Baltimore County

Department of Public Works and Transportation

Bureau of Solid Waste Management

EASTERN SANITARY LANDFILL

SEMI-ANNUAL ENVIRONMENTAL REPORT

Refuse Disposal Permit #2020-WMF-0052A

July – December 2023

Prepared by:

Maryland Environmental Service

and

Baltimore County Bureau of Solid Waste Management

February 12, 2024

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1.0 INTRODUCTION

1.1 Purpose

Baltimore County Bureau of Solid Waste Management (BSWM) and Maryland Environmental Service (MES) has prepared this Semi-Annual Environmental Report for the Eastern Sanitary Landfill Solid Waste Management Facility (ESL) located at 6259 Days Cove Road in White Marsh, Maryland. The purpose of this report is to present a summary of groundwater, surface water, and landfill gas (LFG) monitoring performed at the ESL during the period of July through December 2023 and to provide other site information in accordance with Refuse Disposal Permit (2020-WMF-0052A).

1.2 Facility Description

ESL is owned and operated by Baltimore County Department of Public Works and Transportation, BSWM. Bordering the facility property is Pulaski Highway (US 40) on the west side, Loreley Beach Road North and Bowerman Road on the south side, Gunpowder Falls State Park, and Wirtz and Daughters (composting facility) on the east and north side. Days Cove Rubble Landfill abuts the eastern property line.

The site encompasses 375 acres with a permitted disposal area footprint of 195 acres, which includes approximately 182 acres for current Phases I thru XII and 13 acres for a future phase (Phase XIII). Phase XII began accepting waste in April 2021. ESL is the only publicly-owned and operated municipal sanitary landfill facility in Baltimore County. Refer to Figure 1-1 for a location map.

Functions, activities, and features at ESL include:

- Residents' Drop-off Center (RDOC) with limited Household Hazardous Waste (HHW) Pavilion (waste anti-freeze, gasoline, and oil only)
- Yard Materials Processing Center (YMPC)
- Waste Transfer Station (WTS)
- Recycle Transfer Station (RTS)
- Fueling Station
- Current active landfill Phase XI and XII as of June 2022 (Phase XI has not yet reached final permitted elevations)
- Area for Future Phases
- Landfill areas uncapped
- Landfill areas capped
- Asbestos and special waste disposal area (Phase I)
- Ash disposal area (Phases V & VI)
- Earth borrow and stockpile areas
- Landfill gas air curtain control building (18 air injection wells)
- Landfill Gas to Energy Facility (LFGTE) (4 megawatt)
- Landfill gas collection flare station (rated 2500 scfm)
- Candlestick Flare (750 scfm)
- Liquid Petroleum Hydrocarbon (LPH) Monitoring & Recovery Wells (40 wells)
- Sediment Basins (3)
- Water Quality Basin
- Forebays (3)
- Leachate sump (Phase XI)
- Leachate/Sewage manhole
- Leachate and gravity sewer duplex pumping station
- Landfill gas collection wells and trenches (160 wellheads)
- Landfill gas monitoring probes (58 on-site, 4 off-site)
- Groundwater monitoring wells (21)
- Operations Office Trailer
- Administration/Maintenance Building
- Salt Barn
- Scalehouse
- Storage trailer, barn, and sea containers

Refer to Figure 1-2 for a site map.

2.0 PERMIT REQUIREMENTS

In accordance with Refuse Disposal Permit #2020-WMF-0052A; leachate, precipitation, groundwater, and landfill gas are monitored, recorded, and analyzed on a routine basis.

2.1 Leachate

Permit requirements are summarized below, and the leachate monitoring data is presented in Table 2-1.

- **III.D.5** Leak detection monitoring: In November 2014, the leachate lagoon was decommissioned in accordance with an approval letter from the Maryland Department of Environment (MDE), dated September 25, 2014.

- **III.D.8.a** Volume of leachate or other contaminated liquid collected monthly: Since October 25, 2018, all leachate generated from the landfill (Phases I-XII) flows to the pump station and is combined with wastewater from the administration buildings and transfer stations; then pumped to the sanitary sewer. The total volume is recorded monthly from the pump station flowmeter totalizer and reported as a combined volume of leachate and wastewater.

  With the addition of the pump station in November 2016, there is no longer a need for the underground storage tank (UST), previously used to collect leachate from Phases I-IV, although it remains to serve as an emergency backup.

- **III.D.8.b** The total volume of leachate and other contaminated liquids disposed of in the sanitary sewer is equivalent to the flowmeter totals from the pump station described in III.D.8.a.

- **III.D.8.c** All leachate collected is discharged to the sanitary sewer. See III.D.8.a. The total volume of leachate and waste water discharged is reported from the pump station totalizer; this includes leachate from the landfill, wastewater from the administration building, and wastewater from the transfer stations.

- **III.D.8.d** No leachate has been disposed of by any means other than specified in III.D.8.c.

- **III.D.8.e** Monthly leachate samples are collected from the leachate influent pipe located at the pump station. The leachate is analyzed on a monthly basis by the Baltimore County Bureau of Utilities Engineering and Regulation Division Laboratory for the constituents listed in Table 2-1 (III.D.8.e).

2.2 Precipitation

- **III.D.8.f** Precipitation is monitored and recorded routinely from a rain gauge located at the ESL. The total cumulative rainfall for this reporting period is 26.53 inches. The total precipitation amounts calculated for each month during this reporting period are presented in Table 2-1.

2.3 Groundwater

- **III.E.1** The depth to water in all existing monitoring wells and one piezometer are measured monthly, and all levels for this reporting period are included in Table 2-1. Figure 2-1 shows the location of all groundwater monitoring wells and one piezometer.

Groundwater contour maps are presented for the Patapsco and Patuxent Aquifer as Figures 2-2 and 2-4, respectively and for the Arundel Formation as Figure 2-3. Groundwater contours are based on the September 2023 water level gauging event.

- **III.F.2** A summary and interpretative discussion for all chemical analyses of groundwater collected from monitoring wells specified in the 2023 ESL Environmental Monitoring Plan (EMP) is included in Tables 3-2 and 3-3 of this report.

2.4 Landfill Gas

- **III.Q** The EMP for the ESL includes a section for LFG monitoring. The compliance level for methane concentrations at the landfill property boundary is 100 percent of the lower explosive limit (LEL) (5.0 percent CH_4). Twenty-nine (29) LFG monitoring probes located around the landfill property perimeter are utilized for compliance purposes. These 29 perimeter probes are monitored on, at least, a quarterly basis. The results for this reporting period are discussed in a separate section of this report and also summarized in Table 2-2. Figure 2-5 presents the Landfill Gas Monitoring Probes Location Map.

3.0 GROUNDWATER SAMPLING

3.1 Groundwater Monitoring Program

Groundwater sampling is conducted in accordance with Refuse Disposal Permit #2020-WMF-0052A and the 2023 Environmental Monitoring Plan (EMP) for the ESL. Additionally, the County has submitted the Hydrogeological Assessment Study and Monitoring Well Network Optimization Recommendations to the MDE, both prepared by EA Engineering, Science, and Technology Inc., PBC (EA).

Groundwater sampling is performed twice a year, between January-March and July-September, and is performed by qualified groundwater scientists or environmental technicians. Seventeen (17) groundwater monitoring wells and two (2) supply wells are sampled semi-annually for volatile organic compounds (VOCs), water quality parameters, and metals. Monitoring well GWM-7, located north-northeast of the landfill is not sampled as part of the sampling program since this well is historically dry or does not contain sufficient volume for collecting samples. Likewise, well GWM-16S has been a non-producing well since well installation and is not included in the sampling program. Water levels in these wells are monitored during monthly gauging events at the ESL, which can be found in Table 2-1. No wells on site are utilized for potable water.

The current ESL monitoring well network consists of groundwater monitoring wells representative of the Patapsco aquifer, Arundel formation, and the Patuxent aquifer:

Patapsco	Arundel	Patuxent
GWM-2*	GWM-1	GWM-15D
GWM-3	GMW-8	GWM-16D*
GWM-4	GWM-10	GWM-17D
GWM-5A	GWM-11	GWM-19D
GWM-6	GWM-12	SMW-13
GWM-9*		SMW-32
GWM-14		
GWM-17S		

* = background well

In a letter dated November 17, 2016, the County submitted to the MDE the Hydrogeological Assessment Study. The purpose of the assessment was to obtain a better understanding of the aquifer system(s) underlying the ESL and establish geospatial extent of these aquifer systems within the confining clay layers, and to also provide an understanding of monitoring well connectivity. The assessment study determined that the Arundel formation exhibits very low hydraulic conductivity due to dense clays that create a confining layer between the shallow (Patapsco) and deep (Patuxent) aquifers. Low hydraulic conductivity inhibits the adequate monitoring of contaminant migration for groundwater samples collected in the Arundel formation. Furthermore, poor groundwater recharge is historically observed in several wells that are screened in the Arundel Formation; not in accordance with drawdown requirements for EPA low flow sampling procedures and confirming that the Arundel formation is not hydraulically conducive in this area.

The County submitted an updated ESL EMP to MDE on April 14, 2017 that identified three separate formations at the ESL: Patapsco, Arundel, and Patuxent. At that time the Patapsco aquifer included monitoring wells GWM-2, GWM-3, GWM-4, GWM-5A, GWM-6, GWM-9, and GWM-14. The Arundel formation included monitoring wells GWM-1, GWM-8, GWM-10, GWM-11, and GWM-12. The Patuxent aquifer included monitoring wells SMW-13, SMW-32 and GWM-15D. Furthermore, the updated EMP

identified monitoring wells GWM-2 and GWM-9 as background wells for the Patapsco aquifer.

In a letter dated October 25, 2017, the MDE requested a revision of the EMP be submitted and include any proposed well locations deemed necessary after review of the spring 2018 groundwater data and as required by 40.CFR.258.55(g).

In a letter dated September 5, 2018, the County submitted to the MDE the Final Monitoring Well Network Optimization Recommendation for the ESL, prepared by EA. This assessment was initiated with the intent of upgrading the groundwater monitoring well network to better define groundwater flow patterns and assess the potential for contaminant transport with considerations to the ESL property boundaries.

In a letter dated May 2, 2019, the County submitted to the MDE an updated plan for upgrading the existing groundwater monitoring well network at the ESL. The plan included the installation of five (5) two-inch diameter groundwater monitoring wells at the ESL. One well pair (GWM-16S/D) was designated as background wells for the Patapsco and Patuxent aquifers. Another well pair (GWM-17S/D) was located downgradient of GWM-4 and GWM-11 for use to determine downstream water quality in the Patapsco and Patuxent aquifers. Lastly, a single well (GWM-19D) was installed downgradient of SMW-13 and GWM-12 and adjacent to the property boundary. The proposal was approved by the MDE (email 6/18/19) and well installation was completed September 30, 2019.

The five (5) newly installed groundwater monitoring wells: GWM-16S/D, GWM-17S/D and GWM-19D were first sampled during the Fall 2019 sampling event. All wells were sampled successfully with the exception of GMW-16S; this well has not been sampled since installation due to an inadequate volume of ground water.

The County submitted an updated ESL EMP to the MDE on June 1, 2021. Since recently-installed background monitoring well GWM-16S does not contain an adequate volume of groundwater for sampling, background monitoring wells GWM-2 and GWM-9 were

reestablished as background monitoring wells for the Patapsco Aquifer. In addition, the updated plan added monitoring well pair GWM-17S/D to the assessment monitoring program to monitor the presence of organochloride pesticides downgradient of GWM-4 and GWM-11.

MDE requested that the ESL EMP be revised to clarify that data from wells screened in the Arundel formation would no longer be statistically analyzed. The County submitted an updated ESL EMP to the MDE on February 28, 2022. In the February 2022 revision of the ESL EMP, BSWM removed requirements to perform statistical analyses on data for monitoring wells located in the Arundel formation: GWM-1, GWM-8, GWM-10, GWM-11, and GWM-12. The Hydrological Assessment Study, performed by EA in 2016, reports that the Arundel formation exhibits exceptionally low vertical conductivity, high porosity, and contains large amounts of water storage as lenses. Monitoring wells that are screened in the Arundel formation are not considered representative of the landfill and are sampled during groundwater monitoring events; no statistical analysis of data shall be performed for these wells.

In the current groundwater monitoring program for ESL, each monitoring well is analyzed for the analytical parameters listed in Tables I and II of Appendix A with the referenced practical quantitation limits (PQL) established by MDE. Groundwater sample IDs and sampling parameters are listed in Table 3-1. Monitoring parameters for VOCs are listed in Table 3-2, and the monitoring parameters for water quality and metals are presented in Table 3-3. Tables 3-2 and 3-3 identify laboratory PQLs that are greater than the MDE approved PQLs. A letter from the reporting laboratory, ALS Environmental, acknowledging parameters with greater reporting limits than their MDE PQL is presented at the end of Appendix C. BSWM included a request for a PQL variance in their 2022 ESL EMP revision. In June 2022, MDE acknowledged the county's request for revised statistics via email correspondence. In February 2023, a revised EMP was submitted to MDE in February 2023 to incorporate comments from MDE, the County, and MES. While MDE acknowledged the 2023 ESL EMP submittal from February 2023, it has yet to be formally approved.

Assessment Monitoring

In a letter dated July 18, 2014, the MDE recommended assessment monitoring for GWM-4 and GWM-11 as a result of a statistically significant increase (SSI) for benzene, 1,4-dichlorobenze and methyl tert-butyl ether (MTBE). During the Fall 2014 sampling event, the County first performed assessment monitoring in accordance with 40 CFR 258.55 for monitoring wells GWM-4 and GWM-11. Groundwater from GWM-4 and GWM-11 was analyzed for the complete list of MDE Appendix II parameters except dioxin, which was granted exemption of analysis by the MDE, as requested by the County (08/19/2014, email).

Detections in these wells were limited to low-level "J" qualified detections of organochloride pesticides and their byproducts. These constituents are known for their environmental persistence and long-range transport capacity. Following the Fall 2014 sampling event, wells GWM-4 and GWM-11 were analyzed for only the organochlorides from the Appendix II parameter list. In the request letter dated November 14, 2014, the County also included upgradient groundwater monitoring well GWM-1 to be monitored for this list of constituents. This list was approved by the MDE in a letter dated January 12, 2015 and incorporated into the Spring 2015 and subsequent monitoring events.

Monitoring well GWM-1 has previously served as a background well for the Arundel Formation, while monitoring wells GWM-2 and GWM-9 are currently designated as background wells for the Patapsco Aquifer. Background well GWM-1 was monitored for organochlorides, to provide background data for downgradient monitoring well GWM-11. Background wells, GWM-2 and GWM-9 are monitored to establish background data for all wells located in the Patapsco aquifer; specifically, organochlorides for monitoring well GWM-4.

Newly installed downgradient monitoring well pair GWM-17S/D was added to the groundwater monitoring well network prior to the Fall 2019 monitoring event to further characterize the downstream water quality from GWM-4 and GWM-11. Monitoring wells

GWM-17S/D were first monitored for organochlorides during the Spring 2021 sampling event.

Beginning with the Fall 2021 sampling event, monitoring well GWM-1 and GWM-11 were not included in the assessment monitoring program since both monitoring wells are located in the Arundel formation and are no longer subjected to a statistical analysis of data. Background monitoring well GMW-16D was first added to the assessment monitoring program during the Fall 2021 sampling event and sampled for organochloride pesticides to establish background concentrations for the Patuxent aquifer. Patapsco aquifer monitoring well GWM-3 was included in the assessment monitoring program during the Fall 2021 sampling event to determine the presence of organochloride pesticides in the aquifer between monitoring wells GWM-2 and GWM-17S.

During the Spring 2022 sampling event, assessment monitoring parameters for organochlorides were analyzed with higher reporting limits that do not meet the established MDE clean-up standards and/or groundwater protection standards (GWPSs). Therefore, the non-detect concentrations reported for these parameters during the Spring 2022 monitoring event may not necessarily indicate they are greater or less than their respective MDE clean-up standard or GWPS.

During the Fall 2023 2023 monitoring event, Assessment Monitoring was performed on Monitoring Wells GWM-2, GWM-4, GWM-9, GWM-16D, GWM-17S, and GWM-17D and all analytes were analyzed using the lower reporting limits. The monitoring parameters and results of these analyses are presented in Appendix D.

3.2 Monitoring Well Sampling Procedure

During the Fall 2013 sampling event, low flow sampling techniques were first developed and utilized at the ESL. BSWM personnel continue to perform low flow groundwater sampling as outlined in the MDE approved EMP, described herein.

The goal of sampling at ESL is to obtain a representative aquifer sample to ensure that the groundwater has not been impacted by landfill activities. A dedicated positive displacement pump is positioned one foot from the well bottom to ensure its placement within the screened interval. The groundwater is pumped within a flow-through cell, containing airtight, daily calibrated meters to measure pH, temperature, specific conductance, oxidation-reduction potential, turbidity, and dissolved oxygen. The low-stress stabilization protocol is followed at each monitoring well, as described in detail below.

Each day of sampling, all instruments are calibrated prior to field use. Instrument Calibration Logs are found at the end of Appendix B. Upon arrival at each well, a sampling log with well sampling information is completed including any new findings. After removing the well's protective covering, the preliminary water level is measured and recorded. Once the pump is turned on, a timer is started after groundwater begins to discharge from the flow-through cell. Depth to water is measured and recorded; and the flow rate is calculated and adjusted to maintain a flow rate of <500 mL/min and maintain a drawdown <0.33 feet. At each five (5) minute interval pH, temperature, specific conductance, oxidation-reduction potential, dissolved oxygen, turbidity, depth to water, and flow rate are recorded. The flow rate continues to be adjusted as necessary based on the drawdown and flow rate measurements calculated. Once three (3) successive readings adhere to the criteria for stabilizing parameters, a sample is collected. Samples for analyzing VOCs are collected first, followed by the inorganic parameter samples and concluding with the samples for metal parameters.

The stabilized condition of the aquifer is summarized on the following page:

Stabilization Criteria	
pH	+/- 0.1 pH units
Specific Conductance	< 3%
Oxidation-Reduction Potential (ORP)	< 10 millivolts (mV)
Turbidity	< 10% (when > 10 NTUs)
Dissolved Oxygen (DO)	+/- 0.3 milligrams per liter

- Drawdown < 0.33 feet
- Flow < 500 mL/min

In some cases, if 60 minutes of purge time elapses, and the indicator parameters have not met the stabilization criteria, a sample is collected. The details regarding are then noted and explained on the sample log (Appendix B).

3.3 Monitoring Well Field Quality Assurance / Quality Control (QA/QC) Samples

BSWM has been contracted with a certified lab since the Fall 2014 sampling event. Subsequently, the use of data qualifiers permits low level of constituents to be detected with specific approved analyzation protocols. The "J" qualifier indicates that the concentration detected in the sample is above the laboratory method detection limit (MDL); however, it is below the laboratory practical quantitation limit (PQL). Parameter concentrations reported with a "J" qualifier are present in the sample but the reported concentrations are considered an estimated value, as the detection is below the PQL.

Trip blanks prepared by ALS Environmental Laboratory (ALS) accompanied field-collected samples each day of sampling. Each trip blank was analyzed for VOCs and prepared prior to field collection. Each trip blank was also sealed, labeled and never opened during any sampling activities.

Field blanks for VOC analysis were collected during each sampling day in the field using deionized water and vials provided by ALS. After collection, field blanks were placed inside sampling coolers, and were unopened until sample processing.

During the Fall 2023 sampling event one (1) VOC was detected at its PQL in a field blank, and one (1) VOC was detected above its PQL in a trip blank and a field blank. Bromomethane was detected at its PQL (1.0 µg/L) in the field blank from September 11, 2023. Chlorobenzene was detected above its PQL (1.0 µg/L) in the trip blank (2.1 µg/L) and field blank (1.6 µg/L) from September 14, 2023.

Any groundwater sample collected during this sampling event that contained the same VOC constituent as that detected in the trip or field blank, are reported with a "B" qualifier. A "B" qualifier is assigned to a parameter concentration when that parameter is detected at a similar magnitude to the concentration detected in an associated blank sample.

A duplicate sample was also collected to evaluate the laboratory's performance. During this sampling event, MW-15A was a duplicate of GWM-10. The duplicate sample was analyzed for the same parameters as the original and was collected simultaneously for proper QA/QC. Calculations were used to report the relative percent difference (RPD) between the original and duplicate sample analysis, to evaluate field sample collection and laboratory analysis method precision. Table 3-4 summarizes the RPD of the detected parameters. The agreement between the detected parameters in the duplicate and corresponding sample was within QC standards, apart from Cadmium. Cadmium was detected at a concentration of 0.005 mg/L in well GMW-10 and 0.0038 mg/L in the duplicate of MW-15A, thus the calculated RPD was greater than 20 percent.

Sample comments regarding laboratory analyses are included in the laboratory reports and are presented in Appendix C. MES communicates with ALS regarding QC samples being reported outside the control limits and works, collectively, to minimize data quality control concerns. It should be noted that reporting limits for various MDE Table I and II parameters do not meet their assigned PQLs, but the lab reports results with a parameter's Method

Detection Limit (MDL) that is well under the reporting limit, noted with a J qualifier. A parameter's reporting limit and MDL is influenced by a multitude of factors including: the method, instrument, technician, etc. ALS Middletown, Pennsylvania is an accredited lab and approved by MDE to analyze drinking water samples using EPA-approved methodology.

4.0 GROUNDWATER ANALYTICAL RESULTS

Field and analytical data for groundwater samples has been reviewed and a summary of the results is presented in this section. Analytical results are presented in daily event summary tables in Appendix D. Concentrations of a parameter which exceed an established maximum contaminant level (MCL), action level, or other health standard are shaded in these tables. A full list of MDE established PQL(s) and the actual laboratory PQLs are presented in Tables 3-2 and 3-3.

Sample logs for groundwater monitoring wells are presented in Appendix B. ALS laboratory analytical results, laboratory validation, and sample chain of custody records for all samples are included in Appendix C. A time series table of all historical analytical data for each groundwater well is presented in Appendix E.

In accordance with the ESL EMP and Refuse Disposal Permit, leachate samples identified as L-1 and L-2 were collected, in addition to the groundwater monitoring and supply wells. All samples were analyzed for VOCs, water quality parameters, and metals listed in Tables I and II of Appendix A. The leachate results are not comparable to MCLs; instead, they are evaluated using the Maximum Concentration of Contaminants for Toxicity Characteristic in the Toxicity Characteristic Leaching Procedure (TCLP). No detected concentrations exceeded the applicable TCLP limits during this monitoring event. Results are presented as Event Summary Tables in Appendix D; and time series tables of all historical analytical data for each leachate sampling location is presented in Appendix E.

4.1 Volatile Organic Compounds

Samples collected from groundwater monitoring wells were analyzed for volatile organic compounds (VOCs) using Methods 8260 and 8011. Since VOC method 8260 is not sensitive enough to detect DBCP and EDB at their MCLs, VOC method 8011 is utilized to demonstrate compliance. The list of reported VOCs has been established by MDE to comply with regulatory requirements of the Refuse Disposal Permit. Appendix D presents groundwater analytical results for VOCs and their respective concentrations, if detected. Copies of laboratory results are included in Appendix C.

During the Fall 2023 Environmental Monitoring Event, the laboratory analysis reported the following Volatile Organic Compound (VOC) detections summarized in Table 4-1 on the following page.

Table 4-1: Summary of VOC Detections in Groundwater

Parameter	MDE PQL	Compliance Limit	GWM-1	GWM-2*	GWM-3	GWM-4	GWM-5A	GWM-6
Acetone	5	1400	7.6 J	--	--	--	--	--
Benzene	1	***5***	--	--	--	--	--	5.5
Bromomethane	1	0.75	0.93 J	0.76 J	0.76 J	0.87 J	0.87 J	--
2-Butanone	5	700	7.1	--	--	--	--	--
Carbon Disulfide	1	81	1.7	--	--	--	--	--
Chloroform	1	***80***	--	--	--	--	--	--
Chloromethane	1	19	--	--	--	--	--	--
1,4-Dichlorobenzene	1	***75***	--	--	--	1.2	--	--
Ethyl Benzene	1	***700***	--	--	--	--	--	5.5
Methyl t-Butyl Ether	2	20	--	--	--	--	--	2.4
4-Methyl-2-Pentanone	5	630	10.5	--	--	--	--	--

Table 4-1 continued

Parameter	MDE PQL	Compliance Limit	GWM-9*	GWM-11	GWM-12	GWM-16D*	GWM-17S	GWM-17D
Acetone	5	1400	--	--	--	--	--	--
Benzene	1	***5***	--	--	--	--	--	--
Bromomethane	1	0.75	--	--	--	1.1	1	0.84 J
2-Butanone	5	700	--	--	--	--	--	--
Carbon Disulfide	1	81	--	--	--	--	--	--
Chloroform	1	***80***	3.4	--	--	--	--	--
Chloromethane	1	19	--	--	--	1.4	--	--
1,4-Dichlorobenzene	1	***75***	--	2.2	--	--	1.6	1.3
Ethyl Benzene	1	***700***	--	--	--	--	--	--
Methyl t-Butyl Ether	2	20	--	1	2.1	--	--	--
4-Methyl-2-Pentanone	5	630	--	--	--	--	--	--

(1) All concentrations reported in µg/L
(2) Dark shading incicates Compliance Limit exceedance
(3) Compliance limit indicates a MCL, Secondary EPA MCL (SMCL) or Maryland Generic Numeric Cleanup Standard (MDE clean-up standard)
(4) ***Bold and Italicized*** paramaters indicates an MCL Compliance Limit
(5) * - Indicates a Background Well

Patapsco Aquifer (shallow) | Arundel Formation | Patuxent Aquifer (deep)

All detections, with the exception of Benzene in GWM-6 and Bromomethane in eight (8) groundwater wells were at or below the established MCL, secondary EPA MCL (SMCL), or Maryland Generic Numeric Cleanup Standard (MDE clean-up standard). In GWM-6, Benzene was detected above its MCL of 5 µg/L and is readily attributable to the 1988 diesel fuel UST leak located near the maintenance building at ESL. Presently, liquid petroleum hydrocarbon (LPH) is monitored and recovered at the ESL semi-annually from several extraction and monitoring wells located within the area impacted by the 1998 diesel fuel

UST leak. The MDE Oil Control Program (OCP) is provided with a summary of all monitoring activities performed concerning Case No. 90-2554 BA4 in the LPH Monitoring and Mitigation Semi-Annual Status Report. This Case is currently seeking closure. Benzene concentrations in GWM-6, background wells GWM-2 and GWM-9, and downgradient monitoring well GWM-14 are presented graphically in Figure 4-1.

4.2 Water Quality Parameters

Water quality parameters can be useful in determining the relative quality of groundwater and the impacts from sources of chemical constituents. This list includes pH, specific conductance, turbidity, total alkalinity, hardness, chloride, nitrate, total dissolved solids (TDS), and chemical oxygen demand (COD). Of this list, only nitrate and turbidity have established drinking water MCLs (10 mg/L and 5 NTU respectively). SMCLs are also monitored and include pH (6.5-8.5), chloride (250 mg/L), sulfate (250 mg/L) and TDS (500 mg/L). National Secondary Drinking Water Regulations (NSDWRs or secondary standards) are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. EPA recommends secondary standards but does not require water systems to comply with them.

Target holding times for water quality parameters are listed in Table 3-3; and all analyses were completed within the allowable holding times.

Appendix D presents daily event summaries of groundwater analytical results for water quality parameters for this monitoring event, in tandem with MDE Table II metal parameters. Copies of laboratory results are available in Appendix C. A summary of the Water Quality Parameters exceeding their MCL, SMCL, or MDE clean-up standard is found in Table 4-2 on the following page.

Table 4-2: Summary of Water Quality Parameters Detected Above Compliance Limit in Groundwater

Parameter	MDE PQL	Compliance Limit	GWM-1	GWM-5A	GWM-8	GWM-12
Turbidity	0.11	***5***	179.97	54.14	11.39	30.34
pH	0.1 (SU)	6.5 - 8.5 (SU)	--	Refer to report text below		

Table 4-2 continued

Parameter	MDE PQL	Compliance Limit	GWM-15D	GWM-16D*	GWM-17D
Turbidity	0.11	***5***	218.91	5.32	5.56
pH	0.1 (SU)	6.5 - 8.5 (SU)	Refer to report text below		

(1) All concentrations reported in µg/L

(2) Compliance limit indicates a MCL, Secondary EPA MCL (SMCL) or Maryland Generic Numeric Cleanup Standard (MDE clean-up standard)

(3) ***Bold and Italicized*** paramaters indicates an MCL Compliance Limit

(4) * - Indicates a Background Well

Patapsco Aquifer (shallow) | Arundel Formation | Patuxent Aquifer (deep)

pH readings were outside the SMCL range (6.5 to 8.5) in all groundwater wells except for GWM-1 of the Arundel formation and GWM-4 of the Patapsco formation. All numerical pH readings for the groundwater wells are presented in Appendix D Event Summary Tables.

4.3 Metals

Samples collected from groundwater wells during the Fall 2023 sampling event were analyzed for MDE Table II metal parameters by ALS Environmental Laboratories. Laboratory reports are provided in Appendix C. Appendix D presents daily Event Summaries of groundwater analytical results for metal and water quality parameters.

During the 2023 Fall Environmental Monitoring Event, the laboratory analysis reported the following MDE Table II metal detections above their MDE clean-up standard, or SMCL, summarized in Table 4-3 on the following page.

Table 4-3: Summary of Metal Parameters Detected at or Above Compliance Limit in Groundwater

Parameter	MDE PQL	Compliance Limit	GWM-1*	GWM-2*	GWM-4	GWM-5A	GWM-6
Cadmium	0.004	***0.005***	--	--	--	--	--
Iron	0.056	0.3	0.58	--	0.52	3.6	61.7
Manganese	0.01	0.043	--	0.17	0.16	1.3	0.35
Mercury	0.0002	***0.002***	--	--	--	--	--
Nickel	0.011	***0.039***	--	0.087	--	--	--

Table 4-3 Continued

Parameter	MDE PQL	Compliance Limit	GWM-8	GWM-9*	GWM-10	GWM-11	GWM-12
Cadmium	0.004	***0.005***	--	--	0.005	--	--
Iron	0.056	0.3	1.2	--	--	67.7	--
Manganese	0.01	0.043	0.35	0.049	0.1	2.4	--
Mercury	0.0002	***0.002***	--	--	--	--	0.0024
Nickel	0.011	***0.039***	--	--	0.056	--	--

Table 4-3 Continued

Parameter	MDE PQL	Compliance Limit	GWM-14	GWM-15D	GWM-17D	GWM-17S	GWM-19D
Cadmium	0.004	***0.005***	--	--	--	--	--
Iron	0.056	0.3	55.5	--	0.66	66.3	--
Manganese	0.01	0.043	2.9	0.98	3.2	7.1	0.07
Mercury	0.0002	***0.002***	--	--	--	--	0.0021
Nickel	0.011	***0.039***	--	--	0.062	--	--

Table 4-3 Continued

Parameter	MDE PQL	Compliance Limit	SMW-13	SMW-32
Cadmium	0.004	***0.005***	--	--
Iron	0.056	0.3	--	--
Manganese	0.01	0.043	--	0.068
Mercury	0.0002	***0.002***	--	0.0027
Nickel	0.011	***0.039***	0.047	0.067

(1) All concentrations reported in µg/L
(2) Compliance limit indicates a MCL, Secondary EPA MCL (SMCL) or Maryland Generic Numeric Cleanup Standard (MDE clean-up standard)
(3) ***Bold and Italicized*** paramaters indicates an MCL Compliance Limit or Action Level
(4) * - Indicates a Background Well

Patapsco Aquifer (shallow) | Arundel Formation | Patuxent Aquifer (deep)

Historically, Mercury has been detected in wells downgradient from the landfill. All wells with historical Mercury detections are presented as a time-series graph in Figure 4-2. The figure shows increased concentrations in all wells after switching to low flow sampling in Fall 2013, then generally decreasing concentrations over time except for well GWM-15D,

located at the Relative Point of Compliance (RPOC). Monitoring well GMW-15D, near the RPOC, has always been non-detect.

4.4 Assessment Monitoring

In accordance with 40 CFR 258.55, samples were collected during the Fall 2023 monitoring event from groundwater monitoring wells:

Patapsco Aquifer	**Patuxent Aquifer**
GWM-2 (background)	GWM-16D (background)
GWM-4	GWM-17D
GWM-9 (background)	
GWM-17S	

Samples collected from these wells were analyzed for the following organochlorides (as approved by the MDE):

4,4'-DDD	alpha-BHC	Dieldrin	Endrin	Heptachlor Epoxide
4,4'-DDE	beta-BHC	Endosulfan I	Endrin Aldehyde	Methoxychlor
4,4'-DDT	Chlordane	Endosulfan II	gamma-BHC	Toxaphene
Aldrin	delta-BHC	Endosulfan Sulfate	Heptachlor	

Background monitoring well GMW-16D was first added to the assessment monitoring program during the Fall 2021 sampling event and sampled for organochloride pesticides to establish background concentrations for the Patuxent aquifer.

Wells GWM-1, GWM-3, and GWM-11 are no longer sampled for assessment monitoring parameters of organochloride pesticides. Wells GWM-1 and GWM-11 of the Arundel formation were no longer sampled, beginning with the Fall 2021 sampling event. Monitoring well GWM-3 was analyzed once for organochloride pesticides during the Fall 2021 sampling event to determine a presence of constituents between background well GWM-2 and downgradient wells GWM-4 and GWM-17S of the Patapsco aquifer

monitoring network. Monitoring well GWM-3 was non-detect for all organochloride pesticides during the Fall 2021 monitoring event and is therefore no longer monitored for organochloride pesticides. Historical groundwater analytical results for organochloride pesticides for GWM-1, GWM-3, and GWM-11 are presented in Appendix E.

During the 2023 Fall Environmental Monitoring Event, the laboratory analysis reported the following organochloride pesticide detections above their MDE clean-up standard summarized in Table 4-4 below.

Table 4-4: Summary of Organochloride pesticide Parameters Detected in Groundwater

Parameter	MDE PQL	Compliance Linit	GWM-2*	GWM-4	GWM-16D	GWM-17D	GWM-17S
4,4'-DDD	0.023	0.0063	--	--	--	0.0012	0.001
beta-BHC	0.023	0.025	--	--	0.00035	--	--
Dieldrin	0.023	0.0018	0.015	0.0047	--	0.004	0.0042

(1) All concentrations reported in µg/L
(2) "Compliance Limit" indicates MDE Clean-up Standard/Groundwater protection standard
(3) * - Indicates a Background Well
(4) Shading indicates an exceedance of the MDE Clean-up Standard or Groundwater protection standard

Patapsco Aquifer (shallow) | Arundel Formation | Patuxent Aquifer (deep)

There is no established MCL for dieldrin; however, the MDE clean-up standard for dieldrin is 0.0018 µg/L. In accordance with 40 CFR 258.55, a groundwater protection standard (GWPS) is equivalent to the MDE clean-up standard (0.0018 µg/L) and has been established for dieldrin at the ESL.

Dieldrin concentrations by well are presented in a time-series graph in Figure 4-3. The graph in Figure 4-3 suggests that background well GWM-2 generally has higher Dieldrin concentrations than compliance wells, and that there are two (2) overall patterns of decreasing Dieldrin concentrations throughout time. Historically, the pattern of Dieldrin concentrations appear to have two (2) downward decreasing patterns; the first decreasing pattern of Dieldrin concentrations range from 2015 to 2019, the second decreasing pattern occurred in 2020 to present, when concentrations increased in 2020 then began to steadily decrease. It should be noted that the graph shows a dramatic decrease in Dieldrin for all wells during the Spring 2022 sampling event because the samples were analyzed at a higher

reporting limit this monitoring event, resulting in non-detect values. During this monitoring event, Dieldrin was analyzed using the lower reporting limits, which is evident in Figure 4-3.

Results for all organochloride pesticide analyses are summarized in daily Event Summary Tables in Appendix D. Copies of laboratory results are included in Appendix C of this report.

5.0 SURFACE WATER

5.1 Surface Water Monitoring

During the Fall 2023 sampling event, one (1) surface water location (SW-1) was sampled. SW-1 is located adjacent to the outfall for Basin 1. See Figure 2-1.

This section summarizes the results from the Fall 2023 sampling event for SW-1.

5.2 Surface Water Sampling Procedure

BSWM personnel performed surface water sampling at ESL during the Fall 2023 sampling event. Turbidity, pH, and specific conductance were measured in the field during the sampling. The SW-1 sample was obtained using containers that contained preservative that were not filled to overflowing and were thoroughly mixed after filling. SW-1 was analyzed for Table I VOCs and Table II Dissolved Metals and Water Quality Parameters with the referenced PQL established by MDE, found in Appendix A. The surface water sample ID and sampling parameters are listed in Table 3-1. The monitoring parameters for VOCs are listed in Table 3-2, and the monitoring parameters for Water Quality Parameters and Dissolved Metals are presented in Table 3-3.

5.3 Surface Water Analytical Results

Samples collected from surface water sampling location, SW-1, during the Fall 2023 sampling event were analyzed by ALS Environmental Laboratories. Per the request of MDE, surface water samples are analyzed for dissolved metals instead of total metals, beginning with the Fall 2022 monitoring event. However, the surface water sample collected during the Fall 2023 monitoring event was mistakenly analyzed for both total and dissolved metals. Results are reported for both total and dissolved metals.

All Table I and Table II parameters will be compared to the standards listed in COMAR 26.08.02.03-2 - Numerical Criteria for Toxic Substances (NCTS) in Surface Waters. Laboratory reports are provided in Appendix C. Surface water analytical data for the Fall 2023 sampling event is summarized in Appendix D. Historical time series tables for surface water sample, SW-1, are presented in Appendix E.

5.3.1 Volatile Organic Compounds

During the Fall 2023 Surface Water Monitoring Event, no VOC detections were reported above their MDE PQL in the surface water sample, SW-1.

5.3.2 Water Quality Parameters

During the Fall 2023 Surface Water Monitoring Event, the laboratory analysis reported no detections in water quality parameters above their NCTS in the surface water sample, SW-1.

5.3.3 Metals

During the Fall 2023 Surface Water Monitoring Event, no metal detections were reported above their NCTS in the surface water sample, SW-1.

6.0 STATISTICAL EVALUATION

The statistical evaluation was performed on the wells screened in the Patapsco (shallow) and Patuxent (deep) aquifers using analytical data obtained with low-flow sampling techniques from the Fall 2013 sampling event through the Fall 2023 sampling event. The Fall 2023 sampling event was the twenty-first consecutive event where low-flow sampling techniques were employed for groundwater sampling at the ESL. The evaluation was performed by Maryland Environmental Service (MES) in general accordance with 40 CFR, Part 258.53. Specific methods used in this analysis are outlined in the most recent update to the EMP (2023). A commercially available software package (ChemStat) was utilized to statistically evaluate the data. Flow charts for the inter-well and updated intra-well statistical analyses as well as completed statistical analysis results are available in Appendix F.

6.2 Data Analysis and Treatment

Statistical analysis was performed on all parameters that were detected above the practical quantitation limit (PQL) during the most recent sampling event with the exception of VOCs. Any VOC detection without a J qualifier was also included in the statistical analysis and treated as an estimated concentration. The data was not transformed and only parent samples were used; duplicate samples were not incorporated into the analysis.

Inter-well evaluations used the Wilcoxon Non-Parametric Inter-Well Test for hypothesis testing. This Wilcoxon Non-Parametric Inter-Well Test is a version of the nonparametric generalized Wilcoxon rank sum test (also known as the Gehan modification) which can handle datasets that have non-detects with multiple RLs without having to substitute an arbitrary value such as one-half the RL.

Intra-well evaluations used a modified statistical method that was described in the ESL 2022 EMP that is still consistent with USEPA recommendations (USEPA 2015 and

USEPA 2009) and was approved by MDE in correspondence from June 10, 2022. For baseline data consisting of non-detects, intra-well UPLs were computed by setting all non-detects to zero.

6.4 Statistical Test Methods

6.4.1 The Generalized Wilcoxon Rank Sum Non-Parametric Inter-Well Test

The generalized Wilcoxon rank sum non-parametric (i.e., Gehan) inter-well test was used to compare compliance wells against background by comparing the mean/median of each compliance well to its designated background well(s). This nonparametric comparison is based on the ranks of sample measurements rather than actual sample concentrations; therefore, there are no assumptions made regarding the distribution of the sample data. The Gehan test is also useful when a high percentage of the data is non-detect and the amount of available background data is limited. The test statistic (*G*) consists of the normalized sum of the ranks (adjusted for ties and non-detects) of the compliance well measurements and is compared against a right-tailed p-value at the 99 percent (%) significance level (i.e., type I error rate alpha = 1%). If the p-value is less than 0.01, the null hypothesis of equal means/medians was rejected, demonstrating a statistically significant increase (SSI) in a parameter concentration over the background concentration. Consistent with the Unified Guidance (USEPA 2009), a Type I error rate of 1% was used to control the site-wide false positive error rate associated with conducting multiple comparisons of approximately 10 monitoring wells to approximately 5%.

Analytical data from GWM-2 and GWM-9 were used as the background data set for this test for wells screened in the Patapsco Aquifer and GWM-16D for the Patuxent Aquifer.

6.4.2 Intra-Well Test

Intra-well tests were performed on the dataset to determine if parameter concentrations at downgradient or cross-gradient wells were elevated with respect to the historical

concentrations measured for that well (baseline). This is of particular importance as several factors not attributable to a suspected release from the landfill, can cause downgradient data to be statistically significantly elevated with respect to background. These include natural geographic variations in geochemistry, the cut-off of groundwater recharge to the area where the landfill cell is situated, relic contamination, or the presence of an alternate source. At the ESL, a documented diesel fuel leak occurred in 1988, constituting an alternate source of contamination. Corrective measures addressing the contamination associated with this leak are currently being implemented. A number of volatile organic compound (VOC) detections, particularly in well GWM-6, are associated with this alternate source.

Intra-well baseline data was defined as the first eight (8) samples since low flow sampling was initiated (Fall 2013). The distribution of the detected baseline data was characterized as normally distributed or not-normally distributed using the Shapiro/Wilks-Francia Test for Normality at the 95% UPL in USEPA's ProUCL Technical Guidance (version 5.1). This portion of the statistical process differs from the process outlined in the 2022 EMP. MDE has been notified of these modifications in an email correspondence dated on June 7, 2022 and was accepted on June 10, 2022. These modifications were incorporated into a revised version of the EMP.

For parametric data sets, the 95% UPL was calculated based on the normal distribution. In accordance with USEPA recommendations (USEPA 2015 and USEPA 2009), the Normal-Parametric Prediction Limit (Intra-well) test using the USEPA 1989/1992 Formula at 95% was used to determine an SSI for a parameter in a monitoring well. For nonparametric data sets, the Non-Parametric Predictions Limit (Intra-well) test was used to determine an SSI for a parameter in a monitoring well.

Intra-well analysis for GWM-17S, screened in the Patapsco Aquifer, and for wells GWM-17D and GWM-19D, screened in the Patuxent Aquifer was performed during this monitoring event, as the required eight data sets have been obtained.

6.5 Statistical Analysis Results

The results of the statistical analysis are summarized in this section, where SSIs above background or potential SSIs above baseline are indicated. A tabular summary of the statistical analysis can be found at the end of this section in Table 6-1.

6.5.1 Volatile Organic Compounds

Inter-well analyses were not required for VOCs, as most VOCs are not naturally occurring and are not influenced by spatial variation in natural groundwater quality. It is assumed that any legitimate VOC detection in the downgradient or cross-gradient monitoring wells represents an SSI over background. An exception is for MTBE in the Patapsco Aquifer wells. Inter-well analyses were performed for in the Patapsco aquifer for MTBE because it is regularly detected in background well GWM-2. Inter-well analyses were also performed for bromomethane and chloroform in the Patapsco Aquifer because it was detected in background well GWM-9 during this monitoring event. An Inter-well analysis was performed for bromomethane and chloromethane in the Patuxent Aquifer because it was detected in background well GWM-16D during this monitoring event. SSIs over background were observed for the following VOCs during the Fall 2023 sampling event below:

Patapsco Aquifer

- 1,4-Dichlorobenzene in wells GWM-4 and GWM-17S.
- Benzene, ethylbenzene, and MTBE, in well GWM-6.

Patuxent Aquifer

- 1-4 Dichlorobenzene in well GWM-17D.

6.5.1.1 Patapsco Aquifer

Inter-well analyses for background wells GWM-2 and GWM-9 and compliance wells GWM-3, GWM-4, GWM-5A, GWM-6, GWM-14, and GWM-17S screened in the

Patapsco Aquifer were performed for bromomethane, chloroform, chloromethane, and MTBE, as these parameters were detected in the background wells. All other listed inter-well SSIs are considered SSIs from current VOC detections in the downgradient or cross-gradient monitoring wells.

Intra-well analyses for compliance wells GWM-3, GWM-4, GWM-5A, GWM-6, and GWM-14 screened in the Patapsco Aquifer were performed for benzene, bromomethane, chloroform, chloromethane, 1-4, Dichlorobenzene, ethylbenzene, and MTBE, as these parameters were detected in wells screened in the Patapsco Aquifer. The results of the statistical analysis for Patapsco Aquifer VOCs are summarized in Table 6-1 at the end of this section.

There were five (5) inter-well SSIs and one (1) intra-well SSI in the Patapsco Aquifer for VOCs. The inter-well statistical analysis confirmed the SSIs for MTBE in wells GWM-4 and GWM-6 and confirmed a SSI for bromomethane in well GWM-17S. While bromomethane was detected at its PQL in well GWM-17S, it was also detected in the upgradient well, GWM-2 during this monitoring event.

