2024 Annual Report

Hidden Valley Landfill
Puyallup, Washington

Pierce County Recycling, Composting
& Disposal, LLC dba LRI
17925 Meridian Street East
Puyallup, Washington 98375

SCS ENGINEERS

04225002.02 | April 18, 2025

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This 2024 Annual Report for the Hidden Valley Landfill located in Puyallup, Washington, was prepared by Jovany Estrada and was reviewed by Travis Berndahl and Gregory Helland, LHG of SCS Engineers.

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1.0 INTRODUCTION

This 2024 Annual Monitoring Report for the Hidden Valley Landfill (HVL) was prepared on behalf of Pierce County Recycling, Composting and Disposal LLC, dba LRI (LRI). The facility consists of a closed municipal solid waste landfill that stopped accepting waste on December 31, 1998. The Hidden Valley Landfill is located at 17925 Meridian Street East, Puyallup, Washington (Figure 1). Post-closure activities are performed consistent with Consent Decree No. 032146876 between the Washington Department of Ecology (Ecology), Pierce County (County) and LRI. Ecology is the lead agency for post-closure activities. In addition, the Tacoma-Pierce County Health Department (TPCHD) is kept informed of post-closure activities and provided with the opportunity to review and comment upon proposed remedial action plans.

1.1 FACILITY CONTACT INFORMATION

Hidden Valley Landfill
17925 Meridian East
Puyallup, Washington 98375
Facility Contact: Maria Finley (253) 324-4051

1.2 FACILITY DESCRIPTION

The landfill property covers approximately 92 acres and is situated in the north half of the northwest quarter of Section 34, Township 19N, Range 4E. The landfill includes approximately 56 acres of unlined fill and a 30-acre lined cell. Also present at the site are an office, maintenance shop, leachate pre-treatment facility, transfer station, household hazardous waste collection site, recycling center and composting facility.

The Hidden Valley Landfill began operations in the mid-1960s and accepted waste until December 31, 1998. Waste disposed of at the landfill included municipal solid waste, demolition wastes, commercial waste, industrial wastes, and small quantities of bulk liquids and sludge.

1.3 PROJECT HISTORY

The U.S. Environmental Protection Agency (EPA) conducted an environmental assessment of the Hidden Valley Landfill between 1981 and 1985 and prepared a Preliminary Assessment (PA) and a Hazard Ranking System (HRS) score for the site. As a result of the HRS, the Hidden Valley Landfill was placed on the National Priority List (NPL) in April 1989.

A Remedial Investigation (RI) was conducted under Ecology Consent Order DE 86 S173. The final RI report was submitted to Ecology in March 1992. The RI identified groundwater impacts downgradient of the landfill. Groundwater contaminants have included dissolved iron and manganese, chloride, ammonia, nitrate, sulfate, specific conductance, total dissolved solids, and low levels of volatile organic compounds (VOCs) including benzene, chlorobenzene, tetrachloroethene, 1,1-dichloroethane, and 1,4-dichlorobenzene.

In January 2004, Consent Decree No. 032146876 was finalized and signed. The Consent Decree and associated Cleanup Action Plan addressed long-term maintenance and monitoring activities at the landfill and establish groundwater cleanup levels.

In April 2014, the Consent Decree was amended (First Amendment) to revise the groundwater monitoring plan. In August 2014, the Groundwater Monitoring Plan (GWMP) was modified to include

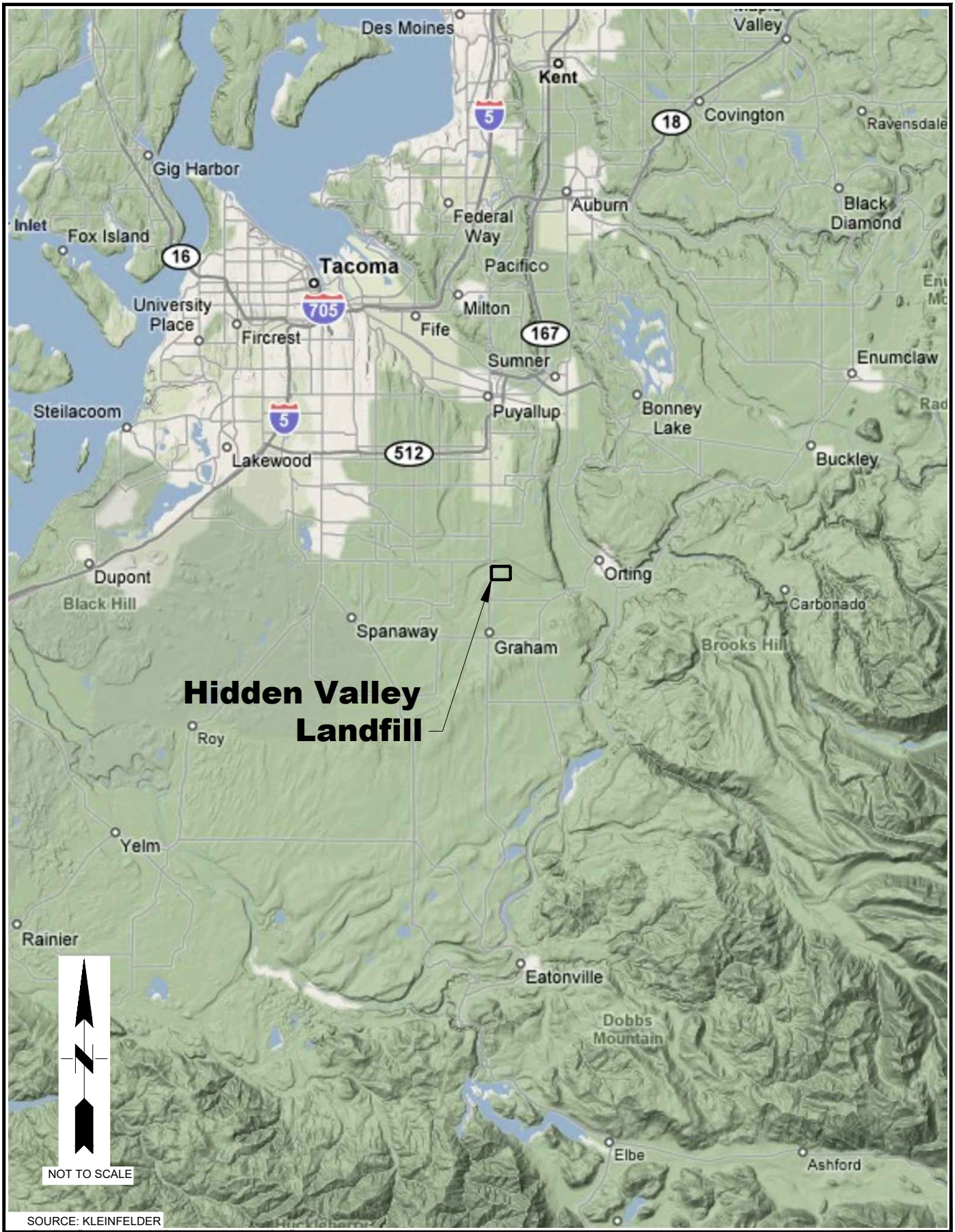
Appendix I WAC 173-351 metals testing. This requirement included eight rounds of total and dissolved metals testing for 15 metals from 23 monitoring wells. Total metals testing began in July 2014 and was completed in April 2016. Following completion of the required monitoring, a Groundwater Monitoring Optimization Report was submitted to Ecology and the TPCHD in December 2016.

Consistent with the Groundwater Monitoring Optimization Report and approval received from Ecology, the groundwater monitoring frequency was changed from quarterly to semi-annual in 2017. The GWMP was revised (October 18, 2018) to reflect updates to the groundwater monitoring network, groundwater monitoring on a semi-annual schedule, and Appendix I metals testing on a five-year schedule beginning in 2021 (Appendix I metals testing will be next performed in 2026). The October 18, 2018 GWMP is the current, approved, plan for HVL.

1.4 2024 MONITORING ACTIVITIES

Groundwater monitoring was performed in January (first semi-annual monitoring event) and July (second semi-annual monitoring event) during 2024. Leachate monitoring was conducted in July. Landfill gas (LFG) monitoring was performed monthly.

Monitoring results for the first semi-annual monitoring event of 2024 were previously submitted to Ecology and the TPCHD in a report dated February 11, 2025. Groundwater laboratory reports for the second semi-annual monitoring event of 2024 and an updated groundwater database will be provided to the TPCHD in a separate submittal. Groundwater laboratory reports will also be provided to Ecology as pdf files and groundwater data from 2024 will be uploaded into Ecology's Environmental Information Management (EIM) system database.



SOURCE: KLEINFELDER

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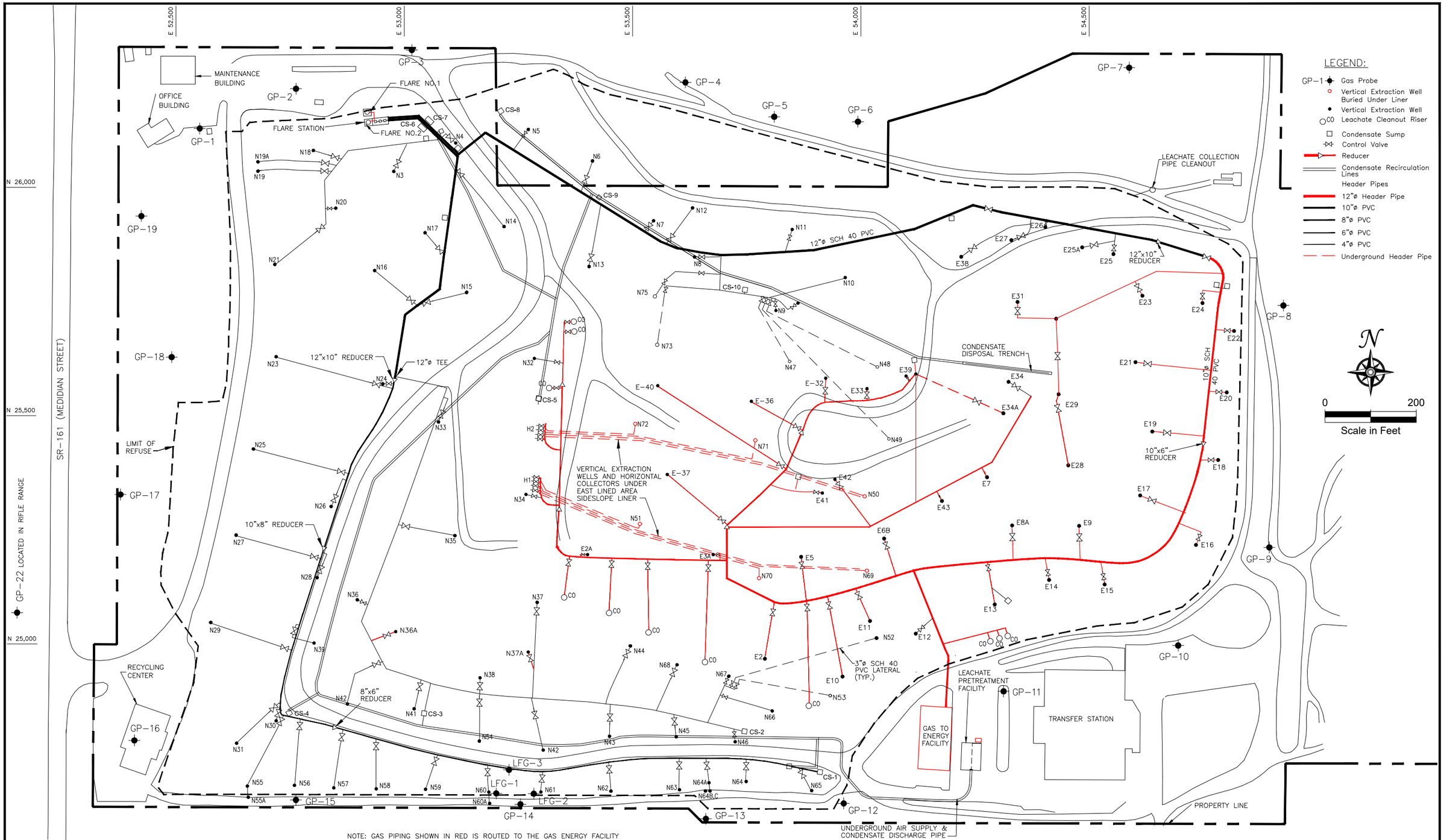
PROJECT NO. 04224002.02	DES BY LEL	SITE LOCATION MAP	DATE MARCH 2025
SCALE NOT TO SCALE	CHK BY JE	HIDDEN VALLEY LANDFILL PIERCE COUNTY, WASHINGTON	FIGURE 1
CAD FILE FIGURE 1	APP BY GH		

2.0 LANDFILL GAS MONITORING

Landfill gas probes were monitored monthly during 2024. The landfill gas probes are installed in site soils near the perimeter of the landfill as illustrated on Figure 2. Parameters measured at the gas probes included carbon dioxide, oxygen, and combustible gas (measured as methane). Gas probe monitoring results were less than five percent methane by volume in all probes each month during 2024. Monthly gas probe monitoring results are included in Appendix A.

On-site buildings were monitored for the presence of combustible gas (measured as methane) on February 14, June 26, August 9, and November 27, 2024 using a flame ionization detector (FID). The main office, maintenance building, scale house/pay booth, recycling building, leachate treatment buildings No. 1 and No. 2, gas to energy building, and transfer station were monitored. No significant methane detections were reported above background concentrations in any of the buildings during 2024. Copies of the building survey reports are included in Appendix A.



NOTE: GAS PIPING SHOWN IN RED IS ROUTED TO THE GAS ENERGY FACILITY

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PROJECT NO. 04225002.02	DES BY KGL	GAS SYSTEM	DATE MARCH 2025
SCALE AS SHOWN	CHK BY JE	HIDDEN VALLEY LANDFILL	FIGURE 2
CAD FILE FIGURE 2	APP BY GH	PIERCE COUNTY, WASHINGTON	

3.0 LEAK DETECTION MONITORING

3.1 LEAK DETECTION SYSTEM

The East Lined Area at the Hidden Valley Landfill includes a leak detection system between the primary geosynthetic liner and the secondary composite liner in the portion of the cell that was constructed over refuse (side slope liner area). Pursuant to Section II C of the Stipulation and Agreed Order of Dismissal (Order), LRI was required to implement the March 1994 Leak Detection Response Action Plan (RAP) once refuse was placed onto the side slope liner. The RAP provides a mechanism for evaluating the performance of the side slope liner. Major components of the plan include routine monitoring of leachate quantities and fluid in the leak detection system, data analysis, record keeping, delineation of acceptable liner performance levels, response actions, and an outline of how groundwater impacts would be evaluated in the event that excessive leakage is observed in the leak detection system.

3.2 LINER PERFORMANCE STANDARD

The RAP defines an acceptable performance standard of 300 gallons per acre per day for the primary side-slope liner in the Cell 2 East Lined Area. The side slope liner covers approximately 13.5 acres of refuse, and therefore, the corresponding liner performance standard is 4,050 gallons per day.

3.3 SUMMARY OF PERFORMANCE DATA

Leachate volumes pumped from the main sump (Cell 1) and side-slope liner sump (Cell 2 Leachate Volume Sump), as well as volumes pumped from the side-slope leak detection system and rainfall totals from an on-site rain gauge, are recorded on a daily basis by on-site personnel. A summary of monthly leachate (pumped) volume data is provided in Exhibit 1, and copies of the monthly reports are included in Appendix B. No fluid was pumped from the side-slope (Cell 2) liner leak detection system in 2024, well below the performance standard of 4,050 gallons per day defined in the RAP.

Exhibit 1. 2024 Leachate and Side Slope Liner Volumes Pumped Data

Month	Cell 1 Monthly Leachate Volume (gallons)	Cell 2 Monthly Leachate Volume (gallons)	Cell 2 Monthly Leakage Volume (gallons)	Monthly Rainfall (inches)
January	14,000	0	0	7.85
February	14,200	0	0	3.84
March	31,000	0	0	2.71
April	24,350	0	0	3.03
May	4,100	0	0	1.97
June	810	0	0	2.24
July	0	0	0	0.19
August	2,135	0	0	2.33
September	1,050	0	0	1.94
October	9,100	0	0	3.86
November	4,600	0	0	6.04
December	14,100	0	0	8.00
Year to date:	**119,445**	**0**	**0**	**44.00**

3.4 SUMMARY OF LEAK DETECTION MONITORING DATA

A sample of the fluids that accumulate in the side-slope liner leak detection system was collected on February 9, 2024. The test results for this sample were similar to previous results and to the May 2024 test results from the side-slope leachate sump (see Appendix D, Table 10 Semi-Annual Monitoring Event No. 1).

3.5 HYDRAULIC GRADIENT CONTROL SYSTEM MONITORING

In addition to the leak detection system, a hydraulic gradient control system is present beneath the main leachate collection sump for the East Lined Area. This system is routinely checked for the presence of liquid. If liquids are removed, the volume pumped is recorded.

The hydraulic gradient control system was not pumped in 2024. However, a sample was collected from the hydraulic gradient control system on February 8, 2024. The results from this sample did not exhibit elevated levels of leachate indicator parameters such as ammonia, chloride, or total dissolved solids (see Appendix D, Table 10 Semi-Annual Monitoring Event No. 1).

4.0 GROUNDWATER LEVELS AND FLOW DIRECTIONS

4.1 LOCAL HYDROGEOLOGY

Hidden Valley Landfill is situated within a Vashon age glacial melt-water channel that trends in an east-west direction and is approximately 50 to 100 feet deep and several hundred feet wide. The northern boundary of the channel lies just north of the landfill. The landfill is underlain by glacial outwash deposits consisting of coarse sand and gravel to a depth of about 55 feet below grade. North of the landfill (and the outwash channel), the outwash deposits are overlain by Vashon till (upper till unit). The outwash deposits are underlain by successive layers of Vashon till (lower till unit), Vashon advance outwash, Salmon Springs till and interglacial deposits, and Salmon Springs advance outwash.

Three aquifers underlie the Hidden Valley Landfill. The aquifers are referred to as the shallow perched aquifer, the upper regional aquifer, and the lower regional aquifer. An intermittent aquitard, referred to as the Vashon till aquitard, is present between the shallow perched aquifer and the upper regional aquifer. A thick section of low permeability deposits referred to as the Salmon Springs aquitard separates the upper regional aquifer and the lower regional aquifer.

The shallow perched aquifer is an unconfined (water table) aquifer that occurs within the Vashon recessional outwash deposit. The shallow perched aquifer represents the uppermost-saturated unit at the site. Depth to groundwater within the lower areas of the glacial melt-water channel ranges from approximately 11 to 15 feet below ground surface (bgs) in winter and spring months to about 25 feet bgs in late fall. Groundwater flow in the shallow perched aquifer beneath the site is towards the northwest with local components to the north and west. The downgradient extent of the shallow perched aquifer appears to be limited. Northwest of the landfill, the recessional outwash is either not saturated, or saturated to only a few feet. In areas where the recessional outwash is unsaturated, the uppermost zone of groundwater saturation occurs within the lower Vashon till unit.

The upper regional aquifer is present within Vashon advance outwash deposits. This aquifer is confined beneath the Vashon till aquitard and appears to be of regional extent. Groundwater flow, water level gradients, and seasonal water level fluctuations in the upper regional aquifer are similar to the shallow perched aquifer.

The lower regional aquifer is present within the Salmon Springs advance outwash deposits. The aquifer is confined and is interpreted to be of regional extent. Monitoring wells BC-4R, MW-14R, and MW-20R are completed at similar depth elevations and display similar water levels. Monitoring well MW-26R is completed approximately 80 feet higher in elevation and may be installed within a water-bearing zone in the Salmon Springs aquitard.

Detailed descriptions of the hydrogeologic units, as well as geologic cross-sections and boring logs/monitoring well details are included in the *Hidden Valley Landfill Remedial Investigation Report* (EMCON, 1991) and *Hidden Valley Landfill Hydrogeologic Report Addendum* (EMCON, 1998).

4.2 WATER LEVEL MEASUREMENTS

Static water levels were measured on January 30-31 and July 17-18, 2024. The water level database and water level contour maps are presented in Appendix C.

Groundwater flow within both the shallow perched aquifer and the upper regional aquifer was generally toward the northwest during both of the 2024 monitoring events. Horizontal hydraulic gradients for both the shallow perched aquifer and the upper regional aquifer were less than 0.005 ft/ft in the central part of the site and approximately 0.025 ft/ft northwest of the landfill. This flow pattern remains consistent with previous data reported for the site. Water level gradients were similar to past measurements, indicating that the previously reported flow rates of 3.2 ft/day to 6.5 ft/day for the shallow perched aquifer and 0.5 to 1.3 ft/day for the upper regional aquifer have not changed significantly. Water level data for wells MW-14R, MW-20R, and BC-4R indicate that the groundwater flow direction in the lower regional aquifer is towards the northeast.

5.0 GROUNDWATER QUALITY

During 2024, groundwater samples were collected on a semi-annual basis from twenty-one monitoring wells; including eleven wells completed within the shallow perched aquifer, seven wells completed within the upper regional aquifer, and three wells completed within the lower regional aquifer. Groundwater sampling locations are shown on Figure 3.

Groundwater quality summary data tables for each semi-annual monitoring event are provided in Appendix D. The summary tables include field parameters, laboratory parameters, and quality control samples. Time series plots for selected water quality parameters are included in Appendix E. Trilinear diagrams for each aquifer and leachate data are included in Appendix F. Statistical calculations performed on groundwater data are presented in Appendix G. The groundwater database will be provided to the TPCHD as a Microsoft Excel file in electronic format (on compact disk). In addition, groundwater data generated from the Hidden Valley Landfill during 2024 were validated and will be input into Ecology's EIM database system.

5.1 WATER SUPPLY WELL DATA

A water quality sample was collected from water supply well only during the second semi-annual event at Heidelberg Materials (formerly Corliss Resources, Inc.) located immediately south of the landfill. Water quality samples were collected at the Paul Bunyan Rifle and Sportsman's Club (Paul Bunyan) located west of the landfill across Meridian East during both events in 2024 (see Figure 4).

No VOCs were detected in the water supply well samples collected during 2024. Low concentrations of total metals and inorganic parameters, including chloride and nitrate, indicate the water quality at the Heidelberg Materials and Paul Bunyan water supply wells is not affected by the Hidden Valley Landfill. A summary of the laboratory test results for the water supply wells is provided in Exhibit 2.

5.2 BACKGROUND WATER QUALITY

Background water quality at the Hidden Valley Landfill is monitored using wells MW-10S (shallow perched aquifer) and MW-10D (upper regional aquifer). These wells have provided background water quality information since 1985.

In 2024, concentrations of inorganic parameters in samples from the background wells remained low and consistent with previous results. Concentrations of dissolved iron and manganese remained low or were not detected in the background well samples during 2024.

5.3 DOWNGRADIENT WATER QUALITY

Phased closure of the unlined portion of the landfill, which began in 1989 and was completed in 1993, included capping the waste with a low permeability composite cover and installing a landfill gas collection and control system (GCCS). The closure activities were designed to minimize the infiltration of precipitation through the refuse and remove landfill gas. These actions have improved the groundwater quality in the shallow perched aquifer and the upper regional aquifer.

Time series plots for specific conductance, ammonia, nitrate, dissolved iron, and dissolved manganese were prepared for wells in the shallow perched and upper regional aquifers that are located close to and downgradient of the landfill (MW-11S, MW-11D(2), MW-12S, MW-12D, MW-13S, MW-13D, MW-14S, MW-14D, and MW-17S, see Appendix E). The plots graphically display consistent trends of decreasing concentrations of water quality parameters in monitoring wells located downgradient of the landfill when the full data set is evaluated. However, over the last 10 years,

slightly increasing trends were noted for dissolved manganese at MW-17S and MW-14D, and dissolved iron at MW-13S and MW-14D (see Appendix E).

A cation-anion balance was prepared based in milliequivalents per liter (meq/L) for each groundwater sample to determine whether it was electro-neutral (balanced cation and anion charges). A threshold of ten percent difference was used if the total sum of cations and anions were less than or equal to 5.0 meq/L, and a threshold of five percent difference was used if the total cation-anion sums was greater than 5.0 meq/L. Calculated cation-anion balances were found to exceed these thresholds during at least one monitoring event during 2024 at MW-10S (background), MW-10D (background), MW-11S, MW-12S, MW-15D, MW-17S, MW-29S and FMMW-2 (see Appendix D). These latter balances may reflect the presence of ions outside the parameter suite being analyzed, possible errors associated with analytical limitations in the measurements, or impacts from human activities at the site

Trilinear (Piper) diagrams were prepared for groundwater sample results from each of the three water bearing zones at the landfill; the shallow perched aquifer, upper regional aquifer, and lower regional aquifer (see Appendix F). As shown on the attached trilinear diagrams, the groundwater sample results from all three aquifers and the hydraulic gradient control system plot within a consistent area of the graph, while the leachate results plot in a different area.

Measurements of pH collected in the field exceeded the lower threshold limit of the WAC 173-200 groundwater quality criteria of 6.5 at all of the shallow perched aquifer wells and at four upper regional aquifer wells on one or more occasion in 2024, including at background wells MW-10S and MW-10D. Therefore, the pH values are interpreted to represent natural shallow and upper regional aquifer chemistry beneath the site.

The Hidden Valley Landfill Consent Decree established site groundwater cleanup levels and the groundwater point of compliance. Exhibit 3 provides a summary of the site-specific groundwater cleanup levels and identifies the monitoring events in 2024 when water quality results were greater than the site-specific cleanup levels.

Shallow perched aquifer water quality results exceeded the cleanup level for nitrate (MW-17S and FMMW-2), dissolved iron (MW-15S), and dissolved manganese (MW-12S, MW-14S, MW-15S, MW-17S, MW-18S, and MW-29S) during at least one semi-annual monitoring event. Upper regional aquifer water quality results exceeded the site-specific cleanup level for dissolved iron (MW-14D) and dissolved manganese (MW-14D) during both semi-annual monitoring events. Lower regional aquifer water quality results exceeded the site-specific cleanup level for dissolved iron (MW-26R) and dissolved manganese (MW-14R and MW-26R) during both semi-annual monitoring events.

Results for the lower regional aquifer are interpreted to represent background water quality. As discussed in previous reports, the presence of dissolved iron and manganese in the lower regional aquifer does not appear to be related to the Hidden Valley Landfill. This interpretation is based on an overall assessment of the groundwater quality data, which includes low concentrations of inorganic parameters and a general absence of VOCs.

The following VOC's were reported present in groundwater samples collected at the Hidden Valley Landfill in 2024:

- Tetrachloroethene (PCE) was reported present in samples from MW-11D(2) and MW-15D during both semi-annual monitoring events with concentrations ranging from 0.67 to 1.3 µg/L. The detections at MW-11D(2) are slightly greater than the WAC 173-200

groundwater quality criteria of 0.80 µg/L, but are consistent with recent monitoring results and lower than the primary drinking water standard of 5.0 µg/L.

5.4 STATISTICAL ANALYSIS

Groundwater quality data for the five-year period of January 2020 through July 2024 were statistically evaluated and compared to site-specific cleanup levels for all monitoring wells in the groundwater-monitoring network. A compound-specific evaluation was used to determine the data distribution type for each compound as normal, lognormal, or non-parametric. The Consent Decree established a cleanup level for 1,4-dichlorobenzene at 1.82 micrograms per liter (µg/L). No other VOCs have Consent Decree defined cleanup levels for the Hidden Valley Landfill. However, the distribution of data was also determined for tetrachloroethene at well MW-11D(2) for tracking purposes. Chlorobenzene was evaluated in previous reports, but no detections of chlorobenzene were reported in groundwater samples collected over the past five years. Therefore, a statistical evaluation for this compound was discontinued.

If the data distribution was either normal or lognormal, the upper 95 percent confidence limits of the mean (UCL 95) were calculated for each data set using the MTCAStat 97: Site Module, obtained from Ecology. The MTCAStat program was used to evaluate data distributions (i.e., normal, lognormal, or neither) for constituents that were detected in at least 50 percent of the sampling events. One-half the MRL was used when a parameter was not detected at a concentration above the MRL.

If the distribution was neither normal nor lognormal, the UCL 95 was determined using the method of Van der Parren (1970) as described in the Statistical Guidance for Ecology Site Managers (Ecology 1992). For the data evaluated, this procedure defaults to the highest reported value. In addition, the highest reported value was used if either lognormal or normal distributions had the UCL 95 value outside of the data sample range. The UCL 95 was not calculated (NC) when any of the evaluated parameters were either not detected for 50 percent of the sampling events, or had less than five data entries.

Exhibit 4 provides a summary of UCL 95 values. Shallow perched aquifer UCL 95 values that exceed site-specific cleanup levels include nitrate (MW-12S, MW-15S, MW-17S, and FMMW-2), dissolved iron (MW15S), dissolved manganese (MW-14S, MW-15S, MW-17S, and FMMW-2) and TDS (MW-17S). Upper regional aquifer UCL 95 values that exceed site-specific cleanup levels include dissolved iron and dissolved manganese (both in MW-14D). Lower regional aquifer UCL 95 values that exceed site-specific cleanup levels include dissolved iron and dissolved manganese (both in MW-14R and MW-26R). Statistical calculations are provided in Appendix G. The statistical results are consistent with those reported in previous monitoring years.

Exhibit 2 2024 Water Supply Well Data Summary

Parameter	MRL	Heidelberg		Paul Bunyon	
		January-31	July-18	January-31	July-18
Volatile Organics (µg/L)					
No Detections	10	—	*	*	*
Total Metals (mg/L)					
Arsenic	0.005	—	*	*	*
Iron	0.01	—	0.14	0.013	*
Manganese	0.001	—	0.0037	*	*
Zinc	0.01	—	0.012	*	0.023
Inorganic Parameters (mg/L)					
Chloride	0.2	—	8.0	8.0	6.1
Ammonia as Nitrogen	0.1	—	*	*	*
Nitrate as Nitrogen	0.2	—	1.9	1.9	1.0
Nitrite as Nitrogen	0.5	—	—	*	—
Sulfate	0.5	—	13	13	12
Chemical Oxygen Demand	10.0	—	—	—	—
Total Organic Carbon	1.0	—	*	*	*
Color	5.0	—	5	5	5
Field Parameters					
pH	—	—	6.97	6.80	7.38
Conductance (µS/cm)	—	—	312.1	286	278.8
Temperature (^{0}C)	—	—	18.0	11.9	24.1

^{0}C = Degrees Celsius
µS/cm = microSiemens per centimeter
* = Not reported at or above the Method Reporting Limit
— = Not Applicable

Exhibit 3. 2024 Groundwater Quality Data versus Site-Specific Cleanup Levels (Page 1)

Shallow Perched Aquifer

Parameter	Cleanup Level	MW-10S (BG)	MW-11S	MW-12S	MW-13S	MW-14S	MW-15S	MW-17S	MW-18S	MW-29S	FMMW-1	FMMW-2
Inorganic (mg/L)												
Chloride	250	–	–	–	–	–	–	–	–	–	–	–
Nitrate as Nitrogen	10.0	–	–	–	–	–	–	**SA 1**	–	–	–	**SA 1**
Sulfate	250	–	–	–	–	–	–	–	–	–	–	–
Specific Conductance	700	–	–	–	–	–	–	–	–	–	–	–
TDS	500	–	–	–	–	–	–	–	–	–	–	–
Metals (mg/L)												
Iron	0.30	–	–	–	–	–	**SA 2**	–	–	–	–	–
Manganese	0.05	–	–	**SA 2**	–	**SA 2**	**SA 1, 2**	**SA 1, 2**	**SA 1**	**SA 2**	–	–
Volatile Organics (µg/L)												
Tetrachloroethene	0.80[(a)]	–	–	–	–	–	–	–	–	–	–	–

Notes:
– indicates results were less than cleanup level.
SA indicates results were greater than cleanup level.
1 & 2 indicate the semi-annual monitoring event in which results were greater than the cleanup level.
(a) the referenced water quality criteria is from on WAC 173-200.

2024 Groundwater Quality Data versus Site-Specific Cleanup Levels (Page 2)

Upper Regional Aquifer and Lower Regional Aquifer

Parameter	Cleanup Level	Upper Regional Aquifer							Lower Regional Aquifer		
		MW-10D (BG)	MW-11D(2)	MW-12D	MW-13D	MW-14D	MW-15D	MW-18D	MW-14R	MW-20R	MW-26R
Inorganic (mg/L)											
Chloride	250	–	–	–	–	–	–	–	–	–	–
Nitrate as Nitrogen	10.0	–	–	–	–	–	–	–	–	–	–
Sulfate	250	–	–	–	–	–	–	–	–	–	–
Specific Conductance	700	–	–	–	–	–	–	–	–	–	–
TDS	500	–	–	–	–	–	–	–	–	–	–
Metals (mg/L)											
Iron	0.30	–	–	–	–	**SA 1, 2**	–	–	–	–	**SA 1, 2**
Manganese	0.05	–	–	–	–	**SA 1, 2**	–	–	**SA 1, 2**	–	**SA 1, 2**
Volatile Organics (µg/L)		–	–	–	–	–	–	–	–	–	–
Tetrachloroethene	0.80	–	**SA 1, 2**	–	–	–	–	–	–	–	–

Notes:
– indicates results were less than cleanup level.
SA indicates results were greater than cleanup level.
1 & 2 indicate the semi-annual monitoring event in which results were greater than the cleanup level.
(a) the referenced water quality criteria is from on WAC 173-200.

Exhibit 4. Summary of 5-Year Groundwater Statistics (Page 1)

Shallow Perched Aquifer

Parameter	Cleanup Level	MW-10S (BG)	MW-11S	MW-12S	MW-13S	MW-14S	MW-15S	MW-17S	MW-18S	FMMW-1	FMMW-2
Inorganic (mg/L)											
Chloride	250	10.44*	22.19	32.0*	15.0*	27.0*	15.0*	13.95	14.92	14.38	19.0
Nitrate as Nitrogen	10.0	2.71	9.0	**166.6**	5.28	1.0	**111.68**	**24.0***	6.2	4.6*	**18.5**
Sulfate	250	13.3	11.08	12.70	17.31	4.75	7.71	10.26	13.49	14.0*	13.73
Specific Conductance	700	299.6	329.42	373.4	237.06	351.6	342.68	466.09	393.57	306.88	426.88
TDS	500	173.63	210*	251.83	152.17	421.63	220.0*	**899.39**	224.16	174.81	300.0*
Metals (mg/L)											
Iron	0.30	NC	NC	NC	NC	0.17	**1.07**	NC	NC	NC	NC
Manganese	0.05	NC	NC	NC	NC	**6.6**	**1.5***	**1.37**	NC	NC	**5.49**
Volatile Organics (µg/L)											
Tetrachloroethene	—	—	NC	NC	NC	NC	NC	NC	NC	NC	NC

Notes:
Values shown are the upper confidence limit on the mean (UCL 95). Evaluated data are from January 2020 through July 2024.
Bold indicates greater than Cleanup Level.
(—) = not applicable.
(NC) = not calculated; less than 50 percent detection frequency.
(*) = maximum detected concentration listed because the UCL 95 calculated value was greater than the data range, or the distribution was neither normal nor lognormal.

Summary of 5-Year Groundwater Statistics (Page 2)

Upper Regional Aquifer and Lower Regional Aquifer

Parameter	Cleanup Level	Upper Regional Aquifer							Lower Regional Aquifer		
		MW-10D (BG)	MW-11D(2)	MW-12D	MW-13D	MW-14D	MW-15D	MW-18D	MW-14R	MW-20R	MW-26R
Inorganic (mg/L)											
Chloride	250	9.1	5.91	9.86	14.0*	12.26	9.7	7.4	1.7	1.6	6.2*
Nitrate as Nitrogen	10.0	2.1	1.9	1.11	1.87	NC	0.81*	1.71	NC	NC	NC
Sulfate	250	11.34	8.83	7.65	16.31	9.22	11.0*	8.02	3.93	3.4*	12.0*
Specific Conductance	700	278	328*	352.01	313.26	297.23	309*	320*	196*	228*	335*
TDS	500	183.24	320*	207.28	183.88	430*	551	170*	216.75	180*	357.84
Metals (mg/L)											
Iron	0.30	NC	NC	NC	NC	**3.7**	NC	NC	**0.17***	NC	**0.85***
Manganese	0.05	NC	NC	NC	NC	**1.52**	0.035	NC	**0.2**	NC	**0.45**
Volatile Organics (µg/L)											
1,4-Dichlorobenzene	1.82	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Tetrachloroethene	—	NC	1.3	NC	NC	NC	NC	NC	NC	NC	NC

Notes:
Values shown are the upper confidence limit on the mean (UCL 95). Evaluated data are from January 2020 through July 2024.
Bold indicates greater than Cleanup Level.
(—) = not applicable.
(NC) = not calculated; less than 50 percent detection frequency.
(*) = maximum detected concentration listed because the UCL 95 calculated value was greater than the data range, or the distribution was neither normal nor lognormal.

LEGEND:

MW-12S — Existing Monitoring Well Location

BC-4R
BC-4S

FMMW-2

FMMW-1

MW-18D
MW-18S

MW-11D(2)
MW-11S

MW-15D
MW-15S

MW-26(R)

MW-14D
MW-14R
MW-14S

MW-17S

MW-12D
MW-12S

MW-29S

MW-13D
MW-13S

MW-10D
MW-10S

MW-19D
MW-19S

MW-20R

GP-1 GP-2 GP-3 GP-4 GP-5 GP-6 GP-7 GP-8 GP-9 GP-10 GP-11 GP-12 GP-13 GP-14 GP-15 GP-16 GP-17 GP-18 GP-19 GP-20 GP-21 GP-22

MAINTENANCE BUILDING

OFFICE BUILDING

LIMIT OF REFUSE

GP-22 LOCATED IN RIFLE RANGE

0 300 600

SCALE: 1" = 300'

CONTOUR INTERVAL = 5 FEET

SCS ENGINEERS
Environmental Consultants and Contractors
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005
(425) 746-4600 FAX: (425) 746-6747

PROJECT NO. 04225002.02	DES BY LEL	GROUNDWATER MONITORING WELL LOCATIONS	DATE MARCH 2025
SCALE AS SHOWN	CHK BY JE	HIDDEN VALLEY LANDFILL PIERCE COUNTY, WASHINGTON	FIGURE 3
CAD FILE FIGURE 3	APP BY GH		

0 400 800

APPROX SCALE IN FEET

LEGEND

WATER SUPPLY WELL LOCATION

SOURCE: KLEINFELDER

SCS ENGINEERS
Environmental Consultants and Contractors
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005
(425) 746-4600 FAX: (425) 746-6747

PROJECT NO.	DES BY
04225002.02	LEL
SCALE	CHK BY
NOT TO SCALE	JE
CAD FILE	APP BY
FIGURE 4	GH

WATER SUPPLY WELL LOCATION

HIDDEN VALLEY LANDFILL
PIERCE COUNTY, WASHINGTON

DATE
MARCH 2025

FIGURE
4

6.0 LEACHATE QUALITY

Leachate quality is monitored on an annual basis. Samples of untreated leachate were collected from the East Lined Area leachate collection system (main sump [Cell 1]) and the Side Slope Area leachate collection system (Cell 2) on February 8, 2024. The leachate samples were analyzed for the same parameter suite analyzed for the groundwater samples, as specified in the approved GWMP. Leachate quality results for 2024 were generally typical of previous results. The analytical results for the leachate samples are summarized below in Exhibit 5 and are included with the groundwater results in Appendix D.

Exhibit 5. 2024 Leachate Quality Data Summary

Parameters	MRL	Leachate – East Area Cell 1	Leachate – Side Slope Cell 2
Volatile Organics (µg/L)			
1,4-Dichlorobenzene	0.5-0.8	2.5	*
2-Butanone (MEK)	6.0	*	59
Acetone	10.0		
Benzene	0.5-0.8	0.89	1.2
Carbon disulfide	0.5-0.84	1.6	*
cis-1,2-Dichloroethene	0.5-0.75		*
Ethylbenzene	1.0	1.2	*
m-Xylene & p-Xylene	0.5-0.77	2.2	*
o-Xylene	0.5-0.95	1	*
Toluene	0.5-0.85	0.78	1.6
Total Metals (mg/L)			
Calcium	0.2-0.78	61	14
Iron	0.01-0.02	1.4	2.4
Magnesium	0.1-0.26	37	23
Manganese	0.005	1.3	0.11
Potassium	2-2.4	170	550
Sodium	1-3.7	1,700	7,200
Inorganic Parameters (mg/L)			
Alkalinity	10	2,800	6,400
Ammonia	0.1-2.2	180	280
Chloride	0.2-60	1,700	6,600
Nitrate as N	0.5-0.9	6.2	5
Sulfate	0.2-5.0	81	530
Total Dissolved Solids	10-470	5,500	21,000
Total Organic Carbon - Quad	1-35	300	850
Total Suspended Solids	4.0	24	4.4
Inorganic Parameters (mg/L)			
Dissolved Oxygen (mg/L)	—	2.32	3.07
Oxidation Reduction Potential (mV)	—	-60.7	50.9
pH (SU)	—	7.54	7.91
Specific Conductivity (µS/cm)	—	9,604	31,360
Temperature (°C)	—	16.5	17.5
Turbidity (NTU)	—	362	2995

Notes:
Analyses performed by TestAmerica, Arvada, CO. H = Sample analyzed beyond specified holding time.
µg/L = micrograms per liter, mg/L = milligrams per liter. * = Not detected above MRL.
VOCs were not listed when not present at concentrations exceeding the MRL.

7.0 POST-CLOSURE MAINTENANCE

7.1 COVER SYSTEM MAINTENANCE

The landfill cover system was inspected on a quarterly basis during 2024. Informal cover inspections were also performed on an ongoing basis by LRI staff, as well as during the monthly LFG monitoring events. The cover system was found to be in good condition during 2024. Copies of the inspection reports are included in Appendix H.

7.2 LANDFILL GAS COLLECTION & CONTROL SYSTEM (GCCS) MAINTENANCE

The LFG extraction wells, piping and blower/flare station were inspected, monitored and maintained on a monthly basis throughout 2024. Methane data collected at the flare was lost in September 2024 due to a device malfunction so consistent with Greenhouse Gas Reporting methods this value has been interpolated. In addition, the LFG condensate recirculation system was inspected quarterly during 2024 and the condensate sumps were observed to be working as designed. Sumps 5 and 10 did not collect condensate for a number of years, and therefore, the pumps were previously removed. Monthly records of GCCS maintenance activities and quarterly records of condensate sump inspections are included in Appendix I. A record of the monthly volume of LFG combusted and the average monthly methane concentration at the flare station is provided in Exhibit 6. It should be noted that an equipment malfunction caused a data loss after monitoring in September so no LFG quality readings were reported for this month. Consistent with what is reported under 40 CFR Part 98 for this facility, the points before and after were averaged as a data substitution.

Exhibit 6. 2024 Flare Station Data

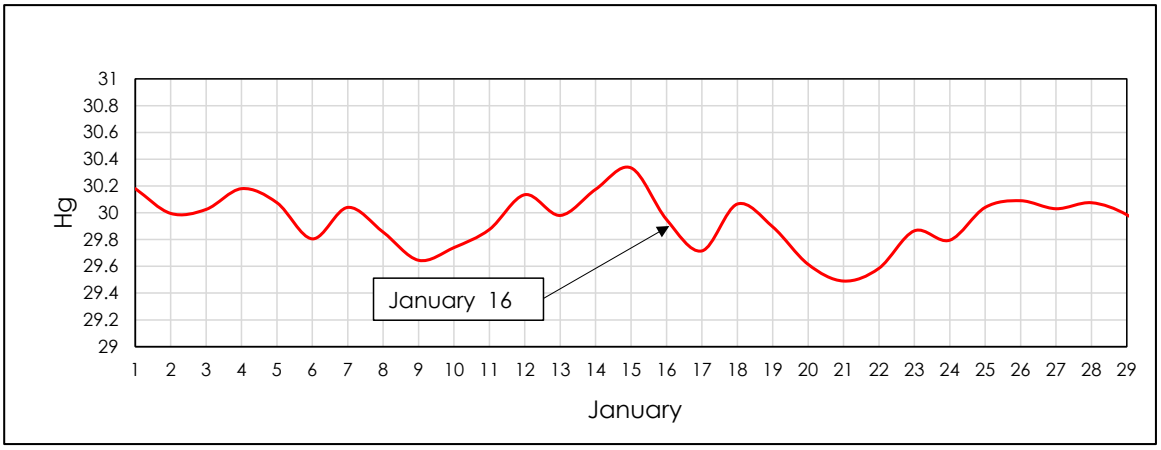
Month	LFG Volume Combusted (scf)	Methane (% by volume)
January	7,024,168	40.4
February	5,024,972	38.3
March	6,342,986	30.0
April	6,654,098	28.8
May	3,409,282	36.9
June	4,637,148	34.2
July	4,278,728	33.8
August	5,335,512	33.5
September	4,322,056	36.2[1]
October	5,200,036	38.9
November	5,023,578	35.8
December	5,185196	31.8
Totals	**62,437,760**	**34.8 (Average)**

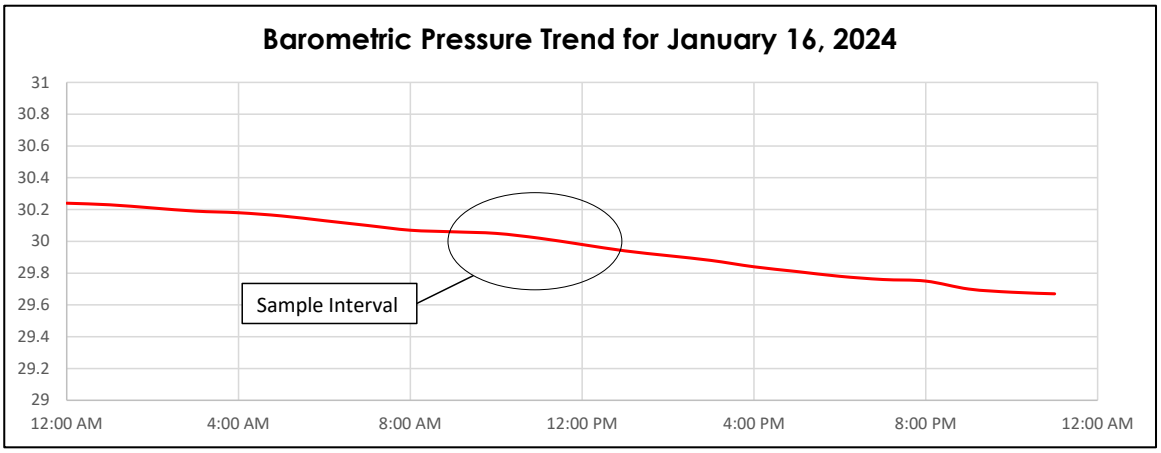
Note: (scf) indicates standard cubic feet
1. Data was averaged for September 2024

Appendix A

LANDFILL GAS MONITORING DATA

Barometric Pressure Trend - January 2024
Hidden Valley Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-01-16/2024-01-16/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-01-16/2024-01-16/monthly

Landfill Gas Probe Monitoring

SCS Engineers

Hidden Valley Landfill

4224002.03

PCRCD dba LRI

January 16, 2024

Location Reference Designation	Date	Time	Pressure (in. H_2O)	CH_4 (% vol.)	CO_2 (% vol.)	O_2 (% vol.)	Comments: Spike CH4 *Note 1* (% vol.)	Comments: Other
Gas Probes								
GP-1A	16-Jan-24	0:00	0.26	0.0	4.5	11.9	-	
GP-1B	16-Jan-24	0:00	0.26	0.0	5.5	16.6	-	
GP-1C	16-Jan-24	0:00	0.34	0.0	7.7	12.2	-	
GP-2A	16-Jan-24	0:00	0.33	0.1	11.6	7.7	0.1	
GP-2B	16-Jan-24	0:00	0.30	0.0	0.6	22.8	-	
GP-3S	16-Jan-24	0:00	0.24	0.0	4.2	11.9	-	
GP-3M	16-Jan-24	0:00	0.31	0.0	6.3	6.5	-	
GP-3D	16-Jan-24	0:00	0.29	0.0	5.8	10.3	-	
GP-4A	16-Jan-24	0:00	0.27	0.0	7.7	10.5	-	
GP-4B	16-Jan-24	0:00	0.24	0.0	0.6	22.4	-	
GP-5A	16-Jan-24	0:00	0.22	0.0	0.4	22.4	-	
GP-5B	16-Jan-24	0:00	0.24	0.0	0.2	22.5	-	
GP-6	16-Jan-24	0:00	0.26	0.0	0.3	22.4	-	
GP-7S	16-Jan-24	0:00	0.25	0.0	0.3	22.3	-	
GP-7D	16-Jan-24	0:00	0.23	0.0	0.5	22.0	-	
GP-8A	16-Jan-24	0:00	0.24	0.0	2.9	18.8	-	
GP-8B	16-Jan-24	0:00	0.20	0.0	0.8	21.2	-	
GP-9	16-Jan-24	0:00	0.25	0.0	4.2	15.9	-	
GP-10	16-Jan-24	0:00	0.28	0.0	0.4	21.5	-	
GP-11	16-Jan-24	0:00	0.09	0.0	3.6	16.5	-	
GP-12	16-Jan-24	0:00	0.25	0.0	2.7	17.4	-	
GP-13A	16-Jan-24	0:00	0.25	0.0	0.4	21.7	-	
GP-13B	16-Jan-24	0:00	0.19	0.0	0.2	21.8	-	
GP-14S	16-Jan-24	0:00	0.24	0.0	2.9	19.0	-	
GP-14D	16-Jan-24	0:00	0.13	0.0	4.5	10.3	-	
GP-15A	16-Jan-24	0:00	0.25	0.0	4.7	9.0	-	
GP-15B	16-Jan-24	0:00	0.16	0.3	13.0	0.5	0.3	
GP-16A	16-Jan-24	0:00	0.32	0.0	3.8	18.0	-	
GP-16B	16-Jan-24	0:00	0.21	0.0	3.3	18.4	-	
GP-17	16-Jan-24	0:00	0.20	0.0	0.3	21.6	-	
GP-18	16-Jan-24	0:00	0.24	0.0	0.8	21.0	-	
GP-19	16-Jan-24	0:00	0.20	0.0	3.7	19.2	-	
LFG-1							-	*Note 2*
LFG-2							-	*Note 2*
LFG-3							-	*Note 2*

General Data

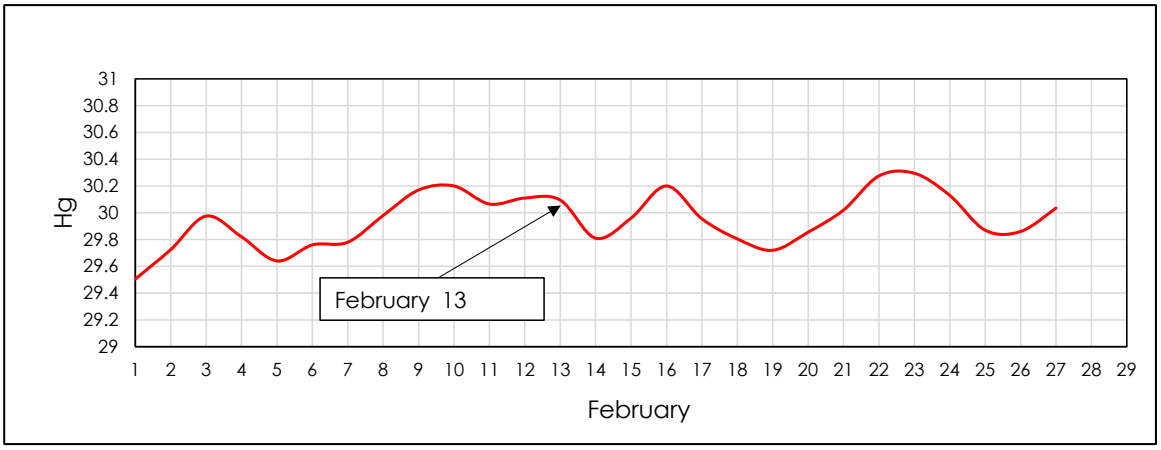
		Weather Conditions	
Monitored by:	T.Hanrahan	Sky Cover:	
Instruments:	GEM 2000	Wind / Rain / Snow:	
Calibration Date:	16-Jan-24	Temperature (°F):	

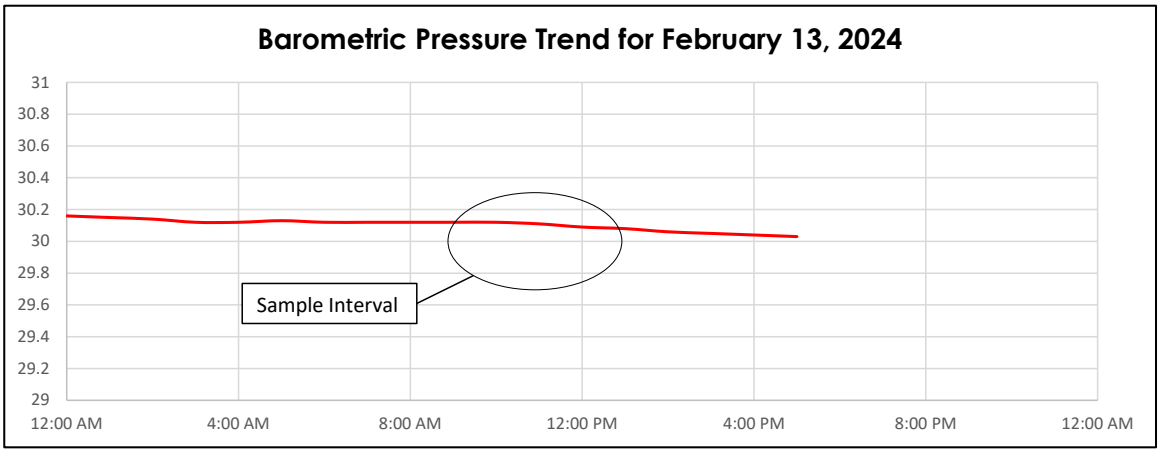
Notes

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded if observed during sampling
2. Not monitored. Probe casing rusted shut.

GP = Gas Probe	CH_4 = Methane	S = shallow	A= shallow
NM = Not measured	CO_2 = Carbon Dioxide	M = medium	B = medium
equipment malfunction	O_2 = Oxygen	D = deep	C = deep

Barometric Pressure Trend - February 2024
Hidden Valley Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-02-13/2024-02-13/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-02-13/2024-02-13/monthly

Landfill Gas Probe Monitoring

SCS Engineers

Hidden Valley Landfill

4224002.03

PCRCD dba LRI

February 13, 2024

Location Reference Designation	Date	Time	Pressure (in. H_2O)	CH_4 (% vol.)	CO_2 (% vol.)	O_2 (% vol.)	Comments: Spike CH4 *Note 1* (% vol.)	Comments: Other
Gas Probes								
GP-1A	13-Feb-24	0:00	0.16	0.0	4.6	11.2	-	
GP-1B	13-Feb-24	0:00	0.17	0.0	5.8	15.7	-	
GP-1C	13-Feb-24	0:00	0.07	0.0	2.9	18.1	-	
GP-2A	13-Feb-24	0:00	0.15	0.0	1.9	19.2	-	
GP-2B	13-Feb-24	0:00	0.15	0.0	2.0	21.8	-	
GP-3S	13-Feb-24	0:00	0.16	0.0	4.3	9.1	-	
GP-3M	13-Feb-24	0:00	0.09	0.0	6.1	3.9	-	
GP-3D	13-Feb-24	0:00	0.15	0.0	9.1	6.9	-	
GP-4A	13-Feb-24	0:00	0.16	0.0	0.3	21.9	-	
GP-4B	13-Feb-24	0:00	0.12	0.0	0.2	22.0	-	
GP-5A	13-Feb-24	0:00	0.17	0.0	0.1	21.9	-	
GP-5B	13-Feb-24	0:00	0.11	0.0	0.1	21.9	-	
GP-6	13-Feb-24	0:00	0.16	0.0	0.1	21.8	-	
GP-7S	13-Feb-24	0:00	0.17	0.0	0.5	21.3	-	
GP-7D	13-Feb-24	0:00	0.09	0.0	0.2	21.8	-	
GP-8A	13-Feb-24	0:00	0.17	0.0	3.0	18.2	-	
GP-8B	13-Feb-24	0:00	0.06	0.0	0.8	21.0	-	
GP-9	13-Feb-24	0:00	0.16	0.0	0.9	20.9	-	
GP-10	13-Feb-24	0:00	0.17	0.0	0.5	21.5	-	
GP-11	13-Feb-24	0:00	0.16	0.0	0.2	21.4	-	
GP-12	13-Feb-24	0:00	0.17	0.0	0.1	21.4	-	
GP-13A	13-Feb-24	0:00	0.15	0.0	0.1	21.6	-	
GP-13B	13-Feb-24	0:00	0.08	0.0	0.1	21.7	-	
GP-14S	13-Feb-24	0:00	0.11	0.0	3.3	17.3	-	
GP-14D	13-Feb-24	0:00	0.06	0.0	4.3	11.4	-	
GP-15A	13-Feb-24	0:00	0.16	0.0	2.6	15.3	-	
GP-15B	13-Feb-24	0:00	0.09	0.0	10.7	3.3	-	
GP-16A	13-Feb-24	0:00	0.16	0.0	0.9	20.8	-	
GP-16B	13-Feb-24	0:00	0.03	0.0	0.3	21.5	-	
GP-17	13-Feb-24	0:00	0.25	0.0	1.2	20.6	-	
GP-18	13-Feb-24	0:00	0.16	0.0	0.3	21.6	-	
GP-19	13-Feb-24	0:00	0.17	0.0	0.5	21.3	-	
LFG-1							-	*Note 2*
LFG-2							-	*Note 2*
LFG-3							-	*Note 2*

General Data

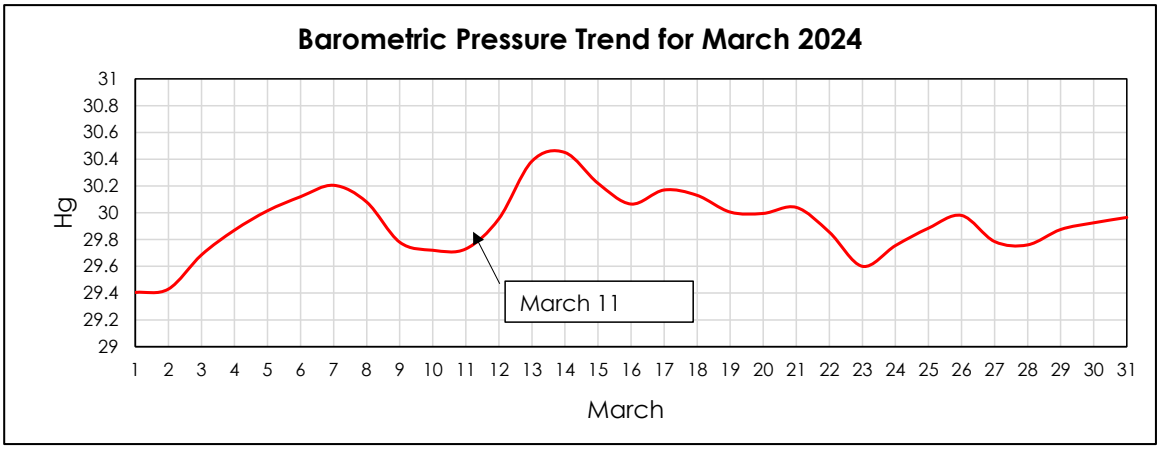
		Weather Conditions	
Monitored by:	T.Hanrahan	Sky Cover:	
Instruments:	GEM 2000	Wind / Rain / Snow:	
Calibration Date:	13-Feb-24	Temperature (°F):	

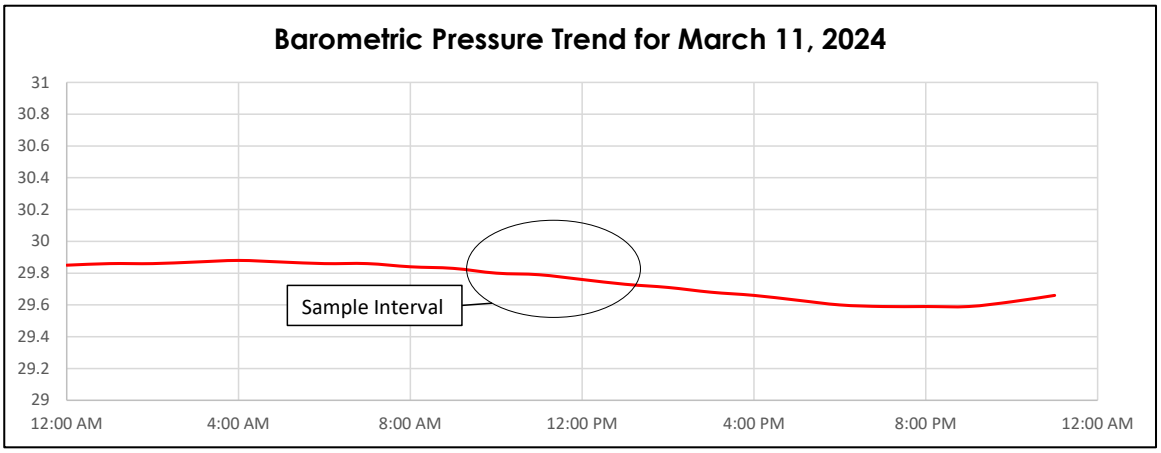
Notes

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded if observed during sampling
2. Not monitored. Probe casing rusted shut.

GP = Gas Probe	CH_4 = Methane	S = shallow	A= shallow
NM = Not measured	CO_2 = Carbon Dioxide	M = medium	B = medium
equipment malfunction	O_2 = Oxygen	D = deep	C = deep

Barometric Pressure Trend - March 2024 Hidden Valley Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-03-11/2024-03-11/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-03-11/2024-03-11/daily

Landfill Gas Probe Monitoring

SCS Engineers

Hidden Valley Landfill
PCRCD dba LRI

4224002.03
March 11, 2024

Location Reference Designation	Date	Time	Pressure (in. H_2O)	CH_4 (% vol.)	CO_2 (% vol.)	O_2 (% vol.)	Comments: Spike CH4 *Note 1* (% vol.)	Comments: Other
Gas Probes								
GP-1A	11-Mar-24	12:28	0.20	0.0	4.6	9.9	-	
GP-1B	11-Mar-24	12:31	-0.01	0.0	5.3	15.7	-	
GP-1C	11-Mar-24	12:35	NR	0.0	6.3	12.5	-	
GP-2A	11-Mar-24	12:39	0.19	0.0	5.0	11.4	-	
GP-2B	11-Mar-24	12:42	0.25	0.0	0.5	21.8	-	
GP-3S	11-Mar-24	12:47	0.05	0.0	4.3	6.7	-	
GP-3M	11-Mar-24	12:50	0.05	0.0	5.8	1.2	-	
GP-3D	11-Mar-24	12:53	0.06	0.0	9.0	2.9	-	
GP-4A	11-Mar-24	12:57	-0.01	0.0	3.7	15.3	-	
GP-4B	11-Mar-24	13:00	-0.01	0.0	0.1	22.0	-	
GP-5A	11-Mar-24	13:06	0.00	0.0	0.1	21.9	-	
GP-5B	11-Mar-24	13:09	0.00	0.0	1.9	18.3	-	
GP-6	11-Mar-24	13:13	0.00	0.0	0.1	22.0	-	
GP-7S	11-Mar-24	13:18	0.00	0.0	0.1	21.8	-	
GP-7D	11-Mar-24	13:21	0.00	0.0	0.1	21.5	-	
GP-8A	11-Mar-24	13:28	-0.01	0.0	2.2	19.3	-	
GP-8B	11-Mar-24	13:31	0.14	0.0	0.6	21.0	-	
GP-9	11-Mar-24	13:36	0.00	0.0	2.4	17.8	-	
GP-10	11-Mar-24	13:43	0.00	0.0	0.1	21.8	-	
GP-11	11-Mar-24	13:51	0.01	0.0	1.1	20.0	-	
GP-12	11-Mar-24	13:56	0.00	0.0	1.6	18.0	-	
GP-13A	11-Mar-24	14:00	0.00	0.0	0.1	21.7	-	
GP-13B	11-Mar-24	14:03	0.00	0.0	0.0	21.7	-	
GP-14S	11-Mar-24	14:09	0.01	0.0	3.5	18.1	-	
GP-14D	11-Mar-24	14:12	-0.04	0.0	3.4	11.3	-	
GP-15A	11-Mar-24	14:16	0.01	0.0	2.4	13.4	-	
GP-15B	11-Mar-24	14:19	0.00	0.0	11.3	1.3	-	
GP-16A	11-Mar-24	14:25	0.14	0.0	2.9	17.1	-	
GP-16B	11-Mar-24	14:28	0.00	0.0	1.9	18.7	-	
GP-17	11-Mar-24	14:34	-0.01	0.0	1.2	20.2	-	
GP-18	11-Mar-24	14:39	0.01	0.0	0.9	20.3	-	
GP-19	11-Mar-24	14:49	0.01	0.0	2.9	19.0	-	
LFG-1							-	*Note 2*
LFG-2							-	*Note 2*
LFG-3							-	*Note 2*

General Data

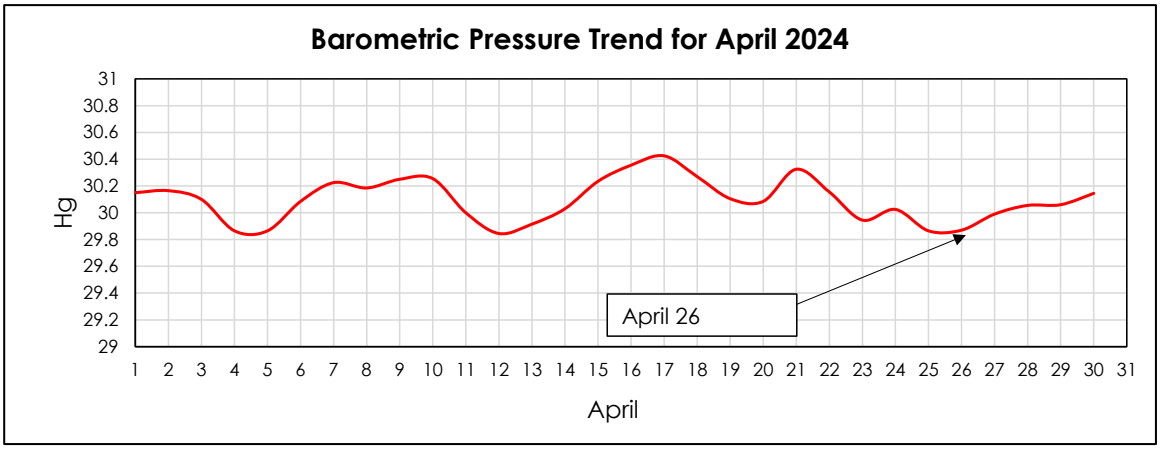
		Weather Conditions	
Monitored by:	T.Hanrahan	Sky Cover:	
Instruments:	GEM 2000	Wind / Rain / Snow:	
Calibration Date:	11-Mar-24	Temperature (°F):	

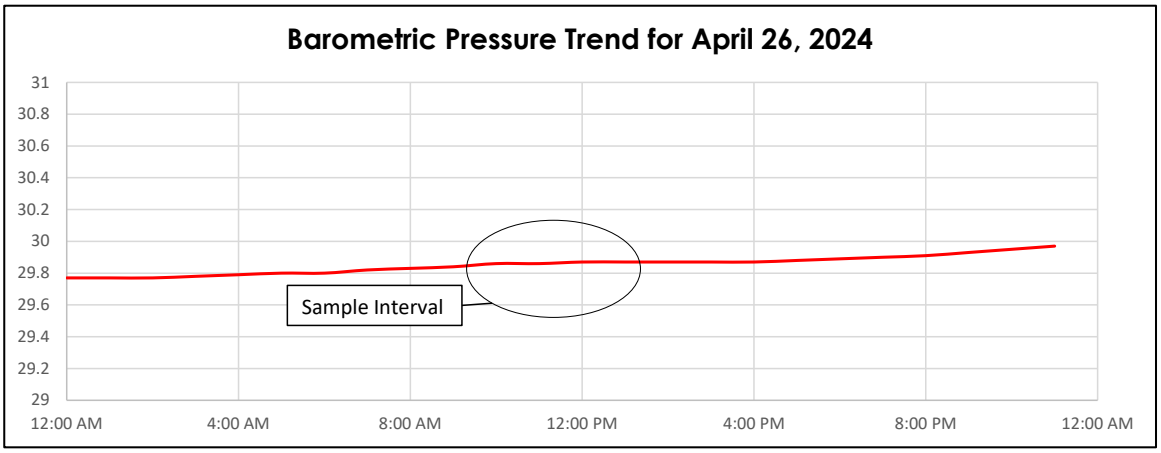
Notes

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded if observed during sampling
2. Not monitored. Probe casing rusted shut.