6.5.1.2 Patuxent Aquifer

Inter-well analyses for background wells GWM-16D and compliance wells GWM-15D, GWM-17D, GWM-19D, SMW-13, and SMW-32 screened in the Patuxent Aquifer were performed for bromomethane and chloromethane, as they were detected above its MDE clean-up standard or PQL, in background well GWM-16D during this monitoring event. All other listed inter-well SSIs are considered SSIs from current VOC detections in the downgradient or cross-gradient monitoring wells.

Intra-well analyses for compliance wells GWM-15D, GWM-17D, GWM-19D, SMW-13, and SMW-32 screened in the Patuxent Aquifer were performed for bromomethane and chloromethane, and 1-4 dichlorobenzene, as these parameters were detected in wells

screened in the Patuxent Aquifer. The results of the statistical analysis for Patuxent Aquifer VOCs are summarized in Table 6-1 at the end of this section.

There was one (1) inter-well SSI, and zero (0) intra-well SSIs in the Patuxent Aquifer for VOCs. The inter-well statistical analysis confirmed that 1,4-Dichlorobenzene was an SSI in well GWM-17D. While an inter-well SSI was detected over background, the absence of intra-well SSIs in background monitoring wells during this monitoring period may indicate that VOC concentrations within background wells have not significantly increased in the Patuxent Aquifer over time.

6.5.2 Assessment Monitoring for Organochloride Pesticides

An SSI for organochloride pesticides was determined by assessing the presence of a constituent between downgradient or cross-gradient wells and upgradient wells. To clarify, neither inter-well nor intra-well statistics were analyzed on the organochloride pesticide parameters, however detections were compared in downgradient or cross-gradient wells to background conditions. The following wells were analyzed for organochloride pesticides during this monitoring event: background wells GWM-2, and GWM-9 in the Patapsco Aquifer, GWM-16D in the Patuxent Aquifer, and compliance wells GWM-4, and GWM-17S in the Patapsco Aquifer, and GWM-17D in the Patuxent Aquifer.

One (1) SSI was detected in well GWM-17D in the Patuxent Aquifer for Dieldrin during this monitoring event. Dieldrin was detected above its groundwater protection standard in the compliance well GWM-17D but was non-detect in background well GWM-16D and is therefore considered an SSI over background in the Patuxent Aquifer. The SSI is noted in Table 6-1 at the end of this section.

6.5.3 Water Quality Parameters

Statistical analyses were performed on each of the water quality parameters monitored under the detection monitoring program because these parameters were detected during the

Fall 2023 sampling event. Inter-well SSIs over background geochemical concentrations were identified for all water quality parameters. In general, the identified groundwater SSIs are attributable to spatial variability and are not necessarily indicative of ongoing impacts related to the landfill.

Intra-well SSIs over baseline geochemical concentrations indicate that the most recent concentration for a given well is statistically elevated with respect to historical data from that well. Intra-well SSIs are generally indicative of increasing concentrations over time; however, with small data sets, these increases may be due to natural or seasonal variations in groundwater geochemistry. Increases over time may also be attributable to a cutoff in groundwater recharge over the area of the landfill or periodic landfill construction activities.

Of particular concern are parameters that exhibit both inter-well (background) SSIs and intra-well (baseline) SSIs, as these may indicate a degradation of groundwater quality, largely independent of natural spatial variability in the formation.

6.5.3.1 Patapsco Aquifer

Inter-well analyses for background wells GWM-2 and GWM-9 and compliance wells GWM-3, GWM-4, GWM-5A, GWM-6, GWM-14, and GWM-17S screened in the Patapsco Aquifer were performed for all water quality parameters.

Intra-well analyses for compliance wells GWM-3, GWM-4, GWM-5A, GWM-6, and GWM-14 screened in the Patapsco Aquifer were performed for all water quality parameters.

The results of the statistical analysis for Patapsco Aquifer water quality parameters are summarized in Table 6-1 at the end of this section.

The statistical analyses detected thirty-seven (37) inter-well SSIs and eight (8) intra-well SSIs in the Patapsco Aquifer for water quality parameters. There were two (2) parameters that exhibited both inter-well and intra-well SSIs in two (2) monitoring wells during this monitoring event (alkalinity in well GWM-3, and sulfate in well GWM-5A). None of these SSIs were detected above their compliance limit in their respective wells during this monitoring event.

6.5.3.2 Patuxent Aquifer

Inter-well analyses for wells screened in the Patuxent Aquifer were performed for all water quality parameters since four required data sets for background well GWM-16D have been obtained. Background well GWM-16D was used in the inter-well analysis with compliance wells GWM-15D, GWM-17D, GWM-19D, SWM-13, and SWM-32.

Intra-well analyses were performed for wells GWM-15D, GWM-17D, GWM-19D, SWM-13, and SWM-32. The results of the statistical analysis for the Patuxent Aquifer water quality parameters are summarized in Table 6-1 at the end of this section.

The statistical analyses detected ten (10) inter-well SSIs and ten (10) intra-well SSIs in the Patuxent Aquifer for water quality parameters. There was (1) parameter that exhibited both inter-well and intra-well SSIs in one (1) monitoring well during this monitoring event (specific conductivity in well GWM-15D). This SSI was not detected above its compliance limit in their respective wells during this monitoring event.

6.5.4 Metals

Statistical analyses were performed on all metal parameters listed in MDE Table II. In general, inter-well SSIs are more attributable to spatial variability in a formation and may not necessarily indicative of ongoing impacts related to the landfill. However, a specific list of inorganic constituents listed in Appendix I in 40 CFR 258 are considered noteworthy for detection monitoring for inter-well analyses, according to 40 CFR 258.54(c). The list

of inorganic parameters in Appendix I 40 CFR 258 includes: Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, and Zinc.

Intra-well SSIs represent concentrations where the more recent sampling data are statistically elevated compared to historical data from a particular well and are generally indicative of increasing concentrations over time. This can be attributable to a cutoff in groundwater recharge over the area of the landfill or periodic landfill construction activities. With the smaller data set of baseline data, SSIs over baseline may be triggered even where metal concentrations are consistent with historical levels. Of particular concern are parameters that exhibit both inter-well SSIs and intra-well SSIs, as this may indicate a degradation of groundwater quality, largely independent of natural spatial variability in the formation. Most SSIs over background are consistent with the historical record. The results from the inter-well analysis and intra-well analysis on MDE Table II parameters from the Fall 2023 sampling event are presented below and compared to the Appendix I 40 CFR 258 list of inorganic constituents.

6.5.4.1 Patapsco Aquifer

Inter-well analyses for background wells GWM-2 and GWM-9 and compliance wells GWM-3, GWM-4, GWM-5A, GWM-6, GWM-14, and GWM-17S screened in the Patapsco Aquifer were performed for all MDE Table II metal parameters.

Intra-well analyses for compliance wells GWM-3, GWM-4, GWM-5A, GWM-6, and GWM-14 screened in the Patapsco Aquifer were performed for all MDE Table II metal parameters.

The results of the statistical analysis for Patapsco Aquifer MDE Table II metal parameters are summarized in Table 6-1 at the end of this section.

The statistical analyses detected thirty-two (32) inter-well SSIs and two (2) intra-well SSIs in the Patapsco Aquifer for metal parameters listed in MDE Table II. Of the thirty-two (32) inter-well SSIs, six (6) were found on the 40 CFR 258 Appendix I list for barium and cobalt. Of the two (2) intra-well SSIs, both were found on the 40 CFR 258 Appendix I list for cobalt and nickel. Cobalt in well GWM-17S was an Appendix I parameter that exhibited SSIs in both the inter-well and intra-well analyses. There were no non-Appendix I parameters that exhibited SSIs in both inter-well and intra-well analyses. It should also be noted that none of the parameters detected in wells with Appendix I SSIs exceeded their compliance limit during this monitoring event; the only SSIs with a compliance limit exceedance during this monitoring event are for iron and manganese in wells GWM-4, GWM-5A, GWM-6, GWM-14, and GWM-17S.

6.5.4.2 Patuxent Aquifer

Inter-well analyses for wells screened in the Patuxent Aquifer were performed for metals using background well GWM-16D and compliance wells GWM-15D, GWM-17D, GWM-19D, SWM-13, and SWM-32.

Intra-well analyses have been performed for compliance wells GWM-15D, GWM-17D, GWM-19D, SWM-13, and SWM-32.

The results of the statistical analysis for Patuxent Aquifer metals are included below and are summarized in Table 6-1 at the end of this section.

The statistical analyses detected twenty-six (26) inter-well SSIs and five (5) intra-well SSIs in the Patuxent Aquifer for metal parameters listed in MDE Table II. Of the twenty-six (26) inter-well SSIs, fourteen (14) were found on the 40 CFR 258 Appendix I list for barium, cobalt, copper, lead, nickel, and zinc. Of the five (5) intra-well SSIs, three (3) were found on the 40 CFR 258 Appendix I list for cobalt, copper, and lead. It should be noted that both intra-well and inter-well SSIs for cobalt well GMW-19D, and lead in SMW-13. There were no non-Appendix I parameters that exhibited SSIs in both inter-well and intra-well. The

following Appendix I parameter SSIs exceeded their compliance limit during this monitoring event: nickel in wells GWM-17D, SMW-13, and SMW-32. Other SSIs with compliance limit exceedances during this monitoring event are for iron in well GWM-17D, mercury in wells GMW-19D and SMW-32, and manganese in wells GWM-15D, GWM-17D, GWM-19D, and SMW-32.

Table 6-1 - Summary of Inter-well Statistical Results

Parameter	GROUNDWATER MONITORING WELLS											
	Patapsco Aquifer (shallow)						Patuxent Aquifer (deep)					
	GWM-3	GWM-4	GWM-5A	GWM-6	GWM-14	GWM-17S	GWM-15D	GWM-17D	GWM-19D	SMW-13	SMW-32
VOC's											
Benzene				↑							
Bromomethane											
Chloroform											
Chloromethane											
1-4-Dichlorobenzene		↑				↑		↑*			
Ethylbenzene				↑							
MTBE		↑*		↑*							
Assessment Monitoring Parameters											
Dieldrin								↑			
Water Quality Parameters											
Alkalinity	↑	↑	↑	↑	↑	↑	↑	↑			
Ammonia Nitrogen		↑				↑					
Chemical Oxygen Demand		↑		↑	↑	↑					
Chloride											↑
Hardness		↑	↑	↑	↑	↑	↑	↑			
Nitrate	↑									↑	
pH		↑	↑	↑	↑	↑					
Specific Conductivity		↑	↑		↑	↑	↑	↑			
Sulfate, total	↑	↑	↑		↑	↑	↑				
Total Dissolved Solids		↑	↑		↑	↑		↑			
Turbidity					↑	↑					
Metals											
Antimony, total											
Arsenic, total											
Barium, total		↑	↑			↑		↑			
Beryllium, total											
Cadmium, total											
Calcium, total		↑	↑	↑	↑	↑	↑	↑			
Chromium, total											
Cobalt, total				↑	↑	↑	↑	↑	↑	↑	↑
Copper, total										↑	↑
Iron, total		↑	↑	↑	↑	↑					
Lead, total										↑	
Magnesium, total	↑	↑	↑	↑	↑	↑	↑	↑			
Manganese, total		↑	↑	↑	↑	↑	↑	↑			↑
Mercury, total			↑						↑	↑	↑
Nickel, total								↑	↑	↑	↑
Potassium, total		↑	↑			↑					
Selenium, total											
Silver, total											
Sodium, total		↑						↑			
Thallium, total											
Vanadium, total											
Zinc, total										↑	↑

Notes:

1. ↑ = Well exhibits an inter-well SSI for analyte
2. Blank cell = No SSI
3. Parameter not analyzed
4. * = VOC SSI confirmed by inter-well statistical analysis

Table 6-2 Summary of Intra-well SSIs

Parameter	GROUNDWATER MONITORING WELLS											
	Patapsco Aquifer (shallow)							Patuxent Aquifer (deep)				
	GWM-3	GWM-4	GWM-5A	GWM-6	GWM-14	GWM-17S		GWM-15D	GWM-17D	GWM-19D	SMW-13	SMW-32
VOC's												
Benzene												
Bromomethane						↑						
Chloroform												
Chloromethane												
1-4-Dichlorobenzene												
Ethylbenzene												
MTBE												
Water Quality Parameters												
Alkalinity	↑											
Ammonia Nitrogen			↑	↑	↑			↑	↑	↑		
Chemical Oxygen Demand												
Chloride					↑				↑	↑	↑	
Hardness												
Nitrate												
pH												
Specific Conductivity								↑				
Sulfate, total			↑	↑						↑		
Total Dissolved Solids											↑	
Turbidity			↑					↑				
Metals												
Antimony, total												
Arsenic, total												
Barium, total												
Beryllium, total												
Cadmium, total												
Calcium, total												
Chromium, total												
Cobalt, total						↑				↑		
Copper, total								↑				
Iron, total									↑			
Lead, total												
Magnesium, total												
Manganese, total										↑		
Mercury, total												
Nickel, total						↑						
Potassium, total												
Selenium, total												
Silver, total												
Sodium, total												
Thallium, total												
Vanadium, total												
Zinc, total												

Notes:

1. ↑ = Well exhibits an intra-well SSI for analyte
2. Blank cell = No SSI
3. Parameter not analyzed

7.0 LANDFILL GAS MONITORING

7.1 Perimeter Monitoring Network

Quarterly landfill gas (LFG) probe readings at the Eastern Sanitary Landfill (ESL) were performed during the months of July and November 2023. Landfill gas readings for this reporting period are presented in Table 2-2.

Landfill gas is not detected in perimeter probes; however, interior LFG probes ESLF006A, ESLF006B, and ESLF008A (located on the southwest side of ESL between the landfill footprint and the perimeter probes along Lorely Beach Road North or Bowerman Road), are monitored monthly, as high methane conditions have been known to be present there. In these probes, the methane readings typically fluctuate above and below the 5% methane concentration as they are thought to be impacted by the performance of the LFG collection system and/or the changing meteorological conditions at the time of LFG sampling. Perimeter probes that are surrounding the area of the aforementioned interior probes are LFG probes ESLF0005, ESLF005A, ESLF0006 and ESLF0009. There were no methane concentrations detected in these probes during the quarterly monitoring events for this reporting period. This confirms that the high methane readings that fluctuate in this area do not reach the perimeter probes.

On the opposite side of the site are landfill gas Probe No. ESLF0025 and ESLF025A, that are located north of the Residents' Drop-Off Center and along the property boundary with Days Cove Road Reclamation Center. This area had previously exhibited LFG migration from the adjacent rubble landfill. Days Cove Road Reclamation Center installed static wells within the landfill footprint in accordance with their Remediation Plan dated July 2009. The January 2010 Addendum to this plan included installing four passive landfill gas vents outside the perimeter of the landfill near Probes ESLF0025 and ESLF0025A; which was completed on July 24, 2012. During this reporting period, methane was not detected in Probes ESLF0025 or ESLF0025A. This improvement in methane concentrations is

likely a positive result from the remediation plan of the adjacent rubble landfill and will continue to be evaluated during future monitoring events.

The Bureau of Solid Waste Management (BSWM) generally meets with the community associations bimonthly. During these meetings the residents are brought up to date on landfill activity and reminded to contact the landfill in the event of any landfill odors. Any community issues are also discussed. BSWM provides six (6) homes with methane detectors and recommends that they are tested twice a year. At these meetings, community associations are reminded to schedule an appointment with the BSWM to have their methane detectors checked. The community associations are also provided with up-to-date contact information for the BSWM for their community bulletins.

7.2 On-Site Structures

Quarterly building scans for on-site structures at the Eastern Sanitary Landfill (ESL) were performed September 6 and December 19, 2023 by BSWM personnel; except for the LFTGE building scan, which was performed on August 14 and November 27, 2023 by SCS Field Services. The on-site structures that are monitored by BSWM include the administration building, maintenance building, operations' trailer, scale house, and waste/recycling transfer stations.

During the 3rd and 4th quarter 2023 monitoring events, methane was detected by BSWM personnel in the maintenance building and waste transfer station. All concentrations detected were below the compliance limit. During the 4th quarter 2023 monitoring event, methane was detected in the LFGTE facility engine room at a concentration of 500 ppm. The LFGTE facility is well ventilated, and the levels detected are well below the need for corrective action.

In accordance with COMAR 26.04.07.03B(9), the compliance limit for methane concentrations in facility structures is 25% of the lower explosive limit (LEL) (1.25% CH_4

by volume in air or 12,500 ppm). All detections during the 3rd and 4th quarter monitoring events at ESL were well below the compliance limit.

Additionally, plug-in detectors located in the administration building level 1 hallway and level 2 office, inside the scale house, and in the operations' trailer are bump tested during the monitoring events with a concentrate consisting of 50% LEL (2.5% CH_4). All detectors were tested and deemed operational during the quarterly monitoring events.

The results for the monitoring of on-site structures during this reporting period are presented in Table 2-3.

8.0 SUMMARY

The monitoring results were reviewed for compliance with the regulatory benchmarks established by MDE. The following section presents a discussion of the results from the 2023 Spring Monitoring Event.

8.1 Groundwater

There were twenty-three (23) Volatile Organic Compound (VOC) detections in twelve (12) groundwater wells for eleven (11) parameters, with one (1) detection above its EPA MCL, and eight (8) detections above their Maryland Generic Numeric Cleanup Standard (MDE clean-up standard) during the Fall 2023 monitoring event.

- Acetone was detected above its EPA PQL (5 µg/L) in well GWM-1 (7.6 J µg/L).
- Benzene was detected above its EPA MCL (5 µg/L) in well GWM-6 (5.5 µg/L).
- Bromomethane was detected above its MDE clean-up standard (0.75 µg/L) in well GWM-1 (0.93 J µg/L), background well GWM-2 (0.76 J µg/L), wells GWM-3 (0.76 J µg/L), GWM-4 (0.87 J µg/L), GWM-5A (0.87 J µg/L), background well GWM-16D (1.1 µg/L), and wells GWM-17S (1 µg/L) and GWM-17D (0.84 J µg/L).

- 2-Butanone was detected above its MDE PQL (5.0 µg/L) in well GWM-1 (7.1 µg/L).
- Carbon disulfide was detected above its MDE PQL (1.0 µg/L) in well GWM-1 (1.7 µg/L).
- Chloroform was detected above its MDE PQL (1.0 µg/L) in background well GWM-9 (3.4 µg/L).
- Chloromethane was detected above its MDE PQL (1.0 µg/L) in well GWM-16D (1.4 µg/L).
- 1,4-Dichlorobenzene was detected above its MDE PQL (1.0 µg/L) in wells GWM-4 (1.2 µg/L), GWM-11 (2.2 µg/L), GWM-17S (1.6 µg/L), and GWM-17D (1.3 µg/L).
- Ethylbenzene was detected above its MDE PQL (1.0 µg/L) in well GWM-6 (5.5 µg/L).
- MTBE was detected in well GWM-11 (1 µg/L), and was detected above its MDE PQL (2.0 µg/L) in wells GWM-6 (2.4 µg/L) and GWM-12 (2.1 µg/L).
- 4-Methyl-2-Pentanone was detected above its EPA PQL (5 µg/L) in well GWM-1 (10.5 µg/L).

Acetone, 2-butanone, carbon disulfide, and 4-methyl-2-pentanone were detected in well GWM-1 during this monitoring event. Historically, any VOC detection has been low and sporadic in well GWM-1. While acetone has been sporadically detected below 10 µg/L in well GWM-1, while 2-butanone, carbon disulfide, and 4-methyl-2-pentanone have never been detected above their respective PQLs in the well until this monitoring event. The constituents do not have designated EPA MCLs, only groundwater clean-up standards. Well GWM-1 is screened in the Arundel Formation and is located hydraulically upgradient to the landfill. It should also be noted that the area upgradient and cross-gradient to well GWM-1 is industrialized and is surrounded by many different types of businesses. Therefore, it is possible these VOC detections may be emanating from a source other than the landfill cells. Acetone, 2-butanone, carbon disulfide, and 4-methyl-2-pentanone will continue to be closely monitored in well GWM-1 during future monitoring events.

The benzene MCL exceedance, and detections of ethylbenzene and MTBE in well GWM-6 have regularly been detected over the historical record and are attributable to the 1988 underground storage tank (UST) leak. While these detections are considered SSIs over background, none of these detections exhibited SSIs over baseline in well GWM-6 during this monitoring event. The lack of intra-well SSIs indicates that these VOC detections in well GWM-6 are not increasing over time. The VOC detections in well GWM-6 are not directly attributable to the landfill cells.

It is highly likely that the bromomethane detections in background wells GWM-2 and GWM-16D, and wells GWM-1, GWM-3, GWM-4, GWM-5A, GWM-17S and GWM-17D are not attributable to the landfill. Bromomethane was also detected in all field blanks and trip blanks from September 11, 12, and 13. Coincidentally, nearly every well that was sampled during the first three days of the monitoring event was detected with bromomethane. Additionally, the constituent was detected in two (2) upgradient wells. Bromomethane was not an SSI in any of the downgradient wells. Bromomethane is a byproduct of landfill gas but is also a byproduct of pesticide fumigants. Bromomethane does not have an established MCL but has an MDE clean-up standard (0.75 µg/L) that below its MDE PQL (1.0 µg/L). It is therefore highly likely that the bromomethane detections could be from another source than the landfill cells.

The chloroform detection in background well GWM-9 may likely originate from another source other than the landfill cells. There is no established MCL for chloroform, but there is an MDE clean-up standard of 80 µg/L. Historically, background well GWM-9 had few low-level detections above and below chloroform's MDE PQL, but nowhere near its MDE clean-up standard, but was detected above its PQL during the previous monitoring events. Chloroform was not an SSI after performing an inter-well statistical analysis for wells screened in the Patuxent Aquifer. Also, background well GWM-9 is technically located cross-gradient from the landfill and receives runoff from an industrial parking lot. Chloroform is commonly found in tap water and is also a common lab contaminant. The

constituent will continue to be closely monitored during future monitoring events but is likely not emanating from the landfill cells.

Chloromethane was first detected in background well GWM-16D during this monitoring event since the well was installed in 2019. Background well GWM-16D is located hydraulically upgradient from the landfill cells and screened in the deep Patuxent Aquifer. While there is a slight possibility of the detection being influenced by landfill gas migration, it is unlikely that the detection emanated from the landfill cells.

1,4-Dichlorobenzene was detected in wells screened in the shallow Patapsco Aquifer (GWM-4 and GWM-17S), the deep Patuxent Aquifer (GWM-17D), and in the Arundel Formation (GWM-11). Historically, 1,4-dichlorobenzene has been detected in low concentrations in Patapsco Aquifer wells GWM-4 and GWM-17S since the 2000's, and in Patuxent Aquifer well GWM-17D since it was first installed in Fall 2019. However, the constituent was not a SSI over baseline in any of the Patapsco or Patuxent Aquifer wells during this monitoring event, meaning that concentrations within either well have not been increasing over time. Historically, 1,4-dichlorobenzene was detected in well GWM-11 of the Arundel Formation since the start of low-flow sampling during Fall 2013. The concentration of 1,4-dichlorobenzene has fluctuated in all of the aforementioned wells over time, but has been detected well below its MCL of 75 µg/L. It should be noted that all wells detected with 1,4-dichlorobenzene during this monitoring event are located near the southern portion of the property less than four hundred (400) feet, upgradient or cross-gradient from the Bird River Dredge Spoils Lagoon. 1,4-dichlorobenzene will continue to be closely monitored during future monitoring events.

MTBE was detected in a well screened in the shallow Patapsco Aquifer (GWM-6), and wells screened in the Arundel Formation (GWM-11 and GWM-12). There is no established MCL for MTBE, but there is an MDE clean-up standard of 20 µg/L. All MTBE detections were well below its MDE clean-up standard this monitoring event. MTBE detections in well GWM-6 have been attributed to the 1988 underground storage tank (UST) leak, as previously explained in the paragraph above. Historically, low-level concentrations of

MTBE have been detected in well GWM-11 since Fall 2013 when low-flow sampling began at the landfill. Historically, low-level concentrations of MTBE have been detected in well GWM-12 since the early 2000's. It should be noted that MTBE has also been previously detected in a background well, which is hydraulically upgradient to the landfill. MTBE will continue to be closely monitored during future monitoring events.

There were two (2) water quality parameters that exceeded their compliance limit in groundwater wells during this monitoring event: turbidity, and pH. Turbidity was detected above its MCL (5 NTU) in wells GWM-1, GWM-5A, GWM-8, GWM-12, GWM-15D, and background well GWM-16D and well GWM-17D. Elevated turbidity levels are generally typical in groundwater samples due to a variety of factors, including the direct contact between groundwater and parent material. pH readings were outside the SMCL range (6.5 to 8.5) in all groundwater wells except for well GWM-1 of the Arundel Formation and well GWM-4 of the Patapsco Formation. Low pH levels are historically typical for groundwater wells at ESL. All groundwater wells outside this range were below the SMCL pH range with the exception of GWM-8. During this event and since low-flow sampling was first implemented at ESL, the pH in GWM-8 has been above the SMCL pH range. Prior to low-flow sampling, the pH in GWM-8 of the Arundel Formation was historically below the SMCL pH range.

There were thirty-two (32) MDE Table II metal detections above their MDE clean-up standard, MCL, or Action Level in seventeen (17) groundwater monitoring wells for five (5) parameters during the Spring 2023 monitoring event.

- Cadmium was detected at its MCL (0.005 mg/L) in well GWM-10 (0.005 mg/L).
- Iron was detected above the MDE clean-up standard (0.3 mg/L) in wells GWM-1, (0.58 mg/L), GWM-4 (0.52 mg/L), GWM-5A (3.6 mg/L), GWM-6 (61.7 mg/L), GWM-8 (1.2 mg/L), GWM-11 (67.7 mg/L), GWM-14 (55.5 mg/L), GWM-17D (0.66), and GWM-17S (66.3 mg/L).
- Manganese was detected above the MDE clean-up standard (0.043 mg/L) in background well GWM-2 (0.17 mg/L), and wells GMW-4 (0.16 mg/L), GWM-5A (1.3 mg/L), GWM-6 (0.35 mg/L), GWM-8 (0.35 mg/L), background well GWM-9 (0.049

mg/L), and wells GWM-10 (0.1 mg/L), GWM-11 (2.4 mg/L), GWM-14 (2.9 µg/L), GWM-15D (0.98 mg/L), GWM-17D (3.2 mg/L), GWM-17S (7.1 mg/L), GWM-19D (0.047 mg/L), and SMW-32 (0.067 mg/L).

- Mercury was detected at or above the MCL (0.002 mg/L) in wells GWM-12 (0.0024 mg/L), GWM-19D (0.0021 mg/L), and SMW-32 (0.0027 mg/L).
- Nickel was detected above the MDE clean-up standard (0.073 mg/L) in background well GWM-2 (0.087 mg/L), wells GWM-10 (0.056 mg/L), GWM-17D (0.062 mg/L), SMW-13 (0.051 mg/L), and SMW-32 (0.07 mg/L).

Cadmium was detected above its MCL in well GWM-10. Historically, cadmium regularly exceeded its MCL in well GWM-10 since Fall 2015. It's important to note that well GWM-10 is screened in the Arundel Formation which is mostly dense clay and pockets of groundwater stored in lenses. Also, the groundwater in well GWM-10 is acidic. Cadmium is generally regarded as one of the most mobile heavy metals in the environment because of its elevated mobilization potential through competition and ligand induced desorption. These slow-moving, acidic conditions make it possible for naturally occurring cadmium in the soil to mobilize into groundwater. It is therefore probable that the landfill cells may not be attributed to the cadmium exceedance in well GWM-10.

Iron was detected at concentrations greater than its MDE clean-up standard in wells GWM-1, GWM-4, GWM-5A, GWM-6, GWM-8, GWM-11, GWM-14, GWM-17D, and GWM-17S. Historically, iron has exceeded the MDE clean-up standard in all aforementioned monitoring wells. Wells GWM-4, GWM-5A, GWM-6, GWM-14, and GWM-17S of the Patapsco Aquifer have a confirmed inter-well SSI for Iron, but no intra-well SSI. Wells with inter-well SSIs indicate that iron concentrations spatially vary throughout the aquifer but have not significantly changed over time within each well. It should be noted that iron is naturally occurring in the geological area and is generally tied to manganese, and iron does not have an established MCL. Iron shall continue to be monitored during subsequent sampling events.

Manganese was detected at reported concentrations greater than its MDE clean-up standard in background well GWM-2, wells GMW-4, GWM-5A, GWM-6, GWM-8, background well GWM-9, and wells GWM-10, GWM-11, GWM-14, GWM-15D, GWM-17D, GWM-17S, GWM-19D, SMW-13, and SMW-32. Historically, manganese has exceeded the MDE clean-up standard in all aforementioned monitoring wells. Wells GWM-4, GWM-5A, GWM-6, GWM-14, and GWM-17S of the Patapsco Aquifer have a confirmed inter-well SSI for Manganese, but no intra-well SSIs. These SSIs indicate that Manganese concentrations are spatially variable throughout the aquifer but have not significantly changed over time within each well. Well GWM-17D from the Patuxent Aquifer has a confirmed SSI for Manganese over baseline. It should be noted that Manganese is generally tied to iron, and iron is naturally occurring in the overall geological area. There is no MCL for manganese, only an MDE clean-up standard. Manganese shall continue to be monitored during subsequent sampling events.

Mercury was detected above its MCL in wells GWM-12, GWM-19D, and SMW-32 during this monitoring event. Historically, mercury was detected above its MCL in well GWM-12 since Spring 2013, and in well SMW-32 since Fall 2013, the start of low-flow sampling, while it has been detected just above and just below its MCL in monitoring well GWM-19D. Mercury was a confirmed inter-well SSI for wells SMW-13 and SMW-32 indicating that mercury concentrations have not significantly increased over time. Mercury was both an inter-well and intra-well SSI for well SMW-19D indicating that mercury concentrations significantly increased over time. Sentinel well GWM-15D was installed in January 2016 to serve as a downgradient well with respect to wells GWM-12, SMW-13, and SMW-32 and to ensure the reported mercury concentrations in samples collected from these wells are isolated to the same deep aquifer. During November 2016, a Hydrological Assessment Study was performed by a third-party hydrologist, which confirmed that samples collected from groundwater monitoring well GWM-15D are representative of the same deep aquifer (Patuxent), as are samples from wells SMW-13 and SMW-32. While well GWM-12 is screened in the Arundel Formation, samples collected from this well are likely influenced by the Patuxent Aquifer. Mercury has been non-detect in well GWM-15D since it was first installed, including this monitoring event, indicating that mercury has likely been confined

within the property. It should be noted that GWM-15D's well screen is between forty-three (43) and fifty-eight (58) feet below surface. All wells with Mercury concentrations detected at or above its MCL during this monitoring event are screened between ninety-four (94) and one-hundred twenty-five (125) feet below surface. All wells that are screened ~100 feet below surface in this portion of the property, including Wells GWM-12, GWM-19D, SMW-13, and SMW-32 have had historical mercury exceedances. Therefore, it is likely mercury is present one-hundred feet below surface, mainly in the Patuxent (deep) Aquifer. Because there have been no detections of mercury in wells screened above ninety-four (94) feet below surface (i.e. within the surficial Patapsco Aquifer) in this region of the property, it is unlikely the source of mercury is emanating from the landfill's cells.

It should be noted that wells SMW-13 and SMW-32 are supply monitoring wells for various non-potable landfill activities on-site including staff buildings. Mercury detections in a supply monitoring well create non-potable conditions on-site. BSWM has non-potable signs posted on all faucets that are used by general staff and is seeking opportunities to connect to the municipal drinking water supply. All mercury exceedances will continue to be monitored and further investigated during subsequent sampling events.

Nickel was detected greater than its MDE clean-up standard in background well GWM-2, and wells GWM-10, GWM-17D, SMW-13, and SMW-32. Historically, Nickel has regularly exceeded the MDE clean-up standard in all aforementioned wells. Wells GWM-17D, SMW-13, and SMW-32 of the Patuxent Aquifer showed an inter-well SSI for nickel, indicating that nickel concentrations vary spatially throughout the aquifer in upgradient and downgradient wells. It should be noted that nickel concentrations above the MDE clean-up standard are also prevalent in background well GWM-2, which is hydraulically cross-gradient to the landfill cells and is used as a background well in statistical analyses. The persistent nickel detections in background well GWM-2 suggest that it is highly unlikely the groundwater quality is impacted by the landfill. It is possible that elevated nickel concentrations in the groundwater are influenced by other industrial activity in the surrounding area. Nickel does not have an established MCL, only an MDE clean-up

standard (0.039 mg/L) and an EPA recommended level (0.1 mg/L). Nickel shall continue to be monitored during subsequent sampling events.

There was one (1) organochloride pesticide parameter detected above its groundwater protection standard (GWPS) in four (4) groundwater monitoring wells during the Fall 2023 monitoring event. Two (2) additional organochloride pesticide parameters were detected in three (3) groundwater monitoring wells during the Fall 2023 monitoring event.

- Dieldrin was detected at concentrations greater than its GWPS (0.0018 µg/L) in background well GWM-2 (0.015 µg/L), and wells GWM-4 (0.0047 µg/L), GWM-17D (0.004 µg/L) and GWM-17S (0.0042 µg/L).
- 4,4'DDD was detected below its PQL (0.023 µg/L) in wells GWM-17D (0.0012 µg/L) and GWM-17S (0.001 µg/L).
- beta-BHC was detected below its PQL (0.023 µg/L) in background well GWM-16D (0.00035 was detected below its PQL (0.023 µg/L).

Dieldrin concentrations detected over time are generally concentrated in one portion of the site and are mostly detected in wells screened in the Patapsco Aquifer, where the highest concentrations are found upgradient to the landfill cells. During this monitoring period, there were no SSIs for dieldrin in the sampled wells that are screened in the Patapsco Aquifer and Arundel Formation because dieldrin was detected in background well, GMW-2 of the Patapsco Aquifer. There was one SSI over background in well GWM-17D, screened in the Patuxent aquifer. Historically, dieldrin has been detected in monitoring wells that are situated in the western portion of the property, including background well GWM-2. Whenever background well GWM-2 is sampled, it always has the highest concentrations of dieldrin compared to other wells at the site, including this monitoring event. It is therefore suggested that the source of dieldrin is not emanating from the landfill cells.

While it is suggested that dieldrin concentrations are not emanating from the landfill cells, it is important to consider the local and historical land use and know that dieldrin was an

insecticide applied to farmland. Dieldrin is also a breakdown product of another insecticide called Aldrin. Dieldrin and aldrin were widely used on crops (i.e., cotton and corn) from the 1950s to 1970 until it was banned in 1970. Dieldrin was also used to kill termites from 1972 to 1987. Since then, dieldrin has not been used in the United States. Historically, the land use of the property and surrounding area was farmland. It is probable the historical land use of the surrounding area and the landfill property may be attributed to the detected dieldrin concentrations; however, further investigation may be necessary.

4,4'-DDD is a part of DDD, a group of known insecticides, and is a degradation product of DDT. The 4-4'-DDD detections from this monitoring event were well below the MDE PQL and MDE Clean-up Standard. Historically, 4,4'-DDD has never been detected in wells GWM-17D and GWM-17S until this monitoring event. In fact, 4,4'-DDD has not been detected in any groundwater monitoring wells at the landfill except for one (1) detection in cross-gradient well GWM-2 during Spring 2017. It should be noted that the historical land use of the area and its surroundings was for agriculture. It is likely that the 4,4'-DDD detections are tied to the historical land use of this property.

beta-BHC is a byproduct of the insecticide, lindane. Trace amounts of beta-BHC, below MDE's PQL, were detected in upgradient well GWM-16D during this monitoring period. It is unlikely that the trace amount of beta-BHC emanated from the landfill. As previously mentioned with 4,4'-DDD, this area has a history of agricultural use, which is likely tied to the beta-BHC detection in the upgradient well.

Reported concentrations and exceedances during this monitoring event are comparable with results from previous sampling events.

8.2 Surface Water

VOCs, total and dissolved metals, and water quality parameters concentrations in SW-1 were compared to the standards listed in COMAR 26.08.02.03-2 - Numerical Criteria for Toxic Substances (NCTS) in Surface Waters. Total and dissolved metals were analyzed

for surface water sample SW-1 during this monitoring event. Future monitoring events will ensure that dissolved metals will be analyzed for any surface water sample that is collected at ESL.

1,4-Dichlorobenzene was detected above its MDE PQL (1 µg/L) in surface water sampling location SW-1 (1.6 µg/L). Historically, 1,4-Dichlorobenze has regularly been detected below its NCTS (63 µg/L) in SW-1 since it was first sampled during Fall 2015. It should be noted that surface water location SW-1 is a natural artesian location of the shallow Patapsco Aquifer. 1,4-Dichlorobenzene was also detected in monitoring wells GWM-4 and GWM-17S that are screened in the Patapsco Aquifer and located near SW-1. It is therefore likely that the 1,4-Dichlorobenzene detection in surface water sampling location SW-1 is influenced by the concentrations found in the groundwater of the Patapsco Aquifer.

There were no dissolved metal detections that exceeded their NCTS in surface water sampling location, SW-1 during this monitoring event.

There were no water quality parameters that exceeded their NCTS in surface water sampling location, SW-1 during this monitoring event.

The Fall 2023 surface water detections for SW-1 are generally comparable with results from previous sampling events. Future monitoring events will continue to analyze dissolved metals and compare all analytes to their NCTS.

8.3 Landfill Gas

- High methane concentrations were observed along the southwest side of ESL in the interior landfill gas probe Nos. ESLF006A, ESLF006B, and ESLF008A.
- Methane was detected at low concentrations during 3rd and/or 4th quarter 2023 structure monitoring events in the engine room of the LFGTE Building, maintenance building, and the waste transfer station. All detected concentrations were well below the regulatory requirements for facility structures.

- There are no other concerns to note regarding the landfill gas data.

9.0 CONCLUSION

The groundwater and surface water potentially influenced by the Eastern Sanitary Landfill, are not utilized as potable water supply sources; all communities in the vicinity of the Eastern Sanitary Landfill are connected to the public drinking water system. The Fall 2023 groundwater and surface water results indicate no impact to local groundwater and surface water except in the area of the previously reported fuel oil UST release. It is likely that some of these detections may be attributed to another source than the landfill cells.

The MDE clean-up standard exceedances of iron and manganese, along with pH readings below the SMCL pH range for many wells, have historically been attributed to natural background levels. Sentinel monitoring well GWM-15D and downgradient monitoring well GWM-19D are used to investigate groundwater mercury concentrations above the MCL for wells GWM-12 and SMW-32 at the relative point of compliance (RPOC). Organochloride pesticides will continue to be assessed for monitoring wells GWM-2, GWM-4, GWM-9, GWM-16D, GWM-17S, and GWM-17D.

Interior LFG probes ESLF006A, ESLF006B, and ESLF008A typically have high methane readings that fluctuate and are monitored on a monthly occurrence. Perimeter LFG probes in this area did not have methane when monitored during this reporting period, and confirm that high methane readings in this area do not reach the property boundary. LFG perimeter probes will continue to be monitored on a quarterly occurrence.

The February 2023 submission of the ESL EMP is currently under review by MDE.

10.0 REFERENCES

United States Environmental Protection Agency (USEPA). 2009. *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance*. EPA 530/R-09-007. Office of Resource Conservation and Recovery, Washington D.C. March.

———. 2015. *ProUCL Version 5.1.002 Technical Guide, Statistical Software for Environmental Applications for Data Sets with and without Nondetect Observations*. October.

TABLES

Tables 4-1 through 4-4, 5-3, 6-1 and 6-2 are located in report text

Table 2-1
Refuse Disposal Permit #2020-WMF-0052A Requirements
July - December 2023

Per permit requirement:

III.D.5 Leak Detection: In November 2014 the leachate lagoon was decommissioned in accordance with MDE's approval letter dated, September 25, 2014.

III.D.8.a Total volume of leachate and other contaminated liquids collected and disposed of in the sanitary sewer.

Month	Gallons
July	892,000
August	781,000
September	599,000
October	529,000
November	503,000
December	1,209,000

Note:

A newly constructed pump station began operation November 21, 2016. It collects and pumps leachate from Phases I-IV, wastewater from the administration buildings, and wastewater from the transfer stations to the sanitary sewer. The total volume reported is calculated from the pump station flow meter.

III.D.8.c See 111.D.8.a

III.D.8.e Summary of chemical analyses of Eastern Sanitary Landfill leachate, performed by Baltimore County Bureau of Utilities' laboratory:

Date	Total Iron	Zinc	pH	BOD	COD	TSS	Ammonia
7/5/2023	14.092	0.02	7.08	53	650	37	466.5
8/2/2023	8.105	<0.01	7.31	51	713	26	392.8
9/6/2023	8.279	0.01	7.31	C	740	27	414.2
10/17/2023	4.048	<0.01	7.9	61	733	56	501.4
11/7/2023	22.432	0.12	7.87	78	204	26	487.4
12/5/2023	35.862	0.12	7.62	31	468	23	356.8

Notes:
1) All values are expressed in mg/L, except pH
C - BOD did not meet depletion requirements for method.

III.D.8.f Data presented for cumulative precipitation is gathered from a rain gauge.
Total precipitation (inches): 26.53

Month	**Inches**
July	6.34
August	3.34
September	4.32
October	1.25
November	3.08
December	8.20

III.E.1 Monitoring well levels from July - December 2023

Well ID/Date	**7/25/2023**	**8/16/2023**	**9/5/2023**	**10/27/2023**	**11/2/2023**	**12/13/2023**
GWM-1	60.51	60.50	60.59	60.71	60.72	60.73
GWM-2	49.74	49.86	49.97	50.02	50.52	50.99
GWM-3	32.05	32.15	32.24	32.47	32.52	32.88
GWM-4	25.80	25.96	26.12	26.51	26.55	26.77
GWM-5A	26.70	26.76	26.84	27.11	27.14	27.26
GWM-6	41.35	41.42	41.43	41.65	41.68	41.84
GWM-7	DRY	DRY	DRY	DRY	DRY	DRY
GWM-8	26.29	26.37	26.46	26.66	26.79	26.80
GWM-9	20.35	20.12	20.29	20.52	20.57	20.77
GWM-10	49.56	49.47	49.51	51.90	51.62	50.41
GWM-11	24.35	24.50	24.64	24.97	25.05	25.19
GWM-12	47.78	47.90	47.94	48.09	48.29	48.29
GWM-14	11.27	11.36	11.39	11.52	11.62	11.77
GWM-15D	8.44	8.56	8.59	8.71	8.85	8.89
GWM-16S	49.41	49.42	49.42	49.43	49.43	49.44
GWM-16D	94.44	94.34	94.35	94.67	95.03	95.15
GWM-17S	10.36	10.44	10.61	10.77	10.79	10.60
GWM-17D	12.82	12.94	13.03	13.24	13.36	13.42
GWM-19D	43.14	43.32	43.33	43.46	43.68	43.74
Piezometer 3	34.11	34.10	34.09	34.16	34.17	34.27

Notes:
1) All readings are in feet, from top of protective casing to water surface.