GP = Gas Probe	CH_4 = Methane	S = shallow	A= shallow
NM = Not measured	CO_2 = Carbon Dioxide	M = medium	B = medium
equipment malfunction	O_2 = Oxygen	D = deep	C = deep

Barometric Pressure Trend - April 2024
Hidden Valley Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-04-26/2024-04-26/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-04-26/2024-04-26/daily

Landfill Gas Probe Monitoring

SCS Engineers

Hidden Valley Landfill

4224002.03

PCRCD dba LRI

April 26, 2024

Location Reference Designation	Date	Time	Pressure (in. H_2O)	CH_4 (% vol.)	CO_2 (% vol.)	O_2 (% vol.)	Comments: Spike CH4 *Note 1* (% vol.)	Comments: Other
Gas Probes								
GP-1A	26-Apr-24	0:00	-0.13	0.0	4.7	13.6	-	
GP-1B	26-Apr-24	0:00	0.14	0.0	6.1	16.6	-	
GP-1C	26-Apr-24	0:00	0.13	0.0	3.5	18.2	-	
GP-2A	26-Apr-24	0:00	0.12	0.0	4.0	17.1	-	
GP-2B	26-Apr-24	0:00	-0.08	0.0	0.1	21.4	-	
GP-3S	26-Apr-24	0:00	-0.11	0.0	4.4	10.5	-	
GP-3M	26-Apr-24	0:00	-0.13	0.0	6.0	14.7	-	
GP-3D	26-Apr-24	0:00	-0.14	0.0	7.3	1.0	-	
GP-4A	26-Apr-24	0:00	-0.12	0.0	0.2	21.5	-	
GP-4B	26-Apr-24	0:00	-0.12	0.0	0.1	21.6	-	
GP-5A	26-Apr-24	0:00	-0.11	0.0	0.1	21.7	-	
GP-5B	26-Apr-24	0:00	-0.11	0.0	0.1	21.7	-	
GP-6	26-Apr-24	0:00	-0.11	0.0	0.1	21.7	-	
GP-7S	26-Apr-24	0:00	-0.09	0.0	0.2	21.4	-	
GP-7D	26-Apr-24	0:00	-0.11	0.0	0.9	21.0	-	
GP-8A	26-Apr-24	0:00	-0.13	0.0	4.6	15.8	-	
GP-8B	26-Apr-24	0:00	-0.11	0.0	4.3	16.5	-	
GP-9	26-Apr-24	0:00	-0.10	0.0	3.4	18.6	-	
GP-10	26-Apr-24	0:00	-0.10	0.0	0.2	21.5	-	
GP-11	26-Apr-24	0:00	-0.10	0.0	1.3	20.6	-	
GP-12	26-Apr-24	0:00	-0.10	0.0	0.2	21.5	-	
GP-13A	26-Apr-24	0:00	-0.11	0.0	0.1	21.6	-	
GP-13B	26-Apr-24	0:00	-0.10	0.0	0.1	21.6	-	
GP-14S	26-Apr-24	0:00	-0.10	0.0	0.1	21.5	-	
GP-14D	26-Apr-24	0:00	-0.09	0.0	0.1	21.6	-	
GP-15A	26-Apr-24	0:00	-0.08	0.0	3.7	16.5	-	
GP-15B	26-Apr-24	0:00	-0.09	0.0	11.7	2.8	-	
GP-16A	26-Apr-24	0:00	-0.09	0.0	0.3	21.5	-	
GP-16B	26-Apr-24	0:00	-0.09	0.0	0.2	21.6	-	
GP-17	26-Apr-24	0:00	0.06	0.0	2.4	19.7	-	
GP-18	26-Apr-24	0:00	0.01	0.0	0.1	21.7	-	
GP-19	26-Apr-24	0:00	-0.08	0.0	0.3	21.6	-	
LFG-1							-	*Note 2*
LFG-2							-	*Note 2*
LFG-3							-	*Note 2*

General Data

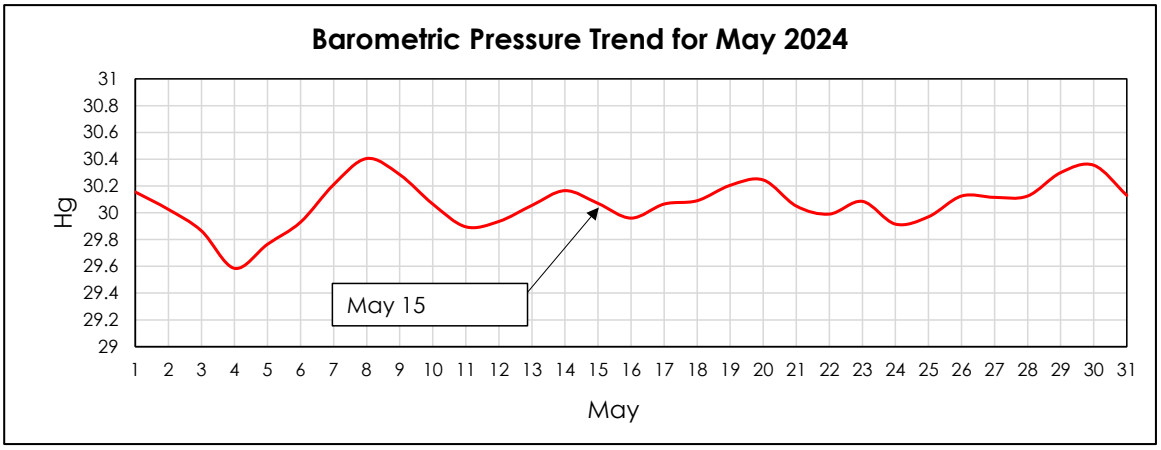
		Weather Conditions	
Monitored by:	T.Hanrahan	Sky Cover:	
Instruments:	GEM 2000	Wind / Rain / Snow:	
Calibration Date:	26-Apr-24	Temperature (°F):	

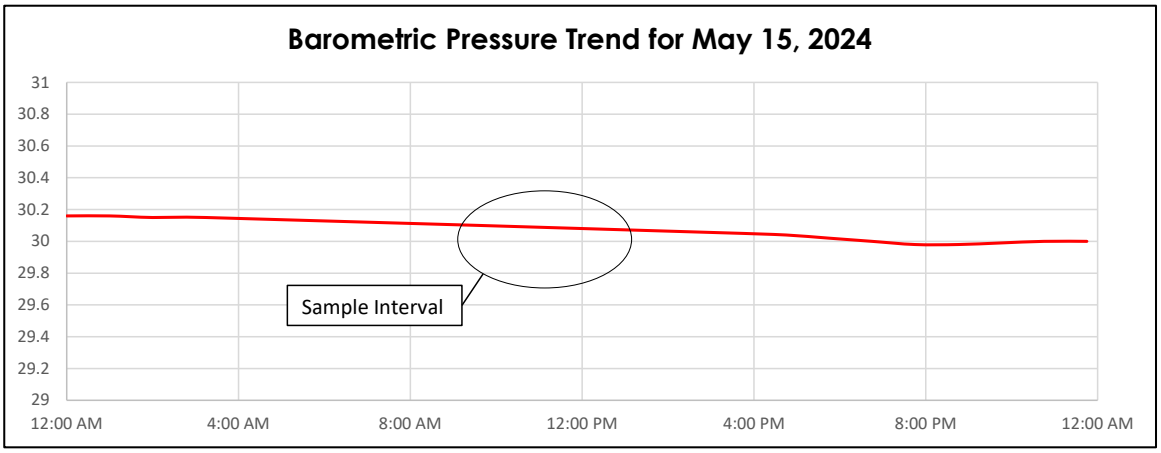
Notes

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded if observed during sampling
2. Not monitored. Probe casing rusted shut.

GP = Gas Probe	CH_4 = Methane	S = shallow	A= shallow
NM = Not measured	CO_2 = Carbon Dioxide	M = medium	B = medium
equipment malfunction	O_2 = Oxygen	D = deep	C = deep

Barometric Pressure Trend - May 2024
Hidden Valley Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-05-15/2024-05-15/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-05-15/2024-05-15/daily

Landfill Gas Probe Monitoring

SCS Engineers

Hidden Valley Landfill

4224002.03

PCRCD dba LRI

May 15, 2024

Location Reference Designation	Date	Time	Pressure (in. H_2O)	CH_4 (% vol.)	CO_2 (% vol.)	O_2 (% vol.)	Comments: Spike CH4 *Note 1* (% vol.)	Comments: Other
Gas Probes								
GP-1A	15-May-24	0:00	-0.12	0.0	3.9	15.5	-	
GP-1B	15-May-24	0:00	-0.13	0.0	5.6	16.8	-	
GP-1C	15-May-24	0:00	-0.11	0.0	1.1	20.1	-	
GP-2A	15-May-24	0:00	-0.09	0.0	0.5	20.6	-	
GP-2B	15-May-24	0:00	-0.05	0.0	0.2	20.7	-	
GP-3S	15-May-24	0:00	-0.13	0.0	2.5	14.8	-	
GP-3M	15-May-24	0:00	-0.08	0.0	5.0	14.4	-	
GP-3D	15-May-24	0:00	-0.09	0.0	5.4	4.6	-	
GP-4A	15-May-24	0:00	-0.07	0.0	0.3	20.9	-	
GP-4B	15-May-24	0:00	-0.07	0.0	0.3	20.7	-	
GP-5A	15-May-24	0:00	-0.03	0.0	3.9	15.6	-	
GP-5B	15-May-24	0:00	-0.09	0.0	0.1	20.9	-	
GP-6	15-May-24	0:00	-0.05	0.0	0.3	20.6	-	
GP-7S	15-May-24	0:00	-0.07	0.0	0.1	20.8	-	
GP-7D	15-May-24	0:00	-0.05	0.0	0.6	20.5	-	
GP-8A	15-May-24	0:00	-0.05	0.0	7.1	9.6	-	
GP-8B	15-May-24	0:00	-0.04	0.0	9.1	10.0	-	
GP-9	15-May-24	0:00	-0.05	0.0	2.7	18.0	-	
GP-10	15-May-24	0:00	-0.03	0.0	0.3	20.2	-	
GP-11	15-May-24	0:00	-0.03	0.0	1.3	20.1	-	
GP-12	15-May-24	0:00	-0.02	0.0	0.2	20.8	-	
GP-13A	15-May-24	0:00	-0.02	0.0	0.1	21.0	-	
GP-13B	15-May-24	0:00	-0.02	0.0	0.1	21.0	-	
GP-14S	15-May-24	0:00	-0.04	0.0	0.1	20.8	-	
GP-14D	15-May-24	0:00	-0.35	0.0	4.4	16.8	-	
GP-15A	15-May-24	0:00	-0.02	0.0	9.2	7.7	-	
GP-15B	15-May-24	0:00	-0.01	0.0	2.7	17.7	-	
GP-16A	15-May-24	0:00	-0.02	0.0	0.2	21.1	-	
GP-16B	15-May-24	0:00	-0.01	0.0	0.2	21.2	-	
GP-17	15-May-24	0:00	-0.02	0.0	0.2	19.2	-	
GP-18	15-May-24	0:00	-0.04	0.0	0.3	21.3	-	
GP-19	15-May-24	0:00	-0.03	0.0	0.1	20.8	-	
LFG-1							-	*Note 2*
LFG-2							-	*Note 2*
LFG-3							-	*Note 2*

General Data

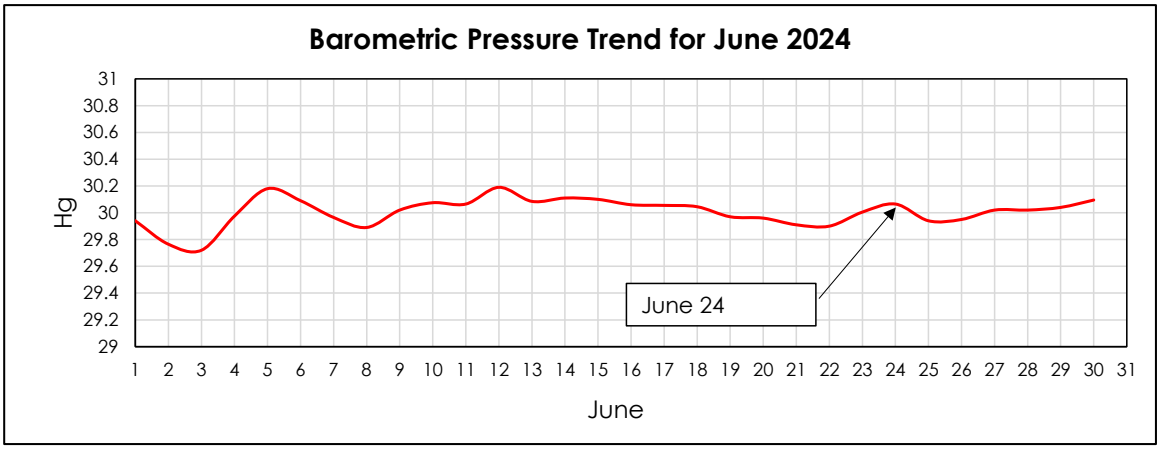
		Weather Conditions	
Monitored by:	T.Hanrahan	Sky Cover:	
Instruments:	GEM 2000	Wind / Rain / Snow:	
Calibration Date:	15-May-24	Temperature (°F):	

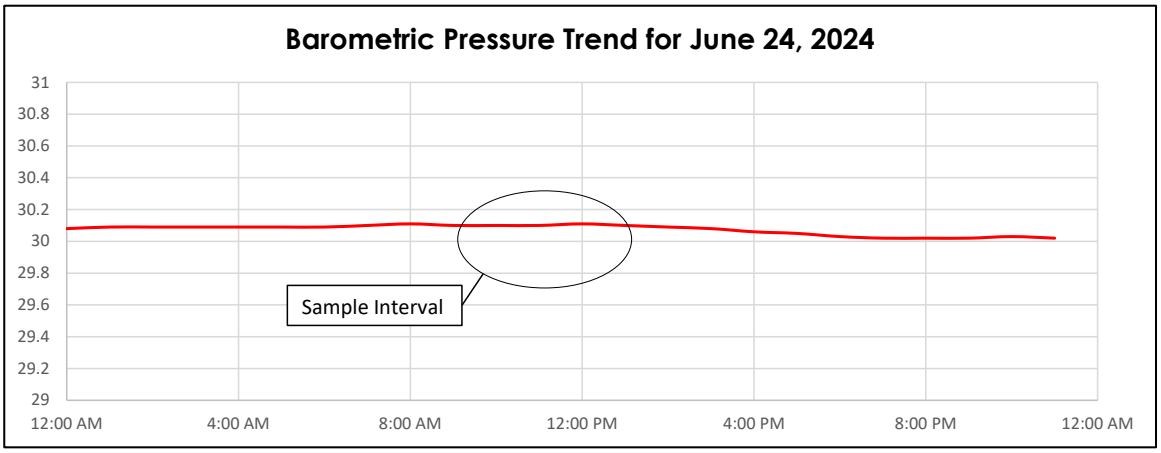
Notes

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded if observed during sampling
2. Not monitored. Probe casing rusted shut.

GP = Gas Probe	CH_4 = Methane	S = shallow	A= shallow
NM = Not measured	CO_2 = Carbon Dioxide	M = medium	B = medium
equipment malfunction	O_2 = Oxygen	D = deep	C = deep

Barometric Pressure Trend - June 2024
Hidden Valley Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-06-24/2024-06-24/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-06-24/2024-06-24/daily

Landfill Gas Probe Monitoring

SCS Engineers

Hidden Valley Landfill

4224002.03

PCRCD dba LRI

June 24, 2024

Location Reference Designation	Date	Time	Pressure (in. H_2O)	CH_4 (% vol.)	CO_2 (% vol.)	O_2 (% vol.)	Comments: Spike CH4 *Note 1* (% vol.)	Comments: Other
Gas Probes								
GP-1A	24-Jun-24	9:24	-0.09	0.0	4.1	13.9	-	
GP-1B	24-Jun-24	9:26	-0.09	0.0	5.6	16.8	-	
GP-1C	24-Jun-24	9:29	-0.08	0.0	1.3	19.9	-	
GP-2A	24-Jun-24	9:32	-0.07	0.0	0.5	20.5	-	
GP-2B	24-Jun-24	9:34	-0.06	0.0	0.2	21.0	-	
GP-3S	24-Jun-24	9:38	-0.09	0.0	2.0	16.5	-	
GP-3M	24-Jun-24	9:40	-0.08	0.0	5.8	6.1	-	
GP-3D	24-Jun-24	9:42	-0.06	0.0	4.9	15.7	-	
GP-4A	24-Jun-24	9:47	-0.05	0.0	0.3	21.0	-	
GP-4B	24-Jun-24	9:49	-0.05	0.0	0.2	21.0	-	
GP-5A	24-Jun-24	9:54	-0.05	0.0	0.5	20.5	-	
GP-5B	24-Jun-24	9:56	-0.04	0.0	0.3	20.5	-	
GP-6	24-Jun-24	10:00	-0.05	0.0	0.2	21.0	-	
GP-7S	24-Jun-24	10:05	-0.06	0.0	0.1	21.1	-	
GP-7D	24-Jun-24	10:07	-0.04	0.0	0.9	20.2	-	
GP-8A	24-Jun-24	10:14	-0.02	0.0	6.2	15.0	-	
GP-8B	24-Jun-24	10:16	-0.03	0.0	4.3	18.1	-	
GP-9	24-Jun-24	10:21	-0.04	0.0	0.3	21.1	-	
GP-10	24-Jun-24	10:27	-0.03	0.0	0.8	19.6	-	
GP-11	24-Jun-24	10:32	-0.04	0.0	1.3	20.1	-	
GP-12	24-Jun-24	10:38	-0.02	0.0	0.2	21.0	-	
GP-13A	24-Jun-24	10:42	-0.03	0.0	0.1	20.9	-	
GP-13B	24-Jun-24	10:45	-0.02	0.0	0.1	20.8	-	
GP-14S	24-Jun-24	10:50	-0.01	0.0	4.7	16.4	-	
GP-14D	24-Jun-24	10:52	-0.03	0.0	3.0	13.1	-	
GP-15A	24-Jun-24	10:56	-0.01	0.0	6.6	12.5	-	
GP-15B	24-Jun-24	10:59	0.00	0.0	1.2	19.7	-	
GP-16A	24-Jun-24	11:05	0.00	0.0	0.1	20.9	-	
GP-16B	24-Jun-24	11:08	0.00	0.0	0.1	21.0	-	
GP-17	24-Jun-24	11:15	0.00	0.0	2.9	17.3	-	
GP-18	24-Jun-24	11:19	0.00	0.0	4.8	14.4	-	
GP-19	24-Jun-24	11:25	0.00	0.0	0.1	21.4	-	
LFG-1							-	*Note 2*
LFG-2							-	*Note 2*
LFG-3							-	*Note 2*

General Data

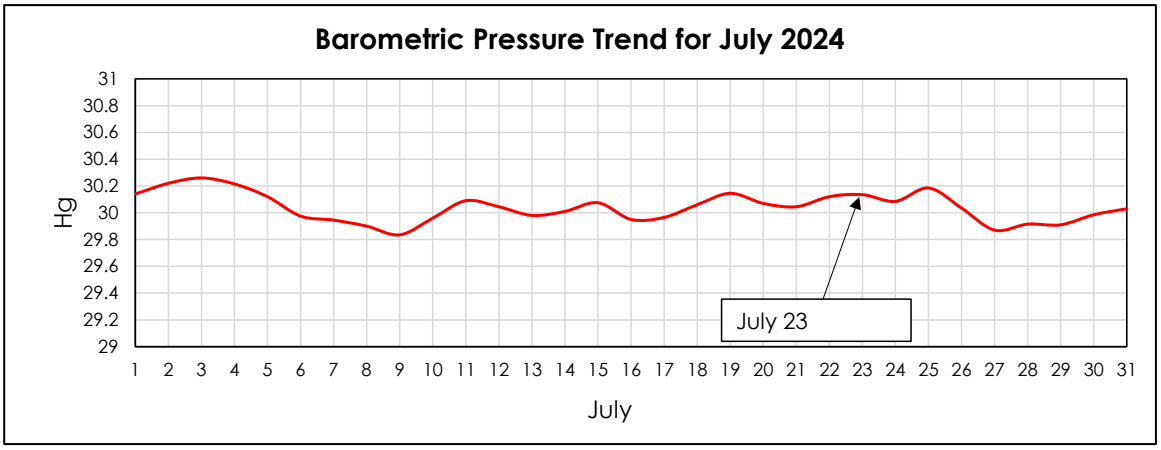
		Weather Conditions	
Monitored by:	T.Hanrahan	Sky Cover:	
Instruments:	GEM 2000	Wind / Rain / Snow:	
Calibration Date:	24-Jun-24	Temperature (°F):	

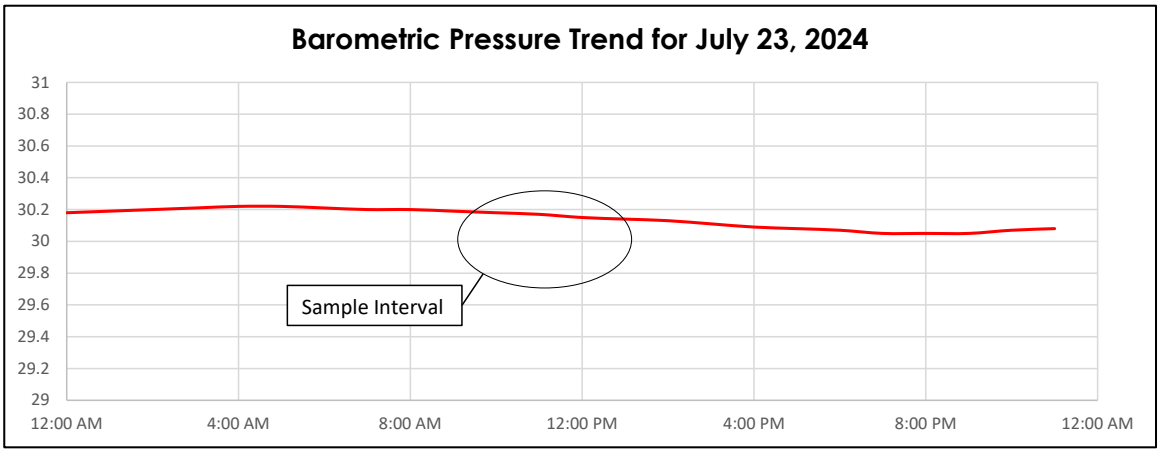
Notes

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded if observed during sampling
2. Not monitored. Probe casing rusted shut.

GP = Gas Probe	CH_4 = Methane	S = shallow	A= shallow
NM = Not measured	CO_2 = Carbon Dioxide	M = medium	B = medium
equipment malfunction	O_2 = Oxygen	D = deep	C = deep

Barometric Pressure Trend - July 2024
Hidden Valley Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-07-23/2024-07-23/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-07-23/2024-07-23/daily

Landfill Gas Probe Monitoring

SCS Engineers

Hidden Valley Landfill

4224002.03

PCRCD dba LRI

July 23, 2024

Location Reference Designation	Date	Time	Pressure (in. H_2O)	CH_4 (% vol.)	CO_2 (% vol.)	O_2 (% vol.)	Comments: Spike CH4 *Note 1* (% vol.)	Comments: Other
Gas Probes								
GP-1A	23-Jul-24	7:37	0.01	0.0	1.6	15.0	-	
GP-1B	23-Jul-24	7:38	-0.02	0.0	2.4	18.3	-	
GP-1C	23-Jul-24	7:41	0.04	0.0	0.5	21.2	-	
GP-2A	23-Jul-24	7:43	-0.02	0.0	0.2	21.5	-	
GP-2B	23-Jul-24	7:45	-0.03	0.0	0.1	21.6	-	
GP-3S	23-Jul-24	7:48	-0.03	0.0	0.2	20.0	-	
GP-3M	23-Jul-24	7:50	-0.01	0.0	1.3	14.9	-	
GP-3D	23-Jul-24	7:51	-0.01	0.0	2.0	20.8	-	
GP-4A	23-Jul-24	7:56	0.00	0.0	0.6	21.3	-	
GP-4B	23-Jul-24	7:58	0.05	0.0	0.2	21.7	-	
GP-5A	23-Jul-24	8:02	-0.01	0.0	0.2	20.4	-	
GP-5B	23-Jul-24	8:04	0.00	0.0	2.2	14.0	-	
GP-6	23-Jul-24	8:07	-0.01	0.0	0.5	21.3	-	
GP-7S	23-Jul-24	8:11	-0.01	0.0	0.4	20.7	-	
GP-7D	23-Jul-24	8:14	-0.01	0.0	0.2	21.7	-	
GP-8A	23-Jul-24	8:22	0.00	0.0	7.5	9.5	-	
GP-8B	23-Jul-24	8:25	0.01	0.0	3.3	15.1	-	
GP-9	23-Jul-24	8:29	0.00	0.0	2.6	16.3	-	
GP-10	23-Jul-24	8:33	0.00	0.0	3.2	12.3	-	
GP-11	23-Jul-24	8:41	-0.01	0.0	0.6	20.6	-	
GP-12	23-Jul-24	8:45	-0.01	0.0	0.3	21.8	-	
GP-13A	23-Jul-24	8:50	0.01	0.0	0.1	21.8	-	
GP-13B	23-Jul-24	8:52	0.00	0.0	0.0	21.8	-	
GP-14S	23-Jul-24	8:57	-0.01	0.0	3.0	18.0	-	
GP-14D	23-Jul-24	9:01	0.40	0.0	2.7	11.0	-	
GP-15A	23-Jul-24	9:08	-0.02	0.0	1.9	19.0	-	
GP-15B	23-Jul-24	9:11	-0.03	0.0	4.8	16.3	-	
GP-16A	23-Jul-24	9:16	-0.03	0.0	0.3	21.9	-	
GP-16B	23-Jul-24	9:19	-0.03	0.0	0.1	21.9	-	
GP-17	23-Jul-24	9:26	-0.03	0.0	3.8	8.4	-	
GP-18	23-Jul-24	9:30	0.03	0.0	8.9	8.0	-	
GP-19	23-Jul-24	9:36	0.03	0.0	1.9	18.5	-	
LFG-1							-	*Note 2*
LFG-2							-	*Note 2*
LFG-3							-	*Note 2*

General Data

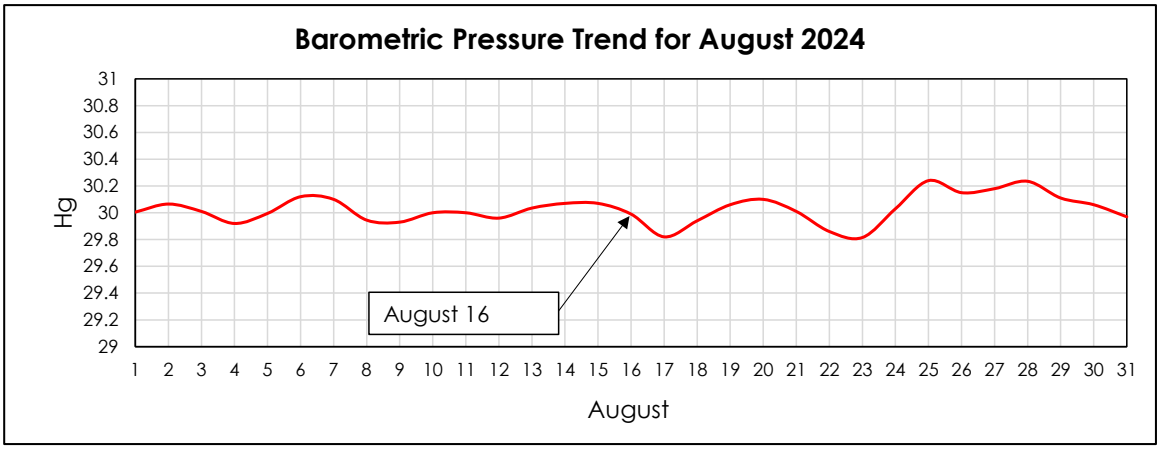
		Weather Conditions	
Monitored by:	T.Hanrahan	Sky Cover:	
Instruments:	Envision	Wind / Rain / Snow:	
Calibration Date:	23-Jul-24	Temperature (^{o}F):	

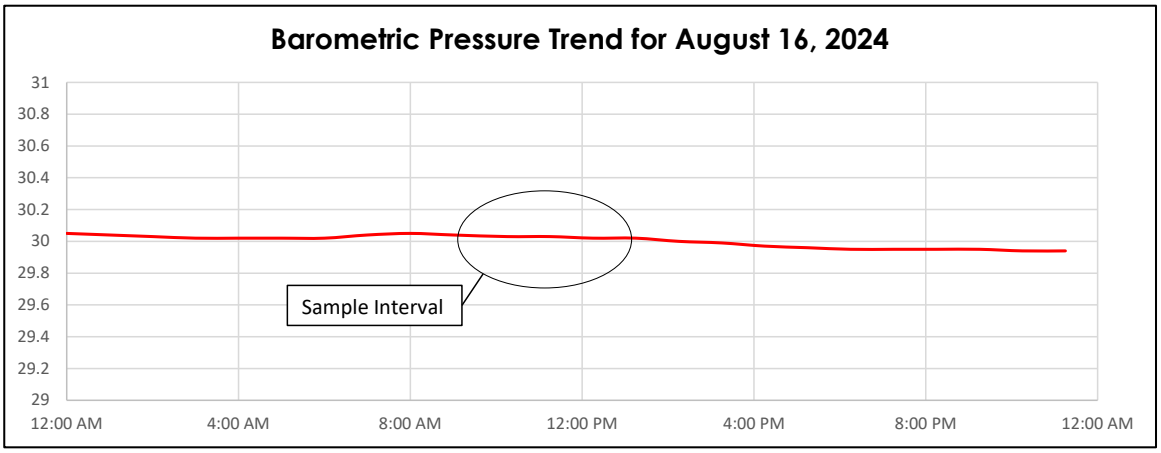
Notes

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded if observed during sampling
2. Not monitored. Probe casing rusted shut.

GP = Gas Probe	CH_4 = Methane	S = shallow	A= shallow
NM = Not measured	CO_2 = Carbon Dioxide	M = medium	B = medium
equipment malfunction	O_2 = Oxygen	D = deep	C = deep

Barometric Pressure Trend - August 2024
Hidden Valley Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-08-16/2024-08-16/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-08-16/2024-08-16/daily

Landfill Gas Probe Monitoring

SCS Engineers

Hidden Valley Landfill

4224002.03

PCRCD dba LRI

August 16, 2024

Location Reference Designation	Date	Time	Pressure (in. H_2O)	CH_4 (% vol.)	CO_2 (% vol.)	O_2 (% vol.)	Comments: Spike CH4 *Note 1* (% vol.)	Comments: Other
Gas Probes								
GP-1A	16-Aug-24	8:01	-0.03	0.1	2.9	13.4	0.1	
GP-1B	16-Aug-24	8:03	-0.03	0.0	2.4	18.2	-	
GP-1C	16-Aug-24	8:06	0.00	0.0	0.7	21.4	-	
GP-2A	16-Aug-24	8:14	-0.01	0.0	0.4	21.7	-	
GP-2B	16-Aug-24	8:16	-0.01	0.0	0.2	21.8	-	
GP-3S	16-Aug-24	8:19	-0.03	0.0	0.2	21.3	-	
GP-3M	16-Aug-24	8:21	-0.03	0.0	0.4	19.4	-	
GP-3D	16-Aug-24	8:24	-0.02	0.0	0.6	19.7	-	
GP-4A	16-Aug-24	8:27	0.00	0.0	0.6	21.6	-	
GP-4B	16-Aug-24	8:29	0.00	0.0	0.2	21.9	-	
GP-5A	16-Aug-24	8:33	0.00	0.0	0.3	20.9	-	
GP-5B	16-Aug-24	8:34	-0.01	0.0	0.2	21.8	-	
GP-6	16-Aug-24	8:38	-0.01	0.0	0.1	21.9	-	
GP-7S	16-Aug-24	8:42	-0.01	0.0	0.2	21.2	-	
GP-7D	16-Aug-24	8:44	-0.01	0.0	0.2	21.7	-	
GP-8A	16-Aug-24	8:50	0.00	0.0	1.4	16.5	-	
GP-8B	16-Aug-24	8:52	0.00	0.0	2.5	17.7	-	
GP-9	16-Aug-24	8:55	0.00	0.0	1.8	13.4	-	
GP-10	16-Aug-24	8:59	0.00	0.0	1.5	17.2	-	
GP-11	16-Aug-24	9:03	-0.01	0.0	1.1	20.5	-	
GP-12	16-Aug-24	9:08	-0.01	0.0	0.4	21.7	-	
GP-13A	16-Aug-24	9:12	0.02	0.0	0.2	21.8	-	
GP-13B	16-Aug-24	9:13	0.00	0.0	0.2	20.4	-	
GP-14S	16-Aug-24	9:16	-0.01	0.0	2.1	18.1	-	
GP-14D	16-Aug-24	9:18	0.16	0.0	1.8	11.4	-	
GP-15A	16-Aug-24	9:21	-0.01	0.0	1.6	19.0	-	
GP-15B	16-Aug-24	9:23	0.00	0.0	3.4	13.4	-	
GP-16A	16-Aug-24	9:28	0.00	0.0	0.8	20.7	-	
GP-16B	16-Aug-24	9:29	0.00	0.0	0.3	21.7	-	
GP-17	16-Aug-24	9:35	0.00	0.0	3.9	6.9	-	
GP-18	16-Aug-24	9:39	-0.01	0.0	6.5	7.9	-	
GP-19	16-Aug-24	9:44	0.00	0.0	0.6	21.5	-	
LFG-1							-	*Note 2*
LFG-2							-	*Note 2*
LFG-3							-	*Note 2*

General Data

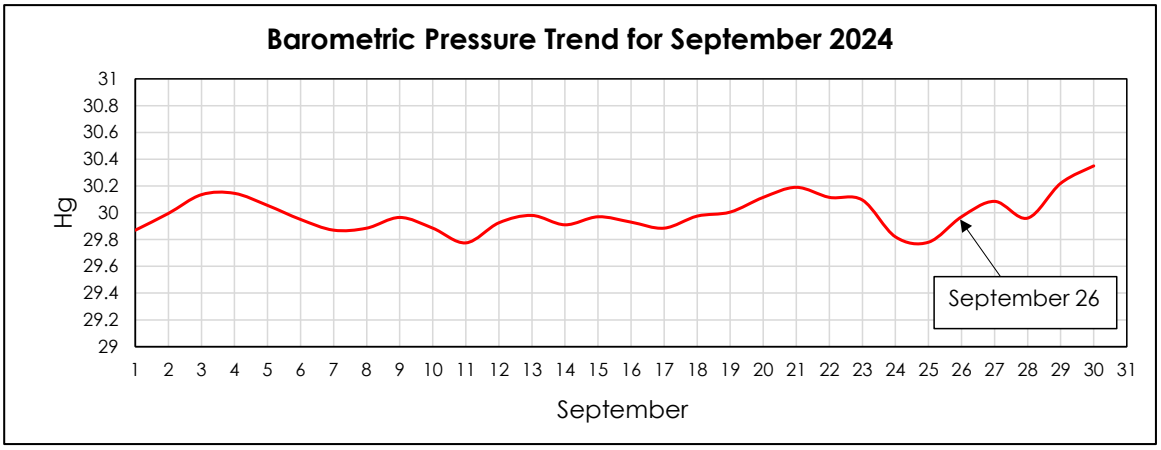
		Weather Conditions	
Monitored by:	L. Murray	Sky Cover:	
Instruments:	Envision	Wind / Rain / Snow:	
Calibration Date:	16-Aug-24	Temperature (°F):	

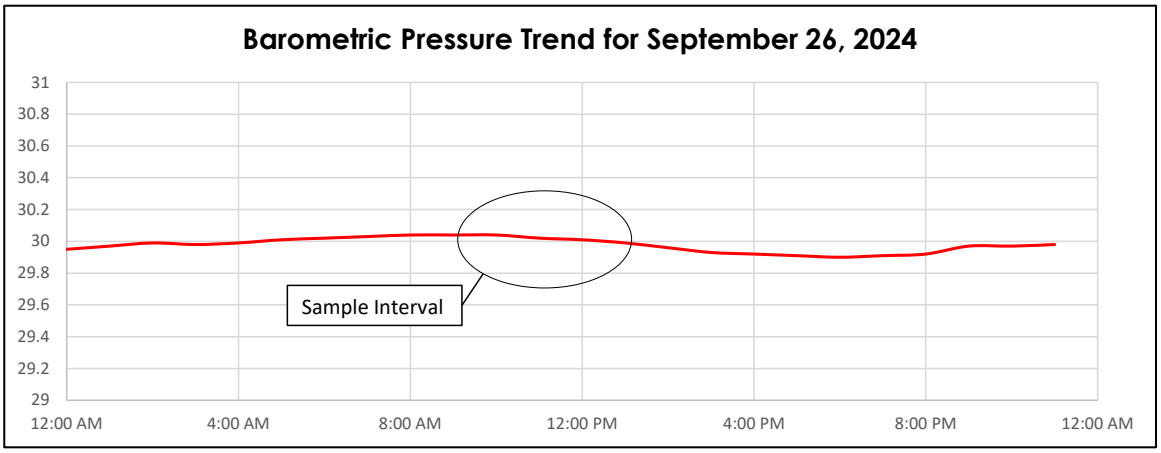
Notes

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded if observed during sampling
2. Not monitored. Probe casing rusted shut.

GP = Gas Probe	CH_4 = Methane	S = shallow	A= shallow
NM = Not measured	CO_2 = Carbon Dioxide	M = medium	B = medium
equipment malfunction	O_2 = Oxygen	D = deep	C = deep

Barometric Pressure Trend - September 2024
Hidden Valley Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-09-26/2024-09-26/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-09-26/2024-09-26/daily

Landfill Gas Probe Monitoring

SCS Engineers

Hidden Valley Landfill

4224002.03

PCRCD dba LRI

September 26, 2024

Location Reference Designation	Date	Time	Pressure (in. H_2O)	CH_4 (% vol.)	CO_2 (% vol.)	O_2 (% vol.)	Comments: Spike CH4 *Note 1* (% vol.)	Comments: Other
Gas Probes								
GP-1A	26-Sep-24	10:16	0.07	0.0	4.6	4.8	-	
GP-1B	26-Sep-24	10:21	0.03	0.0	4.2	15.8	-	
GP-1C	26-Sep-24	10:24	0.06	0.0	1.0	19.8	-	
GP-2A	26-Sep-24	10:32	0.01	0.0	0.4	19.5	-	
GP-2B	26-Sep-24	10:35	0.00	0.0	0.1	21.3	-	
GP-3S	26-Sep-24	10:41	0.03	0.0	0.5	20.3	-	
GP-3M	26-Sep-24	10:45	0.02	0.0	2.7	18.0	-	
GP-3D	26-Sep-24	10:48	0.04	0.0	2.2	18.5	-	
GP-4A	26-Sep-24	10:58	0.00	0.0	4.0	14.4	-	
GP-4B	26-Sep-24	11:01	0.10	0.0	1.0	20.1	-	
GP-5A	26-Sep-24	11:07	-0.03	0.0	0.2	21.0	-	
GP-5B	26-Sep-24	11:10	0.00	0.0	0.0	21.7	-	
GP-6	26-Sep-24	11:16	0.00	0.0	0.0	21.6	-	
GP-7S	26-Sep-24	11:24	0.00	0.0	0.6	21.1	-	
GP-7D	26-Sep-24	11:27	0.01	0.0	0.1	21.2	-	
GP-8A	26-Sep-24	11:46	0.00	0.0	6.8	14.3	-	
GP-8B	26-Sep-24	11:49	0.00	0.0	4.7	16.6	-	
GP-9	26-Sep-24	12:04	0.01	0.0	4.6	9.4	-	
GP-10	26-Sep-24	12:12	0.01	0.0	1.9	18.8	-	
GP-11	26-Sep-24	12:19	0.01	0.0	1.2	19.4	-	
GP-12	26-Sep-24	12:28	0.01	0.0	8.3	10.1	-	
GP-13A	26-Sep-24	12:35	0.13	2.9	18.2	0.1	2.9	
GP-13B	26-Sep-24	12:38	0.06	0.0	1.7	17.7	-	
GP-14S	26-Sep-24	12:46	-0.12	0.0	3.0	11.2	-	
GP-14D	26-Sep-24	12:49	0.01	0.0	4.0	16.9	-	
GP-15A	26-Sep-24	12:57	0.01	0.0	1.5	17.9	-	
GP-15B	26-Sep-24	12:59	0.01	0.0	8.2	8.8	-	
GP-16A	26-Sep-24	13:17	0.01	0.0	2.4	16.3	-	
GP-16B	26-Sep-24	13:24	0.15	0.0	2.2	16.6	-	
GP-17	26-Sep-24	13:30	0.01	0.0	7.3	6.8	-	
GP-18	26-Sep-24	13:37	0.01	0.0	11.8	7.9	-	
GP-19	26-Sep-24	13:45	0.04	0.0	2.4	18.5	-	
LFG-1							-	*Note 2*
LFG-2							-	*Note 2*
LFG-3							-	*Note 2*

General Data

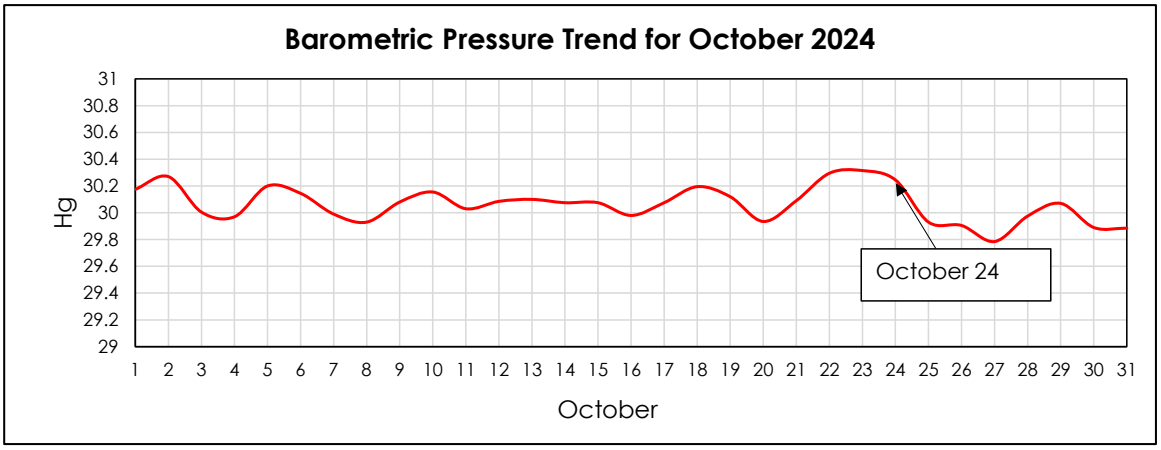
		Weather Conditions	
Monitored by:	J. Faille	Sky Cover:	
Instruments:	Envision	Wind / Rain / Snow:	
Calibration Date:	26-Sep-24	Temperature (°F):	

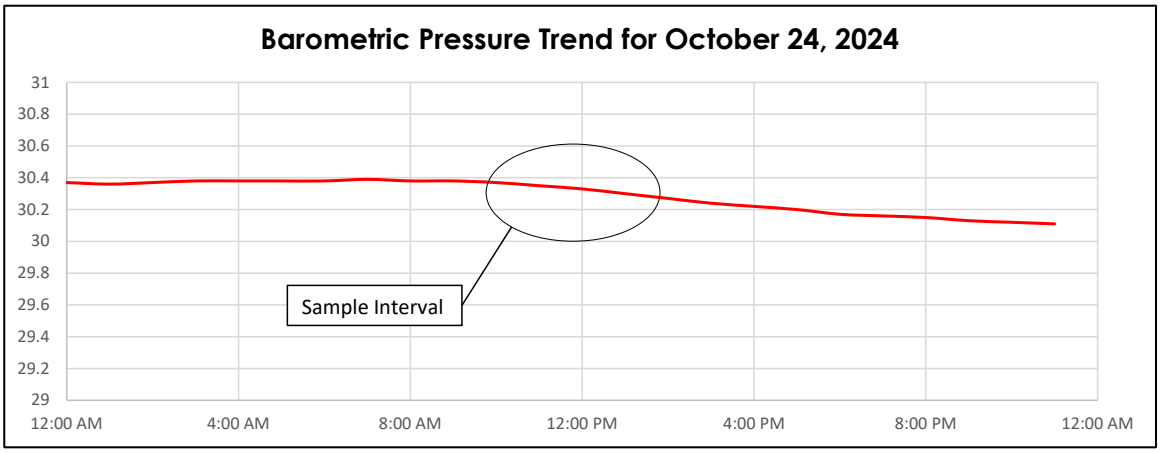
Notes

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded if observed during sampling
2. Not monitored. Probe casing rusted shut.

GP = Gas Probe	CH_4 = Methane	S = shallow	A= shallow
NM = Not measured	CO_2 = Carbon Dioxide	M = medium	B = medium
equipment malfunction	O_2 = Oxygen	D = deep	C = deep

Barometric Pressure Trend - October 2024
Hidden Valley Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-09-26/2024-09-26/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-09-26/2024-09-26/daily

Landfill Gas Probe Monitoring

SCS Engineers

Hidden Valley Landfill
PCRCD dba LRI

4224002.03
October 24, 2024

Location Reference Designation	Date	Time	Pressure (in. H_2O)	CH_4 (% vol.)	CO_2 (% vol.)	O_2 (% vol.)	Comments: Spike CH4 *Note 1* (% vol.)	Comments: Other
Gas Probes								
GP-1A	24-Oct-24	0:00	0.00	0.0	5.1	3.8	-	
GP-1B	24-Oct-24	0:00	0.00	0.0	5.6	14.0	-	
GP-1C	24-Oct-24	0:00	0.00	0.0	1.9	17.6	-	
GP-2A	24-Oct-24	0:00	0.00	0.0	0.8	18.3	-	
GP-2B	24-Oct-24	0:00	0.00	0.0	0.3	20.6	-	
GP-3S	24-Oct-24	0:00	0.00	0.0	0.7	19.4	-	
GP-3M	24-Oct-24	0:00	0.00	0.0	1.9	16.4	-	
GP-3D	24-Oct-24	0:00	0.00	0.0	2.0	16.4	-	
GP-4A	24-Oct-24	0:00	0.00	0.0	5.5	10.6	-	
GP-4B	24-Oct-24	0:00	0.00	0.0	0.8	20.2	-	
GP-5A	24-Oct-24	0:00	0.00	0.0	0.3	21.2	-	
GP-5B	24-Oct-24	0:00	0.00	0.0	0.2	21.0	-	
GP-6	24-Oct-24	0:00	0.00	0.0	0.2	21.2	-	
GP-7S	24-Oct-24	0:00	0.00	0.0	0.4	20.7	-	
GP-7D	24-Oct-24	0:00	0.00	0.0	0.4	20.5	-	
GP-8A	24-Oct-24	0:00	0.00	0.0	7.2	13.2	-	
GP-8B	24-Oct-24	0:00	0.00	0.0	2.1	18.7	-	
GP-9	24-Oct-24	0:00	0.00	0.0	5.3	8.6	-	
GP-10	24-Oct-24	0:00	0.00	0.0	0.7	20.9	-	
GP-11	24-Oct-24	0:00	0.00	0.0	1.4	18.8	-	
GP-12	24-Oct-24	0:00	0.00	0.0	7.6	11.9	-	
GP-13A	24-Oct-24	0:00	0.00	1.6	17.3	0.1	1.6	
GP-13B	24-Oct-24	0:00	0.00	0.0	0.4	20.7	-	
GP-14S	24-Oct-24	0:00	0.00	0.0	3.3	11.4	-	
GP-14D	24-Oct-24	0:00	0.00	0.0	4.0	16.8	-	
GP-15A	24-Oct-24	0:00	0.00	0.0	2.2	18.6	-	
GP-15B	24-Oct-24	0:00	0.00	0.0	7.3	11.6	-	
GP-16A	24-Oct-24	0:00	0.00	0.0	2.0	18.5	-	
GP-16B	24-Oct-24	0:00	0.00	0.0	2.5	17.2	-	
GP-17	24-Oct-24	0:00	0.00	0.0	6.4	13.3	-	
GP-18	24-Oct-24	0:00	0.00	0.0	3.9	19.3	-	
GP-19	24-Oct-24	0:00	0.00	0.0	2.8	17.1	-	
LFG-1							-	*Note 2*
LFG-2							-	*Note 2*
LFG-3							-	*Note 2*

General Data

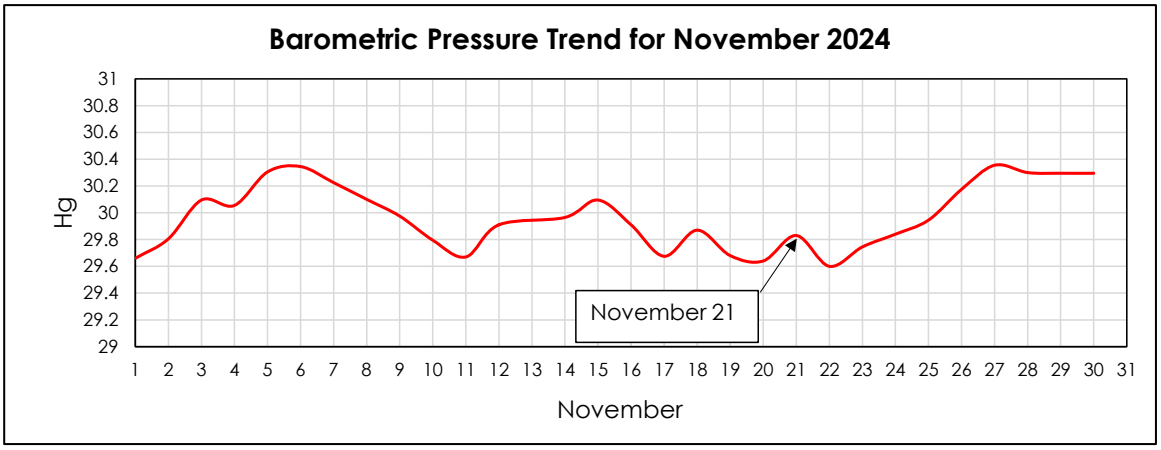
		Weather Conditions	
Monitored by:	L. Murray	Sky Cover:	
Instruments:	GEM 5000	Wind / Rain / Snow:	
Calibration Date:	24-Oct-24	Temperature (°F):	

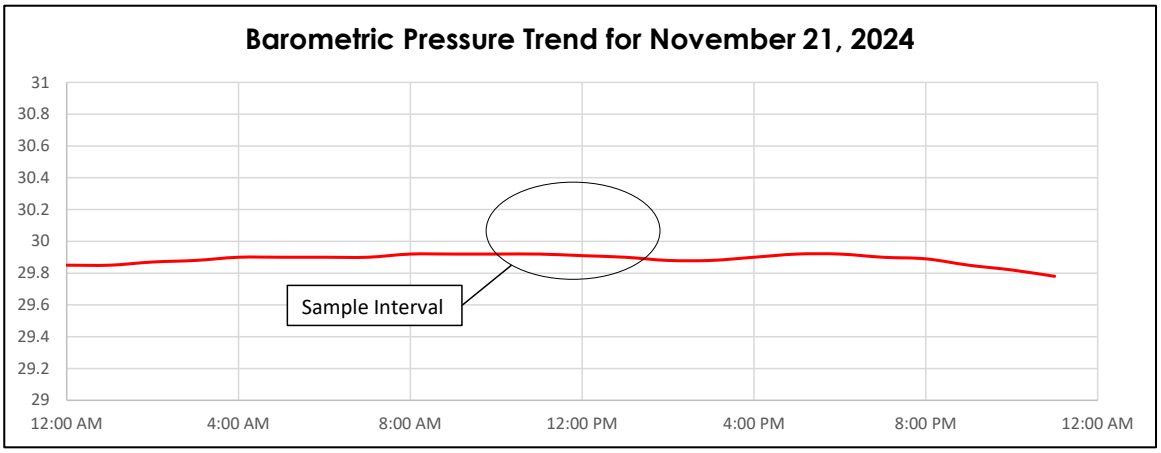
Notes

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded if observed during sampling
2. Not monitored. Probe casing rusted shut.

GP = Gas Probe	CH_4 = Methane	S = shallow	A= shallow
NM = Not measured	CO_2 = Carbon Dioxide	M = medium	B = medium
equipment malfunction	O_2 = Oxygen	D = deep	C = deep

Barometric Pressure Trend - November 2024
Hidden Valley Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-11-21/2024-11-21/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-09-26/2024-09-26/daily

Landfill Gas Probe Monitoring

SCS Engineers

Hidden Valley Landfill

4224002.03

PCRCD dba LRI

November 21, 2024

Location Reference Designation	Date	Time	Pressure (in. H_2O)	CH_4 (% vol.)	CO_2 (% vol.)	O_2 (% vol.)	Comments: Spike CH4 *Note 1* (% vol.)	Comments: Other
Gas Probes								
GP-1A	21-Nov-24	10:44	0.58	0.0	4.8	6.0	-	
GP-1B	21-Nov-24	10:47	0.54	0.0	5.3	15.2	-	
GP-1C	21-Nov-24	10:50	0.52	0.0	4.2	14.9	-	
GP-2A	21-Nov-24	10:57	0.54	0.7	9.1	6.6	0.7	
GP-2B	21-Nov-24	11:09	0.18	0.0	0.1	21.0	-	
GP-3S	21-Nov-24	11:15	0.55	0.0	1.8	18.6	-	
GP-3M	21-Nov-24	11:18	0.53	0.0	4.0	8.9	-	
GP-3D	21-Nov-24	11:21	0.58	0.0	4.4	9.2	-	
GP-4A	21-Nov-24	11:29	0.56	0.0	5.2	13.2	-	
GP-4B	21-Nov-24	11:33	0.51	0.0	0.9	20.0	-	
GP-5A	21-Nov-24	11:38	0.55	0.0	0.1	21.4	-	
GP-5B	21-Nov-24	11:44	0.55	0.0	0.0	21.5	-	
GP-6	21-Nov-24	11:49	0.57	0.0	0.0	21.4	-	
GP-7S	21-Nov-24	11:55	0.55	0.0	0.1	21.1	-	
GP-7D	21-Nov-24	11:58	0.54	0.0	0.2	20.9	-	
GP-8A	21-Nov-24	12:06	0.55	0.0	6.2	14.8	-	
GP-8B	21-Nov-24	12:10	0.56	0.0	1.0	20.0	-	
GP-9	21-Nov-24	12:23	0.55	0.0	5.2	10.5	-	
GP-10	21-Nov-24	12:30	0.56	0.0	0.4	21.1	-	
GP-11	21-Nov-24	12:37	0.54	0.0	2.1	17.7	-	
GP-12	21-Nov-24	12:42	0.56	0.0	4.8	13.8	-	
GP-13A	21-Nov-24	12:47	0.75	0.0	4.3	17.1	-	
GP-13B	21-Nov-24	12:50	0.56	0.0	0.4	20.9	-	
GP-14S	21-Nov-24	12:56	0.55	0.0	3.4	17.1	-	
GP-14D	21-Nov-24	12:59	0.56	0.0	3.5	11.4	-	
GP-15A	21-Nov-24	13:04	0.56	0.0	2.4	16.0	-	
GP-15B	21-Nov-24	13:07	0.56	0.0	10.1	5.9	-	
GP-16A	21-Nov-24	13:15	0.71	0.0	2.0	19.6	-	
GP-16B	21-Nov-24	13:18	0.57	0.0	1.2	20.1	-	
GP-17	21-Nov-24	13:24	0.57	0.0	2.3	17.9	-	
GP-18	21-Nov-24	13:29	0.57	0.0	2.0	19.9	-	
GP-19	21-Nov-24	13:39	0.58	0.0	3.3	16.8	-	
LFG-1							-	*Note 2*
LFG-2							-	*Note 2*
LFG-3							-	*Note 2*

General Data

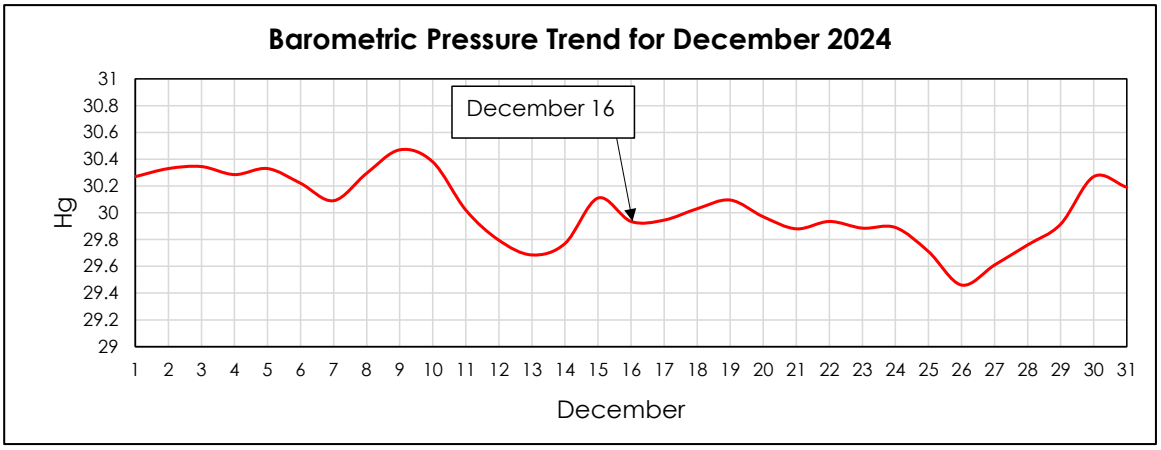
		Weather Conditions	
Monitored by:	A. Deszo	Sky Cover:	
Instruments:	Envision	Wind / Rain / Snow:	
Calibration Date:	21-Nov-24	Temperature (°F):	

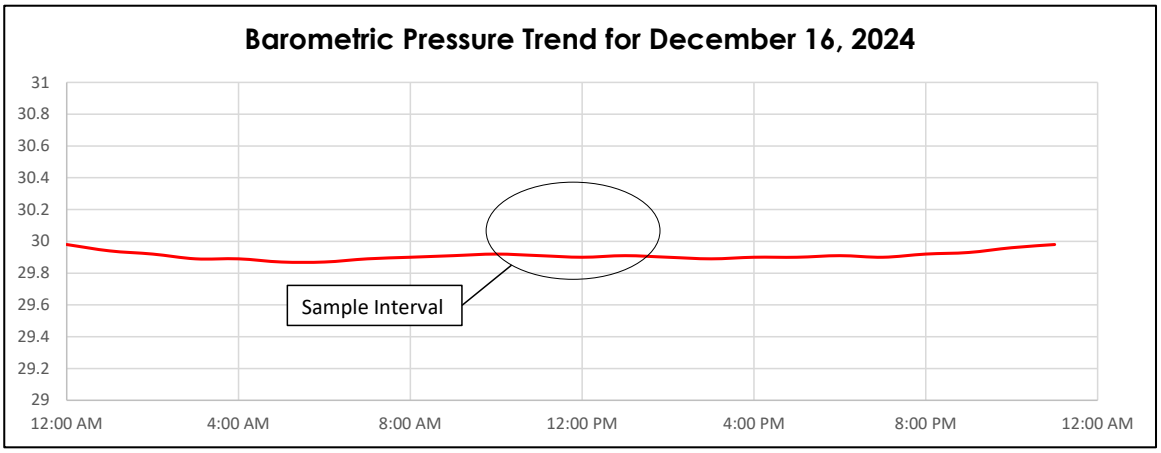
Notes

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded if observed during sampling
2. Not monitored. Probe casing rusted shut.

GP = Gas Probe	CH_4 = Methane	S = shallow	A= shallow
NM = Not measured	CO_2 = Carbon Dioxide	M = medium	B = medium
equipment malfunction	O_2 = Oxygen	D = deep	C = deep

Barometric Pressure Trend - December 2024
Hidden Valley Landfill, Pierce County, Washington





Monthly Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-12-16/2024-12-16/monthly

Daily Data Source: Wunderground.com (South Hill, WA)
Lat: 47.10 Long: 122.27 Elev: 561 ft-AMSL
Data Source:
https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-12-16/2024-12-16/daily

Landfill Gas Probe Monitoring

SCS Engineers

Hidden Valley Landfill

4224002.03

PCRCD dba LRI

December 16, 2024

Location Reference Designation	Date	Time	Pressure (in. H_2O)	CH_4 (% vol.)	CO_2 (% vol.)	O_2 (% vol.)	Comments: Spike CH4 *Note 1* (% vol.)	Comments: Other
Gas Probes								
GP-1A	16-Dec-24	8:19	0.63	0.0	1.5	12.1	-	
GP-1B	16-Dec-24	8:21	0.14	0.0	2.2	16.6	-	
GP-1C	16-Dec-24	8:23	0.02	0.0	1.3	18.4	-	
GP-2A	16-Dec-24	8:27	0.09	0.5	3.5	15.1	1.5	
GP-2B	16-Dec-24	8:29	0.09	0.0	0.4	21.7	-	
GP-3S	16-Dec-24	8:32	0.02	0.0	0.9	19.4	-	
GP-3M	16-Dec-24	8:33	0.04	0.0	2.6	10.8	-	
GP-3D	16-Dec-24	8:35	0.05	0.0	3.6	8.7	-	
GP-4A	16-Dec-24	8:40	0.21	0.0	1.3	18.6	-	
GP-4B	16-Dec-24	8:42	-0.02	0.0	1.6	20.0	-	
GP-5A	16-Dec-24	8:46	0.11	0.0	0.4	21.8	-	
GP-5B	16-Dec-24	8:48	-0.01	0.0	0.1	22.0	-	
GP-6	16-Dec-24	8:51	0.18	0.0	0.1	21.9	-	
GP-7S	16-Dec-24	8:54	0.06	0.0	0.1	22.0	-	
GP-7D	16-Dec-24	8:56	-0.01	0.0	0.1	21.9	-	
GP-8A	16-Dec-24	9:03	0.15	0.0	2.3	16.3	-	
GP-8B	16-Dec-24	9:06	-0.01	0.0	1.2	18.7	-	
GP-9	16-Dec-24	9:06	-0.01	0.0	1.2	18.7	-	
GP-10	16-Dec-24	9:16	-0.06	0.0	0.4	21.7	-	
GP-11	16-Dec-24	9:22	0.09	0.0	1.0	18.5	-	
GP-12	16-Dec-24	9:25	0.19	0.0	0.6	20.5	-	
GP-13A	16-Dec-24	9:29	0.23	0.0	0.6	20.9	-	
GP-13B	16-Dec-24	9:32	-0.20	0.0	0.2	21.8	-	
GP-14S	16-Dec-24	9:36	0.06	0.0	2.5	16.9	-	
GP-14D	16-Dec-24	9:38	-0.28	0.0	2.3	11.9	-	
GP-15A	16-Dec-24	9:41	0.02	0.0	1.6	14.6	-	
GP-15B	16-Dec-24	9:44	-0.26	0.0	8.7	2.5	-	
GP-16A	16-Dec-24	9:49	0.24	0.0	3.0	20.1	0.1	
GP-16B	16-Dec-24	9:51	-0.06	0.0	1.5	19.9	-	
GP-17	16-Dec-24	9:57	-0.02	0.0	1.5	20.4	-	
GP-18	16-Dec-24	10:00	0.05	0.0	0.6	21.4	-	
GP-19	16-Dec-24	10:04	0.17	0.0	0.2	21.9	-	
LFG-1							-	*Note 2*
LFG-2							-	*Note 2*
LFG-3							-	*Note 2*

General Data

		Weather Conditions	
Monitored by:	T.Hanrahan	Sky Cover:	
Instruments:	Envision	Wind / Rain / Snow:	
Calibration Date:	16-Dec-24	Temperature (°F):	

Notes

1. Measurement for spike concentrations of CH_4 and CO_2 are recorded if observed during sampling
2. Not monitored. Probe casing rusted shut.

GP = Gas Probe	CH_4 = Methane	S = shallow	A= shallow
NM = Not measured	CO_2 = Carbon Dioxide	M = medium	B = medium
equipment malfunction	O_2 = Oxygen	D = deep	C = deep

Hidden Valley Landfill
Landfill Gas Monitoring of On-site Buildings

Date: 2-14-24
Weather Conditions: Overcast
Instrument: Micro FID
Measured By: JTF

The atmosphere inside buildings at the landfill were monitored for possible intrusion of methane gas. Per WAC 173-351, concentrations of methane in on-site structures must not exceed 25% of the lower explosive limit (LEL). If off-site gas migration is suspected, concentrations of methane in off-site structures must not exceed 100 ppm methane.

The areas monitored included:
- The general overall work area
- Floor drains
- Underground conduit protrusions
- Closed areas where landfill gas could collect, such as under cupboards and inside closets

The gas detection instrument must be calibrated using calibration gas containing methane equal to 50 % LEL. Calibration must be performed before and after the survey is completed.

Checked boxes indicate that the survey revealed **no detectable methane**.

1.4 ppm ☐	Main Office - individual office spaces, storage areas and within open crawl-space area.
0.1 ppm ☐	Repair Shop – survey atmosphere conditions throughout (lower height levels).
0.2 ppm ☐	Pay/Scale Booth – interior of building.
0.2 ppm ☐	Recycle Building – throughout facility and water drainage areas.
0.2 ppm ☐	Leachate Treatment Building – all lower level office spaces, restrooms, water drainage system and storage/equipment areas.
0.3 ppm ☐	Gas to Energy Building – central monitoring/control room, engine room and storage cabinets.
0.9 ppm ☐	Transfer Station Building – throughout entire building and lower levels.

Max

Signature

0 ppm upwind and downwind.

Hidden Valley Landfill
Landfill Gas Monitoring of On-site Buildings

Date: 6/26/24
Weather Conditions: Overcast
Instrument: MicroFID
Measured By: TWH

The atmosphere inside buildings at the landfill were monitored for possible intrusion of methane gas. Per WAC 173-351, concentrations of methane in on-site structures must not exceed 25% of the lower explosive limit (LEL). If off-site gas migration is suspected, concentrations of methane in off-site structures must not exceed 100 ppm methane.

The areas monitored included:
- The general overall work area
- Floor drains
- Underground conduit protrusions
- Closed areas where landfill gas could collect, such as under cupboards and inside closets

The gas detection instrument must be calibrated using calibration gas containing methane equal to 50 % LEL. Calibration must be performed before and after the survey is completed.

Checked boxes indicate that the survey revealed **no detectable methane**.

- ☐ Main Office - individual office spaces, storage areas and within open crawl-space area. 0 ppm
- ☐ Repair Shop – survey atmosphere conditions throughout (lower height levels). 0 ppm
- ☐ Pay/Scale Booths – interior of building for both scales. 0 ppm
- ☐ Recycle Building – throughout facility and water drainage areas. 0 ppm
- ☐ Leachate Treatment Building – all lower level office spaces, restrooms, water drainage system and storage/equipment areas. 0.1 ppm – Back east corner
- ☐ Transfer Station Building – throughout entire building and lower levels. 0.0 ppm

Signature

Hidden Valley Landfill
Landfill Gas Monitoring of On-site Buildings

Date: 8/9/24
Weather Conditions: Sunny
Instrument: Microtid
Measured By: TWH CM

The atmosphere inside buildings at the landfill were monitored for possible intrusion of methane gas. Per WAC 173-351, concentrations of methane in on-site structures must not exceed 25% of the lower explosive limit (LEL). If off-site gas migration is suspected, concentrations of methane in off-site structures must not exceed 100 ppm methane.

The areas monitored included:
- The general overall work area
- Floor drains
- Underground conduit protrusions
- Closed areas where landfill gas could collect, such as under cupboards and inside closets

The gas detection instrument must be calibrated using calibration gas containing methane equal to 50 % LEL. Calibration must be performed before and after the survey is completed.

Checked boxes indicate that the survey revealed **no detectable methane**.

- ☐ Main Office - individual office spaces, storage areas and within open crawl-space area. .9 - printer room
- ☐ Repair Shop – survey atmosphere conditions throughout (lower height levels). .7 - maintenance room
- ☑ Pay/Scale Booth – interior of building. 0.0
- ☑ Recycle Building – throughout facility and water drainage areas. 0.0
- ☐ Leachate Treatment Building – all lower level office spaces, restrooms, water drainage system and storage/equipment areas. .5 - DSP-5-404 - .3 ppm
- ☐ Gas to Energy Building – central monitoring/control room, engine room and storage cabinets.
- ☐ Transfer Station Building – throughout entire building and lower levels. .5 - top office

Signature

Hidden Valley Landfill
Landfill Gas Monitoring of On-site Buildings

Date: 11/27/24
Weather Conditions: Partly Cloudy 45° F
Instrument: Micro FID
Measured By: AMD

The atmosphere inside buildings at the landfill were monitored for possible intrusion of methane gas. Per WAC 173-351, concentrations of methane in on-site structures must not exceed 25% of the lower explosive limit (LEL). If off-site gas migration is suspected, concentrations of methane in off-site structures must not exceed 100 ppm methane.

The areas monitored included:
- The general overall work area
- Floor drains
- Underground conduit protrusions
- Closed areas where landfill gas could collect, such as under cupboards and inside closets

The gas detection instrument must be calibrated using calibration gas containing methane equal to 50 % LEL. Calibration must be performed before and after the survey is completed.

Nat

Checked boxes indicate that the survey revealed **no detectable methane**.

1.8 — ☒ Main Office - individual office spaces, storage areas and within open crawl-space area.

1.2 — ☒ Repair Shop – survey atmosphere conditions throughout (lower height levels).

0.8 — ☒ Pay/Scale Booths – interior of building for both scales.

1.8 — ☒ Recycle Building – throughout facility and water drainage areas.

2.5 — ☒ Leachate Treatment Building – all lower level office spaces, restrooms, water drainage system and storage/equipment areas.

1.1 — ☒ Transfer Station Building – throughout entire building and lower levels.

Signature

Appendix B

LEACHATE TREATMENT &

SIDE-SLOPE LINER SYSTEM DATA

Table 1. 2024 Main Sump and Side-Slope Liner Area Performance Data
Semi - Annual Monitoring Event No. 2 - July 2024
Hidden Valley Landfill, Pierce County, Washington

Month	Main Sump Monthly Leachate Volume - Cell 1 (gallons)	Side-Slope Sump Monthly Leachate Volume - Cell 2 (gallons)	Side-Slope Sump Monthly Leakage Flow[a] - Cell 2 (gallons/month)	Monthly Rainfall (inches)
January	14,000	0	0	11.50
February	14,200	0	0	4.30
March	31,000	0	0	5.90
April	24,350	0	0	5.20
May	4,100	0	0	4.60
June	810	0	0	4.00
July	0	0	0	0.28
August	2,135	0	0	3.30
September	1,050	0	0	2.25
October	9,100	0	0	4.80
November	4,600	0	0	5.70
December	14,100	0	0	7.55
Year to date:	119,445	0	0	59.38

Notes:

a = Leakage is fluid pumped from the leak detection sump as recorded by LRI staff.

Month:____________________

LEACHATE DAILY LOG

Year:____________________

Date	Time	P15A	P15B	AG HRS	RAIN	E8 LVL	GP HRS	S-SL	CELL1	TS/GL	TRAN P	E PH	DAILY EFFLUENT
1	12AM												
2	12AM												
3	12AM												
4	12AM												
5	12AM												
6	12AM												
7	12AM												
8	12AM												
9	12AM												
10	12AM												
11	12AM												
12	12AM												
13	12AM												
14	12AM												
15	12AM												
16	12AM												
17	12AM												
18	12AM												
19	12AM												
20	12AM												
21	12AM												
22	12AM												
23	12AM												
24	12AM												
25	12AM												
26	12AM												
27	12AM												
28	12AM												
29	12AM												
30	12AM												
31	12AM												

P15A: PUMP HOURS
P15B: " "
RAIN: RAIN
E8 LVL: CELL 1 LEVEL
S-SL: SIDE SLOPE GAL'S PUMPED
CELL1: CELL 1 " "
TS/GL: TRANSFER STA " "
DAILY EFFLUENT: DAILY GAL'S PUMPED TO SEWER

Month: Dec. 2024

LEACHATE DAILY LOG

Year: ____________________

Date	Time	P15A	P15B	AC HRS	RAIN	LS LVL	GP HRS	S SL	CELL 1	TS/GL	TRAN R	ESPH	DAILY EFFLUENT
1	12AM	9833	7569	95882	0	21.8	23114	153750	1403200	484636	1598	7.48	61603
2	12AM	9833	7591	95885	0	21.9	23114	"	"	"	1590	761	61603
3	12AM	9838	7607	95888	0	21.6	23124	"	1404600	"	1588	766	61603
4	12AM	9860		95890	Ø	21.5	23129	"	1406000	"	1590	767	61603
5	12AM	9886	"	95893	Ø	21.1	23134	"	1407400	"	15.78	7.46	61603
6	12AM	9909	"	95895	0	20.7	23139	"	1408425	"	15.95	7.54	61603
7	12AM	9926		95897	1.0	20.6	23144	"	"	"	1629	752	61603
8	12AM	9931	7624	95900	.1	20.4	23150	"	1409710	"	1591	753	61603
9	12AM		7646	95902	0	20.1	23155	"	1411808	"	1583	772	61602 x
10	12AM		7668	95904	0	20	"	"	1413800	"	1605	752	61603
11	12AM		7689	95907	Ø	19.8	23165	"	1415000	"	1615	758	61603
12	12AM	9941	7705	95910	.25	19.8	23170	"	"	"	15.98	7.40	61603
13	12AM	9963	"	95912	.4	19.9	23176	"	"	"	16.18	7.43	61603
14	12AM	9981		95914	.3	19.9	23181	"	"	"	1589	751	61603
x 15	12AM	10003		95917	.1	19.9	23186	"	"	"	1590	751	61603
16	12AM	10025		95920	.55	20.2	23186	"	"	"	1653	740	61603
17	12AM	10029	7723	95922	1.20	20.2	23192	"	"	"	1611	742	61603
18	12AM		7745	95924	.35	19.8	23203	"	1416200	"	1625	732	61603
19	12AM	"	7771	95927	Ø	20.2	23208	"	"	"	1638	7.23	61603
20	12AM		7794	95929	0	20.3	23213	"	"	"	16.09	7.22	61603
21	12AM	10036	7803	95931	.2	20.5	23219	"	"	485340	1668	735	61603
22	12AM	10058		95934	.45	20.5	23225	"	"	485524	15.82	745	61602 x
23	12AM	10080		95937	.05	20.5	"	"	"	486135	1520	749	61603
24	12AM	10102		95941	.2	20.6	23231	"	"	486678	1530	742	61603
25	12AM	10124		95943	0	20.9	23242	"	"	486862	1620	736	61603
26	12AM	10127	7822	95945	.6	20.8	23242	"	"	487742	1587	738	61603
27	12AM		7863	95947	1.0	20.9	23252	"	"	490998	1674	727	61603
28	12AM		7865	95951	.25	21.1	23252	"	"	491094	1579	737	61603
29	12AM		7887	95953	.2	21.3	23257	"	"	491653	1647	721	61603
30	12AM	10135	7901	95956	.25	21.4	23262	"	"	492394	1556	734	61603
31	12AM	10156		95958	.1	21.3	23267	153750	1417300	492698	16602	723	61603

Month: NOVEMBER

LEACHATE DAILY LOG

Year: 2024

Date	Time	P15A	P15B	AC HRS	RAIN	L8 LVL	CP HRS	S5SL	CELL 1	TS/GL	TRAN PH	E PH	DAILY EFFLUENT
1	12AM	9534	7215	95807	.1	20.0	22915	153750	1398600	484636	16.21	7.39	61603
2	12AM	9539	7228	95809	.05	20	22920	"	"	"	1566	733	61603
3	12AM		7250	95811	0	20.1	22925	"	"	"	1553	738	61603
4	12AM		7272	95813	0	20.1	22930	"	"	"	1595	739	61603
5	12AM		7294	95815	0	20.2	22941	"	"	"	1557	755	61603
6	12AM	9542	7313	95818	Ø	20.2	22951	"	"	"	1588	742	61603
7	12AM	9568	"	95821	Ø	20.5	22967	"	"	"	16.09	7.41	61603
8	12AM	9590	"	95823	0	20.5	22972	"	"	"	16.10	7.41	61603
9	12AM	9607		95825	.45	20.5	22977	"	"	"	1588	737	61603
10	12AM	9629		95828	.35	20.4	22982	"	"	"	1598	734	61603
x 11	12AM	9637	7328	95832	1.0	20.5	22987	"	"	"	1637	733	61603
12	12AM		7349	95834	.25	20.6	22992	"	"	"	1687	736	61603
13	12AM		7371	95836	.50	20.7	22997	"	"	"	1656	750	61603
14	12AM	"	7398	95839	.10	20.5	23002	"	1399800	"	16.39	7.31	61603
15	12AM	9645	7411	95841	.05	20.8	23010	"	"	"	15.77	7.30	61603
16	12AM	9662		95844	.3	20.8	23020	"	"	"	1601	740	61603
17	12AM	9684		95847	.25	20.9	23025	"	"	"	16	747	61603
18	12AM	9706		95850	.1	21.1	23030	"	"	"	1584	742	61603
19	12AM	9728		95853	.1	21.3	23035	"	"	"	1584	738	61603
20	12AM	9735	7426	95856	.10	21	23040	"	1401000	"	1535	746	61603
x 21	12AM x	"	7453	95859	.50	21.3	23050	"	"	"	15.71	7.41	61603
22	12AM	"	7474	95861	.20	21.1	23055	"	1402200	"	16.03	7.40	61603
23	12AM		7492	95863	.05	20.9	23060	"	1403200	"	16.11	736	61603
24	12AM	9739	7509	95865	.55	21.1	23065	"	"	"	1597	739	61603
25	12AM	9761		95867	.45	21.1	23070	"	"	"	1590	760	61603
26	12AM	9783		95868	.20	21.3	23081	"	"	"	1579	755	61603
27	12AM	9805		95871	Ø	21.3	23086	"	"	"	1564	741	61603
28	12AM	9832	"	95874	.05	21.6	23091	"	"	"	16.07	7.32	61603
29	12AM	9833	7525	95876	0	21.7	23106	"	"	"	1587	739	61603
30	12AM		7547	95879	0	21.7	23111	153750	1403200	484636	1596	748	61603
31	12AM						23114						

Month: OCT. 2024

LEACHATE DAILY LOG

Year: ______________

Date	Time	P15A	P15B	AG HRS	RAIN	L8 LVL	GP HRS	S-SL	CELL 7	T5/GL	TRAN P	E-PH	DAILY EFFLUENT
1	12AM	9147	6920	95727	.1	20.5	22723	153750	1389500	484636	1597	682	61603
2	12AM	9168	6921	95729	Ø	20.4	22729	"	"	"	1571	677	61603
3	12AM	9194	"	95732	Ø	20.7	22735	"	"	"	16.18	6.81	61603
4	12AM	9216	"	95735	.55	20.7	22741	"	"	"	15.98	6.81	61602
5	12AM	9233		95738	0	20.6	22747	"	"	"	15.54	6.89	61602
6	12AM	9245	6932	95740	0	20.7	"	"	"	"	1587	689	61603
7	12AM		6954	95742	0	20.7	22754	"	"	"	1566	685	61603
8	12AM		6975	95743	0	20.6	22760	"	"	"	1579	670	61603
9	12AM		6997	95748	Ø	20.6	22767	"	"	"	1572	661	61603
10	12AM	9249	7019	95751	Ø	20.8	22779	"	"	"	15.93	661	61603
11	12AM	9271	"	95754	.05	20.8	22783	"	"	"	15.91	6.70	61603
12	12AM	9289		95756	0	20.6	"	"	1391401	"	1575	6.74	61603
13	12AM	9310		95758	0	20.7	22789	"	"	"	15.55	671	61603
14	12AM	9332		95760	.2	20.7	22795	"	"	"	1581	672	61603
15	12AM	9343	7031	95762	.5	20.3	22801	"	1392410	"	1579	660	61603
16	12AM		7052	95764	.25	20.2	22812	"	1393600	"	1587	659	61603
17	12AM	"	7078	95767	Ø	20.1	22818	"	1394600	"	15.92	658	61603
18	12AM	"	7100	95769	.35	20.2	22824	"	"	"	15.93	6.61	61604
19	12AM	9344	7117	95771	.05	20	22835	"	"	"	15.81	6.59	61603
20	12AM	9366		95774	.10	20	"	"	"	"	1613	7.51	61603
21	12AM	9387		95777	.15	20.3	22840	"	"	"	1592	752	61603
22	12AM	9409		95780	0	20.3	22846	"	"	"	1558	751	61603
23	12AM	9431		95782	Ø	20.2	22854	"	1394743	"	1588	736	61603
24	12AM	9441	7133	95785	Ø	19.9	22859	"	1397000	"	15.91	756	61603
25	12AM	"	7155	95787	.05	19.9	22864	"	1397450	"	16.23	7.52	61603
26	12AM		7173	95789	1.25	19.3	22870	"	1398600	"	1566	7.43	61602
27	12AM		7195	95792	.65	19.5	22875	"	"	"	1640	748	61603
28	12AM	9442	7215	95796	.05	19.7	22881	"	"	"	1576	746	61603
29	12AM	9464		95798	0	19.8	22892	"	"	"	1573	745	61603
30	12AM	9486		95802	.25	20	22898	"	"	"	1618	735	61603
31	12AM	9512		95805	.25	20.0	22909	"	"	"	15.91	727	61603

22915

Month: SEPTEMBER

Year: 2024

LEACHATE DAILY LOG

Date	Time	P14A	P15B	AC HRS	RAIN	L8 LVL	GP HRS	SSI	CELL1	TS/GL	TRANSF	PH	DAILY EFFLUENT
1	12AM	8853	6563	95546	0	19.6	22534	153750	13884 50	480172	15.84	7.04	61602
2	12AM		6584	95551	.0	19.5	22534	153750	1388450	480346	15.76	7.06	61603
3	12AM		6606	95559	.0	19.5	22534	153750	1388450	480346	15.76	7.07	61602
4	12AM		6627	95566	.0	19.5	22534	153750	1388450	480366	15.76	7.08	61603
5	12AM	8875		95574	.0	19.7	22534	153750	1388450	480762	15.88	7.01	61603
6	12AM	8897		95580	.0	19.6	22562	153750	1388450	480958	15.81	6.99	61603
7	12AM	8920		95587	.0	19.6	22562	153750	1388450	481074	15.75	7.01	61603
8	12AM	8942		95590	.2	19.8	22576	153750	1388450	481473	15.70	7.04	61603
9	12AM	8951	6638	95596	.0	19.8	22576	153750	1388450	481473	15.70	7.04	61602
10	12AM		6661	95604	.2	19.9	22583	153750	1388450	481473	15.83	7.01	61603
11	12AM	8951	6683	95611	.8	20.0	22590	"	"	482112	16.11	7.0	61603
12	12AM	"	6705	95619	.75	20.0	22596	"	"	483667	15.67	6.9	61603
13	12AM	8952	6725	95627	.0	20.1	22603	"	"	483765	15.80	6.93	61603
14	12AM	8975		95632	.0	20.1	22603	153750	1388450	483765	15.80	6.90	61603
15	12AM	8997		95638	.0	20.1	22609	153750	1388450	484319	5.80	6.88	61603
16	12AM	9014		95643	.0	20.0	22615	153750	1388450	484636	15.91	6.88	61603
17	12AM	9040		95655	.25	20.0	22615	153750	1389500	484636	15.91	6.89	61603
18	12AM	9049	6734	95660	0	19.9	22627	"	"	"	15.71	685	61603
19	12AM		6756	95669	0	20.1	22634	"	"	"	1577	686	61603
20	12AM		6778	95675	0	20.1	22640	"	"	"	1525	685	61603
21	12AM		6800	95681	.0	20.3	22646	"	"	"	1578	686	61603
22	12AM	9052	6823	95689	.0	20.3	22655	150750	1389500	484636	15.78	6.86	61603
23	12AM	9069		95696	.0	20.3	22655	150750	1389500	484636	16.17	6.87	61603
24	12AM	9095		95709	0	20.3	22686	153750	1389500	484636	16.17	6.83	61603
25	12AM	9113		95713	0	"	22692	"	"	"	15.88	682	61603
26	12AM	9135		95715	.05	20.4	22698	"	"	"	1542	685	61603
27	12AM	9147	6833	95717	0	20.1	22704	"	"	"	1566	686	61603
28	12AM		6855	95720	0	20.3	22710	"	"	"	1616	682	61603
29	12AM		6877	95722	0	20.4	"	"	"	"	1586	685	61603
30	12AM		6898	95724	0	20.5	22717	"	"	"	1565	684	61603
31	12AM												

6920

22723

Month: August 2024

LEACHATE DAILY LOG

Year: ______________________

Date	Time	P15A	P15B	AC HRS	RAIN	L8 LVL	GP HRS	S SL	CELL1	TS/GL	TRAN P	E-PH	DAILY EFFLUENT
1	12AM	8507	6235	95367	0	18.6	22371	153750	1386315	473414	1583	696	61603
2	12AM	8529		95370	0	18.6	22379	"	"	"	1581	696	61603
3	12AM	8551		95376	0	18.6	22387	"	"	"	1577	696	61603
4	12AM	8559	6249	95382	.0	18.6	22395	"	"	"	1579	696	61603
5	12AM		6275	95389	.Ø	18.9	22395	153750	1386315	473414	15.61	6.97	61603
6	12AM		6297	95393	.Ø	18.8	22395	153750	1386315	473414	15.55	7.00	61603
7	12AM		6319	95399	.Ø	18.8	24403	153750	1386315	473414	15.74	7.00	61603
8	12AM	8562	6333	95405	0	18.8	24403	153750	1386315	473414	15.74	7.00	61603
9	12AM	8584		95407	0	18.9	22417	"	"	"	1572	699	61603
10	12AM	8606		95412	.Ø	18.9	22424	"	"	"	1565	7.00	61603
11	12AM	8633		95418	Ø	18.9	22424	153750	1386315	473414	15.65	7.00	61603
12	12AM	8654	6354	95424	.Ø	19.1	22431	153750	1386315	473414	15.70	7.06	61603
13	12AM	8657	6352	95429	.Ø	19.1	22431	153750	1386315	473414	15.67	7.04	61602 -
14	12AM		6374	95434	.Ø	19.1	22431	153750	1386315	473414	15.67	7.03	61603
15	12AM		6396	95440	.Ø	18.9	22431	153250	1386315	473414	1575	7.02	61603
16	12AM		6413	95446	.Ø	18.9	22459	153750	1387400	473414	15.75	7.04	61603
17	12AM	8680	6431	95451	.Ø	18.9	22459	153750	1387400	473414	15.75	7.04	61603
18	12AM	8680		95457	.Ø	18.9	22459	153750	1387400	473414	15.75	7.05	61602 -
19	~~12AM~~	8704		95464	.2	19.2	22466	153750	1387400	473414	15.76	7.06	61602 -
20	12AM	8730		95469		19.2	22473	153750	1387400	473414	15.74	7.04	61602 -
21	12AM	8752	6431	95471	.9	19.3	22480	"	"	474996	15.85	7.07	61603
22	12AM	8755	6451	95474	.6	19.3	22487	"	"	475151	15.98	7.01	61603
23	12AM		6468	95478	.8	19.1	22487	153750	1387400	475151	15.79	7.02	61603
24	12AM		6495	95483	.2	19.1	22487	153750	1387400	475151	15.79	7.04	61603
25	12AM		6517	95486	.2	19.4	22487	153750	1387400	475151	15.79	7.00	61603
26	12AM		6529	95492	.Ø	19.4	22506	153750	1388450	477260	15.79	7.00	61603
27	12AM	8786		95496	.Ø	19.4	22506	153750	1388450	477260	1576	7.01	61603 -
28	12AM	8808		95502	.Ø	19.5	22506	153750	1388450	477260	15.90	7.02	47327 -
29	12AM	8822		95507	.Ø	19.6	———	———	———	———	15.87	7.06	61603
30	12AM	8840		95535	Ø	19.6	22520	153750	1388450	479892	15.87	7.01	61603
31	12AM	8853	6541	95540	Ø	19.6	22527	"	"	480070	15.81	7.00	61603

22534

Month: July

LEACHATE DAILY LOG

Year: 2024

208 7.7 1467

Date	Time	P15A	P15B	AC HRS	RAIN	L8 LVL	GP HRS	S-SL	CELL1	TS/GL	TRAN P	E-PH	DAILY EFFLUENT
1	12AM		5899	95230	0	16.9	22197	153750	1386310	473414	1574	6.99	61603
2	12AM	8167	5921	95234	0	17.1	22204	"	"	"	1571	6.99	61603
3	12AM	8169	5941	95239	.Ø	17.1	22211	"	"	"	1558	7.01	61603
4	12AM	8195		95244	.Ø	17.1	22219	153750	1386310	473414	1558	6.99	61603
5	12AM	8217		95246	.Ø	17.1	22219	153750	1386310	473414	1558	6.97	61603
6	12AM	8239		95251	.Ø	17.2	22219	153750	1386310	473414	15.58	7.01	61603
7	12AM	8263		95256	0	17.2	22233	153750	1386310	473414	15.55	7.02	61603
8	12AM	8265	5954	95260	0	17.3	22241	"	"	"	1585	6.95	61603
22 9	12AM		5976	95262	0	"	"	"	"	"	1579	7	61603
19 10	12AM		5998	95265	0	"	22249	"	"	"	1554	6.99	56244
22 11	12AM		6017	95269	.Ø	17.5	22257	"	"	"	1566	6.98	61603
12	12AM	8270	6039	95274	.Ø	17.5	22257	153750	1386310	473414	15.78	6.96	61603
13	12AM	8292		95278	.Ø	17.5	22257	153750	1386310	473414	15.78	6.96	61603
14	12AM	8315		95283	.Ø	17.5	22271	153750	1386310	473414	15.65	6.96	61602
15	12AM	8335		95287	0	17.8	22279	153750	1386310	473414	15.72	6.98	61603
16	12AM	8353		95291	0	17.8	"	"	"	"	1587	6.99	61603
17	12AM	8363	6051	95295	0	17.8	22287	"	"	"	1573	6.98	61603
18	12AM		6073	95299	0	17.9	22295	"	"	"	1565	7	61603
19	12AM		6095	95303	.Ø	17.9	22303	"	"	"	1563	6.99	61603
20	12AM		6124	95310	.Ø	17.9	22310	153750	1386310	473414	15.63	7.01	61603
21 21	12AM	8369	6137	95316	.Ø	17.9	22310	153750	1386310	473414	15.63	7.00	61603
22	12AM	8390		95320	.Ø	18.1	22310	153750	1386310	473414	15.71	7.01	61603
23	12AM	8412		95323	0	18.1	22325	153250	1386310	473414	15.71	7.01	61603
24	12AM	8430		95327	0	18.3	22333	"	"	"	1576	6.99	61603
25	12AM	8452		95332	0	18.3	"	"	"	"	1562	7	61603
26	12AM	8461	6150	95337	0	18.4	22338	"	"	"	1596	7.01	61603
27	12AM		6172	95342	.Ø	18.4	22346	"	"	"	1586	6.99	61603
28	12AM		6199	95348	.Ø	18.4	22346	153750	1386310	473414	1586	7.00	61603
29	12AM		6215	95353	.Ø	18.4	22346	153750	1386310	473414	15.86	6.98	61603
30	12AM	8460	6235	95358	.4	18.5	22346	153750	1386310	473414	15.70	6.96	61603
31	12AM	8489		95364	.25	18.5	22371	153750	1386310	473414	15.69	6.94	61603

Month: JUNE

Year: 2024

LEACHATE DAIL.

Date	Time	P15A	P15B	AC HRS	RAIN	L8 LVL	GR HRS	SSL	CELL	15/GL	TRAN		
1	12AM		5581	95086	.2	15.2	22044	153750	1385500	470685	1582		
2	12AM	7838	5595	95093	.8	15.2	22051	153750	1385500	470685	1592	7.05	
3	12AM	7864		95102	.6	15.4	22057	153750	1385500	470685	15.07	7.05	61603
4	12AM	7886		95108	.2	15.3	22057	153750	1385860	471482	15.98	6.92	61603
5	12AM	7908		95112	.05	15.3	22064	153750	1385860	471670	1576	6.91	61603
6	12AM	7926		95115	0	15.6	22071	"	"	"	1583	697	61602 *
7	12AM		5614	95118	0	15.6	22078	"	"	471699	1579	693	61603
8	12AM		5636	95122	0	15.6	22085	"	"	"	1585	701	61603
9	12AM		5658	95125	.2	15.7	"	"	"	471771	1577	702	61603
10	12AM		5684	95130	.0	15.8	22085	153750	1385860	471824	15.60	7.03	61603
11	12AM	7942	5691	95137	.0	15.8	22095	153750	1385860	471824	15.60	7.04	61603
12	12AM	7963		95144	.0	16.2	22106	153750	1385860	472069	15.89	7.02	61602 *
13	12AM	7984		95155	0	16.2	22113	153750	1385860	472093	15.89	7.04	61603
14	12AM	8003		95159	.05	16.1	"	"	"	472115	1588	701	61603
15	12AM	8024		95162	.7	16.1	22120	"	"	"	1597	705	61603
16	12AM		5713	95166	.0	16.2	22126	"	"	473110	1585	701	61603
17	12AM		5735	95173	.4	16.3	"	"	"	473213	1579	697	61603
18	12AM		5757	95178	.0	16.1	22126	153750	1385860	473213	15.81	7.00	61603
19	12AM		5783	95183	.0	16.1	22126	153750	1386310	473414	15.81	6.98	61603
20	12AM	8036	5789	95187	.0	16.1	22145	153750	1386310	473414	15.81	7.01	61602 *
21	12AM	8059		95192	0	16.1	22145	153750	1386310	473414	15.73	7.05	61603
22	12AM	8080		95196	0	16.4	22156	"	"	"	1573	701	61603
23	12AM	8102		95200	0	16.4	"	"	"	"	1569	705	61603
24	12AM	8122	5790	95202	0	16.5	22163	"	"	"	1576	704	61603
25	12AM		5812	95206	.0	16.7	"	"	"	"	1592	702	61602 *
26	12AM		5838	92209	.2	16.6	22163	153750	1386310	473414	15.89	6.98	61603
27	12AM	8140	5843	95212	.4	16.7	22163	153750	1386310	473414	15.77	7.02	61603
28	12AM	8162		95219	.2	16.7	22183	153750	1386310	473414	15.79	6.93	61603
29	12AM	8167	5860	95222	0	16.7	22183	153750	1386310	473414	15.79	6.97	61603
30	12AM	8167	5877	95226	0	16.7	22197	"	"	"	1578	701	61603
31	12AM						153						

Month: May 2024

LEACHATE DAILY LOG

Year: ____________________

	Date	Time	P15A	P15B	AC HRS	RAIN	LS LVL	GPHRS	S-SL	CELL	TS/GL	TRAN P	E-PH	DAILY EFFLUENT
	1	12AM	7534	5202	94925	.2	13.5	21873	153750	1381400	470683	15.72	6.97	61603
2	2	12AM		5223	94929	.Ø	13.5	21879	153750	1382100	470683	15.72	7.01	61603
	3	12AM		5241	94934	.2	13.3	21891	153750	1382000	470683	16.06	7.00	61603
	4	12AM		5268	94938	.4	13.5	21897	153750	1383000	470683	16.05	7.01	61603
	5	12AM		5285	94942	.5	13.6	21903	"	"	"	15.59	7.8	61603
	6	12AM		5299	94946	.4	13.6	21909	"	"	"	1585	7.1	61603
	7	12AM	7564		94950	.35	13.4	21915	"	1383417	"	1581	7.6	61603
	8	12AM	7586		94954	.Ø	13.7	21921	"	"	"	15.61	6.96	61603
	9	12AM	7608		94965	.Ø	13.6	21927	153750	1383417	470683	15.77	7.04	61603
	10	12AM	7631		94971	.Ø	13.6	21927	153750	1384000	470683	15.81	7.05	61603
	11	12AM	7632	5318	94975	.Ø	13.6	21940	153750	1384000	470683	15.81	7.06	61603
	12	12AM		5345	94981	0	13.6	21940	153750	1384000	470683	15.81	7.07	61603
	13	12AM		5362	94984	0	14.1	21948	"	1384000	"	1566	707	61603
	14	12AM		5384	94988	0	13.8	21954	"	1384750	"	1560	712	61603
	15	12AM	7641	5397	94991	0	14	21960	"	"	"	1584	712	61603
	16	12AM	7663		94997	.Ø	14.1	21966	"	"	"	1571	706	61603
	17	12AM	7689		95005	.Ø	14.1	21966	153750	1384750	470683	15.71	7.10	61603
	18	12AM	7706		95010	.4	14.Ø	21966	153750	1384750	470683	15.87	7.11	61603
	19	12AM	7730	5400	95016	.0	14.1	21973	153750	1385500	470683	15.56	7.03	61603
	20	12AM		5419	95021	.4	14.2	21986	153750	1385500	470683	15.74	7.08	61603
	21	12AM		5439	95025	.7	14.4	21992	"	"	"	1589	703	61603
	22	12AM		5460	95028	0	14.4	21993	"	"	"	1577	708	61603
	23	12AM		5482	95036	0	14.5	22003	"	"	"	1571	702	61603
2	24	12AM	7740	5495	95041	.4	14.6	"	"	"	"	1584	694	61603
	25	12AM	7761		95048	.6	14.6	22010	153750	1385500	470683	15.84	7.04	61603
	26	12AM	7783		95054	.2	14.6	22017	153750	1385500	470683	15.84	7.06	61603
	27	12AM	7810		95060	.0	14.8	22017	153750	1385500	470683	15.71	7.64	61603
	28	12AM	7827		95065	.25	14.9	22030	153750	1385500	470683	15.70	7.01	61603
	29	12AM	7828	5516	95069	0	15	"	"	"	"	1568	704	61603
	30	12AM		5537	95073	0	15.1	22037	"	"	"	1573	704	61603
	31	12AM		5559	95077	0	15.3	22044	"	"	"	1588	705	61603

Month: April

LEACHATE DAILY LOG

Year: 2024

Date	Time	P15A	P15B	AC HRS	RAIN	L8 LVL	GP HRS	S-SL	CELL 1	TS/GL	TRAN F	E-PH	DAILY EFFLUENT
1	12AM	7168		94780	.Ø	18.9	21732	153750	1357050	470661	15.46	7.05	61603
2	12AM	7190		94784	.15	18.9	21732	153750	1357050	470661	15.46	7.08	61604
3	12AM	7212	4907	94788	0	18.7	21738	〃	1358200	470666	1542	7.09	61603
4	12AM	7234		94791	.45	18.8	21745	〃	〃	〃	1595	7.09	61603
5	12AM	7240	4923	94796	0	18.2	21750	〃	1359965	〃	1585	704	61603
6	12AM		4944	94799	.Ø	17.6	〃	〃	1362388	〃	1594	705	61603
7	12AM		4966	94805	.4	17.6	21750	153750	1363047	470669	15.94	7.05	61604
8	12AM		4992	94812	.2	17.8	21762	153750	1363047	470677	15.89	7.09	61603
9	12AM	7250	5005	94818	.4	17.9	21767	153750	1363047	47068	15.52	7.10	61603
10	12AM	7272		94822	.5	17.8	21767	153750	1363047	47068	15.78	7.10	61603
11	12AM	7289		94825	.05	17.2	21773	〃	1365408	470681	1655	705	61603
12	12AM	7311		94828	0	16.5	21779	〃	1367784	〃	1585	706	61603
13	12AM	7333		94833	0	16.2	21785	〃	1369300	〃	1586	708	61603
14	12AM	7338	5021	94838	.Ø	16.5	〃	〃	〃	470683	1573	705	61603
15	12AM		5043	94845	.Ø	16.4	21785	153750	1369300	470683	15.57	7.12	61603
16	12AM		5065	94852	.Ø	16.4	21796	153750	1369300	470683	15.57	6.97	61603
17	12AM		5088	94856	.Ø	16.4	21796	153750	1369300	470683	15.57	7.09	61603
18	12AM	7344	5103	94860	0	16.5	21796	153750	1369300	470683	15.83	7.08	61603
19	12AM	7366		94863	0	16.5	21815	〃	1370000	〃	16.22	707	61603
20	12AM	7388		94866	0	16.3	21819	〃	1371050	〃	1585	707	61603
21	12AM	7410		94870	.05	16.4	21824	〃	〃	〃	1538	709	61603
22	12AM	7432		94874	.Ø	16.5	〃	〃	〃	〃	1598	707	61603
23	12AM	7436	5120	94878	.0	16.5	21824	153750	1372000	470683	16.00	7.11	61603
24	12AM		5142	94885	.2	15.7	21841	153750	1373000	470683	16.05	7.07	61603
25	12AM		5164	94892	.8	15.7	21841	153750	1374000	470683	16.16	7.10	61603
26	12AM		5189	94898	.8	15.5	21841	153750	1375100	470683	15.68	7.05	61603
27	12AM	7443	5201	94902	.1	15	21860	〃	1376737	〃	1567	707	61603
28	12AM	7465		94907	.1	14.5	〃	〃	1378177	〃	1558	706	61603
29	12AM	7487		94911	.6	14.1	21866	〃	1379608	〃	16.01	707	61603
30	12AM	7509		94917	.4	13.6	21873	〃	1381400	〃	1577	708	61603
31	12AM												

Month: March

Year: 2024

LEACHATE DAILY LOG

Date	Time	P1 5A	P1 5B	AC HRS	RAIN	LS LVL	GP HRS	S.SL	CELL #	TS/GL	TRANS	E.PH	DAILY EFFLUENT
1	12AM	6844	4630	94653	1.8	23.5	21069	153750	1325000	470593	15.67	7.20	109909
2	12AM		4647	94656	0	23.2	21069	"	1326000	470599	16 12	723	109909
3	12AM		4669	94660	.4	23.3	"	"	"	470609	15.47	722	109909
4	12AM		4691	94663	.1	23.5	"	"	"	470612	1588	719	109909
5	12AM		4713	94668	.0	23.5	21100	"	"	470616	1551	721	109908
6	12AM		4715	94674	.0	23.3	21100	153750	1326000	470616	15,51	7.20	109909
7	12AM	6891		94682	.0	23.3	21100	153750	1326000	470619	15.53	7.13	109908
21 8	12AM	6915		94685	.4	23.3	21100	153750	1327000	470621	15.72	7.17	109903
15 9	12AM	6936			.3	23.3	21100	153750	1328000	470621	15.72	7.17	106381
21 10	12AM	6945	4722	94687	.1	23.5	21111	"	"	"	16.37	7.19	106928
23 11	12AM	6962	4726	94690	.2	23.1	21173	"	1328702	"	1550	7.19	109909
21 12	12AM		4749	94694	.3	22.7	21215	"	1331152	"	1555	7.19	109909
23 13	12AM		4770	94699	.0	22.6	"	"	1333000	470623	1535	720	109909
14	12AM	6941	4793	94705	.10	22.6	21215	153750	1336569	470623	15.35	7.13	109908
20 15	12AM	69800		94709	.0	21.0	21215	153750	1341041	470623	15.87	7.16	106679
19 16	12AM	7008		94712	.0	21.0	21215	153750	1342000	470625	15.87	7.14	103863
20 17	12AM	7026	"	94716	.0	21.0	21215	153750	1342000	470625	1585	7.17	90580
18 18	12AM	7044	"	94718	0	21.0	21346	"	1342878	"	15.87	7.20	367
0 19	12AM	" off	" off	94722	0	off	21657	"	1343002	"	off	717	201 off
0 20	12AM	"	"	94727	.2	20.4	"	"	1345333	"	1579	719	34223
8 21	12AM		4801	94731	.2	19.6	"	"	1349407	"	1548	719	61603
19 22	12AM	7055	4809	94735	.2	19.1	21657	153750	1351600	470625	16.13	7.20	40348
19 23	12AM	7072		94741	.2	19.1	21657	153750	1352800	470625	16.13	7.15	61603
24	12AM	7091		94747	0	19.1	21657	153750	1352300	470627	16.53	7.10	61603
22 25	12AM	7116		94750	.80	19.1	21670	153750	1352800	470625	15.71	7.10	61602
2 26	12AM	7135		94753	0	19.4	21698	"	"	"	1556	709	61602
27	12AM	7142	4824	94756	.5	19.2	21707	"	1354020	"	1615	706	61602
28	12AM		4846	94760	.2	19	21713	"	1355000	470657	1588	707	61603
29	12AM		4867	94766	.0	18.8	21720	"	1356000	"	1556	706	61603
30	12AM		4887	94722	.0	18.9	21723	153750	1356600	470657	1556	7.04	61603
31	12AM	7147	4907	94754	0	18.8	21723	153750	1356400	470657	15.46	7.03	61603

PLANT OFF

Month: FEB

Year: 2024

LEACHATE DAILY LOG

Date	Time	P45A	P45B	ACHRS	RAIN	LS VL	GPHRS	SGL	CELL	LS/GL	TRANR	GPH	DAILY EFFLUENT
1	12AM		4288	94541	.2	23.8	21005	153750	1310800	470035	1571	727	79905
2	12AM		4310	94545	.0	23.1	11	11	1314198	11	1581	716	79905
3	12AM	6553	4326	94550	.0	23.1	21005	153750	1316810	470035	1556	723	79903
4	12AM	6581		94555	.0	23.0	21005	153750	1316810	470035	1600	728	79904
5	12AM	6602		94558	.2	23.1	21005	153750	1316810	470035	1569	728	79906
6	12AM	6624		94561	.35	22.1	21005	153750	1316810	470035	1569	720	79904
7	12AM	6641		94563	0	23.1	11	11	1317260	470053	1598	710	79904
8	12AM	6645	4344	94566	0	23	11	11	1318100	11	1557	715	59104
9	12AM		4360	94571	0	22.9	11	11	1319100	11	1559	718	79904
2/10	12AM		4382	94574	.2	23	11	11	11	11	1557	719	79905
24 11	12AM		4408	94579	.4	23	21005	153750	1319100	470053	1556	716	79904
12	12AM	6652	4429	94583	.2	23.1	21005	153750	1319100	470091	1554	725	99907
13	12AM	6672		94587	.0	23.1	21005	153750	1319100	470091	1554	722	99908
14	12AM	6692		94591	.95	23.2	21005	153750	1319100	470091	1591	727	99907
15	12AM	6714		94595	.05	23.3	11	11	1319615	470262	1591	722	99908
16	12AM	6737		94598	0	23.1	11	11	1320800	470279	1549	723	99907
17	12AM	6743	4440	94601	0	22.9	11	11	1322000	11	1548	722	99907
18	12AM		4462	94604	0	23	11	11	11	11	1568	716	99908
19	12AM		4489	94608	.4	23.1	21005	153750	1322000	470279	1580	720	99908
20	12AM		4511	94615	.4	23.7	21005	153750	1322000	470279	1549	717	99906
21	12AM		4522	94618	.2	23.0		153750	1322000	470367	1564	723	99907
22	12AM	6776		94621	.7	22.8	21005	153750	1323100	470434	1541	721	99907
23	12AM	6792		94624	0	23	11	11	1323900	470455	1547	722	99908
24	12AM	6814		94627	0	23.1	11	11	11	11	1597	719	99907
25	12AM	6836		94630	.35	23.2	11	11	11	470501	1587	723	99907
26	12AM	6841	4540	94633	.4	23.3	11	11	11	470516	1559	722	109909
27	12AM		4563	94642		23.1	21005	153750	1325000	470546	1546	715	109907
28	12AM		4583	94646		23.1	21005	153750	1325000	470566	1590	720	109909
29	12AM		4606	94650		23.3	21069	153750	1325000	470585	1601	727	109908
30	12AM												
31	12AM												

Month: JANUARY

LEACHATE DAILY LOG

Year: 2024

Date	Time	P15A	P15B	AC HRS	RAIN	L8 LVL	GP HRS	S SL	CELL 1	TS/GL	TRAN P	E-PH	DAILY EFFLUENT
8 1	12AM	6253	3960	94428		22.9	20936	153750	1295500	469413	1595	730	21806
11 2	12AM		3968	94434		22.9	20936	153750	1295500	469413	15.55	7.17	30719
21 3	12AM		3979	94437		24.0	20936	153750	1295500	469413	15.73	7.40	44589
22 4	12AM		4000	94440		24.0	20936	153750	1295500	469413	15.23	7.38	61617
14 5	12AM		4022	94443		24.0	20936	153750	1295500	469413	15.73	7.34	53334
15 6	12AM	6257	4032	94445	1.25	24.3	20936	"	"	"	1667	743	44362
18 7	12AM	6272		94448	.05	24.3	"	"	"	"	1625	745	50343
11 8	12AM	6290		94451	1.0	24.4	"	"	"	"	1586	743	29327
23 9	12AM	6301		94453	1.0	24.3	"	"	1296700	"	1585	7.37	61617
23 10	12AM	6324		94458	.6	24.3	20936	153750	1297800	469413	15.85	7.33	61617
11	12AM	6347		94462	.2	24.1	20936	153750	1299050	469413	15.85	7.36	61617
21 12	12AM	6351	4049	94468		23.2	20936	153750	1302856	469413	15.57	7.39	61617
21 13	12AM		4069		0				1			7.40	58054
14	12AM		4090	94478	0	23.4	20975	"	1304400	"	1555	737	61617
23 15	12AM		4112	94480	0	23.6	"	"	"	"	1587	736	61617
16	12AM	6355	4130	94483	.2	23.6	"	"	"	"	1616	737	61617
17	12AM	6377		94488	.4	23.6	"	"	"	"	1620	735	61617
18	12AM	6399		94492	.4	23.6	20975	153750	1304400	469413	16.20	7.40	61616
19	12AM	6426		94495	.2	23.6	20975	153750	1304400	469413	16.20	7.45	61617
20	12AM	6413		94498	.4	23.6	21005	153750	1305800	469413	16.20	7.32	61617
20 21	12AM	6449	4151	94503	2.0	23.6	21005	153750	1305800	469413	16.20	7.35	61617
21 22	12AM		4167	94505	.5	23.7	"	"	"	"	1612	732	57633
23	12AM		4187	94509	.05	23.8	"	"	"	"	1598	731	59105
24	12AM		4209	94512	.4	23.6	21005	"	1307250	469749	1608	734	61617
25	12AM	6451	4228	94516	.8	23.3	"	"	1308750	469981	1562	718	61616
26	12AM	6475		94520	.4	23.3	21005	153750	1308750	469981	16.62	7.28	61617
27	12AM	6496		94525	.0	23.6	21005	153750	1309500	470035	15.47	7.16	61617
24 28	12AM	6523		94523		23.8	21005	153750	1309500	470035	16.08	7.25	61617
22 29	12AM	6545		94532	1.6	23.8	"	"	"	"	15.71	7.36	79905
23 30	12AM	6547	4243	94534	.05	23.8	"	"	"	470035	1574	718	79905
22 31	12AM		4266	94538		24	21005	153750	1309500	470035	1597	7.21	79905

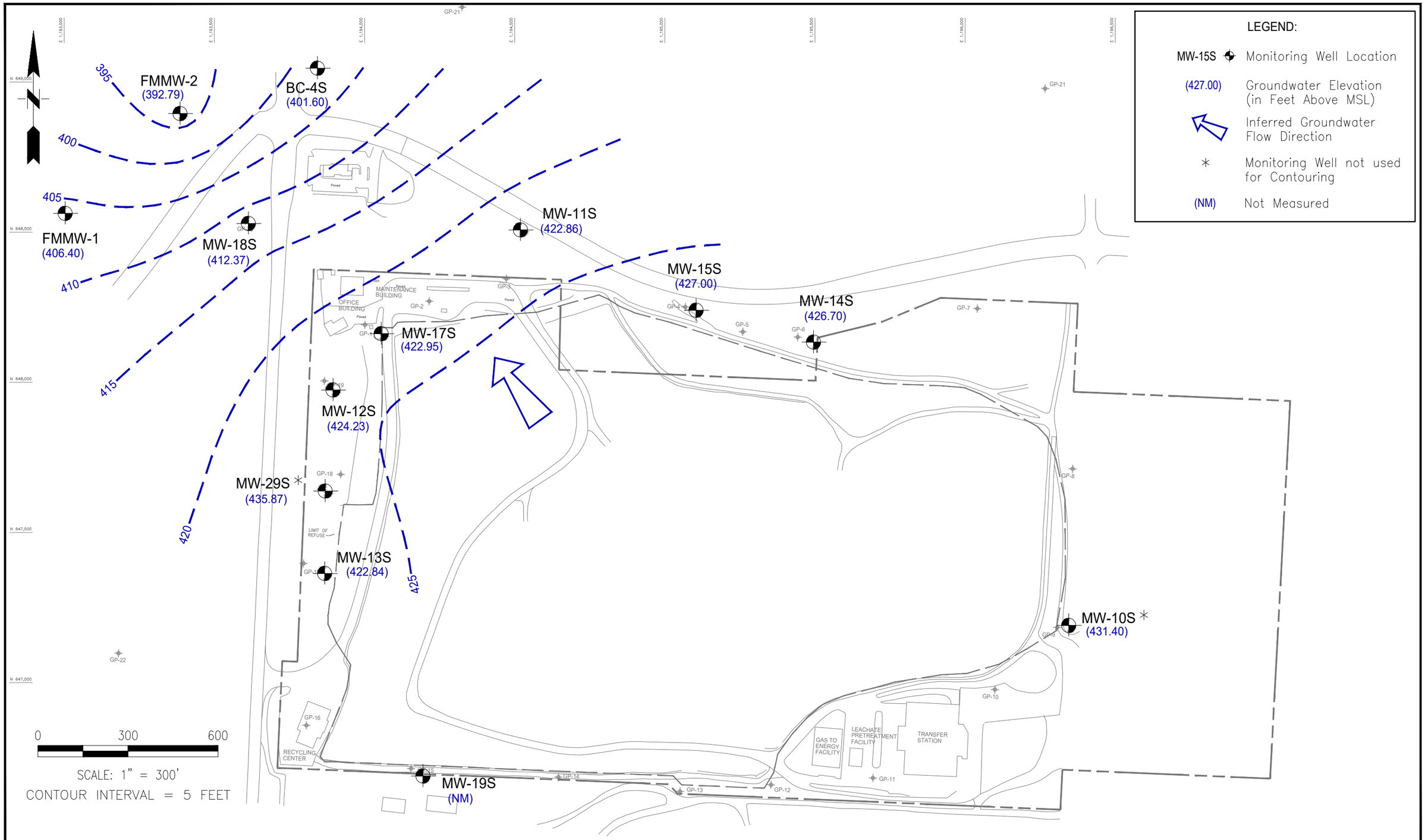
27°? <

11:58

4288

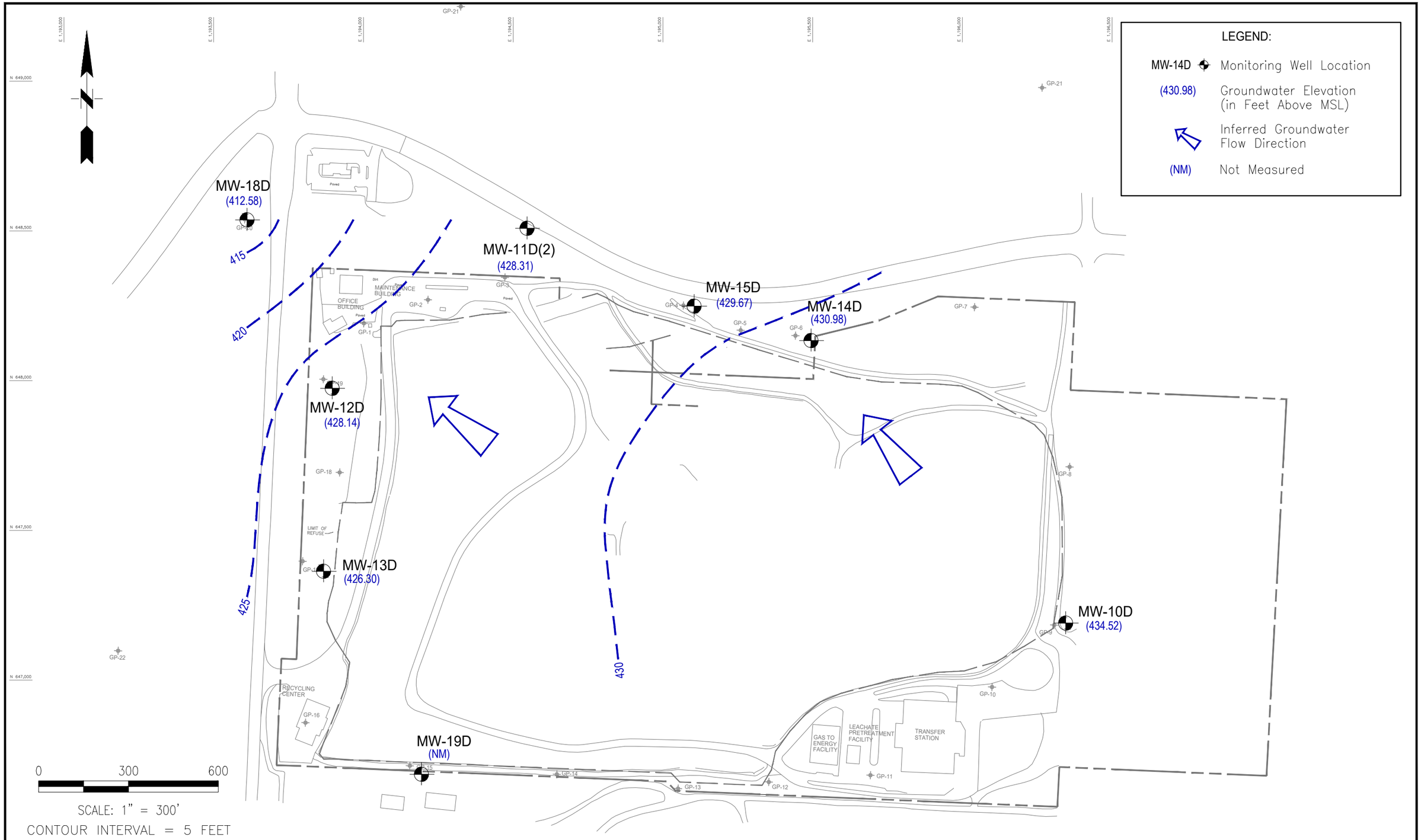
Appendix C

WATER LEVEL DATABASE



SCS ENGINEERS
Environmental Consultants and Contractors
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005
(425) 746-4600 FAX: (425) 746-6747

PROJECT NO. 04223002.02	DES BY J.E.	SHALLOW PERCHED AQUIFER WATER LEVEL MAP JANUARY 30, 2024	DATE JANUARY 2025
SCALE AS SHOWN	CHK BY D.V.	HIDDEN VALLEY LANDFILL PIERCE COUNTY, WASHINGTON	FIGURE 1
CAD FILE FIGURE 1	APP BY G.H.		



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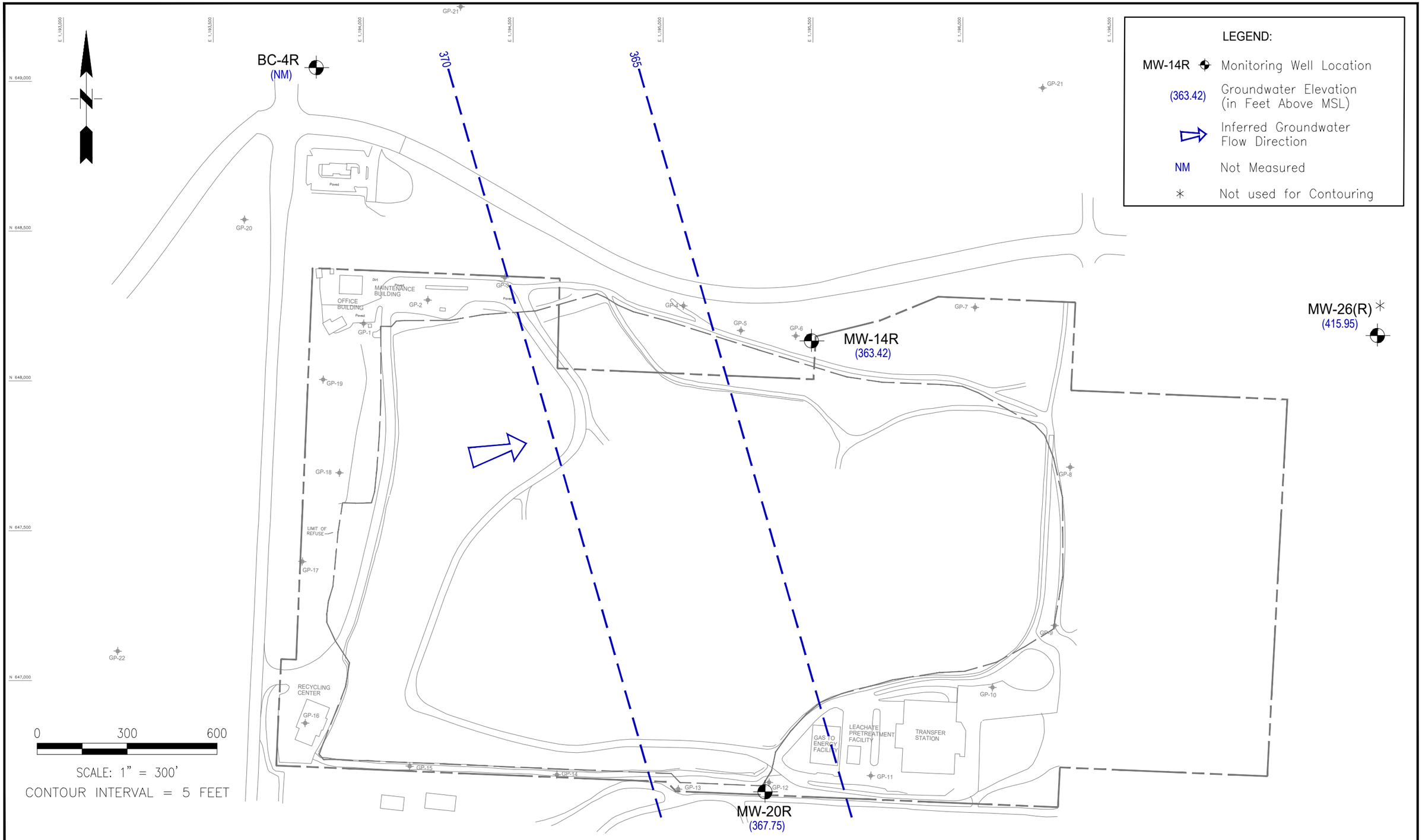
Bellevue, Washington 98005
(425) 746-4600 FAX: (425) 746-6747

PROJECT NO. 04224002.02	DES BY J.E.	UPPER REGIONAL AQUIFER WATER LEVEL MAP JANUARY 30, 2024	DATE JANUARY 2025
SCALE AS SHOWN	CHK BY D.V.	HIDDEN VALLEY LANDFILL PIERCE COUNTY, WASHINGTON	FIGURE 2
CAD FILE FIGURE 2	APP BY G.H.		



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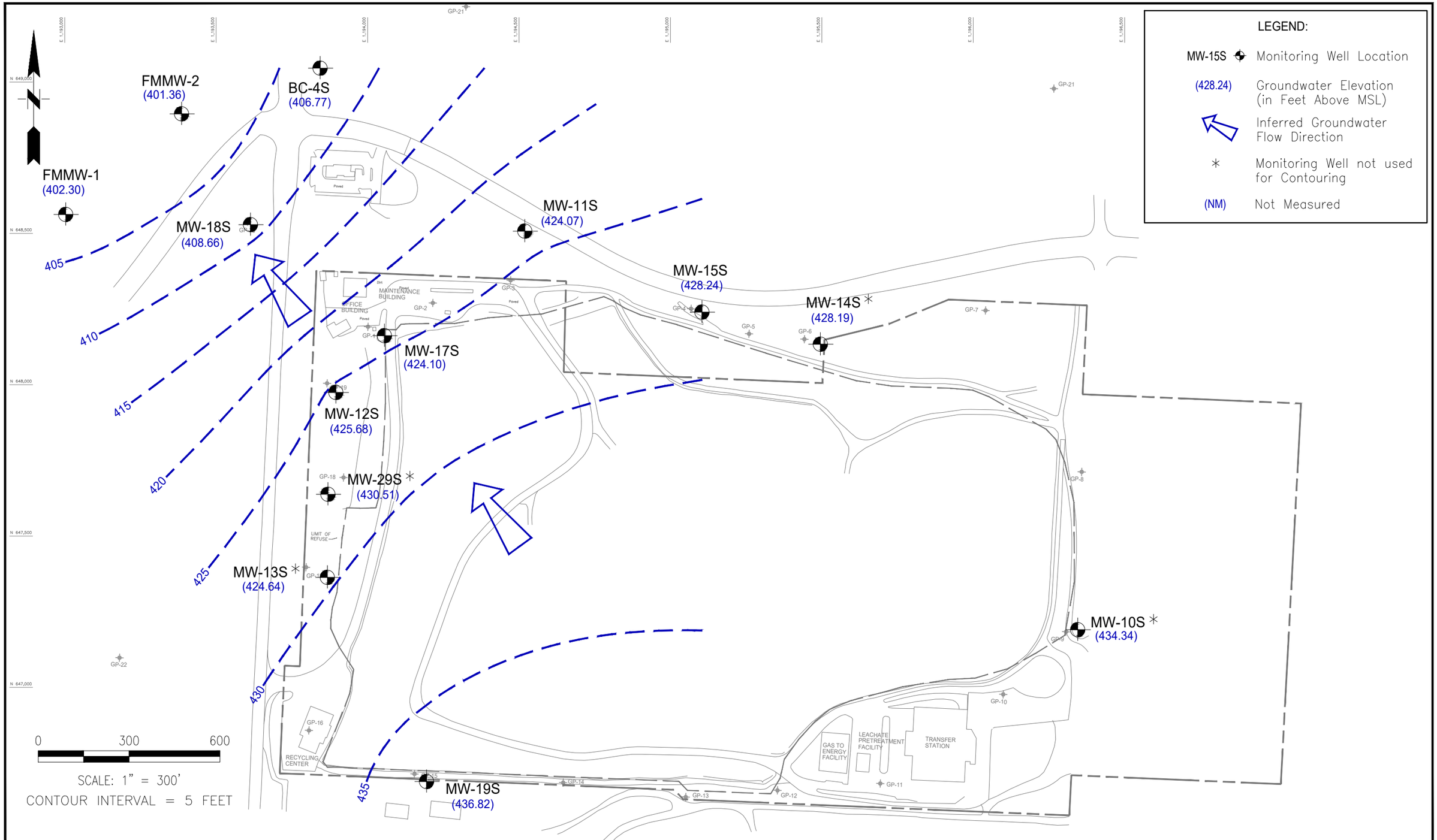
PROJECT NO. 04223002.02	DES BY J.E.	LOWER REGIONAL AQUIFER WATER LEVEL MAP JANUARY 30, 2024	DATE JANUARY 2025
SCALE AS SHOWN	CHK BY D.V.	HIDDEN VALLEY LANDFILL PIERCE COUNTY, WASHINGTON	FIGURE 3
CAD FILE FIGURE 3	APP BY G.H.		



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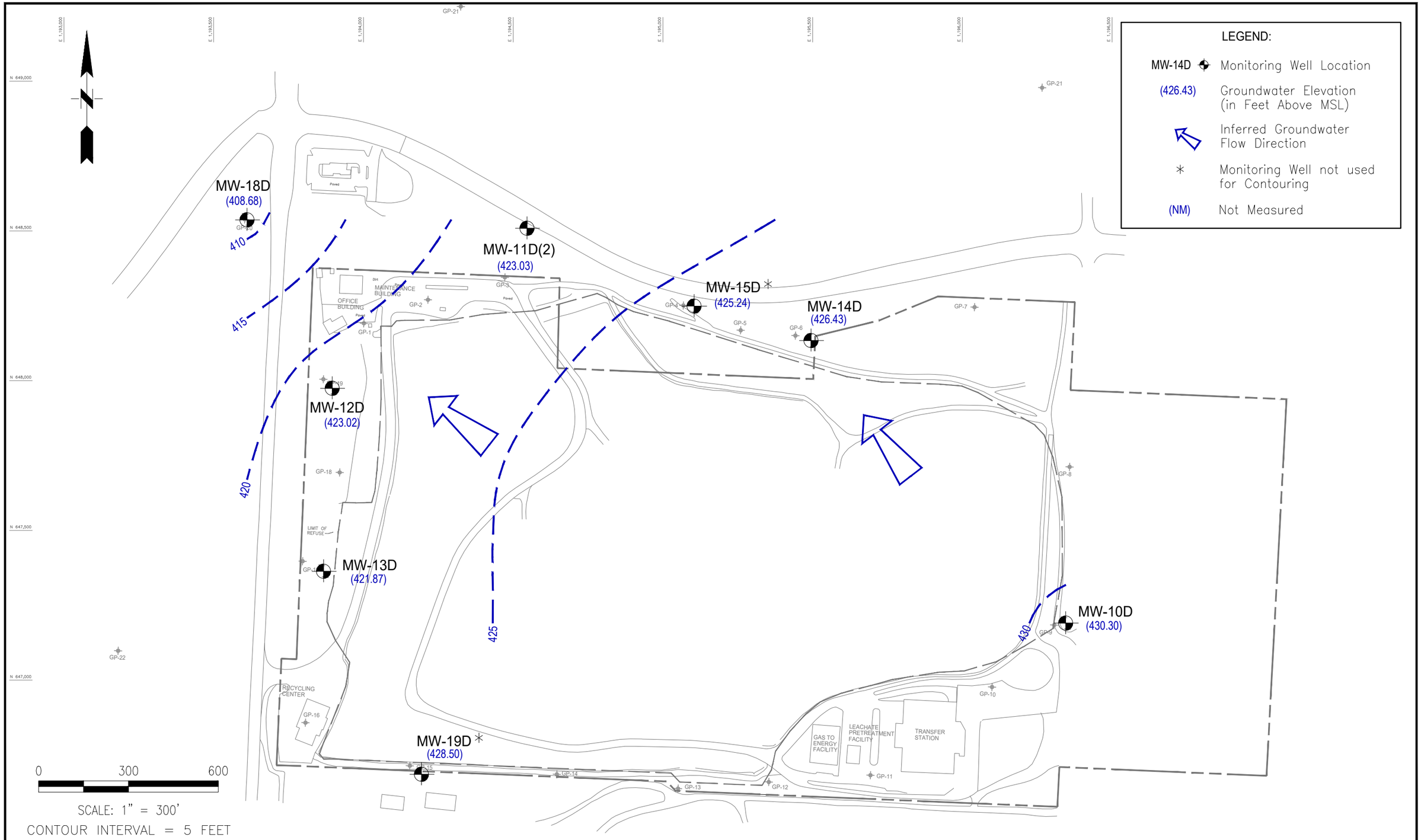
PROJECT NO. 04224002.02	DES BY J.E.	SHALLOW PERCHED AQUIFER WATER LEVEL MAP JULY 17, 2024 HIDDEN VALLEY LANDFILL PIERCE COUNTY, WASHINGTON	DATE APRIL 2025
SCALE AS SHOWN	CHK BY D.V.		FIGURE 1
CAD FILE FIGURE 1	APP BY G.H.		



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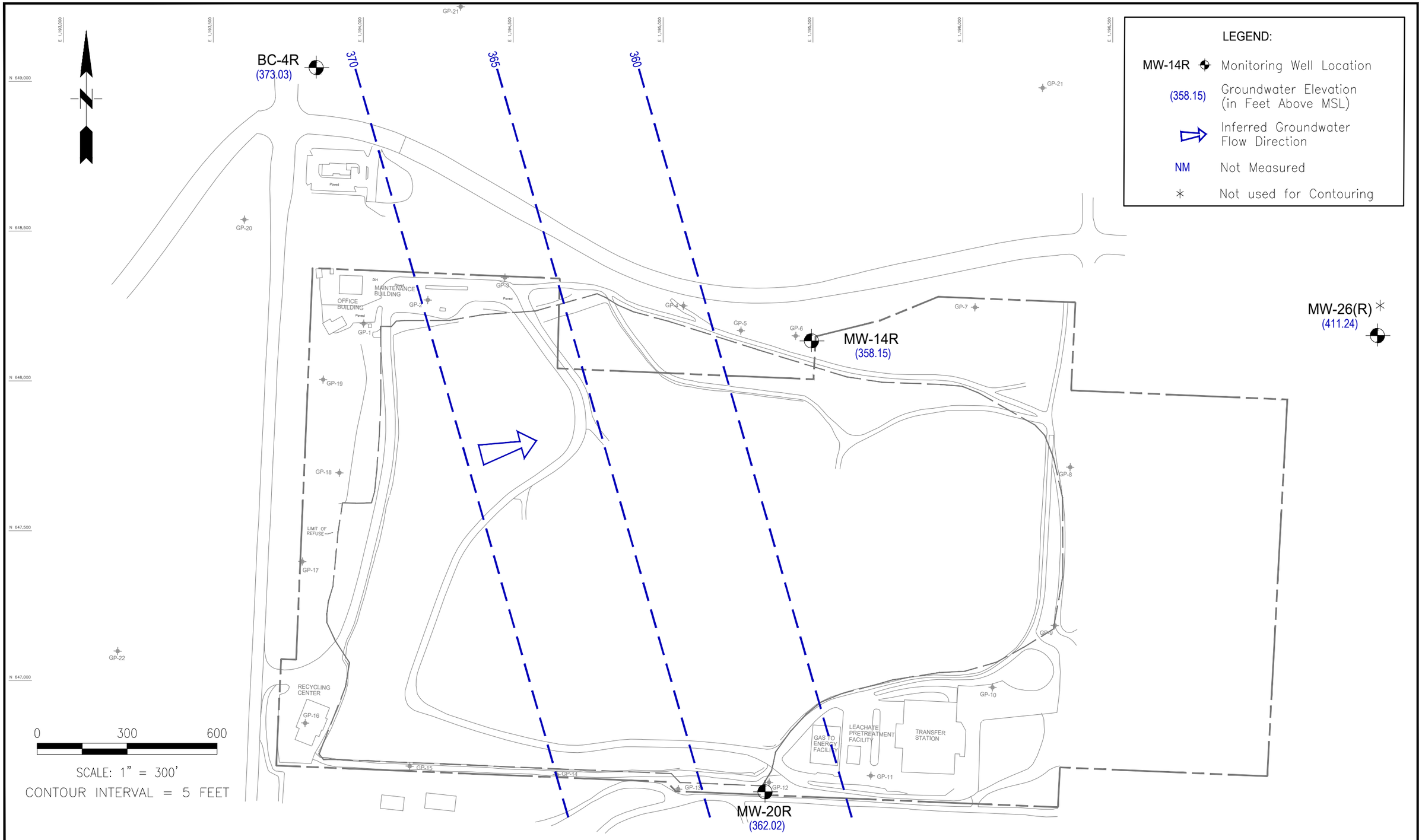
PROJECT NO. 04224002.02	DES BY J.E.	UPPER REGIONAL AQUIFER WATER LEVEL MAP JANUARY 30, 2024	DATE JANUARY 2025
SCALE AS SHOWN	CHK BY D.V.	HIDDEN VALLEY LANDFILL PIERCE COUNTY, WASHINGTON	FIGURE 2
CAD FILE FIGURE 2	APP BY G.H.		



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PROJECT NO. 04224002.02	DES BY J.E.	LOWER REGIONAL AQUIFER WATER LEVEL MAP JULY 17, 2024 HIDDEN VALLEY LANDFILL PIERCE COUNTY, WASHINGTON	DATE APRIL 2025
SCALE AS SHOWN	CHK BY D.V.		FIGURE 3
CAD FILE FIGURE 3	APP BY G.H.		