Table 2-2
Landfill Gas Probe Monitoring Results
3rd Quarter 2023

Device ID	Date/Time	CH4 (%)	CO2 (%)	O2 (%)	Balance (%)	Barometric Pressure (Hg)	Relative Pressure (H20)
ESLF0004	7/27/2023 8:46	0	2.9	18.1	79	29.95	0.07
ESLF0005	7/27/2023 10:38	0	2.9	18.5	78.6	29.91	-0.02
ESLF005A	7/27/2023 10:34	0	2.7	18.5	78.8	29.93	-0.02
ESLF0006	7/27/2023 10:22	0	7	13.9	79.1	29.9	0.06
ESLF006A	7/27/2023 10:25	39.9	35.4	1.3	23.4	29.91	0.08
ESLF006B	7/27/2023 10:28	35.2	33.7	1.6	29.5	29.94	-0.01
ESLF0008	7/27/2023 10:58	0	2.9	18.3	78.8	29.88	-0.03
ESLF008A	7/27/2023 10:54	38.6	44.6	0.4	16.4	29.87	-0.04
ESLF0009	7/27/2023 10:48	0	5.5	14.6	79.9	29.87	-0.02
ESLF0010	7/27/2023 11:17	0	6	16.2	77.8	29.89	-0.01
ESLF011A	7/27/2023 11:26	0	0.1	21	78.9	29.87	0.03
ESLF0013	7/27/2023 11:54	0	3.8	17.6	78.6	29.82	-0.01
ESLF0014	7/27/2023 12:06	0	5	16.8	78.2	29.82	-0.02
ESLF015A	7/27/2023 12:10	0	10.5	11.7	77.8	29.83	-0.02
ESLF0016	7/27/2023 10:08	0	9.4	13.2	77.4	29.81	0.01
ESLF0017	7/27/2023 10:05	0	9.9	12.7	77.4	29.81	0.07
ESLF017A	7/27/2023 10:01	0	10.9	13	76.1	29.81	0.05
ESLF0018R	7/27/2023 9:58	0	0.8	19.8	79.4	29.81	0.04
ESLF0019	7/27/2023 9:54	0	4.2	17.5	78.3	29.82	0.04
ESLF0020R	7/27/2023 9:49	0	7	14.3	78.7	29.81	-0.02
ESLF0021	7/27/2023 9:45	0	0.2	20.2	79.6	29.88	0.04
ESLF0022	7/27/2023 9:36	0	12.9	9.3	77.8	29.9	0.04
ESLF0023	7/27/2023 9:28	0	13.7	9.3	77	29.91	0.03
ESLF0024	7/27/2023 9:11	0	4	17.5	78.5	29.88	0.02
ESLF0025	7/27/2023 9:08	0	7.1	14.1	78.8	29.89	-0.06
ESLF025A	7/27/2023 8:58	0	6.5	16.2	77.3	29.95	0.91
ESLF0026	7/27/2023 8:51	0	6.7	15.5	77.8	29.95	0.06
ESLF0038R	7/27/2023 11:23	0	0.1	21.1	78.8	29.88	0.45
ESLFTB10	7/27/2023 11:43	0	4.7	15.5	79.8	29.84	-0.01
ESLF00X1	7/27/2023 11:11	0	0.2	20.9	78.9	29.86	0.38
ESLF00X2	7/27/2023 11:13	0	4.6	15.7	79.7	29.9	0
ESLF00X3	7/27/2023 11:14	0	0.3	20.9	78.8	29.9	0.06
ESLF00X4	7/27/2023 11:15	0	6.5	10.1	83.4	29.89	0.03

* - Interior probes
Highlighted Cells - LFG >= 5%

Table 2-2 cont.
Landfill Gas Probe Monitoring Results
4th Quarter 2023

Device ID	Date/Time	CH4 (%)	CO2 (%)	O2 (%)	Balance (%)	Barometric Pressure (Hg)	Relative Pressure (H20)
ESLF0004	11/6/2023 12:26	0	1	20.1	78.9	30.03	-0.01
ESLF0005	11/6/2023 13:46	0	1.8	19.8	78.4	30	0.01
ESLF005A	11/6/2023 13:40	0	5.7	15.1	79.2	29.99	0.01
ESLF0006	11/6/2023 13:30	0	6.4	16.5	77.1	29.98	0
ESLF006A	11/6/2023 13:33	25.3	28	1.6	45.1	29.97	-0.02
ESLF006B	11/6/2023 13:36	25	31.5	0.8	42.7	30	0.01
ESLF0008	11/6/2023 13:57	0	1.3	20	78.7	29.94	0.05
ESLF008A	11/6/2023 13:54	22.6	32.5	0.8	44.1	30.01	0.05
ESLF0009	11/6/2023 14:00	0	5.6	15.6	78.8	29.96	0.06
ESLF0010	11/6/2023 14:17	0	0.8	21.1	78.1	29.93	0.03
ESLF011A	11/6/2023 14:24	0	0.1	21.3	78.6	29.92	0.07
ESLF0013	11/6/2023 14:47	0	2.6	19.7	77.7	29.88	0.02
ESLF0014	11/6/2023 14:56	0	3.4	18.8	77.8	29.86	0.04
ESLF015A	11/6/2023 14:59	0	9.6	13	77.4	29.86	0.04
ESLF0016	11/6/2023 13:20	0	5.9	16.1	78	29.86	0.01
ESLF0017	11/6/2023 13:15	0	8.1	14.3	77.6	29.9	0
ESLF017A	11/6/2023 13:12	0	8.8	13.1	78.1	29.89	-0.01
ESLF0018R	11/6/2023 13:08	0	6	16.3	77.7	29.88	0
ESLF0019	11/6/2023 13:04	0	2.3	19.3	78.4	29.88	-0.02
ESLF0020R	11/6/2023 13:20	0	6.8	15.1	78.1	29.9	0.02
ESLF0021	11/6/2023 12:58	0	0.3	20.3	79.4	29.95	-0.01
ESLF0022	11/6/2023 12:55	0	2.6	10.1	87.3	29.98	-0.58
ESLF0023	11/6/2023 12:49	0	13.1	9.5	77.4	29.95	0.05
ESLF0024	11/6/2023 12:46	0	2.6	18.8	78.6	29.97	0.02
ESLF0025	11/6/2023 12:43	0	7.1	14.7	78.2	29.95	0.05
ESLF025A	11/6/2023 12:39	0	0.1	18.4	81.5	30.02	0.45
ESLF0026	11/6/2023 12:34	0	2.8	18.6	78.6	30.02	-0.01
ESLF0038R	11/6/2023 14:20	0	0.1	21.2	78.7	29.93	0.01
ESLFTB10	11/6/2023 14:37	0	3.5	18.4	78.1	29.9	0.06
ESLF00X1	11/6/2023 14:06	0	0.2	20.9	78.9	29.93	0.12
ESLF00X2	11/6/2023 14:08	0	6.3	14.5	79.2	29.94	0.04
ESLF00X3	11/6/2023 14:09	0	0.3	21	78.7	29.95	0.57
ESLF00X4	11/6/2023 14:12	0	3.1	17.7	79.2	29.95	0.04

* - Interior probes
Highlighted Cells - LFG >= 5%

Table 2-3
On-Site Structures Monitoring
3rd and 4th Quarters 2023

Date: 09/06/23
Sampler: Brooke Zibell
Time: 11:00
Weather: Mostly sunny, mid 80s

Structure ID	CH_4 (ppm)	Comments
Administration Building	0 ppm	
Maintenance Building	20 ppm	
Operations Trailer	0 ppm	
Scalehouse	0 ppm	
Waste Transfer Stations	40 ppm	IT Room
	110 ppm	Fire Suppression Room
Recycle Transfer Station	0 ppm	
LFGTE Building[1]	0 ppm	Engine Room
	0 ppm	Office Trailer

Date: 12/19/23
Sampler: Laura Russell
Time: 15:00
Weather: Mostly cloudy, high 30s

Structure ID	CH_4 (ppm)	Comments
Administration Building	0 ppm	
Maintenance Building	40 ppm	
Operations Trailer	0 ppm	
Scalehouse	0 ppm	
Waste Transfer Stations	20 ppm	IT Room
	60 ppm	Fire Suppression Room
Recycle Transfer Station	0 ppm	
LFGTE Building[2]	500 ppm	Engine Room
	0 ppm	Office Trailer

Notes:

1) LFGTE = Landfill Gas to Energy
2) 1 = LFGTE Building scan performed on 8/14/23 by SCS Field Services.
3) 2 = LFGTE Building scan performed on 11/27/23 by SCS Field Services.

Table 3-1
Sampling Location IDs and Parameters

Sampling Location	VOCs	Water Quality	Metals	Pesticides
GWM-1	*	*	*	*
GWM-2	*	*	*	*
GWM-3	*	*	*	
GWM-4	*	*	*	*
GWM-5A	*	*	*	
GWM-6	*	*	*	
GWM-8	*	*	*	
GWM-9	*	*	*	*
GWM-10	*	*	*	
GWM-10 (DUP)	*	*	*	
GWM-11	*	*	*	*
GWM-12	*	*	*	
GWM-14	*	*	*	
GWM-15D	*	*	*	
GWM-16D	*	*	*	
GWM-17S	*	*	*	
GWM-17D	*	*	*	
GWM-19D	*	*	*	
SMW-13	*	*	*	
SMW-32	*	*	*	
SW-1	*	*	**	

** = Disolved Metals

Table 3-2
Monitoring Parameters for Volatile Organic Compounds and Pesticides

Volatile Organic Compounds	Method	MDE PQLs (µg/L)	Actual PQLs (µg/L)	Holding Time
Acetone	SW846 8260B	5	10	14 days
Acrylonitrile	SW846 8260B	5	5	14 days
Benzene	SW846 8260B	1	1	14 days
Bromochloromethane	SW846 8260B	1	1	14 days
Bromodichloromethane	SW846 8260B	1	1	14 days
Bromoform	SW846 8260B	1	1	14 days
Bromomethane	SW846 8260B	1	1	14 days
2-Butanone	SW846 8260B	5	10	14 days
Carbon disulfide	SW846 8260B	1	1	14 days
Carbon tetrachloride	SW846 8260B	1	1	14 days
Chlorobenzene	SW846 8260B	1	1	14 days
Chloroethane	SW846 8260B	1	1	14 days
Chloroform	SW846 8260B	1	1	14 days
Chloromethane	SW846 8260B	1	1	14 days
Dibrimochloromethane	SW846 8260B	1	1	14 days
1,2-Dibromo-3-chloropropane	SW846 8011	0.04	0.02	14 days
1,2-Dibromoethane (EDB)	SW846 8011	0.04	0.02	14 days
Dibromomethane	SW846 8260B	1	1	14 days
1,2 - Dichlorobenzene	SW846 8260B	1	1	14 days
1,4 - Dichlorobenzene	SW846 8260B	1	1	14 days
Trans-1,4-dichloro-2-butene	SW846 8260B	5	3	14 days
1,1-Dichloroethane	SW846 8260B	1	1	14 days
1,2-Dichloroethane	SW846 8260B	1	1	14 days
1,1-Dichloroethene	SW846 8260B	1	1	14 days
Cis-1,2-Dichloroethene	SW846 8260B	1	1	14 days
Trans-1,3-Dichloropropene	SW846 8260B	1	1	14 days
Cis-1,3-Dichloropropene	SW846 8260B	1	1	14 days
Ethylbenzene	SW846 8260B	1	1	14 days
2-Hexanone	SW846 8260B	5	5	14 days
Iodomethane	SW846 8260B	1	1	14 days
4-Methyl-2-pentanone	SW846 8260B	5	5	14 days
Methyl Tertiary Butyl Ether	SW846 8260B	2	1	14 days
Methylene Chloride	SW846 8260B	1	1	14 days
Styrene	SW846 8260B	1	1	14 days
1,1,1,2-Tetrachloroethane	SW846 8260B	1	1	14 days
1,1,2,2-Tetrachloroethane	SW846 8260B	1	1	14 days
Tetrachloroethene	SW846 8260B	1	1	14 days
Toluene	SW846 8260B	1	1	14 days
1,1,1-Trichloroethane	SW846 8260B	1	1	14 days

Table 3-2 (continued)
Monitoring Parameters for Volatile Organic Compounds and Pesticides

Volatile Organic Compounds	Method	MDE PQLs (µg/L)	Actual PQLs (µg/L)	Holding Time
1,1,2-Trichloroethane	SW846 8260B	1	1	14 days
Trichloroethene	SW846 8260B	1	1	14 days
Trichloroflouromethane	SW846 8260B	1	1	14 days
1,2,3-Trichloropropane	SW846 8260B	1	2	14 days
Vinyl acetate	SW846 8260B	1	5	14 days
Vinyl chloride	SW846 8260B	1	1	14 days
mp-Xylene	SW846 8260B	1	2	14 days
o-Xylene	SW846 8260B	1	1	14 days
4,4'-DDD	SW846 8081B	0.023	0.0037	7 days*
4,4'-DDE	SW846 8081B	0.023	0.0037	7 days*
4,4'-DDT	SW846 8081B	0.023	0.0037	7 days*
Aldrin	SW846 8081B	0.023	0.0037	7 days*
alpha-BHC	SW846 8081B	0.023	0.0037	7 days*
beta-BHC	SW846 8081B	0.023	0.0037	7 days*
Chlordane	SW846 8081B	0.46	0.093	7 days*
delta-BHC	SW846 8081B	0.023	0.0037	7 days*
Dieldrin	SW846 8081B	0.023	0.0037	7 days*
Endosulfan I	SW846 8081B	0.023	0.0037	7 days*
Endosulfan II	SW846 8081B	0.023	0.0037	7 days*
Endosulfan Sulfate	SW846 8081B	0.023	0.0037	7 days*
Endrin	SW846 8081B	0.023	0.0037	7 days*
Endrin Aldehyde	SW846 8081B	0.023	0.0037	7 days*
gamma-BHC	SW846 8081B	0.023	0.0037	7 days*
Heptachlor	SW846 8081B	0.023	0.0037	7 days*
Heptachlor Epoxide	SW846 8081B	0.023	0.0037	7 days*
Methoxychlor	SW846 8081B	0.023	0.0037	7 days*
Toxaphene	SW846 8081B	0.93	0.19	7 days*

Notes:

1) * = 7 days after sampling then 40 days after sample extraction
2) PQL = Practical Quantitation Limit
3) Shading = Actual Lab PQL is greater than MDE PQL

Table 3-3
Monitoring Parameters for Water Quality Parameters and Metals

Water Quality and Metals	Method	MDE PQLs (mg/L)*	Actual PQLs (mg/L)*	Holding Time
pH	Field	0.1 (SU)	0.1 (SU)	15 minutes
Temperature	Field	1°C/F	1°C/F	NA
Alkalinity	S2320B-97	1	5	14 days
Hardness	S2340C-97	0.5	0.73	180 days
Chloride	EPA 300.0	0.39	2	28 days
Specific Conductance	Field/EPA 120.1	1	1	28 days
Nitrate	EPA 300.0	0.06	0.2	48 hours
Chemical Oxygen Demand	EPA 410.4	10	15	28 days
Turbidity	Field/EPA 180.1	0.11 (NTU)	0.11 (NTU)	48 hours
Ammonia	D6919-09	1	0.1	28 days
Sulfate	EPA 300.0	0.38	2	28 days
Total Dissolved Solids	S2540C-97	10	25	7 days
Total Antimony	SW846 6020A	0.002	0.0022	180 days
Total Arsenic	SW846 6020A	0.002	0.0033	180 days
Total Barium	SW846 6020A	0.01	0.0056	180 days
Total Beryllium	SW846 6020A	0.002	0.0011	180 days
Total Cadmium	SW846 6020A	0.004	0.0011	180 days
Total Chromium	SW846 6020A	0.01	0.0022	180 days
Total Calcium	SW846 6020A	0.08	0.11	180 days
Total Cobalt	SW846 6020A	0.01	0.0056	180 days
Total Copper	SW846 6020A	0.01	0.0056	180 days
Total Iron	SW846 6020A	0.005	0.056	180 days
Total Lead	SW846 6020A	0.002	0.0022	180 days
Total Nickel	SW846 6020A	0.011	0.0056	180 days
Total Magnesium	SW846 6020A	0.004	0.11	180 days
Total Manganese	SW846 6020A	0.01	0.0056	180 days
Total Mercury	SW846 7470A	0.0002	0.0005	28 days
Total Potassium	SW846 6020A	0.39	0.11	180 days
Total Selenium	SW846 6020A	0.035	0.0056	180 days
Total Silver	SW846 6020A	0.01	0.0022	180 days
Total Sodium	SW846 6020A	0.2	0.11	180 days
Total Thallium	SW846 6020A	0.002	0.0011	180 days
Total Vanadium	SW846 6020A	0.01	0.0022	180 days
Total Zinc	SW846 6020A	0.01	0.0056	180 days
Dissolved Antimony	EPA 200.7	0.002	0.020	180 days
Dissolved Arsenic	EPA 200.7	0.002	0.0080	180 days
Dissolved Barium	EPA 200.7	0.01	0.010	180 days
Dissolved Beryllium	EPA 200.7	0.002	0.0040	180 days

All Dissolved parameters are filtered in the lab

"Actual PQLs" are the Labatory Reporting Limit

Table 3-3 Continued
Monitoring Parameters for Water Quality Parameters and Metals

Water Quality and Metals	Method	MDE PQLs (mg/L)*	Actual PQLs (mg/L)*	Holding Time
Dissolved Cadmium	EPA 200.7	0.004	0.0020	180 days
Dissolved Chromium	EPA 200.7	0.01	0.0050	180 days
Dissolved Calcium	EPA 200.7	0.08	0.11	180 days
Dissolved Cobalt	EPA 200.7	0.01	0.0050	180 days
Dissolved Copper	EPA 200.7	0.01	0.010	180 days
Dissolved Iron	EPA 200.7	0.005	0.060	180 days
Dissolved Lead	EPA 200.7	0.002	0.0060	180 days
Dissolved Nickel	EPA 200.8	0.011	0.0050	180 days
Dissolved Magnesium	EPA 200.7	0.004	0.10	180 days
Dissolved Manganese	SW846 6010C	0.01	0.0050	180 days
Dissolved Mercury	EPA 200.8	0.0002	0.00020	28 days
Dissolved Potassium	EPA 200.7	0.39	0.50	180 days
Dissolved Selenium	EPA 200.7	0.035	0.020	180 days
Dissolved Silver	EPA 200.7	0.01	0.0040	180 days
Dissolved Sodium	EPA 200.7	0.2	0.50	180 days
Dissolved Thallium	EPA 200.8	0.002	0.0010	180 days
Dissolved Vanadium	EPA 200.7	0.01	0.0050	180 days
Dissolved Zinc	EPA 200.8	0.01	0.0050	180 days

All Dissolved parameters are filtered in the lab
"Actual PQLs" are the Labatory Reporting Limit

Table 3-4 - Relative Percent Difference (RPD) for Detected Parameters Blind Duplicate Sample Analysis

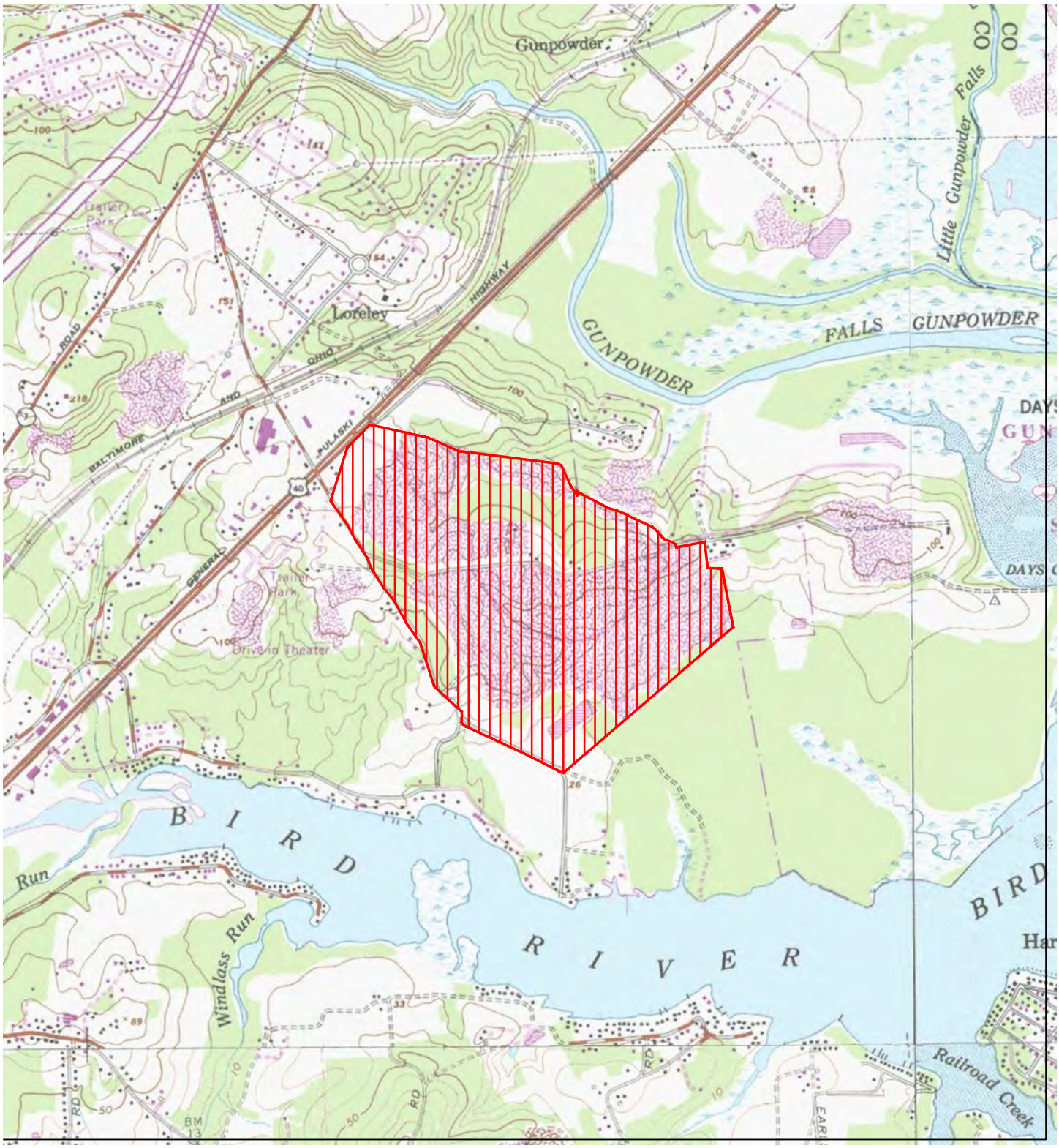
Name: Eastern Sanitary Landfill

Sampling Event 9/13/2023

Parameter Name	Units	GWM-10	MW-15A	RPD
Barium, Total	mg/L	0.028	0.027	3.70%
Cadmium, Total	mg/L	0.005	0.0038	31.58%
Calcium, Total	mg/L	2.3	2.2	4.55%
Cobalt, Total	mg/L	0.031	0.03	3.33%
Copper, Total	mg/L	0.025	0.029	13.79%
Iron, Total	mg/L	0.23	0.22	4.55%
Magnesium, Total	mg/L	1	1	0.00%
Manganese, Total	mg/L	0.1	0.098	2.04%
Nickel, Total	mg/L	0.056	0.056	0.00%
Potassium, Total	mg/L	1.5	1.4	7.14%
Sodium, Total	mg/L	3	2.8	7.14%
Zinc, Total	mg/L	0.045	0.045	0.00%
Ammonia-N	mg/L	0.189	0.188	0.53%
Hardness	mg/L	10.2	10.3	0.97%
Sulfate	mg/L	16.5	16.5	0.00%
Total Dissolved Solids	mg/L	50	53	5.66%

Shading - RPD greater than 20%
NA - Not Applicabe
ND - Non detect

FIGURES



Base maps from White Marsh (dated 1986), Edgewood (dated 1985), Gunpowder Neck (dated 1986), and Middle River (dated 1985) USGS 7½ minute quadrangle.

LEGEND

Existing Property Boundary

0 2,000 4,000 6,000

SCALE IN FEET

N

Site Location Map

Eastern Sanitary Landfill
Solid Waste Management Facility
Baltimore County, Maryland

October 2015	Scale: 1" = 2,000'	M13141

ARM Group Inc.
Earth Resource Engineers and Consultants
www.armgroup.net

Figure 1-1

\\armgroup.lcl\CorpData\Projects\Baltimore County Solid Waste\M13141 On Call Solid Waste Services\ESL Operations Manual Update\Drwgs\1_Site Location Map\M13141 ESL Site Location Map.dwg Plotted: October 6, 2015

LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (FT.)
- EXISTING PROPERTY BOUNDARY
- PERMITTED LANDFILL BOUNDARY
- EXISTING LANDFILL PHASE BOUNDARY
- EXISTING CAPPED AREA (APPROXIMATE)
- EXISTING ASH DISPOSAL AREA (APPROXIMATE)
- EXISTING SEDIMENT BASIN
- EXISTING STORMWATER POND
- EXISTING WATERCOURSE
- EXISTING TREELINE
- EXISTING TREE
- EXISTING BUILDING / STRUCTURE
- EXISTING PAVED ROAD
- EXISTING UNPAVED ROAD
- EXISTING FENCELINE
- EXISTING LITTER CONTROL FENCE
- EXISTING WALL
- EXISTING JERSEY BARRIER
- EXISTING CULVERTS
- EXISTING GUIDERAIL
- EXISTING LEACHATE GRAVITY MAIN
- EXISTING LEACHATE FORCE MAIN
- EXISTING OVERHEAD ELECTRIC
- EXISTING UNDERGROUND ELECTRIC
- EXISTING SANITARY SEWER LINE WITH MANHOLE
- EXISTING WATER LINE
- EXISTING RIP-RAP
- EXISTING STOCKPILE
- EXISTING UTILITY POLE
- EXISTING SURVEY CONTROL POINT
- EXISTING SUPER SILT FENCE
- EXISTING CONCRETE PAD
- EXISTING WALL
- EXISTING COMMUNICATION TOWER
- EXISTING ASBESTOS & SPECIAL WASTE AREA
- EXISTING PARK / BALL FIELD

- EXISTING LEACHATE COLLECTION PIPE
- 14" DIA. LANDFILL GAS HEADER
- 12" DIA. LANDFILL GAS HEADER
- 10" DIA. LANDFILL GAS HEADER
- 8" DIA. LANDFILL GAS HEADER
- 8" DIA. LANDFILL GAS LATERAL
- 6" DIA. LANDFILL GAS LATERAL
- 4" DIA. LANDFILL GAS LATERAL
- 3" DIA. LANDFILL GAS LATERAL

- ESLF0006 — EXISTING COMPLIANCE LANDFILL GAS MONITORING PROBE
- ESLF0006 — EXISTING INTERNAL LANDFILL GAS MONITORING PROBE
- EXISTING LANDFILL GAS MANIFOLD W/ REMOTE WELLHEADS
- EXISTING HYDRANT
- TR — EXISTING AIR INJECTION WELL VALVE VAULT BOX (AIR CURTAIN SYSTEM)
- WV1 — EXISTING LANDFILL GAS VENT WELL (PASSIVE LFG BARRIER / VENT TRENCH)
- V1 — EXISTING LANDFILL GAS VENT (PASSIVE LFG BARRIER / VENT TRENCH)
- M-5 — EXISTING LANDFILL GAS MIGRATION CONTROL WELLS
- W-15 — EXISTING LANDFILL GAS EXTRACTION WELL
- CT-6 — EXISTING LANDFILL GAS CONDENSATE TRAP
- T-8 — EXISTING REMOTE LANDFILL GAS WELL HEAD / WELL HEAD
- V-5 — EXISTING LANDFILL GAS VALVE
- L-6 — EXISTING LANDFILL GAS EXTRACTION FROM LEACHATE COLLECTION CLEANOUT RISER
- GWM-2 — EXISTING GROUNDWATER MONITORING WELL
- SMW-32 — EXISTING GROUNDWATER SUPPLY MONITORING WELL
- P2006-03 — EXISTING PIEZOMETER
- MH-0 — EXISTING MANHOLE

SURVEY NOTES:

1. PLAN BASED ON MARYLAND STATE PLANE COORDINATE SYSTEM NAD 83/91 (HORIZONTAL DATUM) AND NAVD 88 (VERTICAL DATUM).
2. TOPOGRAPHY SHOWN IS FROM AERIAL PHOTOGRAPHY DATED JANUARY 6, 2022, PREPARED BY APEX COMPANIES ,LLC. SUBSURFACE AND UTILITIES UPDATED PER BALTIMORE COUNTY FIELD SURVEY OF VARIOUS SITE IMPROVEMENT FEATURES AND HISTORICAL MODIFICATIONS.
3. LIMITS OF PVC CAP ALONG 2021 ASH LANDFILLING ACTIVITY BOUNDARY ARE APPROXIMATE BASED ON ONSITE GPS RECORDS.
4. PHASE XII WASTE PLACEMENT BEGAN ON FEBRUARY 22, 2021.

HOUSEHOLD HAZARDOUS WASTE BUILDING
COMMUNICATION TOWER COMPOUND
SITE ENTRANCE
RESIDENTS' DROP-OFF CENTER
COMPOST PROCESSING CENTER
LEVEL SPREADER
FOREBAY NO. 3
WATER QUALITY BASIN NO. 3
FORCE MAIN METER VAULT
BGE METER
RECYCLING TRANSFER STATION
FUEL CENTER
ADMINISTRATION BUILDING MAINTENANCE BUILDING
SCALE HOUSE
OFFICE TRAILER
WASTE TRANSFER STATION
SEDIMENT BASIN NO. 2
FIRE SUPPRESSION PUMP HOUSE AND TANK
MULCH PROCESSING AREA
PROPERTY BOUNDARY
PERIMETER FENCE
STORAGE BARN
MULTIPHASE EXTRACTION SYSTEM (MPX)
EAST DITCH INTERIM TRAPPING DEVICE
LANDFILL ACCESS ROAD
SEDIMENT BASIN NO. 4
STOCKPILE #4B
FOREBAY NO. 2
EAST DITCH
FUTURE PHASE XIII
STORAGE AREA
FOREBAY NO. 1
SEDIMENT BASIN NO. 1
PUMP STATION
LANDFILL GAS TO ENERGY FACILITY
VALVE MANHOLE AND MH-A
LANDFILL GAS COLLECTION FLARE STATION
ASBESTOS AND SPECIAL WASTE AREA
BIRD RIVER DREDGE SPOILS LAGOON
COMMUNITY BALL FIELD
AIR CURTAIN BUILDING
PHASE I
PHASE II
PHASE III
PHASE IV
PHASE V
PHASE VI
PHASE VII
PHASE VIII
PHASE IX
PHASE X
PHASE XI
PHASE XII
ASH DISPOSAL AREA
PERIMETER FENCE
OBESLEY ROAD
U.S. 40
PULASKI HIGHWAY
LEACHATE DISPOSAL MANHOLE
SALT BARN
TEMPORARY STORAGE AREA
5A
STOCKPILE # 2
WEST DITCH
HYDRANT
ALLENDER ROAD
COMMUNICATIONS & PHONE HUT
SOUTH DITCH
LORELEY BEACH ROAD NORTH
BOWERMAN ROAD
DATS COVE ROAD
NORTH DITCH

0 200 400 600
SCALE IN FEET

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BALTIMORE COUNTY MARYLAND

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License No. _____.
Expiration Date _____.

P. W. A. DIR. NO.	CONTRACT NO.	DATE	REVISION	BY

DESIGNED TMD
DRAWN TMR
CHECKED CPS

ARM Group LLC
9175 Guilford Road, Suite 310
Columbia, MD 21046
www.armgroup.net

BUREAU OF SOLID WASTE MANAGEMENT
APPROVED _____ CHIEF
DATE _____

DEPARTMENT OF PUBLIC WORKS
APPROVED _____ DIRECTOR
DATE _____

LEVEL BK.	KEY SHEET
DETAIL BK.	POSITION SHEET

SCALE
PLAN: 1" = 200'
PROFILE HOR. VERT.

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF SOLID WASTE MANAGEMENT
EASTERN SANITARY LANDFILL SOLID WASTE MANAGEMENT FACILITY

2022 OVERALL SITE PLAN

CONTRACT NO. M13141-5
JOB ORDER NO.
FLYOVER DATE 01/06/2022
SHEET _____ OF _____
DWG. NO. 3
FILE:

Feb 18, 2022 - 10:31am User: tl020
P:\Baltimore County Solid Waste\M13141 On Call Solid Waste Services\Task 5 - Tonnage Report\2021 Annual Tonnage Report\Dwg\Production\2021 Tonnage Report\3-Overall Site Map.dwg

LEGEND

- EXISTING GROUND SURFACE CONTOURS (10')
- EXISTING PROPERTY BOUNDARY
- EXISTING LANDFILL PERMIT BOUNDARY
- EXISTING LANDFILL PHASE BOUNDARY
- EXISTING SURFACE STREAM/TRIBUTARY
- EXISTING SURFACE WATER FEATURE
- EXISTING BUILDINGS
- EXISTING PAVED ROAD
- EXISTING UNPAVED ROAD
- EXISTING CHAIN LINK FENCE
- EXISTING LITTER CONTROL FENCE
- EXISTING PVC CAP LIMITS
- EXISTING ASH DISPOSAL AREA (APPROXIMATE)
- GWM-6 — EXISTING MONITORING WELL SCREENED IN ARUNDEL FORMATION
- SMW-32 — EXISTING MONITORING WELL SCREENED IN PATAPSCO FORMATION
- SMW-32 — EXISTING MONITORING WELL SCREENED IN PATUXENT FORMATION
- P2006-03 — EXISTING PIEZOMETER
- SW-01 — EXISTING SURFACE WATER MONITORING POINT

SURVEY NOTES:

1. PLAN BASED ON MARYLAND STATE PLANE COORDINATE SYSTEM NAD 83/91 (HORIZONTAL DATUM) AND NAVD 88 (VERTICAL DATUM).
2. TOPOGRAPHY SHOWN IS FROM AERIAL PHOTOGRAPHY DATED DECEMBER 31, 2019, PREPARED BY CME ENGINEERING. SUBSURFACE AND UTILITIES UPDATED PER BALTIMORE COUNTY FIELD SURVEY OF VARIOUS SITE IMPROVEMENT FEATURES AND HISTORICAL MODIFICATIONS.

NOTES:

1. GWM-7 DOES NOT READILY PRODUCE WATER AND IS NOT SAMPLED AS PART OF THE GROUNDWATER SAMPLING PROGRAM; GAUGED MONTHLY.

HOUSEHOLD HAZARDOUS WASTE BUILDING
COMMUNICATION TOWER COMPOUND
SITE ENTRANCE
RESIDENTS' DROP-OFF CENTER
GWM-19D
GWM-7 SEE NOTE 1 (THIS SHEET)
FORCE MAIN METER VAULT
BGE METER
WASTE TRANSFER STATION
RECYCLING TRANSFER STATION
FUEL CENTER
ADMINISTRATION BUILDING / MAINTENANCE BUILDING
SCALE HOUSE
YARD MATERIALS PROCESSING CENTER
LEVEL SPREADER
FOREBAY NO. 3
WATER QUALITY BASIN NO. 3
GWM-8
SEDIMENT BASIN NO. 2
DAYS COVE ROAD
NORTH DITCH
SMW-32
OFFICE TRAILER
FIRE SUPPRESSION PUMP HOUSE AND TANK
SMW-13
GWM-15
GWM-14
WOOD WASTE PROCESSING AREA
LEACHATE SUMP
STORAGE BARN
EAST DITCH
MULTIPHASE EXTRACTION SYSTEM (MPX)
GWM-16D
PROPERTY BOUNDARY
PERIMETER FENCE
LANDFILL ACCESS ROAD
VEGETATED EARTH STOCKPILE
SEDIMENT BASIN NO.4
VEGETATED EARTH STOCKPILE
TRAPPING DEVICE
FOREBAY NO. 2
GWM-12
GWM-5A
EAST DITCH
FOREBAY NO. 1
SEDIMENT BASIN NO. 1
STORAGE AREA
GWM-17D
GWM-17S
SW-01
ASH DISPOSAL AREA
PERIMETER FENCE
ORDER ROAD
U.S. 40 PULASKI HIGHWAY
GWM-18S
GWM-18D
LEACHATE DISPOSAL MANHOLE
SALT BARN
GWM-1
WEST DITCH
STOCKPILE # 2
P2006-03
ASBESTOS AND SPECIAL WASTE AREA
LANDFILL GAS TO ENERGY FACILITY
LANDFILL GAS COLLECTION FLARE STATION
GWM-11
GWM-4
BIRD RIVER DREDGE SPOILS LAGOON
HYDRANT
ALLENDER ROAD
C&P HUT
GWM-2
SOUTH DITCH
GWM-3
GWM-10
LORELEY BEACH ROAD NORTH
AIR CURTAIN BUILDING
COMMUNITY BALL FIELD
SOUTH DITCH
BOWERMAN ROAD
LORELEY BEACH ROAD

450 225 0 450 900
GRAPHIC SCALE IN FEET

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BALTIMORE COUNTY MARYLAND

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License No. _____.
Expiration Date _____.

P. W. A. DIR. NO.	CONTRACT NO.	DATE	REVISION	BY

DESIGNED ARM
DRAWN SEH
CHECKED WJP

ARM Group LLC
9175 Guilford Road, Suite 310
Columbia, MD 21046
www.armgroup.net

BUREAU OF SOLID WASTE MANAGEMENT
APPROVED _____ CHIEF
DATE _____

DEPARTMENT OF PUBLIC WORKS
APPROVED _____ DIRECTOR
DATE _____

LEVEL BK. | KEY SHEET
DETAIL BK. | POSITION SHEET

SCALE
PLAN: 1" = 450'
PROFILE HOR. VERT.

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF SOLID WASTE MANAGEMENT
EASTERN SANITARY LANDFILL SOLID WASTE MANAGEMENT FACILITY

GROUNDWATER AND SURFACE WATER LOCATION MAP

FLYOVER DATE 12/31/2019

CONTRACT NO. M13141-5
JOB ORDER NO.
SHEET ____ OF ____
DWG. NO. 2
FILE:

Jun 11, 2020 - 8:59pm User: cschmer
\\armgroup.lat\CivilData\Projects\Baltimore County Solid Waste\M13141 On Call Solid Waste Services\Task 2 - Misc CAD, Routine Support\Dwg\Production\2019 Updates\2019 Tonnage Report\8-Groundwater Well Location Map_formation.dwg

LEGEND	
GROUNDWATER ELEVATION CONTOUR	25.0
GROUNDWATER ELEVATION INFERRED	
GROUNDWATER FLOW DIRECTION	
GROUNDWATER ELEVATION	21.31
GROUNDWATER ELEVATION (NOT MEASURED)	(0.00)
MONITORING WELL	38.94 GWM-8

NOTES:

1. EXISTING SITE FEATURES AND CONTOUR AND TOPOGRAPHIC INFORMATION SHOWN PROVIDED BY CME ENGINEERING. AERIAL IMAGERY FLOWN JANUARY 2021. HORIZONTAL DATUM NAD 1983. VERTICAL DATUM NADV 1988. MARYLAND STATE PLANE.
2. GROUNDWATER CONTOURS ARE BASED ON DATA COLLECTED SPTEMBER 2023 BY BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF SOLID WASTE MANAGEMENT.
3. WELL LOCATIONS ARE BASED ON DRAWING DATA PROVIDED SEPTEMBER 2019 BY BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF SOLID WASTE MANAGEMENT.

HOUSEHOLD HAZARDOUS WASTE BUILDING
COMMUNICATION TOWER COMPOUND
RESIDENTS' DROP-OFF CENTER
FORCE MAIN METER VAULT
BGE METER
WASTE TRANSFER STATION
RECYCLING TRANSFER STATION
FUEL STATION
YARD MATERIALS PROCESSING CENTER
ADMINISTRATIVE BUILDING
OFFICE TRAILER
20.86 GWM-6
18.41 GWM-14
DAYS COVE ROAD
NORTH DITCH
76.21 GWM-9
PERIMETER FENCE
WOOD WASTE PROCESSING AREA
BORROW AREA NORTH
FOREBAY NO. 2
VEGETATED EARTH STOCKPILE
97.28 GWM-16S
SALT BARN
LEACHATE DISPOSAL MANHOLE
BORROW AREA SOUTH
23.56 GWM-5A
EAST DITCH
FUTURE STORAGE AREA
FOREBAY NO. 1
SEDIMENT BASIN NO. 1
WEST DITCH
ASBESTOS AND SPECIAL WASTE AREA
LANDFILL GAS TO ENERGY FACILITY
21.09 GWM-17S
LANDFILL GAS COLLECTION FLARE STATION
78.69 GWM-2
62.66 GWM-3
24.69 GWM-4
BIRD RIVER DREDGE SPOILS LAGOON
SOUTH DITCH
COMMUNITY BALL FIELD

DESIGNED KP
DETAILED KP
CHECKED KP
APPROVED KP

Maryland ENVIRONMENTAL SERVICE

MARYLAND ENVIRONMENTAL SERVICE
ENVIRONMENTAL OPERATIONS GROUP

Dr. CHARLES GLASS, DIRECTOR
TIM FORD, GROUP DIRECTOR
JOHN AGNOLI, ENVIRONMENTAL SECTION CHIEF
KELSEY PEARCE, PROJECT MANAGER

BALTIMORE COUNTY DPW
BUREAU OF SOLID WASTE MANAGEMENT
EASTERN SANITARY LANDFILL
WHITE MARSH, MARYLAND

GROUNDWATER CONTOUR MAP SEPTEMBER 2023
PATAPSCO FORMATION

DATE
SEPTEMBER 2023

FIG 2-2

LEGEND	
GROUNDWATER ELEVATION CONTOUR	80.0
GROUNDWATER ELEVATION INFERRED	
GROUNDWATER FLOW DIRECTION	
GROUNDWATER ELEVATION	21.31
GROUNDWATER ELEVATION (NOT MEASURED)	(0.00)
MONITORING WELL	35.34 GWM-9

NOTES:

1. EXISTING SITE FEATURES AND CONTOUR AND TOPOGRAPHIC INFORMATION SHOWN PROVIDED BY CMS ENGINEERING. AERIAL IMAGERY FLOWN JANUARY 2021. HORIZONTAL DATUM NAD 1983. VERTICAL DATUM NADV 1988. MARYLAND STATE PLANE.
2. GROUNDWATER CONTOURS ARE BASED ON DATA COLLECTEDSEPTEMBER 2023 BY BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF SOLID WASTE MANAGEMENT.
3. WELL LOCATIONS ARE BASED ON DRAWING DATA PROVIDED SEPTEMBER 2018 BY BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF SOLID WASTE MANAGEMENT.

HOUSEHOLD HAZARDOUS WASTE BUILDING
COMMUNICATION TOWER COMPOUND
RESIDENTS' DROP-OFF CENTER
FORCE MAIN METER VAULT
BGE METER
WASTE TRANSFER STATION
RECYCLING TRANSFER STATION
FUEL STATION
YARD MATERIALS PROCESSING CENTER
ADMINISTRATIVE BUILDING
OFFICE TRAILER
WOOD WASTE PROCESSING AREA
18.84 GWM-6
DAYS COVE ROAD
NORTH DITCH
PERIMETER FENCE
BORROW AREA NORTH
FOREBAY NO. 2
14.68 GWM-12
VEGETATED EARTH STOCKPILE
SALT BARN
LEACHATE DISPOSAL MANHOLE
85.21 GWM-1
WEST DITCH
BORROW AREA SOUTH
EAST DITCH
FUTURE STORAGE AREA
FOREBAY NO. 1
SEDIMENT BASIN NO. 1
ASBESTOS AND SPECIAL WASTE AREA
LANDFILL GAS TO ENERGY FACILITY
LANDFILL GAS COLLECTION FLARE STATION
23.68 GWM-11
BIRD RIVER DREDGE SPOILS LAGOON
41.39 GWM-10
SOUTH DITCH
COMMUNITY BALL FIELD

DESIGNED KP
DETAILED KP
CHECKED KP
APPROVED KP

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ENVIRONMENTAL OPERATIONS GROUP

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KELSEY PEARCE, PROJECT MANAGER

BALTIMORE COUNTY DPW
BUREAU OF SOLID WASTE MANAGEMENT
EASTERN SANITARY LANDFILL
WHITE MARSH, MARYLAND

GROUNDWATER CONTOUR MAP SEPTEMBER 2023
ARUNDEL FORMATION

DATE
SEPTEMBER 2023

FIG 2-3

LEGEND	
GROUNDWATER ELEVATION CONTOUR	20
GROUNDWATER ELEVATION INFERRED	
GROUNDWATER FLOW DIRECTION	
GROUNDWATER ELEVATION	21.31
GROUNDWATER ELEVATION (NOT MEASURED)	(0.00)
MONITORING WELL	20.84 GWM-8

GRAPHIC SCALE

200 0 100 200 400

(IN FEET)

1 inch = 200 ft.

NOTES:

1. EXISTING SITE FEATURES AND CONTOUR AND TOPOGRAPHIC INFORMATION SHOWN PROVIDED BY CME ENGINEERING. AERIAL IMAGERY FLOWN JANUARY 2021. HORIZONTAL DATUM NAD 1983. VERTICAL DATUM NADV 1988. MARYLAND STATE PLANE.
2. GROUNDWATER CONTOURS ARE BASED ON DATA COLLECTED SEPTEMBER 2023 BY BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF SOLID WASTE MANAGEMENT.
3. WELL LOCATIONS ARE BASED ON DRAWING DATA PROVIDED SEPTEMBER 2018 BY BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF SOLID WASTE MANAGEMENT.