Water Level Measurements
2024 Annual Monitoring Report
Hidden Valley Landfill, Pierce County, Washington

WELL	TOC ELEV	01/15/88	02/23/88	02/24/88	04/26/88	05/24/88	06/24/88	07/18/88	07/19/88	07/20/88	07/21/88	08/30/88	08/31/88	09/15/88	09/16/88	10/25/88	12/01/88	12/02/88	12/22/88
MW-10S	463.65	427.99	427.49	--	435.51	436.45	436.11	--	435.06	--	--	432.25	--	430.78	--	428.08	433.69	--	433.08
MW-10D	464.09	--	425.36	--	431.46	431.95	392.59	--	367.17	--	--	376.81	--	426.94	--	402.14	355.13	--	402.27
MW-11S	520.03	--	--	DRY	425.79	426.18	425.77	--	--	--	424.54	--	--	--	--	DRY	--	424.29	--
MW-11D	520.10	--	--	421.19	425.61	425.97	--	--	--	--	424.33	--	421.72	420.74	--	419.81	--	--	423.94
MW-11D(2)	519.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12S	493.41	--	DRY	--	430.70	DRY	--	--	--	426.74	--	--	--	--	--	DRY	--	--	--
MW-12D	493.49	419.44	420.09	--	423.68	424.91	425.17	--	--	423.32	--	--	421.11	420.34	--	419.18	--	422.21	422.64
MW-13S	452.26	--	--	425.74	428.20	428.68	428.16	--	--	426.35	--	--	424.31	--	423.78	422.97	425.86	--	425.31
MW-13D	450.19	420.14	--	419.37	423.79	424.16	--	--	--	422.53	--	--	--	--	--	418.84	--	--	--
MW-14S	481.30	--	DRY	--	430.41	430.68	430.30	428.90	--	--	--	--	426.40	425.74	--	DRY	428.70	--	428.52
MW-14D	481.39	421.74	422.74	--	427.75	427.06	427.31	426.19	--	--	--	--	423.86	423.24	--	421.71	424.80	--	425.37
MW-14R	480.26	--	--	--	366.46	366.73	--	365.84	--	--	--	--	--	--	--	363.73	--	--	--
MW-15S	506.78	--	--	--	434.88	--	--	433.45	--	--	--	--	--	--	--	429.85	--	--	--
MW-15D	509.09	--	--	--	433.89	--	--	432.30	--	--	--	--	--	--	--	427.97	--	--	--
MW-16S^	480.27	--	--	--	427.52	--	--	--	425.92	--	--	--	--	--	--	421.67	--	--	--
MW-16D^	480.73	--	--	--	425.67	--	--	--	423.45	--	--	--	--	--	--	419.52	--	--	--
MW-17S	555.97	--	--	--	425.63	--	--	--	--	424.67	--	--	--	--	--	419.84	--	--	--
MW-18S	541.43	--	--	--	408.30	--	--	--	--	--	407.39	405.64	--	--	405.06	404.71	--	406.31	407.54
MW-18D	541.79	--	--	--	409.22	--	--	--	--	--	408.40	--	--	--	--	405.70	--	--	--
MW-19S	489.23	--	--	--	433.87	--	--	--	432.93	--	--	--	--	--	--	430.71	--	--	--
MW-19D	489.35	--	--	--	426.18	--	--	--	423.41	--	--	--	--	--	--	419.75	--	--	--
MW-20R	472.90	--	--	--	364.52	--	--	--	375.01	--	--	--	--	--	--	372.19	--	--	--
MW-22U	549.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22L	548.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23S	448.34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23D	448.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25S	527.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25D	527.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-26R	485.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-27S	531.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-27D	531.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-28S	466.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-29S	450.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BC-4S	530.25	--	--	402.57	404.81	--	--	--	--	--	--	--	402.65	--	--	401.39	--	--	--
BC-4R	530.31	--	--	369.76	372.49	--	--	--	--	--	--	370.56	--	--	--	369.53	--	--	--
FMMW-1	546.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FMMW-2	539.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes: Water level elevations have been recalculated based on the most recent TOC survey data from 5/23/2018
Before June 1996 well elevations were: MW-11s 501.48; MW-11d 501.45; MW-15s 490.53; MW-15d 490.61
Between June 1996 and March 2001 well elevations were: MW-11s 512.13; MW-11d 512.06
Before October 30, 1999 well elevations were: MW-27s 531.81; MW-27d 531.92
Before January 21, 2000 well elevations were: MW-10s 455.45; MW-10d 456.19
Before May 18, 2001 well elevations were: MW-23s 449.92; MW-23d 449.96
Before September 2000, well elevations were: BC-4S 524.35; BC-4R 524.46
Before November 19, 2004 well elevations were: MW-25S 526.54; MW-25D 526.66
Before August 2005 well elevations were: MW-18S 546.88; MW-18D 546.01, new elevations are field measurements, not survey results
MW-23S, MW-23D, MW-25S, MW-25D, MW-27S, MW-27D and MW-28S were abandoned in 2017. Subsequent data cells marked with "N/A".
-- = Water level not measured/not available
* = The well casing was blocked and SCS was unable to measure DTW at this location.
^ = Water level measurements are no longer taken at MW-16S and MW-16D
Dry = Well dry and therefore no WLE was calculated

Water Level Measurements
2024 Annual Monitoring Report
Hidden Valley Landfill, Pierce County, Washington

WELL	01/24/89	03/02/89	03/04/89	03/15/89	03/16/89	04/25/89	05/25/89	06/29/89	06/30/89	07/17/89	07/18/89	07/19/89	09/05/89	10/04/89	10/25/89	10/26/89	10/27/89	11/15/89	12/18/89
MW-10S	436.08	437.65	--	--	439.78	444.69	442.91	439.43	--	437.98	--	--	434.41	431.97	430.18	--	--	431.26	433.16
MW-10D	411.63	433.30	--	--	435.47	439.85	437.76	378.37	--	433.58	--	--	429.64	427.73	426.55	--	--	--	--
MW-11S	426.22	--	427.72	429.47	--	433.99	432.61	429.97	--	--	428.69	--	424.26	DRY	--	DRY	--	DRY	424.47
MW-11D	426.01	--	--	--	--	432.89	--	--	--	--	428.44	--	--	422.09	--	420.66	--	--	--
MW-11D(2)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12S	429.12	--	--	432.40	--	435.70	--	--	426.49	--	--	430.70	DRY	DRY	--	DRY	--	DRY	DRY
MW-12D	424.81	426.19	--	428.15	--	432.31	430.73	--	--	--	--	426.59	422.79	421.18	--	420.19	--	--	--
MW-13S	426.79	427.60	--	429.80	--	433.86	432.25	--	429.86	--	428.93	--	425.85	424.80	--	423.97	--	424.84	425.82
MW-13D	424.01	--	--	--	--	431.35	--	--	--	--	425.74	--	--	--	--	--	419.47	--	--
MW-14S	430.77	--	432.55	--	435.12	440.67	438.50	427.68	--	433.31	--	--	428.31	426.46	DRY	--	--	426.60	428.64
MW-14D	427.88	--	428.99	--	431.50	435.81	434.01	--	--	429.72	--	--	--	--	422.88	--	--	--	--
MW-14R	366.28	--	--	--	--	372.16	--	--	--	--	364.64	--	--	--	364.72	--	--	--	--
MW-15S	435.45	--	--	439.55	--	444.45	--	--	438.70	433.20	--	--	432.70	430.99	--	429.87	--	430.87	433.52
MW-15D	434.02	--	--	--	--	442.04	--	--	--	440.28	--	--	--	--	--	429.04	--	--	--
MW-16S^	427.90	--	--	--	--	439.37	--	--	--	--	431.22	--	--	--	422.35	--	--	--	--
MW-16D^	425.63	--	--	--	--	433.43	--	--	--	--	427.26	--	--	--	420.66	--	--	--	--
MW-17S	426.57	--	--	430.41	--	434.25	--	--	430.41	--	428.32	--	424.52	422.55	--	421.10	--	420.88	423.72
MW-18S	409.61	410.66	--	411.67	--	415.44	414.91	--	412.76	--	--	411.65	409.71	407.44	--	--	406.72	406.20	408.28
MW-18D	409.45	--	--	--	--	415.40	--	--	--	--	--	411.27	--	--	--	--	406.52	406.58	408.06
MW-19S	436.49	--	--	--	--	440.89	--	--	--	--	435.90	--	--	--	--	--	430.30	--	--
MW-19D	425.40	--	--	--	--	432.12	--	--	--	--	427.43	--	--	--	--	--	421.47	--	--
MW-20R	374.97	--	--	--	--	381.08	--	--	--	--	--	368.86	--	--	--	372.97	--	--	--
MW-22U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	DRY	DRY
MW-22L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	403.71	405.26
MW-23S	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25S	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-26R	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-27S	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-27D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-28S	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-29S	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BC-4S	405.40	--	--	--	--	410.52	--	--	--	--	--	406.99	--	--	--	--	402.69	--	--
BC-4R	372.43	--	--	--	--	378.09	--	--	--	--	--	373.42	--	--	--	--	370.77	--	--
FMMW-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FMMW-2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Water Level Measurements
2024 Annual Monitoring Report
Hidden Valley Landfill, Pierce County, Washington

WELL	01/03/90	01/15/90	01/24/90	01/29/90	02/12/90	02/27/90	03/12/90	03/26/90	04/09/90	04/25/90	05/07/90	05/21/90	06/04/90	06/18/90	07/02/90	07/24/90	09/04/90	10/01/90	10/22/90
MW-10S	432.26	438.75	--	441.97	445.00	446.08	446.31	445.70	444.75	443.92	443.16	441.82	441.60	428.93	440.13	438.59	436.17	428.80	433.53
MW-10D	--	--	--	437.98	--	--	--	440.70	--	438.94	--	437.09	--	436.54	--	434.42	431.39	435.02	--
MW-11S	423.74	429.85	--	431.41	434.50	435.19	434.84	434.48	433.69	432.93	432.37	431.41	430.86	431.12	430.41	429.03	426.00	424.17	422.26
MW-11D	--	--	--	431.12	--	--	--	--	--	432.74	--	--	--	--	--	428.71	--	423.92	--
MW-11D(2)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12S	DRY	432.03	432.47	434.06	436.63	436.56	436.49	436.21	435.43	434.69	434.37	433.42	433.16	433.26	432.36	429.79	--	--	--
MW-12D	--	--	--	430.27	--	--	--	--	--	431.76	--	--	--	--	--	427.49	424.53	--	421.83
MW-13S	425.20	431.30	431.35	432.74	435.61	436.05	435.88	435.26	434.52	433.96	433.13	432.79	432.66	432.52	431.72	430.31	428.13	427.11	426.90
MW-13D	--	--	--	429.55	--	--	--	--	--	431.67	--	--	--	--	--	426.69	--	422.38	--
MW-14S	428.30	435.36	437.46	438.16	441.65	442.87	442.85	442.05	440.82	439.77	438.86	437.36	436.35	436.89	435.77	434.06	430.42	428.38	427.82
MW-14D	--	--	--	434.36	--	--	--	--	--	435.09	--	--	--	--	--	430.58	--	425.55	--
MW-14R	--	--	--	369.69	--	--	--	--	--	370.84	--	--	--	--	--	359.37	--	363.08	--
MW-15S	432.92	439.33	--	441.55	444.99	446.09	445.75	445.29	444.27	443.34	440.67	441.40	440.78	441.07	440.06	438.31	434.98	--	--
MW-15D	--	--	--	439.68	--	--	--	--	--	441.13	--	--	--	--	--	436.56	--	--	--
MW-16S^	--	--	--	436.38	--	--	--	--	--	433.05	--	--	--	--	--	427.06	--	--	--
MW-16D^	--	--	--	431.37	--	--	--	--	--	432.43	--	--	--	--	--	428.09	--	--	--
MW-17S	424.11	435.97	430.63	431.91	434.87	435.24	435.00	434.62	433.92	433.20	432.87	431.99	431.43	431.68	430.95	429.57	426.39	424.45	--
MW-18S	408.21	410.13	411.08	413.05	415.35	--	417.08	415.99	415.40	414.93	414.76	415.23	413.51	DRY	412.89	411.58	409.74	408.54	407.49
MW-18D	407.80	411.82	--	413.51	415.87	417.18	416.45	416.64	416.10	415.27	414.92	414.15	413.38	413.49	413.00	411.60	409.50	408.20	--
MW-19S	--	--	--	440.26	--	--	--	--	--	440.23	--	--	--	--	--	436.63	--	--	--
MW-19D	--	--	--	431.91	--	--	--	--	--	432.10	--	--	--	--	--	428.23	--	--	--
MW-20R	--	--	--	378.07	--	--	--	--	--	378.69	--	--	--	--	--	363.88	--	369.09	--
MW-22U	DRY	DRY	--	DRY	412.95	413.80	413.48	413.64	413.29	412.72	412.22	412.00	411.97	DRY	411.97	411.72	406.57	--	--
MW-22L	415.09	408.07	408.95	410.00	412.41	413.72	413.53	413.48	412.86	412.13	411.63	410.89	410.09	--	409.83	408.31	406.35	--	--
MW-23S	--	--	--	432.63	--	--	--	--	--	432.47	--	--	--	--	--	429.61	--	426.73	--
MW-23D	--	--	--	427.92	--	--	--	--	--	428.61	--	--	--	--	--	424.96	--	--	--
MW-25S	--	--	--	404.32	--	--	--	--	--	407.69	--	--	--	--	--	402.12	--	399.24	--
MW-25D	--	--	--	407.37	--	--	--	--	--	410.27	--	--	--	--	--	405.81	--	--	--
MW-26R	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-27S	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-27D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-28S	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-29S	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BC-4S	--	--	--	408.09	--	--	--	--	--	410.27	--	--	--	--	--	407.19	--	--	--
BC-4R	--	--	--	375.40	--	--	--	--	--	378.36	--	--	--	--	--	372.06	--	--	--
FMMW-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FMMW-2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Water Level Measurements
2024 Annual Monitoring Report
Hidden Valley Landfill, Pierce County, Washington

WELL	11/26/90	12/17/90	01/29/91	02/25/91	03/26/91	04/29/91	06/28/91	07/29/91	01/20/92	04/14/92	07/14/92	10/19/92	03/22/93	06/02/93	09/07/93	12/07/93	03/14/94	06/07/94	09/19/94
MW-10S	--	439.17	440.15	444.80	436.70	447.78	446.84	438.68	432.83	436.97	433.79	DRY	430.85	436.53	433.09	428.36	431.34	431.20	DRY
MW-10D	--	--	437.29	--	--	442.81	437.36	434.56	427.69	432.27	428.65	424.38	427.04	432.03	429.14	425.87	428.13	427.47	423.19
MW-11S	431.14	430.37	430.17	433.68	434.81	435.71	431.78	429.42	422.87	426.32	423.19	DRY	423.72	420.86	416.65	413.86	418.23	415.97	410.81
MW-11D	--	--	431.15	--	--	435.59	--	429.14	422.51	426.17	423.14	418.40	423.64	420.67	416.54	413.73	418.04	415.82	410.72
MW-11D(2)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12S	429.56	432.71	432.50	434.23	436.28	433.82	433.55	431.51	DRY	428.20	DRY	420.20	DRY	428.81	--	--	--	--	--
MW-12D	--	--	430.54	--	--	435.37	--	427.75	420.98	424.69	421.69	417.89	420.99	424.36	421.85	419.07	421.66	420.32	416.75
MW-13S	432.48	431.58	433.78	435.88	427.04	437.99	434.28	432.08	422.68	425.92	422.65	419.36	421.21	425.53	423.10	--	422.94	421.57	417.93
MW-13D	--	--	427.89	--	--	434.54	--	427.32	420.04	423.65	420.40	417.03	418.81	423.27	420.83	418.06	420.63	419.29	415.67
MW-14S	--	435.80	423.70	450.65	442.30	443.74	437.77	434.36	427.40	431.92	427.62	DRY	426.78	431.72	427.51	426.08	428.35	427.13	DRY
MW-14D	--	--	436.69	--	--	439.25	433.66	430.74	423.86	428.14	424.30	420.96	423.18	427.96	425.05	422.15	424.83	423.61	419.92
MW-14R	--	--	370.91	--	--	373.66	--	361.62	364.60	364.86	358.84	360.16	362.71	362.30	358.60	361.51	362.38	361.06	357.66
MW-15S	--	--	441.09	--	--	446.38	--	438.90	431.90	435.92	432.28	428.17	431.18	435.83	--	429.53	432.99	431.53	427.68
MW-15D	--	--	439.86	--	--	445.39	--	436.94	429.68	434.16	430.27	427.00	429.23	433.97	431.16	428.24	430.93	429.70	425.96
MW-16S^	--	--	434.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16D^	405.49	--	431.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17S	--	--	431.78	--	--	435.41	--	430.09	422.87	426.60	414.25	418.39	422.29	426.97	423.71	419.98	424.98	422.77	417.32
MW-18S	--	412.41	--	414.91	406.79	416.45	414.35	412.49	DRY	DRY	DRY	405.65	407.73	410.17	407.86	406.42	409.63	408.23	406.13
MW-18D	--	--	--	--	--	418.17	414.57	412.38	407.40	409.40	--	405.10	406.55	409.25	407.36	405.61	407.57	406.75	404.65
MW-19S	--	--	--	--	--	441.19	--	439.72	430.81	433.21	429.48	426.94	430.33	433.11	429.57	427.31	430.70	429.14	425.62
MW-19D	--	--	--	--	--	435.06	--	427.93	419.81	424.24	420.27	417.06	419.08	422.80	424.91	421.33	421.95	427.06	415.64
MW-20R	--	--	379.40	--	--	380.21	--	365.60	375.48	370.85	362.62	366.69	368.84	369.37	365.39	368.45	368.69	367.69	362.64
MW-22U	--	--	--	--	--	405.03	--	412.08	411.93	411.91	411.93	411.88	411.84	411.83	412.14	411.88	411.89	411.88	411.82
MW-22L	--	--	DRY	--	--	414.00	--	409.21	404.77	406.38	404.59	402.60	403.90	406.22	404.37	402.97	404.85	404.08	402.33
MW-23S	--	--	431.73	--	--	429.94	--	430.28	426.11	427.38	425.59	422.09	426.54	427.46	425.22	423.01	426.11	424.79	420.91
MW-23D	--	--	428.00	--	--	431.86	--	425.43	419.36	422.39	419.50	416.24	419.16	422.21	419.55	417.14	419.74	418.50	414.73
MW-25S	--	--	404.54	--	--	412.34	--	403.25	399.17	399.99	398.66	397.72	398.29	400.04	398.53	397.87	399.47	397.06	397.58
MW-25D	--	--	406.91	--	--	414.08	--	406.76	401.69	403.37	401.33	399.65	400.76	403.36	401.38	399.88	401.89	400.91	399.23
MW-26R	--	--	--	--	--	--	--	--	422.00	425.83	422.23	418.86	420.86	422.78	421.87	419.26	422.32	420.88	417.12
MW-27S	--	--	--	--	--	--	--	--	418.61	423.23	418.89	416.24	417.80	423.19	418.84	416.44	419.39	417.93	415.62
MW-27D	--	--	--	--	--	--	--	--	419.12	423.47	419.53	416.07	418.44	423.34	419.84	416.84	419.92	418.69	415.20
MW-28S	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-29S	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BC-4S	--	--	--	--	--	412.92	--	--	404.26	405.62	--	401.42	403.22	405.48	403.55	401.78	404.02	403.19	401.20
BC-4R	--	--	--	--	--	369.92	--	--	371.19	372.58	--	367.63	369.43	370.85	367.88	363.21	369.45	368.53	366.36
FMMW-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FMMW-2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Water Level Measurements
2024 Annual Monitoring Report
Hidden Valley Landfill, Pierce County, Washington

WELL	12/05/94	03/18/95	06/19/95	09/19/95	12/13/95	03/19/96	06/12/96	09/03/96	12/10/96	12/11/96	03/25/97	06/09/97	09/08/97	12/15/97	03/16/98	06/24/98	09/16/98	12/21/98	04/09/99
MW-10S	429.46	441.64	438.30	431.80	436.63	447.59	444.28	437.45	--	439.64	449.09	442.97	436.79	435.67	440.78	437.25	431.48	437.27	445.95
MW-10D	425.96	439.10	434.93	427.99	434.00	443.71	440.91	433.94	--	437.40	445.78	439.58	433.06	430.81	437.93	433.36	427.15	435.30	442.33
MW-11S	418.15	425.46	422.10	416.95	423.30	425.09	433.07	418.00	421.34	--	426.98	422.22	415.98	416.46	421.38	417.61	412.58	419.42	424.49
MW-11D	417.88	425.31	421.97	416.80	423.04	424.99	432.96	417.86	420.13	--	426.88	422.05	416.82	416.32	421.15	417.45	412.44	419.28	424.37
MW-11D(2)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12S	--	433.68	--	--	--	--	434.71	429.84	--	--	437.34	--	--	--	--	429.29	--	--	435.33
MW-12D	420.01	431.55	--	--	--	--	433.34	426.50	--	--	437.39	--	--	--	--	425.59	--	--	434.42
MW-13S	421.36	432.58	428.50	422.16	428.51	436.95	434.49	427.68	431.04	--	438.43	432.99	427.01	425.97	431.71	427.02	421.48	429.57	435.58
MW-13D	419.11	430.31	426.23	419.83	426.15	434.60	432.21	425.37	428.74	--	436.15	430.68	424.67	423.64	429.34	424.95	419.15	427.22	433.26
MW-14S	427.58	438.29	434.01	427.21	433.13	443.69	440.55	432.84	436.27	--	444.90	439.06	431.67	430.40	437.04	432.10	426.30	433.69	441.91
MW-14D	422.81	435.55	431.09	424.20	430.69	440.23	437.81	430.29	433.90	--	442.24	436.05	429.20	427.72	434.40	429.59	423.29	432.17	438.94
MW-14R	360.04	369.03	--	--	--	373.23	--	--	--	--	375.79	372.77	--	--	372.26	369.06	--	367.76	377.41
MW-15S	431.88	441.83	--	--	--	--	435.80	437.13	--	--	443.20	--	--	--	--	432.05	--	--	440.66
MW-15D	429.06	441.57	--	--	--	--	435.82	436.07	--	--	437.95	--	--	--	--	525.26	--	--	434.75
MW-16S^	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16D^	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17S	423.64	432.07	429.51	424.07	429.79	435.17	433.27	428.57	431.06	--	435.77	432.27	427.54	443.32	431.32	428.09	422.98	429.24	433.80
MW-18S	408.77	414.75	--	--	--	--	DRY	411.34	--	--	417.05	--	Dry	Dry	413.60	410.54	--	411.66	415.75
MW-18D	406.57	414.93	411.50	407.06	411.03	418.79	416.81	411.26	--	413.20	420.04	415.78	410.33	419.67	413.87	410.23	406.46	411.19	417.79
MW-19S	430.65	438.17	--	--	--	--	439.08	433.57	--	--	442.25	--	--	--	--	433.09	--	--	439.81
MW-19D	419.40	433.82	--	--	--	--	434.31	425.87	--	--	438.09	--	--	--	--	424.16	--	--	434.11
MW-20R	367.32	377.03	--	--	--	380.52	--	--	--	--	378.13	--	--	--	378.75	372.68	--	--	381.44
MW-22U	411.79	412.33	--	--	--	--	413.54	408.28	--	--	414.90	--	--	--	--	411.85	--	411.80	413.46
MW-22L	403.97	411.50	--	--	--	--	412.76	411.66	--	--	416.49	--	407.10	--	--	407.00	--	407.54	414.42
MW-23S	426.02	430.94	427.78	424.75	429.37	433.76	431.80	427.50	--	427.10	434.60	431.35	427.15	427.01	430.92	427.28	424.07	428.77	432.50
MW-23D	418.86	427.76	--	--	--	--	429.71	423.78	--	--	433.41	--	423.11	422.29	427.46	423.22	--	425.09	--
MW-25S	399.71	407.39	--	--	401.96	--	410.74	402.43	--	--	415.13	--	401.39	--	--	401.46	--	403.13	412.72
MW-25D	401.32	409.70	405.91	401.29	405.30	--	412.72	404.96	--	--	416.69	411.61	404.92	403.70	408.83	404.80	401.02	405.80	414.14
MW-26R	420.20	432.36	--	--	--	437.94	--	--	--	--	440.28	--	--	--	432.28	--	--	429.90	437.08
MW-27S	417.69	430.84	--	--	--	--	433.34	426.05	--	--	436.35	--	--	--	--	425.22	--	--	435.18
MW-27D	417.89	430.78	--	--	--	--	433.07	425.86	--	--	437.98	--	--	--	--	425.02	--	--	434.74
MW-28S	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-29S	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BC-4S	403.03	409.91	--	--	--	--	411.41	406.50	--	--	414.11	--	--	--	--	405.49	--	406.29	--
BC-4R	367.47	376.58	--	--	--	--	379.59	371.70	--	--	383.77	--	--	--	--	374.77	--	373.33	--
FMMW-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FMMW-2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Water Level Measurements
2024 Annual Monitoring Report
Hidden Valley Landfill, Pierce County, Washington

WELL	06/07/99	09/13/99	12/13/99	03/15/00	06/09/00	09/12/00	01/18/01	03/22/01	04/19/01	07/12/01	10/23/01	01/18/02	04/25/02	07/25/02	10/24/02	01/30/03	04/24/03	07/24/03	10/30/03
MW-10S	440.31	435.19	434.31	--	440.42	435.67	432.45	431.01	425.45	431.63	423.52	439.17	442.23	436.36	428.62	434.14	437.02	432.12	430.00
MW-10D	437.10	430.29	434.84	440.17	436.95	430.43	427.59	427.74	428.48	427.12	423.01	436.72	439.20	432.24	426.28	430.90	434.22	427.80	426.68
MW-11S	420.04	415.65	419.32	426.93	430.10	425.18	423.31	422.18	423.76	421.93	417.39	430.10	432.17	426.78	420.53	428.84	428.03	422.55	421.79
MW-11D	419.89	414.90	418.47	426.93	429.89	425.04	--	422.04	423.61	421.81	417.27	430.09	431.83	426.64	420.42	428.52	427.87	422.42	421.65
MW-11D(2)	--	--	--	--	429.56	423.62	420.78	420.74	421.20	419.95	416.88	429.34	431.79	425.18	418.99	424.21	426.49	420.52	419.89
MW-12S	431.44	--	430.79	434.01	431.25	426.60	425.03	422.96	425.45	423.41	420.29	431.59	433.23	428.31	421.60	427.04	429.03	423.70	422.20
MW-12D	429.79	422.90	427.02	431.88	429.10	422.96	421.40	420.59	420.86	419.64	416.44	429.00	431.22	424.74	419.39	423.79	426.11	420.21	419.65
MW-13S	430.64	424.91	428.75	433.31	430.57	424.79	424.61	422.47	422.62	421.31	418.10	430.75	433.31	427.32	421.47	425.91	427.95	422.13	421.67
MW-13D	428.29	422.33	426.31	431.85	428.27	422.28	420.49	419.90	420.14	418.87	415.61	428.24	430.53	424.31	418.43	424.83	426.44	419.37	419.06
MW-14S	435.91	429.07	434.18	439.91	435.75	429.25	427.50	426.42	427.71	426.08	421.59	434.95	438.12	430.93	424.61	430.26	432.49	426.20	426.05
MW-14D	434.07	425.40	431.11	436.38	433.32	426.41	423.89	423.79	424.29	422.99	419.77	432.94	435.47	428.36	422.06	426.69	429.99	423.64	423.07
MW-14R	370.78	360.18	366.72	373.26	369.79	363.33	363.66	355.02	354.67	347.91	349.36	356.05	360.45	351.96	353.91	355.58	359.54	350.75	355.08
MW-15S	--	429.24	--	438.60	435.06	429.30	427.51	426.67	427.73	426.51	422.67	434.67	437.38	431.04	424.71	429.65	432.01	426.45	426.06
MW-15D	--	422.30	--	432.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	421.96
MW-16S^	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16D^	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17S	430.05	425.35	429.33	431.15	429.69	425.37	423.40	422.04	423.42	422.02	416.65	430.07	431.67	426.99	420.72	425.82	427.66	422.66	421.41
MW-18S	Dry	Dry	411.57	414.46	412.01	408.68	407.31	406.81	407.32	406.76	405.96	412.66	415.75	409.91	406.09	408.46	410.59	406.96	406.48
MW-18D	413.48	408.16	410.66	414.97	412.70	402.50	406.50	406.15	406.54	405.88	404.23	412.10	413.09	409.59	405.40	407.86	410.22	406.37	405.75
MW-19S	--	430.75	--	438.94	435.83	430.90	430.18	428.56	430.05	429.11	425.58	436.50	437.98	432.27	426.67	432.01	433.63	428.20	428.66
MW-19D	--	422.40	--	432.29	429.88	422.20	--	422.66	420.01	421.57	415.96	431.30	430.96	424.14	421.14	426.65	426.35	420.05	419.38
MW-20R	--	--	--	381.10	375.78	370.29	369.65	362.53	361.24	352.45	356.57	364.32	366.91	356.37	359.61	360.63	365.21	354.47	360.08
MW-22U	411.87	411.99	411.77	412.12	411.74	411.90	--	418.36	--	411.77	411.76	411.83	411.96	411.88	411.85	411.83	411.83	411.83	411.79
MW-22L	410.03	405.15	407.23	411.50	409.30	405.12	--	403.23	405.73	403.00	401.82	408.55	411.22	406.28	402.64	404.48	406.85	403.30	402.91
MW-23S	427.83	426.17	429.15	431.62	428.74	426.10	425.11	424.28	424.38	424.02	420.01	429.36	430.66	426.72	421.88	426.86	427.36	423.52	423.38
MW-23D	425.35	--	--	428.71	426.04	420.98	--	418.31	418.24	417.24	414.80	425.84	428.05	422.13	417.02	421.05	423.50	418.02	417.75
MW-25S	406.26	399.65	402.07	408.62	405.62	399.66	399.04	398.49	399.12	398.45	397.69	403.93	408.25	401.21	397.96	400.43	401.87	398.56	398.62
MW-25D	408.78	402.74	405.09	410.31	408.06	402.82	--	399.04	401.61	400.66	399.30	406.84	410.29	404.55	400.28	402.89	405.11	401.15	400.71
MW-26R	--	--	--	434.06	431.10	424.12	421.55	421.99	422.69	420.95	417.75	429.98	432.67	425.45	419.58	424.06	427.10	420.61	419.98
MW-27S	--	--	--	431.83	429.31	421.77	--	417.86	418.95	417.81	415.59	427.92	431.41	424.01	416.90	421.45	425.44	418.43	417.81
MW-27D	--	--	--	431.95	428.99	422.76	--	418.61	419.53	418.49	415.18	428.07	431.16	424.05	417.41	421.92	425.55	419.02	418.27
MW-28S	--	--	--	--	427.07	423.74	--	--	--	--	--	427.42	428.56	424.95	422.18	--	425.82	422.21	--
MW-29S	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BC-4S	--	--	--	--	--	403.69	--	401.45	401.93	401.47	400.20	407.13	409.31	404.61	400.65	402.68	405.28	401.47	401.10
BC-4R	--	--	--	--	--	371.04	--	367.95	368.07	364.84	363.38	370.31	374.56	368.66	366.63	367.72	371.20	365.66	366.17
FMMW-1	--	--	--	407.92	405.10	400.56	398.73	398.55	398.58	398.47	397.64	403.73	407.47	401.78	398.13	398.73	402.24	398.64	397.93
FMMW-2	--	--	--	408.76	406.32	402.23	400.31	399.91	400.06	401.36	398.86	404.44	408.36	403.02	399.45	400.31	403.76	400.21	399.26

Water Level Measurements
2024 Annual Monitoring Report
Hidden Valley Landfill, Pierce County, Washington

WELL	01/22/04	04/15/04	06/29/04	10/21/04	01/27/05	02/23/05	04/21/05	07/22/05	10/17/05	01/18/06	04/14/06	08/08/06	10/26/06	01/18/07	04/26/07	07/19/07	10/11/07	01/24/08	04/17/08
MW-10S	436.15	436.45	427.28	429.79	435.10	--	436.46	434.32	429.41	444.27	441.85	435.00	430.65	445.84	441.84	436.42	434.09	438.52	439.06
MW-10D	432.72	433.60	425.35	426.94	431.09	--	432.97	429.89	426.03	440.71	439.08	430.14	426.93	442.71	440.22	432.35	429.07	435.33	436.09
MW-11S	427.33	427.08	420.71	421.04	425.46	--	426.52	424.67	420.06	433.68	436.78	424.48	420.35	434.55	432.19	426.15	422.82	428.96	429.15
MW-11D	427.21	426.96	--	--	425.30	--	426.39	424.52	419.94	433.49	431.63	424.31	420.26	434.82	432.17	426.01	422.69	429.12	428.99
MW-11D(2)	425.73	426.53	418.92	419.64	423.73	--	425.50	423.03	418.94	432.78	431.98	423.00	419.75	435.30	433.01	425.14	421.51	428.15	428.91
MW-12S	428.57	430.59	421.86	422.26	--	--	--	426.10	--	--	432.97	425.79	420.98	435.58	433.23	427.50	--	429.92	430.25
MW-12D	425.21	426.18	418.64	419.23	423.64	--	425.18	422.61	418.71	432.21	431.33	422.49	419.45	434.39	432.19	424.62	420.97	427.20	428.04
MW-13S	427.09	427.90	420.05	421.03	425.31	--	426.81	424.09	420.26	433.60	432.49	423.56	420.94	435.56	433.30	425.89	422.45	428.39	429.25
MW-13D	424.52	425.45	417.54	418.56	422.89	--	424.45	421.74	417.90	431.29	430.22	421.17	418.60	433.27	431.02	423.52	420.18	426.21	426.83
MW-14S	431.21	431.37	424.80	426.11	429.13	--	430.61	428.35	424.54	440.16	438.40	428.34	424.75	441.87	438.87	430.27	427.83	433.49	434.33
MW-14D	429.00	426.58	421.87	423.18	427.02	--	428.78	426.05	422.06	436.34	435.52	426.06	422.76	438.82	436.67	428.35	424.53	431.30	432.18
MW-14R	358.99	361.73	351.70	356.38	359.06	--	363.06	357.84	357.48	363.43	368.93	354.35	357.85	369.11	367.45	355.73	359.17	363.20	366.05
MW-15S	431.16	431.42	424.61	425.36	429.20	--	430.68	428.55	424.52	438.93	437.03	428.45	424.76	440.45	437.94	430.25	426.86	433.22	433.94
MW-15D	427.82	435.91	427.84	429.30	425.98	--	427.70	424.99	428.06	435.20	434.37	424.99	421.67	437.59	435.47	427.28	423.34	430.20	430.59
MW-16S^	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16D^	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17S	427.12	427.16	420.54	420.09	425.40	--	426.31	424.73	419.85	433.02	431.26	424.50	418.19	433.88	431.56	425.98	421.39	428.05	428.67
MW-18S	410.32	410.37	406.55	406.30	--	408.71	409.30	408.77	--	406.65	413.69	408.66	406.66	407.83	405.69	401.26	398.83	411.62	412.01
MW-18D	409.47	410.12	405.59	405.65	--	407.66	408.89	407.74	--	408.59	415.38	408.36	406.02	410.91	409.21	402.82	400.04	411.68	412.48
MW-19S	433.43	433.46	426.37	427.51	--	--	433.20	430.65	426.66	440.41	437.51	430.22	426.73	440.99	437.84	431.44	429.21	434.92	434.86
MW-19D	425.40	429.24	420.90	420.51	427.08	--	428.40	423.04	419.84	434.97	432.75	421.86	419.91	435.18	434.36	424.07	422.16	429.12	426.49
MW-20R	365.13	367.55	355.13	362.77	364.70	--	370.57	368.57	363.35	368.45	375.02	356.82	363.82	375.66	373.17	358.22	363.32	366.81	370.42
MW-22U	411.80	411.80	411.76	411.78	--	--	411.73	411.70	411.67	412.56	411.93	411.91	411.92	414.00	412.37	406.46	411.91	411.88	411.93
MW-22L	406.07	401.68	402.77	402.72	--	--	405.32	404.56	402.55	411.24	411.55	404.83	402.81	414.01	412.41	411.72	403.58	407.72	408.72
MW-23S	427.33	426.98	421.90	423.12	426.42	--	427.22	426.81	--	434.54	431.58	426.99	423.52	434.74	432.07	428.03	426.22	428.13	427.94
MW-23D	422.92	423.21	416.77	417.47	420.82	--	422.38	421.50	--	431.53	429.77	421.75	418.56	432.41	430.17	423.10	420.33	424.12	425.12
MW-25S	401.25	401.40	--	--	400.23	--	400.86	398.32	396.69	407.84	407.33	398.24	396.69	410.92	408.72	399.75	397.52	402.59	404.10
MW-25D	404.54	404.80	--	--	401.62	--	402.57	400.62	398.08	408.45	408.77	400.76	398.27	411.43	409.96	402.42	399.38	404.63	406.01
MW-26R	425.63	426.18	418.09	419.08	423.19	--	424.52	421.75	417.85	431.23	430.74	421.10	419.62	435.55	432.87	423.86	423.86	426.24	427.52
MW-27S	424.31	424.72	416.86	417.50	421.54	--	423.09	421.01	416.89	431.74	431.41	421.17	417.03	434.62	432.82	423.82	419.02	426.60	428.13
MW-27D	424.47	425.08	417.15	418.02	422.11	--	423.70	421.51	417.15	431.58	431.22	421.57	417.67	434.38	432.58	424.02	419.79	426.33	427.98
MW-28S	424.25	425.50	--	--	421.63	--	423.30	--	--	430.34	428.30	423.12	--	430.59	428.57	423.37	422.21	426.60	426.59
MW-29S	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BC-4S	404.44	403.99	400.77	400.63	402.62	--	403.22	403.20	400.60	409.55	409.78	403.19	400.99	412.43	409.27	404.68	401.77	406.16	407.06
BC-4R	369.82	372.04	365.20	365.88	368.95	--	370.99	369.51	366.70	373.71	377.99	368.21	367.40	378.61	378.85	369.47	368.79	372.50	374.21
FMMW-1	400.72	402.36	398.28	398.71	402.32	--	399.21	399.73	397.98	406.40	408.16	399.81	398.21	410.93	410.47	402.08	398.60	402.94	404.47
FMMW-2	402.38	403.85	399.63	399.17	400.25	--	401.03	401.85	399.35	407.58	408.85	401.85	399.52	411.56	409.80	403.38	400.15	404.58	405.94

Water Level Measurements
2024 Annual Monitoring Report
Hidden Valley Landfill, Pierce County, Washington

WELL	07/10/08	10/23/08	01/12/09	04/16/09	07/09/09	10/29/09	01/28/10	04/08/10	07/15/10	10/14/10	01/06/11	04/21/11	07/07/11	10/27/11	01/26/12	04/27/12	07/19/12	10/11/12	01/17/13
MW-10S	435.30	427.47	439.23	439.29	436.11	431.99	439.51	440.01	438.29	*	*	*	*	*	*	*	*	*	*
MW-10D	430.75	425.34	435.82	436.77	432.37	427.71	436.80	438.48	435.20	435.20	436.53	441.99	438.29	430.48	433.04	438.69	435.288	428.738	436.36
MW-11S	424.76	419.60	430.66	429.49	426.04	422.29	425.43	429.99	428.23	423.92	429.58	443.53	430.58	424.03	427.67	430.80	427.895	422.825	429.61
MW-11D	424.64	419.47	430.50	429.37	425.91	422.17	429.43	429.83	428.52	423.78	429.11	--	430.41	423.90	427.46	430.60	427.702	422.702	429.39
MW-11D(2)	423.73	418.67	428.94	429.62	425.34	420.91	429.12	429.91	427.95	422.26	429.12	434.73	431.83	423.03	426.03	431.27	427.771	421.641	429.38
MW-12S	425.31	--	431.79	430.56	--	--	429.59	431.04	451.41	--	430.30	434.21	431.52	--	428.74	431.74	429.336	427.856	430.61
MW-12D	422.89	418.35	428.33	428.91	424.88	420.51	428.57	429.75	427.29	421.86	428.50	434.49	430.32	423.03	425.72	430.71	427.566	420.876	428.54
MW-13S	423.95	419.79	429.85	430.20	426.04	422.13	430.37	430.58	428.51	423.45	429.52	434.56	431.36	424.72	427.35	431.83	429.185	422.225	429.65
MW-13D	421.64	417.44	427.49	427.83	423.72	419.75	427.98	428.17	426.13	420.98	427.46	432.17	428.90	422.32	424.94	430.04	426.69	419.84	427.23
MW-14S	428.61	--	434.77	434.64	430.10	426.97	434.69	435.61	433.28	427.99	434.64	440.84	436.68	428.10	432.29	436.60	432.818	426.558	434.75
MW-14D	426.51	421.62	431.64	432.86	428.37	423.72	432.61	433.26	431.32	425.92	432.11	438.44	434.77	426.13	429.13	434.84	431.59	424.39	432.76
MW-14R	359.64	357.00	362.03	367.99	359.40	357.76	363.32	366.15	360.15	361.90	363.18	366.10	366.13	359.81	360.76	366.15	358.954	354.814	362.35
MW-15S	428.71	423.98	434.51	434.18	430.13	426.53	434.26	434.93	432.81	428.07	434.10	439.58	436.01	428.26	431.88	435.90	432.59	426.79	434.35
MW-15D	425.36	420.50	430.68	431.77	427.37	422.64	431.48	432.07	430.04	424.85	431.28	437.2	434	--	427.69	433.74	430.59	423.13	431.65
MW-16S^	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16D^	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17S	424.72	--	430.02	428.83	425.86	421.78	428.94	429.17	427.67	423.81	428.68	432.474	429.724	423.924	426.83	429.94	427.524	422.974	428.97
MW-18S	408.80	406.19	412.64	412.16	409.66	406.78	412.45	412.56	411.17	408.03	412.11	415.396	412.986	408.116	409.86	413.18	410.896	407.716	412.46
MW-18D	408.41	405.56	412.15	412.72	409.78	406.62	412.66	413.29	411.92	407.67	412.41	417.46	414.90	407.94	410.13	414.13	411.755	407.375	412.92
MW-19S	430.35	426.01	438.07	435.64	431.65	429.13	435.98	436.05	433.72	430.19	435.62	439.15	436.16	430.48	434.77	437.11	432.652	428.832	435.92
MW-19D	422.98	420.36	430.23	431.24	427.82	423.51	434.04	435.20	428.82	417.93	429.56	437.87	427.50	428.50	429.82	436.00	432.35	416.63	430.69
MW-20R	363.76	360.73	367.37	375.67	364.27	362.02	367.50	370.52	363.31	368.98	368.50	367.73	369.97	363.65	363.94	368.94	363.629	356.649	367.05
MW-22U	411.89	411.90	411.88	411.86	411.88	411.87	411.74	411.71	411.80	411.72	411.77	--	411.84	411.83	411.80	411.78	411.838	413.968	411.92
MW-22L	404.94	402.54	408.27	408.85	406.15	403.30	408.76	409.44	408.07	404.21	408.59	--	411.18	404.57	406.30	410.28	408.076	404.056	409.10
MW-23S	425.67	421.36	432.59	430.26	427.99	424.66	430.57	427.64	429.01	426.85	428.60	433.36	430.65	427.04	428.54	429.91	427.39	424.23	448.34
MW-23D	419.94	415.95	427.22	427.34	423.39	418.20	427.19	430.65	425.72	421.05	425.28	431.53	431.51	421.34	423.14	426.84	423.84	419.35	426.05
MW-25S	399.63	397.85	403.98	402.73	399.34	398.60	402.62	403.99	402.02	398.86	403.64	410.32	406.94	397.98	401.60	406.43	403.1	398.56	404.35
MW-25D	401.67	398.85	405.31	405.16	402.10	399.77	404.93	406.04	404.43	399.05	400.66	411.06	408.46	400.34	403.42	407.77	405.22	400.45	406.21
MW-26R	421.36	416.46	425.40	427.56	422.47	417.58	426.06	426.79	--	420.03	424.74	--	426.90	417.95	419.88	425.70	422	415.4	425.20
MW-27S	421.57	416.64	426.62	427.87	423.46	418.19	427.68	428.89	426.90	420.24	427.77	434.21	430.81	420.43	424.02	430.11	426.56	418.93	428.23
MW-27D	422.01	416.76	426.75	428.09	423.75	418.77	427.73	428.97	426.83	420.75	427.81	433.82	430.84	421.07	424.15	430.02	426.79	419.64	428.23
MW-28S	422.20	--	428.75	426.91	423.73	--	427.12	427.21	426.05	422.12	426.83	429.44	427.4	422.19	424.67	427.77	NM	422.07	421.75
MW-29S	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BC-4S	403.08	400.54	406.51	406.51	404.51	401.07	407.25	407.78	406.54	402.76	406.84	411.756	409.246	402.646	404.19	408.30	406.246	402.26	407.28
BC-4R	369.50	366.23	370.58	374.48	370.17	367.12	--	--	371.53	--	--	--	--	--	370.41	375.16	386.882	385.60	372.66
FMMW-1	399.89	398.07	401.39	404.20	402.00	398.45	411.88	404.93	403.71	398.97	403.89	410.683	407.633	399.073	408.23	406.28	403.673	399.033	404.37
FMMW-2	401.95	399.41	403.08	405.81	403.27	399.92	398.05	406.45	405.32	400.93	405.54	411.75	408.31	401.01	394.17	407.21	405.287	400.867	406.027

Water Level Measurements
2024 Annual Monitoring Report
Hidden Valley Landfill, Pierce County, Washington

WELL	04/23/13	07/25/13	10/10/13	01/06/14	04/09/14	07/07/14	10/29/14	01/15/15	04/20/15	07/28/15	10/15/15	01/14/16	04/21/16	07/07/16	10/13/16	01/19/17	07/14/17	01/12/18	08/29/18
MW-10S	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	438.60	438.38	439.69	*
MW-10D	438.09	432.23	433.33	431.84	441.79	435.56	430.11	435.54	436.08	428.64	425.87	440.99	441.21	434.09	428.38	435.82	436.39	437.27	429.63
MW-11S	430.48	426.04	427.12	425.22	433.16	428.73	424.18	428.02	428.93	422.84	--	432.63	432.38	426.81	421.95	428.59	429.09	430.00	423.74
MW-11D	431.15	425.90	426.54	425.00	429.95	424.84	419.19	422.65	428.70	422.74	419.50	432.49	432.23	426.68	421.85	423.87	424.41	429.74	423.39
MW-11D(2)	430.58	425.10	426.28	423.92	433.89	428.78	422.93	426.58	428.94	421.78	419.43	434.08	434.53	426.99	421.38	428.64	429.71	430.21	422.99
MW-12S	431.20	--	433.19	--	434.91	--	--	428.91	430.18	423.89	420.36	433.47	433.09	428.11	422.61	429.88	429.69	430.80	425.06
MW-12D	429.68	424.40	426.15	424.48	434.52	428.31	422.59	426.02	428.22	421.19	419.06	433.27	433.08	426.27	421.18	428.03	429.09	429.47	422.28
MW-13S	430.71	425.51	427.26	426.06	434.71	428.74	424.39	429.81	429.99	422.56	420.69	433.86	434.01	427.72	422.19	429.61	429.87	430.92	423.72
MW-13D	428.44	423.15	424.94	423.59	432.40	426.59	421.99	427.09	427.46	420.19	418.51	431.52	431.67	425.14	419.94	427.24	427.51	428.49	421.02
MW-14S	436.19	430.41	431.40	429.25	440.20	434.01	428.64	433.52	434.06	426.59	--	439.78	439.07	431.41	428.95	435.92	434.23	436.78	427.61
MW-14D	434.39	428.22	429.09	427.49	437.99	432.14	425.94	431.39	432.57	424.64	422.29	437.49	437.96	429.98	424.56	432.11	433.02	433.71	425.62
MW-14R	365.14	353.64	359.94	364.62	369.01	358.48	357.45	363.58	367.26	353.71	356.41	367.43	370.08	361.66	357.41	363.07	361.57	364.23	356.24
MW-15S	435.67	430.51	432.28	429.28	439.47	433.68	428.35	433.24	433.73	426.76	424.13	438.50	438.08	431.26	425.81	432.17	433.77	435.26	427.85
MW-15D	432.69	427.17	428.09	426.83	436.69	431.09	424.84	430.74	431.22	423.52	421.22	436.22	436.74	429.26	423.32	430.06	431.88	432.47	424.48
MW-16S^	--	--	--	--	--	--	--	--	480.27	--	--	--	--	--	--	--	--	--	--
MW-16D^	--	--	--	--	--	--	--	--	480.73	--	--	--	--	--	--	--	--	--	--
MW-17S	429.62	425.87	426.76	424.97	432.14	428.19	423.27	428.32	428.32	422.89	419.36	431.47	431.13	426.26	421.39	427.17	428.07	428.79	423.68
MW-18S	412.44	407.58	411.58	409.12	416.43	411.60	407.83	414.83	411.79	407.61	406.26	414.98	414.43	410.10	407.05	410.91	411.52	412.35	408.14
MW-18D	413.47	407.74	411.68	409.08	417.47	413.02	407.87	411.39	412.91	407.55	405.85	416.58	417.24	411.20	406.88	411.58	413.46	412.99	408.07
MW-19S	436.36	431.90	434.01	431.93	440.32	436.91	430.03	436.81	435.88	428.73	426.51	439.11	437.80	432.26	428.69	434.19	433.55	435.23	432.43
MW-19D	435.35	--	421.32	426.40	439.32	437.32	417.39	434.97	424.45	417.12	423.85	429.35	431.52	430.22	425.80	424.01	430.65	433.13	418.74
MW-20R	368.59	354.75	361.65	371.65	372.63	360.95	362.79	368.15	370.70	357.13	360.70	372.00	375.97	364.95	360.42	367.14	364.08	368.60	358.40
MW-22U	410.77	405.65	418.81	407.67	414.82	410.16	403.62	411.81	411.84	411.84	411.85	412.67	412.59	411.88	411.83	411.81	411.85	411.83	411.89
MW-22L	409.45	404.32	408.86	404.73	413.40	408.95	402.35	410.29	409.16	404.13	402.75	412.50	413.46	407.69	403.53	407.67	409.97	409.47	404.66
MW-23S	--	426.52	427.77	426.28	427.29	427.45	--	--	428.10	424.24	--	431.34	430.21	426.61	423.47	428.87	427.49	--	--
MW-23D	426.45	421.45	423.18	422.05	430.98	424.81	420.99	427.52	425.60	419.15	416.35	429.00	433.87	423.03	417.92	426.80	426.79	--	--
MW-25S	405.68	400.97	401.44	399.76	408.85	405.19	399.10	403.28	404.56	398.59	397.52	409.97	411.10	402.60	397.97	402.46	406.00	--	--
MW-25D	407.27	403.32	403.66	402.27	410.54	408.36	401.15	405.15	406.34	400.50	398.73	410.44	411.85	404.79	399.68	404.88	407.47	--	--
MW-26R	--	418.82	419.09	418.39	427.32	357.75	--	360.40	361.98	352.63	354.20	368.00	372.30	398.40	357.60	364.89	362.69	422.28	414.02
MW-27S	429.31	423.86	422.84	424.21	433.28	429.46	421.79	429.16	428.21	419.19	416.61	433.21	433.70	425.59	418.07	427.13	429.09	--	--
MW-27D	429.02	423.92	424.08	424.12	433.00	428.92	421.85	428.93	428.07	419.91	416.92	433.20	433.70	425.65	419.19	427.19	428.99	--	--
MW-28S	--	--	424.77	--	--	--	--	--	426.37	422.17	422.17	428.97	428.38	423.79	421.70	426.51	426.21	--	--
MW-29S	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	436.75	430.03
BC-4S	407.45	404.75	406.19	402.82	411.49	408.37	397.25	409.48	407.25	402.05	400.65	410.54	416.06	405.55	401.20	405.84	407.63	407.29	402.56
BC-4R	374.31	--	--	--	377.96	389.91	--	372.61	375.23	390.99	389.65	376.57	--	372.19	368.11	--	373.76	373.86	367.83
FMMW-1	405.73	402.38	400.13	400.41	409.73	405.28	398.81	403.45	404.67	398.88	398.01	409.03	409.90	402.92	398.38	402.88	405.85	403.93	399.19
FMMW-2	406.087	403.59	402.14	402.26	410.36	406.46	400.49	405.11	406.14	400.64	399.30	409.77	410.57	404.42	399.83	404.40	406.67	405.66	401.22

Water Level Measurements
2024 Annual Monitoring Report
Hidden Valley Landfill, Pierce County, Washington

WELL	01/16/19	08/22/19	01/22/20	08/25/20	01/20/21	08/03/21	01/18/22	08/24/22	01/24/23	07/18/23	01/31/24	07/17/24
MW-10S	*	*	*	*	439.81	434.25	439.558	435.14	435.25	431.40	434.40	434.34
MW-10D	430.33	425.65	431.54	426.29	438.14	429.99	437.808	431.64	431.59	427.84	434.52	430.30
MW-11S	424.78	421.08	425.83	421.58	430.98	424.08	431.555	425.78	425.93	422.86	422.86	424.07
MW-11D	424.65	419.95	425.72	421.47	430.88	424.00	431.402	425.70	--	--	428.78	423.93
MW-11D(2)	423.28	419.56	424.68	420.46	431.16	423.12	431.051	425.14	424.58	420.35	428.31	423.03
MW-12S	426.01	420.79	427.16	422.47	431.95	425.91	432.896	433.66	428.13	424.23	424.23	425.68
MW-12D	423.07	418.90	424.27	420.22	430.50	422.78	430.866	424.78	424.35	421.17	428.14	423.02
MW-13S	424.47	420.54	425.81	420.55	431.39	424.16	432.125	425.41	430.94	422.84	422.84	424.64
MW-13D	423.99	417.99	423.27	417.88	429.29	421.64	430.64	423.19	423.90	420.14	426.30	421.87
MW-14S	428.50	Dry	426.63	Dry	426.10	428.00	436.298	429.81	430.20	426.70	426.70	428.19
MW-14D	426.44	422.27	427.67	423.68	434.39	425.89	434.1	428.26	427.79	424.28	430.98	426.43
MW-14R	359.47	352.16	358.24	356.07	365.28	359.66	366.304	358.99	361.06	355.47	363.42	358.15
MW-15S	428.58	424.39	429.54	425.66	430.65	428.38	435.97	429.93	430.23	427.00	427.00	428.24
MW-15D	425.25	421.06	426.44	422.49	433.62	425.04	433.34	427.24	426.63	423.18	429.67	429.67
MW-16S^	--	--	--	--	--	--	--	--	--	--	--	--
MW-16D^	--	--	--	--	--	--	--	--	--	--	--	--
MW-17S	424.51	419.87	425.26	421.57	429.92	424.07	430.914	425.67	426.47	422.95	422.95	424.10
MW-18S	408.71	406.40	409.63	406.93	414.92	408.59	414.906	409.82	408.04	407.83	412.37	408.66
MW-18D	408.39	405.77	409.10	406.68	414.49	408.37	415.335	409.89	409.62	407.38	412.38	408.68
MW-19S	431.23	426.79	433.78	427.82	437.50	433.29	440.892	435.98	--	--	--	436.82
MW-19D	421.33	421.43	422.69	415.99	428.88	420.25	428.5	422.35	--	--	--	425.44
MW-20R	362.56	355.04	362.16	358.74	369.95	362.10	370.749	361.39	363.70	357.75	367.75	362.02
MW-22U	411.81	411.80	411.83	411.83	417.31	412.01	412.558	549.17	--	--	--	--
MW-22L	404.94	402.76	405.61	403.48	411.04	404.95	411.796	406.34	--	--	--	--
MW-23S	--	--	--	--	--	--	--	--	--	--	--	--
MW-23D	--	--	--	--	--	--	--	--	--	--	--	--
MW-25S	--	--	--	--	--	--	--	--	--	--	--	--
MW-25D	--	--	--	--	--	--	--	--	--	--	--	--
MW-26R	414.51	409.60	414.75	410.71	421.34	412.70	419.98	413.91	361.89	409.75	415.95	411.24
MW-27S	--	--	--	--	--	--	--	--	--	--	--	--
MW-27D	--	--	--	--	--	--	--	--	--	--	--	--
MW-28S	--	--	--	--	--	--	--	--	--	--	--	--
MW-29S	430.85	427.30	431.98	428.07	436.95	430.54	438.454	433.25	433.15	429.74	435.87	430.51
BC-4S	402.88	400.63	403.73	401.24	408.70	402.75	392.486	386.11	404.11	401.60	401.60	406.77
BC-4R	369.35	*	368.44	*	374.52	369.65	399.502	393.47	370.28	*	*	373.03
FMMW-1	399.06	398.19	399.46	398.42	406.13	399.39	425.583	420.01	401.08	398.86	406.40	402.30
FMMW-2	400.92	399.52	401.50	399.89	407.40	401.49	385.107	379.78	402.88	400.33	392.79	401.36

Appendix D

GROUNDWATER MONITORING DATA

Table 2. Water Level Elevations
Semi-Annual Monitoring Event No. 1 - January 2024
Hidden Valley Landfill, Pierce County, Washington

Location	Well Casing Elevation	Depth to Water (FT)	Water Level Elevation
Shallow Perched Aquifer			
MW-10S	463.65	32.25	431.40
MW-11S	520.03	97.17	422.86
MW-12S	493.41	69.18	424.23
MW-13S	452.26	29.42	422.84
MW-14S	481.30	54.60	426.70
MW-15S	506.78	79.78	427.00
MW-17S	555.97	133.02	422.95
MW-18S	541.43	129.06	412.37
MW-29S	450.65	14.78	435.87
FMMW-1	546.03	139.63	406.40
FMMW-2	539.96	147.17	392.79
BC-4S	530.25	128.65	401.60
Upper Regional Aquifer			
MW-10D	464.09	29.57	434.52
MW-11D	520.10	91.32	428.78
MW-11D(2)	519.53	91.22	428.31
MW-12D	493.49	65.35	428.14
MW-13D	450.19	23.89	426.30
MW-14D	481.39	50.41	430.98
MW-15D	509.09	79.42	429.67
MW-18D	541.79	129.21	412.58
Lower Regional Aquifer			
MW-14R	480.26	116.84	363.42
MW-20R	472.90	105.15	367.75
MW-26R	485.40	69.45	415.95

Table 3. Field Parameters
Semi-Annual Monitoring Event No. 1 - January 2024
Hidden Valley Landfill, Pierce County, Washington

Location	Sample Number	Date	Method	pH	Specific Conductivity	Temperature
Units				(SU)	(µS/cm)	(°C)
HVL Cleanup Level				—	700	—
WAC 173-200				6.5-8.5	700[b]	—
Shallow Perched Aquifer						
(BG) MW-10S	HVL-013024-11	1/30/24	DP	**6.27**	313.4	13.6
MW-11S	HVL-013124-02	1/31/24	DP	**5.86**	265.3	13.9
MW-12S	HVL-013124-20	1/31/24	DB	**5.85**	205.5	17.4
MW-13S	HVL-013024-24	1/30/24	DP	**5.85**	151.0	11.8
MW-14S	HVL-013024-01	1/30/24	DP	**5.81**	95.7	12.7
MW-15S	HVL-013024-07	1/30/24	DP	**6.06**	311.1	15.3
MW-17S	HVL-013124-27	1/31/24	DP	**5.65**	312.5	17.2
MW-18S	HVL-013124-10	1/31/24	DP	**6.20**	387.9	15.0
MW-29S	HVL-013124-26	1/31/24	DP	**5.87**	188.8	11.9
FMMW-1	HVL-013124-23	1/31/24	DP	**6.22**	223.4	14.0
FMMW-2	HVL-013124-22	1/31/24	DP	**5.99**	438.8	15.5
Upper Regional Aquifer						
(BG) MW-10D	HVL-013024-16	1/30/24	DP	**6.36**	249.5	13.1
MW-11D(2)	HVL-013124-06	1/31/24	DP	6.75	209.8	13.3
MW-12D	HVL-013124-18	1/31/24	DP	6.54	393.9	16.9
MW-13D	HVL-013024-22	1/30/24	DP	**6.19**	217.5	12.3
MW-14D	HVL-013024-03	1/30/24	DP	**6.08**	241.9	13.3
MW-15D	HVL-013024-09	1/30/24	DP	**6.69**	293.0	14.0
MW-18D	HVL-013124-08	1/31/24	DP	6.60	264.7	14.9
Lower Regional Aquifer						
MW-14R	HVL-013024-05	1/30/24	DP	7.48	100.4	11.4
MW-20R	HVL-013124-14	1/31/24	DP	6.94	100.7	10.1
MW-26R	HVL-013024-12	1/30/24	DP	7.24	213.6	11.0

Notes:

Parameter concentrations that are greater than cleanup levels are shown in **bold**

b = Secondary Drinking Water Standard
BG = Background Monitoring Well
°C = degrees Celsius
DP = dedicated bladder pump
DB = disposable bailer
µS/cm = microsiemens per centimeter
— = not analyzed or not applicable

Table 4. Inorganic Parameters
Semi-Annual Monitoring Event No. 1 - January 2024
Hidden Valley Landfill, Pierce County, Washington

Location		Alkalinity, Total	Ammonia	Chloride	Nitrate	Sulfate	Total Dissolved Solids	Total Organic Carbon	Total Suspended Solids
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MRL		10.0	0.10	0.2-1.2	0.20	0.2-1.0	10	1.0	4.0
HVL Cleanup Level		—	—	250	10	250	500	—	—
WAC 173-200 Criteria		—	—	250[b]	10[a]	250[b]	500[b]	—	—
Shallow Perched Aquifer									
(BG)	MW-10S	120	*	14	2.6	11	190	1	*
	MW-11S	77	*	18	5.5	13	160	*	*
	MW-12S	42	*	10	5.8	15	150	1.5	*
	MW-13S	44	*	15	0.9	8	100	*	*
	MW-14S	33	*	3	1.4	2.5	73	1.7	*
	MW-15S	130	2.7	13	1.9	6.9	180	1.6	*
	MW-17S	73	*	15	**11**	16	210	1.4	*
	MW-18S	63	*	12	0.6	12	120	1.2	7.2
	MW-29S	130	*	15	4	16	230	1.3	*
	FMMW-1	71	*	15	1.5	13	130	*	*
	FMMW-2	120	*	18	**13**	14	280	1.3	*
Upper Regional Aquifer									
(BG)	MW-10D	97	*	9.4	2.7	8.9	150	*	*
	MW-11D(2)	81	*	5.9	1.7	8.7	130	*	*
	MW-12D	180	*	11	0.56	8.5	220	*	*
	MW-13D	77	*	14	0.8	11	130	*	*
	MW-14D	100	2.7	9	*	5.1	140	2.1	*
	MW-15D	130	*	10	0.67	11	180	*	*
	MW-18D	110	*	7.8	1.5	8.2	160	*	*
Lower Regional Aquifer									
	MW-14R	49	*	1.6	*	4.0	82	*	*
	MW-20R	46	*	1.7	*	3.3	85	*	*
	MW-26R	96	*	5.4	*	12	130	*	*

Notes:

Parameter concentrations that are greater than cleanup levels are shown in **bold**

Analyses performed by Eurofins TestAmerica in Denver, Colorado

H = Due to a Fedex shipping delay, parameter analyzed outside specified holding time

— = not analyzed or not applicable

* = not reported at or above the MRL (Method Reporting Limit)

a = Primary Drinking Water Standard

b = Secondary Drinking Water Standard

BG = Background monitoring well

mg/L = milligrams per liter

Table 5. Dissolved Metals
Semi-Annual Monitoring Event No. 1 - January 2024
Hidden Valley Landfill, Pierce County, Washington

Location	Iron	Manganese	Calcium	Magnesium	Potassium	Sodium
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MRL	0.005	0.001	0.20	0.10	2.0	1.0
HVL Cleanup Level	0.30	0.05	—	—	—	—
WAC 173-200 Criteria	0.30[b]	0.05[b]	—	—	—	—
Shallow Perched Aquifer						
(BG) MW-10S	*	*	39	12	2.3	9.6
MW-11S	0.0058	*	26	7.6	5.5	17
MW-12S	0.017	0.013	15	4.1	8	14
MW-13S	*	*	15	4.1	2.3	8.6
MW-14S	0.0078	0.022	8	2.5	2.5	6
MW-15S	*	**1.2**	28	8.6	9.2	18
MW-17S	*	**0.5**	23	7.3	12	19
MW-18S	0.029	**0.23**	17	4.9	2.8	13
MW-29S	*	0.001	40	12	9.0	19
FMMW-1	*	*	19	5.5	2.9	18
FMMW-2	*	*	39	12	12	23
Upper Regional Aquifer						
(BG) MW-10D	*	*	30	9.6	*	8.2
MW-11D(2)	*	*	21	8.9	2.3	8.1
MW-12D	*	*	38	14	3.7	23
MW-13D	*	*	22	8.2	2.4	9.8
MW-14D	**3.3**	**1.2**	20	6.3	7.0	13
MW-15D	*	0.014	29	12	3.2	22
MW-18D	*	*	26	10	3.1	12
Lower Regional Aquifer						
MW-14R	0.053	**0.18**	8.4	4.8	2.1	5.4
MW-20R	*	*	8.2	4.2	2.1	5.9
MW-26R	**0.85**	**0.5**	23	10	2.5	7.0

Notes:

Parameter concentrations that are greater than site cleanup levels or WAC 173-200 criteria are shown in **bold**

Analyses performed by Eurofins TestAmerica in Denver, Colorado

BG = Background Monitoring Well

mg/L = milligrams per liter

* = not reported at or above the MRL (Method Reporting Limit)

— = not analyzed or not applicable

Table 6. Volatile Organic Compounds
Semi-Annual Monitoring Event No. 1 - January 2024
Hidden Valley Landfill, Pierce County, Washington

Location		Tetrachloroethene
Units		µg/L
MRL		0.5
HVL Cleanup Level		—
WAC 173-200 Criteria		0.80
Shallow Perched Aquifer		
(BG)	MW-10S	*
	MW-11S	*
	MW-12S	*
	MW-13S	*
	MW-14S	*
	MW-15S	*
	MW-17S	*
	MW-18S	*
	MW-29S	*
	FMMW-1	*
	FMMW-2	*
Upper Regional Aquifer		
(BG)	MW-10D	*
	MW-11D(2)	**1.1**
	MW-12D	*
	MW-13D	*
	MW-14D	*
	MW-15D	0.7
	MW-18D	*
Lower Regional Aquifer		
	MW-14R	*
	MW-20R	*
	MW-26R	*
Quality Control Samples		
	Field Blank	*
	Trip Blank	*

Notes:

Parameter concentrations that are greater than cleanup levels are shown in **bold**
Analyses performed by Eurofins TestAmerica in Denver, Colorado
Volatile organic compounds not listed were not present at concentrations exeeding the MRL
BG = Background
µg/L = micrograms per liter
* = not reported at or above the MRL (Method Reporting Limit)
— = not analyzed or not applicable

Table 7. Duplicate Sample Evaluation
Semi-Annual Monitoring Event No. 1 - January 2024
Hidden Valley Landfill, Pierce County, Washington

Parameter	MRL	MW-11S	MW-11S (Duplicate)	RPD (%)
Dissolved Metals (mg/L)				
Calcium	0.2	21	21	0
Iron	0.005	*	0.013	88.9
Magnesium	0.1	8.9	8.7	2.3
Potassium	2.0	2.3	2.2	4.4
Sodium	1.0	8.1	8	1.2
Inorganic Parameters (mg/L)				
Alkalinity	10.0	81	82	1.2
Chloride	0.6	5.9	6	1.7
Nitrate	0.2	1.7	1.7	0
Sulfate	0.5	8.7	8.7	0
Total Dissolved Solids	10	130	130	0
Volatile Organic Compounds (ug/L)				
Tetrachloroethene	0.05	1.1	1	9.5

Notes:

Analysis performed by Eurofins TestAmerica in Denver, Colorado
Analytes not listed were not present at concentrations exceeding the MRL
H = Parameter analyzed outside specified holding time
RPD = relative percent difference
mg/L = milligrams per liter

*= RPD based on result as compared to the Reporting Limit (RL) for a non-detection in the compared sample

Table 8. Water Supply Wells
Semi-Annual Monitoring Event No. 1 - January 2024
Hidden Valley Landfill, Pierce County, Washington

Parameter	Units	MRL	Corliss	Paul Bunyan
Field Parameters				
pH	SU	—	—	6.8
Specific Conductivity	µS/cm	—	—	286
Temperature	°C	—	—	11.9
Metals (total)				
Arsenic	mg/L	0.005	—	*
Iron	mg/L	0.01	—	0.190
Manganese	mg/L	0.001	—	0.0055
Zinc	mg/L	0.01	—	0.037
Inorganic Parameters				
Ammonia	mg/L	0.1	—	*
Chemical Oxygen Demand	mg/L	10	—	—
Chloride	mg/L	1.2	—	8.0
Nitrate	mg/L	0.2	—	1.9
Nitrite	mg/L	0.5	—	*
Sulfate	mg/L	0.2	—	13
Total Organic Carbon	mg/L	1.0	—	*
Other				
Color	PCU	5.0	—	5.0

Notes:

Sample at Corliss was not collected due to access issues.
Analyses performed by Eurofins TestAmerica in Denver, Colorado.
Analytes not listed are VOCs that were not detected above the reporting limit.
Color reported in color units
°C = degrees Celsius
mg/L = milligrams per liter
PCU = platinum-cobalt units
SU = Standard Units
µS/cm = microsiemens per centimeter
µg/L = micrograms per liter
* = not reported at or above the MRL (Method Reporting Limit)
— = Not Applicable
^ = The Paul Bunyon water supply well was resampled on 3/31/22

Table 9. Cation-Anion Balance
Semi-Annual Monitoring Event No. 1 - January 2024
Hidden Valley Landfill, Pierce County, Washington

Cations	mg/L					meq/L					% of Total		
	Ca	Mg	K	Na	Total	Ca	Mg	K	Na	Total	Na+K	Ca	Mg
MW-10S	39	12	2.3	9.6	62.90	1.95	0.99	0.06	0.42	3.41	14	57	29
MW-11S	26	7.6	5.5	17	56.10	1.30	0.63	0.14	0.74	2.80	31	46	22
MW-12S	15	4.1	7.7	14	40.80	0.75	0.34	0.20	0.61	1.89	43	40	18
MW-13S	15	4.1	2.3	8.6	30.00	0.75	0.34	0.06	0.37	1.52	29	49	22
MW-14S	8	2.5	2.5	6	19.10	0.40	0.21	0.06	0.27	0.93	35	43	22
MW-15S	28	8.6	9.2	18	63.80	1.40	0.71	0.24	0.78	3.12	33	45	23
MW-17S	23	7.3	12	19	61.30	1.15	0.60	0.31	0.83	2.88	39	40	21
MW-18S	17	4.9	2.8	13	37.70	0.85	0.40	0.07	0.57	1.89	34	45	21
MW-29S	40	12	9.0	19	80.00	2.00	0.99	0.23	0.83	4.04	26	49	24
FMMW-1	19	5.5	2.9	18	45.40	0.95	0.45	0.07	0.78	2.26	38	42	20
FMMW-2	39	12	12	23	86.00	1.95	0.99	0.31	1.00	4.24	31	46	23
MW-10D	30	9.6	2.0	8.2	49.80	1.50	0.79	0.05	0.36	2.69	15	56	29
MW-11D(2)	21	8.9	2.3	8.1	40.30	1.05	0.73	0.06	0.35	2.19	19	48	33
MW-12D	38	14	3.7	23	78.70	1.90	1.15	0.09	1.00	4.14	26	46	28
MW-13D	22	8.2	2.4	9.8	42.40	1.10	0.67	0.06	0.43	2.26	22	49	30
MW-14D	20	6.3	7.0	13	46.30	1.00	0.52	0.18	0.57	2.26	33	44	23
MW-15D	29	12	3.2	22	66.20	1.45	0.99	0.08	0.96	3.47	30	42	28
MW-18D	26	10	3.1	12	51.10	1.30	0.82	0.08	0.52	2.72	22	48	30
MW-14R	8.4	4.8	2.1	5.4	20.70	0.42	0.40	0.05	0.23	1.10	26	38	36
MW-20R	8.2	4.2	2.1	5.9	20.40	0.41	0.35	0.05	0.26	1.07	29	38	32
MW-26R	23	10	2.5	7.0	42.50	1.15	0.82	0.06	0.30	2.34	16	49	35

Anions	mg/L					meq/L					% of Total			Total Ions (meq/L)	Cation - Anion Balance	Applicable Ratio (%)	Ratio Exceedance
	Alk	Cl	NO_3	SO_4	Total	Alk	Cl	NO_3	SO_4	Total	Cl	Alk	SO_4				
MW-10S	144	14.0	2.60	11	171.60	2.36	0.39	0.04	0.23	3.03	13	78	8	6.44	5.95	5	Exceeds
MW-11S	92.4	18	5.5	13.0	128.90	1.52	0.51	0.09	0.27	2.38	21	64	11	5.19	8.12	5	Exceeds
MW-12S	50.4	10	5.8	15	81.20	0.83	0.28	0.09	0.31	1.51	19	55	21	3.41	11.10	10	Exceeds
MW-13S	52.8	15	0.92	7.6	76.32	0.87	0.42	0.01	0.16	1.46	29	59	11	2.98	1.92	10	-
MW-14S	39.6	2.5	1.40	2.5	46.00	0.65	0.07	0.02	0.05	0.79	9	82	7	1.73	8.09	10	-
MW-15S	156	13	1.90	6.9	177.80	2.56	0.37	0.03	0.14	3.10	12	83	5	6.22	0.39	5	-
MW-17S	87.6	15	11.00	16.0	129.60	1.44	0.42	0.18	0.33	2.37	18	61	14	5.25	9.76	5	Exceeds
MW-18S	75.6	12	0.62	12	100.22	1.24	0.34	0.01	0.25	1.84	18	67	14	3.73	1.37	10	-
MW-29S	156	15	4	16	191.00	2.56	0.42	0.06	0.33	3.38	13	76	10	7.42	8.92	5	Exceeds
FMMW-1	85.2	15.0	1.5	13	114.70	1.40	0.42	0.02	0.27	2.11	20	66	13	4.37	3.27	10	-
FMMW-2	144	18	13	14.0	189.00	2.36	0.51	0.21	0.29	3.37	15	70	9	7.61	11.45	5	Exceeds
MW-10D	116.4	9.4	2.7	8.9	137.40	1.91	0.27	0.04	0.19	2.40	11	79	8	5.10	5.74	5	Exceeds
MW-11D(2)	97.2	5.9	1.7	8.7	113.50	1.59	0.17	0.03	0.18	1.97	8	81	9	4.16	5.36	10	-
MW-12D	216	11.0	0.56	8.5	236.06	3.54	0.31	0.01	0.18	4.04	8	88	4	8.18	1.29	5	-
MW-13D	92.4	14	0.8	11	118.23	1.52	0.39	0.01	0.23	2.15	18	70	11	4.41	2.45	10	-
MW-14D	120	9	0.2	5.1	133.90	1.97	0.24	0.00	0.11	2.32	10	85	5	4.58	1.28	10	-
MW-15D	156	10	0.67	11	177.67	2.56	0.28	0.01	0.23	3.08	9	83	7	6.55	6.01	5	Exceeds
MW-18D	132	7.8	1.5	8.2	149.50	2.16	0.22	0.02	0.17	2.58	9	84	7	5.30	2.68	5	-
MW-14R	58.8	1.6	0.2	4	64.60	0.96	0.05	0.00	0.08	1.10	4	88	8	2.20	0.32	10	-
MW-20R	55.2	1.7	0.2	3.3	60.40	0.91	0.05	0.00	0.07	1.03	5	88	7	2.09	1.92	10	-
MW-26R	115.2	5.4	0.2	12.0	132.80	1.89	0.15	0.00	0.25	2.29	7	82	11	4.63	0.97	10	-

Notes:
mg/L = milligrams per liter
meq/L = milliequivalents per liter
Total alkalinity concentration, reported as calcium carbonate (CaCO3), is converted to the bicarbonate (HCO3-) ion by multiplying by a factor of 1.2.
Cation / anion balance equation is the equivalent percent difference in cations minus anions divided by the sum of cations and anions [(cations-anions)/(anions+cations)*100].
The MRL was used for analytes that were non-detect
A 10% difference threshold is used if the total cation-anion sums are < 5.0 meq/liter.
A 5% difference threshold is used if the total cation-anion sums are > or = to 5.0 meq/liter.
— = Not Applicable

Table 10. Leachate Monitoring Results
Semi-Annual Monitoring Event No. 1 - January 2023
Hidden Valley Landfill, Pierce County, Washington

Parameters	MRL	Leachate-East Area	Leachate-Side Slope	Leak Detection-Side Slope	Hydraulic Gradient Control System
Volatile Organics (µg/L)					
1,4-Dichlorobenzene	0.5-0.8	2.5	*	*	*
2-Butanone (MEK)	6.0	*	59	*	*
Benzene	0.5-0.8	0.89	1.2	*	*
Carbon disulfide	0.5-0.84	1.6	*	*	*
Ethylbenzene	1.0	1.2	*	*	*
m-Xylene & p-Xylene	0.5-0.77	2.2	*	*	*
o-Xylene	0.5-0.95	1	*	*	*
Toluene	0.5-0.85	0.78	1.6	*	*
Total Metals (mg/L)					
Calcium	0.2-0.78	61	14	88	26
Iron	0.01-0.02	1.4	2.4	8.4	2.5
Magnesium	0.1-0.26	37	23	23	23
Manganese	0.005	1.3	0.11	3.4	0.22
Potassium	2-2.4	170	550	3.1	480.0
Sodium	1-3.7	1,700	7,200	16	5400
Inorganic Parameters (mg/L)					
Alkalinity	10	2,800	6,400	380	6400
Ammonia	0.1-2.2	180	280	*	360
Chloride	0.2-60	1,700	6,600	3	6100
Nitrate as N	0.5-0.9	6.2	5	*	*
Sulfate	0.2-5.0	81	530	11	210
Total Dissolved Solids	10-470	5,500	21,000	390	180000
Total Organic Carbon - Quad	1-35	300	850	2	730
Total Suspended Solids	4.0	24	4.4	25.0	*
Field Parameters					
Dissolved Oxygen (mg/L)	—	2.32	3.07	4.74	2.35
Oxidation Reduction Potential (mV)	—	-60.7	50.9	222.7	75
pH (SU)	—	7.54	7.91	6.08	7.88
Specific Conductivity (µS/cm)	—	9,604	31,360	329	25590
Temperature (°C)	—	16.5	17.5	13.2	18.1
Turbidity (NTU)	—	362	2995	42.8	472

Notes:
Analyses performed by Eurofins TestAmerica in Denver, Colorado.
Volatile organic compounds not listed were not present at concentrations exceeding the MRL
°C = degrees celcius
H = Sample was prepped or analyzed beyond specified holding time
mg/L = milligrams per liter
mV = millivolts
NTU = Nephelometric Turbidity Units
SU = standard units
µg/L = micrograms per liter
µS/cm = microsiemens per centimeter
— = not applicable or not analyzed
* = not reported at or above the MRL (Method Reporting Limit)

Table 1. 2024 Main Sump and Side-Slope Liner Area Performance Data
Semi - Annual Monitoring Event No. 2 - July 2024
Hidden Valley Landfill, Pierce County, Washington

Month	Main Sump Monthly Leachate Volume - Cell 1 (gallons)	Side-Slope Sump Monthly Leachate Volume - Cell 2 (gallons)	Side-Slope Sump Monthly Leakage Flow[a] - Cell 2 (gallons/month)	Monthly Rainfall (inches)
January	14,000	0	0	11.50
February	14,200	0	0	4.30
March	31,000	0	0	5.90
April	24,350	0	0	5.20
May	4,100	0	0	4.60
June	810	0	0	4.00
July	0	0	0	0.29
August	2,135	0	0	3.30
September	1,050	0	0	2.25
October	9,100	0	0	4.80
November	4,600	0	0	6.15
December	14,100	0	0	7.55
Year to date:	119,445	0	0	59.84

Notes:

a = Leakage is fluid pumped from the leak detection sump as recorded by LRI staff.