HOUSEHOLD HAZARDOUS WASTE BUILDING
COMMUNICATION TOWER COMPOUND
8.87 GWM-18D
RESIDENTS' DROP-OFF CENTER
FORCE MAIN METER VAULT
BGE METER
WASTE TRANSFER STATION
RECYCLING TRANSFER STATION
FUEL STATION
YARD MATERIALS PROCESSING CENTER
ADMINISTRATIVE BUILDING
OFFICE TRAILER
DAYS COVE ROAD
NORTH DITCH
WOOD WASTE PROCESSING AREA
15.91 GWM-15D
PERIMETER FENCE
BORROW AREA NORTH
FOREBAY NO. 2
VEGETATED EARTH STOCKPILE
52.45 GWM-16D
SALT BARN
LEACHATE DISPOSAL MANHOLE
BORROW AREA SOUTH
EAST DITCH
FUTURE STORAGE AREA
FOREBAY NO. 1
SEDIMENT BASIN NO. 1
WEST DITCH
ASBESTOS AND SPECIAL WASTE AREA
LANDFILL GAS TO ENERGY FACILITY
18.77 GWM-17D
LANDFILL GAS COLLECTION FLARE STATION
BIRD RIVER DREDGE SPOILS LAGOON
SOUTH DITCH
COMMUNITY BALL FIELD

DESIGNED KP
DETAILED KP
CHECKED KP
APPROVED KP

Maryland ENVIRONMENTAL SERVICE

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ENVIRONMENTAL OPERATIONS GROUP

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KELSEY PEARCE, PROJECT MANAGER

BALTIMORE COUNTY DPW
BUREAU OF SOLID WASTE MANAGEMENT
EASTERN SANITARY LANDFILL
WHITE MARSH, MARYLAND

GROUNDWATER CONTOUR MAP SEPTEMBR 2023
PATUXENT FORMATION

DATE
SEPTEMBER 2023

FIG 2-4

LEGEND

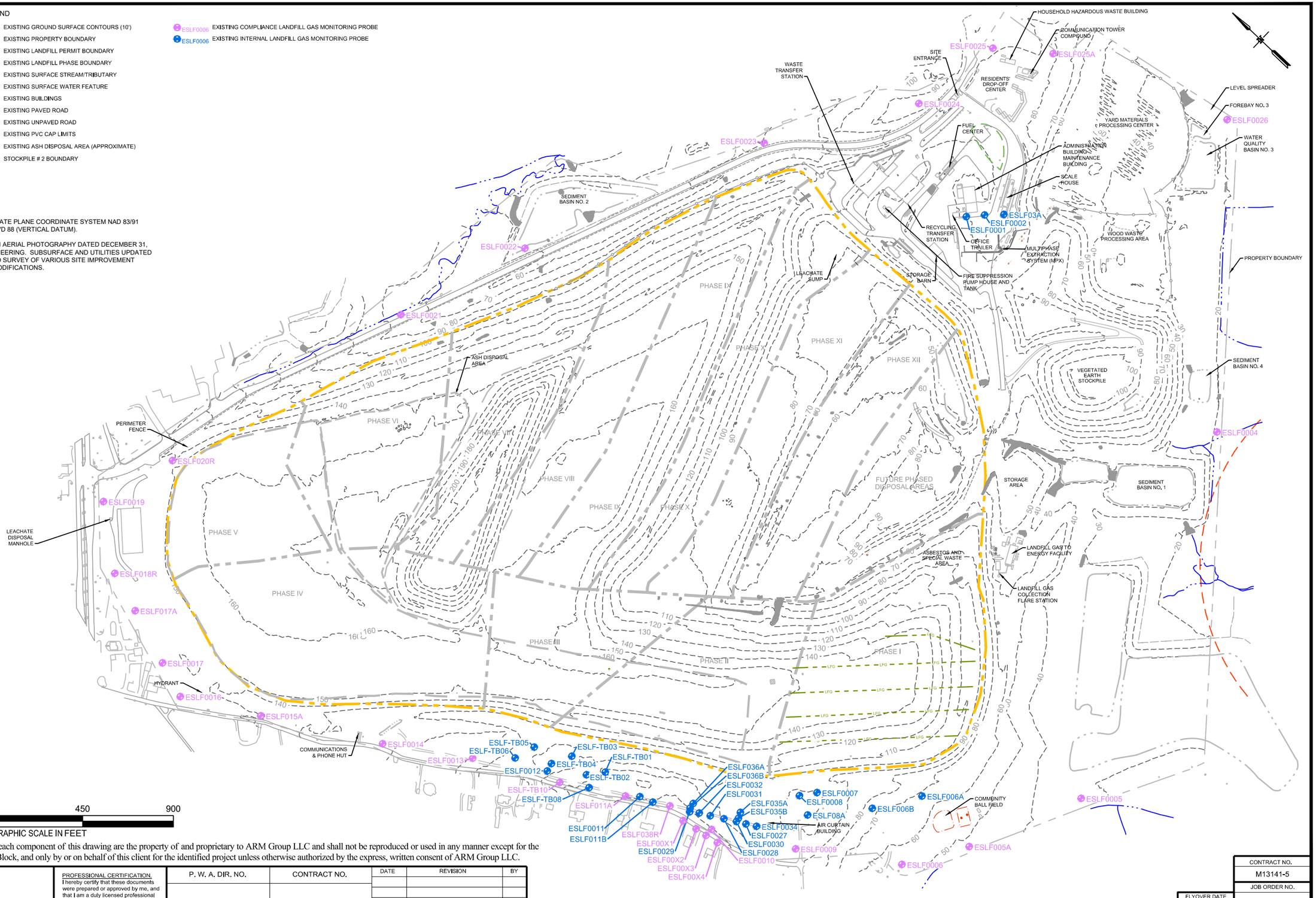
- EXISTING GROUND SURFACE CONTOURS (10')
- EXISTING PROPERTY BOUNDARY
- EXISTING LANDFILL PERMIT BOUNDARY
- EXISTING LANDFILL PHASE BOUNDARY
- EXISTING SURFACE STREAM/TRIBUTARY
- EXISTING SURFACE WATER FEATURE
- EXISTING BUILDINGS
- EXISTING PAVED ROAD
- EXISTING UNPAVED ROAD
- EXISTING PVC CAP LIMITS
- EXISTING ASH DISPOSAL AREA (APPROXIMATE)
- STOCKPILE # 2 BOUNDARY

ESLF0006 EXISTING COMPLIANCE LANDFILL GAS MONITORING PROBE

ESLF0006 EXISTING INTERNAL LANDFILL GAS MONITORING PROBE

SURVEY NOTES:

1. PLAN BASED ON MARYLAND STATE PLANE COORDINATE SYSTEM NAD 83/91 (HORIZONTAL DATUM) AND NAVD 88 (VERTICAL DATUM).
2. TOPOGRAPHY SHOWN IS FROM AERIAL PHOTOGRAPHY DATED DECEMBER 31, 2019 PREPARED BY CME ENGINEERING. SUBSURFACE AND UTILITIES UPDATED PER BALTIMORE COUNTY FIELD SURVEY OF VARIOUS SITE IMPROVEMENT FEATURES AND HISTORICAL MODIFICATIONS.



450 225 0 450 900

GRAPHIC SCALE IN FEET

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BALTIMORE COUNTY MARYLAND

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License No. _____.

Expiration Date _____.

P. W. A. DIR. NO.	CONTRACT NO.	DATE	REVISION	BY

DESIGNED ARM
DRAWN SEH
CHECKED WJP

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Columbia, MD 21046
www.armgroup.net

BUREAU OF SOLID WASTE MANAGEMENT
APPROVED _____ CHIEF
DATE _____

DEPARTMENT OF PUBLIC WORKS
APPROVED _____ DIRECTOR
DATE _____

LEVEL BK. | KEY SHEET
DETAIL BK. | POSITION SHEET

SCALE
PLAN: 1" = 450'
PROFILE HOR. VERT.

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF SOLID WASTE MANAGEMENT

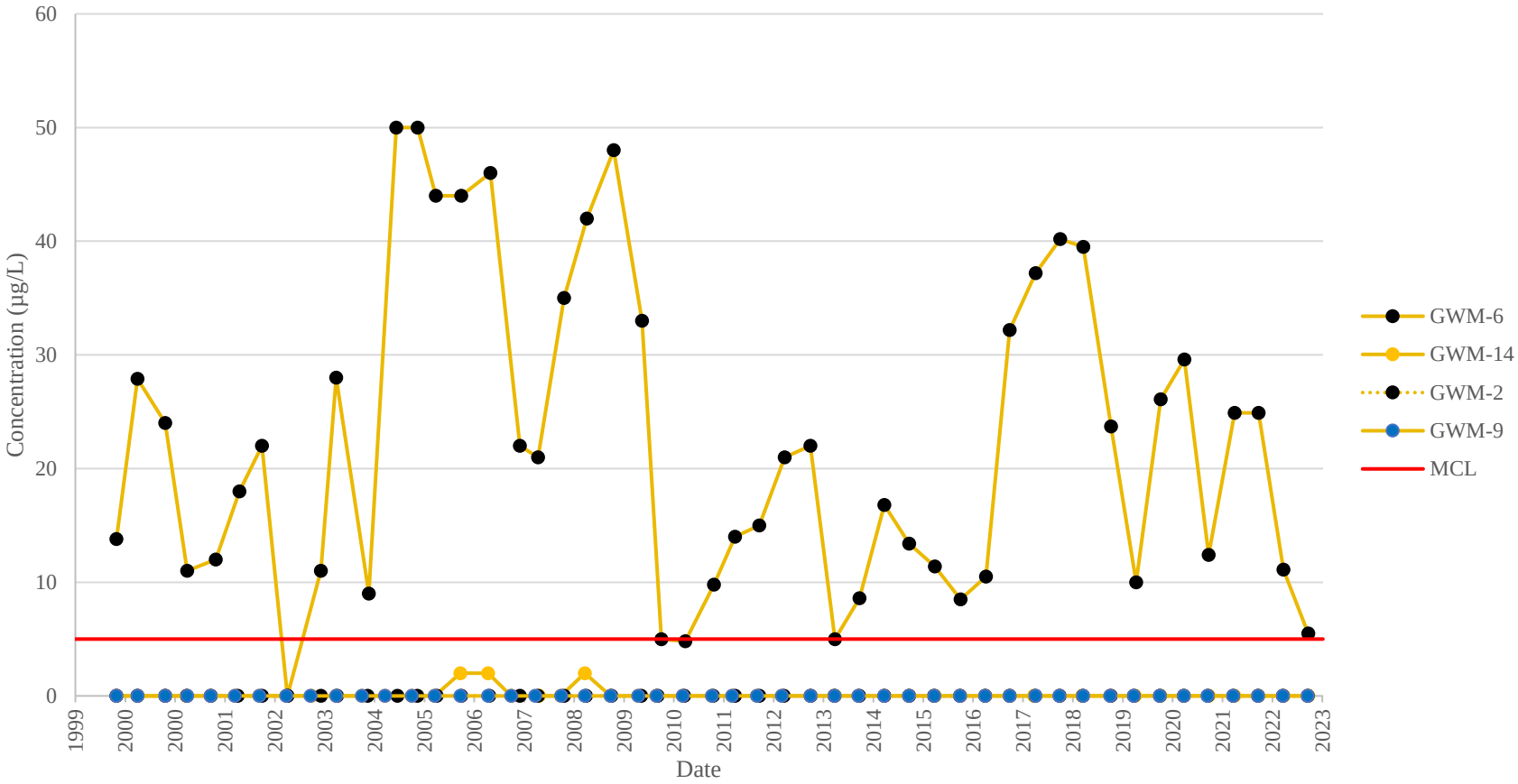
EASTERN SANITARY LANDFILL SOLID WASTE MANAGEMENT FACILITY

LANDFILL GAS MONITORING PROBES LOCATION MAP

CONTRACT NO. M13141-5
JOB ORDER NO.
FLYOVER DATE 12/31/2019
SHEET ____ OF ____
DWG. NO. 3
FILE:

Mar 17, 2020 - 9:53am User: dtatkins
P:\Baltimore County Solid Waste\M13141 On Call Solid Waste Services\Task 2 - Misc O&O, Routes Support\Dwg\Production\2019 Update\2019 Tonnage Report\64-Landfill Gas Monitoring Probes Location Map.dwg

Figure 4-1: Benzene Concentrations by Well



Notes:

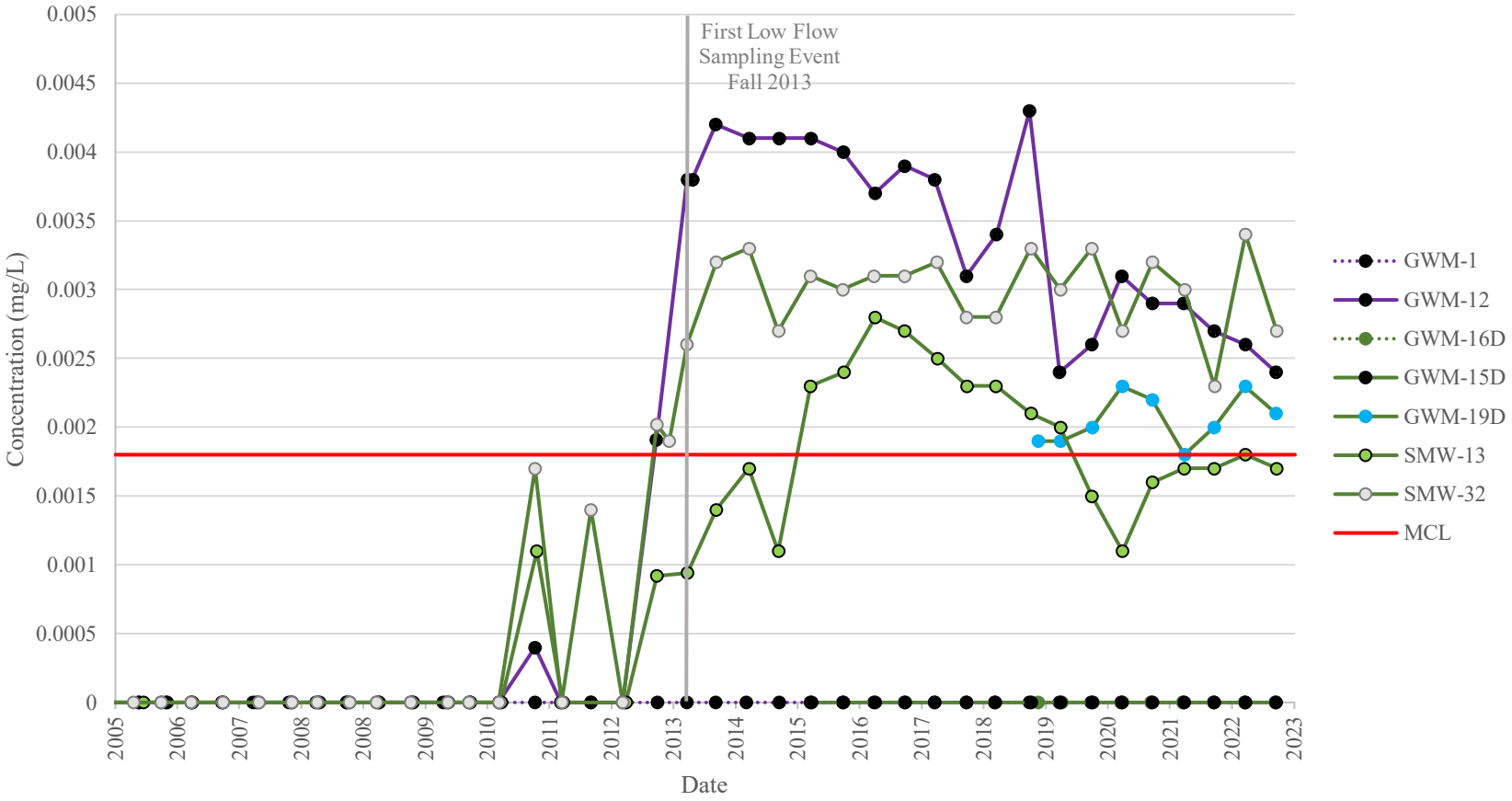
1) MCL = Maximum Contaminant Level (Benzene = 5 µg/L)

2) Trend Line Pattern: Dotted = Background well | Solid = Compliance well

3) Trend Line Color = Patapsco Aquifer (Shallow)

4) Concentrations with the value zero were non-detect, below the detection limit.

Figure 4-2: Mercury Concentrations by Well



Notes:

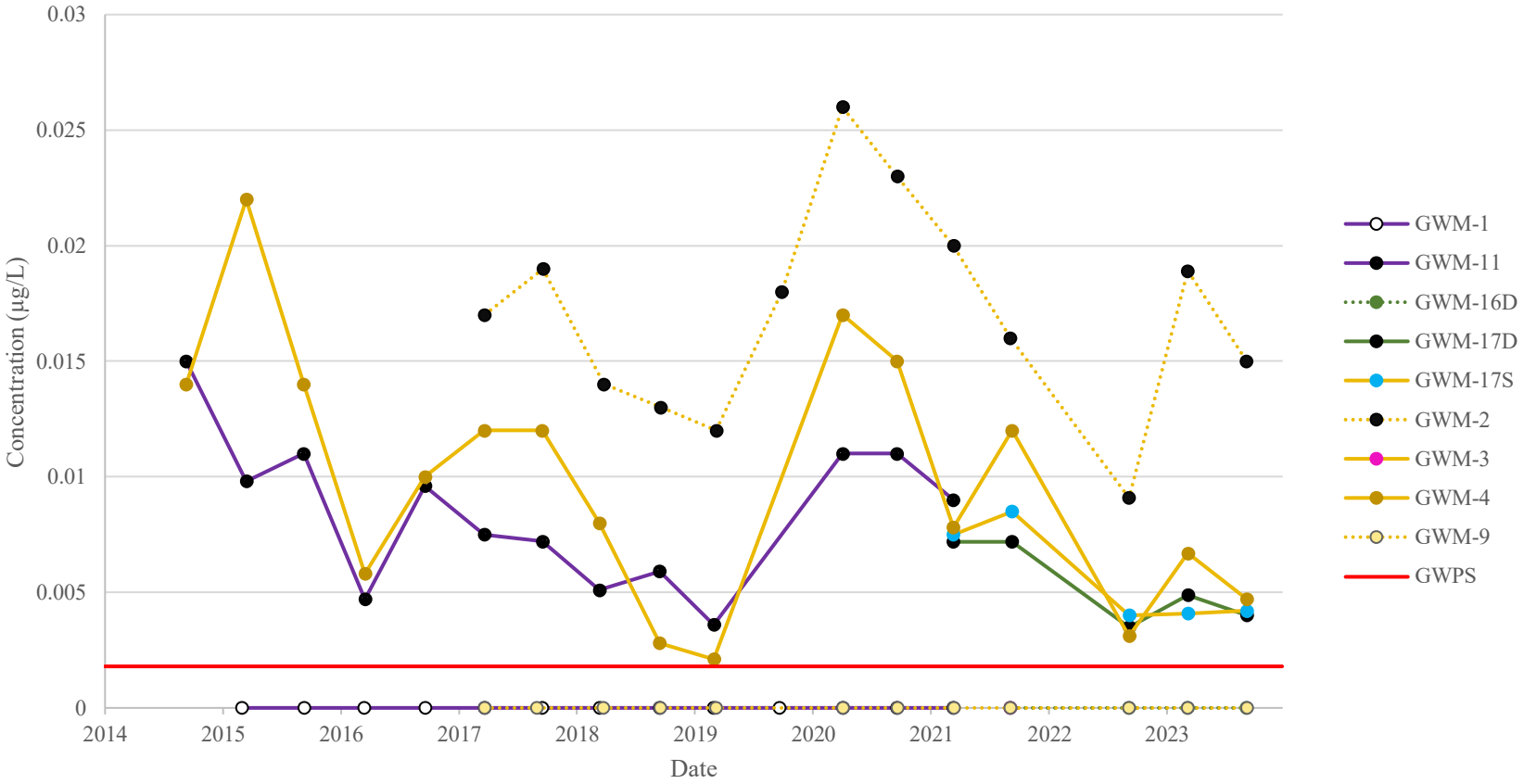
1) MCL = Maximum Contaminant Level (Mercury = 0.002 mg/L)

2) Trend Line Pattern: Dotted = Background well | Solid = Compliance well

3) Trend Line Color = Arundel Formation | Patuxent Aquifer (Deep)

4) Concentrations with the value zero were non-detect, below the detection limit.

Figure 4-3: Dieldrin Concentrations by Well



Notes:

1) GWPS = Groundwater Protection Standard (Dieldrin = 0.0018 µg/L)

2) Trend Line Pattern: Dotted = Background well | Solid = Compliance well

3) Trend Line Color = Patapsco Aquifer (Shallow) | Arundel Formation | Patuxent Aquifer (Deep)

4) Concentrations with the value zero were non-detect, below the detection limit.

5) September 2019 and March 2022 data is ommitted from graph due to high reporting limits.

APPENDICIES

Appendix A: Monitoring Parameters per Refuse Disposal Permit

Appendix B: Sample Logs and Instrument Calibration Data

Appendix C: Laboratory Data Validation, Sample Chain of Custody Records, and Laboratory Results

Appendix D: Spring 2022 Groundwater and Surface Water Event Summary Tables (Analytical Results) for Volatile Organic Compounds (Table I), Metals (Table II) and Water Quality Parameters, and Assessment Monitoring Parameters

Appendix E: Time Series (Historical) Data Tables

Appendix F: Statistical Analysis Results

APPENDIX A

Monitoring Parameters per Refuse Disposal Permit

k. Upon detection of the exceedance of an MCL, Action Level or other health standard for the first time, the monitoring point(s) in which the standard was exceeded must be immediately resampled to verify the initial detection. This resampling must occur as soon as possible, and no later than 30 days following receipt of the analytical data by the permittee or the qualified groundwater scientist or professional who is reviewing the analytical data which indicated the exceedance. If the permittee accepts the initial sampling result as a valid result, then the permittee can elect to not resample the monitoring point(s);

l. All data for each well must be summarized and presented in time series format. The data for each well must be presented in a spreadsheet so that the water quality data for each parameter for each well can be observed simultaneously; and

m. All "J" values must be reported. "J" values are analytical results that are below the PQL but can be estimated.

TABLE I
MONITORING PARAMETERS

VOLATILE ORGANIC COMPOUNDS	PQL (ppb)	VOLATILE ORGANIC COMPOUNDS	PQL (ppb)
Acetone	5.0	Cis-1,2-Dichloroethene	1.0
Acrylonitrile	5.0	Trans-1,2-Dichloroethene	1.0
Benzene	1.0	Methylene Chloride	1.0
Bromochloromethane	1.0	1,2-Dichloropropane	1.0
Bromodichloromethane	1.0	Trans-1,3-Dichloropropene	1.0
Bromoform	1.0	Cis-1,3-Dichloropropene	1.0
Bromomethane	1.0	Ethylbenzene	1.0
2-Butanone	5.0	2-Hexanone	5.0
Carbon disulfide	1.0	Iodomethane	1.0
Carbon Tetrachloride	1.0	4-Methyl-2-pentanone	5.0
Chlorobenzene	1.0	Methyl Tertiary Butyl Ether	2.0
Chloroethane	1.0	Styrene	1.0
Chloroform	1.0	1,1,1,2-Tetrachloroethane	1.0
Chloromethane	1.0	1,1,2,2-Tetrachloroethane	1.0
Dibromochloromethane	1.0	Tetrachloroethene	1.0
1,2-Dibromo-3-chloropropane	1.0	Toluene	1.0
1,2 – Dibromoethane (EDB)	1.0	1,1,1-Trichloroethane	1.0
Dibromomethane	1.0	1,1,2-Trichloroethane	1.0
1,2 – Dichlorobenzene	1.0	Trichloroethene	1.0
1,4 – Dichlorobenzene	1.0	Trichlorofluoromethane	1.0
Trans-1,4-dichloro-2-butene	5.0	1,2,3-Trichloropropane	1.0
1,1-Dichloroethane	1.0	Vinyl Acetate	1.0
1,2-Dichloroethane	1.0	Vinyl Chloride	1.0
1,1-Dichloroethene	1.0	Xylene	1.0

TABLE II
MONITORING PARAMETERS

ELEMENTS AND INDICATOR PARAMETERS	PQL (ppm)	ELEMENTS AND INDICATOR PARAMETERS	PQL (ppm)
Total Antimony	0.0020	Total Silver	0.0100
Total Arsenic	0.0020	Total Sodium	0.2
Total Barium	0.0100	Total Thallium	0.0020
Total Beryllium	0.0020	Total Vanadium	0.0100
Total Cadmium	0.0040	Total Zinc	0.0100
Total Chromium	0.0100	PH	0.1 (SU)
Total Calcium	0.08	Alkalinity	1
Total Cobalt	0.0100	Hardness	0.5
Total Copper	0.0100	Chloride	0.39
Total Iron	0.005	Specific Conductance	1
Total Lead	0.0020	Nitrate	0.06
Total Nickel	0.0110	Chemical Oxygen Demand	10
Total Magnesium	0.004	Turbidity	0.11 (NTU)
Total Manganese	0.0100	Ammonia	1
Total Mercury	0.0002	Sulfate	0.38
Total Potassium	0.39	Total Dissolved Solids	10
Total Selenium	0.035		

3. The semiannual report on water quality must include a time series analysis of the data. The historical data from each well should be presented in a tabular form in each semiannual report. The discussion should emphasize historical trends in the data. Also, the report must include statistical analysis methods in evaluating groundwater monitoring data as required under the federal regulation 40 CFR §258.53(g)-(i).

4. A copy of the most current topographic map generated by a survey performed as required in this permit shall be included in each semiannual report on water quality and shall depict the location of all monitoring wells and piezometers in existence at the time of the survey.

5. A copy of a current groundwater contour map depicting the location of all monitoring wells from which groundwater data is collected shall be included in each semiannual report on water quality. Multiple aquifers shall be depicted on separate groundwater contour maps.

6. The requirements of 40 CFR §258 subpart E concerning groundwater monitoring and remediation must be followed to the satisfaction of the Department.

G. Spreading and Compaction:

Solid waste shall be spread in uniform layers and compacted to its smallest practicable volume before application of cover material.

APPENDIX B

Sample Logs and Instrument Calibration Data

Calibration Report

Instrument	Aqua TROLL 600
Serial Number	663604
Created	9/11/2023

Sensor	**Conductivity**
Serial Number	866779
Last Calibrated	9/11/2023

Calibration Details

TDS Conversion Factor (ppm)	0.65
Cell Constant	0.914
Reference Temperature	25.00 °C

Pre Measurement

Actual Conductivity	1,538.2 µS/cm
Specific Conductivity	1,461.7 µS/cm

Post Measurement

Actual Conductivity	1,482.8 µS/cm
Specific Conductivity	1,409.0 µS/cm

Sensor	**Turbidity**
Serial Number	984219
Last Calibrated	9/11/2023

Calibration Details

Slope	1.011068
Offset	-1.41 NTU

Calibration Point 1

Pre Measurement	11.40 NTU
Post Measurement	10.00 NTU

Calibration Point 2

Pre Measurement	100.73 NTU
Post Measurement	100.00 NTU

Sensor	**RDO**
Serial Number	1025204
Last Calibrated	9/11/2023

Calibration Details

Slope	1.109716
Offset	0.00 mg/L

Calibration point 100%

Concentration	7.08 mg/L
Pre Measurement	100.52 %Sat
Post Measurement	100.00 %Sat
Temperature	27.81 °C
Barometric Pressure	1,013.2 mbar

Sensor	**pH/ORP**
Serial Number	953052
Last Calibrated	9/11/2023

Calibration Details

Calibration Point 1

pH of Buffer	4.01 pH
pH mV	171.7 mV
Temperature	27.75 °C

Pre Measurement

pH	4.10 pH
pH mV	170.7 mV

Post Measurement

pH	4.01 pH
pH mV	173.3 mV

Calibration Point 2

pH of Buffer	6.99 pH
pH mV	2.0 mV
Temperature	27.82 °C

Pre Measurement

pH	6.92 pH
pH mV	2.0 mV

Post Measurement

pH	6.99 pH
pH mV	2.0 mV

Calibration Point 3

pH of Buffer	9.95 pH
pH mV	-171.0 mV
Temperature	28.02 °C

Pre Measurement

pH	9.82 pH
pH mV	-171.0 mV

Post Measurement

pH	9.95 pH
pH mV	-172.7 mV

Slope and Offset 1

Slope	-56.96 mV/pH
Offset	1.4 mV

Slope and Offset 2

Slope	-58.43 mV/pH
Offset	1.4 mV

ORP

ORP Solution	ORP Standard
Offset	17.3 mV
Temperature	27.82 °C
Pre Measurement	220.4 mV
Post Measurement	229.0 mV

Sensor	**Barometric Pressure**
Serial Number	663604
Last Calibrated	Factory Defaults

Calibration Report

Instrument	Aqua TROLL 600
Serial Number	663604
Created	9/12/2023

Sensor: Conductivity

Serial Number	866779
Last Calibrated	9/12/2023

Calibration Details

TDS Conversion Factor (ppm)	0.65
Cell Constant	0.935
Reference Temperature	25.00 °C

Pre Measurement

Actual Conductivity	1,448.5 µS/cm
Specific Conductivity	1,406.9 µS/cm

Post Measurement

Actual Conductivity	1,450.7 µS/cm
Specific Conductivity	1,409.0 µS/cm

Sensor: Turbidity

Serial Number	984219
Last Calibrated	9/12/2023

Calibration Details

Slope	1.008736
Offset	-1.88 NTU

Calibration Point 1

Pre Measurement	10.31 NTU
Post Measurement	10.00 NTU

Calibration Point 2

Pre Measurement	100.55 NTU
Post Measurement	100.00 NTU

Sensor: RDO

Serial Number	1025204
Last Calibrated	9/12/2023

Calibration Details

Slope	1.114431
Offset	0.00 mg/L

Calibration point 100%

Concentration	7.21 mg/L
Pre Measurement	99.84 %Sat
Post Measurement	100.00 %Sat
Temperature	26.61 °C
Barometric Pressure	1,014.0 mbar

Sensor	**pH/ORP**
Serial Number	953052
Last Calibrated	9/12/2023

Calibration Details

Calibration Point 1

pH of Buffer	4.00 pH
pH mV	169.9 mV
Temperature	27.01 °C

Pre Measurement

pH	4.04 pH
pH mV	169.8 mV

Post Measurement

pH	4.00 pH
pH mV	171.1 mV

Calibration Point 2

pH of Buffer	7.00 pH
pH mV	1.9 mV
Temperature	27.08 °C

Pre Measurement

pH	6.99 pH
pH mV	1.8 mV

Post Measurement

pH	7.00 pH
pH mV	1.9 mV

Calibration Point 3

pH of Buffer	10.00 pH
pH mV	-170.9 mV
Temperature	27.16 °C

Pre Measurement

pH	9.95 pH
pH mV	-170.7 mV

Post Measurement

pH	10.00 pH
pH mV	-172.2 mV

Slope and Offset 1

Slope	-56.01 mV/pH
Offset	1.9 mV

Slope and Offset 2

Slope	-57.6 mV/pH
Offset	1.9 mV

ORP

ORP Solution	ORP Standard
Offset	16.4 mV
Temperature	26.78 °C
Pre Measurement	229.9 mV
Post Measurement	229.0 mV

Sensor	**Barometric Pressure**
Serial Number	663604
Last Calibrated	Factory Defaults

Calibration Report

Instrument	Aqua TROLL 600
Serial Number	663604
Created	9/13/2023

Sensor **Conductivity**

Serial Number	866779
Last Calibrated	9/13/2023

Calibration Details

TDS Conversion Factor (ppm)	0.65
Cell Constant	0.939
Reference Temperature	25.00 °C

Pre Measurement

Actual Conductivity	1,462.2 µS/cm
Specific Conductivity	1,406.7 µS/cm

Post Measurement

Actual Conductivity	1,464.6 µS/cm
Specific Conductivity	1,409.0 µS/cm

Sensor **Turbidity**

Serial Number	984219
Last Calibrated	9/13/2023

Calibration Details

Slope	1.008482
Offset	-1.57 NTU

Calibration Point 1

Pre Measurement	9.67 NTU
Post Measurement	10.00 NTU

Calibration Point 2

Pre Measurement	99.78 NTU
Post Measurement	100.00 NTU

Sensor **RDO**

Serial Number	1025204
Last Calibrated	9/13/2023

Calibration Details

Slope	1.113342
Offset	0.00 mg/L

Calibration point 100%

Concentration	7.09 mg/L
Pre Measurement	100.29 %Sat
Post Measurement	100.00 %Sat
Temperature	27.42 °C
Barometric Pressure	1,011.4 mbar

Sensor	**pH/ORP**
Serial Number	953052
Last Calibrated	9/13/2023

Calibration Details

Calibration Point 1

pH of Buffer	4.00 pH
pH mV	170.4 mV
Temperature	27.04 °C

Pre Measurement

pH	3.99 pH
pH mV	170.4 mV

Post Measurement

pH	4.00 pH
pH mV	171.6 mV

Calibration Point 2

pH of Buffer	7.00 pH
pH mV	3.8 mV
Temperature	27.15 °C

Pre Measurement

pH	6.97 pH
pH mV	3.4 mV

Post Measurement

pH	7.00 pH
pH mV	3.8 mV

Calibration Point 3

pH of Buffer	10.00 pH
pH mV	-171.3 mV
Temperature	27.22 °C

Pre Measurement

pH	10.00 pH
pH mV	-171.0 mV

Post Measurement

pH	10.00 pH
pH mV	-172.5 mV

Slope and Offset 1

Slope	-55.55 mV/pH
Offset	3.8 mV

Slope and Offset 2

Slope	-58.34 mV/pH
Offset	3.8 mV

ORP

ORP Solution	ORP Standard
Offset	15.9 mV
Temperature	26.97 °C
Pre Measurement	229.5 mV
Post Measurement	229.0 mV

Sensor	**Barometric Pressure**
Serial Number	663604
Last Calibrated	Factory Defaults

Calibration Report

Instrument	Aqua TROLL 600
Serial Number	663604
Created	9/14/2023

Sensor **Conductivity**

Serial Number	866779
Last Calibrated	9/14/2023

Calibration Details

TDS Conversion Factor (ppm)	0.65
Cell Constant	0.941
Reference Temperature	25.00 °C

Pre Measurement

Actual Conductivity	1,420.6 µS/cm
Specific Conductivity	1,403.5 µS/cm

Post Measurement

Actual Conductivity	1,426.2 µS/cm
Specific Conductivity	1,409.0 µS/cm

Sensor **Turbidity**

Serial Number	984219
Last Calibrated	9/14/2023

Calibration Details

Slope	0.9995768
Offset	-1.90 NTU

Calibration Point 1

Pre Measurement	10.29 NTU
Post Measurement	10.00 NTU

Calibration Point 2

Pre Measurement	101.19 NTU
Post Measurement	100.00 NTU

Sensor **RDO**

Serial Number	1025204
Last Calibrated	9/14/2023

Calibration Details

Slope	1.111465
Offset	0.00 mg/L

Calibration point 100%

Concentration	7.37 mg/L
Pre Measurement	100.24 %Sat
Post Measurement	100.00 %Sat
Temperature	25.57 °C
Barometric Pressure	1,015.4 mbar

Sensor	**pH/ORP**
Serial Number	953052
Last Calibrated	9/14/2023

Calibration Details

Calibration Point 1

pH of Buffer	4.00 pH
pH mV	166.6 mV
Temperature	25.90 °C

Pre Measurement

pH	4.06 pH
pH mV	166.5 mV

Post Measurement

pH	4.00 pH
pH mV	167.1 mV

Calibration Point 2

pH of Buffer	7.00 pH
pH mV	0.3 mV
Temperature	25.94 °C

Pre Measurement

pH	7.06 pH
pH mV	0.4 mV

Post Measurement

pH	7.00 pH
pH mV	0.3 mV

Calibration Point 3

pH of Buffer	10.00 pH
pH mV	-171.5 mV
Temperature	26.01 °C

Pre Measurement

pH	10.01 pH
pH mV	-171.2 mV

Post Measurement

pH	10.00 pH
pH mV	-172.1 mV

Slope and Offset 1

Slope	-55.43 mV/pH
Offset	0.3 mV

Slope and Offset 2

Slope	-57.25 mV/pH
Offset	0.3 mV

ORP

ORP Solution	ORP Standard
Offset	14.9 mV
Temperature	25.79 °C
Pre Measurement	230.0 mV
Post Measurement	229.0 mV

Sensor	**Barometric Pressure**
Serial Number	663604
Last Calibrated	Factory Defaults

Calibration Report

Instrument	Aqua TROLL 600
Serial Number	663604
Created	9/15/2023

Sensor **Conductivity**

Serial Number	866779
Last Calibrated	9/15/2023

Calibration Details

TDS Conversion Factor (ppm)	0.65
Cell Constant	0.938
Reference Temperature	25.00 °C

Pre Measurement

Actual Conductivity	1,456.8 µS/cm
Specific Conductivity	1,427.3 µS/cm

Post Measurement

Actual Conductivity	1,438.1 µS/cm
Specific Conductivity	1,409.0 µS/cm

Sensor **Turbidity**

Serial Number	984219
Last Calibrated	9/15/2023

Calibration Details

Slope	0.9954139
Offset	-1.97 NTU

Calibration Point 1

Pre Measurement	9.82 NTU
Post Measurement	10.00 NTU

Calibration Point 2

Pre Measurement	99.90 NTU
Post Measurement	100.00 NTU

Sensor **RDO**

Serial Number	1025204
Last Calibrated	9/15/2023

Calibration Details

Slope	1.110207
Offset	0.00 mg/L

Calibration point 100%

Concentration	7.44 mg/L
Pre Measurement	100.16 %Sat
Post Measurement	100.00 %Sat
Temperature	25.25 °C
Barometric Pressure	1,016.9 mbar

Sensor	**pH/ORP**
Serial Number	953052
Last Calibrated	9/15/2023

Calibration Details

Calibration Point 1

pH of Buffer	4.00 pH
pH mV	168.8 mV
Temperature	25.01 °C

Pre Measurement

pH	3.95 pH
pH mV	168.7 mV

Post Measurement

pH	4.00 pH
pH mV	168.8 mV

Calibration Point 2

pH of Buffer	7.00 pH
pH mV	1.7 mV
Temperature	24.99 °C

Pre Measurement

pH	6.97 pH
pH mV	1.8 mV

Post Measurement

pH	7.00 pH
pH mV	1.7 mV

Calibration Point 3

pH of Buffer	10.00 pH
pH mV	-170.6 mV
Temperature	25.05 °C

Pre Measurement

pH	9.99 pH
pH mV	-170.5 mV

Post Measurement

pH	10.00 pH
pH mV	-170.7 mV

Slope and Offset 1

Slope	-55.69 mV/pH
Offset	1.7 mV

Slope and Offset 2

Slope	-57.46 mV/pH
Offset	1.7 mV

ORP

ORP Solution	Zobell's
Offset	13.9 mV
Temperature	25.23 °C
Pre Measurement	229.8 mV
Post Measurement	228.8 mV

Sensor	**Barometric Pressure**
Serial Number	663604
Last Calibrated	Factory Defaults

Low-Flow Test Report:

Test Date / Time: 9/11/2023 8:29:32 AM
Project: ESL Fall 2023
Operator Name: Laura Russell

Location Name: GWM-1 **Well Diameter: 4 in** **Screen Length: 10 ft** **Top of Screen: 67 ft** **Total Depth: 78 ft** **Initial Depth to Water: 60.55 ft**	**Pump Type: Fultz** **Estimated Total Volume Pumped: 20219.166 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 8.32 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 663604**

Test Notes:

Weather Conditions:
Mostly cloudy Low 70s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 0.3	+/- 10 %	+/- 10	+/- 0.3	
9/11/2023 8:29 AM	00:00	8.04 pH	20.15 °C	310.74 µS/cm	5.02 mg/L	28.50 NTU	-165.1 mV	60.55 ft	250.00 ml/min
9/11/2023 8:31 AM	02:11	7.80 pH	18.62 °C	322.86 µS/cm	0.31 mg/L	11.87 NTU	-218.8 mV	60.55 ft	250.00 ml/min
9/11/2023 8:32 AM	02:43	7.76 pH	18.76 °C	323.34 µS/cm	0.31 mg/L	10.94 NTU	-219.6 mV	61.57 ft	250.00 ml/min
9/11/2023 8:37 AM	07:43	7.57 pH	17.01 °C	323.31 µS/cm	0.29 mg/L	18.24 NTU	-218.8 mV	62.29 ft	320.00 ml/min
9/11/2023 8:42 AM	12:43	7.40 pH	16.60 °C	320.65 µS/cm	0.17 mg/L	19.60 NTU	-226.1 mV	62.98 ft	300.00 ml/min
9/11/2023 8:47 AM	17:43	7.30 pH	16.83 °C	318.68 µS/cm	0.18 mg/L	25.48 NTU	-224.0 mV	63.53 ft	300.00 ml/min
9/11/2023 8:52 AM	22:43	7.24 pH	16.83 °C	317.75 µS/cm	0.18 mg/L	32.19 NTU	-221.8 mV	64.09 ft	280.00 ml/min
9/11/2023 8:57 AM	27:43	7.19 pH	16.73 °C	316.44 µS/cm	0.16 mg/L	39.90 NTU	-224.9 mV	64.85 ft	440.00 ml/min
9/11/2023 9:02 AM	32:43	7.10 pH	16.77 °C	309.74 µS/cm	0.12 mg/L	56.42 NTU	-232.3 mV	65.54 ft	400.00 ml/min
9/11/2023 9:07 AM	37:43	6.94 pH	16.98 °C	301.14 µS/cm	0.12 mg/L	71.55 NTU	-237.2 mV	66.22 ft	380.00 ml/min
9/11/2023 9:12 AM	42:43	6.85 pH	17.08 °C	292.46 µS/cm	0.11 mg/L	81.53 NTU	-239.6 mV	66.92 ft	320.00 ml/min
9/11/2023 9:17 AM	47:43	6.76 pH	17.35 °C	288.14 µS/cm	0.11 mg/L	98.83 NTU	-239.6 mV	67.50 ft	300.00 ml/min
9/11/2023 9:22 AM	52:43	6.73 pH	17.69 °C	286.87 µS/cm	0.12 mg/L	114.14 NTU	-238.5 mV	67.95 ft	300.00 ml/min
9/11/2023 9:27 AM	57:43	6.71 pH	17.47 °C	279.26 µS/cm	0.12 mg/L	140.21 NTU	-240.7 mV	68.49 ft	280.00 ml/min
9/11/2023 9:32 AM	01:02:43	6.68 pH	17.90 °C	277.98 µS/cm	0.12 mg/L	155.51 NTU	-239.8 mV	68.87 ft	200.00 ml/min

9/11/2023 9:33 AM	01:03:40	6.68 pH	17.62 °C	276.49 µS/cm	0.12 mg/L	176.94 NTU	-240.2 mV	68.87 ft	200.00 ml/min

Samples

Sample ID:	Description:
GWM-1	

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 9/11/2023 12:54:00 PM
Project: ESL Fall 2023 GWM-2
Operator Name: Laura Russell

Location Name: GWM-2 **Well Diameter: 4 in** **Screen Length: 10 ft** **Top of Screen: 50 ft** **Total Depth: 61 ft** **Initial Depth to Water: 50.12 ft**	**Pump Type: Fultz** **Estimated Total Volume Pumped: 7350 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 400 ml/min** **Final Draw Down: 1.09 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 663604**

Test Notes:

Weather Conditions:
Pt.Cloudy High 70s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 0.3	+/- 10 %	+/- 10	+/- 0.3	
9/11/2023 12:54 PM	00:00	4.78 pH	21.55 °C	324.40 µS/cm	5.25 mg/L	4.84 NTU	151.6 mV	50.12 ft	250.00 ml/min
9/11/2023 12:59 PM	05:00	4.72 pH	16.57 °C	327.23 µS/cm	2.61 mg/L	0.45 NTU	208.3 mV	50.96 ft	400.00 ml/min
9/11/2023 1:04 PM	10:00	4.65 pH	14.88 °C	327.05 µS/cm	2.57 mg/L	1.00 NTU	217.1 mV	51.07 ft	400.00 ml/min
9/11/2023 1:09 PM	15:00	4.61 pH	14.60 °C	327.45 µS/cm	2.55 mg/L	1.59 NTU	221.6 mV	51.14 ft	420.00 ml/min
9/11/2023 1:14 PM	20:00	4.59 pH	14.57 °C	327.18 µS/cm	2.54 mg/L	2.81 NTU	225.2 mV	51.21 ft	400.00 ml/min

Samples

Sample ID:	Description:
GWM-2	

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 9/11/2023 1:42:09 PM
Project: ESL Fall 2023 GWM-3
Operator Name: Laura Russell

Location Name: GWM-3 **Well Diameter: 4 in** **Screen Length: 10 ft** **Top of Screen: 31 ft** **Total Depth: 42 ft** **Initial Depth to Water: 32.49 ft**	**Pump Type: Fultz** **Estimated Total Volume Pumped: 5650 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 240 ml/min** **Final Draw Down: 0.04 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 663604**

Test Notes:

Weather Conditions:
Sunny High 70s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 0.3	+/- 10 %	+/- 10	+/- 0.3	
9/11/2023 1:42 PM	00:00	5.12 pH	16.15 °C	250.29 µS/cm	7.34 mg/L	3.15 NTU	165.7 mV	32.49 ft	250.00 ml/min
9/11/2023 1:47 PM	05:00	5.20 pH	16.88 °C	235.94 µS/cm	6.08 mg/L	17.50 NTU	186.4 mV	32.52 ft	200.00 ml/min
9/11/2023 1:52 PM	10:00	5.22 pH	16.43 °C	236.20 µS/cm	6.14 mg/L	43.04 NTU	194.9 mV	32.53 ft	200.00 ml/min
9/11/2023 1:57 PM	15:00	5.18 pH	16.39 °C	234.71 µS/cm	6.10 mg/L	12.99 NTU	199.9 mV	32.52 ft	240.00 ml/min
9/11/2023 2:02 PM	20:00	5.15 pH	16.38 °C	233.52 µS/cm	6.08 mg/L	8.83 NTU	203.1 mV	32.53 ft	240.00 ml/min
9/11/2023 2:07 PM	25:00	5.14 pH	16.21 °C	232.91 µS/cm	6.08 mg/L	4.99 NTU	205.3 mV	32.53 ft	240.00 ml/min

Samples

Sample ID:	Description:
GWM-3	

Low-Flow Test Report:

Test Date / Time: 9/12/2023 9:16:59 AM
Project: ESL Fall 2023 GWM-4
Operator Name: Laura Russell

Location Name: GWM-4 **Well Diameter: 4 in** **Screen Length: 10 ft** **Top of Screen: 65 ft** **Total Depth: 80 ft** **Initial Depth to Water: 26.44 ft**	**Pump Type: Fultz** **Estimated Total Volume Pumped: 8350 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 360 ml/min** **Final Draw Down: 0.17 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 663604**

Test Notes:

Weather Conditions:
Sunny Mid 70s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 0.3	+/- 10 %	+/- 10	+/- 0.3	
9/12/2023 9:16 AM	00:00	6.30 pH	19.90 °C	734.97 µS/cm	5.11 mg/L	28.74 NTU	91.5 mV	26.44 ft	250.00 ml/min
9/12/2023 9:21 AM	05:00	6.50 pH	19.73 °C	742.89 µS/cm	0.46 mg/L	0.00 NTU	66.5 mV	26.59 ft	300.00 ml/min
9/12/2023 9:26 AM	10:00	6.50 pH	19.69 °C	743.54 µS/cm	0.39 mg/L	0.00 NTU	86.6 mV	26.59 ft	360.00 ml/min
9/12/2023 9:31 AM	15:00	6.51 pH	19.69 °C	743.66 µS/cm	0.35 mg/L	0.00 NTU	98.1 mV	26.61 ft	400.00 ml/min
9/12/2023 9:36 AM	20:00	6.50 pH	19.68 °C	743.36 µS/cm	0.34 mg/L	0.00 NTU	94.9 mV	26.60 ft	360.00 ml/min
9/12/2023 9:41 AM	25:00	6.50 pH	19.71 °C	743.17 µS/cm	0.30 mg/L	0.00 NTU	93.1 mV	26.61 ft	360.00 ml/min

Samples

Sample ID:	Description:
GWM-4	

Low-Flow Test Report:

Test Date / Time: 9/13/2023 10:26:27 AM
Project: ESL Fall 2023 GWM-5A (2)
Operator Name: Laura Russell

Location Name: GWM-5A **Well Diameter: 4 in** **Screen Length: 10 ft** **Top of Screen: 29 ft** **Total Depth: 40 ft** **Initial Depth to Water: 27.17 ft**	**Pump Type: Fultz** **Estimated Total Volume Pumped: 7450 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 300 ml/min** **Final Draw Down: 0.09 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 663604**

Test Notes:

Weather Conditions:
Pt Cloudy Mid 70s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 0.3	+/- 10 %	+/- 10	+/- 0.3	
9/13/2023 10:26 AM	00:00	6.05 pH	18.11 °C	545.51 µS/cm	3.18 mg/L	91.63 NTU	56.3 mV	27.23 ft	250.00 ml/min
9/13/2023 10:31 AM	05:00	5.99 pH	19.06 °C	549.72 µS/cm	0.64 mg/L	74.54 NTU	78.3 mV	27.17 ft	200.00 ml/min
9/13/2023 10:36 AM	10:00	5.94 pH	18.17 °C	526.73 µS/cm	0.48 mg/L	55.90 NTU	76.5 mV	27.24 ft	240.00 ml/min
9/13/2023 10:41 AM	15:00	5.92 pH	17.54 °C	511.69 µS/cm	0.40 mg/L	51.32 NTU	80.0 mV	27.24 ft	240.00 ml/min
9/13/2023 10:46 AM	20:00	5.90 pH	17.40 °C	499.31 µS/cm	0.35 mg/L	52.23 NTU	82.8 mV	27.26 ft	240.00 ml/min
9/13/2023 10:51 AM	25:00	5.89 pH	17.15 °C	491.81 µS/cm	0.34 mg/L	52.14 NTU	84.2 mV	27.26 ft	320.00 ml/min
9/13/2023 10:56 AM	30:00	5.90 pH	17.04 °C	488.96 µS/cm	0.35 mg/L	54.14 NTU	84.5 mV	27.26 ft	300.00 ml/min

Samples

Sample ID:	Description:
GWM-5A	

Low-Flow Test Report:

Test Date / Time: 9/14/2023 9:35:12 AM
Project: ESL Fall 2023 GWM-6
Operator Name: Laura Russell

Location Name: GWM-6 **Well Diameter: 4 in** **Screen Length: 10 ft** **Top of Screen: 40 ft** **Total Depth: 60 ft** **Initial Depth to Water: 41.77 ft**	**Pump Type: Fultz** **Estimated Total Volume Pumped: 10650 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 300 ml/min** **Final Draw Down: 0.01 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 663604**

Test Notes:

Weather Conditions:
Sunny High 70s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 0.3	+/- 10 %	+/- 10	+/- 0.3	
9/14/2023 9:35 AM	00:00	5.74 pH	17.55 °C	480.61 µS/cm	5.04 mg/L	0.49 NTU	-45.1 mV	41.77 ft	250.00 ml/min
9/14/2023 9:40 AM	05:00	6.29 pH	17.37 °C	0.06 µS/cm	8.13 mg/L	0.00 NTU	-88.8 mV	41.79 ft	300.00 ml/min
9/14/2023 9:45 AM	10:00	6.23 pH	17.15 °C	529.58 µS/cm	0.17 mg/L	0.00 NTU	-87.5 mV	41.78 ft	300.00 ml/min
9/14/2023 9:50 AM	15:00	6.24 pH	17.34 °C	516.17 µS/cm	0.18 mg/L	0.00 NTU	-87.8 mV	41.78 ft	300.00 ml/min
9/14/2023 9:55 AM	20:00	6.24 pH	17.40 °C	500.77 µS/cm	0.16 mg/L	0.00 NTU	-87.4 mV	41.79 ft	360.00 ml/min
9/14/2023 10:00 AM	25:00	6.25 pH	17.45 °C	490.43 µS/cm	0.15 mg/L	0.00 NTU	-86.9 mV	41.79 ft	320.00 ml/min
9/14/2023 10:05 AM	30:00	6.27 pH	17.44 °C	485.75 µS/cm	0.14 mg/L	0.00 NTU	-87.0 mV	41.79 ft	300.00 ml/min
9/14/2023 10:10 AM	35:00	6.29 pH	17.62 °C	483.99 µS/cm	0.13 mg/L	0.00 NTU	-87.5 mV	41.78 ft	300.00 ml/min

Samples

Sample ID:	Description:
GWM-6	

Low-Flow Test Report:

Test Date / Time: 9/13/2023 2:18:45 PM
Project: ESL Fall 2023 GWM-8
Operator Name: Laura Russell

Location Name: Gwm-8 **Well Diameter: 4 in** **Screen Length: 10 ft** **Top of Screen: 50 ft** **Total Depth: 61 ft** **Initial Depth to Water: 26.56 ft**	**Pump Type: Fultz** **Estimated Total Volume Pumped: 9250 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 4.49 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 663604**

Test Notes:

Weather Conditions:
Sunny Low 80s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 0.3	+/- 10 %	+/- 10	+/- 0.3	
9/13/2023 2:18 PM	00:00	9.18 pH	16.37 °C	317.71 µS/cm	3.26 mg/L	72.27 NTU	103.5 mV	26.56 ft	250.00 ml/min
9/13/2023 2:23 PM	05:00	10.52 pH	15.05 °C	343.21 µS/cm	2.43 mg/L	20.63 NTU	48.7 mV	28.30 ft	500.00 ml/min
9/13/2023 2:28 PM	10:00	10.59 pH	15.89 °C	350.35 µS/cm	2.50 mg/L	18.06 NTU	31.3 mV	28.91 ft	300.00 ml/min
9/13/2023 2:33 PM	15:00	10.63 pH	15.99 °C	353.22 µS/cm	2.53 mg/L	15.62 NTU	21.8 mV	29.44 ft	300.00 ml/min
9/13/2023 2:38 PM	20:00	10.66 pH	15.99 °C	356.53 µS/cm	2.57 mg/L	12.34 NTU	15.5 mV	30.02 ft	300.00 ml/min
9/13/2023 2:43 PM	25:00	10.64 pH	16.92 °C	357.78 µS/cm	2.59 mg/L	11.42 NTU	10.8 mV	30.42 ft	200.00 ml/min
9/13/2023 2:48 PM	30:00	10.71 pH	15.52 °C	357.96 µS/cm	2.58 mg/L	11.39 NTU	7.2 mV	31.05 ft	200.00 ml/min

Samples

Sample ID:	Description:
GWM-8	

Low-Flow Test Report:

Test Date / Time: 9/11/2023 10:51:14 AM
Project: ESL Fall 2023 GWM-9
Operator Name: Laura Russell

Location Name: GWM-9 **Well Diameter: 4 in** **Screen Length: 10 ft** **Top of Screen: 20 ft** **Total Depth: 30 ft** **Initial Depth to Water: 20.61 ft**	**Pump Type: Fultz** **Estimated Total Volume Pumped: 8750 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 240 ml/min** **Final Draw Down: 0.03 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 663604**

Test Notes:

Weather Conditions:
Mostly Cloudy mid 70s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 0.3	+/- 10 %	+/- 10	+/- 0.3	
9/11/2023 10:51 AM	00:00	5.19 pH	17.80 °C	585.55 µS/cm	7.10 mg/L	11.85 NTU	130.6 mV	20.61 ft	250.00 ml/min
9/11/2023 10:56 AM	05:00	5.17 pH	16.81 °C	604.18 µS/cm	5.39 mg/L	3.32 NTU	179.6 mV	20.65 ft	300.00 ml/min
9/11/2023 11:01 AM	10:00	5.17 pH	16.43 °C	601.13 µS/cm	5.39 mg/L	1.81 NTU	187.2 mV	20.64 ft	240.00 ml/min
9/11/2023 11:06 AM	15:00	5.17 pH	16.52 °C	596.97 µS/cm	5.36 mg/L	2.81 NTU	191.7 mV	20.64 ft	240.00 ml/min
9/11/2023 11:11 AM	20:00	5.16 pH	16.46 °C	590.10 µS/cm	5.35 mg/L	1.10 NTU	204.3 mV	20.64 ft	240.00 ml/min
9/11/2023 11:16 AM	25:00	5.17 pH	16.48 °C	584.30 µS/cm	5.34 mg/L	0.52 NTU	209.4 mV	20.64 ft	240.00 ml/min
9/11/2023 11:21 AM	30:00	5.16 pH	16.45 °C	578.18 µS/cm	5.33 mg/L	0.74 NTU	215.3 mV	20.64 ft	240.00 ml/min
9/11/2023 11:26 AM	35:00	5.17 pH	16.56 °C	573.01 µS/cm	5.32 mg/L	1.15 NTU	215.0 mV	20.64 ft	240.00 ml/min

Samples

Sample ID:	Description:
GWM-9	

Low-Flow Test Report:

Test Date / Time: 9/13/2023 12:51:23 PM
Project: ESL Fall 2023 GWM-10
Operator Name: Laura Russell

Location Name: GWM-10 **Well Diameter: 4 in** **Screen Length: 10 ft** **Top of Screen: 62 ft** **Total Depth: 80 ft** **Initial Depth to Water: 49.83 ft**	**Pump Type: Fultz** **Estimated Total Volume Pumped: 16650 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 500 ml/min** **Final Draw Down: 5.94 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 663604**

Test Notes:

Weather Conditions:
Sunny High 70s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 0.3	+/- 10 %	+/- 10	+/- 0.3	
9/13/2023 12:51 PM	00:00	5.43 pH	18.02 °C	45.59 µS/cm	5.85 mg/L	14.58 NTU	193.8 mV	49.83 ft	250.00 ml/min
9/13/2023 12:56 PM	05:00	5.01 pH	16.40 °C	45.67 µS/cm	0.21 mg/L	0.00 NTU	202.7 mV	51.16 ft	220.00 ml/min
9/13/2023 1:01 PM	10:00	4.72 pH	16.10 °C	45.54 µS/cm	0.25 mg/L	0.00 NTU	224.4 mV	51.56 ft	240.00 ml/min
9/13/2023 1:06 PM	15:00	4.66 pH	16.80 °C	45.34 µS/cm	0.29 mg/L	0.00 NTU	236.6 mV	51.83 ft	240.00 ml/min
9/13/2023 1:11 PM	20:00	4.49 pH	16.12 °C	45.33 µS/cm	0.23 mg/L	0.00 NTU	261.1 mV	52.29 ft	240.00 ml/min
9/13/2023 1:16 PM	25:00	4.49 pH	16.93 °C	46.09 µS/cm	0.36 mg/L	0.00 NTU	275.8 mV	52.55 ft	300.00 ml/min
9/13/2023 1:21 PM	30:00	4.34 pH	15.84 °C	46.70 µS/cm	0.56 mg/L	0.00 NTU	299.5 mV	53.09 ft	300.00 ml/min
9/13/2023 1:26 PM	35:00	4.33 pH	15.98 °C	47.19 µS/cm	0.79 mg/L	0.00 NTU	310.8 mV	53.64 ft	300.00 ml/min
9/13/2023 1:31 PM	40:00	4.33 pH	16.13 °C	47.65 µS/cm	1.35 mg/L	0.00 NTU	316.6 mV	54.11 ft	280.00 ml/min
9/13/2023 1:36 PM	45:00	4.34 pH	16.25 °C	47.97 µS/cm	1.83 mg/L	0.00 NTU	319.1 mV	54.53 ft	200.00 ml/min
9/13/2023 1:41 PM	50:00	4.34 pH	16.06 °C	48.00 µS/cm	2.10 mg/L	0.00 NTU	321.1 mV	54.95 ft	260.00 ml/min
9/13/2023 1:46 PM	55:00	4.37 pH	16.14 °C	48.08 µS/cm	2.33 mg/L	0.00 NTU	320.5 mV	55.37 ft	500.00 ml/min
9/13/2023 1:51 PM	01:00:00	4.37 pH	16.29 °C	48.28 µS/cm	2.65 mg/L	0.00 NTU	321.3 mV	55.77 ft	500.00 ml/min

Samples

Sample ID:	Description:
GWM-10, MW-15A	

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 9/12/2023 8:35:16 AM
Project: ESL Fall 2023 GWM-11
Operator Name: Laura Russell

Location Name: GWM-11 **Well Diameter: 4 in** **Screen Length: 10 ft** **Top of Screen: 63 ft** **Total Depth: 80 ft** **Initial Depth to Water: 24.93 ft**	**Pump Type: Fultz** **Estimated Total Volume Pumped: 3450 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.05 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 663604**

Test Notes:

Weather Conditions:
Pt Cloudy Mid 70s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 0.3	+/- 10 %	+/- 10	+/- 0.3	
9/12/2023 8:35 AM	00:00	6.90 pH	19.45 °C	738.08 µS/cm	5.67 mg/L	0.00 NTU	0.3 mV	24.93 ft	250.00 ml/min
9/12/2023 8:40 AM	05:00	6.31 pH	18.81 °C	916.80 µS/cm	0.46 mg/L	0.00 NTU	-84.0 mV	24.98 ft	240.00 ml/min
9/12/2023 8:45 AM	10:00	6.28 pH	18.78 °C	915.48 µS/cm	0.40 mg/L	0.00 NTU	-84.8 mV	24.98 ft	200.00 ml/min
9/12/2023 8:50 AM	15:00	6.22 pH	18.88 °C	912.48 µS/cm	0.33 mg/L	0.00 NTU	-83.8 mV	24.98 ft	200.00 ml/min

Samples

Sample ID:	Description:
GWM-11	

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 9/13/2023 8:36:41 AM
Project: ESL Fall 2023 GWM-12
Operator Name: Laura Russell

Location Name: GWM-12 **Well Diameter: 4 in** **Screen Length: 10 ft** **Top of Screen: 94 ft** **Total Depth: 109 ft** **Initial Depth to Water: 48.12 ft**	**Pump Type: Fultz** **Estimated Total Volume Pumped: 20200 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 400 ml/min** **Final Draw Down: 0.09 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 663604**

Test Notes:

Weather Conditions:
Overcast Low 70s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 0.3	+/- 10 %	+/- 10	+/- 0.3	
9/13/2023 8:36 AM	00:00	7.04 pH	18.09 °C	226.31 µS/cm	6.34 mg/L	5.74 NTU	205.4 mV	48.12 ft	250.00 ml/min
9/13/2023 8:41 AM	05:00	4.79 pH	17.12 °C	232.85 µS/cm	2.20 mg/L	4.63 NTU	276.8 mV	48.19 ft	280.00 ml/min
9/13/2023 8:46 AM	10:00	4.75 pH	16.32 °C	236.65 µS/cm	1.75 mg/L	6.88 NTU	286.6 mV	48.20 ft	360.00 ml/min
9/13/2023 8:51 AM	15:00	4.73 pH	16.15 °C	236.37 µS/cm	1.61 mg/L	9.42 NTU	294.5 mV	48.19 ft	320.00 ml/min
9/13/2023 8:56 AM	20:00	4.71 pH	16.15 °C	235.77 µS/cm	1.52 mg/L	10.80 NTU	301.8 mV	48.20 ft	360.00 ml/min
9/13/2023 9:01 AM	25:00	4.69 pH	16.19 °C	235.46 µS/cm	1.47 mg/L	12.60 NTU	307.0 mV	48.20 ft	320.00 ml/min
9/13/2023 9:06 AM	30:00	4.68 pH	16.26 °C	234.88 µS/cm	1.45 mg/L	13.55 NTU	310.0 mV	48.20 ft	350.00 ml/min
9/13/2023 9:11 AM	35:00	4.67 pH	16.26 °C	234.57 µS/cm	1.44 mg/L	15.19 NTU	312.0 mV	48.20 ft	320.00 ml/min
9/13/2023 9:16 AM	40:00	4.67 pH	16.23 °C	234.44 µS/cm	1.41 mg/L	18.41 NTU	309.4 mV	48.21 ft	400.00 ml/min
9/13/2023 9:21 AM	45:00	4.66 pH	16.24 °C	234.21 µS/cm	1.41 mg/L	21.27 NTU	316.5 mV	48.21 ft	360.00 ml/min
9/13/2023 9:26 AM	50:00	4.66 pH	16.22 °C	234.41 µS/cm	1.39 mg/L	23.74 NTU	320.6 mV	48.21 ft	360.00 ml/min
9/13/2023 9:31 AM	55:00	4.66 pH	16.18 °C	234.25 µS/cm	1.38 mg/L	25.83 NTU	326.4 mV	48.21 ft	360.00 ml/min
9/13/2023 9:36 AM	01:00:00	4.66 pH	16.14 °C	234.64 µS/cm	1.36 mg/L	30.34 NTU	330.2 mV	48.21 ft	400.00 ml/min

Samples

Sample ID:	Description:
GWM-12	

Low-Flow Test Report:

Test Date / Time: 9/13/2023 11:21:56 AM
Project: ESL Fall 2023 GWM-14
Operator Name: Laura Russell

Location Name: GWM-14 **Well Diameter: 4 in** **Screen Length: 10 ft** **Top of Screen: 9 m** **Total Depth: 20 ft** **Initial Depth to Water: 11.5 ft**	**Pump Type: Fultz** **Estimated Total Volume Pumped: 4550 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 360 ml/min** **Final Draw Down: 0.08 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 663604**

Test Notes:

Weather Conditions:
Pt. Cloudy Mid 70s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 0.3	+/- 10 %	+/- 10	+/- 0.3	
9/13/2023 11:21 AM	00:00	6.07 pH	17.75 °C	465.90 µS/cm	4.68 mg/L	23.20 NTU	-43.0 mV	11.50 ft	250.00 ml/min
9/13/2023 11:26 AM	05:00	6.14 pH	16.92 °C	476.80 µS/cm	0.15 mg/L	1.69 NTU	-41.2 mV	11.57 ft	300.00 ml/min
9/13/2023 11:31 AM	10:00	6.11 pH	16.57 °C	471.62 µS/cm	0.08 mg/L	1.22 NTU	-41.9 mV	11.58 ft	360.00 ml/min
9/13/2023 11:36 AM	15:00	6.10 pH	16.52 °C	475.52 µS/cm	0.06 mg/L	0.53 NTU	-45.0 mV	11.58 ft	360.00 ml/min

Samples

Sample ID:	Description:
GWM-14	

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 9/12/2023 1:35:34 PM
Project: ESL Fall 2023 GWM-15D
Operator Name: Laura Russell

Location Name: GWM-15D **Well Diameter: 4 in** **Screen Length: 10 ft** **Top of Screen: 44 ft** **Total Depth: 55 ft** **Initial Depth to Water: 8.69 ft**	**Pump Type: Fultz** **Estimated Total Volume Pumped: 15775.333 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.01 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 663604**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 0.3	+/- 10 %	+/- 10	+/- 0.3	
9/12/2023 1:35 PM	00:00	6.65 pH	20.32 °C	247.24 µS/cm	6.97 mg/L	134.45 NTU	72.1 mV	8.69 ft	200.00 ml/min
9/12/2023 1:40 PM	05:00	5.43 pH	17.29 °C	439.27 µS/cm	0.35 mg/L	418.39 NTU	192.9 mV	8.70 ft	250.00 ml/min
9/12/2023 1:45 PM	10:00	5.34 pH	15.88 °C	440.97 µS/cm	0.29 mg/L	371.74 NTU	193.6 mV	8.70 ft	500.00 ml/min
9/12/2023 1:50 PM	15:00	5.30 pH	15.41 °C	440.62 µS/cm	0.16 mg/L	269.35 NTU	194.4 mV	8.71 ft	400.00 ml/min
9/12/2023 1:55 PM	20:00	5.24 pH	15.50 °C	439.12 µS/cm	0.11 mg/L	193.97 NTU	198.4 mV	8.71 ft	420.00 ml/min
9/12/2023 2:00 PM	25:00	5.21 pH	15.29 °C	440.30 µS/cm	0.08 mg/L	158.24 NTU	201.7 mV	8.71 ft	440.00 ml/min
9/12/2023 2:05 PM	30:00	5.19 pH	16.66 °C	440.87 µS/cm	0.12 mg/L	145.86 NTU	204.9 mV	8.71 ft	160.00 ml/min
9/12/2023 2:10 PM	35:00	5.19 pH	16.50 °C	440.56 µS/cm	0.17 mg/L	165.12 NTU	203.9 mV	8.70 ft	160.00 ml/min
9/12/2023 2:12 PM	37:02	5.18 pH	16.39 °C	440.56 µS/cm	0.15 mg/L	153.01 NTU	204.5 mV	8.70 ft	160.00 ml/min
9/12/2023 2:17 PM	42:02	5.18 pH	16.03 °C	440.78 µS/cm	0.11 mg/L	173.97 NTU	206.7 mV	8.70 ft	160.00 ml/min
9/12/2023 2:22 PM	47:02	5.18 pH	16.22 °C	442.38 µS/cm	0.11 mg/L	192.27 NTU	208.6 mV	8.70 ft	200.00 ml/min
9/12/2023 2:27 PM	52:02	5.18 pH	16.27 °C	444.54 µS/cm	0.12 mg/L	203.18 NTU	209.9 mV	8.70 ft	200.00 ml/min
9/12/2023 2:32 PM	57:02	5.18 pH	16.29 °C	444.01 µS/cm	0.12 mg/L	218.91 NTU	210.8 mV	8.70 ft	200.00 ml/min

Samples

Sample ID:	Description:

GWM-15D	

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 9/11/2023 10:01:00 AM
Project: ESL Fall 2023 GWM16D
Operator Name: Laura Russell

Location Name: GWM-16D **Well Diameter: 2 in** **Screen Length: 10 ft** **Top of Screen: 102 ft** **Total Depth: 112 ft** **Initial Depth to Water: 94.66 ft**	**Pump Type: Fultz** **Estimated Total Volume Pumped: 9400 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.05 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 663604**

Test Notes:

Weather Conditions:
Overcast Mid 70s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 0.3	+/- 10 %	+/- 10	+/- 0.3	
9/11/2023 10:01 AM	00:00	6.13 pH	16.21 °C	313.59 µS/cm	8.31 mg/L	11.37 NTU	42.3 mV	94.66 ft	250.00 ml/min
9/11/2023 10:06 AM	05:00	5.28 pH	16.11 °C	308.39 µS/cm	8.32 mg/L	2.81 NTU	88.3 mV	94.75 ft	440.00 ml/min
9/11/2023 10:11 AM	10:00	5.11 pH	15.95 °C	303.17 µS/cm	8.33 mg/L	1.30 NTU	130.7 mV	94.76 ft	440.00 ml/min
9/11/2023 10:16 AM	15:00	5.05 pH	15.94 °C	301.09 µS/cm	8.33 mg/L	0.47 NTU	159.1 mV	94.76 ft	500.00 ml/min
9/11/2023 10:21 AM	20:00	5.03 pH	17.16 °C	300.51 µS/cm	8.22 mg/L	2.22 NTU	157.4 mV	94.71 ft	250.00 ml/min
9/11/2023 10:26 AM	25:00	5.01 pH	17.59 °C	299.97 µS/cm	8.17 mg/L	5.32 NTU	164.6 mV	94.71 ft	200.00 ml/min

Samples

Sample ID:	Description:
GWM-16D	

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 9/12/2023 10:11:50 AM
Project: ESL Fall 2023 GWM-17D
Operator Name: Laura Russell

Location Name: GWM-17D **Well Diameter: 2 in** **Screen Length: 10 ft** **Top of Screen: 65 ft** **Total Depth: 75 ft** **Initial Depth to Water: 13.31 ft**	**Pump Type: Fultz** **Estimated Total Volume Pumped: 21700 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 400 ml/min** **Final Draw Down: 0.09 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 663604**

Test Notes:

Weather Conditions:
Sunny High 70s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 0.3	+/- 10 %	+/- 10	+/- 0.3	
9/12/2023 10:11 AM	00:00	6.33 pH	18.16 °C	598.58 µS/cm	5.34 mg/L	29.15 NTU	-8.0 mV	13.31 ft	250.00 ml/min
9/12/2023 10:16 AM	05:00	5.90 pH	16.51 °C	623.55 µS/cm	0.13 mg/L	810.44 NTU	42.2 mV	13.38 ft	360.00 ml/min
9/12/2023 10:21 AM	10:00	5.89 pH	16.04 °C	623.37 µS/cm	0.08 mg/L	207.27 NTU	54.1 mV	13.40 ft	360.00 ml/min
9/12/2023 10:26 AM	15:00	5.88 pH	15.88 °C	625.56 µS/cm	0.06 mg/L	78.42 NTU	57.6 mV	13.39 ft	400.00 ml/min
9/12/2023 10:31 AM	20:00	5.86 pH	15.81 °C	626.68 µS/cm	0.04 mg/L	70.32 NTU	62.5 mV	13.39 ft	360.00 ml/min
9/12/2023 10:36 AM	25:00	5.84 pH	15.84 °C	628.04 µS/cm	0.04 mg/L	74.92 NTU	65.9 mV	13.40 ft	350.00 ml/min
9/12/2023 10:41 AM	30:00	5.83 pH	15.79 °C	625.87 µS/cm	0.03 mg/L	30.39 NTU	68.0 mV	13.40 ft	340.00 ml/min
9/12/2023 10:46 AM	35:00	5.82 pH	15.84 °C	626.78 µS/cm	0.03 mg/L	35.06 NTU	68.4 mV	13.40 ft	360.00 ml/min
9/12/2023 10:51 AM	40:00	5.82 pH	15.79 °C	625.59 µS/cm	0.02 mg/L	15.02 NTU	69.1 mV	13.40 ft	360.00 ml/min
9/12/2023 10:56 AM	45:00	5.82 pH	15.71 °C	625.40 µS/cm	0.02 mg/L	13.16 NTU	69.1 mV	13.40 ft	400.00 ml/min
9/12/2023 11:01 AM	50:00	5.82 pH	15.74 °C	624.38 µS/cm	0.01 mg/L	9.09 NTU	69.5 mV	13.41 ft	400.00 ml/min
9/12/2023 11:06 AM	55:00	5.82 pH	15.81 °C	624.77 µS/cm	0.01 mg/L	5.22 NTU	69.5 mV	13.41 ft	400.00 ml/min
9/12/2023 11:11 AM	01:00:00	5.82 pH	15.75 °C	623.01 µS/cm	0.00 mg/L	5.56 NTU	69.9 mV	13.40 ft	400.00 ml/min

Samples

Sample ID:	Description:
GWM-17D	

Low-Flow Test Report:

Test Date / Time: 9/12/2023 11:31:07 AM
Project: ESL Fall 2023 GWM-17S
Operator Name: Laura Russell

Location Name: GWM-17S **Well Diameter: 2 in** **Screen Length: 10 ft** **Top of Screen: 30 ft** **Total Depth: 40 ft** **Initial Depth to Water: 10.88 ft**	**Pump Type: Fultz** **Estimated Total Volume Pumped: 12600 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 300 ml/min** **Final Draw Down: 0.01 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 663604**

Test Notes:

Weather Conditions:
Sunny High 70s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 0.3	+/- 10 %	+/- 10	+/- 0.3	
9/12/2023 11:31 AM	00:00	6.07 pH	17.57 °C	736.40 µS/cm	4.58 mg/L	209.81 NTU	-21.2 mV	10.88 ft	250.00 ml/min
9/12/2023 11:36 AM	05:00	6.23 pH	17.13 °C	819.97 µS/cm	0.13 mg/L	149.13 NTU	-54.6 mV	10.88 ft	350.00 ml/min
9/12/2023 11:41 AM	10:00	6.24 pH	16.71 °C	816.10 µS/cm	0.08 mg/L	99.12 NTU	-56.9 mV	10.89 ft	360.00 ml/min
9/12/2023 11:46 AM	15:00	6.24 pH	16.57 °C	817.88 µS/cm	0.06 mg/L	49.27 NTU	-58.9 mV	10.88 ft	350.00 ml/min
9/12/2023 11:51 AM	20:00	6.23 pH	16.43 °C	816.11 µS/cm	0.04 mg/L	24.30 NTU	-59.5 mV	10.89 ft	350.00 ml/min
9/12/2023 11:56 AM	25:00	6.23 pH	16.34 °C	814.72 µS/cm	0.03 mg/L	15.17 NTU	-60.1 mV	10.89 ft	260.00 ml/min
9/12/2023 12:01 PM	30:00	6.22 pH	16.35 °C	815.46 µS/cm	0.03 mg/L	8.48 NTU	-60.1 mV	10.89 ft	300.00 ml/min
9/12/2023 12:06 PM	35:00	6.22 pH	16.35 °C	814.24 µS/cm	0.02 mg/L	5.12 NTU	-60.4 mV	10.89 ft	300.00 ml/min
9/12/2023 12:11 PM	40:00	6.22 pH	16.28 °C	812.63 µS/cm	0.02 mg/L	1.26 NTU	-60.1 mV	10.89 ft	300.00 ml/min

Samples

Sample ID:	Description:
GWM-17S	

Low-Flow Test Report:

Test Date / Time: 9/14/2023 8:38:48 AM
Project: ESL Fall 2023 GWM-19D
Operator Name: Laura Russell

Location Name: GWM-19D **Well Diameter: 2 in** **Screen Length: 10 ft** **Top of Screen: 105 ft** **Total Depth: 115 ft** **Initial Depth to Water: 43.58 ft**	**Pump Type: Fultz** **Estimated Total Volume Pumped: 8450 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 280 ml/min** **Final Draw Down: 0.02 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 663604**

Test Notes:

Weather Conditions:
Sunny Low 70s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 0.3	+/- 10 %	+/- 10	+/- 0.3	
9/14/2023 8:38 AM	00:00	6.89 pH	21.16 °C	174.02 µS/cm	4.38 mg/L	0.00 NTU	246.1 mV	43.58 ft	250.00 ml/min
9/14/2023 8:43 AM	05:00	4.88 pH	19.58 °C	180.39 µS/cm	0.20 mg/L	0.28 NTU	259.8 mV	43.60 ft	300.00 ml/min
9/14/2023 8:48 AM	10:00	4.79 pH	19.65 °C	177.14 µS/cm	0.19 mg/L	0.00 NTU	277.7 mV	43.60 ft	300.00 ml/min
9/14/2023 8:53 AM	15:00	4.77 pH	19.68 °C	176.09 µS/cm	0.17 mg/L	0.00 NTU	286.2 mV	43.60 ft	360.00 ml/min
9/14/2023 8:58 AM	20:00	4.71 pH	19.71 °C	173.55 µS/cm	0.16 mg/L	0.00 NTU	294.2 mV	43.60 ft	240.00 ml/min
9/14/2023 9:03 AM	25:00	4.67 pH	19.73 °C	172.61 µS/cm	0.16 mg/L	0.00 NTU	300.3 mV	43.59 ft	240.00 ml/min
9/14/2023 9:08 AM	30:00	4.64 pH	19.76 °C	172.35 µS/cm	0.16 mg/L	0.00 NTU	303.9 mV	43.60 ft	280.00 ml/min

Samples

Sample ID:	Description:
GWM-19D	

Baltimore County Bureau of Solid Waste Management

Sampling Log

Landfill Name: ESL

Well ID: L-1

Location: White Marsh, MD

Personnel: Laura Russell/Brooke Zibell

Date: 9-15-23

Weather: Sunny/Mid 70s

Arrival Time 0835

Well Depth: NA feet

Well Diameter: NA inches

Depth to Water: NA feet

Time	Water Level (feet)	Pumping Rate (ml/min)	DO (mg/l)	Temp. (°C)	Specific Conductance (µS/ cm)	pH	ORP (mV)	Turbidity (NTU)
0850				22.7	8920	7.89		15.2

Sampling Time: 0850

Notes:

Baltimore County Bureau of Solid Waste Management
Sampling Log

Landfill Name: ESL

Well ID: L-2

Location: White Marsh, MD

Personnel: Laura Russell/Brooke Zibell

Date: 9-15-23

Weather: Sunny/Mid 70s

Arrival Time 0910

Well Depth: NA feet

Well Diameter: NA inches

Depth to Water: NA feet

Time	Water Level (feet)	Pumping Rate (ml/min)	DO (mg/l)	Temp. (°C)	Specific Conductance (µS/ cm)	pH	ORP (mV)	Turbidity (NTU)
0920				21.2	8100	7.08		46.3

Sampling Time: 0920

Notes:

Baltimore County Bureau of Solid Waste Management
Sampling Log

Landfill Name: ESL

Well ID: SMW-13

Location: White Marsh, MD

Personnel: Laura Russell | Brooke Zibell

Date: 9-15-23

Weather: Sunny | High 70s

Arrival Time 1120

Well Depth: NA feet

Well Diameter: NA inches

Depth to Water: NA feet

Time	Water Level (feet)	Pumping Rate (ml/min)	DO (mg/l)	Temp. (°C)	Specific Conductance (µS/ cm)	pH	ORP (mV)	Turbidity (NTU)
1145				17.4	338	4.93		0.60

Sampling Time: 1145

Notes: 55.32 sec | 5 Gallons = 0.922 min | 5 Gallons

Start 1134

End 1144

= 5.42 gal/min

5.42 gal/min × 10 min = 54.2 gallons purged prior to sampling

Baltimore County Bureau of Solid Waste Management
Sampling Log

Landfill Name: ESL

Well ID: SMW-32

Location: White Marsh, MD

Personnel: Laura Russell / Brooke Zibell

Date: 9-15-23

Weather: Sunny / Mid 70s

Arrival Time 1315

Well Depth: NA feet

Well Diameter: NA inches

Depth to Water: NA feet

Time	Water Level (feet)	Pumping Rate (ml/min)	DO (mg/l)	Temp. (°C)	Specific Conductance (µS/ cm)	pH	ORP (mV)	Turbidity (NTU)
1336				17.7	351	4.52		1.52

Sampling Time: 1335

Notes: 25.67 sec / 5 Gallons = 0.428 min / 5 Gallons

= 11.68 gal/min

Start 1324
End 1334

11.68 x 10 min = 116.8 gallons purged prior to sampling

Baltimore County Bureau of Solid Waste Management
Sampling Log

Landfill Name: ESL

~~Well~~ ID: SG)-1

Location: White Marsh, MD

Personnel: Laura Russell / Brooke Zibell

Date: 9-15-23

Weather: Sunny / High 70s

Arrival Time 1350

Well Depth: NA feet

Well Diameter: NA inches

Depth to Water: NA feet

Time	Water Level (feet)	Pumping Rate (ml/min)	DO (mg/l)	Temp. (°C)	Specific Conductance (µS/ cm)	pH	ORP (mV)	Turbidity (NTU)
1405					796	6.40		14.9

Sampling Time: 1355

Notes:

APPENDIX C

Laboratory Data Validation, Sample Chain of Custody Records, and Laboratory Results

301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

Analytical Results Report For | Maryland Environmental Services - Landfills

Report ID 274563 on 10/4/2023

Certificate of Analysis

Project Name:	**Eastern Sanitary Landfill**	Workorder:	**3322523**
Purchase Order:	**MA 3680**	Workorder ID:	**Eastern Sanitary Landfill**

Enclosed are the analytical results for samples received by the laboratory on Monday, September 11, 2023.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP)
accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact George Methlie (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements.
The test results meet requirements of the current NELAP standards or state requirements, where applicable.
For a specific list of accredited
analytes, refer to the certifications section of the ALS website at
www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

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ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):
- Maryland Services-ENVOPS - Maryland Environmental Services - Landfills
- Jessica Cox - Maryland Environmental Services
- Maryland Services-LF Data - Maryland Environmental Services
- William Herpel - Maryland Environmental Service

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

George Methlie

George Methlie *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3322523001	Trip Blank	Water	09/11/2023 00:00	09/11/2023 17:10	CBC	Collected By Client
3322523002	Field Blank	Water	09/11/2023 08:35	09/11/2023 17:10	CBC	Collected By Client
3322523003	GWM-1	Water	09/11/2023 09:35	09/11/2023 17:10	CBC	Collected By Client
3322523004	GWM-16D	Water	09/11/2023 10:30	09/11/2023 17:10	CBC	Collected By Client
3322523005	GWM-9	Water	09/11/2023 11:30	09/11/2023 17:10	CBC	Collected By Client
3322523006	GWM-2	Water	09/11/2023 13:20	09/11/2023 17:10	CBC	Collected By Client
3322523007	GWM-3	Water	09/11/2023 14:10	09/11/2023 17:10	CBC	Collected By Client
3322523008	GWM-16D	Water	09/11/2023 10:30	09/11/2023 17:10	CBC	Collected By Client
3322523009	GWM-9	Water	09/11/2023 11:30	09/11/2023 17:10	CBC	Collected By Client
3322523010	GWM-2	Water	09/11/2023 13:20	09/11/2023 17:10	CBC	Collected By Client

Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136, including but not limited to the following EPA Method reference revisions:
  EPA 300.1 Rev. 1.0-1997
  EPA 300.0 Rev. 2.1-1993
  EPA 353.2 Rev. 2.0-1993
  EPA 410.4 Rev. 1.0-1993
  EPA 420.4 Rev. 1.0-1993
  EPA 365.1 Rev. 2.0-1993
  EPA 200.7 Rev. 4.4-1994
  EPA 200.8 Rev. 5.4-1994
  EPA 245.1 Rev. 3.0-1994
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
2	This sample result was calculated and reported using Method SM2340B-2011.
3	The QC type CCV for method SW846 6020A was outside the control limits for the analyte Sb. The % recovery was reported as 111.7 and the control limits were 90 to 110. The sample concentration was ND.
4	The QC type CCV for method SW846 6020A was outside the control limits for the analyte Sb. The % recovery was reported as 111.7 and the control limits were 90 to 110. The sample concentration was ND.
5	The QC sample type MS for method SW846 8260C was outside the control limits for the analyte trans-1,3-Dichloropropene. The % Recovery was reported as 77.7 and the control limits were 78 to 126.
6	The QC sample type MSD for method SW846 8260C was outside the control limits for the analyte trans-1,3-Dichloropropene. The % Recovery was reported as 77.8 and the control limits were 78 to 126.
7	The QC type LLICV for method SW846 6020A was outside the control limits for the analyte Se. The % RSD was reported as 26.8 and the control limits were 0 to 20.
8	The QC type LLCCV for method SW846 6020A was outside the control limits for the analyte Se. The % RSD was reported as 20.6 and the control limits were 0 to 20.
9	Eurofins Pittsburgh method 608 LL Pesticides results are attached.

Detected Results Summary

Client Sample ID	Trip Blank	Collected	09/11/2023 00:00
Lab Sample ID	3322523001	Lab Receipt	09/11/2023 17:10

Compound	Result	Units	RDL	MDL	Method	Flag
VOLATILE ORGANICS						
Bromomethane	0.85J	ug/L	1.0	0.39	SW846 8260C	#
Chloromethane	0.34J	ug/L	1.0	0.31	SW846 8260C	#

Detected Results Summary

Client Sample ID	Field Blank	Collected	09/11/2023 08:35
Lab Sample ID	3322523002	Lab Receipt	09/11/2023 17:10

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Calcium, Total	0.053J	mg/L	0.11	0.037	SW846 6020A	#
Hardness	0.23J	mg/L	0.33	0.11	EPA 200.7	#
Sodium, Total	0.21	mg/L	0.11	0.037	SW846 6020A	#
VOLATILE ORGANICS						
Bromomethane	1.0	ug/L	1.0	0.39	SW846 8260C	#
Chloromethane	0.41J	ug/L	1.0	0.31	SW846 8260C	#
WET CHEMISTRY						
Ammonia-N	0.026	mg/L	0.010	0.003	ASTM D6919-17	#

Detected Results Summary

Client Sample ID	GWM-1	Collected	09/11/2023 09:35
Lab Sample ID	3322523003	Lab Receipt	09/11/2023 17:10

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Arsenic, Total	0.0022J	mg/L	0.0033	0.0011	SW846 6020A	#
Barium, Total	0.054	mg/L	0.0056	0.0019	SW846 6020A	#
Calcium, Total	26.2	mg/L	0.11	0.037	SW846 6020A	#
Chromium, Total	0.0098	mg/L	0.0022	0.00074	SW846 6020A	#
Copper, Total	0.0085	mg/L	0.0056	0.0019	SW846 6020A	#
Hardness	93.7	mg/L	0.33	0.11	EPA 200.7	#
Iron, Total	0.58	mg/L	0.056	0.019	SW846 6020A	#
Magnesium, Total	6.1	mg/L	0.11	0.037	SW846 6020A	#
Manganese, Total	0.029	mg/L	0.0056	0.0019	SW846 6020A	#
Nickel, Total	0.0049J	mg/L	0.0056	0.0019	SW846 6020A	#
Potassium, Total	2.6	mg/L	0.11	0.037	SW846 6020A	#
Sodium, Total	18.6	mg/L	0.11	0.037	SW846 6020A	#
Vanadium, Total	0.0051	mg/L	0.0022	0.00074	SW846 6020A	#
Zinc, Total	0.0090	mg/L	0.0056	0.0019	SW846 6020A	#
VOLATILE ORGANICS						
2-Butanone	7.1J	ug/L	10.0	1.8	SW846 8260C	#
4-Methyl-2-Pentanone(MIBK)	10.5	ug/L	5.0	1.5	SW846 8260C	#
Acetone	7.6J	ug/L	10.0	3.1	SW846 8260C	#
Bromomethane	0.93J	ug/L	1.0	0.39	SW846 8260C	#
Carbon Disulfide	1.7	ug/L	1.0	0.23	SW846 8260C	#
Chloromethane	0.76J	ug/L	1.0	0.31	SW846 8260C	#
Toluene	0.55J	ug/L	1.0	0.23	SW846 8260C	#
WET CHEMISTRY						
Alkalinity, Total	104	mg/L	5	5	SM2320B-2011	#
Ammonia-N	3.68	mg/L	0.100	0.03	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	30	mg/L	15	5	EPA 410.4	#
Chloride	30.0	mg/L	2.0	1.5	EPA 300.0	#
Nitrate-N	0.26J	mg/L	1.0	0.22	EPA 300.0	#
Sulfate	3.8	mg/L	2.0	1.5	EPA 300.0	#
Total Dissolved Solids	186	mg/L	25	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	GWM-16D	Collected	09/11/2023 10:30
Lab Sample ID	3322523004	Lab Receipt	09/11/2023 17:10

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Barium, Total	0.14	mg/L	0.0056	0.0019	SW846 6020A	#
Calcium, Total	12.6	mg/L	0.11	0.037	SW846 6020A	#
Chromium, Total	0.0027	mg/L	0.0022	0.00074	SW846 6020A	#
Cobalt, Total	0.0040J	mg/L	0.0056	0.0019	SW846 6020A	#
Copper, Total	0.0065	mg/L	0.0056	0.0019	SW846 6020A	#
Hardness	62.2	mg/L	0.33	0.11	EPA 200.7	#
Iron, Total	0.026J	mg/L	0.056	0.019	SW846 6020A	#
Magnesium, Total	7.2	mg/L	0.11	0.037	SW846 6020A	#
Manganese, Total	0.028	mg/L	0.0056	0.0019	SW846 6020A	#
Nickel, Total	0.018	mg/L	0.0056	0.0019	SW846 6020A	#
Potassium, Total	3.3	mg/L	0.11	0.037	SW846 6020A	#
Sodium, Total	32.0	mg/L	0.11	0.037	SW846 6020A	#
Zinc, Total	0.027	mg/L	0.0056	0.0019	SW846 6020A	#
VOLATILE ORGANICS						
Bromomethane	1.1	ug/L	1.0	0.39	SW846 8260C	#
Carbon Disulfide	0.31J	ug/L	1.0	0.23	SW846 8260C	#
Chloromethane	1.4	ug/L	1.0	0.31	SW846 8260C	#
Iodomethane	0.78J	ug/L	1.0	0.42	SW846 8260C	#
WET CHEMISTRY						
Alkalinity, Total	7	mg/L	5	5	SM2320B-2011	#
Ammonia-N	0.207	mg/L	0.100	0.03	ASTM D6919-17	#
Chloride	74.8	mg/L	2.0	1.5	EPA 300.0	#
Nitrate-N	2.9	mg/L	1.0	0.22	EPA 300.0	#
Sulfate	16.1	mg/L	2.0	1.5	EPA 300.0	#
Total Dissolved Solids	210	mg/L	25	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	GWM-9	Collected	09/11/2023 11:30
Lab Sample ID	3322523005	Lab Receipt	09/11/2023 17:10