Table 2. Water Level Elevations - July 2024
Semi - Annual Monitoring Event No. 2 - July 2024
Hidden Valley Landfill, Pierce County, Washington

Location	Well Casing Elevation	Depth to Water (FT)	Water Level Elevation
Shallow Perched Aquifer			
MW-10S	463.65	29.31	434.34
MW-11S	520.03	95.96	424.07
MW-12S	493.41	67.73	425.68
MW-13S	452.26	27.62	424.64
MW-14S	481.30	53.11	428.19
MW-15S	506.78	78.54	428.24
MW-17S	555.97	131.87	424.10
MW-18S	541.43	132.77	408.66
MW-19S	489.23	52.41	436.82
MW-29S	450.65	20.14	430.51
FMMW-1	546.03	143.73	402.30
FMMW-2	539.96	138.60	401.36
BC-4S	530.25	123.48	406.77
Upper Regional Aquifer			
MW-10D	464.09	33.79	430.30
MW-11D	520.10	96.17	423.93
MW-11D(2)	519.53	96.50	423.03
MW-12D	493.49	70.47	423.02
MW-13D	450.19	28.32	421.87
MW-14D	481.39	54.96	426.43
MW-15D	509.09	79.42	429.67
MW-18D	541.79	133.11	408.68
MW-19D	489.35	63.91	425.44
Lower Regional Aquifer			
MW-14R	480.26	122.11	358.15
MW-20R	472.90	110.88	362.02
MW-26R	485.40	74.16	411.24
BC-4R	530.31	157.28	373.03

Updated well casing elevation with survey data from 5/23/2018

Table 3. Field Parameters
Semi - Annual Monitoring Event No. 2 - July 2024
Hidden Valley Landfill, Pierce County, Washington

Location	Sample Number	Date	Method	pH	Specific Conductivity	Temperature
Units				(SU)	(µS/cm)	(°C)
HVL Cleanup Level				—	700	—
WAC 173-200				6.5-8.5	700[b]	—
Shallow Perched Aquifer						
(BG) MW-10S	HVL-071724-11	7/17/24	DP	**6.44**	284.1	14.5
MW-11S	HVL-071824-02	7/18/24	DP	**5.90**	315	14.7
MW-12S	HVL-071824-20	7/18/24	DB	**6.12**	288.6	18.8
MW-13S	HVL-071724-24	7/17/24	DP	**6.03**	195.1	13.9
MW-14S	HVL-071724-01	7/17/24	DP	**5.95**	351.6	14.9
MW-15S	HVL-071724-07	7/17/24	DP	**5.62**	383	16.0
MW-17S	HVL-071724-27	7/17/24	DP	**6.08**	325	18.8
MW-18S	HVL-071824-10	7/18/24	DP	**5.66**	277.1	16.1
MW-29S	HVL-071824-26	7/18/24	DP	**6.28**	259.1	14.0
FMMW-1	HVL-071824-23	7/18/24	DP	**6.06**	240	15.4
FMMW-2	HVL-071824-22	7/18/24	DP	**6.03**	341	17.0
Upper Regional Aquifer						
(BG) MW-10D	HVL-071724-16	7/17/24	DP	**6.48**	291.4	14.2
MW-11D(2)	HVL-071824-06	7/18/24	DP	6.81	219	14.4
MW-12D	HVL-071824-18	7/18/24	DP	6.57	375	16.4
MW-13D	HVL-071724-22	7/17/24	DP	**6.22**	232	14.1
MW-14D	HVL-071724-03	7/17/24	DP	**6.17**	341.4	14.7
MW-15D	HVL-071724-09	7/17/24	DP	**6.24**	297	15.2
MW-18D	HVL-071824-08	7/18/24	DP	6.60	272.8	15.9
Lower Regional Aquifer						
MW-14R	HVL-071724-05	7/17/24	DP	7.42	102	11.9
MW-20R	HVL-071724-14	7/17/24	DP	6.96	96	10.5
MW-26R	HVL-071724-12	7/17/24	DP	7.11	212	11.6

Notes:

Parameter concentrations that are greater than cleanup levels are shown in **bold**

b = Secondary Drinking Water Standard
BG = Background
°C = degrees Celsius
DP = dedicated bladder-pump
DB = disposable bailer
µS/cm = microsiemens per centimeter
— = not analyzed or not applicable

Table 4. Inorganic Parameters
Semi - Annual Monitoring Event No. 2 - July 2024
Hidden Valley Landfill, Pierce County, Washington

Location		Alkalinity, Total	Ammonia	Chloride	Nitrate	Sulfate	Total Dissolved Solids	Total Organic Carbon	Total Suspended Solids
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MRL		10.0	0.1	0.2-1.2	0.2	0.2-1.0	10	1.0	4.0
HVL Cleanup Level		—	—	250	10	250	500	—	—
WAC 173-200 Criteria		—	—	250[b]	10[a]	250[b]	500[b]	—	—
Shallow Perched Aquifer									
(BG)	MW-10S	110	*	9.9	1.3	12	170	1.1	*
	MW-11S	120	*	16	1.1	8.4	190	1.3	*
	MW-12S	110	0.8	9.1	0.81	14	180	1.1	5.2
	MW-13S	67	*	6.5	0.86	15	130	*	*
	MW-14S	150	1.1	17	*	3.4	190	2.1	*
	MW-15S	170	3.5	15	*	1.9	220	2.1	*
	MW-17S	150	4.4	11	0	7.3	200	1.3	*
	MW-18S	100	*	10	1	15	180	*	*
	MW-29S	100	*	13	*	16	160	*	4.8
	FMMW-1	72	*	13	1.1	13	140	*	*
	FMMW-2	120	*	14	2.7	12	210	1.8	*
Upper Regional Aquifer									
(BG)	MW-10D	110	*	9.9	1.3	11	170	1.0	*
	MW-11D(2)	79	*	6.6	1.9	8.5	140	*	*
	MW-12D	170	*	10	0.88	8.3	220	*	*
	MW-13D	82	*	7.7	0.85	15	150	1.1	*
	MW-14D	130	3.2	13	*	5.8	190	1.7	4.8
	MW-15D	130	*	10	0.70	11	180	1.3	*
	MW-18D	110	*	7.8	1.7	8.3	170	*	*
Lower Regional Aquifer									
	MW-14R	46	*	1.7	*	4.1	96	*	*
	MW-20R	52	*	1.7	*	3.4	92	*	*
	MW-26R	100	*	5.6	*	12	140	*	*

Notes:

Parameter concentrations that are greater than cleanup levels are shown in **bold**

Analyses performed by Eurofins TestAmerica in Denver, Colorado

H = Due to a Fedex shipping delay, parameter analyzed outside specified holding time

— = not analyzed or not applicable

* = not reported at or above the MRL (Method Reporting Limit)

a = Primary Drinking Water Standard

b = Secondary Drinking Water Standard

BG = Background/upgradient wells

mg/L = milligrams per liter

Table 5. Dissolved Metals
Semi - Annual Monitoring Event No. 2 - July 2024
Hidden Valley Landfill, Pierce County, Washington

Location	Iron	Manganese	Calcium	Magnesium	Potassium	Sodium
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MRL	0.005	0.001	0.2	0.1	2.0	1.0
HVL Cleanup Level	0.30	0.05	—	—	—	—
WAC 173-200 Criteria	0.30[b]	0.05[b]	—	—	—	—
Shallow Perched Aquifer						
(BG) MW-10S	*	0.002	31	9.6	*	9.1
MW-11S	*	*	27	8.3	6.9	20
MW-12S	0.064	**0.23**	23	6.5	10	18
MW-13S	*	*	19	5.4	2.4	9.4
MW-14S	0.28	**1.0**	31	9.8	6.2	19
MW-15S	**0.38**	**1.5**	33	10	9.6	19
MW-17S	0.0069	**0.96**	24	7.9	13	20
MW-18S	*	*	23	7.1	7.7	18
MW-29S	0.17	**0.8**	22	6.3	2.6	20
FMMW-1	*	*	18	5.3	2.8	18
FMMW-2	*	0.01	26	8.3	10	20
Upper Regional Aquifer						
(BG) MW-10D	*	*	32	10	2	9.1
MW-11D(2)	*	*	20	8.5	2.2	8.2
MW-12D	*	*	33	13	3.4	22
MW-13D	*	*	23	7.7	2.5	9.7
MW-14D	**5.8**	**1.6**	26	8	7.7	15
MW-15D	*	0.0048	25	11	2.7	19
MW-18D	*	*	25	10	3.2	12
Lower Regional Aquifer						
MW-14R	0.051	**0.17**	7.8	4.5	*	5.4
MW-20R	*	*	7.6	3.9	*	5.9
MW-26R	**0.84**	**0.43**	21	9.4	2.2	6.9

Notes:

Parameter concentrations that are greater than site cleanup levels or WAC 173-200 criteria are shown in **bold**

Analyses performed by Eurofins TestAmerica in Denver, Colorado

BG = Background

mg/L = milligrams per liter

* = not reported at or above the MRL (Method Reporting Limit)

— = not analyzed or not applicable

Table 6. Volatile Organic Compounds
Semi - Annual Monitoring Event No. 2 - July 2023
Hidden Valley Landfill, Pierce County, Washington

Location		Tetrachloroethene
Units		µg/L
MRL		0.5
HVL Cleanup Level		—
WAC 173-200 Criteria		0.80
Shallow Perched Aquifer		
(BG)	MW-10S	*
	MW-11S	*
	MW-12S	*
	MW-13S	*
	MW-14S	*
	MW-15S	*
	MW-17S	*
	MW-18S	*
	MW-29S	*
	FMMW-1	*
	FMMW-2	*
Upper Regional Aquifer		
(BG)	MW-10D	*
	MW-11D(2)	**1.3**
	MW-12D	*
	MW-13D	*
	MW-14D	*
	MW-15D	0.67
	MW-18D	*
Lower Regional Aquifer		
	MW-14R	*
	MW-20R	*
	MW-26R	*
Quality Control Samples		
	Field Blank	*
	Trip Blank	*

Notes:

Parameter concentrations that are greater than cleanup levels are shown in **bold**

Analyses performed by Eurofins TestAmerica in Denver, Colorado

Volatile organic compounds not listed were not present at concentrations exeeding the MRL

BG = Background

µg/L = micrograms per liter

* = not reported at or above the MRL (Method Reporting Limit)

— = not analyzed or not applicable

Table 7. Duplicate Sample Evaluation
Semi - Annual Monitoring Event No. 2 - July 2023
Hidden Valley Landfill, Pierce County, Washington

Parameter	MRL	MW-11S	MW-11S (Duplicate)	RPD (%)
Dissolved Metals (mg/L)				
Calcium	0.2	27	28	3.6
Magnesium	0.1	8.3	8.4	1.2
Potassium	2.0	6.9	7.1	2.9
Sodium	1.0	20	21	4.9
Inorganic Parameters (mg/L)				
Alkalinity	10.0	120	120	0.0
Chloride	0.6	16	16	0.0
Nitrate as N	0.2	1.1	1.1	0.0
Sulfate	0.5	8.4	8.5	1.2
Total Dissolved Solids	10	190	190	0.0
Total Suspended Solids	4	1.3	1	26.1

Notes:

Analysis performed by Eurofins TestAmerica in Denver, Colorado

Analytes not listed were not present at concentrations exceeding the MRL

H = Parameter analyzed outside specified holding time

RPD = relative percent difference

mg/L = milligrams per liter

*= RPD based on result as compared to the Reporting Limit (RL) for a non-detection in the compared sample

Table 8. Water Supply Wells
Semi - Annual Monitoring Event No. 2 - July 2024
Hidden Valley Landfill, Pierce County, Washington

Parameter	Units	MRL	Heidelberg	Paul Bunyan
Field Parameters				
pH	SU	—	6.97	7.38
Specific Conductivity	µS/cm	—	312.1	278.8
Temperature	°C	—	18.0	24.1
Metals (total)				
Arsenic	mg/L	0.005	*	*
Iron	mg/L	0.01	0.14	*
Manganese	mg/L	0.003	0.0037	*
Zinc	mg/L	0.01	0.12	0.023
Inorganic Parameters				
Ammonia	mg/L	0.1	*	*
Chemical Oxygen Demand	mg/L	10	—	—
Chloride	mg/L	1.2	8	6.1
Nitrate	mg/L	0.2	1.9	1
Nitrite	mg/L	0.5	—	—
Sulfate	mg/L	0.2	13	12
Total Organic Carbon	mg/L	1.0	*	*
Other				
Color	PCU	5.0	5	5

Notes:

Analyses performed by Eurofins TestAmerica in Denver, Colorado.

Analytes not listed are VOCs that were not detected above the reporting limit.

Color reported in color units

°C = degrees Celsius

mg/L = milligrams per liter

PCU = platinum-cobalt units

SU = Standard Units

µS/cm = microsiemens per centimeter

µg/L = micrograms per liter

* = not reported at or above the MRL (Method Reporting Limit)

— = Not Applicable

Table 9. Cation-Anion Balance
Semi - Annual Monitoring Event No. 2 - July 2024
Hidden Valley Landfill, Pierce County, Washington

Cations	mg/L					meq/L					% of Total		
	Ca	Mg	K	Na	Total	Ca	Mg	K	Na	Total	Na+K	Ca	Mg
MW-10S	31	9.6	2.0	9.1	51.70	1.55	0.79	0.05	0.40	2.78	16	56	28
MW-11S	27	8.3	6.9	20	62.20	1.35	0.68	0.18	0.87	3.08	34	44	22
MW-12S	23	6.5	10	18	57.50	1.15	0.53	0.26	0.78	2.72	38	42	20
MW-13S	19	5.4	2.4	9.4	36.20	0.95	0.44	0.06	0.41	1.86	25	51	24
MW-14S	31	9.8	6.2	19	66.00	1.55	0.81	0.16	0.83	3.34	30	46	24
MW-15S	33	10.0	9.6	19	71.60	1.65	0.82	0.25	0.83	3.54	30	46	23
MW-17S	24	7.9	13	20	64.90	1.20	0.65	0.33	0.87	3.05	39	39	21
MW-18S	23	7.1	8	18	55.80	1.15	0.58	0.20	0.78	2.71	36	42	22
MW-29S	22	6.3	2.6	20	50.90	1.10	0.52	0.07	0.87	2.55	37	43	20
FMMW-1	18	5.3	2.8	18	44.10	0.90	0.44	0.07	0.78	2.19	39	41	20
FMMW-2	26	8.3	10	20	64.30	1.30	0.68	0.26	0.87	3.11	36	42	22
MW-10D	32	10	2.0	9.1	53.10	1.60	0.82	0.05	0.40	2.87	16	56	29
MW-11D(2)	20	8.5	2.2	8.2	38.90	1.00	0.70	0.06	0.36	2.11	20	47	33
MW-12D	33	13	3.4	22	71.40	1.65	1.07	0.09	0.96	3.76	28	44	28
MW-13D	23	7.7	2.5	9.7	42.90	1.15	0.63	0.06	0.42	2.27	21	51	28
MW-14D	26	8	7.7	15	56.70	1.30	0.66	0.20	0.65	2.81	30	46	23
MW-15D	25	11	2.7	19	57.70	1.25	0.91	0.07	0.83	3.05	29	41	30
MW-18D	25	10	3.2	12	50.20	1.25	0.82	0.08	0.52	2.67	23	47	31
MW-14R	7.8	4.5	2.0	5.4	19.70	0.39	0.37	0.05	0.23	1.05	27	37	35
MW-20R	7.6	3.9	2.0	5.9	19.40	0.38	0.32	0.05	0.26	1.01	31	38	32
MW-26R	21	9.4	2.2	6.9	39.50	1.05	0.77	0.06	0.30	2.18	16	48	36

Anions	mg/L					meq/L					% of Total			Total Ions (meq/L)	Cation - Anion Balance	Applicable Ratio (%)	Ratio Exceedance
	Alk	Cl	NO_3	SO_4	Total	Alk	Cl	NO_3	SO_4	Total	Cl	Alk	SO_4				
MW-10S	132	9.9	1.30	12	155.20	2.16	0.28	0.02	0.25	2.71	10	80	9	5.50	1.26	5	-
MW-11S	144	16	1.1	8	169.50	2.36	0.45	0.02	0.17	3.01	15	79	6	6.08	1.18	5	-
MW-12S	132	9.1	1	14	155.91	2.16	0.26	0.01	0.29	2.73	9	79	11	5.45	0.07	5	-
MW-13S	80.4	7	0.9	15	102.76	1.32	0.18	0.01	0.31	1.83	10	72	17	3.69	0.95	10	-
MW-14S	180	17	0.20	3.4	200.60	2.95	0.48	0.00	0.07	3.51	14	84	2	6.84	2.44	5	-
MW-15S	204	15	0.20	1.9	221.10	3.35	0.42	0.00	0.04	3.81	11	88	1	7.35	3.66	5	-
MW-17S	180	11	0.20	7.3	198.50	2.95	0.31	0.00	0.15	3.42	9	86	4	6.47	5.67	5	Exceeds
MW-18S	120	10	1	15	146.00	1.97	0.28	0.02	0.31	2.58	11	76	12	5.29	2.53	5	-
MW-29S	120	13	0.20	16	149.20	1.97	0.37	0.00	0.33	2.67	14	74	12	5.22	2.25	5	-
FMMW-1	86.4	13.0	1.1	13	113.50	1.42	0.37	0.02	0.27	2.07	18	68	13	4.26	2.76	10	-
FMMW-2	144	14	2.7	12	172.70	2.36	0.39	0.04	0.25	3.05	13	77	8	6.16	0.93	5	-
MW-10D	132	9.9	1.3	11.0	154.20	2.16	0.28	0.02	0.23	2.69	10	80	8	5.56	3.11	5	-
MW-11D(2)	94.8	6.6	1.9	8.5	111.80	1.55	0.19	0.03	0.18	1.95	10	80	9	4.06	4.00	10	-
MW-12D	204	10.0	0.88	8.3	223.18	3.35	0.28	0.01	0.17	3.81	7	88	5	7.58	0.71	5	-
MW-13D	98.4	7.7	0.9	15	121.95	1.61	0.22	0.01	0.31	2.16	10	75	14	4.42	2.50	10	-
MW-14D	156	13.0	0.20	5.8	175.00	2.56	0.37	0.00	0.12	3.05	12	84	4	5.85	4.16	5	-
MW-15D	156	10	0.70	11	177.70	2.56	0.28	0.01	0.23	3.08	9	83	7	6.13	0.52	5	-
MW-18D	132	7.8	1.7	8.3	149.80	2.16	0.22	0.03	0.17	2.58	9	84	7	5.26	1.70	5	-
MW-14R	55.2	1.7	0.20	4.1	61.20	0.91	0.05	0.00	0.09	1.04	5	87	8	2.09	0.19	10	-
MW-20R	62.4	1.7	0.20	3.4	67.70	1.02	0.05	0.00	0.07	1.15	4	89	6	2.15	6.37	10	-
MW-26R	120	5.6	0.20	12.0	137.80	1.97	0.16	0.00	0.25	2.38	7	83	10	4.56	4.41	10	-

Notes:
mg/L = milligrams per liter
meq/L = milliequivalents per liter
Total alkalinity concentration, reported as calcium carbonate (CaCO3), is converted to the bicarbonate (HCO3-) ion by multiplying by a factor of 1.2.
Cation / anion balance equation is the equivalent percent difference in cations minus anions divided by the sum of cations and anions [(cations-anions)/(anions+cations)*100].
The MRL was used for analytes that were non-detect
A 10% difference threshold is used if the total cation-anion sums are < 5.0 meq/liter.
A 5% difference threshold is used if the total cation-anion sums are > or = to 5.0 meq/liter.
— = Not Applicable

Table 10. Leachate Monitoring Results
January 2024
Hidden Valley Landfill, Pierce County, Washington

Parameters	MRL	Leachate-East Area	Leachate-Side Slope	Leak Detection-Side Slope	Hydraulic Gradient Control System
Volatile Organics (µg/L)					
1,4-Dichlorobenzene	0.5-0.8	2.5	*	*	*
2-Butanone (MEK)	6.0	*	59	*	*
Acetone	10.0				
Benzene	0.5-0.8	0.89	1.2	*	*
Carbon disulfide	0.5-0.84	1.6	*	*	*
cis-1,2-Dichloroethene	0.5-0.75				
Ethylbenzene	1.0	1.2	*	*	*
m-Xylene & p-Xylene	0.5-0.77	2.2	*	*	*
o-Xylene	0.5-0.95	1	*	*	*
Toluene	0.5-0.85	0.78	1.6	*	*
Total Metals (mg/L)					
Calcium	0.2-0.78	61	14	26	88
Iron	0.01-0.02	1.4	2.4	2.5	8.4
Magnesium	0.1-0.26	37	23	23	23
Manganese	0.005	1.3	0.11	0.2	3.40
Potassium	2-2.4	170	550	480.0	3.1
Sodium	1-3.7	1,700	7,200	5,400	16
Inorganic Parameters (mg/L)					
Alkalinity	10	2,800	6,400	6,400	380
Ammonia	0.1-2.2	180	280	360	*
Chloride	0.2-60	1,700	6,600	6,100	3
Nitrate as N	0.5-0.9	6.2	5	*	*
Sulfate	0.2-5.0	81	530	210	11
Total Dissolved Solids	10-470	5,500	21,000	180,000	390
Total Organic Carbon - Quad	1-35	300	850	730	2
Total Suspended Solids	4.0	24.0	4.4	*	25.0
Field Parameters					
Dissolved Oxygen (mg/L)	—	2.32	3.07	2.35	4.74
Oxidation Reduction Potential (mV)	—	-60.7	50.9	75.0	223
pH (SU)	—	7.54	7.91	7.88	6.08
Specific Conductivity (µS/cm)	—	9,604	31,360	25,590	329
Temperature (°C)	—	16.5	17.5	18.1	13.2
Turbidity (NTU)	—	362	2995	472.0	43

Notes:
Analyses performed by Eurofins TestAmerica in Denver, Colorado.
Volatile organic compounds not listed were not present at concentrations exceeding the MRL
°C = degrees celcius
H = Sample was prepped or analyzed beyond specified holding time
mg/L = milligrams per liter
mV = millivolts
NTU = Nephelometric Turbidity Units
SU = standard units
µg/L = micrograms per liter
µS/cm = microsiemens per centimeter
— = not applicable or not analyzed
* = not reported at or above the MRL (Method Reporting Limit)

Appendix E

TIME SERIES PLOTS

Figure 1

Specific Conductivity

Shallow Perched Aquifer, Hidden Valley Landfill
Wells MW-11S, MW-12S, MW-13S, MW-14S, and MW-17S

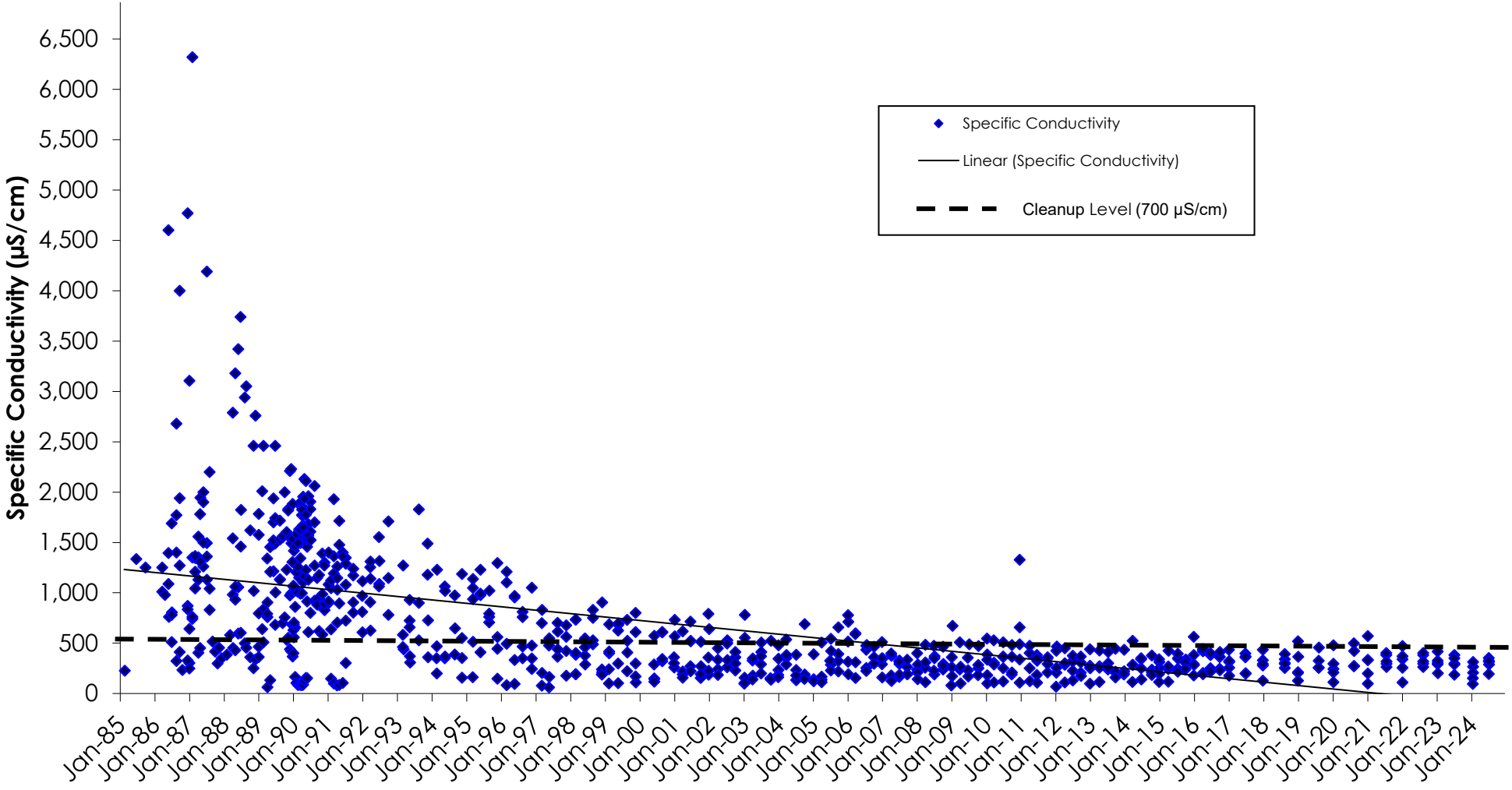


Figure 2

Ammonia

Shallow Perched Aquifer, Hidden Valley Landfill
Wells MW-11S, MW-12S, MW-13S, MW-14S, and MW-17S

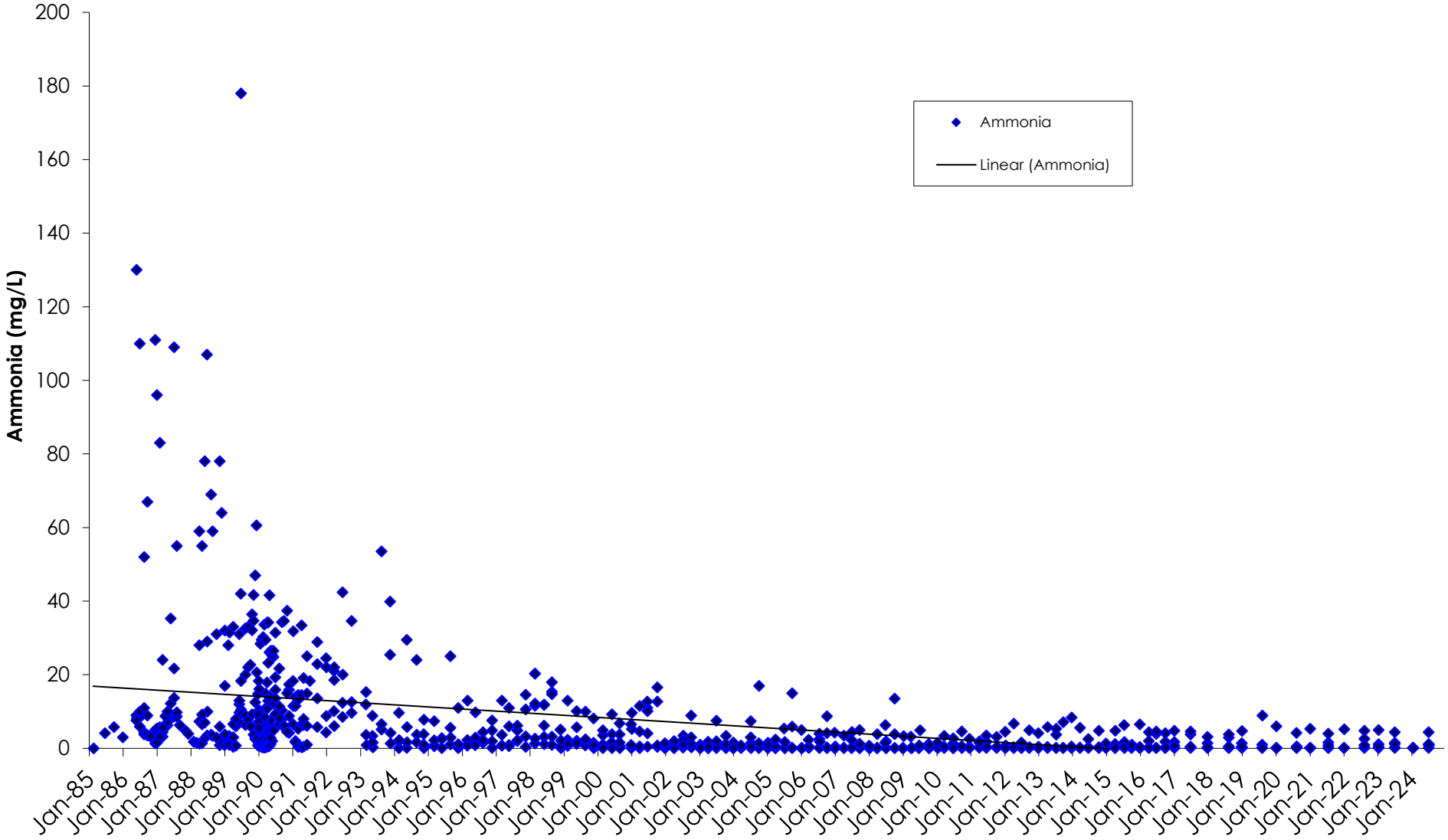


Figure 3

Nitrate

Shallow Perched Aquifer, Hidden Valley Landfill
Wells MW-11S, MW-12S, MW-13S, MW-14S, and MW-17S

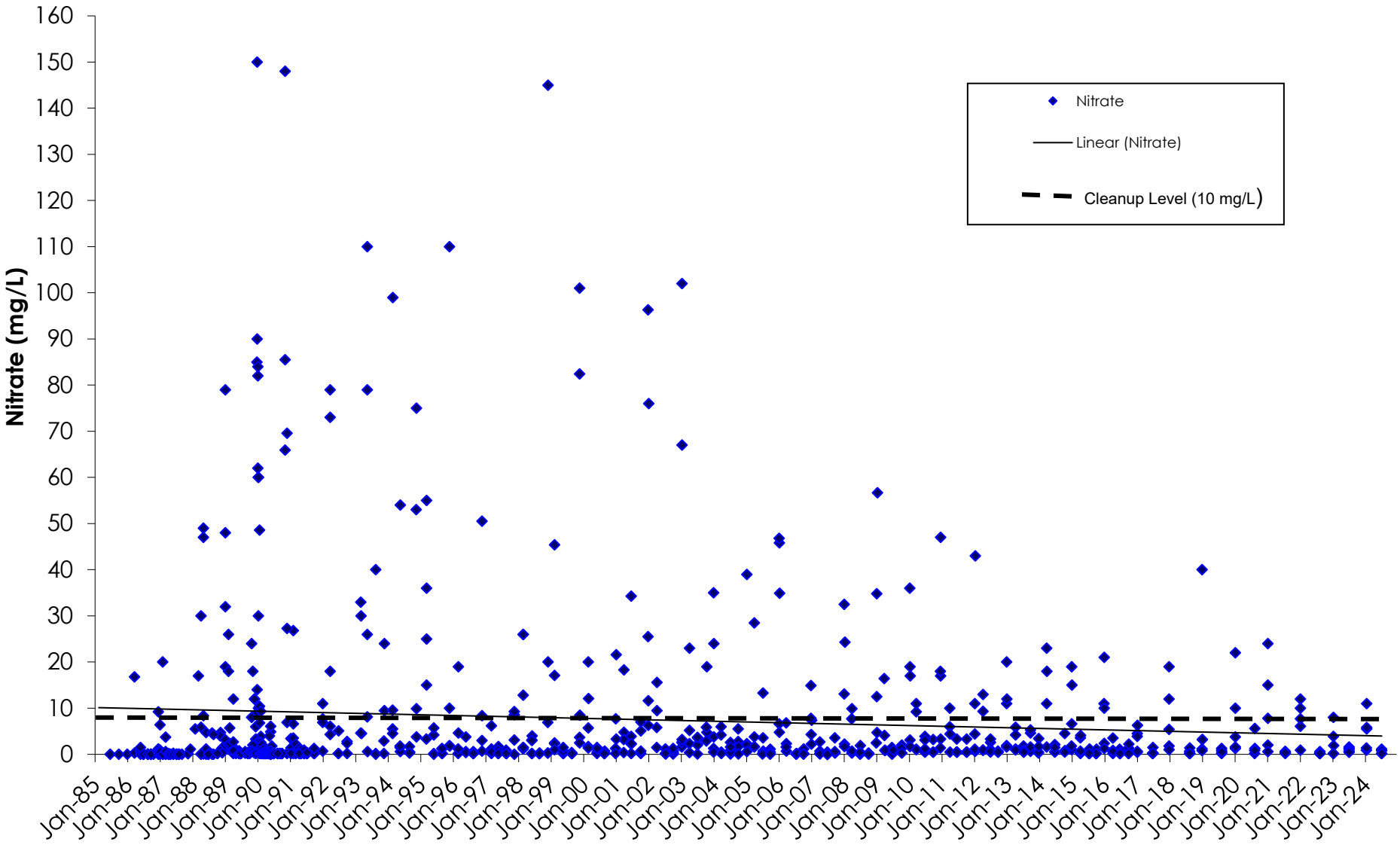


Figure 4

Dissolved Iron

Shallow Perched Aquifer, Hidden Valley Landfill
Wells MW-11S, MW-12S, MW-13S, MW-14S, and MW-17S

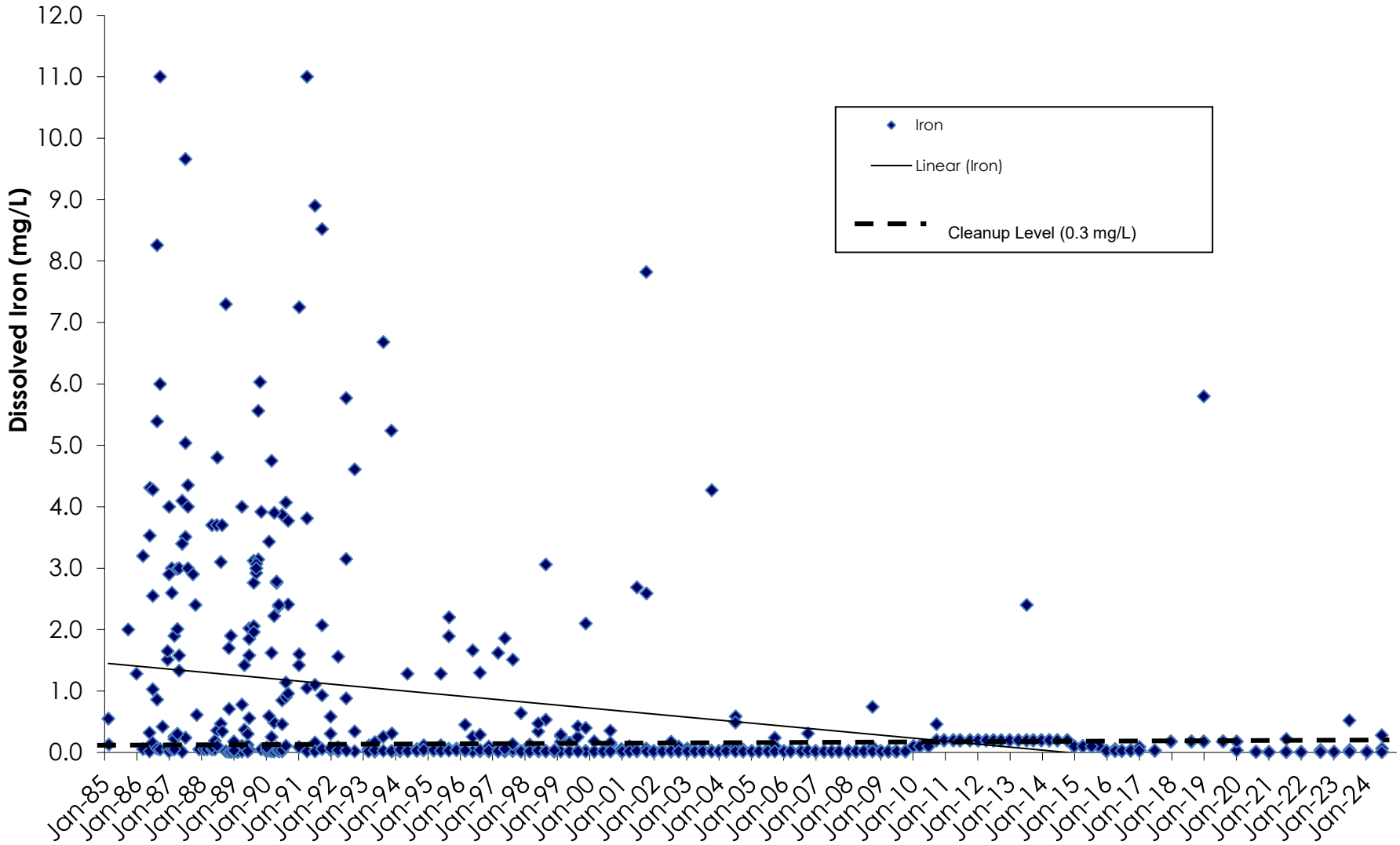


Figure 5

Dissolved Manganese

Shallow Perched Aquifer, Hidden Valley Landfill
Wells MW-11S, MW-12S, MW-13S, MW-14S, and MW-17S

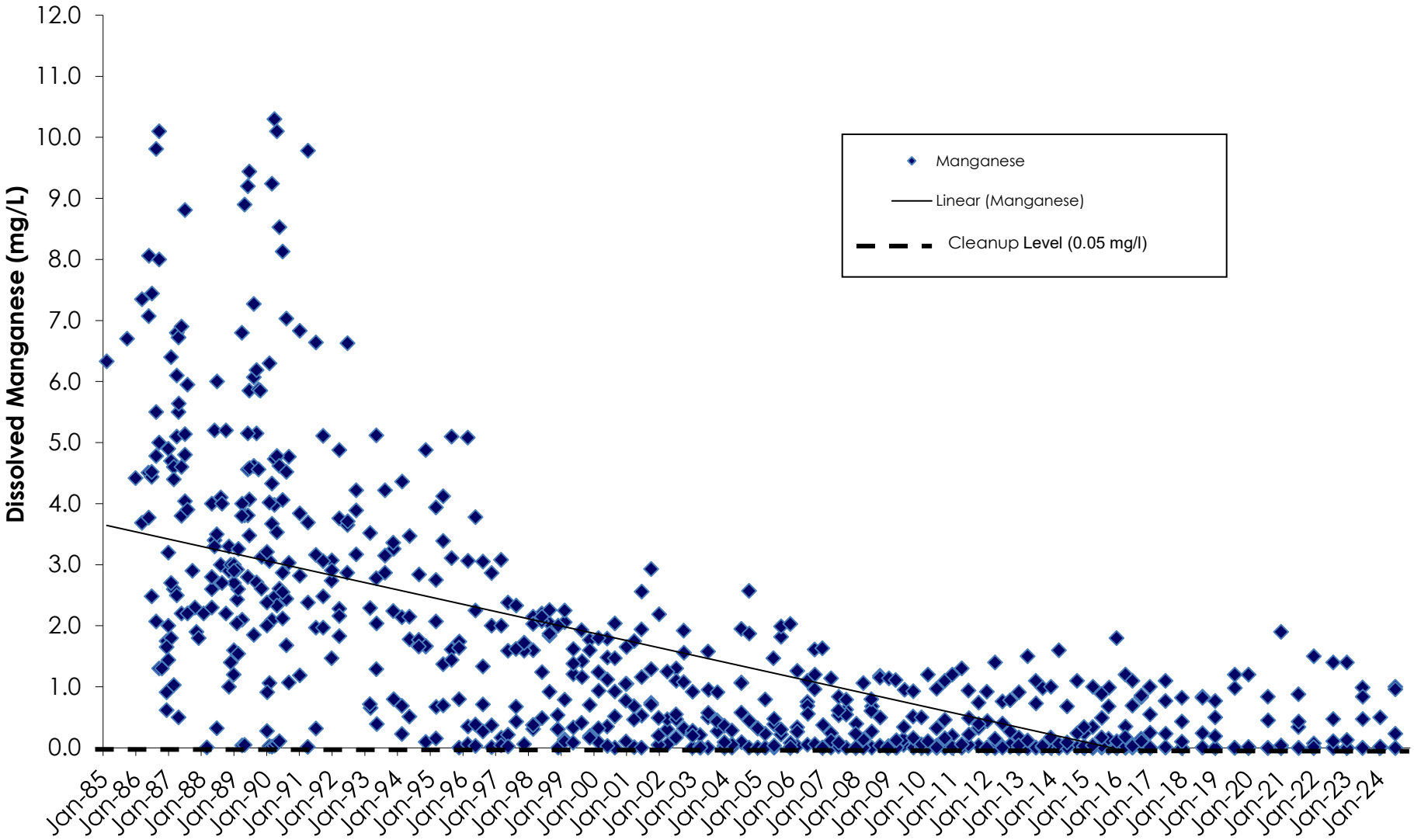


Figure 6

Specific Conductivity

Upper Regional Aquifer, Hidden Valley Landfill
Wells MW-11D(2), MW-12D, MW-13D, and MW-14D

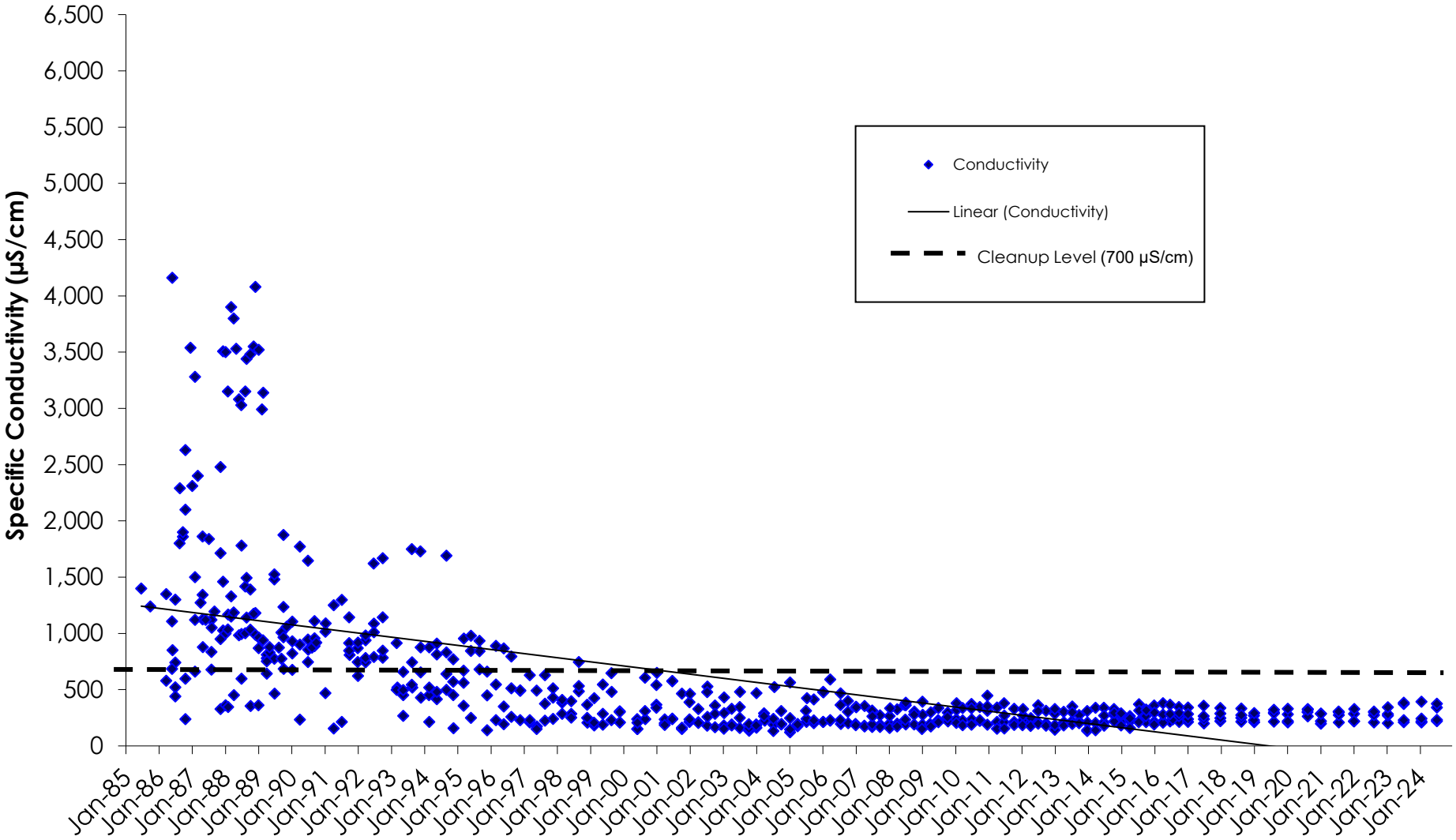


Figure 7

Ammonia

Upper Regional Aquifer, Hidden Valley Landfill
Wells MW-11D(2), MW-12D, MW-13D, and MW-14D

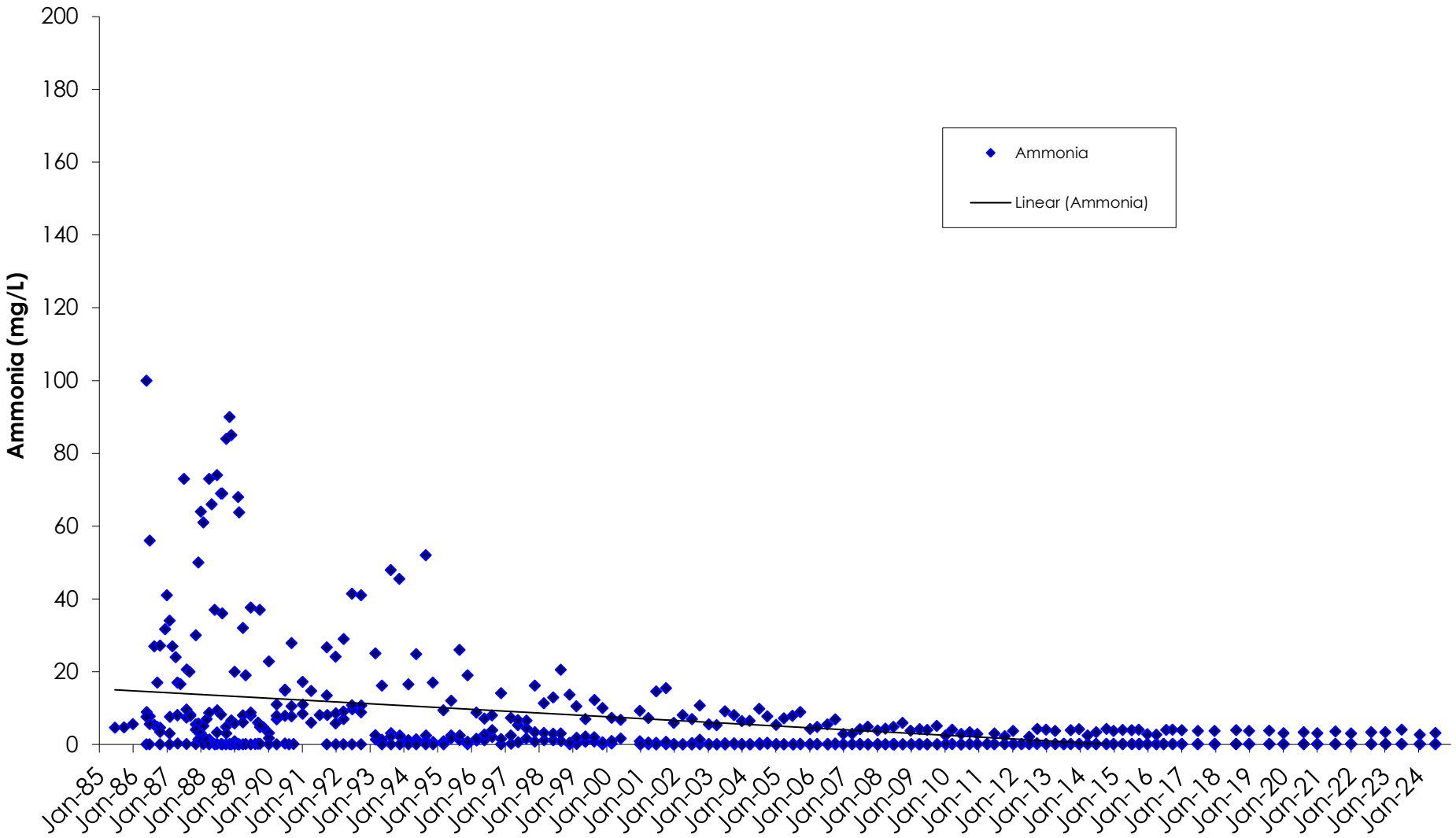


Figure 8

Nitrate

Upper Regional Aquifer, Hidden Valley Landfill
Wells MW-11D(2), MW-12D, MW-13D, and MW-14D

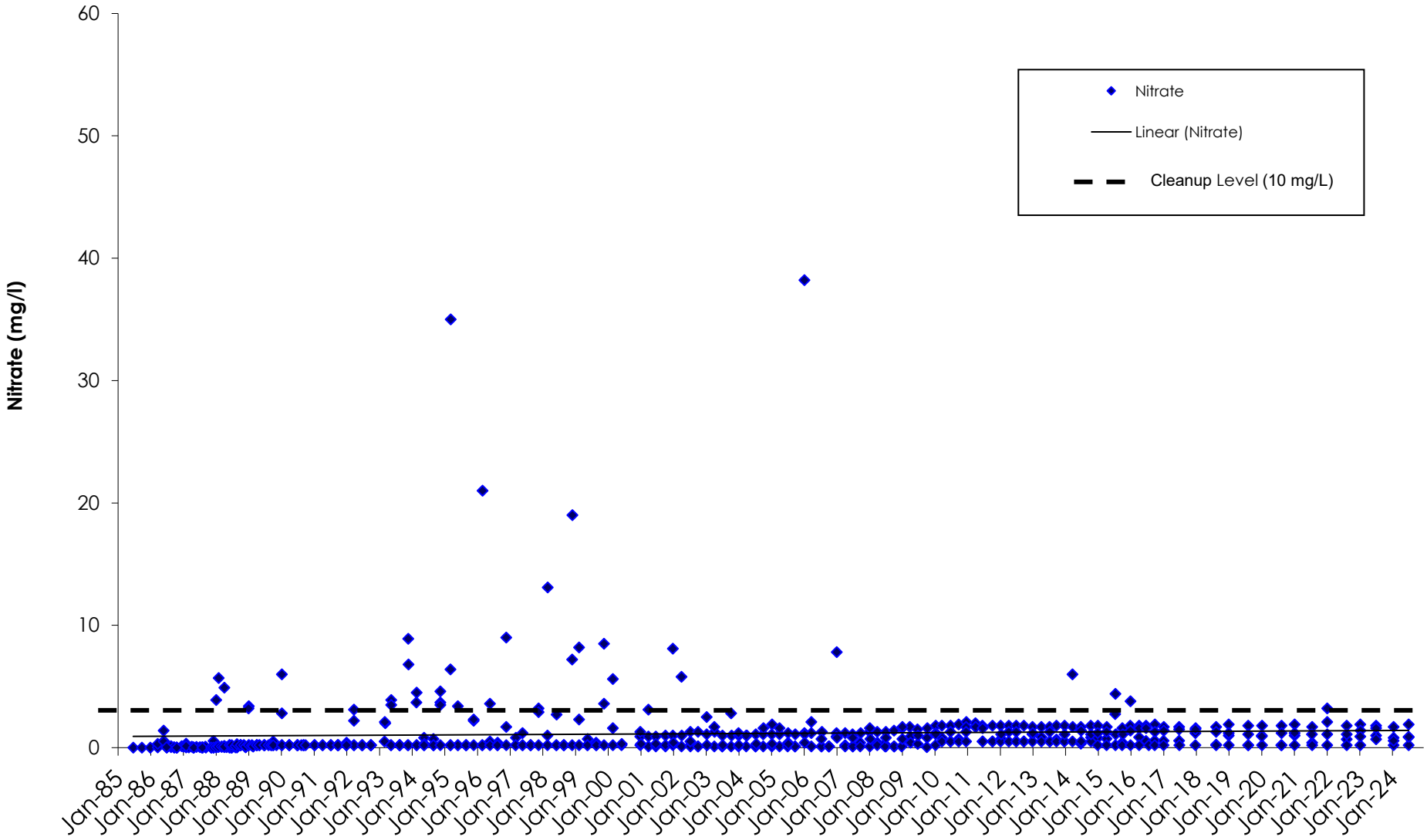


Figure 9

Dissolved Iron

Upper Regional Aquifer, Hidden Valley Landfill
Wells MW-11D(2), MW-12D, MW-13D, and MW-14D

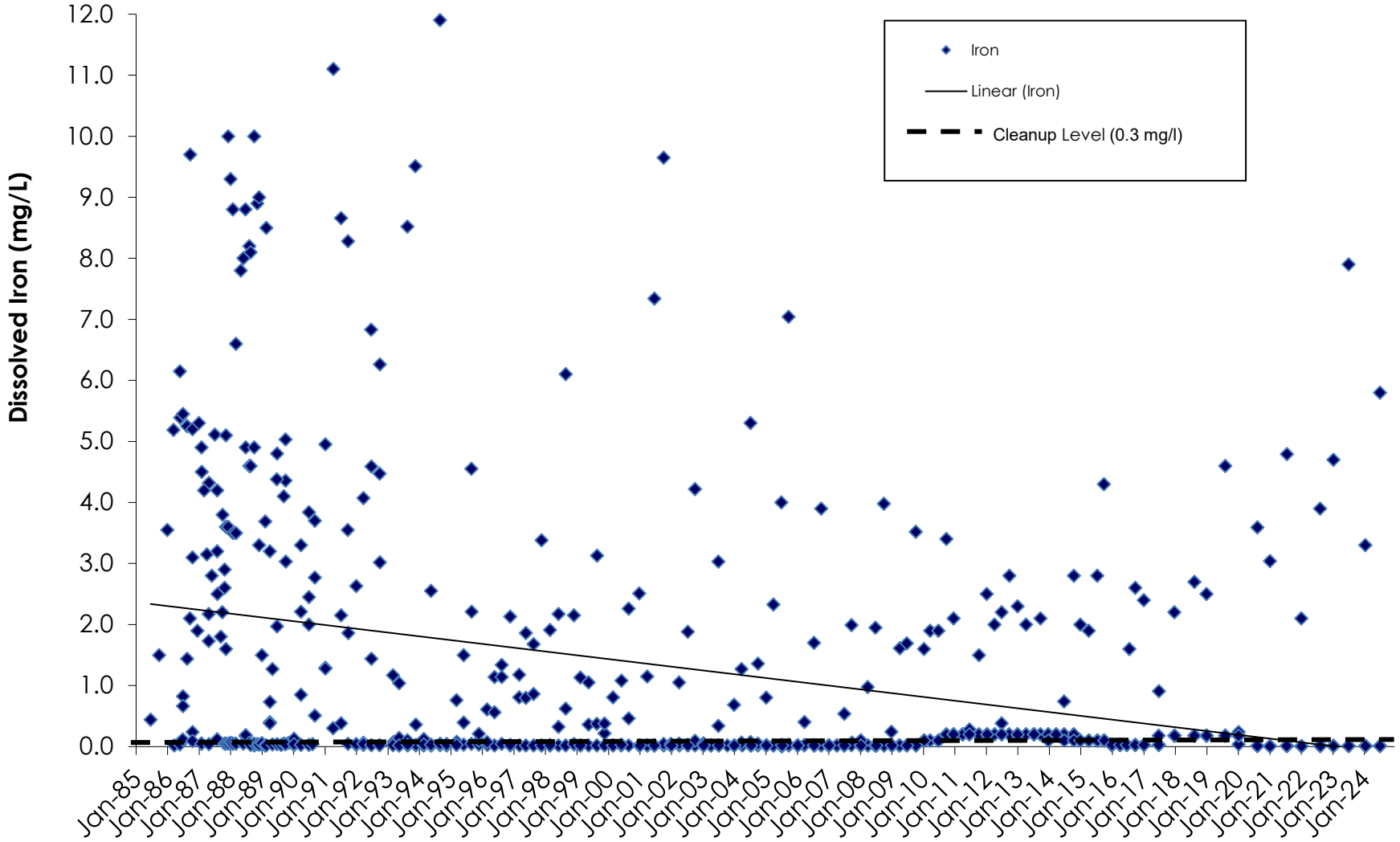


Figure 10

Dissolved Manganese

Upper Regional Aquifer, Hidden Valley Landfill
Wells MW-11D(2), MW-12D, MW-13D, and MW-14D

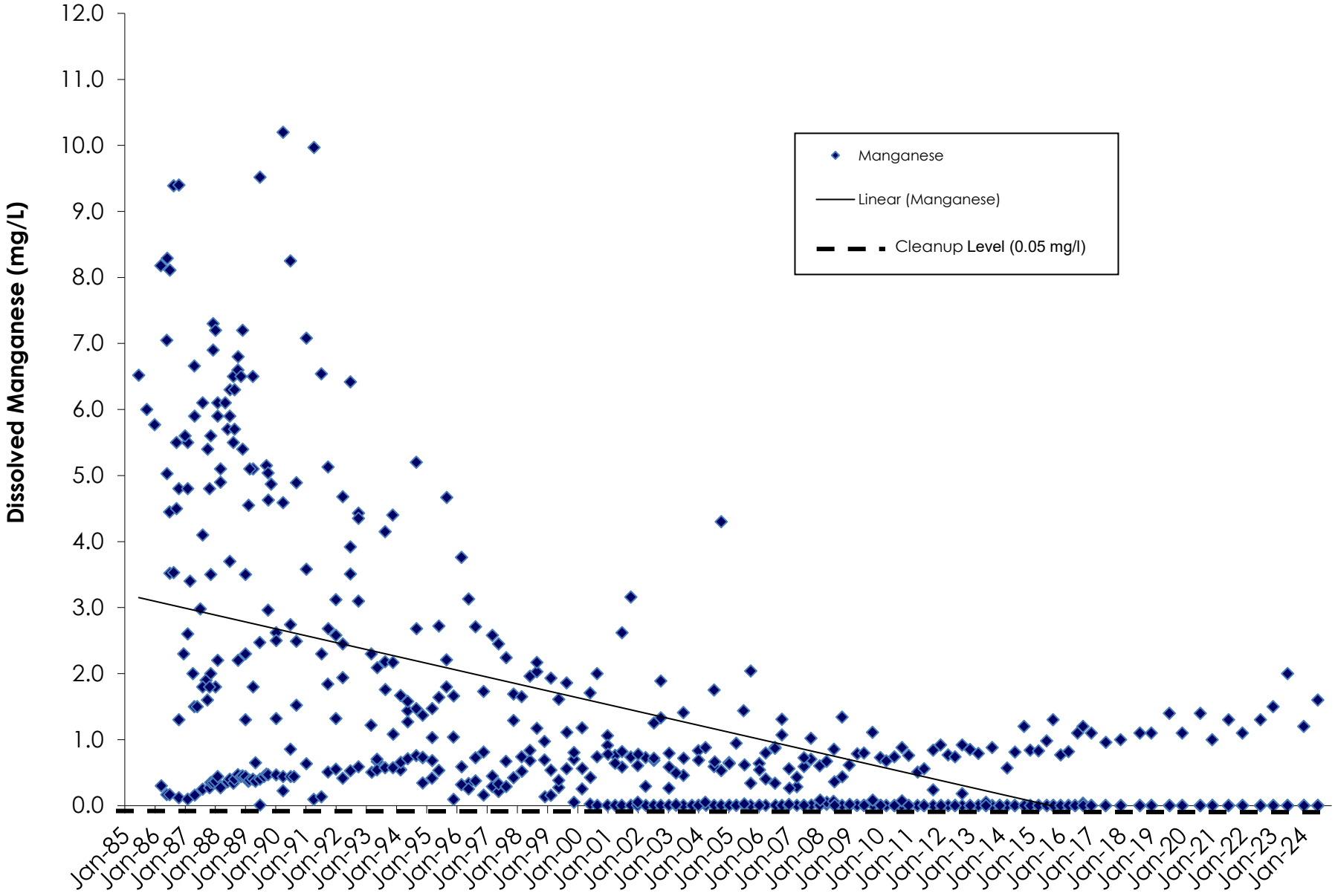


Figure 11

Nitrate

Shallow Perched Aquifer, Hidden Valley Landfill
Well MW-12S, 10 year Trend

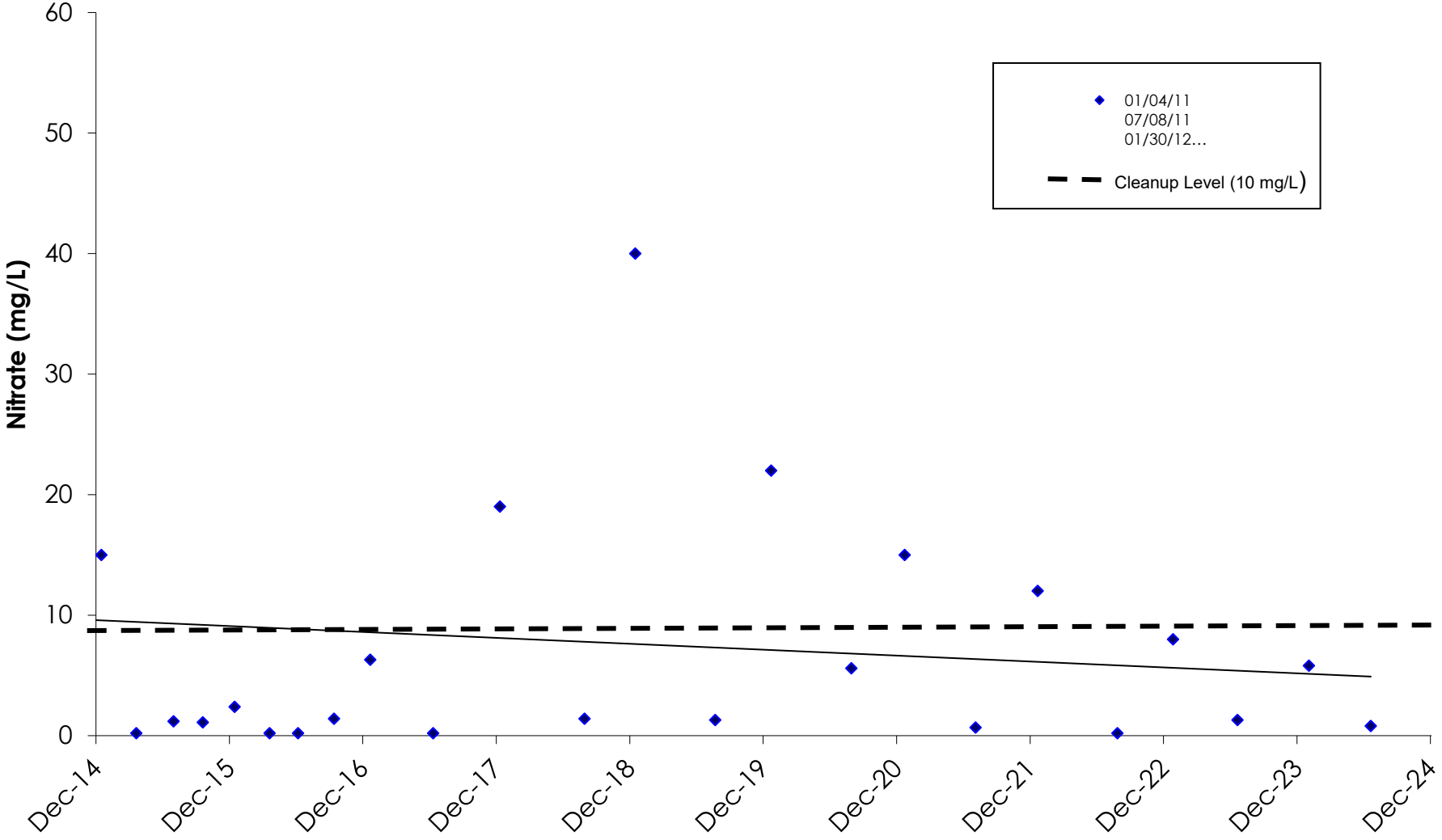


Figure 12

Dissolved Iron

Shallow Perched Aquifer, Hidden Valley Landfill
Well MW-13S, 10 year Trend

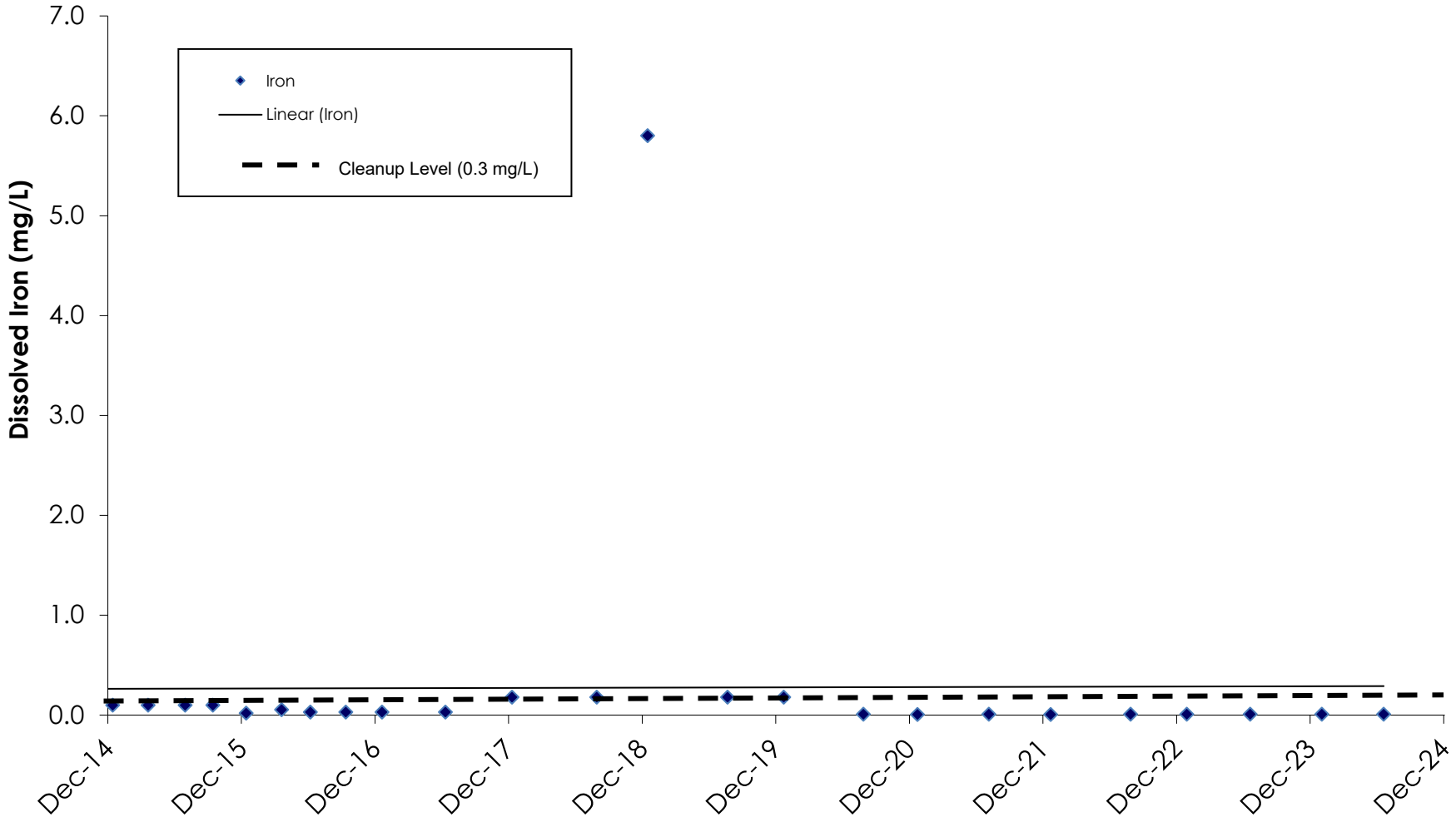


Figure 13

Dissolved Iron

Shallow Perched Aquifer, Hidden Valley Landfill

Well MW-14S, 10 year trend

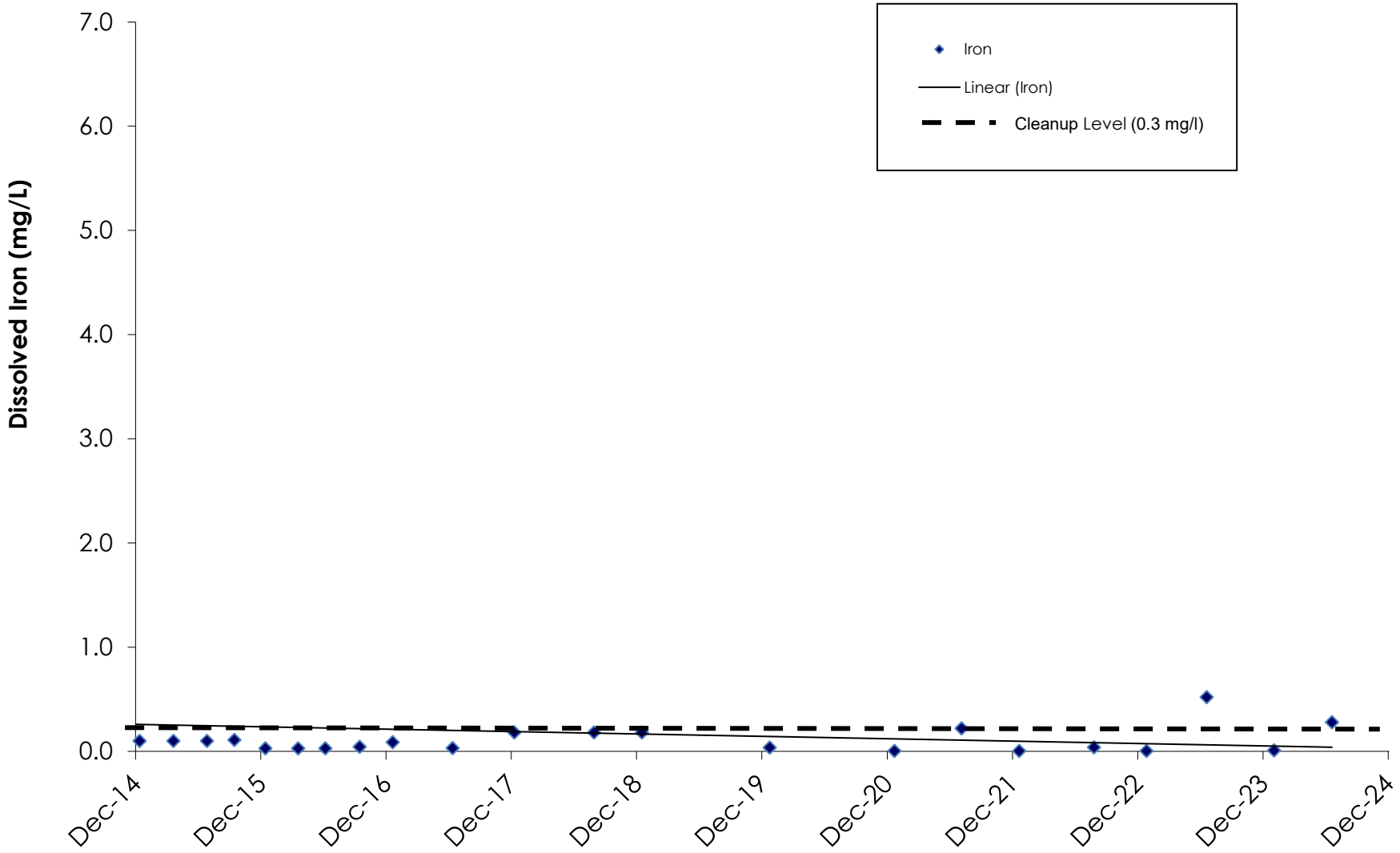


Figure 14

Dissolved Manganese

Shallow Perched Aquifer, Hidden Valley Landfill
Well MW-11S, 10 Year Trend

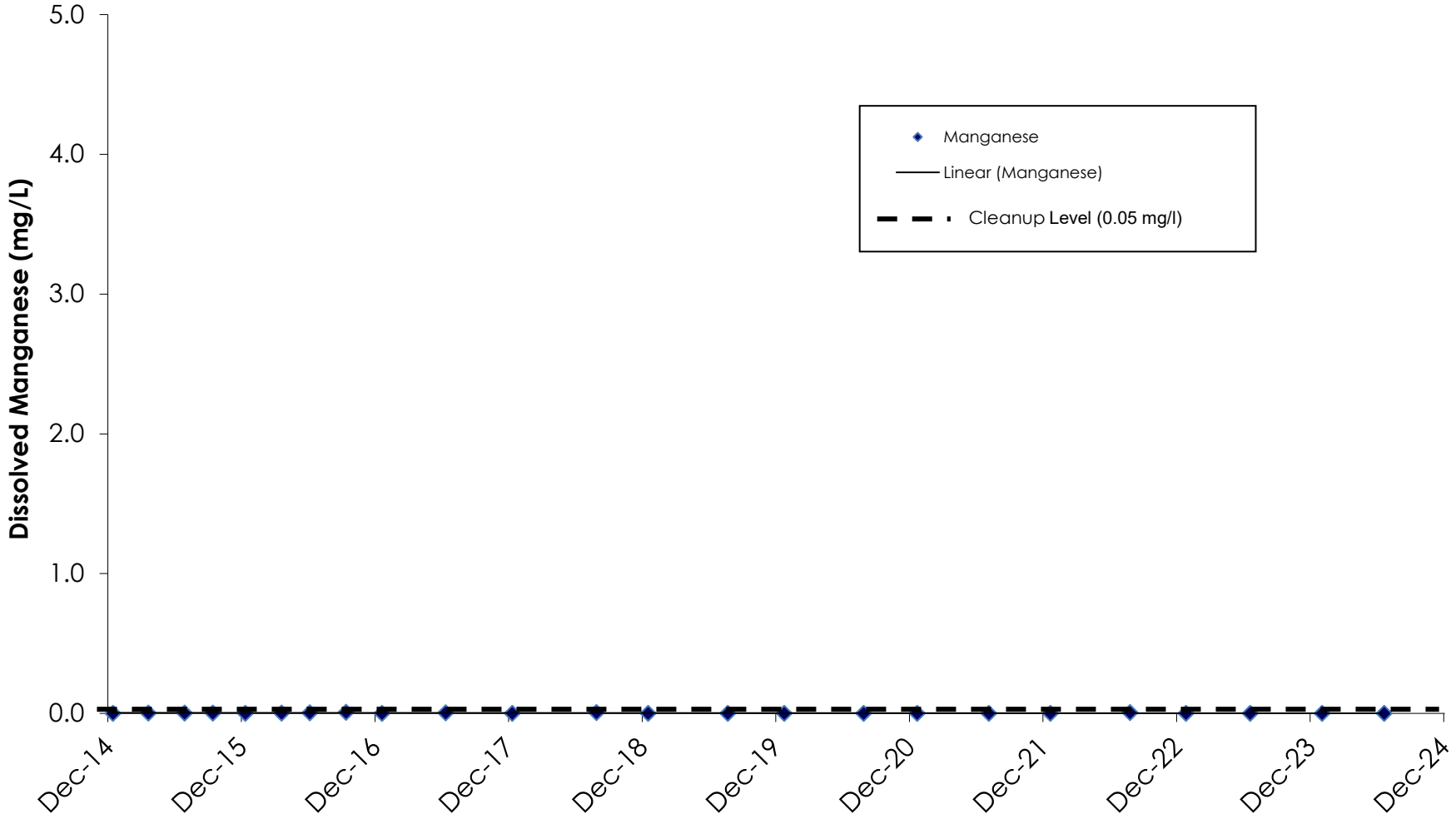


Figure 15

Dissolved Manganese

Shallow Perched Aquifer, Hidden Valley Landfill

Well MW-12S, 10 year trend

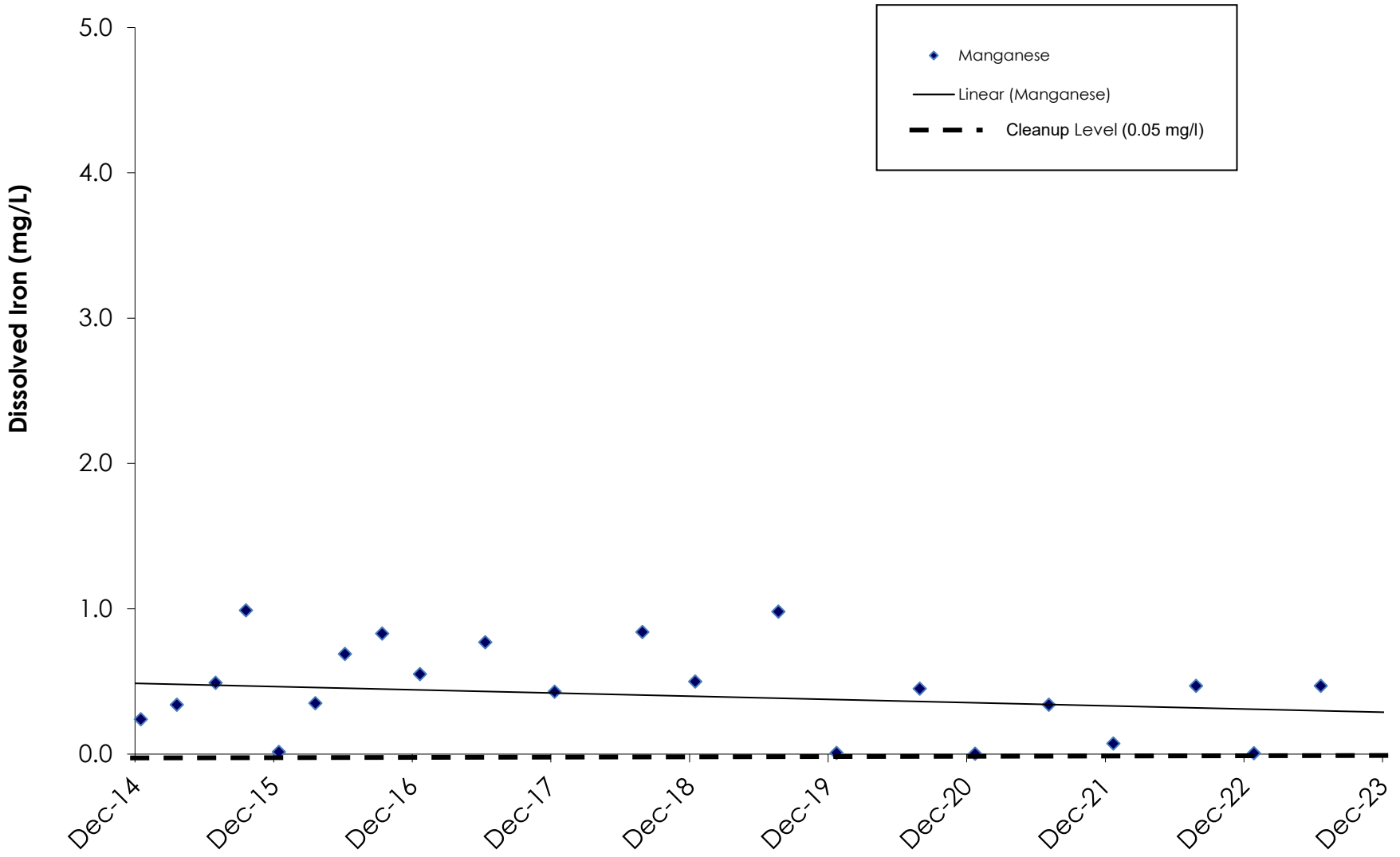


Figure 16

Dissolved Manganese

Shallow Perched Aquifer, Hidden Valley Landfill

Well MW-13S, 10 year trend

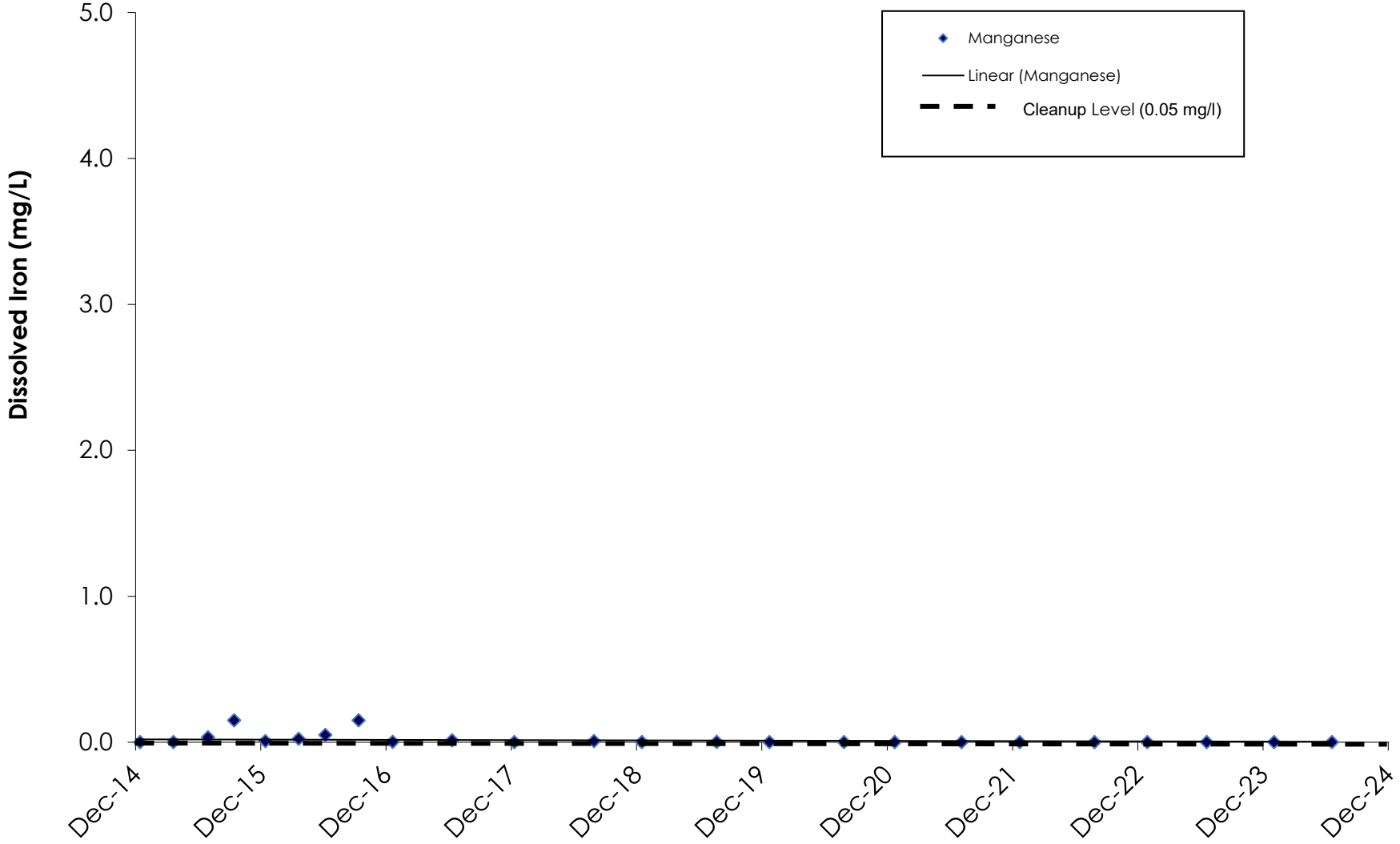


Figure 17

Dissolved Manganese

Shallow Perched Aquifer, Hidden Valley Landfill

Well MW-14S, 10 year trend

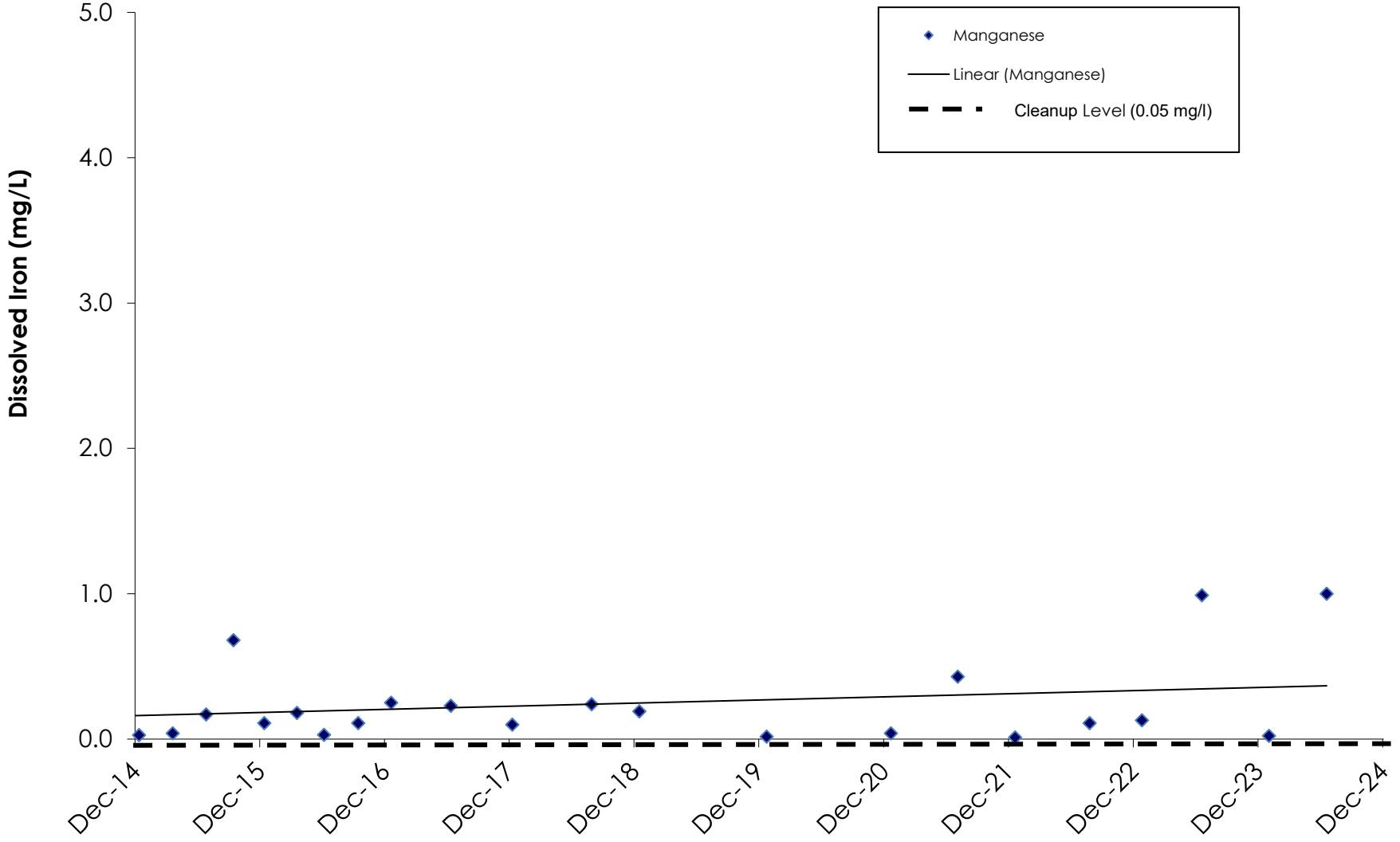


Figure 18

Dissolved Manganese

Shallow Perched Aquifer, Hidden Valley Landfill

Well MW-17S, 10 year trend

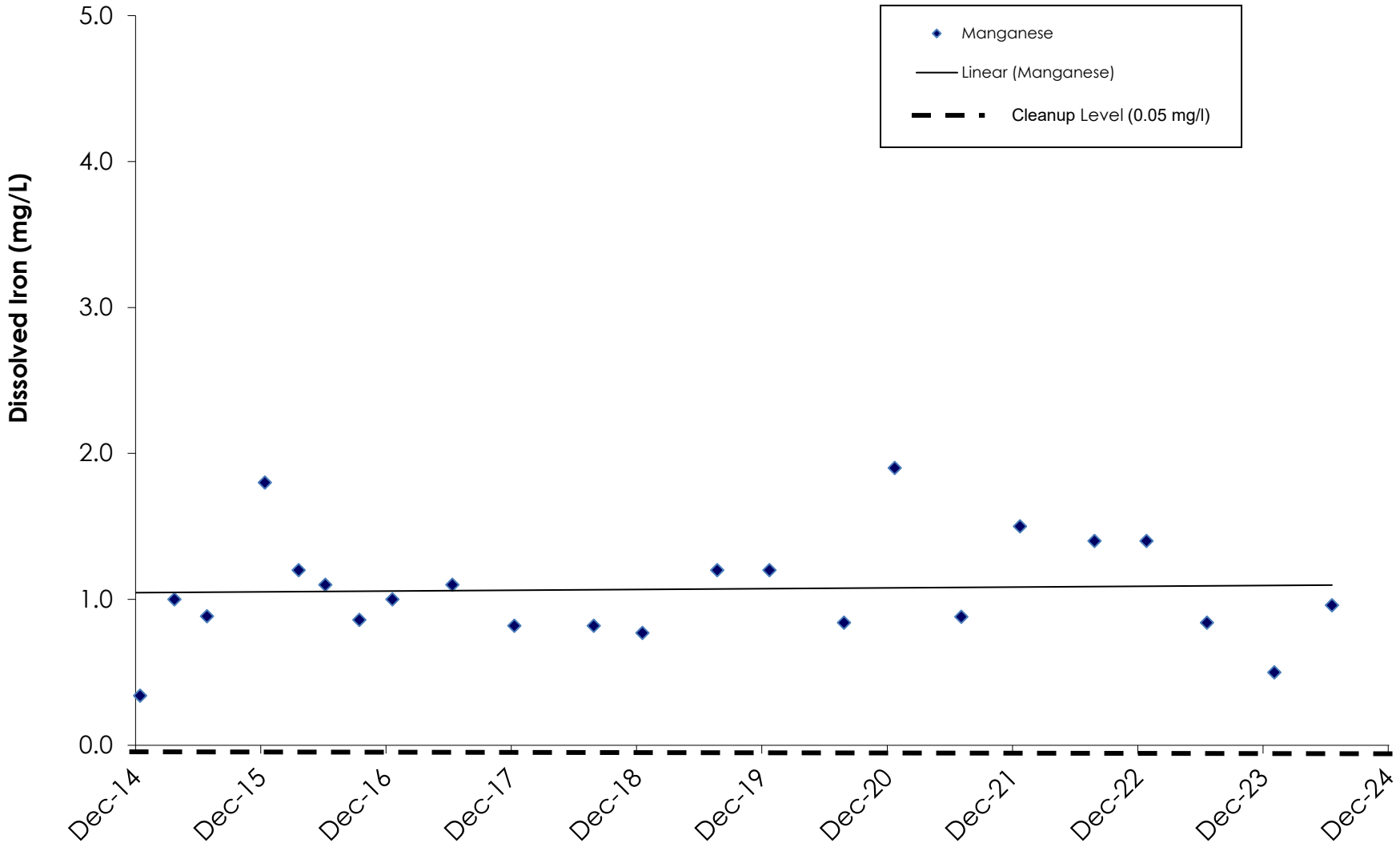


Figure 19

Dissolved Iron

Upper Regional Aquifer, Hidden Valley Landfill
Well MW-11D(2), 10 year trend

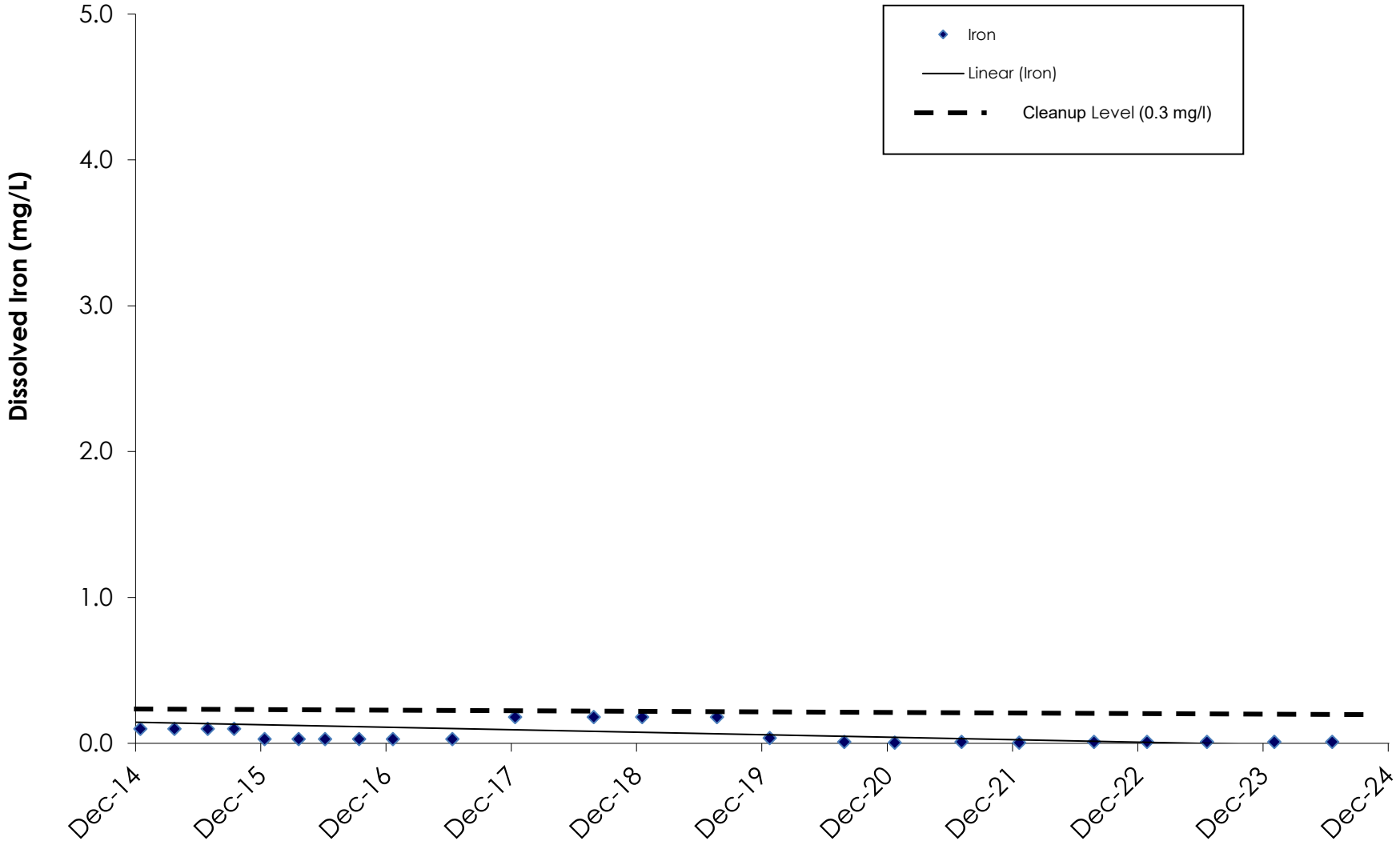


Figure 20

Dissolved Iron

Upper Regional Aquifer, Hidden Valley Landfill

Well MW-12D, 10 year trend

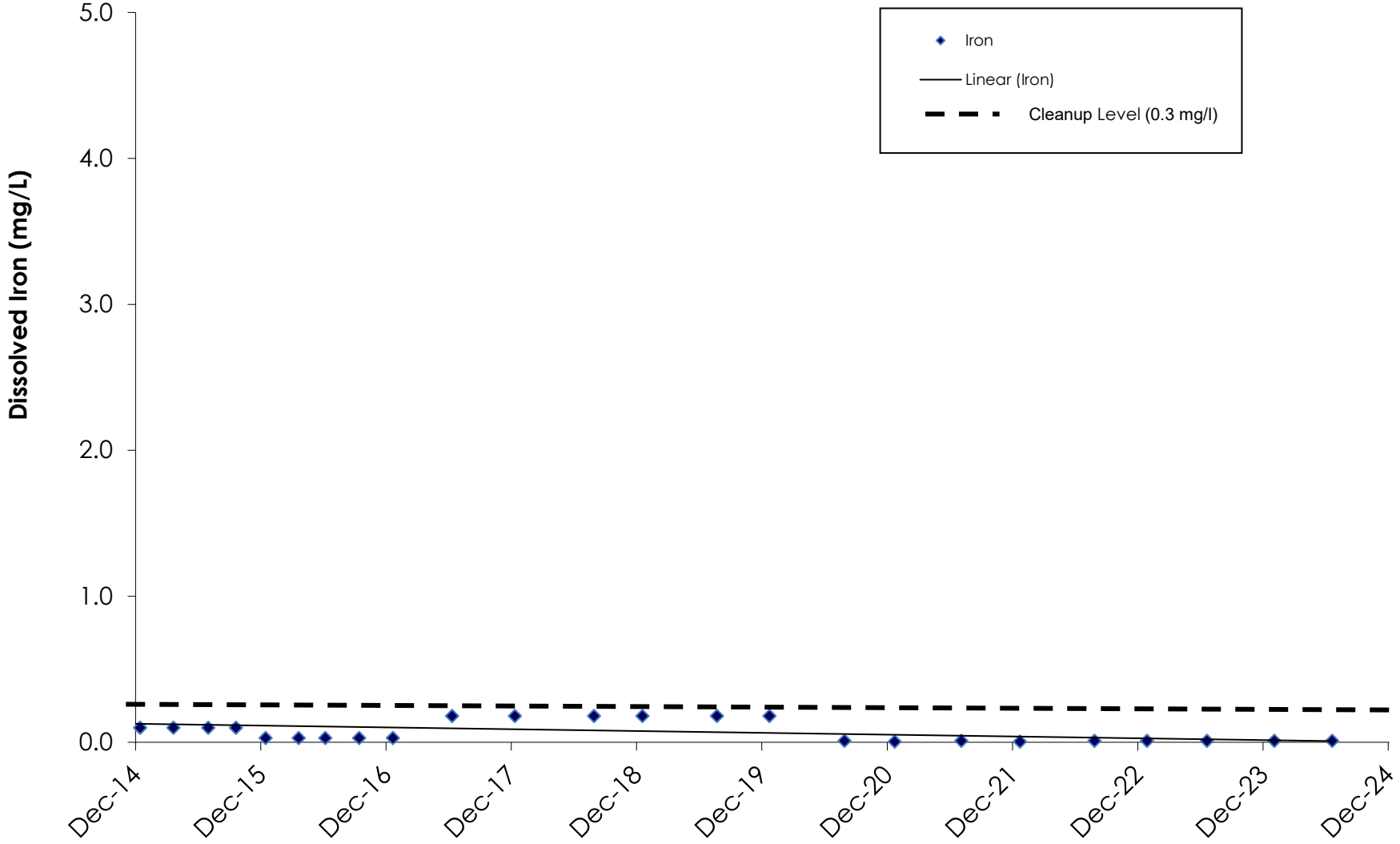


Figure 21

Dissolved Iron

Upper Regional Aquifer, Hidden Valley Landfill
Well MW-13D, 10 year trend

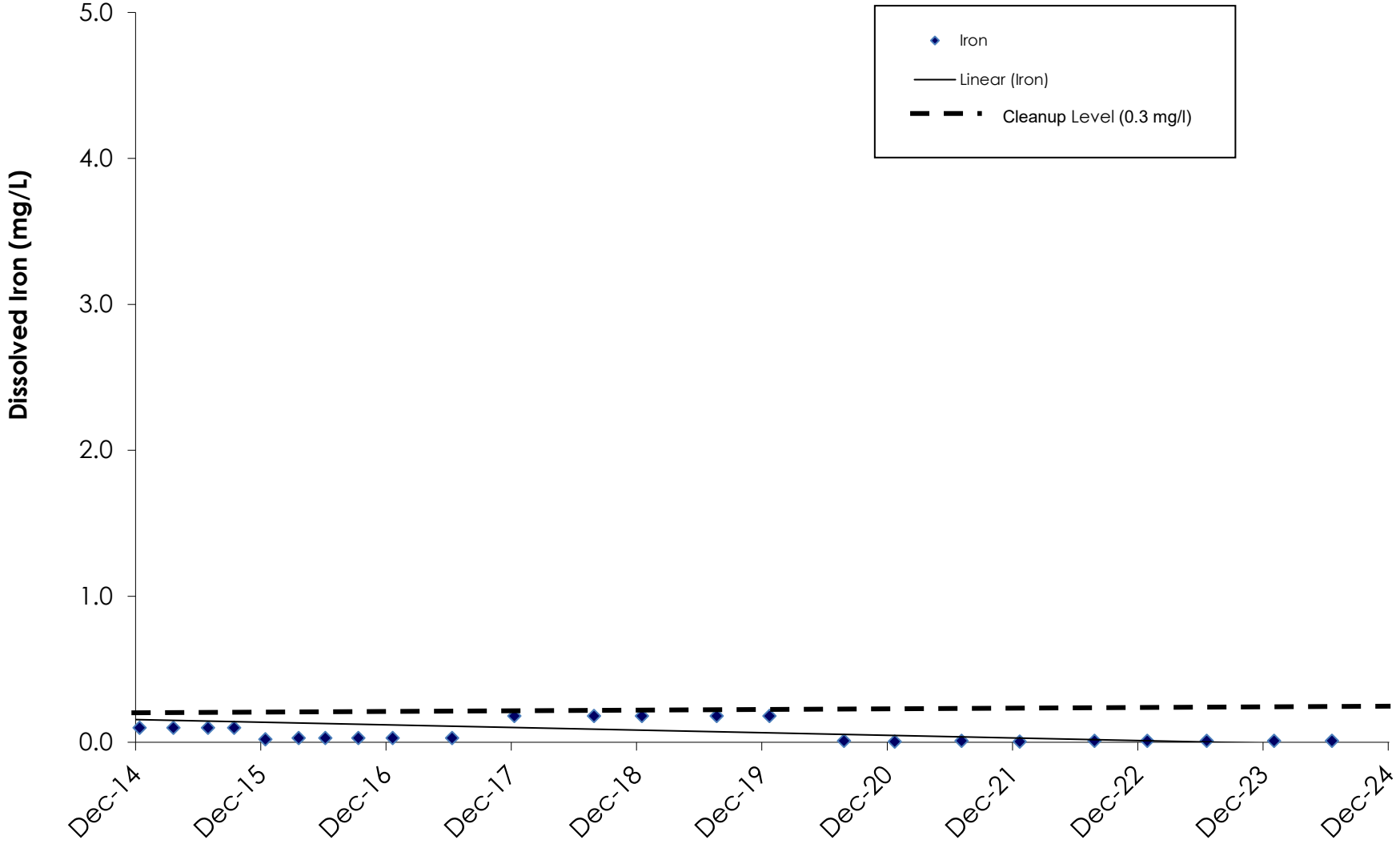


Figure 22

Dissolved Iron

Upper Regional Aquifer, Hidden Valley Landfill
Well MW-14D, 10 year trend

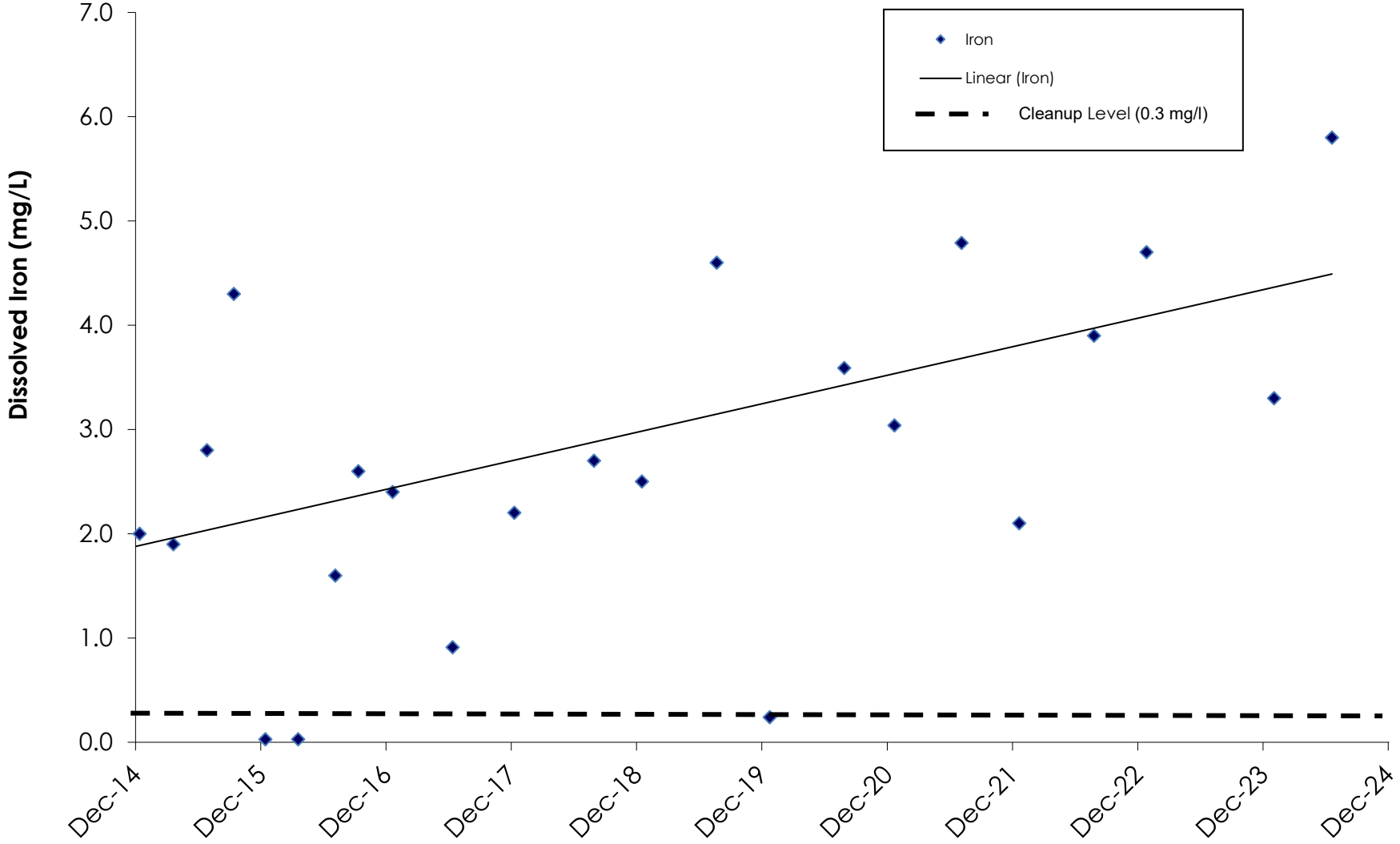


Figure 23

Dissolved Manganese

Upper Regional Aquifer, Hidden Valley Landfill

Well MW-11D(2), 10 year trend

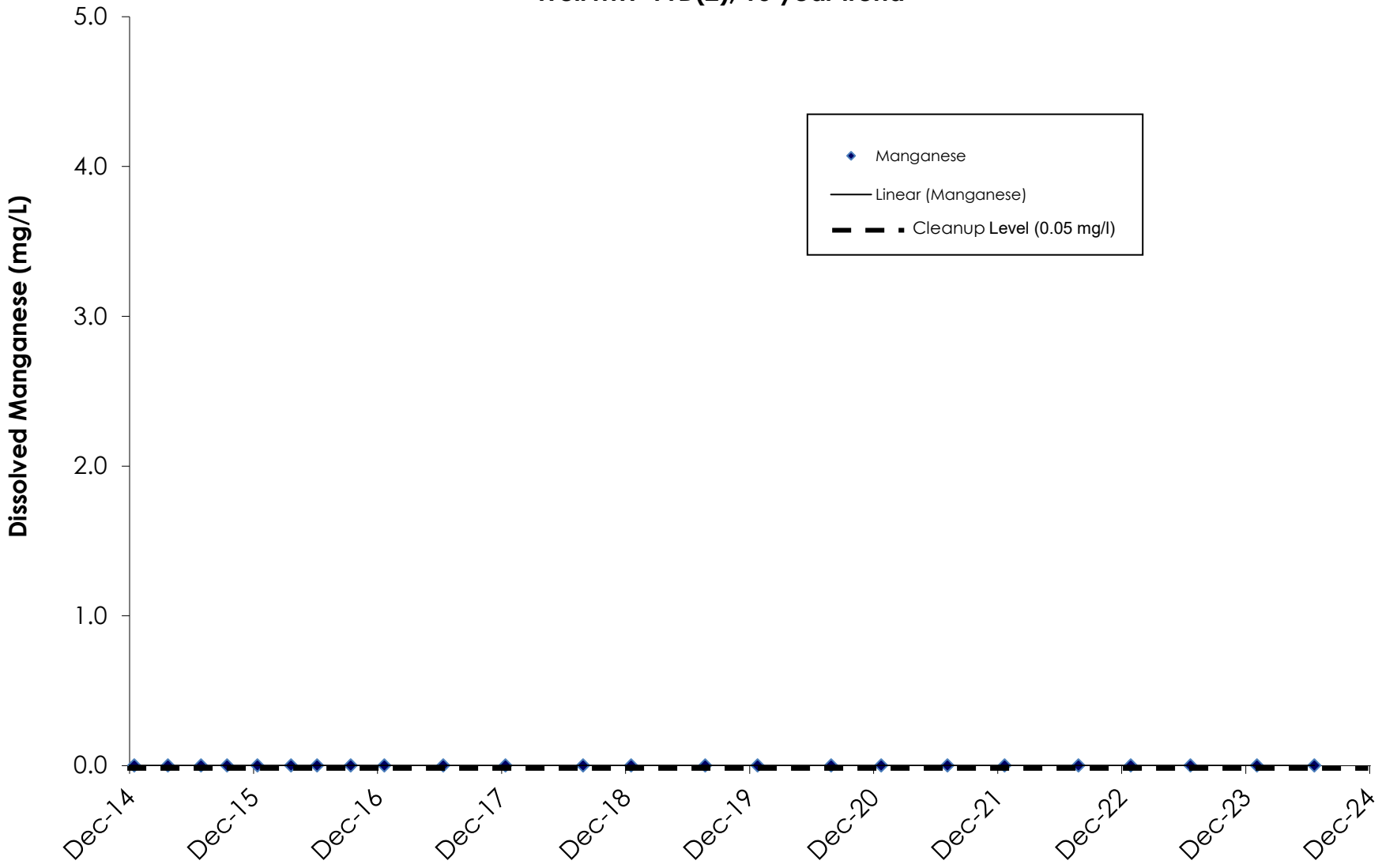


Figure 24

Dissolved Manganese

Upper Regional Aquifer, Hidden Valley Landfill

Well MW-12D, 10 year trend

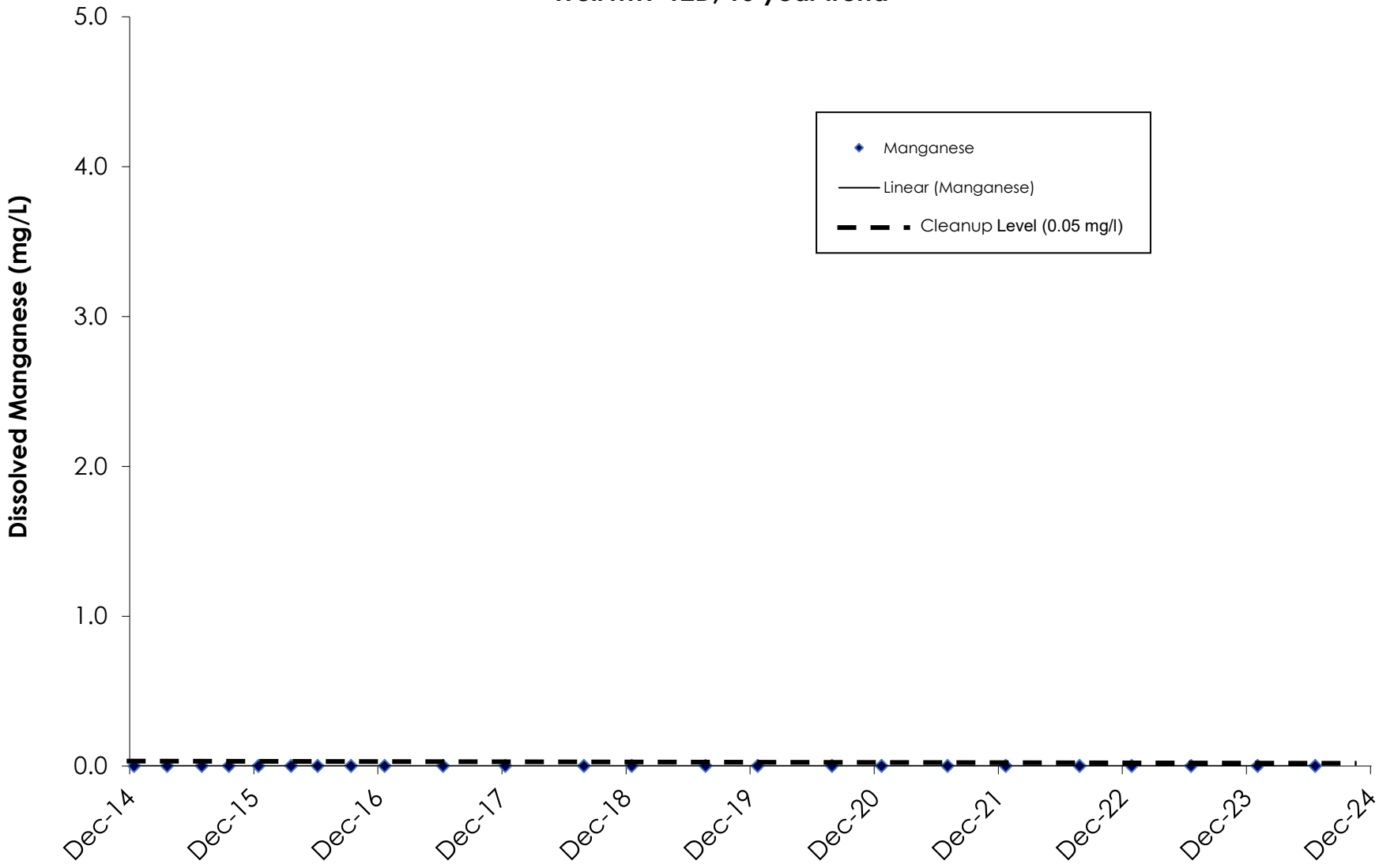


Figure 25

Dissolved Manganese

Upper Regional Aquifer, Hidden Valley Landfill

Well MW-13D, 10 year trend

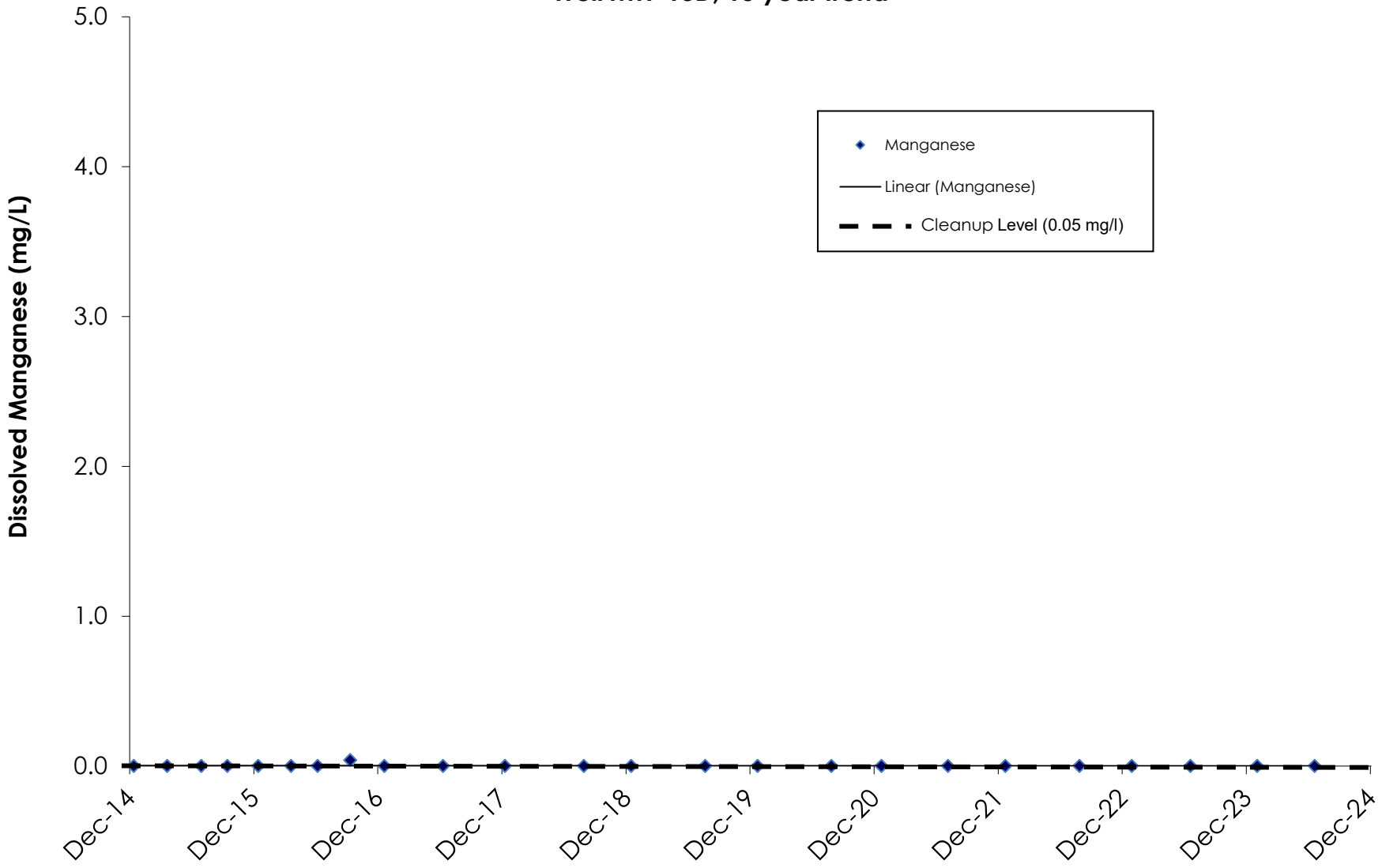
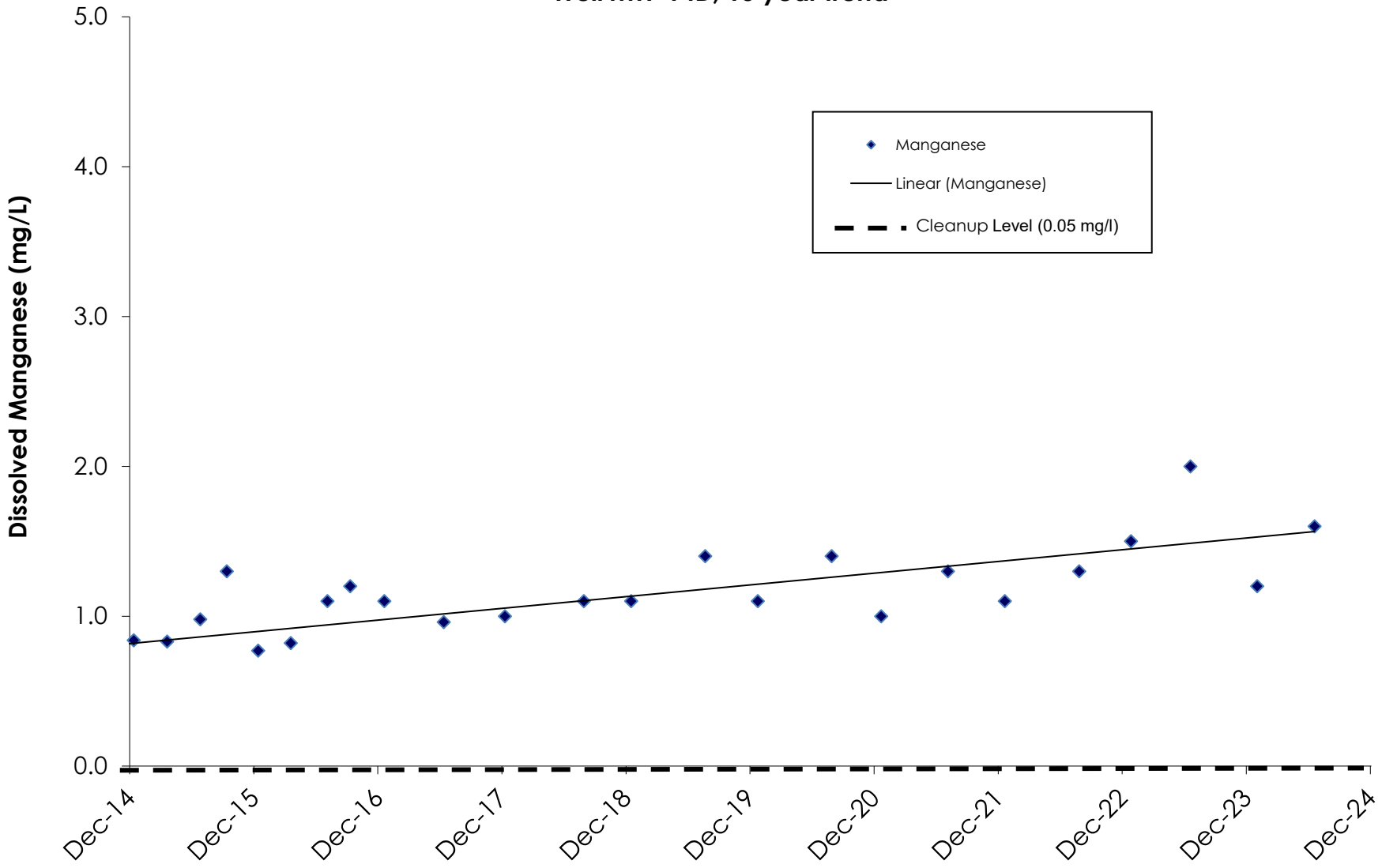


Figure 26

Dissolved Manganese

Upper Regional Aquifer, Hidden Valley Landfill

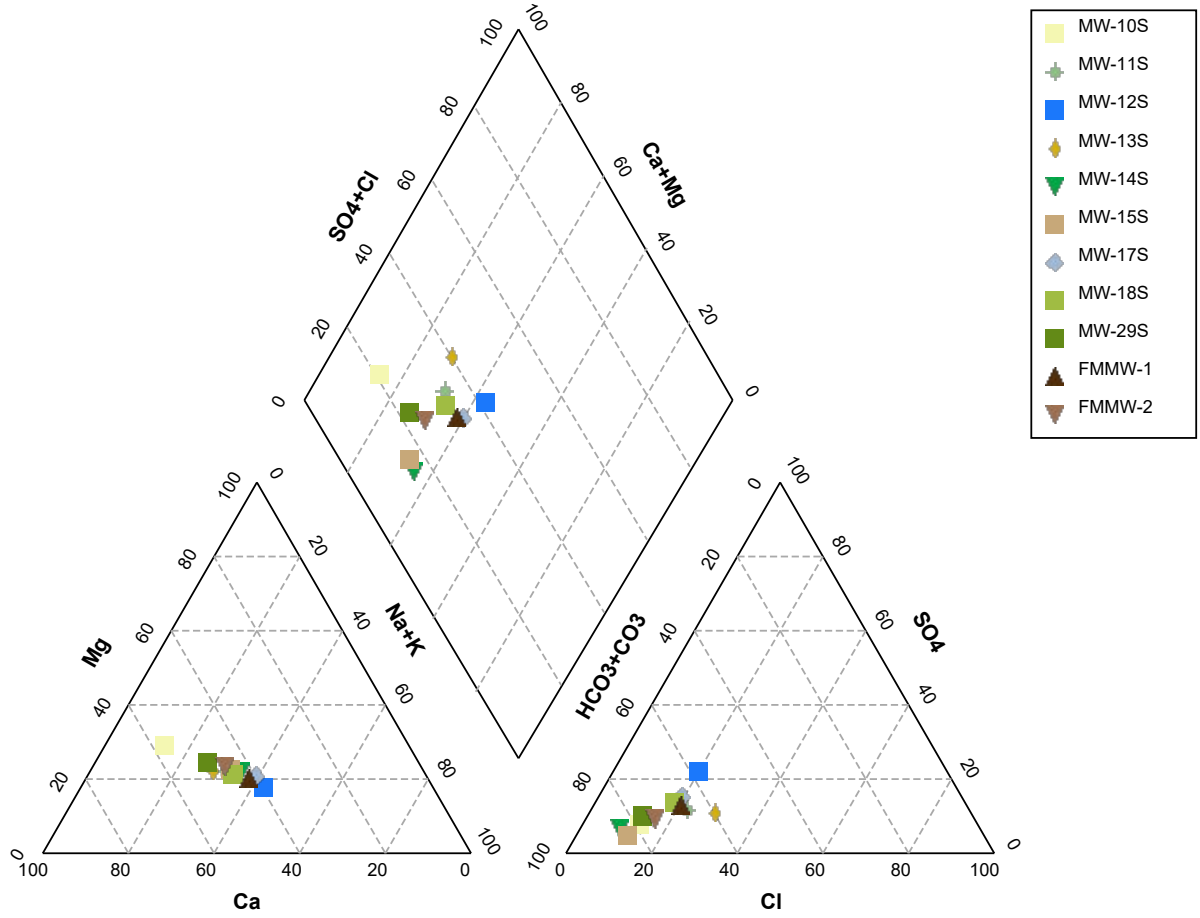
Well MW-14D, 10 year trend



Appendix F

TRILINEAR DIAGRAMS

Shallow Aquifer - Semi-annual Event No. 1, 2024

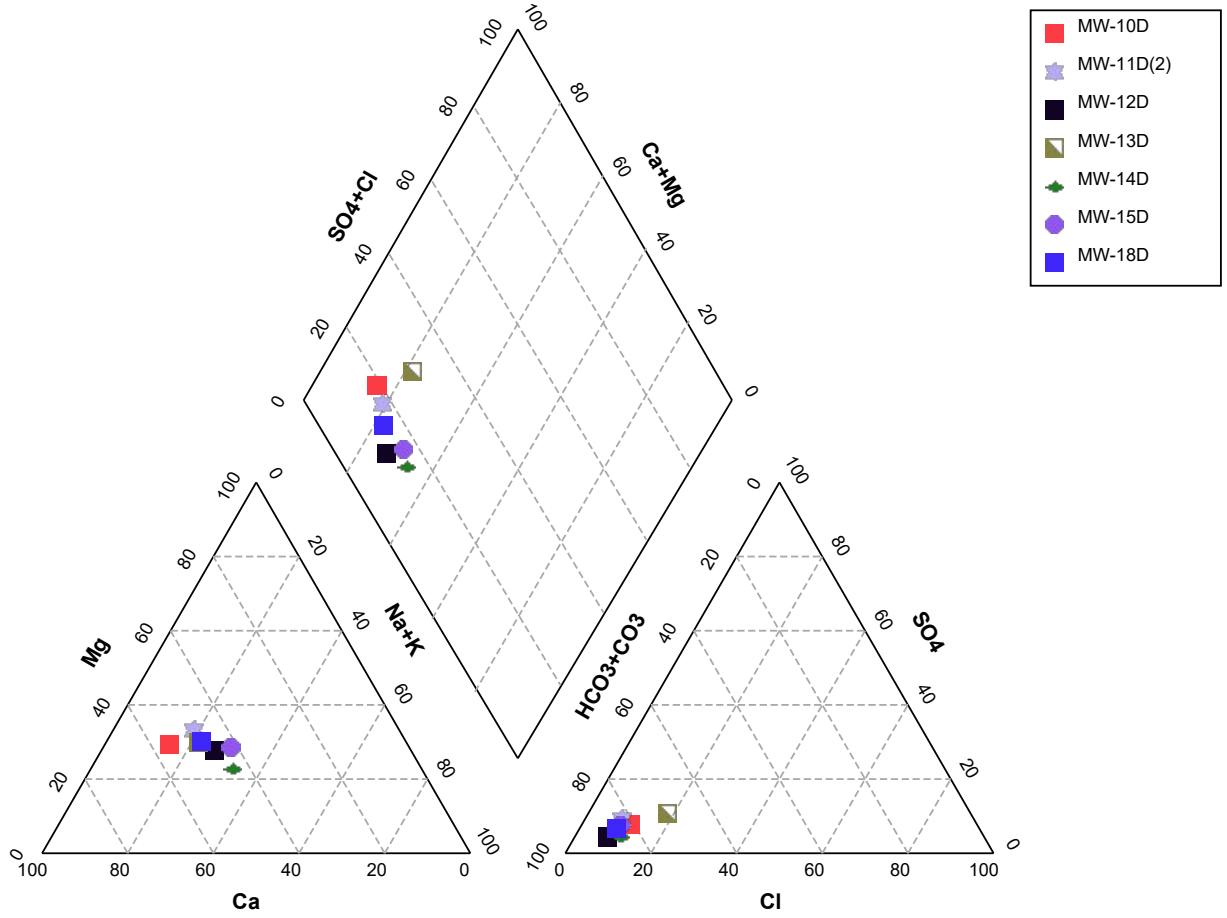


Trilinear Diagram

Hidden Valley Landfill

LRI Inc.
04225002.02
April 7, 2025

Upper Regional Aquifer - Semi-annual Event No. 1, 2024

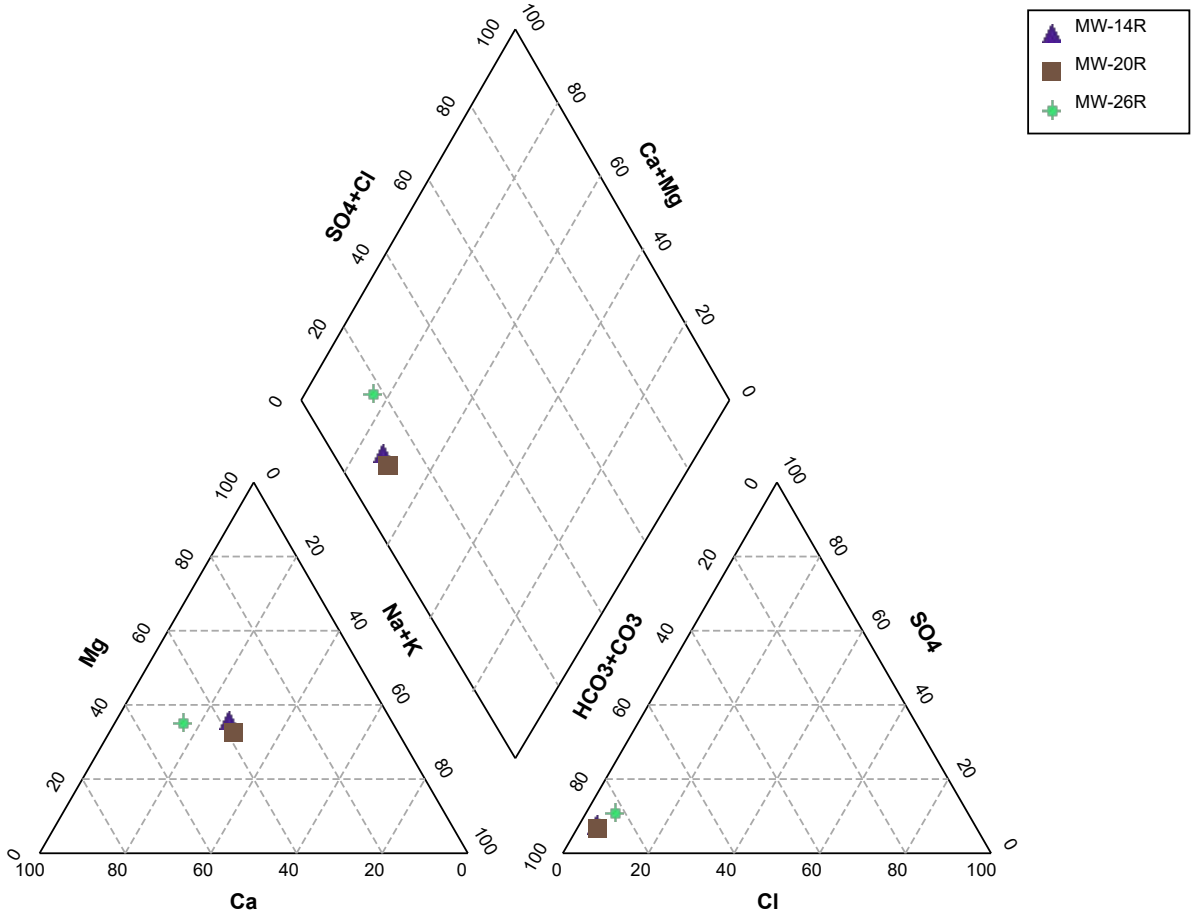


Trilinear Diagram

Hidden Valley Landfill

LRI Inc.
04225002.02
April 7, 2025

Lower Regional Aquifer - Semi-annual Event No. 1, 2024

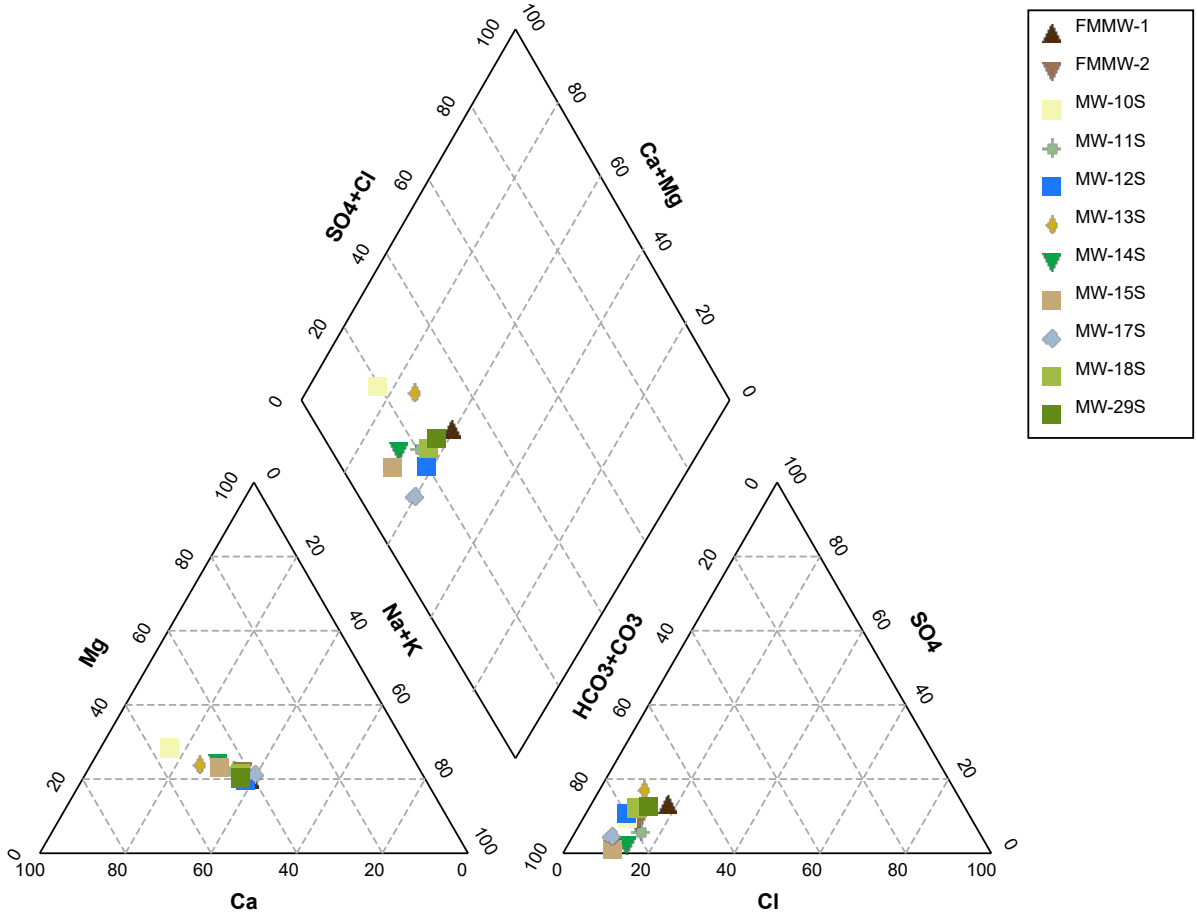


Trilinear Diagram

Hidden Valley Landfill

LRI Inc.
04225002.02
April 7, 2025

Shallow Aquifer - Semi-annual Event No. 2, 2024

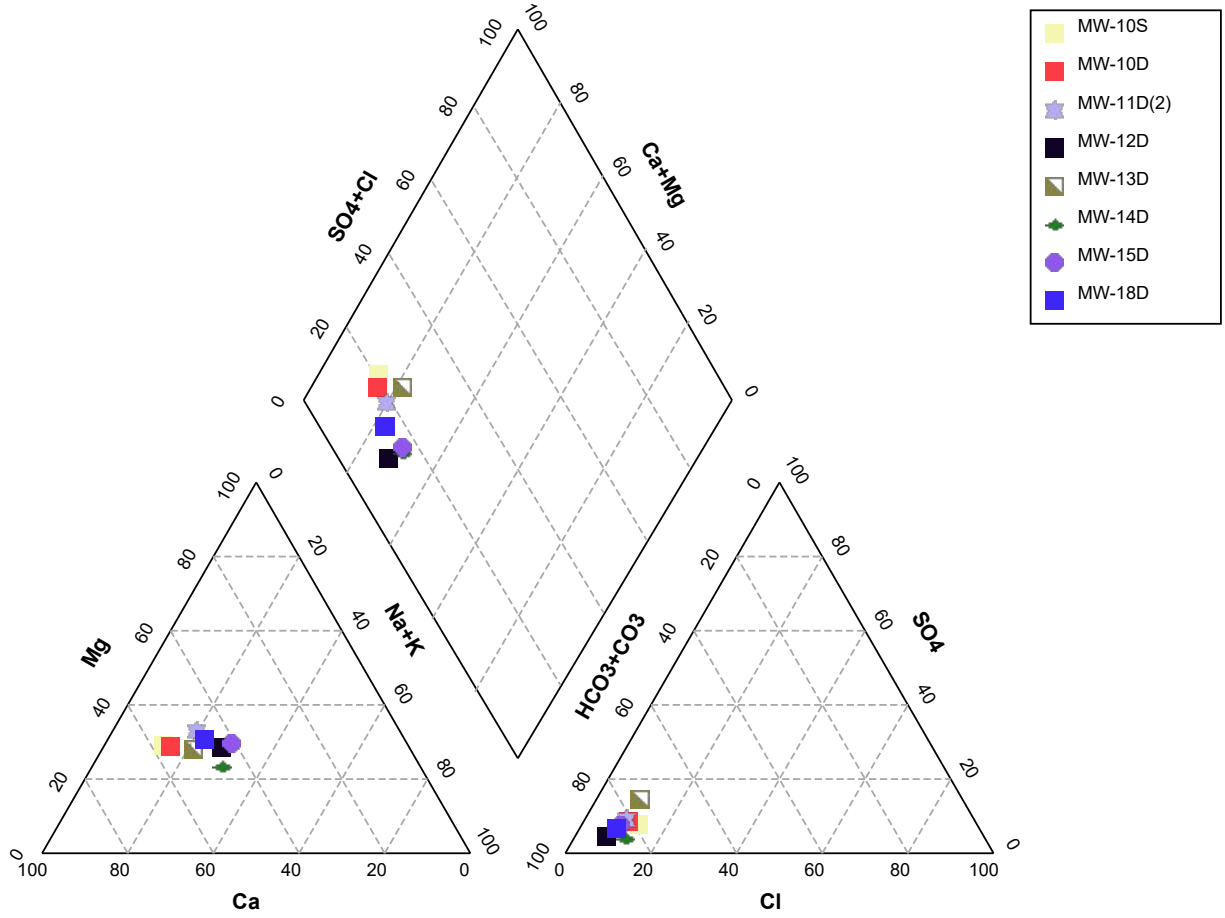


Trilinear Diagram

Hidden Valley Landfill

LRI Inc.
04225002.02
April 7, 2025

Upper Regional Aquifer - Semi-annual Event No. 2, 2024

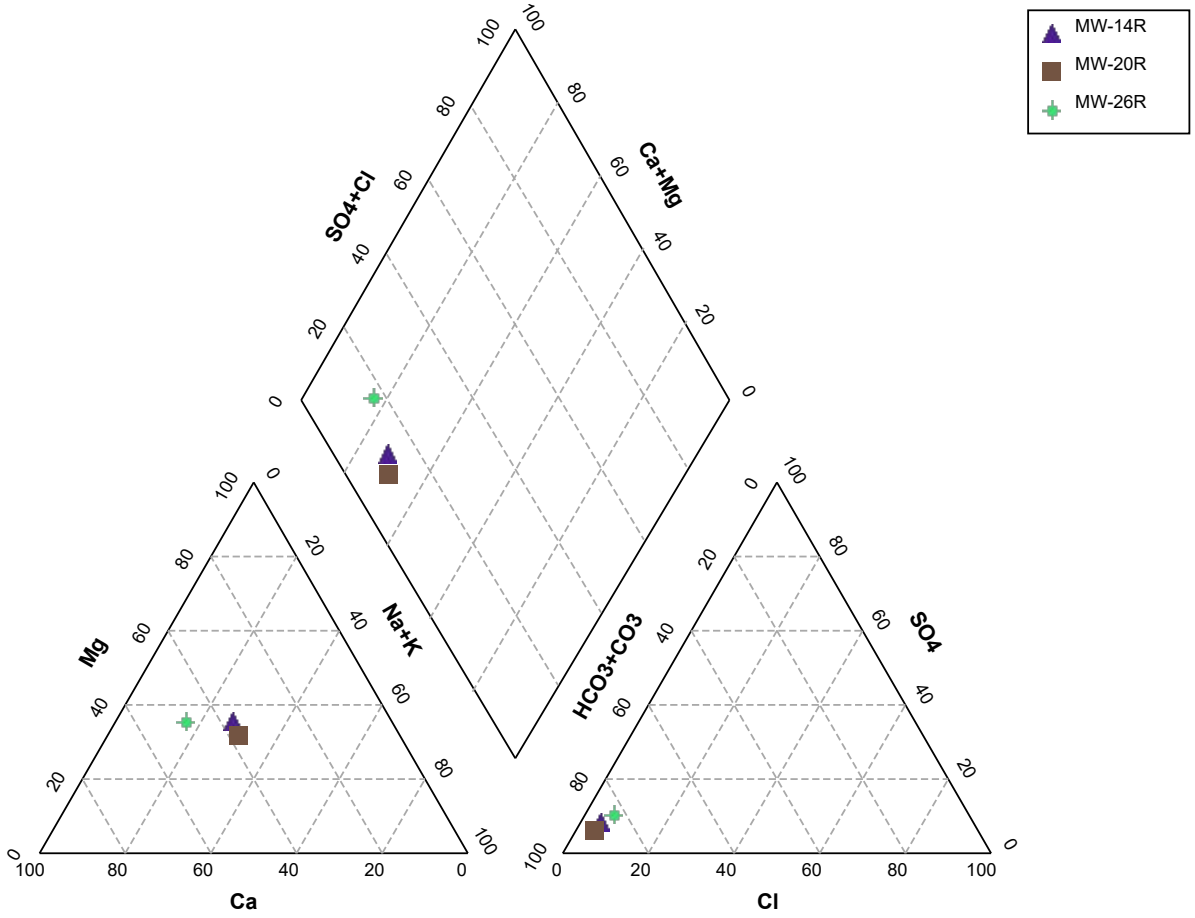


Trilinear Diagram

Hidden Valley Landfill

LRI Inc.
04225002.02
April 7, 2025

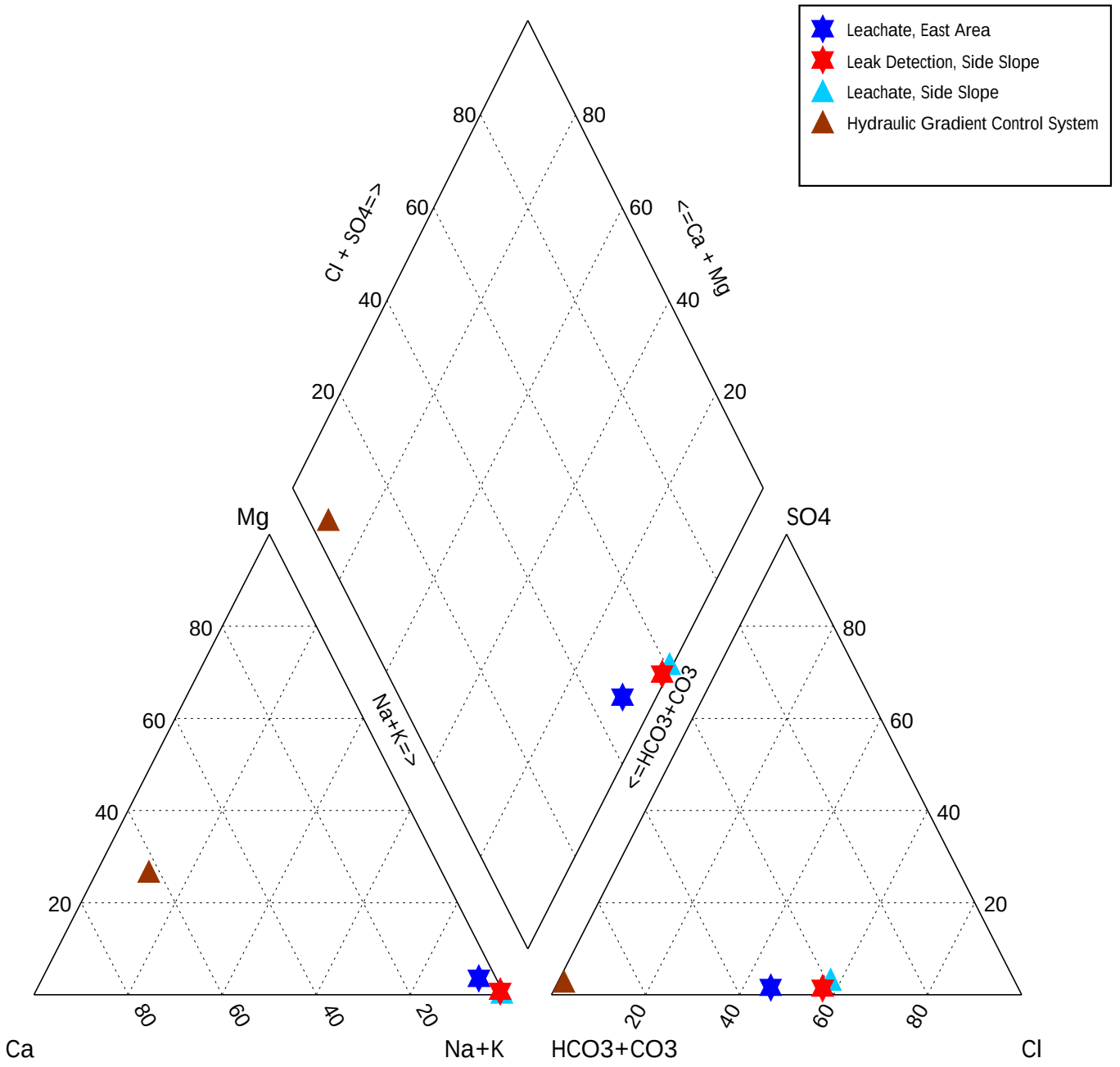
Lower Regional Aquifer - Semi-annual Event No. 2, 2024