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Barium, Total	0.058	mg/L	0.0056	0.0019	SW846 6020A	#
Calcium, Total	8.2	mg/L	0.11	0.037	SW846 6020A	#
Chromium, Total	0.0012J	mg/L	0.0022	0.00074	SW846 6020A	#
Copper, Total	0.013	mg/L	0.0056	0.0019	SW846 6020A	#
Hardness	39.7	mg/L	0.33	0.11	EPA 200.7	#
Iron, Total	0.065	mg/L	0.056	0.019	SW846 6020A	#
Magnesium, Total	4.9	mg/L	0.11	0.037	SW846 6020A	#
Manganese, Total	0.049	mg/L	0.0056	0.0019	SW846 6020A	#
Nickel, Total	0.0033J	mg/L	0.0056	0.0019	SW846 6020A	#
Potassium, Total	1.9	mg/L	0.11	0.037	SW846 6020A	#
Sodium, Total	98.9	mg/L	0.11	0.037	SW846 6020A	#
Zinc, Total	0.016	mg/L	0.0056	0.0019	SW846 6020A	#
VOLATILE ORGANICS						
Bromomethane	0.73J	ug/L	1.0	0.39	SW846 8260C	#
Chloroform	3.4	ug/L	1.0	0.21	SW846 8260C	#
Chloromethane	0.99J	ug/L	1.0	0.31	SW846 8260C	#
Iodomethane	0.43J	ug/L	1.0	0.42	SW846 8260C	#
WET CHEMISTRY						
Alkalinity, Total	14	mg/L	5	5	SM2320B-2011	#
Ammonia-N	0.391	mg/L	0.100	0.03	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	6J	mg/L	15	5	EPA 410.4	#
Chloride	164	mg/L	2.0	1.5	EPA 300.0	#
Nitrate-N	0.79J	mg/L	1.0	0.22	EPA 300.0	#
Sulfate	8.8	mg/L	2.0	1.5	EPA 300.0	#
Total Dissolved Solids	324	mg/L	25	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	GWM-2	Collected	09/11/2023 13:20
Lab Sample ID	3322523006	Lab Receipt	09/11/2023 17:10

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Barium, Total	0.10	mg/L	0.0056	0.0019	SW846 6020A	#
Calcium, Total	8.8	mg/L	0.11	0.037	SW846 6020A	#
Chromium, Total	0.0017J	mg/L	0.0022	0.00074	SW846 6020A	#
Cobalt, Total	0.042	mg/L	0.0056	0.0019	SW846 6020A	#
Copper, Total	0.0027J	mg/L	0.0056	0.0019	SW846 6020A	#
Hardness	50.1	mg/L	0.33	0.11	EPA 200.7	#
Iron, Total	0.047J	mg/L	0.056	0.019	SW846 6020A	#
Magnesium, Total	6.8	mg/L	0.11	0.037	SW846 6020A	#
Manganese, Total	0.17	mg/L	0.0056	0.0019	SW846 6020A	#
Nickel, Total	0.087	mg/L	0.0056	0.0019	SW846 6020A	#
Potassium, Total	2.9	mg/L	0.11	0.037	SW846 6020A	#
Sodium, Total	40.2	mg/L	0.11	0.037	SW846 6020A	#
Zinc, Total	0.067	mg/L	0.0056	0.0019	SW846 6020A	#
VOLATILE ORGANICS						
Bromomethane	0.76J	ug/L	1.0	0.39	SW846 8260C	#
Chloroform	0.36J	ug/L	1.0	0.21	SW846 8260C	#
Chloromethane	0.89J	ug/L	1.0	0.31	SW846 8260C	#
Iodomethane	0.47J	ug/L	1.0	0.42	SW846 8260C	#
Methyl t-Butyl Ether	0.75J	ug/L	1.0	0.33	SW846 8260C	#
WET CHEMISTRY						
Alkalinity, Total	5	mg/L	5	5	SM2320B-2011	#
Ammonia-N	0.180	mg/L	0.100	0.03	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	6J	mg/L	15	5	EPA 410.4	#
Chloride	82.5	mg/L	2.0	1.5	EPA 300.0	#
Nitrate-N	2.2	mg/L	1.0	0.22	EPA 300.0	#
Sulfate	16.3	mg/L	2.0	1.5	EPA 300.0	#
Total Dissolved Solids	194	mg/L	25	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	GWM-3	Collected	09/11/2023 14:10
Lab Sample ID	3322523007	Lab Receipt	09/11/2023 17:10

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Barium, Total	0.076	mg/L	0.0056	0.0019	SW846 6020A	#
Calcium, Total	9.2	mg/L	0.11	0.037	SW846 6020A	#
Chromium, Total	0.0057	mg/L	0.0022	0.00074	SW846 6020A	#
Cobalt, Total	0.0021J	mg/L	0.0056	0.0019	SW846 6020A	#
Hardness	54.3	mg/L	0.33	0.11	EPA 200.7	#
Iron, Total	0.028J	mg/L	0.056	0.019	SW846 6020A	#
Lead, Total	0.00075J	mg/L	0.0022	0.00074	SW846 6020A	#
Magnesium, Total	7.8	mg/L	0.11	0.037	SW846 6020A	#
Manganese, Total	0.010	mg/L	0.0056	0.0019	SW846 6020A	#
Mercury, Total	0.00033J	mg/L	0.00050	0.00017	SW846 7470A	#
Nickel, Total	0.0037J	mg/L	0.0056	0.0019	SW846 6020A	#
Potassium, Total	2.0	mg/L	0.11	0.037	SW846 6020A	#
Sodium, Total	22.5	mg/L	0.11	0.037	SW846 6020A	#
Zinc, Total	0.0026J	mg/L	0.0056	0.0019	SW846 6020A	#
VOLATILE ORGANICS						
Bromomethane	0.76J	ug/L	1.0	0.39	SW846 8260C	#
Chloromethane	0.71J	ug/L	1.0	0.31	SW846 8260C	#
WET CHEMISTRY						
Alkalinity, Total	21	mg/L	5	5	SM2320B-2011	#
Ammonia-N	0.123	mg/L	0.100	0.03	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	5J	mg/L	15	5	EPA 410.4	#
Chloride	41.5	mg/L	2.0	1.5	EPA 300.0	#
Nitrate-N	2.4	mg/L	1.0	0.22	EPA 300.0	#
Sulfate	26.9	mg/L	2.0	1.5	EPA 300.0	#
Total Dissolved Solids	154	mg/L	25	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	GWM-16D	Collected	09/11/2023 10:30
Lab Sample ID	3322523008	Lab Receipt	09/11/2023 17:10

Compound	Result	Units	RDL	MDL	Method	Flag
SUBCONTRACTED ANALYSIS						
Subcontracted Analysis	See attached				Subcontract	#

Detected Results Summary

Client Sample ID	GWM-9	Collected	09/11/2023 11:30
Lab Sample ID	3322523009	Lab Receipt	09/11/2023 17:10

Compound	Result	Units	RDL	MDL	Method	Flag
SUBCONTRACTED ANALYSIS						
Subcontracted Analysis	See attached				Subcontract	#

Detected Results Summary

Client Sample ID	GWM-2	Collected	09/11/2023 13:20
Lab Sample ID	3322523010	Lab Receipt	09/11/2023 17:10

Compound	Result	Units	RDL	MDL	Method	Flag
SUBCONTRACTED ANALYSIS						
Subcontracted Analysis	See attached				Subcontract	#

Results

Client Sample ID	Trip Blank	Collected	09/11/2023 00:00
Lab Sample ID	3322523001	Lab Receipt	09/11/2023 17:10

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 12:32	ILY	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/20/2023 12:32	ILY	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 12:32	ILY	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 12:32	ILY	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 12:32	ILY	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 12:32	ILY	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/20/2023 12:32	ILY	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0051	SW846 8011	1	09/12/2023 19:12	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/20/2023 12:32	ILY	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/12/2023 19:12	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 12:32	ILY	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/20/2023 12:32	ILY	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 12:32	ILY	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 12:32	ILY	C
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 12:32	ILY	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/20/2023 12:32	ILY	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/20/2023 12:32	ILY	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/20/2023 12:32	ILY	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/20/2023 12:32	ILY	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/20/2023 12:32	ILY	C
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 12:32	ILY	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 12:32	ILY	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 12:32	ILY	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/20/2023 12:32	ILY	C
Bromomethane	0.85J	J	ug/L	1.0	0.39	SW846 8260C	1	09/20/2023 12:32	ILY	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 12:32	ILY	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 12:32	ILY	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/20/2023 12:32	ILY	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 12:32	ILY	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 12:32	ILY	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/20/2023 12:32	ILY	C
Chloromethane	0.34J	J	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 12:32	ILY	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 12:32	ILY	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 12:32	ILY	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 12:32	ILY	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 12:32	ILY	C
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 12:32	ILY	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 12:32	ILY	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/20/2023 12:32	ILY	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 12:32	ILY	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 12:32	ILY	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/20/2023 12:32	ILY	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 12:32	ILY	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 12:32	ILY	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 12:32	ILY	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 12:32	ILY	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/20/2023 12:32	ILY	C

Results

Client Sample ID	Trip Blank	Collected	09/11/2023 00:00
Lab Sample ID	3322523001	Lab Receipt	09/11/2023 17:10

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/20/2023 12:32	ILY	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 12:32	ILY	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/20/2023 12:32	ILY	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 12:32	ILY	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 12:32	ILY	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/20/2023 12:32	ILY	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/20/2023 12:32	ILY	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	104%	62 – 133	09/20/2023 12:32	
1-Chloro-2-Fluorobenzene	348-51-6	112%	70 – 130	09/12/2023 19:12	
4-Bromofluorobenzene	460-00-4	106%	79 – 114	09/20/2023 12:32	
Dibromofluoromethane	1868-53-7	105%	78 – 116	09/20/2023 12:32	
Toluene-d8	2037-26-5	108%	76 – 127	09/20/2023 12:32	

Results

Client Sample ID	Field Blank	Collected	09/11/2023 08:35
Lab Sample ID	3322523002	Lab Receipt	09/11/2023 17:10

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND,3	mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 11:17	MO	E1
Arsenic, Total	ND	ND	mg/L	0.0033	0.0011	SW846 6020A	1	09/15/2023 11:17	MO	E1
Barium, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 11:17	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/15/2023 11:17	MO	E1
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/15/2023 11:17	MO	E1
Calcium, Total	0.053J	J	mg/L	0.11	0.037	SW846 6020A	1	09/15/2023 11:17	MO	E1
Chromium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 11:17	MO	E1
Cobalt, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 11:17	MO	E1
Copper, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 11:17	MO	E1
Hardness	0.23J	J,2	mg/L	0.33	0.11	EPA 200.7	1	09/21/2023 16:07	MO	E2
Iron, Total	ND	ND	mg/L	0.056	0.019	SW846 6020A	1	09/15/2023 11:17	MO	E1
Lead, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 11:17	MO	E1
Magnesium, Total	ND	ND	mg/L	0.11	0.037	SW846 6020A	1	09/15/2023 11:17	MO	E1
Manganese, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 11:17	MO	E1
Mercury, Total	ND	ND	mg/L	0.00050	0.00017	SW846 7470A	1	09/13/2023 14:14	JSE	E
Nickel, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 11:17	MO	E1
Potassium, Total	ND	ND	mg/L	0.11	0.037	SW846 6020A	1	09/15/2023 11:17	MO	E1
Selenium, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 11:17	MO	E1
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 11:17	MO	E1
Sodium, Total	0.21		mg/L	0.11	0.037	SW846 6020A	1	09/15/2023 11:17	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/15/2023 11:17	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 11:17	MO	E1
Zinc, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 11:17	MO	E1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 12:56	ILY	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/20/2023 12:56	ILY	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 12:56	ILY	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 12:56	ILY	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 12:56	ILY	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 12:56	ILY	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/20/2023 12:56	ILY	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0051	SW846 8011	1	09/12/2023 19:27	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/20/2023 12:56	ILY	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/12/2023 19:27	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 12:56	ILY	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/20/2023 12:56	ILY	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 12:56	ILY	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 12:56	ILY	C
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 12:56	ILY	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/20/2023 12:56	ILY	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/20/2023 12:56	ILY	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/20/2023 12:56	ILY	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/20/2023 12:56	ILY	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/20/2023 12:56	ILY	C

Results

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VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 12:56	ILY	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 12:56	ILY	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 12:56	ILY	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/20/2023 12:56	ILY	C
Bromomethane	1.0		ug/L	1.0	0.39	SW846 8260C	1	09/20/2023 12:56	ILY	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 12:56	ILY	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 12:56	ILY	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/20/2023 12:56	ILY	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 12:56	ILY	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 12:56	ILY	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/20/2023 12:56	ILY	C
Chloromethane	0.41J	J	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 12:56	ILY	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 12:56	ILY	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 12:56	ILY	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 12:56	ILY	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 12:56	ILY	C
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 12:56	ILY	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 12:56	ILY	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/20/2023 12:56	ILY	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 12:56	ILY	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 12:56	ILY	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/20/2023 12:56	ILY	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 12:56	ILY	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 12:56	ILY	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 12:56	ILY	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 12:56	ILY	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/20/2023 12:56	ILY	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/20/2023 12:56	ILY	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 12:56	ILY	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/20/2023 12:56	ILY	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 12:56	ILY	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 12:56	ILY	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/20/2023 12:56	ILY	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/20/2023 12:56	ILY	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	105%	62 – 133	09/20/2023 12:56	
1-Chloro-2-Fluorobenzene	348-51-6	121%	70 – 130	09/12/2023 19:27	
4-Bromofluorobenzene	460-00-4	106%	79 – 114	09/20/2023 12:56	
Dibromofluoromethane	1868-53-7	98.3%	78 – 116	09/20/2023 12:56	
Toluene-d8	2037-26-5	108%	76 – 127	09/20/2023 12:56	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	Field Blank	Collected	09/11/2023 08:35
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WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	ND	ND,1	mg/L	5	5	SM2320B-2011	1	09/15/2023 00:01	JMS	F
Ammonia-N	0.026		mg/L	0.010	0.003	ASTM D6919-17	1	09/23/2023 00:05	NML	G
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	5	EPA 410.4	1	09/13/2023 11:55	KMS	G
Chloride	ND	ND	mg/L	2.0	1.5	EPA 300.0	2	09/12/2023 12:04	J1W	F
Nitrate-N	ND	ND	mg/L	1.0	0.22	EPA 300.0	2	09/12/2023 12:04	J1W	F
Sulfate	ND	ND	mg/L	2.0	1.5	EPA 300.0	2	09/12/2023 12:04	J1W	F
Total Dissolved Solids	ND	ND	mg/L	25	25	SM2540C-15	1	09/15/2023 13:30	GJB	F

Results

Client Sample ID	GWM-1	Collected	09/11/2023 09:35
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METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND,4	mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 11:19	MO	E1
Arsenic, Total	0.0022J	J	mg/L	0.0033	0.0011	SW846 6020A	1	09/15/2023 11:19	MO	E1
Barium, Total	0.054		mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 11:19	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/15/2023 11:19	MO	E1
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/15/2023 11:19	MO	E1
Calcium, Total	26.2		mg/L	0.11	0.037	SW846 6020A	1	09/15/2023 11:19	MO	E1
Chromium, Total	0.0098		mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 11:19	MO	E1
Cobalt, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 11:19	MO	E1
Copper, Total	0.0085		mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 11:19	MO	E1
Hardness	93.7	2	mg/L	0.33	0.11	EPA 200.7	1	09/14/2023 21:06	MO	E2
Iron, Total	0.58		mg/L	0.056	0.019	SW846 6020A	1	09/15/2023 11:19	MO	E1
Lead, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 11:19	MO	E1
Magnesium, Total	6.1		mg/L	0.11	0.037	SW846 6020A	1	09/15/2023 11:19	MO	E1
Manganese, Total	0.029		mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 11:19	MO	E1
Mercury, Total	ND	ND	mg/L	0.00050	0.00017	SW846 7470A	1	09/13/2023 14:18	JSE	E
Nickel, Total	0.0049J	J	mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 11:19	MO	E1
Potassium, Total	2.6		mg/L	0.11	0.037	SW846 6020A	1	09/15/2023 11:19	MO	E1
Selenium, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 11:19	MO	E1
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 11:19	MO	E1
Sodium, Total	18.6		mg/L	0.11	0.037	SW846 6020A	1	09/15/2023 11:19	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/15/2023 11:19	MO	E1
Vanadium, Total	0.0051		mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 11:19	MO	E1
Zinc, Total	0.0090		mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 11:19	MO	E1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 14:52	ILY	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/20/2023 14:52	ILY	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 14:52	ILY	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 14:52	ILY	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 14:52	ILY	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 14:52	ILY	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/20/2023 14:52	ILY	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0051	SW846 8011	1	09/12/2023 19:41	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/20/2023 14:52	ILY	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/12/2023 19:41	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 14:52	ILY	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/20/2023 14:52	ILY	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 14:52	ILY	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 14:52	ILY	C
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 14:52	ILY	C
2-Butanone	7.1J	J	ug/L	10.0	1.8	SW846 8260C	1	09/20/2023 14:52	ILY	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/20/2023 14:52	ILY	C
4-Methyl-2-Pentanone(MIBK)	10.5		ug/L	5.0	1.5	SW846 8260C	1	09/20/2023 14:52	ILY	C
Acetone	7.6J	J	ug/L	10.0	3.1	SW846 8260C	1	09/20/2023 14:52	ILY	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/20/2023 14:52	ILY	C

Results

Client Sample ID	GWM-1	Collected	09/11/2023 09:35
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VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 14:52	ILY	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 14:52	ILY	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 14:52	ILY	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/20/2023 14:52	ILY	C
Bromomethane	0.93J	J	ug/L	1.0	0.39	SW846 8260C	1	09/20/2023 14:52	ILY	C
Carbon Disulfide	1.7		ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 14:52	ILY	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 14:52	ILY	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/20/2023 14:52	ILY	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 14:52	ILY	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 14:52	ILY	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/20/2023 14:52	ILY	C
Chloromethane	0.76J	J	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 14:52	ILY	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 14:52	ILY	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 14:52	ILY	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 14:52	ILY	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 14:52	ILY	C
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 14:52	ILY	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 14:52	ILY	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/20/2023 14:52	ILY	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 14:52	ILY	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 14:52	ILY	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/20/2023 14:52	ILY	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 14:52	ILY	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 14:52	ILY	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 14:52	ILY	C
Toluene	0.55J	J	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 14:52	ILY	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/20/2023 14:52	ILY	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/20/2023 14:52	ILY	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 14:52	ILY	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/20/2023 14:52	ILY	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 14:52	ILY	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 14:52	ILY	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/20/2023 14:52	ILY	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/20/2023 14:52	ILY	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	104%	62 – 133	09/20/2023 14:52	
1-Chloro-2-Fluorobenzene	348-51-6	118%	70 – 130	09/12/2023 19:41	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	09/20/2023 14:52	
Dibromofluoromethane	1868-53-7	98.7%	78 – 116	09/20/2023 14:52	
Toluene-d8	2037-26-5	102%	76 – 127	09/20/2023 14:52	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	GWM-1	Collected	09/11/2023 09:35
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WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	104	1	mg/L	5	5	SM2320B-2011	1	09/15/2023 00:12	JMS	F
Ammonia-N	3.68		mg/L	0.100	0.03	ASTM D6919-17	10	09/22/2023 23:38	NML	G
Chemical Oxygen Demand (COD)	30		mg/L	15	5	EPA 410.4	1	09/13/2023 11:55	KMS	G
Chloride	30.0		mg/L	2.0	1.5	EPA 300.0	2	09/12/2023 12:14	J1W	F
Nitrate-N	0.26J	J	mg/L	1.0	0.22	EPA 300.0	2	09/12/2023 12:14	J1W	F
Sulfate	3.8		mg/L	2.0	1.5	EPA 300.0	2	09/12/2023 12:14	J1W	F
Total Dissolved Solids	186		mg/L	25	25	SM2540C-15	1	09/15/2023 13:30	GJB	F

Results

Client Sample ID	GWM-16D	Collected	09/11/2023 10:30
Lab Sample ID	3322523004	Lab Receipt	09/11/2023 17:10

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND,4	mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 12:19	MO	E1
Arsenic, Total	ND	ND	mg/L	0.0033	0.0011	SW846 6020A	1	09/15/2023 12:19	MO	E1
Barium, Total	0.14		mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 12:19	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/15/2023 12:19	MO	E1
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/15/2023 12:19	MO	E1
Calcium, Total	12.6		mg/L	0.11	0.037	SW846 6020A	1	09/15/2023 12:19	MO	E1
Chromium, Total	0.0027		mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 12:19	MO	E1
Cobalt, Total	0.0040J	J	mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 12:19	MO	E1
Copper, Total	0.0065		mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 12:19	MO	E1
Hardness	62.2	2	mg/L	0.33	0.11	EPA 200.7	1	09/14/2023 21:09	MO	E2
Iron, Total	0.026J	J	mg/L	0.056	0.019	SW846 6020A	1	09/15/2023 12:19	MO	E1
Lead, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 12:19	MO	E1
Magnesium, Total	7.2		mg/L	0.11	0.037	SW846 6020A	1	09/15/2023 12:19	MO	E1
Manganese, Total	0.028		mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 12:19	MO	E1
Mercury, Total	ND	ND	mg/L	0.00050	0.00017	SW846 7470A	1	09/13/2023 14:19	JSE	E
Nickel, Total	0.018		mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 12:19	MO	E1
Potassium, Total	3.3		mg/L	0.11	0.037	SW846 6020A	1	09/15/2023 12:19	MO	E1
Selenium, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 12:19	MO	E1
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 12:19	MO	E1
Sodium, Total	32.0		mg/L	0.11	0.037	SW846 6020A	1	09/15/2023 12:19	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/15/2023 12:19	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 12:19	MO	E1
Zinc, Total	0.027		mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 12:19	MO	E1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 15:15	ILY	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/20/2023 15:15	ILY	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 15:15	ILY	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 15:15	ILY	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 15:15	ILY	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 15:15	ILY	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/20/2023 15:15	ILY	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.022	0.0053	SW846 8011	1	09/12/2023 20:10	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/20/2023 15:15	ILY	C
1,2-Dibromoethane	ND	ND	ug/L	0.022	0.011	SW846 8011	1	09/12/2023 20:10	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 15:15	ILY	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/20/2023 15:15	ILY	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 15:15	ILY	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 15:15	ILY	C
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 15:15	ILY	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/20/2023 15:15	ILY	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/20/2023 15:15	ILY	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/20/2023 15:15	ILY	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/20/2023 15:15	ILY	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/20/2023 15:15	ILY	C

Results

Client Sample ID	GWM-16D	Collected	09/11/2023 10:30
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VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 15:15	ILY	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 15:15	ILY	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 15:15	ILY	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/20/2023 15:15	ILY	C
Bromomethane	1.1		ug/L	1.0	0.39	SW846 8260C	1	09/20/2023 15:15	ILY	C
Carbon Disulfide	0.31J	J	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 15:15	ILY	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 15:15	ILY	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/20/2023 15:15	ILY	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 15:15	ILY	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 15:15	ILY	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/20/2023 15:15	ILY	C
Chloromethane	1.4		ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 15:15	ILY	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 15:15	ILY	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 15:15	ILY	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 15:15	ILY	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 15:15	ILY	C
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 15:15	ILY	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 15:15	ILY	C
Iodomethane	0.78J	J	ug/L	1.0	0.42	SW846 8260C	1	09/20/2023 15:15	ILY	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 15:15	ILY	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 15:15	ILY	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/20/2023 15:15	ILY	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 15:15	ILY	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 15:15	ILY	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 15:15	ILY	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 15:15	ILY	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/20/2023 15:15	ILY	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/20/2023 15:15	ILY	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 15:15	ILY	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/20/2023 15:15	ILY	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 15:15	ILY	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 15:15	ILY	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/20/2023 15:15	ILY	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/20/2023 15:15	ILY	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	103%	62 – 133	09/20/2023 15:15	
1-Chloro-2-Fluorobenzene	348-51-6	107%	70 – 130	09/12/2023 20:10	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	09/20/2023 15:15	
Dibromofluoromethane	1868-53-7	106%	78 – 116	09/20/2023 15:15	
Toluene-d8	2037-26-5	108%	76 – 127	09/20/2023 15:15	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	GWM-16D	Collected	09/11/2023 10:30
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WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	7	1	mg/L	5	5	SM2320B-2011	1	09/15/2023 00:25	JMS	F
Ammonia-N	0.207		mg/L	0.100	0.03	ASTM D6919-17	10	09/22/2023 23:52	NML	G
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	5	EPA 410.4	1	09/13/2023 11:55	KMS	G
Chloride	74.8		mg/L	2.0	1.5	EPA 300.0	2	09/12/2023 12:25	J1W	F
Nitrate-N	2.9		mg/L	1.0	0.22	EPA 300.0	2	09/12/2023 12:25	J1W	F
Sulfate	16.1		mg/L	2.0	1.5	EPA 300.0	2	09/12/2023 12:25	J1W	F
Total Dissolved Solids	210		mg/L	25	25	SM2540C-15	1	09/15/2023 13:30	GJB	F

Results

Client Sample ID	GWM-9	Collected	09/11/2023 11:30
Lab Sample ID	3322523005	Lab Receipt	09/11/2023 17:10

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND,4	mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 12:21	MO	E1
Arsenic, Total	ND	ND	mg/L	0.0033	0.0011	SW846 6020A	1	09/15/2023 12:21	MO	E1
Barium, Total	0.058		mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 12:21	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/15/2023 12:21	MO	E1
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/15/2023 12:21	MO	E1
Calcium, Total	8.2		mg/L	0.11	0.037	SW846 6020A	1	09/15/2023 12:21	MO	E1
Chromium, Total	0.0012J	J	mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 12:21	MO	E1
Cobalt, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 12:21	MO	E1
Copper, Total	0.013		mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 12:21	MO	E1
Hardness	39.7	2	mg/L	0.33	0.11	EPA 200.7	1	09/14/2023 21:12	MO	E2
Iron, Total	0.065		mg/L	0.056	0.019	SW846 6020A	1	09/15/2023 12:21	MO	E1
Lead, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 12:21	MO	E1
Magnesium, Total	4.9		mg/L	0.11	0.037	SW846 6020A	1	09/15/2023 12:21	MO	E1
Manganese, Total	0.049		mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 12:21	MO	E1
Mercury, Total	ND	ND	mg/L	0.00050	0.00017	SW846 7470A	1	09/13/2023 14:20	JSE	E
Nickel, Total	0.0033J	J	mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 12:21	MO	E1
Potassium, Total	1.9		mg/L	0.11	0.037	SW846 6020A	1	09/15/2023 12:21	MO	E1
Selenium, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 12:21	MO	E1
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 12:21	MO	E1
Sodium, Total	98.9		mg/L	0.11	0.037	SW846 6020A	1	09/15/2023 12:21	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/15/2023 12:21	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 12:21	MO	E1
Zinc, Total	0.016		mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 12:21	MO	E1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 15:38	ILY	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/20/2023 15:38	ILY	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 15:38	ILY	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 15:38	ILY	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 15:38	ILY	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 15:38	ILY	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/20/2023 15:38	ILY	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.022	0.0052	SW846 8011	1	09/12/2023 20:38	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/20/2023 15:38	ILY	C
1,2-Dibromoethane	ND	ND	ug/L	0.022	0.011	SW846 8011	1	09/12/2023 20:38	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 15:38	ILY	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/20/2023 15:38	ILY	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 15:38	ILY	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 15:38	ILY	C
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 15:38	ILY	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/20/2023 15:38	ILY	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/20/2023 15:38	ILY	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/20/2023 15:38	ILY	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/20/2023 15:38	ILY	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/20/2023 15:38	ILY	C

Results

Client Sample ID	GWM-9	Collected	09/11/2023 11:30
Lab Sample ID	3322523005	Lab Receipt	09/11/2023 17:10

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 15:38	ILY	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 15:38	ILY	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 15:38	ILY	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/20/2023 15:38	ILY	C
Bromomethane	0.73J	J	ug/L	1.0	0.39	SW846 8260C	1	09/20/2023 15:38	ILY	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 15:38	ILY	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 15:38	ILY	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/20/2023 15:38	ILY	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 15:38	ILY	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 15:38	ILY	C
Chloroform	3.4		ug/L	1.0	0.21	SW846 8260C	1	09/20/2023 15:38	ILY	C
Chloromethane	0.99J	J	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 15:38	ILY	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 15:38	ILY	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 15:38	ILY	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 15:38	ILY	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 15:38	ILY	C
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 15:38	ILY	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 15:38	ILY	C
Iodomethane	0.43J	J	ug/L	1.0	0.42	SW846 8260C	1	09/20/2023 15:38	ILY	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 15:38	ILY	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 15:38	ILY	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/20/2023 15:38	ILY	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 15:38	ILY	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 15:38	ILY	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 15:38	ILY	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 15:38	ILY	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/20/2023 15:38	ILY	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/20/2023 15:38	ILY	C
trans-1,3-Dichloropropene	ND	ND,5,6	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 15:38	ILY	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/20/2023 15:38	ILY	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 15:38	ILY	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 15:38	ILY	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/20/2023 15:38	ILY	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/20/2023 15:38	ILY	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	106%	62 – 133	09/20/2023 15:38	
1-Chloro-2-Fluorobenzene	348-51-6	115%	70 – 130	09/12/2023 20:38	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	09/20/2023 15:38	
Dibromofluoromethane	1868-53-7	100%	78 – 116	09/20/2023 15:38	
Toluene-d8	2037-26-5	109%	76 – 127	09/20/2023 15:38	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	GWM-9	Collected	09/11/2023 11:30
Lab Sample ID	3322523005	Lab Receipt	09/11/2023 17:10

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	14	1	mg/L	5	5	SM2320B-2011	1	09/15/2023 00:38	JMS	F
Ammonia-N	0.391		mg/L	0.100	0.03	ASTM D6919-17	10	09/23/2023 00:19	NML	G
Chemical Oxygen Demand (COD)	6J	J	mg/L	15	5	EPA 410.4	1	09/13/2023 11:55	KMS	G
Chloride	164		mg/L	2.0	1.5	EPA 300.0	2	09/12/2023 12:35	J1W	F
Nitrate-N	0.79J	J	mg/L	1.0	0.22	EPA 300.0	2	09/12/2023 12:35	J1W	F
Sulfate	8.8		mg/L	2.0	1.5	EPA 300.0	2	09/12/2023 12:35	J1W	F
Total Dissolved Solids	324		mg/L	25	25	SM2540C-15	1	09/15/2023 13:30	GJB	F

Results

Client Sample ID	GWM-2	Collected	09/11/2023 13:20
Lab Sample ID	3322523006	Lab Receipt	09/11/2023 17:10

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND,4	mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 12:23	MO	E1
Arsenic, Total	ND	ND	mg/L	0.0033	0.0011	SW846 6020A	1	09/15/2023 12:23	MO	E1
Barium, Total	0.10		mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 12:23	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/15/2023 12:23	MO	E1
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/15/2023 12:23	MO	E1
Calcium, Total	8.8		mg/L	0.11	0.037	SW846 6020A	1	09/15/2023 12:23	MO	E1
Chromium, Total	0.0017J	J	mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 12:23	MO	E1
Cobalt, Total	0.042		mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 12:23	MO	E1
Copper, Total	0.0027J	J	mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 12:23	MO	E1
Hardness	50.1	2	mg/L	0.33	0.11	EPA 200.7	1	09/14/2023 21:25	MO	E2
Iron, Total	0.047J	J	mg/L	0.056	0.019	SW846 6020A	1	09/15/2023 12:23	MO	E1
Lead, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 12:23	MO	E1
Magnesium, Total	6.8		mg/L	0.11	0.037	SW846 6020A	1	09/15/2023 12:23	MO	E1
Manganese, Total	0.17		mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 12:23	MO	E1
Mercury, Total	ND	ND	mg/L	0.00050	0.00017	SW846 7470A	1	09/13/2023 14:21	JSE	E
Nickel, Total	0.087		mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 12:23	MO	E1
Potassium, Total	2.9		mg/L	0.11	0.037	SW846 6020A	1	09/15/2023 12:23	MO	E1
Selenium, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 12:23	MO	E1
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 12:23	MO	E1
Sodium, Total	40.2		mg/L	0.11	0.037	SW846 6020A	1	09/15/2023 12:23	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/15/2023 12:23	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/15/2023 12:23	MO	E1
Zinc, Total	0.067		mg/L	0.0056	0.0019	SW846 6020A	1	09/15/2023 12:23	MO	E1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 16:02	ILY	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/20/2023 16:02	ILY	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 16:02	ILY	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 16:02	ILY	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 16:02	ILY	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 16:02	ILY	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/20/2023 16:02	ILY	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0051	SW846 8011	1	09/12/2023 20:53	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/20/2023 16:02	ILY	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/12/2023 20:53	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 16:02	ILY	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/20/2023 16:02	ILY	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 16:02	ILY	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 16:02	ILY	C
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 16:02	ILY	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/20/2023 16:02	ILY	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/20/2023 16:02	ILY	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/20/2023 16:02	ILY	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/20/2023 16:02	ILY	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/20/2023 16:02	ILY	C

Results

Client Sample ID	GWM-2	Collected	09/11/2023 13:20
Lab Sample ID	3322523006	Lab Receipt	09/11/2023 17:10

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 16:02	ILY	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 16:02	ILY	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 16:02	ILY	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/20/2023 16:02	ILY	C
Bromomethane	0.76J	J	ug/L	1.0	0.39	SW846 8260C	1	09/20/2023 16:02	ILY	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 16:02	ILY	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 16:02	ILY	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/20/2023 16:02	ILY	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 16:02	ILY	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 16:02	ILY	C
Chloroform	0.36J	J	ug/L	1.0	0.21	SW846 8260C	1	09/20/2023 16:02	ILY	C
Chloromethane	0.89J	J	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 16:02	ILY	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 16:02	ILY	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 16:02	ILY	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 16:02	ILY	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 16:02	ILY	C
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 16:02	ILY	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 16:02	ILY	C
Iodomethane	0.47J	J	ug/L	1.0	0.42	SW846 8260C	1	09/20/2023 16:02	ILY	C
Methyl t-Butyl Ether	0.75J	J	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 16:02	ILY	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 16:02	ILY	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/20/2023 16:02	ILY	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 16:02	ILY	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 16:02	ILY	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 16:02	ILY	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 16:02	ILY	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/20/2023 16:02	ILY	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/20/2023 16:02	ILY	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 16:02	ILY	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/20/2023 16:02	ILY	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 16:02	ILY	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 16:02	ILY	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/20/2023 16:02	ILY	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/20/2023 16:02	ILY	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	105%	62 – 133	09/20/2023 16:02	
1-Chloro-2-Fluorobenzene	348-51-6	116%	70 – 130	09/12/2023 20:53	
4-Bromofluorobenzene	460-00-4	105%	79 – 114	09/20/2023 16:02	
Dibromofluoromethane	1868-53-7	96.1%	78 – 116	09/20/2023 16:02	
Toluene-d8	2037-26-5	102%	76 – 127	09/20/2023 16:02	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	GWM-2	Collected	09/11/2023 13:20
Lab Sample ID	3322523006	Lab Receipt	09/11/2023 17:10

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	5	1	mg/L	5	5	SM2320B-2011	1	09/15/2023 00:50	JMS	F
Ammonia-N	0.180		mg/L	0.100	0.03	ASTM D6919-17	10	09/23/2023 00:46	NML	G
Chemical Oxygen Demand (COD)	6J	J	mg/L	15	5	EPA 410.4	1	09/13/2023 11:55	KMS	G
Chloride	82.5		mg/L	2.0	1.5	EPA 300.0	2	09/12/2023 12:46	J1W	F
Nitrate-N	2.2		mg/L	1.0	0.22	EPA 300.0	2	09/12/2023 12:46	J1W	F
Sulfate	16.3		mg/L	2.0	1.5	EPA 300.0	2	09/12/2023 12:46	J1W	F
Total Dissolved Solids	194		mg/L	25	25	SM2540C-15	1	09/15/2023 13:30	GJB	F

Results

Client Sample ID	GWM-3	Collected	09/11/2023 14:10
Lab Sample ID	3322523007	Lab Receipt	09/11/2023 17:10

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 12:58	MO	E1
Arsenic, Total	ND	ND	mg/L	0.0033	0.0011	SW846 6020A	1	09/21/2023 12:58	MO	E1
Barium, Total	0.076		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 12:58	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/21/2023 12:58	MO	E1
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/21/2023 12:58	MO	E1
Calcium, Total	9.2		mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 12:58	MO	E1
Chromium, Total	0.0057		mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 12:58	MO	E1
Cobalt, Total	0.0021J	J	mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 12:58	MO	E1
Copper, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 12:58	MO	E1
Hardness	54.3	2	mg/L	0.33	0.11	EPA 200.7	1	09/14/2023 21:28	MO	E2
Iron, Total	0.028J	J	mg/L	0.056	0.019	SW846 6020A	1	09/21/2023 12:58	MO	E1
Lead, Total	0.00075J	J	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 12:58	MO	E1
Magnesium, Total	7.8		mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 12:58	MO	E1
Manganese, Total	0.010		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 12:58	MO	E1
Mercury, Total	0.00033J	J	mg/L	0.00050	0.00017	SW846 7470A	1	09/13/2023 14:31	JSE	E
Nickel, Total	0.0037J	J	mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 12:58	MO	E1
Potassium, Total	2.0		mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 12:58	MO	E1
Selenium, Total	ND	ND,7,8	mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 12:58	MO	E1
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 12:58	MO	E1
Sodium, Total	22.5		mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 12:58	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/21/2023 12:58	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 12:58	MO	E1
Zinc, Total	0.0026J	J	mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 12:58	MO	E1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 16:25	ILY	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/20/2023 16:25	ILY	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 16:25	ILY	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 16:25	ILY	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 16:25	ILY	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 16:25	ILY	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/20/2023 16:25	ILY	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0051	SW846 8011	1	09/12/2023 21:07	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/20/2023 16:25	ILY	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/12/2023 21:07	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 16:25	ILY	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/20/2023 16:25	ILY	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 16:25	ILY	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 16:25	ILY	C
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 16:25	ILY	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/20/2023 16:25	ILY	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/20/2023 16:25	ILY	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/20/2023 16:25	ILY	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/20/2023 16:25	ILY	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/20/2023 16:25	ILY	C

Results

Client Sample ID	GWM-3	Collected	09/11/2023 14:10
Lab Sample ID	3322523007	Lab Receipt	09/11/2023 17:10

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 16:25	ILY	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 16:25	ILY	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 16:25	ILY	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/20/2023 16:25	ILY	C
Bromomethane	0.76J	J	ug/L	1.0	0.39	SW846 8260C	1	09/20/2023 16:25	ILY	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 16:25	ILY	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 16:25	ILY	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/20/2023 16:25	ILY	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 16:25	ILY	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 16:25	ILY	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/20/2023 16:25	ILY	C
Chloromethane	0.71J	J	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 16:25	ILY	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 16:25	ILY	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 16:25	ILY	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 16:25	ILY	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 16:25	ILY	C
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 16:25	ILY	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 16:25	ILY	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/20/2023 16:25	ILY	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 16:25	ILY	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 16:25	ILY	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/20/2023 16:25	ILY	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 16:25	ILY	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 16:25	ILY	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 16:25	ILY	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 16:25	ILY	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/20/2023 16:25	ILY	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/20/2023 16:25	ILY	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 16:25	ILY	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/20/2023 16:25	ILY	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 16:25	ILY	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 16:25	ILY	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/20/2023 16:25	ILY	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/20/2023 16:25	ILY	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	105%	62 – 133	09/20/2023 16:25	
1-Chloro-2-Fluorobenzene	348-51-6	120%	70 – 130	09/12/2023 21:07	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	09/20/2023 16:25	
Dibromofluoromethane	1868-53-7	106%	78 – 116	09/20/2023 16:25	
Toluene-d8	2037-26-5	102%	76 – 127	09/20/2023 16:25	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	GWM-3	Collected	09/11/2023 14:10
Lab Sample ID	3322523007	Lab Receipt	09/11/2023 17:10

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	21	1	mg/L	5	5	SM2320B-2011	1	09/15/2023 01:03	JMS	F
Ammonia-N	0.123		mg/L	0.100	0.03	ASTM D6919-17	10	09/23/2023 00:33	NML	G
Chemical Oxygen Demand (COD)	5J	J	mg/L	15	5	EPA 410.4	1	09/13/2023 11:55	KMS	G
Chloride	41.5		mg/L	2.0	1.5	EPA 300.0	2	09/12/2023 12:56	J1W	F
Nitrate-N	2.4		mg/L	1.0	0.22	EPA 300.0	2	09/12/2023 12:56	J1W	F
Sulfate	26.9		mg/L	2.0	1.5	EPA 300.0	2	09/12/2023 12:56	J1W	F
Total Dissolved Solids	154		mg/L	25	25	SM2540C-15	1	09/15/2023 13:30	GJB	F

Results

Client Sample ID	GWM-16D	Collected	09/11/2023 10:30
Lab Sample ID	3322523008	Lab Receipt	09/11/2023 17:10

SUBCONTRACTED ANALYSIS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Subcontracted Analysis	See attached	9				Subcontract	1	10/04/2023 14:52	SUB	A

Results

Client Sample ID	GWM-9	Collected	09/11/2023 11:30
Lab Sample ID	3322523009	Lab Receipt	09/11/2023 17:10

SUBCONTRACTED ANALYSIS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Subcontracted Analysis	See attached	9				Subcontract	1	10/04/2023 14:53	SUB	A

Results

Client Sample ID	GWM-2	Collected	09/11/2023 13:20
Lab Sample ID	3322523010	Lab Receipt	09/11/2023 17:10

SUBCONTRACTED ANALYSIS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Subcontracted Analysis	See attached	9				Subcontract	1	10/04/2023 14:54	SUB	A

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3322523001	Trip Blank	SW846 8011	SW846 8011	
		SW846 8260C	N/A	
3322523002	Field Blank	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3322523003	GWM-1	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3322523004	GWM-16D	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3322523005	GWM-9	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3322523006	GWM-2	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3322523007	GWM-3	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3322523008	GWM-16D	Subcontract	N/A	
3322523009	GWM-9	Subcontract	N/A	
3322523010	GWM-2	Subcontract	N/A	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3322523001	Trip Blank	SW846 8011	1057411	09/12/2023 10:15	WDA	SW846 8011	1057534
		N/A	N/A	N/A		SW846 8260C	1061098
3322523002	Field Blank	EPA TRMD	1058220	09/13/2023 23:02	ANN	EPA 200.7	1061064
		SW846 3015A	1057080	09/12/2023 22:24	ANN	SW846 6020A	1058898
		SW846 7470A	1057552	09/13/2023 10:05	JSE	SW846 7470A	1057938
		SW846 8011	1057411	09/12/2023 10:15	WDA	SW846 8011	1057534
		N/A	N/A	N/A		SW846 8260C	1061098
		N/A	N/A	N/A		ASTM D6919-17	1061529
		N/A	N/A	N/A		EPA 300.0	1057421
		N/A	N/A	N/A		EPA 410.4	1057834
		N/A	N/A	N/A		SM2320B-2011	1057876
		N/A	N/A	N/A		SM2540C-15	1058833
3322523003	GWM-1	EPA TRMD	1058219	09/13/2023 22:58	ANN	EPA 200.7	1058933
		SW846 3015A	1057080	09/12/2023 22:24	ANN	SW846 6020A	1058898
		SW846 7470A	1057552	09/13/2023 10:05	JSE	SW846 7470A	1057938
		SW846 8011	1057411	09/12/2023 10:15	WDA	SW846 8011	1057534
		N/A	N/A	N/A		SW846 8260C	1061098
		N/A	N/A	N/A		ASTM D6919-17	1061529
		N/A	N/A	N/A		EPA 300.0	1057421
		N/A	N/A	N/A		EPA 410.4	1057834
		N/A	N/A	N/A		SM2320B-2011	1057876
		N/A	N/A	N/A		SM2540C-15	1058833
3322523004	GWM-16D	EPA TRMD	1058219	09/13/2023 22:58	ANN	EPA 200.7	1058933
		SW846 3015A	1057080	09/12/2023 22:24	ANN	SW846 6020A	1058898
		SW846 7470A	1057552	09/13/2023 10:05	JSE	SW846 7470A	1057938
		SW846 8011	1057411	09/12/2023 10:15	WDA	SW846 8011	1057534
		N/A	N/A	N/A		SW846 8260C	1061098
		N/A	N/A	N/A		ASTM D6919-17	1061529
		N/A	N/A	N/A		EPA 300.0	1057421
		N/A	N/A	N/A		EPA 410.4	1057834
		N/A	N/A	N/A		SM2320B-2011	1057876
		N/A	N/A	N/A		SM2540C-15	1058833
3322523005	GWM-9	EPA TRMD	1058219	09/13/2023 22:58	ANN	EPA 200.7	1058933
		SW846 3015A	1057080	09/12/2023 22:24	ANN	SW846 6020A	1058898
		SW846 7470A	1057552	09/13/2023 10:05	JSE	SW846 7470A	1057938
		SW846 8011	1057411	09/12/2023 10:15	WDA	SW846 8011	1057534
		N/A	N/A	N/A		SW846 8260C	1061098
		N/A	N/A	N/A		ASTM D6919-17	1061529
		N/A	N/A	N/A		EPA 300.0	1057421
		N/A	N/A	N/A		EPA 410.4	1057834
		N/A	N/A	N/A		SM2320B-2011	1057876
		N/A	N/A	N/A		SM2540C-15	1058833
3322523006	GWM-2	EPA TRMD	1058219	09/13/2023 22:58	ANN	EPA 200.7	1058933
		SW846 3015A	1057080	09/12/2023 22:24	ANN	SW846 6020A	1058898
		SW846 7470A	1057552	09/13/2023 10:05	JSE	SW846 7470A	1057938
		SW846 8011	1057411	09/12/2023 10:15	WDA	SW846 8011	1057534
		N/A	N/A	N/A		SW846 8260C	1061098
		N/A	N/A	N/A		ASTM D6919-17	1061529
		N/A	N/A	N/A		EPA 300.0	1057421
		N/A	N/A	N/A		EPA 410.4	1057834
		N/A	N/A	N/A		SM2320B-2011	1057876
		N/A	N/A	N/A		SM2540C-15	1058833
3322523007	GWM-3	EPA TRMD	1058219	09/13/2023 22:58	ANN	EPA 200.7	1058933
		SW846 3015A	1058214	09/14/2023 00:18	ANN	SW846 6020A	1061255
		SW846 7470A	1057553	09/13/2023 10:05	JSE	SW846 7470A	1057939
		SW846 8011	1057411	09/12/2023 10:15	WDA	SW846 8011	1057534
		N/A	N/A	N/A		SW846 8260C	1061098
		N/A	N/A	N/A		ASTM D6919-17	1061529
		N/A	N/A	N/A		EPA 300.0	1057421
		N/A	N/A	N/A		EPA 410.4	1057834
		N/A	N/A	N/A		SM2320B-2011	1057876
		N/A	N/A	N/A		SM2540C-15	1058833

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3322523008	GWM-16D	N/A	N/A	N/A		Subcontract	
3322523009	GWM-9	N/A	N/A	N/A		Subcontract	
3322523010	GWM-2	N/A	N/A	N/A		Subcontract	

CHAIN OF CUSTODY / SAMPLE INFORMATION FORM

Maryland Environmental Service • 259 Najoles Rd. • Millersville, MD 21108 • (410) 729-8200 • FAX (410) 7

3322523
Logged By: SLS
PM: GJM

Laboratory: ALS

Sampler: Laura Russell / Brooke Zibell

Client Name: Maryland Environmental Service, Attn: Wil Herpel

Facility Name: Eastern Sanitary Landfill

Client Address: 259 Najoles Rd, Millersville, MD 21108 410-729-8356

Project# / Purpose: 3926-2000

Invoice To: Same

Turnaround Time: Routine

Sample #	Sample ID	Grab or Composite	Container Description/ Preservation Status	Matrix	# of Containers	Date	Time	Analyses Required/Comments
1	Trip Blank	N/A	40 mL G Na2S2O3	W	2	9/11/2023	--	VOCs (8011)
↓	↓	↓	40 mL G HCl	W	2	↓	--	VOCs (8260)
2	Field Blank	G	40 mL G Na2S2O3	W	2	9/11/2023	0835	VOCs (8011)
			40 mL G HCl	W	2			VOCs (8260)
			125 mL P HNO3	W	1			Metals - Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn (6020), Hg (7470), Hardness
			1 L P unpreserved	W	1			Alkalinity, TDS, Nitrate (EPA 300), Sulfate, Chloride
			250 mL P H2SO4	W	1			Ammonia, COD

Transferred by: Laura Russell	Received by:	Date 9-11-23	Time 1510	Cooler Receipt Informa
Transferred by:	Received by: DAG/ALS	Date 9-11-23	Time 1710	Sufficient ice? - Yes/No Temp.
Transferred by:	Received by:	Date	Time	Sample containers properly pres'd?