Trilinear Diagram

Hidden Valley Landfill

LRI Inc.
04225002.02
April 7, 2025



DESCRIPTION: Leachate and Leak Detection - Semi-annual Event No. 1, 2024		
	PROJECT: Hidden Valley Landfill	PROJECT NO: 04224002.02
	CLIENT: LRI Hidden Valley	DATE: January 2024

Appendix G

STATISTICAL CALCULATIONS

Statistical Summary of Groundwater Data - Inorganics
2024 Annual Monitoring Report
Hidden Valley Landfill, Pierce County, Washington

Monitoring Well	Date	Specific Conductance		Alkalinity		Chloride		Ammonia		Nitrate		Sulfate		TDS		TOC	
		Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
MW-10D																	
MW-10D	1/14/2019	258	258	110	110	5.7	5.7	0.1 L	0.05	0.85	0.85	9.2	9.2	180	180	1 L	1.0
MW-10D	8/20/2019	193	193	72	72	5.1	5.1	0.1 L	0.05	2.1	2.1	8.8	8.8	140	140	1 L	0.5
MW-10D	1/22/2020	265	265	110	110	8.9	8.9	0.1 L	0.05	1.3	1.3	11	11	160	160	1 L	1.0
MW-10D	8/25/2020	258	258	120	120	7.1	7.1	0.1 L	0.05	0.56	0.56	15	15	180	180	1 L	0.5
MW-10D	1/20/2021	193.9	194	82	82	5.4	5	0.1 L	0.05	2.3	2	8.6	9	110	110	1 L	0.5
MW-10D	8/3/2021	282	282	130	130	6.5	6.5	0.1 L	0.05	0.58	0.58	13	13	140	140	1.1	1.1
MW-10D	1/19/2022	194	194	76	76	5.2	5.2	0.1 L	0.05	1.8	1.8	8	8	130	130	1 L	0.5
MW-10D	8/24/2022	242	242	110	110	6.5	6.5	0.1 L	0.05	1	1	9.4	9.4	130	130	1 L	0.5
MW-10D	1/24/2023	277	277	100	100	10	10	0.1 L	0.05	1.8	1.8	8	8	130	130	1 L	0.5
MW-10D	7/19/2023	330	330	130	130	12	12	0.1 L	0.05	0.84	0.84	11	11	170	170	1.3	1.3
MW-10D	1/30/2024	249.5	249.5	97	97	9.4	9.4	0.1 L	0.05	2.7	2.7	8.9	8.9	150	150	1 L	1.0
MW-10D	7/17/2024	291.4	291.4	110	110	9.9	9.9	0.1 L	0.05	1.3	1.3	11	11	170	170	1 L	1
No. Analyzed		12		12		12		12		12		12		12		12	
No. Detect		12		12		12		0		11		12		12		2	
Minimum conc.			193		72		5.1		0.050		0.56		8.0		110		0.5
Maximum conc.			330		130		12.0		0.05		2.7		15		180		1.3
Average conc.			253		104		7.6		0.050		1.4		10.2		149		0.8
Distribution			Lognormal		Lognormal		Lognormal		NC		Lognormal		Lognormal		Lognormal		NC
UCL 95			278		116		9.1		NC		2.1		11.34		183.24		NC

Statistical Summary of Groundwater Data - Inorganics
2024 Annual Monitoring Report
Hidden Valley Landfill, Pierce County, Washington

Monitoring Well	Date	Specific Conductance		Alkalinity		Chloride		Ammonia		Nitrate		Sulfate		TDS		TOC	
		Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
MW-10S																	
MW-10S	1/14/2019	254	254	110	110	6.1	6.1	0.19	0.19	0.81	0.81	9.6	9.6	160	160	1.1	1.1
MW-10S	8/20/2019	306	306	130	130	7.7	7.7	0.1 L	0.05	0.2 L	0.1	17	17	180	180	1.6	1.6
MW-10S	1/21/2020	269	269	100	100	11	11	0.1 L	0.05	1.3	1.3	11	11	160	160	1.1	1.1
MW-10S	8/25/2020	298	298	110	110	7.2	7.2	0.1 L	0.05	0.87	0.87	15	15	180	180	1.4	1.4
MW-10S	1/20/2021	332	332	150	150	8.9	9	0.1 L	0.05	1.9	2	15	15	180	180	1.3	1.3
MW-10S	8/2/2021	282	282	120	120	7	7	0.1 L	0.05	0.66	0.66	11	11	150	150	1.1	1.1
MW-10S	1/18/2022	226	226	94	94	7.7	7.7	0.1 L	0.05	1.7	1.7	12	12	140	140	1 L	0.5
MW-10S	8/24/2022	243	243	100	100	6.6	6.6	0.1 L	0.05	1	1	9.5	9.5	130	130	1 L	0.5
MW-10S	1/24/2023	263	263	94	94	8.3	8.3	0.1 L	0.05	0.2 L	0.1	10	10	130	130	1 L	1
MW-10S	7/19/2023	308	308	120	120	13	13	0.1 L	0.05	0.92	0.92	11	11	170	170	1.3	1.3
MW-10S	1/30/2024	313.4	313.4	120	120	14	14	0.1 L	0.10	2.6	2.6	11	11	190	190	1 L	1.0
MW-10S	7/17/2024	284.1	284.1	110	110	9.9	9.9	0.1 L	0.05	1.3	1.3	12	12	170	170	1.1	1.1
No. Analyzed		12		12		12		12		12		12		12		12	
No. Detect		12		12		12		1		9		12		12		7	
Minimum conc.			226		94		6.1		0.050		0.10		9.5		130		0.5
Maximum conc.			332		150		14.0		0.19		2.6		17		190		1.6
Average conc.			282		113		9.0		0.066		1.1		12.0		162		1.1
Distribution			Lognormal		Lognormal		Neither		NC		Lognormal		Lognormal		Lognormal		Lognormal
UCL 95			299.6		122.05		10.44*		NC		2.71		13.3		173.63		1.27

Statistical Summary of Groundwater Data - Inorganics
2024 Annual Monitoring Report
Hidden Valley Landfill, Pierce County, Washington

Monitoring Well	Date	Specific Conductance		Alkalinity		Chloride		Ammonia		Nitrate		Sulfate		TDS		TOC	
		Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
MW-11D(2)																	
MW-11D(2)	1/15/2019	211	211	82	82	5.6	5.6	0.1 L	0.05	1.9	1.9	9.4	9.4	140	140	1 L	0.5
MW-11D(2)	8/21/2019	215	215	83	83	5.5	5.5	0.1 L	0.05	1.8	1.8	9.3	9.3	150	150	1 L	0.5
MW-11D(2)	1/22/2020	210	210	83	83	5.8	5.8	0.1 L	0.05	1.8	1.8	9	9	140	140	1 L	0.5
MW-11D(2)	8/26/2020	328	328	86	86	5.4	5.4	0.1 L	0.05	1.8	1.8	8.3	8.3	150	150	1 L	0.5
MW-11D(2)	1/20/2021	197	197	86	86	5.1	5	0.1 L	0.05	1.9	2	7	7	150	150	1 L	0.5
MW-11D(2)	8/3/2021	209	209	89	89	5	5	0.1 L	0.05	1.7	1.7	7.8	7.8	320	320	1 L	0.5
MW-11D(2)	1/18/2022	218	218	87	87	5.2	5.2	0.1 L	0.05	2.1	2.1	7.8	7.8	130	130	1 L	0.5
MW-11D(2)	8/24/2022	207	207	84	84	5.2	5.2	0.1 L	0.05	1.8	1.8	8	8	120	120	1 L	0.5
MW-11D(2)	1/24/2023	202	202	87	87	5.6	5.6	0.1 L	0.05	1.9	1.9	8.7	8.7	140	140	1 L	0.5
MW-11D(2)	7/18/2023	211	211	81	81	6.6	6.6	0.1 L	0.05	1.8	1.8	8.8	8.8	150	150	1 L	0.5
MW-11D(2)	1/31/2024	209.8	209.8	81	81	5.9	5.9	0.1 L	0.05	1.7	1.7	8.7	8.7	130	130	1 L	0.5
MW-11D(2)	7/18/2024	219	219	79	79	6.6	6.6	0.1 L	0.05	1.9	1.9	8.5	8.5	140	140	1 L	0.5
No. Analyzed		12		12		12		12		12		12		12		12	
No. Detect		12		12		12		0		11		12		12		0	
Minimum conc.			197		79		5.0		0.050		1.70		7.0		120		0.5
Maximum conc.			328		89		6.6		0.05		2.1		9		320		0.5
Average conc.			220		84		5.6		0.050		1.8		8.4		155		0.5
Distribution			Neither		Lognormal		Lognormal		NC		Lognormal		Lognormal		Neither		NC
UCL 95			328*		85.59		5.91		NC		1.9		8.83		320*		NC

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		Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
MW-11S																	
MW-11S	1/15/2019	211	211	54	54	17	17	0.1 L	0.05	3.2	3.2	7.4	7.4	140	140	1 L	0.5
MW-11S	8/21/2019	257	257	100	100	11	11	0.1 L	0.05	0.86	0.86	8.2	8.2	170	170	1 L	0.5
MW-11S	1/22/2020	244	244	62	62	19	19	0.1 L	0.05	3.8	3.8	9.1	9.1	170	170	1 L	0.5
MW-11S	8/26/2020	422	422	100	100	18	18	0.1 L	0.05	1.3	1.3	9	9	200	200	1 L	0.5
MW-11S	1/19/2021	333	333	90	90	16	16	0.1 L	0.05	7.8	8	15	15	210	210	1.1	1.1
MW-11S	8/3/2021	296	296	120	120	16	16	0.12	0.12	0.55	0.55	8.5	8.5	160	160	1.1	1.1
MW-11S	1/18/2022	340	340	100	100	19	19	0.1 L	0.05	6.1	6.1	11	11	210	210	1	1
MW-11S	8/24/2022	296	296	120	120	13	13	0.17	0.17	0.27	0.27	5	5	160	160	1.4	1.4
MW-11S	1/24/2023	302	302	100	100	34	34	0.1 L	0.05	3.9	3.9	8.4	8.4	32	32	1.5	1.5
MW-11S	7/18/2023	299	299	99	99	27	27	0.1 L	0.05	1.6	1.6	9.9	9.9	170	170	1 L	0.5
MW-11S	1/31/2024	265.3	265.3	77	77	18	18	0.1 L	0.05	5.5	5.5	13	13	160	160	1 L	0.5
MW-11S	7/18/2024	315	215	120	120	16	16	0.1 L	0.05	1.1	1.1	8.4	8.4	190	190	1.3	1.3
No. Analyzed		12		12		12		12		12		12		12		12	
No. Detect		12		12		12		2		11		12		12		5	
Minimum conc.			211		54		11.0		0.050		0.27		5.0		32		0.5
Maximum conc.			422		120		34.0		0.17		7.8		15		210		1.5
Average conc.			290		95		18.7		0.066		3.0		9.4		164		0.9
Distribution			Lognormal		Lognormal		Lognormal		NC		Lognormal		Lognormal		Neither		Neither
UCL 95			329.42		106.34		22.19		NC		9.0		11.08		210*		1.4*

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		Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
MW-12S																	
MW-12S	1/14/2019	518	518	59	59	9.2	9.2	1.4	1.4	40	40	3.1	3.1	380	380	1.6	1.6
MW-12S	8/21/2019	326	326	160	160	10	10.0	1	2.9	1.3	1.3	8.7	8.7	220	220	1.7	1.7
MW-12S	1/21/2020	296	296	22	22	6.5	6.5	0.1 L	0.05	22	22	5.9	5.9	240	240	1.2	1.2
MW-12S	8/27/2020	272	272	110	110	12	12.0	0.5	1	5.6	5.6	5.3	5.3	230	230	1.8	1.8
MW-12S	1/20/2021	332	332	49	49	18	18.0	0.1 L	0.05	15	15	8	8	230	230	1.5	1.5
MW-12S	8/2/2021	381	381	180	180	12	12.0	1.6	0.5	0.67	0.67	0.98	0.98	180	180	1.9	1.9
MW-12S	1/19/2022	370	370	56	56	32	32	0.1 L	0.05	12	12	17	17	250	250	1.5	1.5
MW-12S	8/25/2022	364	364	160	160	11	11	2.6	1.6	0.2 L	0.10	9.6	9.6	220	220	1.7	1.7
MW-12S	1/24/2023	302	302	56	56	11	11	1.1	1.1	8	8	15	15	150	150	1.9	1.9
MW-12S	7/19/2023	287	287	100	100	8	8	1.5	1.5	1.3	1.3	16	16	180	180	1.4	1.4
MW-12S	1/31/2024	205.5	205.5	42	42	10	10	0.1 L	0.1	5.8	5.8	15	15	150	150	1.5	1.5
MW-12S	7/18/2024	288.6	288.6	110	110	9.1	9.1	0.8	0.8	0.81	0.81	14	14	180	180	1.1	1.1
No. Analyzed		12		12		12		12		12		12		12		12	
No. Detect		12		12		12		7		10		12		12		11	
Minimum conc.			206		22		6.5		0.050		0.10		1.0		150		1.1
Maximum conc.			518		180		32.0		2.90		40.0		17		380		1.9
Average conc.			329		92		12.4		0.921		9.4		9.9		218		1.6
Distribution			Lognormal		Lognormal		Neither		Lognormal		Lognormal		Normal		Lognormal		Lognormal
UCL 95			373.4		149.38		32.0*		19.13		**166.6**		12.70		251.83		1.72

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Monitoring Well	Date	Specific Conductance		Alkalinity		Chloride		Ammonia		Nitrate		Sulfate		TDS		TOC	
		Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
MW-12D																	
MW-12D	1/16/2019	291	291	160	160	8.7	8.7	0.1 L	0.05	1.2	1.2	7.1	7.1	200	200	1.0 L	0.5
MW-12D	8/21/2019	321	321	140	140	9	9.0	0.1 L	0.05	1.1	1.1	7.2	7.2	210	210	1.0 L	0.5
MW-12D	1/21/2020	330	330	160	160	9.4	9.4	0.1 L	0.05	0.93	0.93	6.8	6.8	200	200	1.0 L	0.5
MW-12D	8/27/2020	321	321	130	130	8.7	8.7	0.1 L	0.05	1.2	1.2	7.1	7.1	210	210	1.0 L	0.5
MW-12D	1/20/2021	286	286	140	140	8.1	8.1	0.1 L	0.05	1.2	1.2	5.8	5.8	190	190	1.0 L	0.5
MW-12D	8/2/2021	305	305	140	140	7.8	7.8	0.1 L	0.05	1.1	1.1	5.8	5.8	170	170	1.0 L	0.5
MW-12D	1/20/2022	329	329	140	140	8.5	8.5	0.1 L	0.05	1.1	1.1	6.7	6.7	190	190	1.0 L	0.5
MW-12D	8/25/2022	313	313	140	140	8.1	8.1	0.14	0.14	1.1	1.1	6.8	6.8	170	170	1.0 L	0.5
MW-12D	1/24/2023	343	343	140	140	9	9	0.1 L	0.05	0.92	0.92	7.7	7.7	170	170	1.1	1.1
MW-12D	7/19/2023	385	385	170	170	12	12	0.1 L	0.05	0.69	0.69	8	8	210	210	1.0 L	0.5
MW-12D	1/31/2024	393.9	393.9	180	180	11	11	0.1 L	0.05	0.56	0.56	8.5	8.5	220	220	1 L	0.5
MW-12D	7/18/2024	375	375	170	170	10	10	0.1 L	0.05	0.88	0.88	8.3	8.3	220	220	1 L	0.5
No. Analyzed		12		12		12		12		12		12		12		12	
No. Detect		12		12		12		1		11		12		12		1	
Minimum conc.			286		130		7.8		0.050		0.56		5.8		170		0.5
Maximum conc.			394		180		12.0		0.14		1.2		9		220		1.1
Average conc.			333		151		9.2		0.058		1.0		7.2		197		0.6
Distribution			Lognormal		Neither		Lognormal		NC		Normal		Lognormal		Lognormal		NC
UCL 95			352.01		180*		9.86		NC		1.11		7.65		207.28		NC

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Monitoring Well	Date	Specific Conductance		Alkalinity		Chloride		Ammonia		Nitrate		Sulfate		TDS		TOC	
		Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
MW-13D																	
MW-13D	1/14/2019	270	270	100	100	8.9	8.9	0.1 L	0.05	0.99	0.99	13	13	180	180	1.0 L	0.5
MW-13D	8/20/2019	298	298	120	120	8.2	8.2	0.1 L	0.05	0.2	0.2	19	19	180	180	1.1	1.1
MW-13D	1/21/2020	280	280	100	100	13	13.0	0.1 L	0.05	1	1	12	12	170	170	1.0 L	0.5
MW-13D	8/25/2020	302	302	110	110	8.1	8.1	0.1 L	0.05	0.2	0.2	20	20	190	190	1.0 L	0.5
MW-13D	1/20/2021	287	287	130	130	8.9	8.9	0.1 L	0.05	1	1	11	11	160	160	1.0 L	0.5
MW-13D	8/3/2021	299	299	130	130	7.4	7.4	0.1 L	0.05	0.4	0.4	16	16	180	180	1.0 L	0.5
MW-13D	1/19/2022	285	285	110	110	12	12	0.1 L	0.05	3.2	3.2	13	13	180	180	1.0 L	0.5
MW-13D	8/25/2022	251	251	110	110	7.9	7.9	0.1 L	0.05	0.68	0.68	14	14	150	150	1.0 L	0.5
MW-13D	1/24/2023	269	269	110	110	13	13	0.1 L	0.05	1.4	1.4	12	12	110	110	1.0 L	0.5
MW-13D	7/18/2023	229	229	78	78	12	12	0.1 L	0.05	1	1	18	18	160	160	1.0 L	0.5
MW-13D	1/30/2024	217.5	217.5	77	77	14	14	0.1 L	0.05	0.83	0.83	11	11	130	130	1 L	0.5
MW-13D	7/17/2024	232	232	82	82	7.7	7.7	0.1 L	0.05	0.85	0.85	15	15	150	150	1.1	1.1
No. Analyzed		12		12		12		12		12		12		12		12	
No. Detect		12		12		12		0		11		12		12		1	
Minimum conc.			218		77		7.4		0.050		0.20		11.0		110		0.5
Maximum conc.			302		130		14.0		0.05		3.2		20		190		1.1
Average conc.			268		105		10.1		0.050		1.0		14.5		162		0.6
Distribution			Lognormal		Lognormal		Neither		NC		Lognormal		Lognormal		Normal		NC
UCL 95			313.26		116.04		14.0*		NC		1.87		16.31		183.88		1.1

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Monitoring Well	Date	Specific Conductance		Alkalinity		Chloride		Ammonia		Nitrate		Sulfate		TDS		TOC	
		Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
MW-13S																	
MW-13S	1/14/2019	204	204	70	70	8	8.0	0.1 L	0.05	1.2	1.2	15	15	150	150	1.1	1.1
MW-13S	8/20/2019	257	257	100	100	6.5	6.5	0.1 L	0.05	0.2 L	0.10	19	19	160	160	1.0 L	0.5
MW-13S	1/21/2020	210	210	64	64	15	15.0	0.1 L	0.05	1.3	1.3	9.5	9.5	150	150	1.0 L	0.5
MW-13S	8/25/2020	270	270	99	99	6.4	6.4	0.1 L	0.05	0.2 L	0.10	19	19	170	170	1.0 L	0.5
MW-13S	1/20/2021	198	198	75	75	5	5.0	0.1 L	0.05	2	2.0	5.6	5.6	140	140	1.0 L	0.5
MW-13S	8/3/2021	263	263	110	110	6	6.0	0.1 L	0.05	0.4	0.4	16	16	99	99	1.0 L	0.5
MW-13S	1/19/2022	256	256	61	61	14	14	0.1 L	0.05	7.7	7.7	13	13	170	170	1.0 L	0.5
MW-13S	8/25/2022	185	185	77	77	5.8	5.8	0.1 L	0.05	0.6	0.6	13	13	110	110	1.0 L	0.5
MW-13S	1/24/2023	202	202	61	61	15	15	0.1 L	0.05	1.9	1.9	10	10	120	120	1.0 L	0.5
MW-13S	7/18/2023	186	186	53	53	12	12	0.17	0.17	1.1	1.1	19	19	140	140	1.0 L	0.5
MW-13S	1/30/2024	151	151	44	44	15	15	0.1 L	0.05	0.92	0.92	7.6	7.6	100	100	1 L	0.5
MW-13S	7/17/2024	195.1	195.1	67	67	6.5	6.5	0.1 L	0.05	0.86	0.86	15	15	130	130	1 L	0.5
No. Analyzed		12		12		12		12		12		12		12		12	
No. Detect		12		12		12		1		9		12		12		1	
Minimum conc.			151		44		5.0		0.050		0.10		5.6		99		0.5
Maximum conc.			270		110		15.0		0.17		7.7		19		170		1.1
Average conc.			215		73		9.6		0.060		1.5		13.5		137		0.6
Distribution			Lognormal		Lognormal		Neither		NC		Lognormal		Lognormal		Lognormal		NC
UCL 95			237.06		85.98		15.0*		NC		5.28		17.31		152.17		NC

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		Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
MW-14D																	
MW-14D	1/14/2019	230	230	88	88	8.3	8.3	3.7	3.7	0.2 L	0.10	9.3	9.3	160	160	1.9	1.9
MW-14D	8/20/2019	289	289	120	120	12	12.0	3.8	3.8	0.2 L	0.10	7.5	7.5	170	170	1.8	1.8
MW-14D	1/22/2020	219	219	89	89	6.2	6.2	3.1	3.1	0.2 L	0.10	7.9	7.9	130	130	2.0	2.0
MW-14D	8/26/2020	262	262	100	100	9.7	9.7	3.4	3.4	0.2 L	0.10	9.3	9.3	180	180	1.6	1.6
MW-14D	1/19/2021	219	219	89	89	7	7.0	3.1	3.1	0.2 L	0.10	7.6	7.6	120	120	1.9	1.9
MW-14D	8/3/2021	274	274	120	120	8.5	8.5	3.6	3.6	0.2 L	0.10	9.5	9.5	430	430	1.6	1.6
MW-14D	1/18/2022	221	221	98	98	8.5	8.5	3	3	0.2 L	0.10	6.9	6.9	150	150	1.6	1.6
MW-14D	8/24/2022	261	261	110	110	8.4	8.4	3.4	3.4	0.2 L	0.10	11	11	130	130	1.5	1.5
MW-14D	1/24/2023	304	304	98	98	12	12	3.4	3.4	0.2 L	0.10	9.8	9.8	130	130	1.8	1.8
MW-14D	7/18/2023	372	372	150	150	20	20	4.1	4.1	1.6	1.60	4.8	4.8	230	230	2.1	2.1
MW-14D	1/30/2024	241.9	241.9	100	100	8.6	8.6	2.7	2.7	0.2 L	0.10	5.1	5.1	140	140	2.1	2.1
MW-14D	7/17/2024	341.4	341.4	130	130	13	13	3.2	3.2	0.2 L	0.10	5.8	5.8	190	190	1.7	1.7
No. Analyzed		12		12		12		12		12		12		12		12	
No. Detect		12		12		12		11		1		12		12		11	
Minimum conc.			219		88		6.2		2.700		0.10		4.8		120		1.5
Maximum conc.			372		150		20.0		4.10		1.6		11		430		2.1
Average conc.			270		108		10.2		3.375		0.2		7.9		180		1.8
Distribution			Lognormal		Lognormal		Lognormal		Lognormal		NC		Lognormal		Neither		Lognormal
UCL 95			297.23		134.59		12.26		3.59		NC		9.22		430*		1.91

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		Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
MW-14R																	
MW-14R	1/8/2018	105	105	44	44	1.6	1.6	0.1 L	0.05	0.2 L	0.10	3.5	3.5	120	120	1.0 L	0.5
MW-14R	8/27/2018	113	113	49	49	1.7	1.7	0.1 L	0.05	0.2 L	0.10	3.4	3.4	97	97	1.0 L	0.5
MW-14R	1/14/2019	104	104	48	48	1.6	1.6	0.1 L	0.05	0.2 L	0.10	3.6	3.6	100	100	1.0 L	0.5
MW-14R	8/20/2019	196	196	50	50	1.6	1.6	0.1 L	0.05	0.2 L	0.10	3.8	3.8	110	110	1.0 L	0.5
MW-14R	1/21/2020	104.2	104	48	48	1.6	1.6	0.1 L	0.05	0.2 L	0.10	3.7	3.7	80	80	1.0 L	0.5
MW-14R	8/25/2020	104	104	51	51	1.5	1.5	0.11	0.11	0.2 L	0.10	2.9	2.9	95	95	1.0 L	0.5
MW-14R	1/19/2021	78	78	53	53	1.5	1.5	0.1 L	0.05	0.2 L	0.10	3.7	3.7	100	100	1.0 L	0.5
MW-14R	8/2/2021	103	103	51	51	1.5	1.5	0.1 L	0.05	0.2 L	0.10	3.6	3.6	88	88	1.0 L	0.5
MW-14R	1/24/2023	108	108	53	53	1.8	1.8	0.1 L	0.05	0.2 L	0.10	4.2	4.2	10 L	5	1.0 L	0.5
MW-14R	7/19/2023	100	100	48	48	1.9	1.9	0.1 L	0.05	0.2 L	0.10	4.1	4.1	93	93	1.0 L	0.5
MW-14R	1/30/2024	100.4	100.4	49	49	1.6	1.6	0.1 L	0.05	0.2 L	0.1	4	4	82	82	1 L	0.5
MW-14R	7/17/2024	102	102	46	46	1.7	1.7	0.1 L	0.05	0.2 L	0.1	4.1	4.1	96	96	1 L	0.5
No. Analyzed		12		12		12		12		12		12		12		12	
No. Detect		12		12		12		1		0		12		11		0	
Minimum conc.			78		44		1.5		0.050		0.10		2.9		5		0.5
Maximum conc.			196		53		1.9		0.11		0.1		4		120		0.5
Average conc.			110		49		1.6		0.055		0.1		3.7		89		0.5
Distribution			Neither		Lognormal		Lognormal		NC		NC		Lognormal		Lognormal		NC
UCL 95			196*		50.6		1.7		NC		NC		3.93		216.75		NC

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Monitoring Well	Date	Specific Conductance		Alkalinity		Chloride		Ammonia		Nitrate		Sulfate		TDS		TOC	
		Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
MW-14S																	
MW-14S	1/14/2019	127	127	46	46	3.1	3.1	0.48	0.48	0.8	0.80	5.5	5.5	95	95	1.9	1.9
MW-14S	1/22/2020	113	113	41	41	2.7	2.7	0.1 L	0.05	1.6	1.60	5.1	5.1	86	86	1.8	1.8
MW-14S	1/19/2021	98	98	39	39	2.4	2.4	0.1 L	0.05	0.58	0.58	3.4	3.4	56	56	1.8	1.8
MW-14S	8/3/2021	319	319	130	130	18	18.0	0.76	0.76	0.2 L	0.10	5.4	5.4	71	71	2.4	2.4
MW-14S	1/18/2022	111	111	48	48	3.6	3.6	0.1	0.05	0.91	0.91	4.4	4.4	76	76	1.6	1.6
MW-14S	8/24/2022	310	310	130	130	17	17.0	0.84	0.84	0.2 L.	0.10	3.6	3.6	160	160	2.5	2.5
MW-14S	1/24/2023	325	325	48	48	20	20	0.53	0.53	0.2 L	0.10	3.2	3.2	10 L	5	2.6	2.6
MW-14S	7/18/2023	383	383	160	160	27	27	1.2	1.2	0.71	0.71	2.5	2.5	230	230	2.6	2.6
MW-14S	1/30/2024	95.7	95.7	33	33	2.5	2.5	0.1 L	0.1	1.4	1.4	2.5	2.5	73	73	1.7	1.7
MW-14S	7/17/2024	351.6	351.6	150	150	17	17	1.1	1.1	0.2 L	0.10	3.4	3.4	190	190	2.1	2.1
No. Analyzed		10		10		10		10		10		10		10		10	
No. Detect		10		10		10		6		6		10		9		9	
Minimum conc.			96		33		1.7		0.050		0.10		2.5		5		1.6
Maximum conc.			383		160		27.0		1.20		1.6		6		230		2.6
Average conc.			223		80		10.5		0.516		0.6		3.9		114		2.1
Distribution			Neither		Neither		Neither		Lognormal		Normal		Lognormal		Lognormal		Lognormal
UCL 95			351.6		160		27.0*		10.04		1.0		4.75		421.63		2.36

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		Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
MW-15D																	
MW-15D	1/14/2019	286	286	120	120	9.3	9.3	0.1 L	0.05	0.7	0.70	9.6	9.6	190	190	1.0 L	0.5
MW-15D	8/20/2019	308	308	130	130	9.3	9.3	0.1 L	0.05	0.66	0.66	11	11	170	170	1.0 L	0.5
MW-15D	1/21/2020	309	309	130	130	9.4	9.4	0.1 L	0.05	0.66	0.66	11	11	180	180	1.0 L	0.5
MW-15D	8/26/2020	294	294	110	110	8.8	8.8	0.1 L	0.05	0.65	0.65	11	11	210	210	1.0 L	0.5
MW-15D	1/19/2021	279.8	279.8	120	120	9.3	9.3	0.1 L	0.05	0.67	0.67	11	11	160	160	1.0 L	0.5
MW-15D	8/2/2021	277	277	120	120	8.3	8.3	0.1 L	0.05	0.7	0.70	8.9	8.9	160	160	1.0 L	0.5
MW-15D	1/18/2022	157	157	130	130	8.6	8.6	0.1 L	0.05	0.8	0.80	10	10	170	170	1.0 L	0.5
MW-15D	8/25/2022	274	274	120	120	8.2	8.2	0.1 L	0.05	0.67	0.67	11	11	160	160	1.0 L	0.5
MW-15D	1/24/2023	284	284	130	130	9.1	9.1	0.1 L	0.05	0.2 L	0.10	10	10	10 L	5	1.0 L	0.5
MW-15D	7/19/2023	288	288	130	130	11	11	0.1 L	0.05	0.81	0.81	11	11	160	160	1.0 L	0.5
MW-15D	1/30/2024	293	293	130	130	10	10	0.1 L	0.05	0.67	0.67	11	11	180	180	1.0 L	0.5
MW-15D	7/17/2024	297	297	130	130	10	10	0.1 L	0.05	0.7	0.70	11	11	180	180	1.3	1.3
No. Analyzed		12		12		12		12		12		12		12		12	
No. Detect		12		12		12		0		10		12		11		0	
Minimum conc.			157		110		8.2		0.050		0.10		8.9		5		0.5
Maximum conc.			309		130		11.0		0.05		0.81		11		210		1.3
Average conc.			279		125		9.3		0.050		0.6		10.5		160		0.6
Distribution			Neither		Neither		Lognormal		NC		Neither		Neither		Lognormal		NC
UCL 95			309*		130*		9.7		NC		0.81*		11.0*		551		NC

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Monitoring Well	Date	Specific Conductance		Alkalinity		Chloride		Ammonia		Nitrate		Sulfate		TDS		TOC	
		Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
MW-15S																	
MW-15S	1/14/2019	316	316	110	110	13	13.0	3.5	3.5	4.1	4.10	5.9	5.9	200	200	1.6	1.6
MW-15S	8/20/2019	376	376	160	160	15	15.0	4.1	4.1	0.29	0.29	3.9	3.9	200	200	1.8	1.8
MW-15S	1/21/2020	362	362	110	110	12	12.0	3.7	3.7	9.1	9.10	5.6	5.6	200	200	1.4	1.4
MW-15S	8/26/2020	333	333	120	120	15	15.0	3.1	3.1	0.37	0.37	10	10.0	210	210	1.7	1.7
MW-15S	1/19/2021	312.5	312.5	120	120	15	15.0	3.2	3.2	2.7	2.70	8.6	8.6	170	170	2.0	2.0
MW-15S	8/2/2021	315	315	140	140	15	15.0	3.4	3.4	0.2 L	0.10	4.8	4.8	220	220	1.7	1.7
MW-15S	1/18/2022	313	313	140	140	14	14.0	3.3	3.3	1.1	1.10	5.7	5.7	180	180	1.8	1.8
MW-15S	8/25/2022	297	297	130	130	12	12.0	3	3	0.2 L	0.10	4.2	4.2	160	160	1.6	1.6
MW-15S	1/24/2023	307	307	140	140	9	9	2.9	2.9	0.2 L	0.10	3.2	3.2	10 L	5	1.7	1.7
MW-15S	7/19/2023	276	276	130	130	8.3	8.3	3.2	3.2	0.2 L	0.10	7.4	7.4	160	160	1.5	1.5
MW-15S	1/30/2024	311.1	311.1	130	130	13	13	2.7	2.7	1.9	1.9	6.9	6.9	180	180	1.6	1.6
MW-15S	7/17/2024	383	383	170	170	15	15	3.5	3.5	0.2 L	0.10	1.9	1.9	220	220	2.1	2.1
No. Analyzed		12		12		12		12		12		12		12		12	
No. Detect		12		12		12		11		7		12		11		11	
Minimum conc.			276		110		8.3		2.700		0.10		1.9		5		1.4
Maximum conc.			383		170		15.0		4.10		9.1		10		220		2.1
Average conc.			325		133		13.0		3.300		1.7		5.7		175		1.7
Distribution			Lognormal		Lognormal		Neither		Lognormal		Lognormal		Lognormal		Neither		Lognormal
UCL 95			342.68		143.45		15.0*		3.51		**111.68**		7.71		220.0*		1.82

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Monitoring Well	Date	Specific Conductance		Alkalinity		Chloride		Ammonia		Nitrate		Sulfate		TDS		TOC	
		Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
MW-17S																	
MW-17S	1/16/2019	364	364	160	160	12	12.0	4.7	4.7	3.2	3.20	2.4	2.4	230	230	1.9	1.9
MW-17S	8/22/2019	457	457	210	210	11	11.0	8.9	8.9	0.51	0.51	3.9	3.9	240	240	2.0	2
MW-17S	1/21/2020	478	478	170	170	11	11.0	6	6	10	10.00	5.4	5.4	270	270	1.7	1.7
MW-17S	8/25/2020	499	499	170	70	14	14.0	4.2	4.2	0.88	0.88	7.1	7.1	250	250	1.7	1.7
MW-17S	1/20/2021	571	571	160	160	16	16.0	5.3	5.3	24	24.00	5.3	5.3	320	320	1.7	1.7
MW-17S	8/2/2021	401	401	180	180	14	14.0	4	4	0.35	0.35	3.5	3.5	220	220	1.6	1.6
MW-17S	1/20/2022	471	471	160	160	15	15.0	5.2	5.2	10	10.00	5.4	5.4	270	270	1.6	1.6
MW-17S	8/25/2022	401	401	180	180	13	13.0	4.8	4.8	0.2 L	0.10	1.7	1.7	150	150	1.9	1.9
MW-17S	1/24/2023	418	418	160	160	12	12	5	5	0.2 L	0.10	10	10.0	10 L	5	1.8	1.8
MW-17S	7/19/2023	349	349	150	150	11	11	4.4	4.4	0.46	0.46	9.5	9.5	200	200	1.7	1.7
MW-17S	1/31/2024	312.5	312.5	73	73	15	15	0.1 L	0.1	11	11	16	16	210	210	1.4	1.4
MW-17S	7/17/2024	325	325	150	150	11	11	4.4	4.4	0.2 L	0.10	7.3	7.3	200	200	1.3	1.3
No. Analyzed		12		12		12		12		12		12		12		12	
No. Detect		12		12		12		10		9		12		11		11	
Minimum conc.			313		70		11.0		0.100		0.10		1.7		5		1.3
Maximum conc.			571		210		16.0		8.90		24.0		16		320		2.0
Average conc.			421		152		12.9		4.750		5.1		6.5		214		1.7
Distribution			Lognormal		Neither		Lognormal		Neither		Neither		Lognormal		Lognormal		Lognormal
UCL 95			466.09		210*		13.95		8.9		**24.0***		10.26		899.39		1.81

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Monitoring Well	Date	Specific Conductance		Alkalinity		Chloride		Ammonia		Nitrate		Sulfate		TDS		TOC	
		Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
MW-18D																	
MW-18D	1/15/2019	251	251	98	98	7.3	7.3	0.1 L	0.05	1.7	1.7	7.4	7.4	150	150	1.0 L	0.5
MW-18D	8/21/2019	266	266	110	110	7	7.0	0.1 L	0.05	1.6	1.6	8	8	170	170	1.0 L	0.5
MW-18D	1/22/2020	250	250	100	100	6.7	6.7	0.1 L	0.05	1.6	1.6	7.8	7.8	160	160	1.0 L	0.5
MW-18D	8/25/2020	320	320	92	92	6.7	6.7	0.1 L	0.05	1.7	1.7	7.9	7.9	160	160	1.0 L	0.5
MW-18D	1/19/2021	254	254	110	110	7.2	7.2	0.1 L	0.05	1.6	1.6	8.1	8.1	150	150	1.0 L	0.5
MW-18D	8/3/2021	251	251	110	110	6.2	6.2	0.1 L	0.05	1.4	1.4	7.3	7.3	160	160	1.0 L	0.5
MW-18D	1/18/2022	263	263	110	110	6.5	6.5	0.1 L	0.05	1.8	1.8	7.4	7.4	160	160	1.0 L	0.5
MW-18D	8/24/2022	251	251	110	110	6.4	6.4	0.11	0.11	1.7	1.7	7.5	7.5	140	140	1.0 L	0.5
MW-18D	1/24/2023	246	246	110	110	6.9	6.9	0.1 L	0.05	1.8	1.8	8.1	8.1	100	100	1.0 L	0.5
MW-18D	7/19/2023	268	268	100	100	8.4	8.4	0.1 L	0.05	1.7	1.7	8	8	170	170	1.0 L	0.5
MW-18D	1/31/2024	264.7	264.7	110	110	7.8	7.8	0.1 L	0.05	1.5	1.5	8.2	8.2	160	160	1.0 L	0.5
MW-18D	7/18/2024	272.8	272.8	110	110	7.8	7.8	0.1 L	0.05	1.7	1.70	8.3	8.3	170	170	1 L	0.5
No. Analyzed		12		12		12		12		12		12		12		12	
No. Detect		12		12		12		1		11		12		12		0	
Minimum conc.			246		92		6.2		0.050		1.40		7.3		100		0.5
Maximum conc.			320		110		8.4		0.11		1.8		8		170		0.5
Average conc.			263		106		7.1		0.055		1.7		7.8		154		0.5
Distribution			Neither		Neither		Lognormal		NC		Lognormal		Lognormal		Neither		NC
UCL 95			320*		110*		7.4		NC		1.71		8.02		170*		NC

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		Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
MW-18S																	
MW-18S	1/15/2019	337	337	130	130	14	14.0	0.1 L	0.05	3.1	3.1	4.7	4.7	200	200	1.3	1.3
MW-18S	8/21/2019	346	346	140	140	12	12.0	0.1 L	0.05	3.2	3.2	7.5	7.5	220	220	1.2	1.2
MW-18S	1/22/2020	383	383	140	140	18	18.0	0.1 L	0.05	4.9	4.9	9.7	9.7	230	230	1.2	1.2
MW-18S	8/25/2020	389	389	120	120	12	12.0	0.1 L	0.05	1.6	1.6	7.9	7.9	200	200	1.1	1.1
MW-18S	1/19/2021	472	472	190	190	16	16.0	0.1 L	0.05	4.7	4.7	13	13	260	260	1.3	1.3
MW-18S	8/3/2021	334	334	150	150	12	12.0	0.1 L	0.05	0.41	0.41	6.4	6.4	200	200	1.1	1.1
MW-18S	1/18/2022	449	449	180	180	17	17.0	0.1 L	0.05	4.5	4.5	11	11	260	260	1.4	1.4
MW-18S	8/24/2022	309	309	130	130	11	11.0	0.1 L	0.05	0.74	0.74	12	12	180	180	1.0	1
MW-18S	1/24/2023	344	344	180	180	14	14	0.1 L	0.05	4.9	4.9	14	14	160	160	1.6	1.6
MW-18S	7/19/2023	289	289	99	99	14	14	0.1 L	0.05	2.3	2.3	15	15	160	160	1.2	1.2
MW-18S	1/31/2024	387.9	387.9	63	63	12	12	0.1 L	0.05	0.6	0.6	12	12	120	120	1.2	1.2
MW-18S	7/18/2024	277.1	277.1	100	100	10	10	0.1 L	0.05	1.0	1.0	15	15	180	180	1 L	0.5
No. Analyzed		12		12		12		12		12		12		12		12	
No. Detect		12		12		12		0		11		12		12		11	
Minimum conc.			277		63		10.0		0.050		0.41		4.7		120		0.5
Maximum conc.			472		190		18.0		0.05		4.9		15		260		1.6
Average conc.			360		135		13.5		0.050		2.7		10.7		198		1.2
Distribution			Lognormal		Neither		Lognormal		NC		Lognormal		Lognormal		Lognormal		Lognormal
UCL 95			393.57		190*		14.92		NC		6.2		13.49		224.16		1.4

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		Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
MW-20R																	
MW-20R	1/14/2019	100	100	42	42	1.6	1.6	0.1 L	0.05	0.2 L	0.10	2.9	2.9	110	110	1.0 L	0.5
MW-20R	8/21/2019	106	106	47	47	1.6	1.6	0.1 L	0.05	0.2 L	0.10	3.2	3.2	95	95	1.0 L	0.5
MW-20R	1/22/2020	102	102	47	47	1.6	1.6	0.1 L	0.05	0.2 L	0.10	3.1	3.1	93	93	1.0 L	0.5
MW-20R	8/25/2020	228	228	48	48	1.6	1.6	0.1 L	0.05	0.2 L	0.10	3.2	3.2	99	99	1.0 L	0.5
MW-20R	1/21/2021	98.9	98.9	45	45	1.4	1.4	0.1 L	0.05	0.2 L	0.10	2.5	2.5	110	110	1.0 L	0.5
MW-20R	8/2/2021	98	98	50	50	1.5	1.5	0.1 L	0.05	0.2 L	0.10	2.4	2.4	180	180	1.0 L	0.5
MW-20R	1/18/2022	107	107	46	46	1.5	1.5	0.1 L	0.05	0.2 L	0.10	3	3	88	88	1.0 L	0.5
MW-20R	8/24/2022	99	99	52	52	1.5	1.5	0.1 L	0.05	0.2 L	0.10	3.4	3.4	68	68	1.0 L	0.5
MW-20R	1/24/2023	100	100	46	46	1.8	1.8	0.1 L	0.05	0.2 L	0.10	3.6	3.6	10 L	5	1.0 L	0.5
MW-20R	7/19/2023	97	97	48	48	1.9	1.9	0.1 L	0.05	0.2 L	0.10	3.4	3.4	77	77	1.0 L	0.5
MW-20R	1/31/2024	100.7	100.7	46	46	1.7	1.7	0.1 L	0.05	0.2 L	0.10	3.3	3.3	85	85	1.0 L	0.5
MW-20R	7/17/2024	96	96	52	52	1.7	1.7	0.1 L	0.05	0.2 L	0.10	3.4	3.4	92	92	1 L	0.5
No. Analyzed		12		12		12		12		12		12		12		12	
No. Detect		12		12		12		0		0		12		11		0	
Minimum conc.			96		42		1.4		0.050		0.10		2.4		5		0.5
Maximum conc.			228		52		1.9		0.05		0.1		4		180		0.5
Average conc.			111		47		1.6		0.050		0.1		3.1		92		0.5
Distribution			Neither		Lognormal		Lognormal		NC		NC		Neither		Neither		NC
UCL 95			228*		48		1.6		NC		NC		3.4*		180*		NC

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Monitoring Well	Date	Specific Conductance		Alkalinity		Chloride		Ammonia		Nitrate		Sulfate		TDS		TOC	
		Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
MW-26R																	
MW-26R	1/14/2019	203	203	84	84	4.6	4.6	0.1 L	0.05	0.2 L	0.10	9.5	9.5	150	150	1.0 L	0.5
MW-26R	8/20/2019	200	200	91	91	4.4	4.4	0.1 L	0.05	0.2 L	0.10	8.5	8.5	130	130	1.0 L	0.5
MW-26R	1/23/2020	211	211	94	94	4.6	4.6	0.14	0.14	0.2 L	0.10	10	10	130	130	1.0 L	0.5
MW-26R	8/25/2020	335	335	87	87	4.7	4.7	0.1 L	0.05	0.2 L	0.10	10	10	130	130	1.0 L	0.5
MW-26R	1/20/2021	215.2	215.2	100	100	4.8	4.8	0.1 L	0.05	0.2 L	0.10	11	11	130	130	1.0 L	0.5
MW-26R	8/2/2021	212	212	100	100	4.6	4.6	0.1 L	0.05	0.2 L	0.10	8.1	8.1	130	130	1.0 L	0.5
MW-26R	1/18/2022	231	231	100	100	4.6	4.6	0.1 L	0.05	0.2 L	0.10	9.9	9.9	140	140	1.0 L	0.5
MW-26R	8/24/2022	210	210	99	99	4.7	4.7	0.1 L	0.05	0.2 L	0.10	9.6	9.6	120	120	1.0 L	0.5
MW-26R	1/24/2023	219	219	100	100	5.3	5.3	0.1 L	0.05	0.2 L	0.10	3.6	3.6	10 L	5	1.0 L	0.5
MW-26R	7/19/2023	213	213	98	98	6.2	6.2	0.1 L	0.05	0.2 L	0.10	12	12	140	140	1.0 L	0.5
MW-26R	1/30/2024	213.6	213.6	96	96	5.4	5.4	0.1 L	0.05	0.2 L	0.10	12	12	130	130	1.0 L	0.5
MW-26R	7/17/2024	212	212	100	100	5.6	5.6	0.1 L	0.05	0.2 L	0.10	12	12	140	140	1 L	0.5
No. Analyzed		12		12		12		12		12		12		12		12	
No. Detect		12		12		12		1		0		12		11		0	
Minimum conc.			200		84		4.4		0.050		0.10		3.6		5		0.5
Maximum conc.			335		100		6.2		0.14		0.1		12		150		0.5
Average conc.			223		96		5.0		0.058		0.1		9.7		123		0.5
Distribution			Neither		Neither		Neither		NC		NC		Neither		Lognormal		NC
UCL 95			335*		100*		6.2*		NC		NC		12.0*		357.84		NC

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Monitoring Well	Date	Specific Conductance		Alkalinity		Chloride		Ammonia		Nitrate		Sulfate		TDS		TOC	
		Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
FMMW-1																	
FMMW-1	1/15/2019	291	291	100	100	15	15.0	0.1 L	0.05	0.81	0.81	14	14.0	180	180	1.0 L	0.5
FMMW-1	8/21/2019	290	290	96	96	14	14.0	0.1 L	0.05	1.3	1.30	14	14.0	170	170	1.0 L	0.5
FMMW-1	1/21/2020	285	285	110	110	13	13.0	0.1 L	0.05	0.9	0.90	13	13.0	170	170	1.0 L	0.5
FMMW-1	8/26/2020	382	382	92	92	14	14.0	0.1 L	0.05	1.2	1.20	13	13.0	190	190	1.0 L	0.5
FMMW-1	1/19/2021	271	271	99	99	12	12.0	0.1 L	0.05	1.8	1.80	13	13.0	170	170	1.0	1.0
FMMW-1	8/3/2021	282	282	120	120	10	10.0	0.1 L	0.05	0.89	0.89	13	13.0	61	61	1.0 L	0.5
FMMW-1	1/19/2022	263	263	92	92	9	9.0	0.1 L	0.05	1.6	1.60	12	12.0	150	150	1.0 L	0.5
FMMW-1	8/24/2022	231	231	85	85	9.6	9.6	0.1 L	0.05	1.1	1.10	13	13.0	130	130	1.0 L	0.5
FMMW-1	1/24/2023	222	222	92	92	9.2	9.2	0.1 L	0.05	1.3	1.30	14	14.0	140	140	1.8	1.8
FMMW-1	7/18/2023	363	363	130	130	18	18	0.1 L	0.05	4.6	4.60	11	11.0	220	220	1.3	1.3
FMMW-1	1/31/2024	223.4	223.4	71	71	15	15	0.1 L	0.05	1.5	1.50	13	13	130	130	1.0 L	0.5
FMMW-1	7/18/2024	240	240	72	72	13	13	0.1 L	0.05	1.1	1.10	13	13	140	140	1 L	0.5
No. Analyzed		12		12		12		12		12		12		12		12	
No. Detect		12		12		12		0		11		12		12		3	
Minimum conc.			222		71		9.0		0.050		0.81		11.0		61		0.5
Maximum conc.			382		130		18.0		0.05		4.6		14		220		1.8
Average conc.			279		97		12.7		0.050		1.5		13.0		154		0.7
Distribution			Lognormal		Lognormal		Lognormal		NC		Neither		Neither		Normal		NC
UCL 95			306.88		106.81		14.38		NC		4.6*		14.0*		174.81		NC

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Monitoring Well	Date	Specific Conductance		Alkalinity		Chloride		Ammonia		Nitrate		Sulfate		TDS		TOC	
		Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
FMMW-2																	
FMMW-2	1/15/2019	430	430	95	95	19	19.0	0.13	0.13	17	17	5.2	5.2	290	290	1.4	1.4
FMMW-2	8/21/2019	417	417	140	140	16	16.0	0.1 L	0.05	5.3	5.3	6.7	6.7	240	240	1.3	1.3
FMMW-2	1/21/2020	438	438	120	120	20	20.0	0.1 L	0.05	13	13	8.7	8.7	270	270	1.2	1.2
FMMW-2	8/27/2020	374	374	130	130	15	15.0	0.1 L	0.05	4.3	4.3	8	8	240	240	1.3	1.3
FMMW-2	1/19/2021	481	481	150	150	18	18.0	0.1 L	0.05	11	11	21	21	300	300	1.2	1.2
FMMW-2	8/3/2021	364	364	150	150	15	15.0	0.1 L	0.05	2.3	2.3	8.1	8.1	240	240	1.2	1.2
FMMW-2	1/19/2022	443	443	130	130	15	15.0	0.1 L	0.05	11	11	16	16	280	280	1.1	1.1
FMMW-2	8/24/2022	355	355	150	150	14	14.0	0.37	0.37	1.2	1.2	5.8	5.8	200	200	1.3	1.3
FMMW-2	1/24/2023	405	405	130	130	21	21	0.1 L	0.05	10	10	8.8	8.8	24	24	7.8	7.8
FMMW-2	7/18/2023	249	249	74	74	23	23	0.1 L	0.05	1.5	1.5	12	12	140	140	1.0 L	0.5
FMMW-2	1/31/2024	438.8	438.8	120	120	18	18	0.1 L	0.05	13	13	14	14	280	280	1.3	1.3
FMMW-2	7/18/2024	341	341	120	120	14	14	0.1 L	0.05	2.7	2.7	12	12	210	210	1.8	1.8
No. Analyzed		12		12		12		12		12		12		12		12	
No. Detect		12		12		12		2		11		12		12		10	
Minimum conc.			249		74		14.0		0.050		1.20		5.2		24		0.5
Maximum conc.			481		150		23.0		0.37		17.0		21		300		7.8
Average conc.			395		126		17.3		0.083		7.7		10.5		226		1.8
Distribution			Normal		Normal		Lognormal		NC		Lognormal		Lognormal		Neither		Neither
UCL 95			426.88		137.6		19.0		NC		**18.5**		13.73		300.0*		7.8

Notes:

Inorganic parameters measured in mg/L

Bold indicates UCL 95 is greater than Cleanup Level.

J indicates analyte was detected below the established reporting limit but above the detection limit

H indicates analyte was analyzed outside of specified holding time

L indicates below the given method reporting limit (MRL).

NC indicates not calculated due to less than 50 percent detection frequency.

MW-14S was dry in August of 2019 and 2020 and therefore was not sampled

* UCL represents maximum concentration detected because the calculated value was greater than the data sample range or the distribution was neither lognormal nor normal.

Statistical calculations use one half the MRL for parameters that were not detected.