Initials: Date:

Temp By: DAG | WO Temp (°C): 3 | Therm ID: 575

Receipt Info Completed By:	DAG
Cooler Custody Seal Intact	Y N NA
Sample Custody Seal Intact	Y N NA
Received on Ice	Y N NA
Cooler & Samples Intact	Y N
Correct Containers Provided	Y N
Sample Label/COC Agree	Y N
Adequate Sample Volumes	Y N
CR6 Samples Filtered	Y N NA
OP Samples Filtered	Y N NA
VOA Trip Blank	Y N NA
NJ≤ 4 Days?	Y N
Rad Screen (uCi)	-
Courier/Tracking #:	-
SDWA Compliance	Y N
PWSID	
WV Containers 0-6°C	Y N NA

3° 575

CHAIN OF CUSTODY / SAMPLE INFORMATION FORM 3322523

Maryland Environmental Service • 259 Najoles Rd. • Millersville, MD 21108 • (410) 729-8200 • FAX (410) 729-8340

Laboratory: ALS

Sampler: Laura Russell / Brooke Zibell

Client Name: Maryland Environmental Service, Attn: Wil Herpel

Facility Name: Eastern Sanitary Landfill

Client Address: 259 Najoles Rd, Millersville, MD 21108 410-729-8356

Project# / Purpose: 3926-2000

Invoice To: Same

Turnaround Time: Routine

Sample #	Sample ID	Grab or Composite	Container Description/ Preservation Status	Matrix	# of Containers	Date	Time	Analyses Required/Comments
3	GWM-1	G	40 mL G Na2S2O3	NPW	2	9/11/2023	0935	VOCs (8011)
			40 mL G HCl	NPW	2			VOCs (8260)
			125 mL P HNO3	NPW	2			Metals - Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn (6020), Hg (7470), Hardness
			1 L P unpreserved	NPW	1			Alkalinity, TDS, Nitrate (EPA 300), Sulfate, Chloride
			250 mL P H2SO4	NPW	1			Ammonia, COD
4	GWM-16D	G	Same as Sample #3	NPW	8	9/11/2023	1030	Same as Sample #3
5	GWM-9	G	Same as Sample #3	NPW	8	9/11/2023	1130	Same as Sample #3
6	GWM-2	G	Same as Sample #3	NPW	8	9/11/2023	1320	Same as Sample #3
7	GWM-3	G	Same as Sample #3	NPW	8	9/12/2023	1410	Same as Sample #3

Transferred by: Laura Russell	Received by:	Date 9-11-23	Time 1510
Transferred by:	Received by: DAG/ALS	Date 9-11-23	Time 1710
Transferred by:	Received by:	Date	Time

Cooler Receipt Information **(LAB USE ONLY)**

Sufficient ice? - Yes/No Temp.= _____

Sample containers properly pres'd? - Yes/No If No, explain

Initials: Date:

CHAIN OF CUSTODY / SAMPLE INFORMATION FORM 3322523

Maryland Environmental Service • 259 Najoles Rd. • Millersville, MD 21108 • (410) 729-8200 • FAX (410) 729-8340

Laboratory: ALS

Sampler: Laura Russell / Brooke Zibell

Client Name: Maryland Environmental Service, Attn: Wil Herpel

Facility Name: Eastern Sanitary Landfill

Client Address: 259 Najoles Rd, Millersville, MD 21108 410-729-8356

Project# / Purpose: 3926-2000

Invoice To: Same

Turnaround Time: Routine

Sample #	Sample ID	Grab or Composite	Container Description/ Preservation Status	Matrix	# of Containers	Date	Time	Analyses Required/Comments
8	GWM-16D	G	1 L G Amb Unpreserved	NPW	1	9/11/2023	1030	Pesticides **(Low Level 608) subcontracted**
9	GWM-9	G	Same as Number 8	NPW	1	9/11/2023	1130	Same as Number 8
10	GWM-2	G	Same as Number 8	NPW	1	9/11/2023	1320	Same as Number 8

Transferred by: Laura Russell	Received by:	Date 9-11-23	Time 1510
Transferred by:	Received by: DAG/ALS	Date 9-11-23	Time 1710
Transferred by:	Received by:	Date	Time

Cooler Receipt Information **(LAB USE ONLY)**

Sufficient ice? - Yes/No Temp.= _____

Sample containers properly pres'd? - Yes/No If No, explain

Initials: Date:

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Kelli Wolfgang
ALS Group USA, Corp
301 Fulling Mill Rd.
Middletown, Pennsylvania 17057

Generated 10/4/2023 6:58:51 AM

JOB DESCRIPTION

OP Pesticides/pesticides PA
SDG NUMBER 3322523

JOB NUMBER

180-162455-1

Eurofins Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh PA 15238

See page two for job notes and contact information.

my EOL

Job Notes

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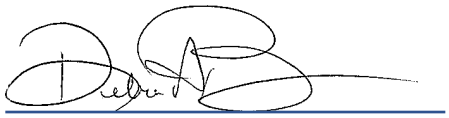
PA Lab ID: 02-00416

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Pittsburgh Project Manager.

Authorization



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10/4/2023 6:58:51 AM

Authorized for release by
Debra Bowen, Project Manager I
Debra.Bowen@et.eurofinsus.com
(412)963-2445

Table of Contents

Job ID: 180-162455-1

Laboratory: Eurofins Pittsburgh

Narrative

Job Narrative
180-162455-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 9/14/2023 2:30 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.3°C

Pesticides
Method 608.3_Pest_PREC: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 180-446771.

Method 608.3_Pest_PREC: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 180-446771 and analytical batch 180-447060 recovered outside control limits for the following analytes: delta-BHC which is ND in all related samples.

Method 608.3_Pest_PREC: The continuing calibration verification (CCV) associated with 180-447060 recovered low and outside the control limits for beta-BHC on one column. Results are confirmed on both columns and hits reported from the passing column. The associated samples are: (CCVIS 180-447060/32) and (CCVIS 180-447060/6).

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

Definitions/Glossary

Client: ALS Group USA, Corp
Job ID: 180-162455-1
Project/Site: OP Pesticides/pesticides PA
SDG: 3322523

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: ALS Group USA, Corp
Project/Site: OP Pesticides/pesticides PA

Job ID: 180-162455-1
SDG: 3322523

Laboratory: Eurofins Pittsburgh

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	02-00416	04-30-24

Sample Summary

Client: ALS Group USA, Corp
Project/Site: OP Pesticides/pesticides PA

Job ID: 180-162455-1
SDG: 3322523

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-162455-1	3322523-008	Water	09/11/23 10:30	09/14/23 14:30
180-162455-2	3322523-009	Water	09/11/23 11:30	09/14/23 14:30
180-162455-3	3322523-010	Water	09/11/23 13:20	09/14/23 14:30

Method Summary

Client: ALS Group USA, Corp
Project/Site: OP Pesticides/pesticides PA

Job ID: 180-162455-1
SDG: 3322523

Method	Method Description	Protocol	Laboratory
EPA 608.3	Organochlorine Pesticides in Water	40CFR136A	EET PIT
608	Liquid-Liquid Extraction (Separatory Funnel)	EPA	EET PIT

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
EPA = US Environmental Protection Agency

Laboratory References:

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: ALS Group USA, Corp
Project/Site: OP Pesticides/pesticides PA

Job ID: 180-162455-1
SDG: 3322523

Client Sample ID: 3322523-008

Date Collected: 09/11/23 10:30
Date Received: 09/14/23 14:30

Lab Sample ID: 180-162455-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	608			1050 mL	1.0 mL	446771	09/18/23 03:00	CBY	EET PIT
Total/NA	Analysis	EPA 608.3		1	1 mL	1 mL	447060	09/20/23 13:07	SMW	EET PIT
	Instrument ID: CHGC15									

Client Sample ID: 3322523-009

Date Collected: 09/11/23 11:30
Date Received: 09/14/23 14:30

Lab Sample ID: 180-162455-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	608			1050 mL	1.0 mL	446771	09/18/23 03:00	CBY	EET PIT
Total/NA	Analysis	EPA 608.3		1	1 mL	1 mL	447060	09/20/23 13:23	SMW	EET PIT
	Instrument ID: CHGC15									

Client Sample ID: 3322523-010

Date Collected: 09/11/23 13:20
Date Received: 09/14/23 14:30

Lab Sample ID: 180-162455-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	608			1050 mL	1.0 mL	446771	09/18/23 03:00	CBY	EET PIT
Total/NA	Analysis	EPA 608.3		1	1 mL	1 mL	447060	09/20/23 13:38	SMW	EET PIT
	Instrument ID: CHGC15									

Laboratory References:

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: EET PIT

Batch Type: Prep

CBY = Charles Yushinski

Batch Type: Analysis

SMW = Shelby Walters

Client Sample ID: 3322523-008

Date Collected: 09/11/23 10:30
Date Received: 09/14/23 14:30

Lab Sample ID: 180-162455-1

Matrix: Water

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0012	0.00034	ug/L		09/18/23 03:00	09/20/23 13:07	1
alpha-BHC	ND		0.0012	0.00023	ug/L		09/18/23 03:00	09/20/23 13:07	1
beta-BHC	**0.00035**	**J**	0.0012	0.00035	ug/L		09/18/23 03:00	09/20/23 13:07	1
gamma-BHC (Lindane)	ND		0.0012	0.00028	ug/L		09/18/23 03:00	09/20/23 13:07	1
delta-BHC	ND	*-	0.0012	0.00061	ug/L		09/18/23 03:00	09/20/23 13:07	1
Chlordane (technical)	ND		0.012	0.0069	ug/L		09/18/23 03:00	09/20/23 13:07	1
4,4'-DDD	ND		0.0012	0.00051	ug/L		09/18/23 03:00	09/20/23 13:07	1
4,4'-DDE	ND		0.0012	0.00028	ug/L		09/18/23 03:00	09/20/23 13:07	1
4,4'-DDT	ND		0.0012	0.00066	ug/L		09/18/23 03:00	09/20/23 13:07	1
Dieldrin	ND		0.0012	0.00026	ug/L		09/18/23 03:00	09/20/23 13:07	1
Endosulfan I	ND		0.0012	0.00065	ug/L		09/18/23 03:00	09/20/23 13:07	1
Endosulfan II	ND		0.0012	0.00030	ug/L		09/18/23 03:00	09/20/23 13:07	1
Endosulfan sulfate	ND		0.0012	0.00061	ug/L		09/18/23 03:00	09/20/23 13:07	1
Endrin	ND		0.0012	0.00022	ug/L		09/18/23 03:00	09/20/23 13:07	1
Endrin aldehyde	ND		0.0012	0.00049	ug/L		09/18/23 03:00	09/20/23 13:07	1
Heptachlor	ND		0.0012	0.00043	ug/L		09/18/23 03:00	09/20/23 13:07	1
Heptachlor epoxide	ND		0.0012	0.00032	ug/L		09/18/23 03:00	09/20/23 13:07	1
Methoxychlor	ND		0.0012	0.00074	ug/L		09/18/23 03:00	09/20/23 13:07	1
Toxaphene	ND		0.095	0.047	ug/L		09/18/23 03:00	09/20/23 13:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*66*		*20 - 138*	*09/18/23 03:00*	*09/20/23 13:07*	*1*
Tetrachloro-m-xylene	*81*		*20 - 138*	*09/18/23 03:00*	*09/20/23 13:07*	*1*
DCB Decachlorobiphenyl (Surr)	*93*		*43 - 143*	*09/18/23 03:00*	*09/20/23 13:07*	*1*
DCB Decachlorobiphenyl (Surr)	*105*		*43 - 143*	*09/18/23 03:00*	*09/20/23 13:07*	*1*

Client Sample ID: 3322523-009

Date Collected: 09/11/23 11:30
Date Received: 09/14/23 14:30

Lab Sample ID: 180-162455-2

Matrix: Water

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0012	0.00034	ug/L		09/18/23 03:00	09/20/23 13:23	1
alpha-BHC	ND		0.0012	0.00023	ug/L		09/18/23 03:00	09/20/23 13:23	1
beta-BHC	ND		0.0012	0.00035	ug/L		09/18/23 03:00	09/20/23 13:23	1
gamma-BHC (Lindane)	ND		0.0012	0.00028	ug/L		09/18/23 03:00	09/20/23 13:23	1
delta-BHC	ND	*-	0.0012	0.00061	ug/L		09/18/23 03:00	09/20/23 13:23	1
Chlordane (technical)	ND		0.012	0.0069	ug/L		09/18/23 03:00	09/20/23 13:23	1
4,4'-DDD	ND		0.0012	0.00051	ug/L		09/18/23 03:00	09/20/23 13:23	1
4,4'-DDE	ND		0.0012	0.00028	ug/L		09/18/23 03:00	09/20/23 13:23	1
4,4'-DDT	ND		0.0012	0.00066	ug/L		09/18/23 03:00	09/20/23 13:23	1
Dieldrin	ND		0.0012	0.00026	ug/L		09/18/23 03:00	09/20/23 13:23	1
Endosulfan I	ND		0.0012	0.00065	ug/L		09/18/23 03:00	09/20/23 13:23	1
Endosulfan II	ND		0.0017	0.00030	ug/L		09/18/23 03:00	09/20/23 13:23	1
Endosulfan sulfate	ND		0.0012	0.00061	ug/L		09/18/23 03:00	09/20/23 13:23	1
Endrin	ND		0.0012	0.00022	ug/L		09/18/23 03:00	09/20/23 13:23	1
Endrin aldehyde	ND		0.0012	0.00049	ug/L		09/18/23 03:00	09/20/23 13:23	1
Heptachlor	ND		0.0012	0.00043	ug/L		09/18/23 03:00	09/20/23 13:23	1
Heptachlor epoxide	ND		0.0012	0.00032	ug/L		09/18/23 03:00	09/20/23 13:23	1
Methoxychlor	ND		0.0012	0.00074	ug/L		09/18/23 03:00	09/20/23 13:23	1

Client: ALS Group USA, Corp
Project/Site: OP Pesticides/pesticides PA

Job ID: 180-162455-1
SDG: 3322523

Client Sample ID: 3322523-009

Lab Sample ID: 180-162455-2

Date Collected: 09/11/23 11:30
Matrix: Water
Date Received: 09/14/23 14:30

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene	ND		0.095	0.047	ug/L		09/18/23 03:00	09/20/23 13:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*20 - 138*	*09/18/23 03:00*	*09/20/23 13:23*	*1*
Tetrachloro-m-xylene	*81*		*20 - 138*	*09/18/23 03:00*	*09/20/23 13:23*	*1*
DCB Decachlorobiphenyl (Surr)	*101*		*43 - 143*	*09/18/23 03:00*	*09/20/23 13:23*	*1*
DCB Decachlorobiphenyl (Surr)	*115*		*43 - 143*	*09/18/23 03:00*	*09/20/23 13:23*	*1*

Client Sample ID: 3322523-010

Lab Sample ID: 180-162455-3

Date Collected: 09/11/23 13:20
Matrix: Water
Date Received: 09/14/23 14:30

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0012	0.00034	ug/L		09/18/23 03:00	09/20/23 13:38	1
alpha-BHC	ND		0.0012	0.00023	ug/L		09/18/23 03:00	09/20/23 13:38	1
beta-BHC	ND		0.0012	0.00035	ug/L		09/18/23 03:00	09/20/23 13:38	1
gamma-BHC (Lindane)	ND		0.0012	0.00028	ug/L		09/18/23 03:00	09/20/23 13:38	1
delta-BHC	ND	*-	0.0012	0.00061	ug/L		09/18/23 03:00	09/20/23 13:38	1
Chlordane (technical)	ND		0.012	0.0069	ug/L		09/18/23 03:00	09/20/23 13:38	1
4,4'-DDD	ND		0.0012	0.00051	ug/L		09/18/23 03:00	09/20/23 13:38	1
4,4'-DDE	ND		0.0012	0.00028	ug/L		09/18/23 03:00	09/20/23 13:38	1
4,4'-DDT	ND		0.0012	0.00066	ug/L		09/18/23 03:00	09/20/23 13:38	1
Dieldrin	**0.015**		0.0012	0.00026	ug/L		09/18/23 03:00	09/20/23 13:38	1
Endosulfan I	ND		0.0012	0.00065	ug/L		09/18/23 03:00	09/20/23 13:38	1
Endosulfan II	ND		0.0012	0.00030	ug/L		09/18/23 03:00	09/20/23 13:38	1
Endosulfan sulfate	ND		0.0012	0.00061	ug/L		09/18/23 03:00	09/20/23 13:38	1
Endrin	ND		0.0012	0.00022	ug/L		09/18/23 03:00	09/20/23 13:38	1
Endrin aldehyde	ND		0.0012	0.00049	ug/L		09/18/23 03:00	09/20/23 13:38	1
Heptachlor	ND		0.0012	0.00043	ug/L		09/18/23 03:00	09/20/23 13:38	1
Heptachlor epoxide	ND		0.0012	0.00032	ug/L		09/18/23 03:00	09/20/23 13:38	1
Methoxychlor	ND		0.0012	0.00074	ug/L		09/18/23 03:00	09/20/23 13:38	1
Toxaphene	ND		0.095	0.047	ug/L		09/18/23 03:00	09/20/23 13:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*58*		*20 - 138*	*09/18/23 03:00*	*09/20/23 13:38*	*1*
Tetrachloro-m-xylene	*79*		*20 - 138*	*09/18/23 03:00*	*09/20/23 13:38*	*1*
DCB Decachlorobiphenyl (Surr)	*95*		*43 - 143*	*09/18/23 03:00*	*09/20/23 13:38*	*1*
DCB Decachlorobiphenyl (Surr)	*111*		*43 - 143*	*09/18/23 03:00*	*09/20/23 13:38*	*1*

Method: EPA 608.3 - Organochlorine Pesticides in Water

Lab Sample ID: MB 180-446771/1-A
Matrix: Water
Analysis Batch: 447060

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 446771

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0013	0.00036	ug/L		09/18/23 03:00	09/20/23 12:20	1
alpha-BHC	ND		0.0013	0.00024	ug/L		09/18/23 03:00	09/20/23 12:20	1
beta-BHC	ND		0.0013	0.00037	ug/L		09/18/23 03:00	09/20/23 12:20	1
gamma-BHC (Lindane)	ND		0.0013	0.00029	ug/L		09/18/23 03:00	09/20/23 12:20	1
delta-BHC	ND		0.0013	0.00064	ug/L		09/18/23 03:00	09/20/23 12:20	1
Chlordane (technical)	ND		0.013	0.0073	ug/L		09/18/23 03:00	09/20/23 12:20	1
4,4'-DDD	ND		0.0013	0.00053	ug/L		09/18/23 03:00	09/20/23 12:20	1
4,4'-DDE	ND		0.0013	0.00030	ug/L		09/18/23 03:00	09/20/23 12:20	1
4,4'-DDT	ND		0.0013	0.00069	ug/L		09/18/23 03:00	09/20/23 12:20	1
Dieldrin	ND		0.0013	0.00027	ug/L		09/18/23 03:00	09/20/23 12:20	1
Endosulfan I	ND		0.0013	0.00069	ug/L		09/18/23 03:00	09/20/23 12:20	1
Endosulfan II	ND		0.0013	0.00032	ug/L		09/18/23 03:00	09/20/23 12:20	1
Endosulfan sulfate	ND		0.0013	0.00064	ug/L		09/18/23 03:00	09/20/23 12:20	1
Endrin	ND		0.0013	0.00023	ug/L		09/18/23 03:00	09/20/23 12:20	1
Endrin aldehyde	ND		0.0013	0.00052	ug/L		09/18/23 03:00	09/20/23 12:20	1
Heptachlor	ND		0.0013	0.00045	ug/L		09/18/23 03:00	09/20/23 12:20	1
Heptachlor epoxide	ND		0.0013	0.00034	ug/L		09/18/23 03:00	09/20/23 12:20	1
Methoxychlor	ND		0.0013	0.00078	ug/L		09/18/23 03:00	09/20/23 12:20	1
Toxaphene	ND		0.10	0.049	ug/L		09/18/23 03:00	09/20/23 12:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*88*		*20 - 138*	*09/18/23 03:00*	*09/20/23 12:20*	*1*
Tetrachloro-m-xylene	*88*		*20 - 138*	*09/18/23 03:00*	*09/20/23 12:20*	*1*
DCB Decachlorobiphenyl (Surr)	*105*		*43 - 143*	*09/18/23 03:00*	*09/20/23 12:20*	*1*
DCB Decachlorobiphenyl (Surr)	*116*		*43 - 143*	*09/18/23 03:00*	*09/20/23 12:20*	*1*

Lab Sample ID: LCS 180-446771/2-A
Matrix: Water
Analysis Batch: 447060

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 446771

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aldrin	0.0250	0.0192		ug/L		77	42 - 140
alpha-BHC	0.0250	0.0131		ug/L		52	37 - 140
beta-BHC	0.0250	0.0125		ug/L		50	17 - 147
gamma-BHC (Lindane)	0.0250	0.0136		ug/L		54	32 - 140
delta-BHC	0.0250	0.00200	*-	ug/L		8	19 - 140
4,4'-DDD	0.0250	0.0168		ug/L		67	31 - 141
4,4'-DDE	0.0250	0.0188		ug/L		75	30 - 145
4,4'-DDT	0.0250	0.0172		ug/L		69	25 - 150
Dieldrin	0.0250	0.0210		ug/L		84	36 - 146
Endosulfan I	0.0250	0.0193		ug/L		77	45 - 150
Endosulfan II	0.0250	0.0198		ug/L		79	10 - 150
Endosulfan sulfate	0.0250	0.0106		ug/L		42	26 - 144
Endrin	0.0250	0.0194		ug/L		78	30 - 147
Endrin aldehyde	0.0250	0.0211		ug/L		84	51 - 113
Heptachlor	0.0250	0.0177		ug/L		71	34 - 140
Heptachlor epoxide	0.0250	0.0191		ug/L		77	37 - 142
Methoxychlor	0.0250	0.0165		ug/L		66	41 - 140

Method: EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: LCS 180-446771/2-A
Matrix: Water
Analysis Batch: 447060

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 446771

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	*89*		*20 - 138*
Tetrachloro-m-xylene	*84*		*20 - 138*
DCB Decachlorobiphenyl (Surr)	*100*		*43 - 143*
DCB Decachlorobiphenyl (Surr)	*112*		*43 - 143*

Lab Sample ID: LCSD 180-446771/3-A
Matrix: Water
Analysis Batch: 447060

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 446771

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aldrin			0.0250	0.0191		ug/L		76	42 - 140	1	35
alpha-BHC			0.0250	0.0130		ug/L		52	37 - 140	0	35
beta-BHC			0.0250	0.0123		ug/L		49	17 - 147	2	35
gamma-BHC (Lindane)			0.0250	0.0133		ug/L		53	32 - 140	2	35
delta-BHC			0.0250	0.00198	*-	ug/L		8	19 - 140	1	35
4,4'-DDD			0.0250	0.0166		ug/L		67	31 - 141	1	35
4,4'-DDE			0.0250	0.0183		ug/L		73	30 - 145	3	35
4,4'-DDT			0.0250	0.0170		ug/L		68	25 - 150	1	35
Dieldrin			0.0250	0.0208		ug/L		83	36 - 146	1	35
Endosulfan I			0.0250	0.0191		ug/L		77	45 - 150	1	28
Endosulfan II			0.0250	0.0205		ug/L		82	10 - 150	4	35
Endosulfan sulfate			0.0250	0.0107		ug/L		43	26 - 144	1	35
Endrin			0.0250	0.0195		ug/L		78	30 - 147	0	35
Endrin aldehyde			0.0250	0.0214		ug/L		86	51 - 113	2	26
Heptachlor			0.0250	0.0173		ug/L		69	34 - 140	2	35
Heptachlor epoxide			0.0250	0.0194		ug/L		78	37 - 142	1	26
Methoxychlor			0.0250	0.0168		ug/L		67	41 - 140	2	24

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	*92*		*20 - 138*
Tetrachloro-m-xylene	*86*		*20 - 138*
DCB Decachlorobiphenyl (Surr)	*102*		*43 - 143*
DCB Decachlorobiphenyl (Surr)	*113*		*43 - 143*

QC Association Summary

Client: ALS Group USA, Corp
Project/Site: OP Pesticides/pesticides PA

Job ID: 180-162455-1
SDG: 3322523

GC Semi VOA

Prep Batch: 446771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-162455-1	3322523-008	Total/NA	Water	608	
180-162455-2	3322523-009	Total/NA	Water	608	
180-162455-3	3322523-010	Total/NA	Water	608	
MB 180-446771/1-A	Method Blank	Total/NA	Water	608	
LCS 180-446771/2-A	Lab Control Sample	Total/NA	Water	608	
LCSD 180-446771/3-A	Lab Control Sample Dup	Total/NA	Water	608	

Analysis Batch: 447060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-162455-1	3322523-008	Total/NA	Water	EPA 608.3	446771
180-162455-2	3322523-009	Total/NA	Water	EPA 608.3	446771
180-162455-3	3322523-010	Total/NA	Water	EPA 608.3	446771
MB 180-446771/1-A	Method Blank	Total/NA	Water	EPA 608.3	446771
LCS 180-446771/2-A	Lab Control Sample	Total/NA	Water	EPA 608.3	446771
LCSD 180-446771/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 608.3	446771

301 Fulling Mill Road
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: 1 of

ALS Quote #: 40-3322523

Client Name: ALS Environmental

Address: 301 Fulling Mill Road
Middletown, PA 17057

Contact: George Methlie

Phone#: 717-944-5541

Project Name/#: 40-3322523

Bill To:

TAT [X] Normal-Standard TAT is 10-12 business days.
[ ] Rush-Subject to ALS approval and surcharges.

Date Required: **Approved?**

Email? [X] -Y namdt.subcontract@alsglobal.com

Fax? [ ] -Y No.:

	Container Type	A									
	Container Size	1L									
	Perservative	UNP									
	ANALYSES/METHOD REQUESTED										
	*G or C	**Matrix	608 LL Pesticides							Sub to Eurofins - Pitt		

	Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	*G or C	**Matrix	Enter Number of Containers Per Sample or Field Results Below. 608 LL Pesticides	Sub to Eurofins - Pitt	Sample/COC Comments
1	3322523-008	9/11/23	1030	G	WW	1		***Please provide standard EDD***
2	3322523-009	9/11/23	1130	G	WW	1		
3	3322523-010	9/11/23	1320	G	WW	1		
4								
5								
6								
7								
8								
9								
10								Quote 18026575-0

180-162455 Chain of Custody

Receipt Information (completed by Receiving Lab)

W.O. Temp: _____ Therm ID: _____

Courier/Tracking #:

Purchase Order #:

Project Comments:

ALS Field Services: □ Pickup □ Labor
□ Composite Sampling □ Rental Equipment
Other:_____

SAMPLED BY (Please Print): Client

Sampler Comments:

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1		9.13.23	17:00	2		9-14-23	1430
3				4			
5				6			
7				8			
9				10			

Data Deliverables: [Qud] Standard; [ ] CLP-like; [ ] USACE/DOD; [ ]

Special Processing: USACE [ ]; Navy [ ]; [ ]

State Samples Collected In: [ ] NY; [ ] NJ; [ ] PA; [ ] NC; [x] MD; other

Reportable to PADEP? Yes [ ] No [ ]

PWSID # _____

Sample Disposal: Lab [ ]; Special [ ]

EDDS: Format Type- _____

* G=Grab, C=Composite

**Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil, OL=Other Liquid, SL=Sludge, SO=Soil, WP=Wipe, WW=Wastewater

ALS SHIPPING ADDRESS: 301 Fulling Mill Road, Middletown, PA 17057

Rev 11/18

Login Sample Receipt Checklist

Client: ALS Group USA, Corp

Job Number: 180-162455-1
SDG Number: 3322523

Login Number: 162455
List Number: 1
Creator: Abernathy, Eric L

List Source: Eurofins Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

Analytical Results Report For | Maryland Environmental Services - Landfills

Report ID 274562 on 10/4/2023

Certificate of Analysis

Project Name:	**Eastern Sanitary Landfill**	Workorder:	**3322731**
Purchase Order:	**MA 3680**	Workorder ID:	**Eastern Sanitary Landfill**

Enclosed are the analytical results for samples received by the laboratory on Tuesday, September 12, 2023.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP)
accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact George Methlie (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements.
The test results meet requirements of the current NELAP standards or state requirements, where applicable.
For a specific list of accredited
analytes, refer to the certifications section of the ALS website at
www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Global.
ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):
- Maryland Services-ENVOPS - Maryland Environmental Services - Landfills
- Jessica Cox - Maryland Environmental Services
- Maryland Services-LF Data - Maryland Environmental Services
- William Herpel - Maryland Environmental Service

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

George Methlie

George Methlie *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3322731001	Trip Blank	Water	09/12/2023 00:00	09/12/2023 16:50	CBC	Collected By Client
3322731002	Field Blank	Water	09/12/2023 08:40	09/12/2023 16:50	CBC	Collected By Client
3322731003	GWM-11	Water	09/12/2023 08:55	09/12/2023 16:50	CBC	Collected By Client
3322731004	GWM-4	Water	09/12/2023 09:50	09/12/2023 16:50	CBC	Collected By Client
3322731005	GWM-17D	Water	09/12/2023 11:15	09/12/2023 16:50	CBC	Collected By Client
3322731006	GWM-17S	Water	09/12/2023 12:15	09/12/2023 16:50	CBC	Collected By Client
3322731007	GWM-15D	Water	09/12/2023 14:40	09/12/2023 16:50	CBC	Collected By Client
3322731008	GWM-4	Water	09/12/2023 09:50	09/12/2023 16:50	CBC	Collected By Client
3322731009	GWM-17D	Water	09/12/2023 11:15	09/12/2023 16:50	CBC	Collected By Client
3322731010	GWM-17S	Water	09/12/2023 12:15	09/12/2023 16:50	CBC	Collected By Client

Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136, including but not limited to the following EPA Method reference revisions:
  EPA 300.1 Rev. 1.0-1997
  EPA 300.0 Rev. 2.1-1993
  EPA 353.2 Rev. 2.0-1993
  EPA 410.4 Rev. 1.0-1993
  EPA 420.4 Rev. 1.0-1993
  EPA 365.1 Rev. 2.0-1993
  EPA 200.7 Rev. 4.4-1994
  EPA 200.8 Rev. 5.4-1994
  EPA 245.1 Rev. 3.0-1994
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
2	This sample result was calculated and reported using Method SM2340B-2011.
3	The QC type LLICV for method SW846 6020A was outside the control limits for the analyte Se. The % RSD was reported as 26.8 and the control limits were 0 to 20.
4	The QC type LLCCV for method SW846 6020A was outside the control limits for the analyte Se. The % RSD was reported as 20.6 and the control limits were 0 to 20.
5	The concentration of this analyte was greater than 4 times the concentration of the spike added to the matrix spike. According to protocol, the calculation for percent recovery of the matrix spike is not valid.
6	Eurofins Pittsburgh method 608 LL Pesticides results are attached.

Detected Results Summary

Client Sample ID	Trip Blank	Collected	09/12/2023 00:00
Lab Sample ID	3322731001	Lab Receipt	09/12/2023 16:50

Compound	Result	Units	RDL	MDL	Method	Flag
VOLATILE ORGANICS						
Bromomethane	0.62J	ug/L	1.0	0.39	SW846 8260C	#

Detected Results Summary

Client Sample ID	Field Blank	Collected	09/12/2023 08:40
Lab Sample ID	3322731002	Lab Receipt	09/12/2023 16:50

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Calcium, Total	0.055J	mg/L	0.11	0.037	SW846 6020A	#
Hardness	0.20J	mg/L	0.33	0.11	EPA 200.7	#
Sodium, Total	0.19	mg/L	0.11	0.037	SW846 6020A	#
VOLATILE ORGANICS						
Bromomethane	0.84J	ug/L	1.0	0.39	SW846 8260C	#
Chloromethane	0.36J	ug/L	1.0	0.31	SW846 8260C	#
WET CHEMISTRY						
Ammonia-N	0.248	mg/L	0.010	0.003	ASTM D6919-17	#

Detected Results Summary

Client Sample ID	GWM-11	Collected	09/12/2023 08:55
Lab Sample ID	3322731003	Lab Receipt	09/12/2023 16:50

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Barium, Total	0.22	mg/L	0.0056	0.0019	SW846 6020A	#
Calcium, Total	39.6	mg/L	0.11	0.037	SW846 6020A	#
Cobalt, Total	0.19	mg/L	0.0056	0.0019	SW846 6020A	#
Copper, Total	0.0065	mg/L	0.0056	0.0019	SW846 6020A	#
Hardness	185	mg/L	0.33	0.11	EPA 200.7	#
Iron, Total	67.7	mg/L	0.056	0.019	SW846 6020A	#
Magnesium, Total	16.6	mg/L	0.11	0.037	SW846 6020A	#
Manganese, Total	2.4	mg/L	0.0056	0.0019	SW846 6020A	#
Nickel, Total	0.011	mg/L	0.0056	0.0019	SW846 6020A	#
Potassium, Total	6.9	mg/L	0.11	0.037	SW846 6020A	#
Sodium, Total	58.1	mg/L	0.11	0.037	SW846 6020A	#
Zinc, Total	0.0022J	mg/L	0.0056	0.0019	SW846 6020A	#
VOLATILE ORGANICS						
1,4-Dichlorobenzene	2.2	ug/L	1.0	0.27	SW846 8260C	#
Benzene	0.39J	ug/L	1.0	0.23	SW846 8260C	#
Bromomethane	0.65J	ug/L	1.0	0.39	SW846 8260C	#
Carbon Disulfide	0.33J	ug/L	1.0	0.23	SW846 8260C	#
Chloromethane	0.61J	ug/L	1.0	0.31	SW846 8260C	#
Methyl t-Butyl Ether	1.0	ug/L	1.0	0.33	SW846 8260C	#
Trichloroethene	0.62J	ug/L	1.0	0.33	SW846 8260C	#
WET CHEMISTRY						
Alkalinity, Total	156	mg/L	5	5	SM2320B-2011	#
Ammonia-N	1.02	mg/L	0.100	0.03	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	15	mg/L	15	5	EPA 410.4	#
Chloride	129	mg/L	2.0	1.5	EPA 300.0	#
Sulfate	19.8	mg/L	2.0	1.5	EPA 300.0	#
Total Dissolved Solids	448	mg/L	25	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	GWM-4	Collected	09/12/2023 09:50
Lab Sample ID	3322731004	Lab Receipt	09/12/2023 16:50

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Barium, Total	0.13	mg/L	0.0056	0.0019	SW846 6020A	#
Calcium, Total	63.5	mg/L	0.11	0.037	SW846 6020A	#
Chromium, Total	0.0017J	mg/L	0.0022	0.00074	SW846 6020A	#
Cobalt, Total	0.0096	mg/L	0.0056	0.0019	SW846 6020A	#
Copper, Total	0.0070	mg/L	0.0056	0.0019	SW846 6020A	#
Hardness	224	mg/L	0.33	0.11	EPA 200.7	#
Iron, Total	0.52	mg/L	0.056	0.019	SW846 6020A	#
Magnesium, Total	12.5	mg/L	0.11	0.037	SW846 6020A	#
Manganese, Total	0.16	mg/L	0.0056	0.0019	SW846 6020A	#
Nickel, Total	0.0051J	mg/L	0.0056	0.0019	SW846 6020A	#
Potassium, Total	7.9	mg/L	0.11	0.037	SW846 6020A	#
Sodium, Total	56.0	mg/L	0.11	0.037	SW846 6020A	#
Zinc, Total	0.0021J	mg/L	0.0056	0.0019	SW846 6020A	#
VOLATILE ORGANICS						
1,4-Dichlorobenzene	1.2	ug/L	1.0	0.27	SW846 8260C	#
Bromomethane	0.87J	ug/L	1.0	0.39	SW846 8260C	#
Chloromethane	0.86J	ug/L	1.0	0.31	SW846 8260C	#
Trichloroethene	0.57J	ug/L	1.0	0.33	SW846 8260C	#
WET CHEMISTRY						
Alkalinity, Total	188	mg/L	5	5	SM2320B-2011	#
Ammonia-N	0.514	mg/L	0.100	0.03	ASTM D6919-17	#
Chloride	112	mg/L	2.0	1.5	EPA 300.0	#
Nitrate-N	0.55J	mg/L	1.0	0.22	EPA 300.0	#
Sulfate	28.7	mg/L	2.0	1.5	EPA 300.0	#
Total Dissolved Solids	452	mg/L	25	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	GWM-17D	Collected	09/12/2023 11:15
Lab Sample ID	3322731005	Lab Receipt	09/12/2023 16:50

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Barium, Total	0.28	mg/L	0.0056	0.0019	SW846 6020A	#
Calcium, Total	40.2	mg/L	0.11	0.037	SW846 6020A	#
Chromium, Total	0.0014J	mg/L	0.0022	0.00074	SW846 6020A	#
Cobalt, Total	0.32	mg/L	0.0056	0.0019	SW846 6020A	#
Hardness	205	mg/L	0.33	0.11	EPA 200.7	#
Iron, Total	0.66	mg/L	0.056	0.019	SW846 6020A	#
Magnesium, Total	21.3	mg/L	0.11	0.037	SW846 6020A	#
Manganese, Total	3.2	mg/L	0.0056	0.0019	SW846 6020A	#
Mercury, Total	0.00054	mg/L	0.00050	0.00017	SW846 7470A	#
Nickel, Total	0.062	mg/L	0.0056	0.0019	SW846 6020A	#
Potassium, Total	3.5	mg/L	0.11	0.037	SW846 6020A	#
Sodium, Total	39.2	mg/L	0.11	0.037	SW846 6020A	#
Zinc, Total	0.030	mg/L	0.0056	0.0019	SW846 6020A	#
VOLATILE ORGANICS						
1,4-Dichlorobenzene	1.3	ug/L	1.0	0.27	SW846 8260C	#
Benzene	0.54J	ug/L	1.0	0.23	SW846 8260C	#
Bromomethane	0.84J	ug/L	1.0	0.39	SW846 8260C	#
Chloromethane	0.50J	ug/L	1.0	0.31	SW846 8260C	#
Methyl t-Butyl Ether	0.62J	ug/L	1.0	0.33	SW846 8260C	#
WET CHEMISTRY						
Alkalinity, Total	164	mg/L	5	5	SM2320B-2011	#
Ammonia-N	0.537	mg/L	0.100	0.03	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	5J	mg/L	15	5	EPA 410.4	#
Chloride	102	mg/L	2.0	1.5	EPA 300.0	#
Sulfate	19.5	mg/L	2.0	1.5	EPA 300.0	#
Total Dissolved Solids	358	mg/L	25	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	GWM-17S	Collected	09/12/2023 12:15
Lab Sample ID	3322731006	Lab Receipt	09/12/2023 16:50

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Arsenic, Total	0.0012J	mg/L	0.0033	0.0011	SW846 6020A	#
Barium, Total	0.23	mg/L	0.0056	0.0019	SW846 6020A	#
Calcium, Total	38.8	mg/L	0.11	0.037	SW846 6020A	#
Chromium, Total	0.0022J	mg/L	0.0022	0.00074	SW846 6020A	#
Cobalt, Total	0.69	mg/L	0.0056	0.0019	SW846 6020A	#
Hardness	200	mg/L	0.33	0.11	EPA 200.7	#
Iron, Total	66.3	mg/L	0.056	0.019	SW846 6020A	#
Magnesium, Total	21.9	mg/L	0.11	0.037	SW846 6020A	#
Manganese, Total	7.1	mg/L	0.0056	0.0019	SW846 6020A	#
Nickel, Total	0.034	mg/L	0.0056	0.0019	SW846 6020A	#
Potassium, Total	2.9	mg/L	0.11	0.037	SW846 6020A	#
Sodium, Total	41.0	mg/L	0.11	0.037	SW846 6020A	#
Zinc, Total	0.011	mg/L	0.0056	0.0019	SW846 6020A	#
VOLATILE ORGANICS						
1,4-Dichlorobenzene	1.6	ug/L	1.0	0.27	SW846 8260C	#
Benzene	0.78J	ug/L	1.0	0.23	SW846 8260C	#
Bromomethane	1.0	ug/L	1.0	0.39	SW846 8260C	#
Chloromethane	0.52J	ug/L	1.0	0.31	SW846 8260C	#
cis-1,2-Dichloroethene	0.34J	ug/L	1.0	0.32	SW846 8260C	#
Methyl t-Butyl Ether	0.67J	ug/L	1.0	0.33	SW846 8260C	#
WET CHEMISTRY						
Alkalinity, Total	166	mg/L	5	5	SM2320B-2011	#
Ammonia-N	0.500	mg/L	0.100	0.03	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	15	mg/L	15	5	EPA 410.4	#
Chloride	102	mg/L	2.0	1.5	EPA 300.0	#
Sulfate	19.3	mg/L	2.0	1.5	EPA 300.0	#
Total Dissolved Solids	382	mg/L	25	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	GWM-15D	Collected	09/12/2023 14:40
Lab Sample ID	3322731007	Lab Receipt	09/12/2023 16:50

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Barium, Total	0.078	mg/L	0.0056	0.0019	SW846 6020A	#
Calcium, Total	19.0	mg/L	0.11	0.037	SW846 6020A	#
Chromium, Total	0.0037	mg/L	0.0022	0.00074	SW846 6020A	#
Cobalt, Total	0.027	mg/L	0.0056	0.0019	SW846 6020A	#
Copper, Total	0.016	mg/L	0.0056	0.0019	SW846 6020A	#
Hardness	131	mg/L	0.33	0.11	EPA 200.7	#
Iron, Total	0.30	mg/L	0.056	0.019	SW846 6020A	#
Magnesium, Total	19.0	mg/L	0.11	0.037	SW846 6020A	#
Manganese, Total	0.98	mg/L	0.0056	0.0019	SW846 6020A	#
Nickel, Total	0.0096	mg/L	0.0056	0.0019	SW846 6020A	#
Potassium, Total	2.6	mg/L	0.11	0.037	SW846 6020A	#
Sodium, Total	32.4	mg/L	0.11	0.037	SW846 6020A	#
Vanadium, Total	0.0015J	mg/L	0.0022	0.00074	SW846 6020A	#
Zinc, Total	0.0074	mg/L	0.0056	0.0019	SW846 6020A	#
VOLATILE ORGANICS						
Bromomethane	0.73J	ug/L	1.0	0.39	SW846 8260C	#
Chloromethane	0.58J	ug/L	1.0	0.31	SW846 8260C	#
WET CHEMISTRY						
Alkalinity, Total	51	mg/L	5	5	SM2320B-2011	#
Ammonia-N	0.506	mg/L	0.100	0.03	ASTM D6919-17	#
Chloride	77.8	mg/L	2.0	1.5	EPA 300.0	#
Sulfate	60.5	mg/L	2.0	1.5	EPA 300.0	#
Total Dissolved Solids	270	mg/L	25	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	GWM-4	Collected	09/12/2023 09:50
Lab Sample ID	3322731008	Lab Receipt	09/12/2023 16:50

Compound	Result	Units	RDL	MDL	Method	Flag
SUBCONTRACTED ANALYSIS						
Subcontracted Analysis	See attached				Subcontract	#