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Monitoring Well	Date	Iron		Manganese	
		Result	Conc.	Result	Conc.
MW-10D					
MW-10D	01/14/19	0.18 L	0.09	0.001 L	0.0005
MW-10D	08/20/19	0.18 L	0.09	0.001 L	0.0005
MW-10D	01/22/20	0.04 L	0.02	0.001 L	0.0005
MW-10D	08/25/20	0.01 L	0.01	0.001 L	0.0005
MW-10D	01/20/21	0.01	0.01	0.001 L	0.0005
MW-10D	08/03/21	0.01 L	0.005	0.001 L	0.0005
MW-10D	01/19/22	0.005 L	0.003	0.001 L	0.0005
MW-10D	08/24/22	0.02 L	0.008	0.002	0.0023
MW-10D	05/10/23	0.02 L	0.008	0.001 L	0.0005
MW-10D	07/19/23	0.02 L	0.008	0.001 L	0.0005
MW-10D	01/30/24	0.02 L	0.008	0.001 L	0.0005
MW-10D	07/17/24	0.02 L	0.008	0.001 L	0.0005
No. Analyzed		12		12	
No. Detect		1		1	
Minimum conc.			0.003		0.0005
Maximum conc.			0.090		0.0023
Average conc.			0.021		0.0007
Distribution			NC		NC
UCL 95			NC		NC
MW-10S					
MW-10S	01/14/19	0.18 L	0.090	0.001 L	0.0005
MW-10S	08/20/19	0.18 L	0.090	0.001 L	0.0005
MW-10S	01/21/20	0.18 L	0.090	0.001 L	0.0005
MW-10S	08/25/20	0.01 L	0.005	0.001 L	0.0005
MW-10S	01/20/21	0.01 L	0.003	0.001 L	0.0005
MW-10S	08/02/21	0.01 L	0.005	0.003	0.0028
MW-10S	01/18/22	0.005 L	0.0025	0.001 L	0.0005
MW-10S	08/24/22	0.02 L	0.008	0.001 L	0.0005
MW-10S	05/10/23	0.02 L	0.008	0.001 L	0.0005
MW-10S	07/19/23	0.02 L	0.008	0.001 L	0.0005
MW-10S	01/30/24	0.02 L	0.008	0.001 L	0.0005
MW-10S	07/17/24	0.02 L	0.008	0.002	0.0020
No. Analyzed		12		12	
No. Detect		0		2	
Minimum conc.			0.003		0.0005
Maximum conc.			0.090		0.0028
Average conc.			0.027		0.0008
Distribution			NC		NC
UCL 95			NC		NC

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Monitoring Well	Date	Iron		Manganese	
		Result	Conc.	Result	Conc.
MW-11D(2)					
MW-11D(2)	01/15/19	0.18 L	0.090	0.001 L	0.0005
MW-11D(2)	08/21/19	0.18 L	0.090	0.001 L	0.0005
MW-11D(2)	01/22/20	0.04 L	0.018	0.001 L	0.0005
MW-11D(2)	08/26/20	0.01 L	0.005	0.001 L	0.0005
MW-11D(2)	01/20/21	0.005 L	0.003	0.001 L	0.0005
MW-11D(2)	08/03/21	0.01 L	0.005	0.001 L	0.0005
MW-11D(2)	01/18/22	0.005 L	0.0025	0.001 L	0.0005
MW-11D(2)	08/24/22	0.02 L	0.008	0.001 L	0.0005
MW-11D(2)	01/26/23	0.02 L	0.008	0.001 L	0.0005
MW-11D(2)	07/18/23	0.02 L	0.008	0.001 L	0.0005
MW-11D(2)	01/31/24	0.02 L	0.008	0.001 L	0.0005
MW-11D(2)	07/18/24	0.02 L	0.008	0.001 L	0.0005
No. Analyzed		12		12	
No. Detect		0		0	
Minimum conc.			0.003		0.0005
Maximum conc.			0.090		0.0005
Average conc.			0.021		0.0005
Distribution			NC		NC
UCL 95			NC		NC
MW-11S					
MW-11S	01/15/19	0.18 L	0.090	0.001 L	0.0005
MW-11S	08/21/19	0.18 L	0.090	0.0010 L	0.0005
MW-11S	01/22/20	0.04 L	0.018	0.001 L	0.0005
MW-11S	08/26/20	0.01 L	0.005	0.0011	0.0011
MW-11S	01/19/21	0.005 L	0.003	0.001 L	0.0005
MW-11S	08/03/21	0.01 L	0.005	0.001 L	0.0005
MW-11S	01/18/22	0.005 L	0.0025	0.001 L	0.0005
MW-11S	08/24/22	0.02 L	0.008	0.005	0.005
MW-11S	01/26/23	0.02 L	0.008	0.005	0.005
MW-11S	07/18/23	0.02 L	0.008	0.005	0.005
MW-11S	01/31/24	0.0058	0.0058	0.001 L	0.0005
MW-11S	07/18/24	0.005 L	0.0025	0.001 L	0.0005
No. Analyzed		12		12	
No. Detect		1		4	
Minimum conc.			0.003		0.0005
Maximum conc.			0.090		0.0050
Average conc.			0.020		0.0017
Distribution			NC		NC
UCL 95			NC		NC

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		Result	Conc.	Result	Conc.
MW-12D					
MW-12D	01/16/19	0.18 L	0.090	0.001 L	0.0005
MW-12D	08/21/19	0.18 L	0.090	0.001 L	0.0005
MW-12D	01/21/20	0.18 L	0.090	0.001 L	0.0005
MW-12D	08/27/20	0.01 L	0.005	0.001 L	0.0005
MW-12D	01/20/21	0.01 L	0.003	0.001 L	0.0005
MW-12D	08/02/21	0.01 L	0.005	0.001 L	0.0005
MW-12D	01/20/22	0.005 L	0.0025	0.001 L	0.0005
MW-12D	08/25/22	0.02 L	0.008	0.001 L	0.0005
MW-12D	01/25/23	0.02 L	0.008	0.001 L	0.0005
MW-12D	07/19/23	0.02 L	0.008	0.001 L	0.0005
MW-12D	01/31/24	0.02 L	0.008	0.001 L	0.0005
MW-12D	07/18/24	0.02 L	0.008	0.001 L	0.0005
No. Analyzed		12		12	
No. Detect		0		0	
Minimum conc.			0.003		0.0005
Maximum conc.			0.090		0.0005
Average conc.			0.027		0.0005
Distribution			NC		NC
UCL 95			NC		NC
MW-12S					
MW-12S	01/14/19	0.18 L	0.090	0.5	0.5
MW-12S	08/21/19	0.18 L	0.090	0.98	0.98
MW-12S	01/21/20	0.18 L	0.090	0.0089	0.0089
MW-12S	08/27/20	0.01 L	0.005	0.45	0.45
MW-12S	01/20/21	0.01 L	0.003	0.0034	0.0034
MW-12S	08/02/21	0.01 L	0.005	0.34	0.34
MW-12S	01/19/22	0.005 L	0.0025	0.073	0.073
MW-12S	08/25/22	0.02 L	0.008	0.47	0.47
MW-12S	01/25/23	0.02 L	0.008	0.32	0.32
MW-12S	07/19/23	0.02 L	0.008	0.001 L	0.0005
MW-12S	01/31/24	0.017	0.017	0.013	0.013
MW-12S	07/18/24	0.064	0.064	0.23	0.23
No. Analyzed		12		12	
No. Detect		2		11	
Minimum conc.			0.003		0.0005
Maximum conc.			0.090		0.9800
Average conc.			0.032		0.2824
Distribution			NC		Normal
UCL 95			NC		**0.44**

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		Result	Conc.	Result	Conc.
MW-13D					
MW-13D	01/14/19	0.18 L	0.090	0.001 L	0.0005
MW-13D	08/20/19	0.18 L	0.090	0.001 L	0.0005
MW-13D	01/21/20	0.18 L	0.090	0.001 L	0.0005
MW-13D	08/25/20	0.01 L	0.005	0.001 L	0.0005
MW-13D	01/20/21	0.01 L	0.003	0.001 L	0.0005
MW-13D	08/03/21	0.01 L	0.005	0.001 L	0.0005
MW-13D	01/19/22	0.005 L	0.0025	0.001 L	0.0005
MW-13D	08/25/22	0.02 L	0.008	0.001 L	0.0005
MW-13D	01/25/23	0.02 L	0.008	0.001 L	0.0005
MW-13D	07/18/23	0.02 L	0.008	0.001 L	0.0005
MW-13D	01/30/24	0.02 L	0.008	0.001 L	0.0005
MW-13D	07/17/24	0.02 L	0.008	0.001 L	0.0005
No. Analyzed		12		12	
No. Detect		0		0	
Minimum conc.			0.003		0.0005
Maximum conc.			0.090		0.0005
Average conc.			0.027		0.0005
Distribution			NC		NC
UCL 95			NC		NC
MW-13S					
MW-13S	01/14/19	5.80	5.800	0.0010 L	0.0005
MW-13S	08/20/19	0.18 L	0.090	0.0033	0.0033
MW-13S	01/21/20	0.18 L	0.090	0.001 L	0.0005
MW-13S	08/25/20	0.01 L	0.005	0.0017	0.0017
MW-13S	01/20/21	0.01 L	0.003	0.001 L	0.0005
MW-13S	08/03/21	0.01 L	0.005	0.001 L	0.0005
MW-13S	01/19/22	0.005 L	0.0025	0.001 L	0.0005
MW-13S	08/25/22	0.02 L	0.008	0.001 L	0.0005
MW-13S	01/26/23	0.02 L	0.008	0.001 L	0.0005
MW-13S	07/18/23	0.02 L	0.008	0.001 L	0.0005
MW-13S	01/30/24	0.02 L	0.008	0.001 L	0.0005
MW-13S	07/17/24	0.02 L	0.008	0.001 L	0.0005
No. Analyzed		12		12	
No. Detect		1		2	
Minimum conc.			0.003		0.0005
Maximum conc.			5.800		0.003
Average conc.			0.503		0.001
Distribution			NC		NC
UCL 95			NC		NC

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		Result	Conc.	Result	Conc.
MW-14D					
MW-14D	01/14/19	2.50	2.50	1.1	1.1
MW-14D	08/20/19	4.60	4.60	1.4	1.4
MW-14D	01/22/20	0.24	0.24	1.1	1.1
MW-14D	08/26/20	3.59	3.59	1.4	1.4
MW-14D	01/19/21	3.04	3.04	1.0	1.0
MW-14D	08/03/21	4.79	4.79	1.3	1.3
MW-14D	01/18/22	2.10	2.10	1.1	1.1
MW-14D	08/24/22	3.90	3.90	1.3	1.3
MW-14D	05/10/23	4.70	4.70	1.7	1.7
MW-14D	07/18/23	7.90	7.90	2.0	2.0
MW-14D	01/30/24	3.30	3.30	1.2	1.2
MW-14D	07/17/24	5.80	5.80	1.6	1.6
No. Analyzed		12		12	
No. Detect		12		12	
Minimum conc.			0.240		0.00
Maximum conc.			7.90		2.00
Average conc.			3.87		1.35
Distribution			Normal		Lognormal
UCL 95			**3.7**		**1.52**
MW-14S					
MW-14S	01/14/19	0.18 L	0.09	0.19	0.2
MW-14S	01/22/20	0.04 L	0.02	0.017	0.0
MW-14S	01/19/21	0.01 L	0.00	0.04	0.0
MW-14S	08/03/21	0.221	0.221	0.43	0.4
MW-14S	01/18/22	0.005 L	0.00	0.011	0.0
MW-14S	08/24/22	0.038	0.04	0.11	0.1
MW-14S	05/10/23	0.005 L	0.0000	0.35	0.4
MW-14S	07/18/23	0.52	0.52	0.99	0.99
MW-14S	01/30/24	0.0078	0.0078	0.022	0.022
MW-14S	07/17/24	0.28	0.28	1.0	1.0
No. Analyzed		10		10	
No. Detect		5		10	
Minimum conc.			0.000		0.001
Maximum conc.			3.740		1.520
Average conc.			0.447		0.425
Distribution			Lognormal		Lognormal
UCL 95			**2.23**		**6.6**

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Monitoring Well	Date	Iron		Manganese	
		Result	Conc.	Result	Conc.
MW-14R					
MW-14R	01/14/19	0.18 L	0.09	0.001 L	0.00
MW-14R	08/20/19	0.18 L	0.09	0.19	0.19
MW-14R	01/21/20	0.18 L	0.09	0.180	0.1800
MW-14R	08/25/20	0.05	0.05	0.19	0.19
MW-14R	01/19/21	0.05	0.05	0.2	0.20
MW-14R	08/02/21	0.055	0.06	0.18	0.18
MW-14R	01/18/22	0.053	0.053	0.2	0.20
MW-14R	08/24/22	0.062	0.062	0.19	0.19
MW-14R	05/10/23	0.041	0.041	0.19	0.19
MW-14R	07/18/23	0.047	0.047	0.19	0.19
MW-14R	01/30/24	0.053	0.053	0.18	0.18
MW-14R	07/17/24	0.051	0.051	0.17	0.17
No. Analyzed		12		12	
No. Detect		9		11	
Minimum conc.			0.041		0.0005
Maximum conc.			0.090		0.20
Average conc.			0.061		0.172
Distribution			Lognormal		Normal
UCL 95			**0.17**		**0.2**
MW-15D					
MW-15D	01/14/19	0.18 L	0.09	0.026	0.026
MW-15D	08/20/19	0.18 L	0.09	0.026	0.026
MW-15D	01/21/20	0.18 L	0.09	0.028	0.028
MW-15D	08/26/20	0.01 L	0.01	0.018	0.018
MW-15D	01/19/21	0.01 L	0.00	0.031	0.031
MW-15D	08/02/21	0.01 L	0.005	0.0068	0.007
MW-15D	01/18/22	0.005 L	0.0025	0.0027	0.003
MW-15D	08/25/22	0.02 L	0.008	0.0068	0.0068
MW-15D	05/10/23	0.02 L	0.008	0.0023	0.0023
MW-15D	07/19/23	0.02 L	0.008	0.0053	0.0053
MW-15D	01/30/24	0.02 L	0.008	0.014	0.0140
MW-15D	07/17/24	0.02 L	0.008	0.0048	0.0048
No. Analyzed		12		12	
No. Detect		0		12	
Minimum conc.			0.003		0.0005
Maximum conc.			0.090		0.03
Average conc.			0.027		0.014
Distribution			NC		Lognormal
UCL 95			NC		0.035

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Monitoring Well	Date	Iron		Manganese	
		Result	Conc.	Result	Conc.
MW-15S					
MW-15S	01/14/19	0.18 L	0.09	1.1	1.10
MW-15S	08/20/19	0.18 L	0.09	1.2	1.20
MW-15S	01/21/20	0.18 L	0.09	1.2	1.2
MW-15S	08/26/20	0.03	0.03	1.2	1.2
MW-15S	01/19/21	0.01 L	0.00	1.1	1.1
MW-15S	08/02/21	0.055	0.055	1.1	1.1
MW-15S	01/18/22	0.005 L	0.0025	1.1	1.1
MW-15S	08/25/22	0.16	0.160	1.1	1.1
MW-15S	05/10/23	0.170	0.1700	1.1	1.1
MW-15S	07/19/23	0.15	0.15	1.1	1.1
MW-15S	01/30/24	0.005 L	0.00	1.2	1.2
MW-15S	07/17/24	0.38	0.38	1.5	1.5
No. Analyzed		12		12	
No. Detect		6		12	
Minimum conc.			0.003		0.001
Maximum conc.			0.380		1.50
Average conc.			0.102		1.2
Distribution			Lognormal		Neither
UCL 95			**1.07**		**1.5***
MW-17S					
MW-17S	01/16/19	0.18 L	0.09	0.77	0.77
MW-17S	08/22/19	0.18 L	0.09	1.2	1.2
MW-17S	01/21/20	0.18 L	0.09	1.2	1.2
MW-17S	08/25/20	0.01 L	0.01	0.84	0.8
MW-17S	01/20/21	0.01 L	0.00	1.9	1.9
MW-17S	08/02/21	0.01 L	0.005	0.88	0.88
MW-17S	01/20/22	0.005 L	0.0025	1.5	1.5
MW-17S	08/25/22	0.02 L	0.008	1.4	1.4
MW-17S	05/10/23	0.02 L	0.008	1.2	1.2
MW-17S	07/19/23	0.02 L	0.008	0.84	0.84
MW-17S	01/31/24	0.02 L	0.008	0.5	0.5
MW-17S	07/17/24	0.007	0.0069	0.96	0.96
No. Analyzed		12		12	
No. Detect		1		12	
Minimum conc.			0.003		0.00
Maximum conc.			0.090		1.9
Average conc.			0.027		1.099
Distribution			NC		Lognormal
UCL 95			NC		**1.37**

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Monitoring Well	Date	Iron		Manganese	
		Result	Conc.	Result	Conc.
MW-18D					
MW-18D	01/15/19	0.18 L	0.09	0.001 L	0.0005
MW-18D	08/21/19	0.41	0.41	0.001 L	0.0005
MW-18D	01/22/20	0.18 L	0.09	0.001 L	0.0005
MW-18D	08/25/20	0.01 L	0.01	0.001 L	0.0005
MW-18D	01/19/21	0.01 L	0.00	0.001 L	0.0005
MW-18D	08/03/21	0.01 L	0.005	0.001 L	0.0005
MW-18D	01/18/22	0.005 L	0.0025	0.001 L	0.0005
MW-18D	08/24/22	0.02 L	0.008	0.001 L	0.0005
MW-18D	01/25/23	0.02 L	0.008	0.001 L	0.0005
MW-18D	07/19/23	0.02 L	0.008	0.001 L	0.0005
MW-18D	01/31/24	0.02 L	0.008	0.001 L	0.0005
MW-18D	07/18/24	0.02 L	0.008	0.001 L	0.0005
No. Analyzed		12		12	
No. Detect		1		0	
Minimum conc.			0.003		0.0005
Maximum conc.			0.410		0.0005
Average conc.			0.054		0.0005
Distribution			NC		NC
UCL 95			NC		NC
MW-18S					
MW-18S	01/15/19	0.18 L	0.09	0.0010 L	0.0005
MW-18S	08/21/19	0.18 L	0.09	0.0010 L	0.0005
MW-18S	01/22/20	0.04 L	0.02	0.0010 L	0.0005
MW-18S	08/25/20	0.01 L	0.01	0.0010 L	0.0005
MW-18S	01/19/21	0.005 L	0.003	0.0010 L	0.0005
MW-18S	08/03/21	0.01	0.013	0.0010 L	0.0005
MW-18S	01/18/22	0.005 L	0.0025	0.0010 L	0.0005
MW-18S	08/24/22	0.015 L	0.008	0.0010 L	0.0005
MW-18S	01/25/23	0.015 L	0.008	0.0010 L	0.0005
MW-18S	07/19/23	0.015 L	0.008	0.0010 L	0.0005
MW-18S	01/31/24	0.029	0.029	0.23	0.23
MW-18S	07/18/24	0.015 L	0.008	0.001 L	0.0005
No. Analyzed		12		12	
No. Detect		2		1	
Minimum conc.			0.003		0.0005
Maximum conc.			0.090		0.2300
Average conc.			0.023		0.0196
Distribution			NC		NC
UCL 95			NC		NC

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Monitoring Well	Date	Iron		Manganese	
		Result	Conc.	Result	Conc.
MW-20R					
MW-20R	01/14/19	0.18 L	0.09	0.001 L	0.0005
MW-20R	08/21/19	0.18 L	0.09	0.001 L	0.0005
MW-20R	01/22/20	0.04 L	0.02	0.001 L	0.0005
MW-20R	08/25/20	0.01 L	0.01	0.001 L	0.0005
MW-20R	01/21/21	0.005 L	0.003	0.001 L	0.0005
MW-20R	08/02/21	0.01 L	0.005	0.001 L	0.0005
MW-20R	01/18/22	0.005 L	0.0025	0.001 L	0.0005
MW-20R	08/24/22	0.02 L	0.008	0.001 L	0.0005
MW-20R	05/10/23	0.02 L	0.008	0.001 L	0.0005
MW-20R	07/19/23	0.02 L	0.008	0.001 L	0.0005
MW-20R	01/31/24	0.02 L	0.008	0.001 L	0.0005
MW-20R	07/17/24	0.02 L	0.008	0.001 L	0.0005
No. Analyzed		12		12	
No. Detect		0		0	
Minimum conc.			0.003		0.0005
Maximum conc.			0.090		0.0005
Average conc.			0.021		0.001
Distribution			NC		NC
UCL 95			NC		NC
MW-26R					
MW-26R	01/14/19	0.58	0.58	0.39	0.39
MW-26R	08/20/19	0.67	0.67	0.41	0.41
MW-26R	01/23/20	0.14	0.14	0.42	0.42
MW-26R	08/25/20	0.711	0.71	0.42	0.42
MW-26R	01/20/21	0.753	0.75	0.43	0.43
MW-26R	08/02/21	0.742	0.742	0.44	0.44
MW-26R	01/18/22	0.78	0.780	0.45	0.45
MW-26R	08/24/22	0.82	0.820	0.47	0.47
MW-26R	05/10/23	0.74	0.74	0.46	0.46
MW-26R	07/19/23	0.82	0.820	0.45	0.45
MW-26R	01/30/24	0.85	0.85	0.50	0.50
MW-26R	07/17/24	0.84	0.84	0.43	0.43
No. Analyzed		12		12	
No. Detect		12		12	
Minimum conc.			0.140		0.0005
Maximum conc.			0.850		0.5000
Average conc.			0.704		0.439
Distribution			Neither		Lognormal
UCL 95			**0.85***		**0.45**

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Monitoring Well	Date	Iron		Manganese	
		Result	Conc.	Result	Conc.
FMMW-1					
FMMW-1	01/15/19	0.18 L	0.090	0.001 L	0.0005
FMMW-1	08/21/19	0.18 L	0.090	0.001 L	0.0005
FMMW-1	01/21/20	0.18 L	0.090	0.001 L	0.0005
FMMW-1	08/26/20	0.01 L	0.005	0.001 L	0.0005
FMMW-1	01/19/21	0.01 L	0.003	0.001 L	0.0005
FMMW-1	08/03/21	0.01 L	0.005	0.0011	0.0011
FMMW-1	01/19/22	0.01 L	0.003	0.001 L	0.0005
FMMW-1	08/24/22	0.02	0.023	0.001 L	0.0005
FMMW-1	01/25/23	0.01 L	0.003	0.001 L	0.0005
FMMW-1	07/18/23	0.01 L	0.003	0.036	0.0360
FMMW-1	01/31/24	0.01 L	0.003	0.001 L	0.0005
FMMW-1	07/18/24	0.01 L	0.003	0.001 L	0.0005
No. Analyzed		12		12	
No. Detect		1		2	
Minimum conc.			0.003		0.0005
Maximum conc.			0.090		0.0360
Average conc.			0.027		0.0035
Distribution			NC		NC
UCL 95			NC		NC
FMMW-2					
FMMW-2	01/15/19	0.18 L	0.09	0.079	0.0790
FMMW-2	08/21/19	0.18 L	0.09	0.011	0.011
FMMW-2	01/21/20	0.18 L	0.09	0.001 L	0.001
FMMW-2	08/27/20	0.01 L	0.01	0.0029	0.003
FMMW-2	01/19/21	0.01 L	0.00	0.001 L	0.0005
FMMW-2	08/03/21	0.01 L	0.005	0.015	0.0150
FMMW-2	01/19/22	0.005 L	0.0025	0.001 L	0.0005
FMMW-2	08/24/22	0.02 L	0.008	0.018	0.018
FMMW-2	01/25/23	0.02 L	0.008	0.038	0.0380
FMMW-2	07/18/23	0.02 L	0.008	0.001 L	0.0005
FMMW-2	01/31/24	0.02 L	0.008	0.001 L	0.0005
FMMW-2	07/18/24	0.02 L	0.008	0.01	0.01
No. Analyzed		12		12	
No. Detect		0		7	
Minimum conc.			0.003		0.0005
Maximum conc.			0.090		0.0790
Average conc.			0.027		0.015
Distribution			NC		Lognormal
UCL 95			NC		**5.49**

Notes:

Metals measured in mg/L

MW-14S was dry in August of 2019 and 2020 and therefore was not sampled

Bold indicates UCL 95 is greater than Cleanup Level.

L indicates below the given method reporting limit (MRL).

NC indicates not calculated due to less than 50 percent detection frequency.

* UCL represents maximum concentration detected because the calculated value was greater than the data sample range or the distribution was neither lognormal nor normal.

Statistical calculations use one half the MRL for parameters that were not detected.

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Monitoring Well	Date	1,4-Dichlorobenzene	
		Result	Conc.
MW-11S			
MW-11S	01/15/19	0.5 L	0.25
MW-11S	08/21/19	0.5 L	0.25
MW-11S	01/22/20	0.5 L	0.25
MW-11S	08/26/20	0.5 L	0.25
MW-11S	01/19/21	0.5 L	0.25
MW-11S	08/03/21	0.5 L	0.25
MW-11S	01/18/22	0.5 L	0.25
MW-11S	08/24/22	0.5 L	0.25
MW-11S	01/25/23	0.5 L	0.25
MW-11S	07/18/23	0.5 L	0.25
MW-11S	01/31/24	0.5 L	0.25
MW-11S	07/18/24	0.5 L	0.25
No. Analyzed		12	
No. Detect		0	
Minimum conc.			0.25
Maximum conc.			0.25
Average conc.			0.25
Distribution			NC
UCL 95			NC

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Monitoring Well	Date	1,4-Dichlorobenzene	
		Result	Conc.
MW-12S			
MW-12S	01/14/19	0.5 L	0.25
MW-12S	08/21/19	0.5 L	0.25
MW-12S	01/21/20	0.5 L	0.25
MW-12S	08/27/20	0.5 L	0.25
MW-12S	01/20/21	0.5 L	0.25
MW-12S	08/02/21	0.5 L	0.25
MW-12S	01/19/22	0.5 L	0.25
MW-12S	08/25/22	0.5 L	0.25
MW-12S	01/25/23	0.5 L	0.25
MW-12S	07/19/23	0.5 L	0.25
MW-12S	01/31/24	0.5 L	0.25
MW-12S	07/18/24	0.5 L	0.25
No. Analyzed		12	
No. Detect		0	
Minimum conc.			0.25
Maximum conc.			0.25
Average conc.			0.25
Distribution			NC
UCL 95			NC

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Monitoring Well	Date	1,4-Dichlorobenzene	
		Result	Conc.
MW-12D			
MW-12D	01/16/19	0.5 L	0.25
MW-12D	08/21/19	0.5 L	0.25
MW-12D	01/21/20	0.5 L	0.25
MW-12D	08/27/20	0.5 L	0.25
MW-12D	01/20/21	0.5 L	0.25
MW-12D	08/02/21	0.5 L	0.25
MW-12D	01/20/22	0.5 L	0.25
MW-12D	08/25/22	0.5 L	0.25
MW-12D	01/25/23	0.5 L	0.25
MW-12D	07/19/23	0.5 L	0.25
MW-12D	01/31/24	0.5 L	0.25
MW-12D	07/18/24	0.5 L	0.25
No. Analyzed		12	
No. Detect		0	
Minimum conc.			0.25
Maximum conc.			0.25
Average conc.			0.25
Distribution			NC
UCL 95			NC

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Monitoring Well	Date	1,4-Dichlorobenzene	
		Result	Conc.
MW-13S			
MW-13S	01/14/19	0.5 L	0.25
MW-13S	08/20/19	0.5 L	0.25
MW-13S	01/21/20	0.5 L	0.25
MW-13S	08/25/20	0.5 L	0.25
MW-13S	01/20/21	0.5 L	0.25
MW-13S	08/03/21	0.5 L	0.25
MW-13S	01/19/22	0.5 L	0.25
MW-13S	08/25/22	0.5 L	0.25
MW-13S	01/26/23	0.5 L	0.25
MW-13S	07/18/23	0.5 L	0.25
MW-13S	01/30/24	0.5 L	0.25
MW-13S	07/17/24	0.5 L	0.25
No. Analyzed		12	
No. Detect		0	
Minimum conc.			0.25
Maximum conc.			0.25
Average conc.			0.25
Distribution			NC
UCL 95			NC

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Monitoring Well	Date	1,4-Dichlorobenzene	
		Result	Conc.
MW-13D			
MW-13D	01/14/19	0.5 L	0.25
MW-13D	08/20/19	0.5 L	0.25
MW-13D	01/21/20	0.5 L	0.25
MW-13D	08/25/20	0.5 L	0.25
MW-13D	01/20/21	0.5 L	0.25
MW-13D	08/03/21	0.5 L	0.25
MW-13D	01/19/22	0.5 L	0.25
MW-13D	08/25/22	0.5 L	0.25
MW-13D	01/25/23	0.5 L	0.25
MW-13D	07/18/23	0.5 L	0.25
MW-13D	01/30/24	0.5 L	0.25
MW-13D	07/17/24	0.5 L	0.25
No. Analyzed		12	
No. Detect		0	
Minimum conc.			0.25
Maximum conc.			0.25
Average conc.			0.25
Distribution			NC
UCL 95			NC

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Monitoring Well	Date	1,4-Dichlorobenzene	
		Result	Conc.
MW-15S			
MW-15S	01/14/19	0.5 L	0.25
MW-15S	08/20/19	0.5 L	0.25
MW-15S	01/21/20	0.5 L	0.25
MW-15S	08/26/20	0.5 L	0.25
MW-15S	01/19/21	0.5 L	0.25
MW-15S	08/02/21	0.5 L	0.25
MW-15S	01/18/22	0.5 L	0.25
MW-15S	08/25/22	0.5 L	0.25
MW-15S	01/24/23	0.5 L	0.25
MW-15S	07/19/23	0.5 L	0.25
MW-15S	01/30/24	0.5 L	0.25
MW-15S	07/17/24	0.5 L	0.25
No. Analyzed		12	
No. Detect		0	
Minimum conc.			0.25
Maximum conc.			0.25
Average conc.			0.25
Distribution			NC
UCL 95			NC

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Monitoring Well	Date	1,4-Dichlorobenzene	
		Result	Conc.
MW-17S			
MW-17S	01/16/19	0.5 L	0.25
MW-17S	08/22/19	0.5 L	0.25
MW-17S	01/21/20	0.5 L	0.25
MW-17S	08/25/20	0.5 L	0.25
MW-17S	01/20/21	0.5 L	0.25
MW-17S	08/02/21	0.5 L	0.25
MW-17S	01/20/22	0.5 L	0.25
MW-17S	08/25/22	0.5 L	0.25
MW-17S	01/24/23	0.5 L	0.25
MW-17S	07/19/23	0.5 L	0.25
MW-17S	01/31/24	0.5 L	0.25
MW-17S	07/17/24	0.5 L	0.25
No. Analyzed		12	
No. Detect		0	
Minimum conc.			0.25
Maximum conc.			0.25
Average conc.			0.25
Distribution			NC
UCL 95			NC

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Monitoring Well	Date	1,4-Dichlorobenzene	
		Result	Conc.
MW-18S			
MW-18S	01/15/19	0.5 L	0.25
MW-18S	08/21/19	0.5 L	0.25
MW-18S	01/22/20	0.5 L	0.25
MW-18S	08/25/20	0.5 L	0.25
MW-18S	01/19/21	0.5 L	0.25
MW-18S	08/03/21	0.5 L	0.25
MW-18S	01/18/22	0.5 L	0.25
MW-18S	08/24/22	0.5 L	0.25
MW-18S	01/25/23	0.5 L	0.25
MW-18S	07/19/23	0.5 L	0.25
MW-18S	01/31/24	0.5 L	0.25
MW-18S	07/18/24	0.5 L	0.25
No. Analyzed		12	
No. Detect		0	
Minimum conc.			0.25
Maximum conc.			0.25
Average conc.			0.25
Distribution			NC
UCL 95			NC

Statistical Summary of Groundwater Data - Volatile Organic Compounds
2024 Annual Monitoring Report
Hidden Valley Landfill, Pierce County, Washington

Monitoring Well	Date	1,4-Dichlorobenzene Result	Conc.
FMMW-2			
FMMW-2	01/15/19	0.5 L	0.25
FMMW-2	08/21/19	0.5 L	0.25
FMMW-2	01/21/20	0.5 L	0.25
FMMW-2	08/27/20	0.5 L	0.25
FMMW-2	01/19/21	0.5 L	0.25
FMMW-2	08/03/21	0.5 L	0.25
FMMW-2	01/19/22	0.5 L	0.25
FMMW-2	08/24/22	0.5 L	0.25
FMMW-2	01/25/23	0.5 L	0.25
FMMW-2	07/18/23	0.5 L	0.25
FMMW-2	01/31/24	0.5 L	0.25
FMMW-2	07/18/24	0.5 L	0.25
No. Analyzed		12	
No. Detect		0	
Minimum conc.			0.25
Maximum conc.			0.25
Average conc.			0.25
Distribution			NC
UCL 95			NC

Notes:

VOCs measured in ug/L

L = below the method reporting limit (MRL)

NC = not calculated due to less than 50 percent detection frequency or historically no detections.

Statistical calculations use one half the MRL for parameters that were non detected.

Statistical Summary of Groundwater Data - Volatile Organic Compounds
2024 Annual Monitoring Report
Hidden Valley Landfill, Pierce County, Washington

Monitoring Well	Date	1,4-Dichlorobenzene		Tetrachloroethene (PCE)	
		Result	Conc.	Result	Conc.
MW-11D(2)					
MW-11D(2)	01/15/19	0.5 L	0.25	0.99	0.99
MW-11D(2)	08/21/19	0.5 L	0.25	0.88	0.88
MW-11D(2)	01/22/20	0.5 L	0.25	1.1	1.10
MW-11D(2)	08/26/20	0.5 L	0.25	1.2	1.20
MW-11D(2)	01/20/21	0.5 L	0.25	1.2	1.20
MW-11D(2)	08/03/21	0.5 L	0.25	1.1	1.10
MW-11D(2)	01/18/22	0.5 L	0.25	1.2	1.20
MW-11D(2)	08/24/22	0.5 L	0.25	1.2	1.20
MW-11D(2)	01/26/23	0.5 L	0.25	0.98	0.98
MW-11D(2)	07/18/23	0.5 L	0.25	1.3	1.30
MW-11D(2)	01/31/24	0.5 L	0.25	1.1	1.10
MW-11D(2)	07/18/24	0.5 L	0.25	1.3	0.70
No. Analyzed		12		12	
No. Detect		0		12	
Minimum conc.			0.25		0.70
Maximum conc.			0.25		1.30
Average conc.			0.25		1.08
Distribution			NC		Neither
UCL 95			NC		1.3*

Notes:
VOCs measured in ug/L
Bold indicates UCL 95 is greater than Cleanup Level.
L = below the method reporting limit (MRL)
NC = not calculated due to less than 50 percent detection frequency or historically no detections
Calculations use half the MRL for parameters that were not detected

Appendix H

QUARTERLY SITE INSPECTION REPORTS

Condensate Recirculation Inspection Checklist

Hidden Valley Landfill, Pierce County, Washington

Name: John. Faill

Signature: John T. Faill

Date: 2-14-24

Weather: Overcast

Instructions: Inspect each sump for pump operation and measure condensate fluid level, which should be below the overflow drainage pipe. Note any unusual observations such as soil staining or air leaks in the comments section.

Sump	Operation per Design (Y or N)	(1) Depth to Condensate (ft)	(2) Depth to Bottom (ft)	Height of Condensate (ft) = (2) – (1)	Comments
Sump No. 1	Y	—	9.43	0	Dry
Sump No. 2	Y	6.49'	8.62	2.13'	
Sump No. 3	Y	—	8.90'	0	Dry
Sump No. 4	N	—	8.71'	0	positive pressure (bubbling)
Sump No. 5	N	7.66'	9.76'	2.10'	positive pressure in sump
Sump No. 6	Y	7.42'	9.06'	1.64'	
Sump No. 7	Y	—	9.08'	0	Dry
Sump No. 8	Y	7.94'	9.20'	1.26'	
Sump No. 9	Y	—	9.40'	0	Dry
Sump No. 10	Y	7.25'	9.35'	2.10'	Leak @ flange
Sump No. 11	Y	6.82'	9.27'	2.45'	

Other Remarks:

Facility Inspection Checklist

Hidden Valley Landfill, Pierce County, Washington

Name: J. Failla Date: 2-14-24

Signature: Weather: Overcast

Items	Yes	No	Comments
Cover System			
Settlement Depressions (sinkholes)		X	
Cracking of Cover Soils		X	
Inadequate Cover Soil or Rock		X	
Standing Water		X	
Vegetation			
Bare or Sparsely Vegetated Areas		X	
Areas of Dying Vegetation		X	
Large Root Vegetation (ex. Bushes)		X	
Stormwater Conveyance System			
Ditch Obstructions or Flat Areas	X		
Culvert Obstructions		X	
Catch Basin Debris or Silt Accumulation	X		
Stormwater Basin Debris or Silt		X	
Cover Erosion			
Gullies and/or Erosion Scars		X	
Presence of Seeps		X	
Vector Control			
Evidence of Ground Burrows		X	
Leachate Collection & Leak Detection Systems			
Piping or Valve Issues			N/A
Pump or Meter Issues			
Foaming at Pump			

Other Remarks:

Facility Inspection Checklist

Hidden Valley Landfill, Pierce County, Washington

Name: TWH

Date: 6/26/24

Signature: TWH

Weather: Overcast

Items	Yes	No	Comments
Cover System			
Settlement Depressions (sinkholes)		✓	
Cracking of Cover Soils		✓	
Inadequate Cover Soil or Rock		✓	
Standing Water		✓	
Vegetation			
Bare or Sparsely Vegetated Areas		✓	
Areas of Dying Vegetation		✓	Some areas looks like they need H2O
Large Root Vegetation (ex. Bushes)		✓	
Stormwater Conveyance System			
Ditch Obstructions or Flat Areas		✓	
Culvert Obstructions		✓	
Catch Basin Debris or Silt Accumulation		✓	
Stormwater Basin Debris or Silt		✓	
Cover Erosion			
Gullies and/or Erosion Scars		✓	
Presence of Seeps		✓	
Vector Control			
Evidence of Ground Burrows		✓	
Leachate Collection & Leak Detection Systems			
Piping or Valve Issues		✓	
Pump or Meter Issues		✓	
Foaming at Pump		✓	

Other Remarks: As Noted in my Field Notes there was landscaping on 6/26/24. When I arrived at CS #10 there appeared to be a leak in a pipe right on the ground. Could hear air, but saw no visible damage.

Condensate Recirculation Inspection Checklist

Hidden Valley Landfill, Pierce County, Washington

Name: T. Hanrahan, J. Faille

Date: 6/26/24

Signature: 

Weather: Clear

Instructions: Inspect each sump for pump operation and measure condensate fluid level, which should be below the overflow drainage pipe. Note any unusual observations such as soil staining or air leaks in the comments section.

Sump	Operation per Design (Y or N)	(1) Depth to Condensate (ft)	(2) Depth to Bottom (ft)	Height of Condensate (ft) = (2) – (1)	Comments
Sump No. 1	Y	10.3	10.3	0	
Sump No. 2	Y	5.1	8.6	3.5	
Sump No. 3	Y	9.6	9.6	0	
Sump No. 4	Y	10.6	29.8	19.2	
Sump No. 5	Y	8.1	28.3	20.2	
Sump No. 6	Y	7.6	22.4	14.8	
Sump No. 7	Y	19.8	19.7	0	
Sump No. 8	Y	8.5	9.4	0.9	
Sump No. 9	Y	9.7	9.7	0	
Sump No. 10	Y	7.3	9.7	2.4	
Sump No. 11	Y	6.8	20.8	14	

Other Remarks:

Facility Inspection Checklist

Hidden Valley Landfill, Pierce County, Washington

Name: TWH

Signature: TWH

Date: 8/16/24

Weather: Cloudy – Mostly

Items	Yes	No	Comments
Cover System			
Settlement Depressions (sinkholes)		✓	
Cracking of Cover Soils		✓	
Inadequate Cover Soil or Rock		✓	
Standing Water		✓	
Vegetation			
Bare or Sparsely Vegetated Areas		✓	
Areas of Dying Vegetation		✓	
Large Root Vegetation (ex. Bushes)		✓	
Stormwater Conveyance System			
Ditch Obstructions or Flat Areas		✓	
Culvert Obstructions		✓	
Catch Basin Debris or Silt Accumulation		✓	
Stormwater Basin Debris or Silt		✓	
Cover Erosion			
Gullies and/or Erosion Scars		✓	
Presence of Seeps		✓	
Vector Control			
Evidence of Ground Burrows		✓	
Leachate Collection & Leak Detection Systems		✓	
Piping or Valve Issues			air leak @ sump #10
Pump or Meter Issues		✓	
Foaming at Pump		✓	

Other Remarks:

Condensate Recirculation Inspection Checklist

Hidden Valley Landfill, Pierce County, Washington

Name: TWH

Signature: TWH

Date: 8/16/24

Weather: Cloudy - Mostly

Instructions: Inspect each sump for pump operation and measure condensate fluid level, which should be below the overflow drainage pipe. Note any unusual observations such as soil staining or air leaks in the comments section.

Sump	Operation per Design (Y or N)	(1) Depth to Condensate (ft)	(2) Depth to Bottom (ft)	Height of Condensate (ft) = (2) – (1)	Comments
Sump No. 1	Y	0	20.25	0	
Sump No. 2	N	7.51	28.8	21.29	
Sump No. 3	Y	0	22.8	22.8	
Sump No. 4	Y	7.85	28.71	20.86	
Sump No. 5	Y	9.31	20.8	11.49	
Sump No. 6	Y	8.48	30.37	21.89	
Sump No. 7	Y	0	29.3	~~0~~ 29	
Sump No. ~~8~~ 11	Y	7	15.09	8.09	
Sump No. 9	Y	0	11.15	~~0~~ 11.15	
Sump No. 10	Y	7.5	38.71	31.21	
Sump No. ~~10~~ 8	Y	8.5	15.8	7.3	

Other Remarks:

Condensate Recirculation Inspection Checklist

Hidden Valley Landfill, Pierce County, Washington

Name: Alex Perez0 Date: 11/27/24

Signature: Alex Perez Weather: Partly Cloudy

Instructions: Inspect each sump for pump operation and measure condensate fluid level, which should be below the overflow drainage pipe. Note any unusual observations such as soil staining or air leaks in the comments section.

Sump	Operation per Design (Y or N)	(1) Depth to Condensate (ft)	(2) Depth to Bottom (ft)	Height of Condensate (ft) = (2) – (1)	Comments
Sump No. 1	Y	N/A	9.31	9.3	Ball valve open on arrival
Sump No. 2	N	6.43	8.6	2.17	Burped air on open
Sump No. 3	Y	9.21	9.61	0.40	—
Sump No. 4	Y	N/A	29.75	0	Open on arrival
Sump No. 5	N	9.28	28.3	19.02	Burped air on open
Sump No. 6	Y	7.69	22.4	14.71	Open on arrival
Sump No. 7	Y	N/A	19.70	0	—
Sump No. 8	Y	7.97	9.44	1.47	Open on Arrival
Sump No. 9	Y	N/A	9.65	0	" "
Sump No. 10	Y	7.25	9.72	2.47	—
Sump No. 11	Y	6.72	20.8	14.08	Open on Arrival

Other Remarks:

Facility Inspection Checklist

Hidden Valley Landfill, Pierce County, Washington

Name: Alex Dezzo Date: 11/27/24

Signature: [signature] Weather: Partly Cloudy

Items	Yes	No	Comments
Cover System			
Settlement Depressions (sinkholes)		X	
Cracking of Cover Soils		X	
Inadequate Cover Soil or Rock		X	
Standing Water		X	
Vegetation			
Bare or Sparsely Vegetated Areas		X	
Areas of Dying Vegetation		X	
Large Root Vegetation (ex. Bushes)		X	
Stormwater Conveyance System			
Ditch Obstructions or Flat Areas		X	
Culvert Obstructions		X	
Catch Basin Debris or Silt Accumulation		X	
Stormwater Basin Debris or Silt		X	
Cover Erosion			
Gullies and/or Erosion Scars		X	
Presence of Seeps		X	
Vector Control			
Evidence of Ground Burrows		X	
Leachate Collection & Leak Detection Systems			
Piping or Valve Issues		X	Some Condensate traps open
Pump or Meter Issues		X	
Foaming at Pump		X	

Other Remarks: LF Cover system visually appears undamaged.

Appendix I

LANDFILL GAS SYSTEM O&M REPORTS

Hidden Valley Landfill
LFG System Monitoring & Maintenance
January 16, 17, 2024.

MAINTENANCE ITEMS COMPLETED THIS MONTH:

- Performed monthly extraction well monitoring on January 16th and 17th, 2024.
- Separated 8" Header at E2a on January 16th.

LANDFILL FLARE STATION

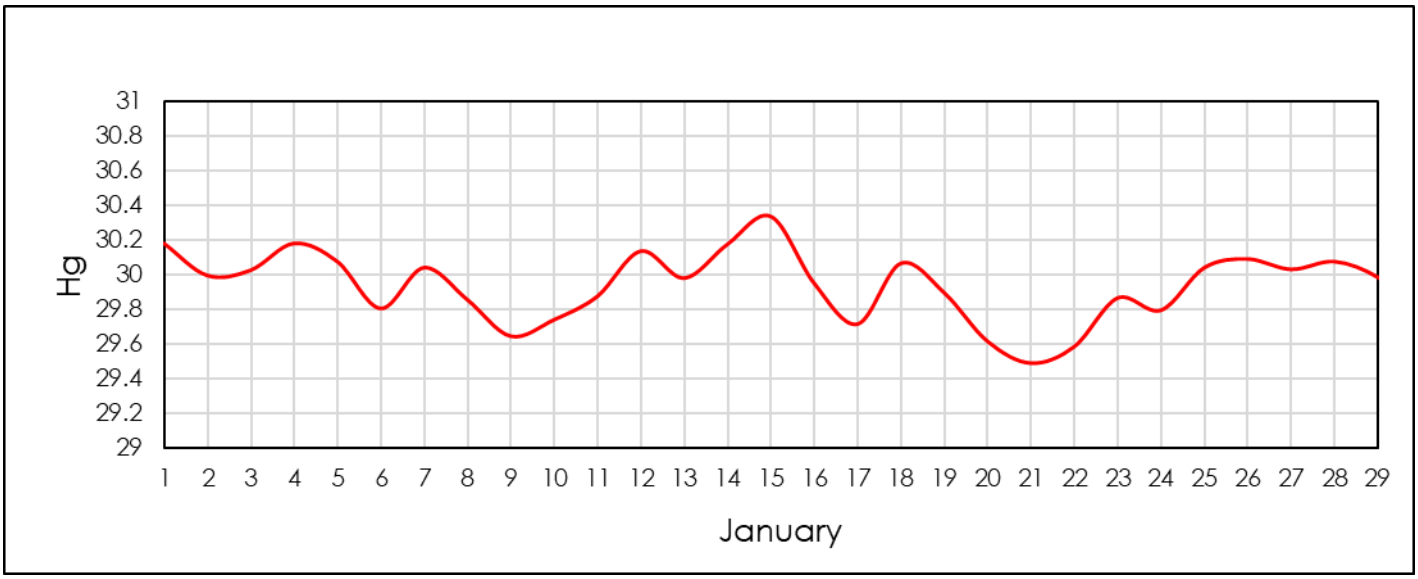
Before system maintenance

Date & Time	CH_4	CO_2	O_2	Balance	Init. Flow	Adj. Flow	Baro. Press.
	%	%	%	%	SCFM	SCFM	inches Hg
1/17/2024 8:30	43.1	21.5	3.3	32.1	172	172	28.82

After system maintenance

Date & Time	CH_4	CO_2	O_2	Balance	Init. Flow	Adj. Flow	Baro. Press.
	%	%	%	%	SCFM	SCFM	inches Hg
1/16/2024 14:56	37.7	18.9	5.2	38.2	188	188	29.25

Barometric Pressure Trends for January 2024



Data Source: https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-1-31/2024-1-31/monthly

Hidden Valley Landfill
LFG System Monitoring & Maintenance
February 6, 7, 14, 15, 2024.

MAINTENANCE ITEMS COMPLETED THIS MONTH:

- Performed monthly extraction well monitoring on February 6th, 7th, 14th, and 15th, 2024.

LANDFILL FLARE STATION

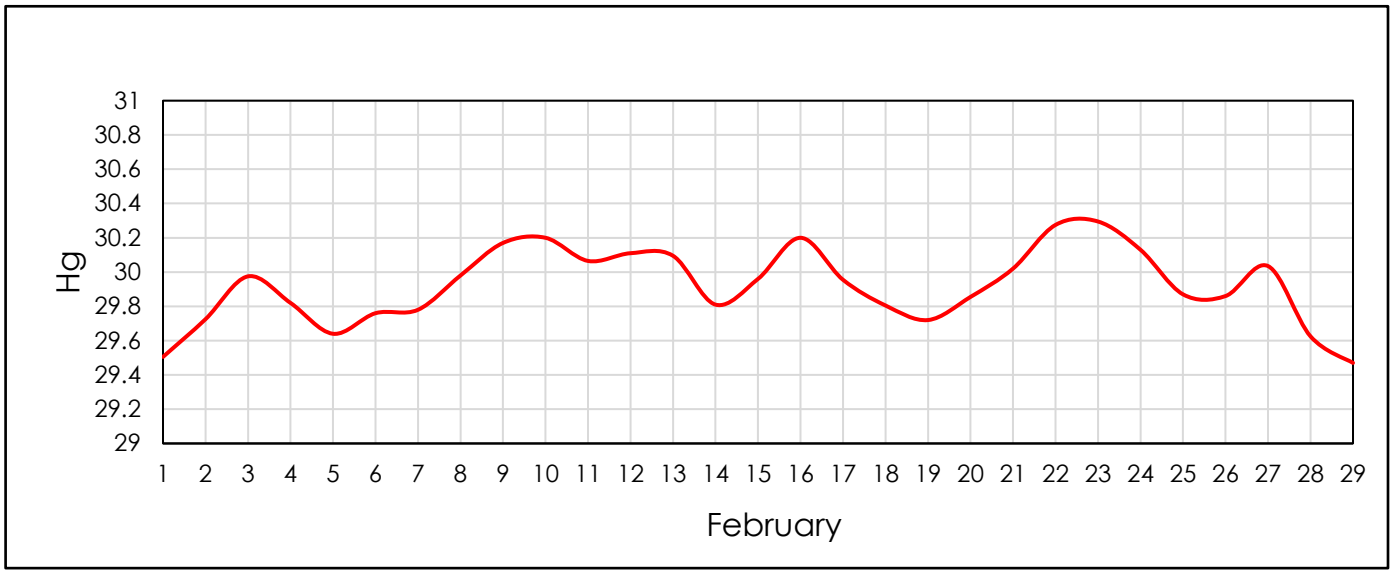
Before system maintenance

Date & Time	CH_4	CO_2	O_2	Balance	Init. Flow	Adj. Flow	Baro. Press.
	%	%	%	%	SCFM	SCFM	inches Hg
2/6/2024 8:49	37.2	20.4	2	40.4	188	188	29.2
2/7/2024 8:11	39	20.2	3.2	37.6	123	123	29.11
2/7/2024 11:23	37.4	20.1	3	39.5	122	122	29.15
2/15/2024 7:47	37.2	19.9	3.4	39.5	108	108	29.28

After system maintenance

Date & Time	CH_4	CO_2	O_2	Balance	Init. Flow	Adj. Flow	Baro. Press.
	%	%	%	%	SCFM	SCFM	inches Hg
2/6/2024 15:01	40.8	21.2	2.3	35.7	123	123	29.16

Barometric Pressure Trends for February 2024



Data Source: https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-2-29/2024-2-29/monthly

Hidden Valley Landfill
LFG System Monitoring & Maintenance
April 18, 19, 2024.

MAINTENANCE ITEMS COMPLETED THIS MONTH:

- Performed monthly extraction well monitoring on April 18th and 19th, 2024.

LANDFILL FLARE STATION

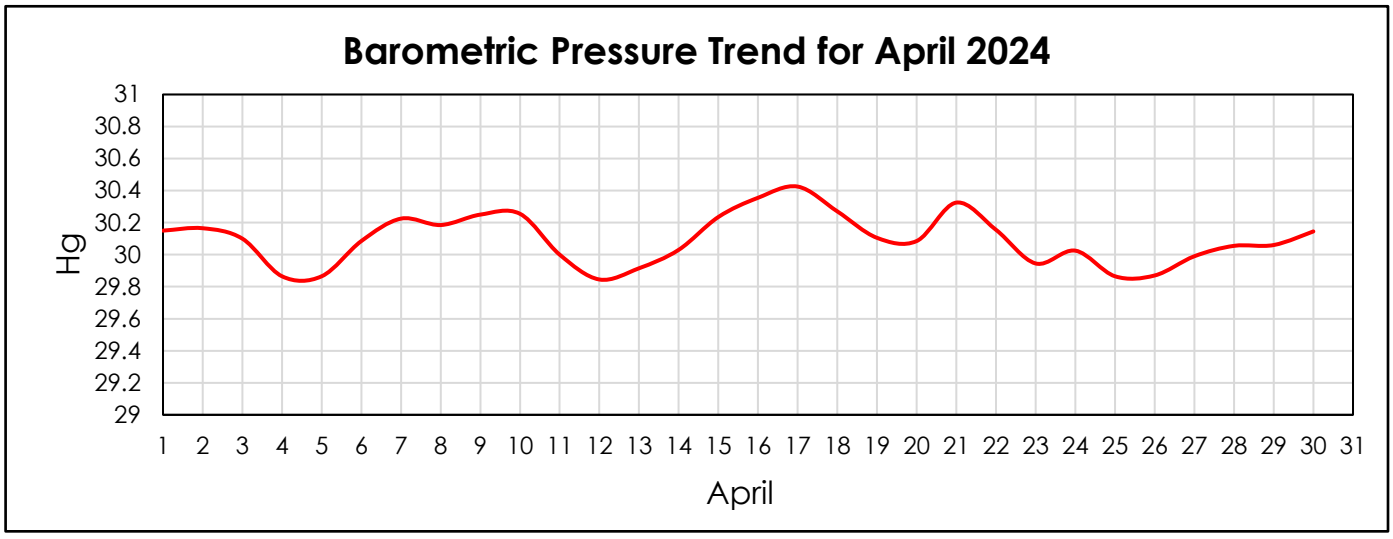
Before system maintenance

Date & Time	CH_4	CO_2	O_2	Balance	Init. Flow	Adj. Flow	Baro. Press.
	%	%	%	%	SCFM	SCFM	inches Hg
4/18/2024 8:29	27.7	16.6	5.1	50.6	158	158	29.7
4/19/2024 9:57	27.1	15.6	5.4	51.9	146	146	29.56

After system maintenance

Date & Time	CH_4	CO_2	O_2	Balance	Init. Flow	Adj. Flow	Baro. Press.
	%	%	%	%	SCFM	SCFM	inches Hg
4/18/2024 14:04	31.7	18.3	2.8	47.2	154	154	29.43

Barometric Pressure Trends for April 2024



Data Source: https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-4-29/2024-4-29/monthly

Hidden Valley Landfill
LFG System Monitoring & Maintenance
May 9, 15, 16, 22, 29, 2024.

MAINTENANCE ITEMS COMPLETED THIS MONTH:

- Performed monthly extraction well monitoring on May 9th, 15th, 16th, 22nd, and 29th, 2024.

LANDFILL FLARE STATION

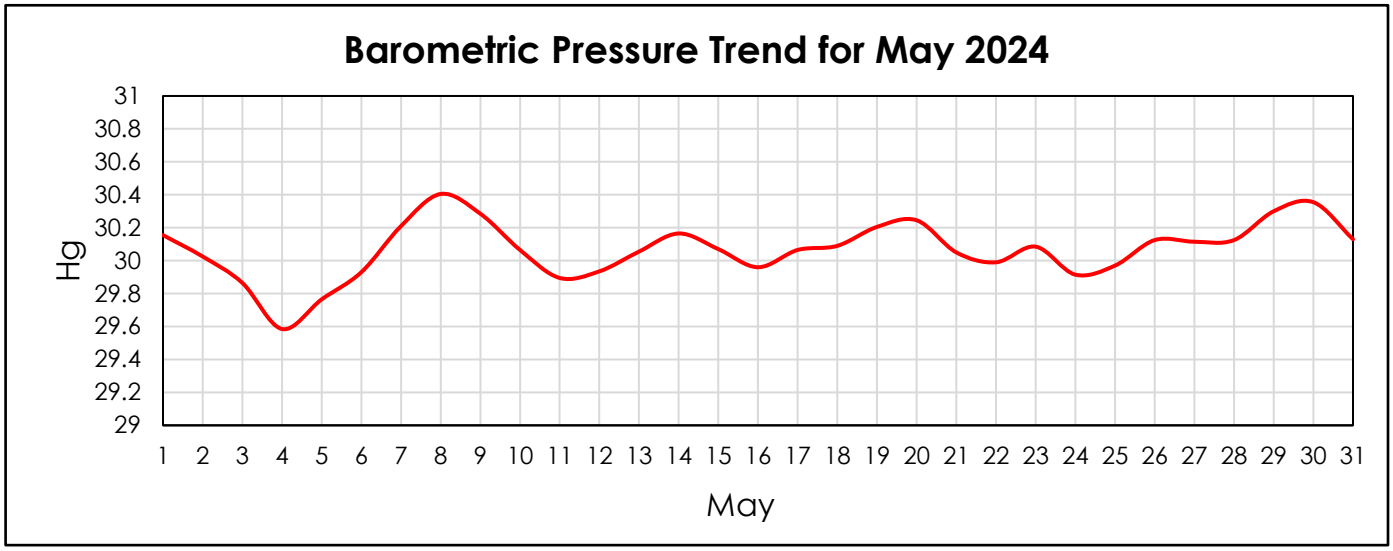
Before system maintenance

Date & Time	CH_4	CO_2	O_2	Balance	Init. Flow	Adj. Flow	Baro. Press.
	%	%	%	%	SCFM	SCFM	inches Hg
5/9/2024 11:34	30	18.3	1.4	50.3	170	170	29.72
5/16/2024 8:49	35.5	19.8	5.1	39.6	125	125	29.41
5/22/2024 11:15	45.8	24.5	1.6	28.1	144	144	29.3
5/29/2024 10:41	43.6	24.6	1.5	30.3	132	132	29.69

After system maintenance

Date & Time	CH_4	CO_2	O_2	Balance	Init. Flow	Adj. Flow	Baro. Press.
	%	%	%	%	SCFM	SCFM	inches Hg
5/9/2024 13:12	29	17.6	2.3	51.1	129	129	29.7
5/15/2024 13:16	42.9	24.5	2.9	29.7	148	148	29.51

Barometric Pressure Trends for May 2024



Data Source: https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-5-15/2024-5-15/monthly

Hidden Valley Landfill
LFG System Monitoring & Maintenance
June 5, 6, 13 2024.

MAINTENANCE ITEMS COMPLETED THIS MONTH:

- Performed monthly extraction well monitoring on June 5th and 6th and 13th, 2024.

LANDFILL FLARE STATION

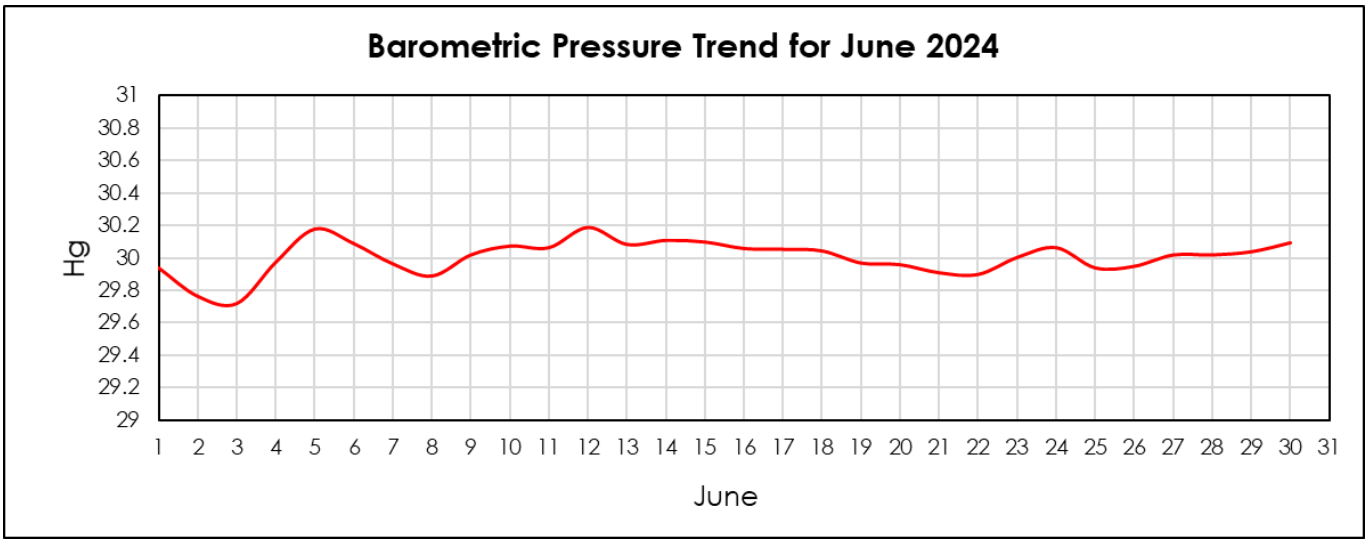
Before system maintenance

Date & Time	CH_4	CO_2	O_2	Balance	Init. Flow	Adj. Flow	Baro. Press.
	%	%	%	%	SCFM	SCFM	inches Hg
6/5/2024 11:06	31.8	18.1	2.5	47.6	133	133	29.62
6/6/2024 11:15	35.6	17.6	3.70	43.1	102	102	29.54

After system maintenance

Date & Time	CH_4	CO_2	O_2	Balance	Init. Flow	Adj. Flow	Baro. Press.
	%	%	%	%	SCFM	SCFM	inches Hg
6/5/2024 15:29	35.2	17.8	3.5	43.5	103	103	29.62

Barometric Pressure Trends for June 2024



Data Source: https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-6-15/2024-6-15/monthly

Hidden Valley Landfill
LFG System Monitoring & Maintenance
July 9, 23, 24, 29, 2024.

MAINTENANCE ITEMS COMPLETED THIS MONTH:

- Performed monthly extraction well monitoring on July 9th, 23rd, 24th, and 29th, 2024.

LANDFILL FLARE STATION

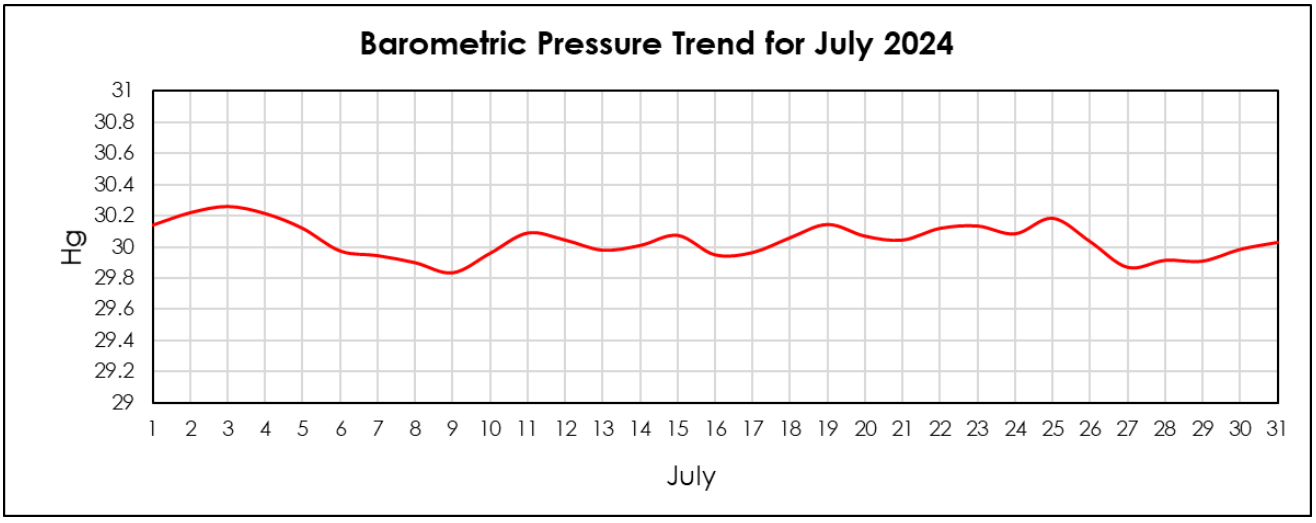
Before system maintenance

Date & Time	CH_4	CO_2	O_2	Balance	Init. Flow	Adj. Flow	Baro. Press.
	%	%	%	%	SCFM	SCFM	inches Hg
7/24/2024 7:08	29.0	15.3	7.4	48.3	130	130	29.52

After system maintenance

Date & Time	CH_4	CO_2	O_2	Balance	Init. Flow	Adj. Flow	Baro. Press.
	%	%	%	%	SCFM	SCFM	inches Hg
7/23/2024 15:38	35.9	18.7	4.1	41.3	114	114	29.50
7/23/2024 17:06	36.0	18.6	3.6	41.8	112	112	29.50
7/24/2024 12:47	34.1	17.7	4.4	43.8	0	0	29.50

Barometric Pressure Trends for July 2024



Data Source: https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-7-23/2024-7-23/monthly

Hidden Valley Landfill
LFG System Monitoring & Maintenance
August 21, 22, 2024.

MAINTENANCE ITEMS COMPLETED THIS MONTH:

- Performed monthly extraction well monitoring on August 21st and 22nd, 2024.

LANDFILL FLARE STATION

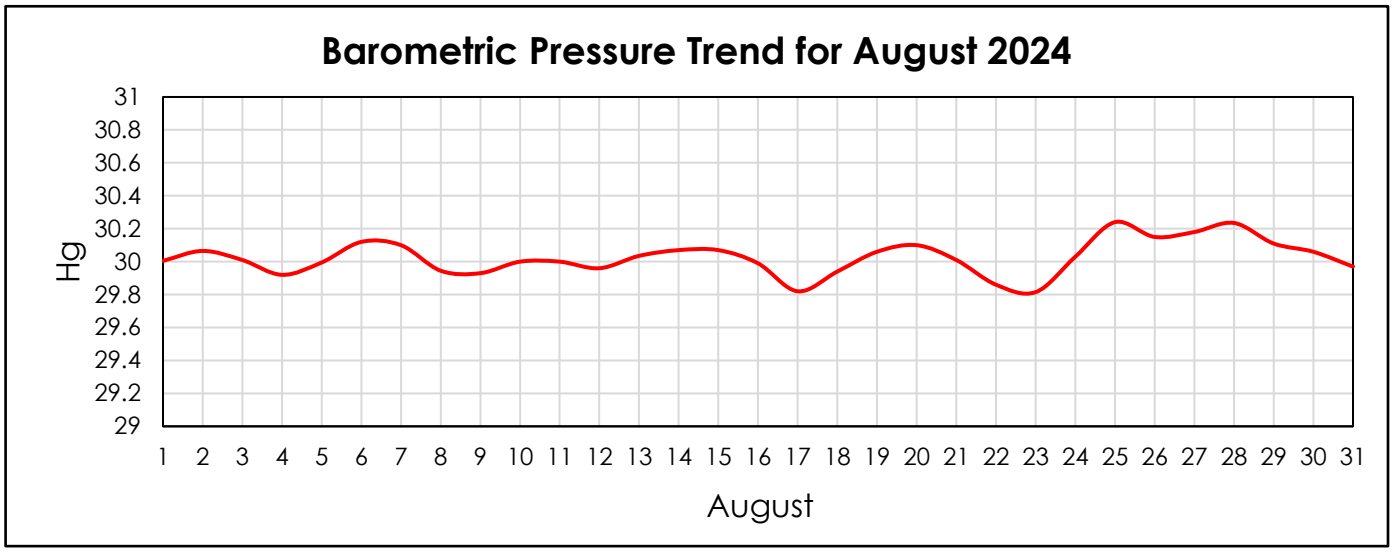
Before system maintenance

Date & Time	CH_4	CO_2	O_2	Balance	Init. Flow	Adj. Flow	Baro. Press.
	%	%	%	%	SCFM	SCFM	inches Hg
8/21/2024 11:38	32.4	17.5	5.7	44.4	131	131	29.47
8/22/2024 8:52	34.3	18.3	5.6	41.8	114	114	29.28
8/21/2024 11:37	33.8	17.9	5.5	42.8	118	118	29.35

After system maintenance

Date & Time	CH_4	CO_2	O_2	Balance	Init. Flow	Adj. Flow	Baro. Press.
	%	%	%	%	SCFM	SCFM	inches Hg
8/21/2024 13:56	33.6	17.4	5.7	43.3	118	118	29.44

Barometric Pressure Trends for August 2024



Data Source: https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-8-23/2024-8-23/monthly

Hidden Valley Landfill
LFG System Monitoring & Maintenance
October 21, 22, 2024.

MAINTENANCE ITEMS COMPLETED THIS MONTH:

- Performed monthly extraction well monitoring on October 21st and 22nd, 2024.

LANDFILL FLARE STATION

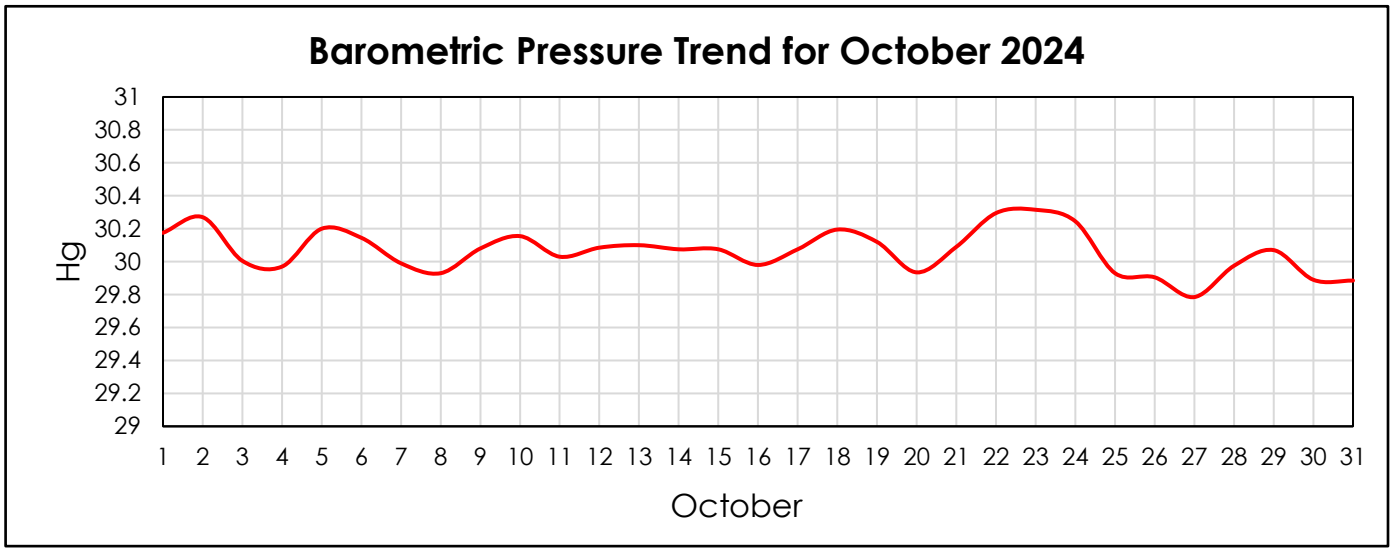
Before system maintenance

Date & Time	CH_4	CO_2	O_2	Balance	Init. Flow	Adj. Flow	Baro. Press.
	%	%	%	%	SCFM	SCFM	inches Hg
10/22/2024 7:40	36.9	18.8	5.5	38.8	122	122	29.66
10/22/2024 11:24	39.6	19.3	4.5	36.6	0	0	29.73
10/22/2024 11:26	39.5	19.5	4.4	36.6	120	120	29.73

After system maintenance

Date & Time	CH_4	CO_2	O_2	Balance	Init. Flow	Adj. Flow	Baro. Press.
	%	%	%	%	SCFM	SCFM	inches Hg
10/21/2024 12:43	39.5	18.8	5.0	36.7	112	112	29.38

Barometric Pressure Trends for October 2024



Data Source: https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-10-23/2024-10-23/monthly

Hidden Valley Landfill
LFG System Monitoring & Maintenance
November 6, 15, 2024.

MAINTENANCE ITEMS COMPLETED THIS MONTH:

- Performed monthly extraction well monitoring on November 6, 15, 2024.

LANDFILL FLARE STATION

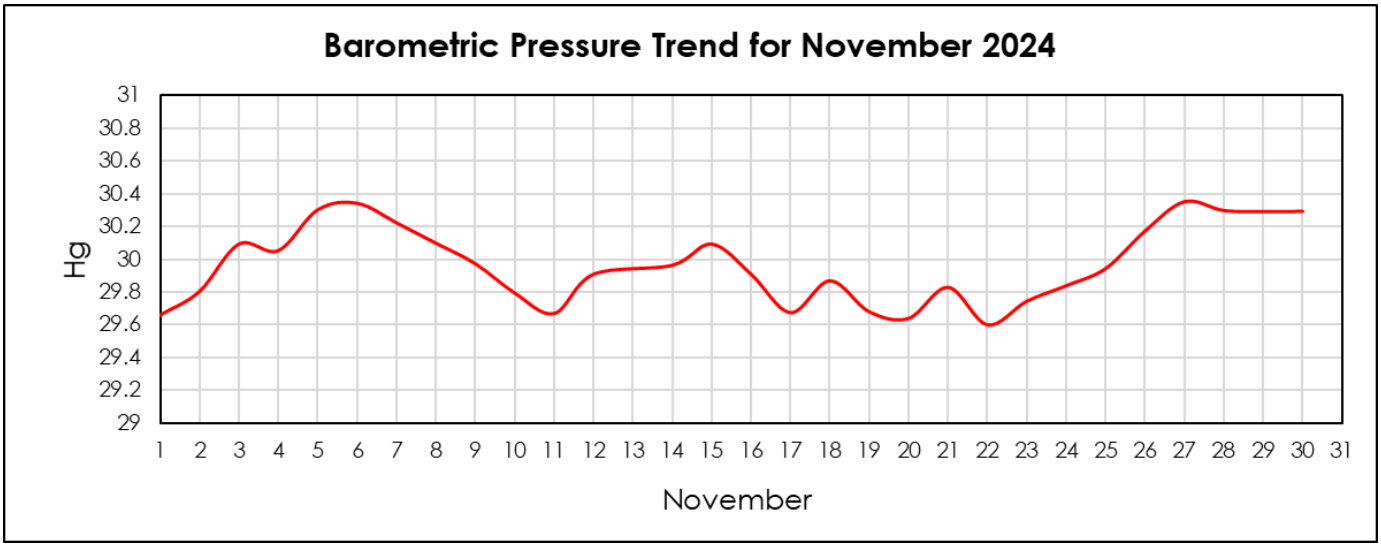
Before system maintenance

Date & Time	CH_4	CO_2	O_2	Balance	Init. Flow	Adj. Flow	Baro. Press.
	%	%	%	%	SCFM	SCFM	inches Hg
11/6/2024 9:28	34.6	18.6	5.2	41.6	139	139	29.77
11/15/2024 9:34	37.8	20.5	3.9	37.8	104	104	29.51
11/15/2024 11:56	37.3	21.7	2.4	38.6	116	116	29.51

After system maintenance

Date & Time	CH_4	CO_2	O_2	Balance	Init. Flow	Adj. Flow	Baro. Press.
	%	%	%	%	SCFM	SCFM	inches Hg
11/6/2024 13:44	35.2	19.0	4.2	41.6	117	117	29.74

Barometric Pressure Trends for November 2024



Data Source: https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-11-23/2024-11-23/monthly

Hidden Valley Landfill
LFG System Monitoring & Maintenance
December 3, 4, 2024.

MAINTENANCE ITEMS COMPLETED THIS MONTH:

- Performed monthly extraction well monitoring on December 3, 4, 2024.

LANDFILL FLARE STATION

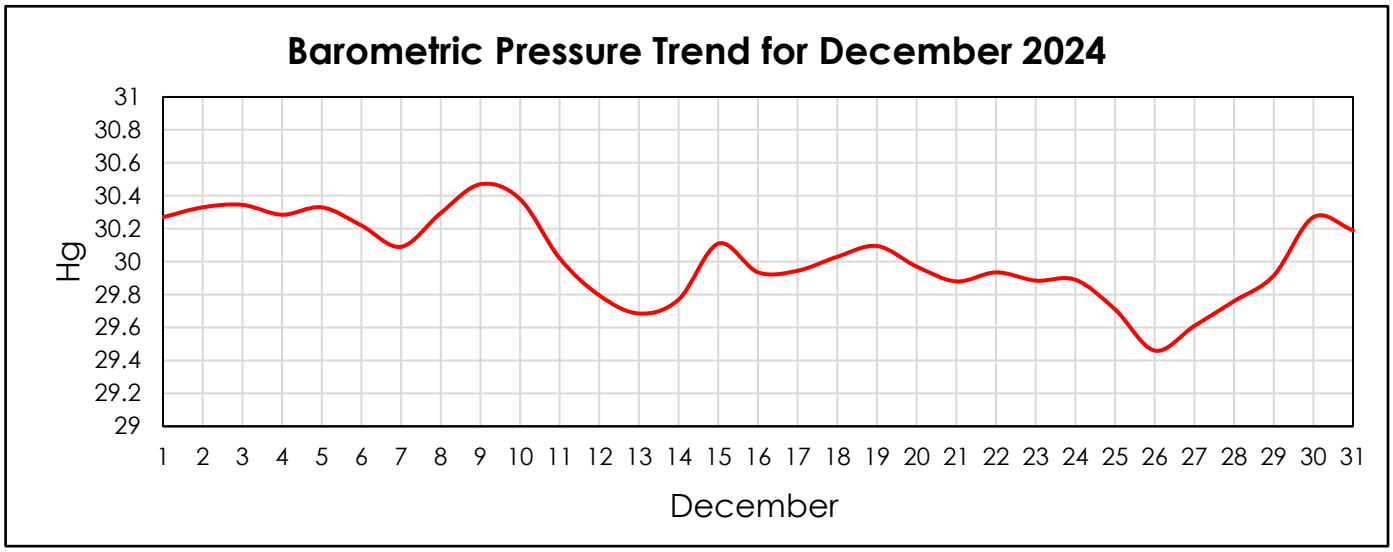
Before system maintenance

Date & Time	CH_4	CO_2	O_2	Balance	Init. Flow	Adj. Flow	Baro. Press.
	%	%	%	%	SCFM	SCFM	inches Hg
12/3/2024 10:22	29.6	15.6	5.6	49.2	133	133	29.68
12/4/2024 6:42	33.2	18.9	4.5	43.4	122	122	29.72

After system maintenance

Date & Time	CH_4	CO_2	O_2	Balance	Init. Flow	Adj. Flow	Baro. Press.
	%	%	%	%	SCFM	SCFM	inches Hg
12/4/2024 12:52	32.6	18.3	4.8	44.3	140	140	29.73

Barometric Pressure Trends for December 2024



Data Source: https://www.wunderground.com/dashboard/pws/KWASOUTH7/table/2024-12-16/2024-12-16/monthly