Detected Results Summary

Client Sample ID	GWM-17D	Collected	09/12/2023 11:15
Lab Sample ID	3322731009	Lab Receipt	09/12/2023 16:50

Compound	Result	Units	RDL	MDL	Method	Flag
SUBCONTRACTED ANALYSIS						
Subcontracted Analysis	See attached				Subcontract	#

Detected Results Summary

Client Sample ID	GWM-17S	Collected	09/12/2023 12:15
Lab Sample ID	3322731010	Lab Receipt	09/12/2023 16:50

Compound	Result	Units	RDL	MDL	Method	Flag
SUBCONTRACTED ANALYSIS						
Subcontracted Analysis	See attached				Subcontract	#

Results

Client Sample ID	Trip Blank	Collected	09/12/2023 00:00
Lab Sample ID	3322731001	Lab Receipt	09/12/2023 16:50

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 13:19	ILY	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/20/2023 13:19	ILY	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 13:19	ILY	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 13:19	ILY	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 13:19	ILY	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 13:19	ILY	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/20/2023 13:19	ILY	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0051	SW846 8011	1	09/13/2023 15:17	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/20/2023 13:19	ILY	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/13/2023 15:17	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 13:19	ILY	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/20/2023 13:19	ILY	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 13:19	ILY	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 13:19	ILY	C
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 13:19	ILY	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/20/2023 13:19	ILY	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/20/2023 13:19	ILY	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/20/2023 13:19	ILY	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/20/2023 13:19	ILY	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/20/2023 13:19	ILY	C
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 13:19	ILY	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 13:19	ILY	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 13:19	ILY	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/20/2023 13:19	ILY	C
Bromomethane	0.62J	J	ug/L	1.0	0.39	SW846 8260C	1	09/20/2023 13:19	ILY	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 13:19	ILY	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 13:19	ILY	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/20/2023 13:19	ILY	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 13:19	ILY	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 13:19	ILY	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/20/2023 13:19	ILY	C
Chloromethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 13:19	ILY	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 13:19	ILY	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 13:19	ILY	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 13:19	ILY	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 13:19	ILY	C
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 13:19	ILY	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 13:19	ILY	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/20/2023 13:19	ILY	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 13:19	ILY	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 13:19	ILY	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/20/2023 13:19	ILY	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 13:19	ILY	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 13:19	ILY	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 13:19	ILY	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 13:19	ILY	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/20/2023 13:19	ILY	C

Results

Client Sample ID	Trip Blank	Collected	09/12/2023 00:00
Lab Sample ID	3322731001	Lab Receipt	09/12/2023 16:50

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/20/2023 13:19	ILY	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 13:19	ILY	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/20/2023 13:19	ILY	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 13:19	ILY	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 13:19	ILY	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/20/2023 13:19	ILY	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/20/2023 13:19	ILY	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	105%	62 – 133	09/20/2023 13:19	
1-Chloro-2-Fluorobenzene	348-51-6	115%	70 – 130	09/13/2023 15:17	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	09/20/2023 13:19	
Dibromofluoromethane	1868-53-7	95%	78 – 116	09/20/2023 13:19	
Toluene-d8	2037-26-5	106%	76 – 127	09/20/2023 13:19	

Results

Client Sample ID	Field Blank	Collected	09/12/2023 08:40
Lab Sample ID	3322731002	Lab Receipt	09/12/2023 16:50

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:00	MO	G1
Arsenic, Total	ND	ND	mg/L	0.0033	0.0011	SW846 6020A	1	09/21/2023 13:00	MO	G1
Barium, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:00	MO	G1
Beryllium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/21/2023 13:00	MO	G1
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/21/2023 13:00	MO	G1
Calcium, Total	0.055J	J	mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:00	MO	G1
Chromium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:00	MO	G1
Cobalt, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:00	MO	G1
Copper, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:00	MO	G1
Hardness	0.20J	J,2	mg/L	0.33	0.11	EPA 200.7	1	09/14/2023 19:51	MO	G2
Iron, Total	ND	ND	mg/L	0.056	0.019	SW846 6020A	1	09/21/2023 13:00	MO	G1
Lead, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:00	MO	G1
Magnesium, Total	ND	ND	mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:00	MO	G1
Manganese, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:00	MO	G1
Mercury, Total	ND	ND	mg/L	0.00050	0.00017	SW846 7470A	1	09/13/2023 14:37	JSE	G
Nickel, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:00	MO	G1
Potassium, Total	ND	ND	mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:00	MO	G1
Selenium, Total	ND	ND,3,4	mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:00	MO	G1
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:00	MO	G1
Sodium, Total	0.19		mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:00	MO	G1
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/21/2023 13:00	MO	G1
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:00	MO	G1
Zinc, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:00	MO	G1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 13:42	ILY	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/20/2023 13:42	ILY	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 13:42	ILY	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 13:42	ILY	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 13:42	ILY	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 13:42	ILY	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/20/2023 13:42	ILY	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0050	SW846 8011	1	09/13/2023 15:31	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/20/2023 13:42	ILY	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/13/2023 15:31	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 13:42	ILY	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/20/2023 13:42	ILY	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 13:42	ILY	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 13:42	ILY	C
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 13:42	ILY	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/20/2023 13:42	ILY	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/20/2023 13:42	ILY	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/20/2023 13:42	ILY	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/20/2023 13:42	ILY	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/20/2023 13:42	ILY	C

Results

Client Sample ID	Field Blank	Collected	09/12/2023 08:40
Lab Sample ID	3322731002	Lab Receipt	09/12/2023 16:50

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 13:42	ILY	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 13:42	ILY	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 13:42	ILY	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/20/2023 13:42	ILY	C
Bromomethane	0.84J	J	ug/L	1.0	0.39	SW846 8260C	1	09/20/2023 13:42	ILY	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 13:42	ILY	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 13:42	ILY	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/20/2023 13:42	ILY	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 13:42	ILY	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 13:42	ILY	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/20/2023 13:42	ILY	C
Chloromethane	0.36J	J	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 13:42	ILY	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 13:42	ILY	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 13:42	ILY	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 13:42	ILY	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 13:42	ILY	C
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 13:42	ILY	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 13:42	ILY	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/20/2023 13:42	ILY	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 13:42	ILY	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 13:42	ILY	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/20/2023 13:42	ILY	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 13:42	ILY	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 13:42	ILY	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 13:42	ILY	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 13:42	ILY	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/20/2023 13:42	ILY	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/20/2023 13:42	ILY	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 13:42	ILY	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/20/2023 13:42	ILY	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 13:42	ILY	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 13:42	ILY	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/20/2023 13:42	ILY	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/20/2023 13:42	ILY	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	102%	62 – 133	09/20/2023 13:42	
1-Chloro-2-Fluorobenzene	348-51-6	111%	70 – 130	09/13/2023 15:31	
4-Bromofluorobenzene	460-00-4	106%	79 – 114	09/20/2023 13:42	
Dibromofluoromethane	1868-53-7	107%	78 – 116	09/20/2023 13:42	
Toluene-d8	2037-26-5	108%	76 – 127	09/20/2023 13:42	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	Field Blank	Collected	09/12/2023 08:40
Lab Sample ID	3322731002	Lab Receipt	09/12/2023 16:50

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	ND	ND,1	mg/L	5	5	SM2320B-2011	1	09/16/2023 08:34	JMS	E
Ammonia-N	0.248		mg/L	0.010	0.003	ASTM D6919-17	1	09/23/2023 20:35	NML	F
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	5	EPA 410.4	1	09/15/2023 11:11	KMS	F
Chloride	ND	ND	mg/L	2.0	1.5	EPA 300.0	2	09/13/2023 23:29	J1W	E
Nitrate-N	ND	ND	mg/L	1.0	0.22	EPA 300.0	2	09/13/2023 23:29	J1W	E
Sulfate	ND	ND	mg/L	2.0	1.5	EPA 300.0	2	09/13/2023 23:29	J1W	E
Total Dissolved Solids	ND	ND	mg/L	25	25	SM2540C-15	1	09/18/2023 04:22	JXK	E

Results

Client Sample ID	GWM-11	Collected	09/12/2023 08:55
Lab Sample ID	3322731003	Lab Receipt	09/12/2023 16:50

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:02	MO	G1
Arsenic, Total	ND	ND	mg/L	0.0033	0.0011	SW846 6020A	1	09/21/2023 13:02	MO	G1
Barium, Total	0.22		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:02	MO	G1
Beryllium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/21/2023 13:02	MO	G1
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/21/2023 13:02	MO	G1
Calcium, Total	39.6		mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:02	MO	G1
Chromium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:02	MO	G1
Cobalt, Total	0.19		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:02	MO	G1
Copper, Total	0.0065		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:02	MO	G1
Hardness	185	2	mg/L	0.33	0.11	EPA 200.7	1	09/14/2023 19:54	MO	G2
Iron, Total	67.7		mg/L	0.056	0.019	SW846 6020A	1	09/21/2023 13:02	MO	G1
Lead, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:02	MO	G1
Magnesium, Total	16.6		mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:02	MO	G1
Manganese, Total	2.4		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:02	MO	G1
Mercury, Total	ND	ND	mg/L	0.00050	0.00017	SW846 7470A	1	09/13/2023 14:38	JSE	G
Nickel, Total	0.011		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:02	MO	G1
Potassium, Total	6.9		mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:02	MO	G1
Selenium, Total	ND	ND,3,4	mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:02	MO	G1
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:02	MO	G1
Sodium, Total	58.1		mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:02	MO	G1
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/21/2023 13:02	MO	G1
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:02	MO	G1
Zinc, Total	0.0022J	J	mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:02	MO	G1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 16:48	ILY	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/20/2023 16:48	ILY	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 16:48	ILY	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 16:48	ILY	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 16:48	ILY	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 16:48	ILY	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/20/2023 16:48	ILY	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0050	SW846 8011	1	09/13/2023 15:46	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/20/2023 16:48	ILY	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/13/2023 15:46	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 16:48	ILY	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/20/2023 16:48	ILY	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 16:48	ILY	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 16:48	ILY	C
1,4-Dichlorobenzene	2.2		ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 16:48	ILY	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/20/2023 16:48	ILY	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/20/2023 16:48	ILY	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/20/2023 16:48	ILY	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/20/2023 16:48	ILY	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/20/2023 16:48	ILY	C

Results

Client Sample ID	GWM-11	Collected	09/12/2023 08:55
Lab Sample ID	3322731003	Lab Receipt	09/12/2023 16:50

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	0.39J	J	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 16:48	ILY	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 16:48	ILY	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 16:48	ILY	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/20/2023 16:48	ILY	C
Bromomethane	0.65J	J	ug/L	1.0	0.39	SW846 8260C	1	09/20/2023 16:48	ILY	C
Carbon Disulfide	0.33J	J	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 16:48	ILY	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 16:48	ILY	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/20/2023 16:48	ILY	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 16:48	ILY	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 16:48	ILY	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/20/2023 16:48	ILY	C
Chloromethane	0.61J	J	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 16:48	ILY	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 16:48	ILY	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 16:48	ILY	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 16:48	ILY	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 16:48	ILY	C
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 16:48	ILY	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 16:48	ILY	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/20/2023 16:48	ILY	C
Methyl t-Butyl Ether	1.0		ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 16:48	ILY	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 16:48	ILY	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/20/2023 16:48	ILY	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 16:48	ILY	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 16:48	ILY	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 16:48	ILY	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 16:48	ILY	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/20/2023 16:48	ILY	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/20/2023 16:48	ILY	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 16:48	ILY	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/20/2023 16:48	ILY	C
Trichloroethene	0.62J	J	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 16:48	ILY	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 16:48	ILY	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/20/2023 16:48	ILY	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/20/2023 16:48	ILY	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	107%	62 – 133	09/20/2023 16:48	
1-Chloro-2-Fluorobenzene	348-51-6	105%	70 – 130	09/13/2023 15:46	
4-Bromofluorobenzene	460-00-4	106%	79 – 114	09/20/2023 16:48	
Dibromofluoromethane	1868-53-7	108%	78 – 116	09/20/2023 16:48	
Toluene-d8	2037-26-5	109%	76 – 127	09/20/2023 16:48	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	GWM-11	Collected	09/12/2023 08:55
Lab Sample ID	3322731003	Lab Receipt	09/12/2023 16:50

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	156	1	mg/L	5	5	SM2320B-2011	1	09/16/2023 08:46	JMS	E
Ammonia-N	1.02		mg/L	0.100	0.03	ASTM D6919-17	10	09/23/2023 19:27	NML	F
Chemical Oxygen Demand (COD)	15		mg/L	15	5	EPA 410.4	1	09/15/2023 11:11	KMS	F
Chloride	129		mg/L	2.0	1.5	EPA 300.0	2	09/13/2023 23:40	J1W	E
Nitrate-N	ND	ND	mg/L	1.0	0.22	EPA 300.0	2	09/13/2023 23:40	J1W	E
Sulfate	19.8		mg/L	2.0	1.5	EPA 300.0	2	09/13/2023 23:40	J1W	E
Total Dissolved Solids	448		mg/L	25	25	SM2540C-15	1	09/18/2023 04:22	JXK	E

Results

Client Sample ID	GWM-4	Collected	09/12/2023 09:50
Lab Sample ID	3322731004	Lab Receipt	09/12/2023 16:50

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:04	MO	G1
Arsenic, Total	ND	ND	mg/L	0.0033	0.0011	SW846 6020A	1	09/21/2023 13:04	MO	G1
Barium, Total	0.13		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:04	MO	G1
Beryllium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/21/2023 13:04	MO	G1
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/21/2023 13:04	MO	G1
Calcium, Total	63.5	5	mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:04	MO	G1
Chromium, Total	0.0017J	J	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:04	MO	G1
Cobalt, Total	0.0096		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:04	MO	G1
Copper, Total	0.0070		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:04	MO	G1
Hardness	224	2	mg/L	0.33	0.11	EPA 200.7	1	09/14/2023 20:07	MO	G2
Iron, Total	0.52		mg/L	0.056	0.019	SW846 6020A	1	09/21/2023 13:04	MO	G1
Lead, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:04	MO	G1
Magnesium, Total	12.5	5	mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:04	MO	G1
Manganese, Total	0.16		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:04	MO	G1
Mercury, Total	ND	ND	mg/L	0.00050	0.00017	SW846 7470A	1	09/13/2023 14:39	JSE	G
Nickel, Total	0.0051J	J	mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:04	MO	G1
Potassium, Total	7.9	5	mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:04	MO	G1
Selenium, Total	ND	ND,3,4	mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:04	MO	G1
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:04	MO	G1
Sodium, Total	56.0	5	mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:04	MO	G1
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/21/2023 13:04	MO	G1
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:04	MO	G1
Zinc, Total	0.0021J	J	mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:04	MO	G1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 17:11	ILY	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/20/2023 17:11	ILY	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 17:11	ILY	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 17:11	ILY	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 17:11	ILY	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 17:11	ILY	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/20/2023 17:11	ILY	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0050	SW846 8011	1	09/13/2023 16:14	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/20/2023 17:11	ILY	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/13/2023 16:14	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 17:11	ILY	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/20/2023 17:11	ILY	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 17:11	ILY	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 17:11	ILY	C
1,4-Dichlorobenzene	1.2		ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 17:11	ILY	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/20/2023 17:11	ILY	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/20/2023 17:11	ILY	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/20/2023 17:11	ILY	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/20/2023 17:11	ILY	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/20/2023 17:11	ILY	C

Results

Client Sample ID	GWM-4	Collected	09/12/2023 09:50
Lab Sample ID	3322731004	Lab Receipt	09/12/2023 16:50

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 17:11	ILY	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 17:11	ILY	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 17:11	ILY	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/20/2023 17:11	ILY	C
Bromomethane	0.87J	J	ug/L	1.0	0.39	SW846 8260C	1	09/20/2023 17:11	ILY	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 17:11	ILY	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 17:11	ILY	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/20/2023 17:11	ILY	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 17:11	ILY	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 17:11	ILY	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/20/2023 17:11	ILY	C
Chloromethane	0.86J	J	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 17:11	ILY	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 17:11	ILY	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 17:11	ILY	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 17:11	ILY	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 17:11	ILY	C
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 17:11	ILY	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 17:11	ILY	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/20/2023 17:11	ILY	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 17:11	ILY	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 17:11	ILY	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/20/2023 17:11	ILY	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 17:11	ILY	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 17:11	ILY	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 17:11	ILY	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 17:11	ILY	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/20/2023 17:11	ILY	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/20/2023 17:11	ILY	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 17:11	ILY	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/20/2023 17:11	ILY	C
Trichloroethene	0.57J	J	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 17:11	ILY	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 17:11	ILY	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/20/2023 17:11	ILY	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/20/2023 17:11	ILY	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	105%	62 – 133	09/20/2023 17:11	
1-Chloro-2-Fluorobenzene	348-51-6	111%	70 – 130	09/13/2023 16:14	
4-Bromofluorobenzene	460-00-4	106%	79 – 114	09/20/2023 17:11	
Dibromofluoromethane	1868-53-7	108%	78 – 116	09/20/2023 17:11	
Toluene-d8	2037-26-5	105%	76 – 127	09/20/2023 17:11	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	GWM-4	Collected	09/12/2023 09:50
Lab Sample ID	3322731004	Lab Receipt	09/12/2023 16:50

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	188	1	mg/L	5	5	SM2320B-2011	1	09/16/2023 07:26	JMS	E
Ammonia-N	0.514		mg/L	0.100	0.03	ASTM D6919-17	10	09/23/2023 19:40	NML	F
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	5	EPA 410.4	1	09/15/2023 11:11	KMS	F
Chloride	112		mg/L	2.0	1.5	EPA 300.0	2	09/14/2023 00:32	J1W	E
Nitrate-N	0.55J	J	mg/L	1.0	0.22	EPA 300.0	2	09/14/2023 00:32	J1W	E
Sulfate	28.7		mg/L	2.0	1.5	EPA 300.0	2	09/14/2023 00:32	J1W	E
Total Dissolved Solids	452		mg/L	25	25	SM2540C-15	1	09/18/2023 04:22	JXK	E

Results

Client Sample ID	GWM-17D	Collected	09/12/2023 11:15
Lab Sample ID	3322731005	Lab Receipt	09/12/2023 16:50

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:10	MO	G1
Arsenic, Total	ND	ND	mg/L	0.0033	0.0011	SW846 6020A	1	09/21/2023 13:10	MO	G1
Barium, Total	0.28		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:10	MO	G1
Beryllium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/21/2023 13:10	MO	G1
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/21/2023 13:10	MO	G1
Calcium, Total	40.2		mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:10	MO	G1
Chromium, Total	0.0014J	J	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:10	MO	G1
Cobalt, Total	0.32		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:10	MO	G1
Copper, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:10	MO	G1
Hardness	205	2	mg/L	0.33	0.11	EPA 200.7	1	09/14/2023 20:10	MO	G2
Iron, Total	0.66		mg/L	0.056	0.019	SW846 6020A	1	09/21/2023 13:10	MO	G1
Lead, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:10	MO	G1
Magnesium, Total	21.3		mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:10	MO	G1
Manganese, Total	3.2		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:10	MO	G1
Mercury, Total	0.00054		mg/L	0.00050	0.00017	SW846 7470A	1	09/13/2023 14:42	JSE	G
Nickel, Total	0.062		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:10	MO	G1
Potassium, Total	3.5		mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:10	MO	G1
Selenium, Total	ND	ND,3,4	mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:10	MO	G1
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:10	MO	G1
Sodium, Total	39.2		mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:10	MO	G1
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/21/2023 13:10	MO	G1
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:10	MO	G1
Zinc, Total	0.030		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:10	MO	G1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 17:34	ILY	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/20/2023 17:34	ILY	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 17:34	ILY	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 17:34	ILY	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 17:34	ILY	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 17:34	ILY	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/20/2023 17:34	ILY	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0051	SW846 8011	1	09/13/2023 16:43	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/20/2023 17:34	ILY	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/13/2023 16:43	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 17:34	ILY	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/20/2023 17:34	ILY	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 17:34	ILY	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 17:34	ILY	C
1,4-Dichlorobenzene	1.3		ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 17:34	ILY	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/20/2023 17:34	ILY	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/20/2023 17:34	ILY	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/20/2023 17:34	ILY	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/20/2023 17:34	ILY	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/20/2023 17:34	ILY	C

Results

Client Sample ID	GWM-17D	Collected	09/12/2023 11:15
Lab Sample ID	3322731005	Lab Receipt	09/12/2023 16:50

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	0.54J	J	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 17:34	ILY	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 17:34	ILY	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 17:34	ILY	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/20/2023 17:34	ILY	C
Bromomethane	0.84J	J	ug/L	1.0	0.39	SW846 8260C	1	09/20/2023 17:34	ILY	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 17:34	ILY	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 17:34	ILY	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/20/2023 17:34	ILY	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 17:34	ILY	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 17:34	ILY	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/20/2023 17:34	ILY	C
Chloromethane	0.50J	J	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 17:34	ILY	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 17:34	ILY	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 17:34	ILY	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 17:34	ILY	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 17:34	ILY	C
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 17:34	ILY	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 17:34	ILY	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/20/2023 17:34	ILY	C
Methyl t-Butyl Ether	0.62J	J	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 17:34	ILY	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 17:34	ILY	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/20/2023 17:34	ILY	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 17:34	ILY	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 17:34	ILY	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 17:34	ILY	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 17:34	ILY	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/20/2023 17:34	ILY	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/20/2023 17:34	ILY	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 17:34	ILY	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/20/2023 17:34	ILY	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 17:34	ILY	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 17:34	ILY	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/20/2023 17:34	ILY	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/20/2023 17:34	ILY	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	106%	62 – 133	09/20/2023 17:34	
1-Chloro-2-Fluorobenzene	348-51-6	114%	70 – 130	09/13/2023 16:43	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	09/20/2023 17:34	
Dibromofluoromethane	1868-53-7	105%	78 – 116	09/20/2023 17:34	
Toluene-d8	2037-26-5	108%	76 – 127	09/20/2023 17:34	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	GWM-17D	Collected	09/12/2023 11:15
Lab Sample ID	3322731005	Lab Receipt	09/12/2023 16:50

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	164	1	mg/L	5	5	SM2320B-2011	1	09/16/2023 07:38	JMS	E
Ammonia-N	0.537		mg/L	0.100	0.03	ASTM D6919-17	10	09/23/2023 19:54	NML	F
Chemical Oxygen Demand (COD)	5J	J	mg/L	15	5	EPA 410.4	1	09/15/2023 11:11	KMS	F
Chloride	102		mg/L	2.0	1.5	EPA 300.0	2	09/14/2023 00:42	J1W	E
Nitrate-N	ND	ND	mg/L	1.0	0.22	EPA 300.0	2	09/14/2023 00:42	J1W	E
Sulfate	19.5		mg/L	2.0	1.5	EPA 300.0	2	09/14/2023 00:42	J1W	E
Total Dissolved Solids	358		mg/L	25	25	SM2540C-15	1	09/18/2023 20:18	JXK	E

Results

Client Sample ID	GWM-17S	Collected	09/12/2023 12:15
Lab Sample ID	3322731006	Lab Receipt	09/12/2023 16:50

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:21	MO	G1
Arsenic, Total	0.0012J	J	mg/L	0.0033	0.0011	SW846 6020A	1	09/21/2023 13:21	MO	G1
Barium, Total	0.23		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:21	MO	G1
Beryllium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/21/2023 13:21	MO	G1
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/21/2023 13:21	MO	G1
Calcium, Total	38.8		mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:21	MO	G1
Chromium, Total	0.0022J	J	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:21	MO	G1
Cobalt, Total	0.69		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:21	MO	G1
Copper, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:21	MO	G1
Hardness	200	2	mg/L	0.33	0.11	EPA 200.7	1	09/14/2023 20:13	MO	G2
Iron, Total	66.3		mg/L	0.056	0.019	SW846 6020A	1	09/21/2023 13:21	MO	G1
Lead, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:21	MO	G1
Magnesium, Total	21.9		mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:21	MO	G1
Manganese, Total	7.1		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:21	MO	G1
Mercury, Total	ND	ND	mg/L	0.00050	0.00017	SW846 7470A	1	09/13/2023 14:44	JSE	G
Nickel, Total	0.034		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:21	MO	G1
Potassium, Total	2.9		mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:21	MO	G1
Selenium, Total	ND	ND,3,4	mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:21	MO	G1
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:21	MO	G1
Sodium, Total	41.0		mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:21	MO	G1
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/21/2023 13:21	MO	G1
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:21	MO	G1
Zinc, Total	0.011		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:21	MO	G1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 17:58	ILY	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/20/2023 17:58	ILY	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 17:58	ILY	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 17:58	ILY	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 17:58	ILY	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 17:58	ILY	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/20/2023 17:58	ILY	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.022	0.0052	SW846 8011	1	09/13/2023 16:57	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/20/2023 17:58	ILY	C
1,2-Dibromoethane	ND	ND	ug/L	0.022	0.011	SW846 8011	1	09/13/2023 16:57	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 17:58	ILY	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/20/2023 17:58	ILY	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 17:58	ILY	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 17:58	ILY	C
1,4-Dichlorobenzene	1.6		ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 17:58	ILY	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/20/2023 17:58	ILY	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/20/2023 17:58	ILY	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/20/2023 17:58	ILY	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/20/2023 17:58	ILY	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/20/2023 17:58	ILY	C

Results

Client Sample ID	GWM-17S	Collected	09/12/2023 12:15
Lab Sample ID	3322731006	Lab Receipt	09/12/2023 16:50

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	0.78J	J	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 17:58	ILY	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 17:58	ILY	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 17:58	ILY	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/20/2023 17:58	ILY	C
Bromomethane	1.0		ug/L	1.0	0.39	SW846 8260C	1	09/20/2023 17:58	ILY	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 17:58	ILY	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 17:58	ILY	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/20/2023 17:58	ILY	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 17:58	ILY	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 17:58	ILY	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/20/2023 17:58	ILY	C
Chloromethane	0.52J	J	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 17:58	ILY	C
cis-1,2-Dichloroethene	0.34J	J	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 17:58	ILY	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 17:58	ILY	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 17:58	ILY	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 17:58	ILY	C
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 17:58	ILY	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 17:58	ILY	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/20/2023 17:58	ILY	C
Methyl t-Butyl Ether	0.67J	J	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 17:58	ILY	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 17:58	ILY	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/20/2023 17:58	ILY	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 17:58	ILY	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 17:58	ILY	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 17:58	ILY	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 17:58	ILY	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/20/2023 17:58	ILY	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/20/2023 17:58	ILY	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 17:58	ILY	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/20/2023 17:58	ILY	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 17:58	ILY	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 17:58	ILY	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/20/2023 17:58	ILY	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/20/2023 17:58	ILY	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	107%	62 – 133	09/20/2023 17:58	
1-Chloro-2-Fluorobenzene	348-51-6	106%	70 – 130	09/13/2023 16:57	
4-Bromofluorobenzene	460-00-4	106%	79 – 114	09/20/2023 17:58	
Dibromofluoromethane	1868-53-7	107%	78 – 116	09/20/2023 17:58	
Toluene-d8	2037-26-5	105%	76 – 127	09/20/2023 17:58	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	GWM-17S	Collected	09/12/2023 12:15
Lab Sample ID	3322731006	Lab Receipt	09/12/2023 16:50

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	166	1	mg/L	5	5	SM2320B-2011	1	09/16/2023 08:58	JMS	E
Ammonia-N	0.500		mg/L	0.100	0.03	ASTM D6919-17	10	09/23/2023 20:08	NML	F
Chemical Oxygen Demand (COD)	15		mg/L	15	5	EPA 410.4	1	09/15/2023 11:11	KMS	F
Chloride	102		mg/L	2.0	1.5	EPA 300.0	2	09/14/2023 00:53	J1W	E
Nitrate-N	ND	ND	mg/L	1.0	0.22	EPA 300.0	2	09/14/2023 00:53	J1W	E
Sulfate	19.3		mg/L	2.0	1.5	EPA 300.0	2	09/14/2023 00:53	J1W	E
Total Dissolved Solids	382		mg/L	25	25	SM2540C-15	1	09/18/2023 20:18	JXK	E

Results

Client Sample ID	GWM-15D	Collected	09/12/2023 14:40
Lab Sample ID	3322731007	Lab Receipt	09/12/2023 16:50

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:23	MO	G1
Arsenic, Total	ND	ND	mg/L	0.0033	0.0011	SW846 6020A	1	09/21/2023 13:23	MO	G1
Barium, Total	0.078		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:23	MO	G1
Beryllium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/21/2023 13:23	MO	G1
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/21/2023 13:23	MO	G1
Calcium, Total	19.0		mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:23	MO	G1
Chromium, Total	0.0037		mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:23	MO	G1
Cobalt, Total	0.027		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:23	MO	G1
Copper, Total	0.016		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:23	MO	G1
Hardness	131	2	mg/L	0.33	0.11	EPA 200.7	1	09/14/2023 20:17	MO	G2
Iron, Total	0.30		mg/L	0.056	0.019	SW846 6020A	1	09/21/2023 13:23	MO	G1
Lead, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:23	MO	G1
Magnesium, Total	19.0		mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:23	MO	G1
Manganese, Total	0.98		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:23	MO	G1
Mercury, Total	ND	ND	mg/L	0.00050	0.00017	SW846 7470A	1	09/13/2023 14:45	JSE	G
Nickel, Total	0.0096		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:23	MO	G1
Potassium, Total	2.6		mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:23	MO	G1
Selenium, Total	ND	ND,3,4	mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:23	MO	G1
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:23	MO	G1
Sodium, Total	32.4		mg/L	0.11	0.037	SW846 6020A	1	09/21/2023 13:23	MO	G1
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/21/2023 13:23	MO	G1
Vanadium, Total	0.0015J	J	mg/L	0.0022	0.00074	SW846 6020A	1	09/21/2023 13:23	MO	G1
Zinc, Total	0.0074		mg/L	0.0056	0.0019	SW846 6020A	1	09/21/2023 13:23	MO	G1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 18:21	ILY	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/20/2023 18:21	ILY	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 18:21	ILY	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 18:21	ILY	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 18:21	ILY	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 18:21	ILY	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/20/2023 18:21	ILY	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0050	SW846 8011	1	09/13/2023 17:11	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/20/2023 18:21	ILY	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/13/2023 17:11	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 18:21	ILY	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/20/2023 18:21	ILY	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 18:21	ILY	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 18:21	ILY	C
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 18:21	ILY	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/20/2023 18:21	ILY	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/20/2023 18:21	ILY	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/20/2023 18:21	ILY	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/20/2023 18:21	ILY	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/20/2023 18:21	ILY	C

Results

Client Sample ID	GWM-15D	Collected	09/12/2023 14:40
Lab Sample ID	3322731007	Lab Receipt	09/12/2023 16:50

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 18:21	ILY	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 18:21	ILY	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 18:21	ILY	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/20/2023 18:21	ILY	C
Bromomethane	0.73J	J	ug/L	1.0	0.39	SW846 8260C	1	09/20/2023 18:21	ILY	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 18:21	ILY	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 18:21	ILY	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/20/2023 18:21	ILY	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 18:21	ILY	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 18:21	ILY	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/20/2023 18:21	ILY	C
Chloromethane	0.58J	J	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 18:21	ILY	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 18:21	ILY	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 18:21	ILY	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 18:21	ILY	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 18:21	ILY	C
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 18:21	ILY	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 18:21	ILY	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/20/2023 18:21	ILY	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 18:21	ILY	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 18:21	ILY	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/20/2023 18:21	ILY	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 18:21	ILY	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 18:21	ILY	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 18:21	ILY	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 18:21	ILY	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/20/2023 18:21	ILY	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/20/2023 18:21	ILY	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 18:21	ILY	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/20/2023 18:21	ILY	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 18:21	ILY	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 18:21	ILY	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/20/2023 18:21	ILY	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/20/2023 18:21	ILY	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	106%	62 – 133	09/20/2023 18:21	
1-Chloro-2-Fluorobenzene	348-51-6	120%	70 – 130	09/13/2023 17:11	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	09/20/2023 18:21	
Dibromofluoromethane	1868-53-7	107%	78 – 116	09/20/2023 18:21	
Toluene-d8	2037-26-5	109%	76 – 127	09/20/2023 18:21	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	GWM-15D	Collected	09/12/2023 14:40
Lab Sample ID	3322731007	Lab Receipt	09/12/2023 16:50

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	51	1	mg/L	5	5	SM2320B-2011	1	09/21/2023 12:22	JMS	E
Ammonia-N	0.506		mg/L	0.100	0.03	ASTM D6919-17	10	09/23/2023 20:21	NML	F
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	5	EPA 410.4	1	09/15/2023 11:11	KMS	F
Chloride	77.8		mg/L	2.0	1.5	EPA 300.0	2	09/14/2023 01:03	J1W	E
Nitrate-N	ND	ND	mg/L	1.0	0.22	EPA 300.0	2	09/14/2023 01:03	J1W	E
Sulfate	60.5		mg/L	2.0	1.5	EPA 300.0	2	09/14/2023 01:03	J1W	E
Total Dissolved Solids	270		mg/L	25	25	SM2540C-15	1	09/18/2023 20:18	JXK	E

Results

Client Sample ID	GWM-4	Collected	09/12/2023 09:50
Lab Sample ID	3322731008	Lab Receipt	09/12/2023 16:50

SUBCONTRACTED ANALYSIS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Subcontracted Analysis	See attached	6				Subcontract	1	10/04/2023 14:57	SUB	A

Results

Client Sample ID	GWM-17D	Collected	09/12/2023 11:15
Lab Sample ID	3322731009	Lab Receipt	09/12/2023 16:50

SUBCONTRACTED ANALYSIS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Subcontracted Analysis	See attached	6				Subcontract	1	10/04/2023 14:58	SUB	A

Results

Client Sample ID	GWM-17S	Collected	09/12/2023 12:15
Lab Sample ID	3322731010	Lab Receipt	09/12/2023 16:50

SUBCONTRACTED ANALYSIS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Subcontracted Analysis	See attached	6				Subcontract	1	10/04/2023 14:58	SUB	A

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3322731001	Trip Blank	SW846 8011	SW846 8011	
		SW846 8260C	N/A	
3322731002	Field Blank	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3322731003	GWM-11	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3322731004	GWM-4	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3322731005	GWM-17D	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3322731006	GWM-17S	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3322731007	GWM-15D	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3322731008	GWM-4	Subcontract	N/A	
3322731009	GWM-17D	Subcontract	N/A	
3322731010	GWM-17S	Subcontract	N/A	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3322731001	Trip Blank	SW846 8011	1057857	09/13/2023 11:40	WDA	SW846 8011	1057931
		N/A	N/A	N/A		SW846 8260C	1061098
3322731002	Field Blank	EPA TRMD	1058219	09/13/2023 22:58	ANN	EPA 200.7	1058933
		SW846 3015A	1058214	09/14/2023 00:18	ANN	SW846 6020A	1061255
		SW846 7470A	1057553	09/13/2023 10:05	JSE	SW846 7470A	1057939
		SW846 8011	1057857	09/13/2023 11:40	WDA	SW846 8011	1057931
		N/A	N/A	N/A		SW846 8260C	1061098
		N/A	N/A	N/A		ASTM D6919-17	1061538
		N/A	N/A	N/A		EPA 300.0	1057814
		N/A	N/A	N/A		EPA 410.4	1059616
		N/A	N/A	N/A		SM2320B-2011	1059627
		N/A	N/A	N/A		SM2540C-15	1060532
3322731003	GWM-11	EPA TRMD	1058219	09/13/2023 22:58	ANN	EPA 200.7	1058933
		SW846 3015A	1058214	09/14/2023 00:18	ANN	SW846 6020A	1061255
		SW846 7470A	1057553	09/13/2023 10:05	JSE	SW846 7470A	1057939
		SW846 8011	1057857	09/13/2023 11:40	WDA	SW846 8011	1057931
		N/A	N/A	N/A		SW846 8260C	1061098
		N/A	N/A	N/A		ASTM D6919-17	1061538
		N/A	N/A	N/A		EPA 300.0	1057814
		N/A	N/A	N/A		EPA 410.4	1059616
		N/A	N/A	N/A		SM2320B-2011	1059627
		N/A	N/A	N/A		SM2540C-15	1060532
3322731004	GWM-4	EPA TRMD	1058219	09/13/2023 22:58	ANN	EPA 200.7	1058933
		SW846 3015A	1058214	09/14/2023 00:18	ANN	SW846 6020A	1061255
		SW846 7470A	1057553	09/13/2023 10:05	JSE	SW846 7470A	1057939
		SW846 8011	1057857	09/13/2023 11:40	WDA	SW846 8011	1057931
		N/A	N/A	N/A		SW846 8260C	1061098
		N/A	N/A	N/A		ASTM D6919-17	1061538
		N/A	N/A	N/A		EPA 300.0	1057814
		N/A	N/A	N/A		EPA 410.4	1059616
		N/A	N/A	N/A		SM2320B-2011	1059627
		N/A	N/A	N/A		SM2540C-15	1060532
3322731005	GWM-17D	EPA TRMD	1058219	09/13/2023 22:58	ANN	EPA 200.7	1058933
		SW846 3015A	1058214	09/14/2023 00:18	ANN	SW846 6020A	1061255
		SW846 7470A	1057553	09/13/2023 10:05	JSE	SW846 7470A	1057939
		SW846 8011	1057857	09/13/2023 11:40	WDA	SW846 8011	1057931
		N/A	N/A	N/A		SW846 8260C	1061098
		N/A	N/A	N/A		ASTM D6919-17	1061538
		N/A	N/A	N/A		EPA 300.0	1057814
		N/A	N/A	N/A		EPA 410.4	1059616
		N/A	N/A	N/A		SM2320B-2011	1059627
		N/A	N/A	N/A		SM2540C-15	1060533
3322731006	GWM-17S	EPA TRMD	1058219	09/13/2023 22:58	ANN	EPA 200.7	1058933
		SW846 3015A	1058214	09/14/2023 00:18	ANN	SW846 6020A	1061255
		SW846 7470A	1057553	09/13/2023 10:05	JSE	SW846 7470A	1057939
		SW846 8011	1057857	09/13/2023 11:40	WDA	SW846 8011	1057931
		N/A	N/A	N/A		SW846 8260C	1061098
		N/A	N/A	N/A		ASTM D6919-17	1061538
		N/A	N/A	N/A		EPA 300.0	1057814
		N/A	N/A	N/A		EPA 410.4	1059616
		N/A	N/A	N/A		SM2320B-2011	1059627
		N/A	N/A	N/A		SM2540C-15	1060533
3322731007	GWM-15D	EPA TRMD	1058219	09/13/2023 22:58	ANN	EPA 200.7	1058933
		SW846 3015A	1058214	09/14/2023 00:18	ANN	SW846 6020A	1061255
		SW846 7470A	1057553	09/13/2023 10:05	JSE	SW846 7470A	1057939
		SW846 8011	1057857	09/13/2023 11:40	WDA	SW846 8011	1057931
		N/A	N/A	N/A		SW846 8260C	1061098
		N/A	N/A	N/A		ASTM D6919-17	1061538
		N/A	N/A	N/A		EPA 300.0	1057814
		N/A	N/A	N/A		EPA 410.4	1059616
		N/A	N/A	N/A		SM2320B-2011	1061268
		N/A	N/A	N/A		SM2540C-15	1060533

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3322731008	GWM-4	N/A	N/A	N/A		Subcontract	
3322731009	GWM-17D	N/A	N/A	N/A		Subcontract	
3322731010	GWM-17S	N/A	N/A	N/A		Subcontract	

CHAIN OF CUSTODY / SAMPLE INFORMATION FO

Maryland Environmental Service • 259 Najoles Rd. • Millersville, MD 21108 • (410) 729-8200 • FAX (41

3322731

Logged By: SLS
PM: GJM

Laboratory: ALS

Sampler: Laura Russell / Brooke Zibel

Client Name: Maryland Environmental Service, Attn: Wil Herpel

Facility Name: Eastern Sanitary Landfill

Client Address: 259 Najoles Rd, Millersville, MD 21108 410-729-8356

Project# / Purpose: 3926-2000

Invoice To: Same

Turnaround Time: Routine

Sample #	Sample ID	Grab or Composite	Container Description/ Preservation Status	Matrix	# of Containers	Date	Time	Analyses Required/Comments
1	Trip Blank	N/A	40 mL G Na2S2O3	W	2	9/12/2023	--	VOCs (8011)
↓	↓	↓	40 mL G HCl	W	2	↓	--	VOCs (8260)
2	Field Blank	G	40 mL G Na2S2O3	W	2	9/12/2023	0840	VOCs (8011)
			40 mL G HCl	W	2			VOCs (8260)
			125 mL P HNO3	W	1			Metals - Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn (6020), Hg (7470), Hardness
			1 L P unpreserved	W	1			Alkalinity, TDS, Nitrate (EPA 300), Sulfate, Chloride
↓	↓	↓	250 mL P H2SO4	W	1	↓	↓	Ammonia, COD

Transferred by: Laura Russell	Received by:	Date 9-12-23	Time 1505	Cooler Receipt Information (LA
Transferred by:	Received by:	Date 9-12-23	Time 1650	Sufficient ice? - Yes/No Temp.= ____
Transferred by:	Received by:	Date	Time	Sample containers properly pres'd? - Yes/No
				Initials: Date:

Temp By:	WO Temp (°C)	Therm ID
RW	5c	569

Receipt Info Completed By:	RW
Cooler Custody Seal Intact	Y N NA
Sample Custody Seal Intact	Y N NA
Received on Ice	Y N NA
Cooler & Samples Intact	Y N
Correct Containers Provided	Y N
Sample Label/COC Agree	Y N
Adequate Sample Volumes	Y N
CR6 Samples Filtered	Y N NA
OP Samples Filtered	Y N NA
VOA Trip Blank	Y N NA
NJ≤ 4 Days?	Y N
Rad Screen (uCi)	
Courier/Tracking #:	
SDWA Compliance	Y N
PWSID	
WV Containers 0-6°C	Y N NA

Page (1 of 3)

5C-569 TH

CHAIN OF CUSTODY / SAMPLE INFORMATION FORM 3322731

Maryland Environmental Service • 259 Najoles Rd. • Millersville, MD 21108 • (410) 729-8200 • FAX (410) 729-8340

Laboratory: ALS

Client Name: Maryland Environmental Service, Attn: Wil Herpel

Client Address: 259 Najoles Rd, Millersville, MD 21108 410-729-8356

Invoice To: Same

Sampler: Laura Russell / Brooke Zibell

Facility Name: Eastern Sanitary Landfill

Project# / Purpose: 3926-2000

Turnaround Time: Routine

Sample #	Sample ID	Grab or Composite	Container Description/ Preservation Status	Matrix	# of Containers	Date	Time	Analyses Required/Comments
3	GWM-11	G	40 mL G Na2S2O3	NPW	2	9/12/2023	0855	VOCs (8011)
			40 mL G HCl	NPW	2			VOCs (8260)
			125 mL P HNO3	NPW	2			Metals - Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn (6020), Hg (7470), Hardness
			1 L P unpreserved	NPW	1			Alkalinity, TDS, Nitrate (EPA 300), Sulfate, Chloride
			250 mL P H2SO4	NPW	1			Ammonia, COD
4	GWM-4	G	Same as Sample # 3	NPW	8	9/12/2023	0950	Same as Sample # 3
5	GWM-17D	G	Same as Sample 3	NPW	8	9-12-23	1115	~~Sample~~ Same as Sample 3
6	GWM-17S	G	Same as Sample 3	NPW	8	9-12-23	1215	Same as Sample 3
7	GWM-15D	G	Same as Sample 3	NPW	8	9-12-23	1440	Same as Sample 3

Transferred by: Laura Russell	Received by:	Date 9-12-23	Time 1505
Transferred by:	Received by:	Date 9/12/23	Time 1650
Transferred by:	Received by:	Date	Time

Cooler Receipt Information **(LAB USE ONLY)**

Sufficient ice? - Yes/No Temp.= _____

Sample containers properly pres'd? - Yes/No If No, explain

Initials: Date:

CHAIN OF CUSTODY / SAMPLE INFORMATION FORM 3322731

Maryland Environmental Service • 259 Najoles Rd. • Millersville, MD 21108 • (410) 729-8200 • FAX (410) 729-8340

Laboratory: ALS

Client Name: Maryland Environmental Service, Attn: Wil Herpel

Client Address: 259 Najoles Rd, Millersville, MD 21108 410-729-8356

Invoice To: Same

Sampler: Laura Russell / Brooke Zibell

Facility Name: Eastern Sanitary Landfill

Project# / Purpose: 3926-2000

Turnaround Time: Routine

Sample #	Sample ID	Grab or Composite	Container Description/ Preservation Status	Matrix	# of Containers	Date	Time	Analyses Required/Comments
8	GWM-4	G	1 L G Amb Unpreserved	NPW	1	9/12/2023	0950	Pesticides **(Low Level 608) subcontracted**
9	GWM-17D	G	Same as Number 8	NPW	1	9/12/2023	1115	Same as Number 8
10	GWM-17S	G	Same as Number 8	NPW	1	9/12/2023	1215	Same as Number 8

Transferred by: Laura Russell	Received by:	Date 9-12-23	Time 1505
Transferred by:	Received by:	Date 9-12-23	Time 1650
Transferred by:	Received by:	Date	Time

Cooler Receipt Information **(LAB USE ONLY)**

Sufficient ice? - Yes/No Temp.= _____

Sample containers properly pres'd? - Yes/No If No, explain

Initials: Date:

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Kelli Wolfgang
ALS Group USA, Corp
301 Fulling Mill Rd.
Middletown, Pennsylvania 17057

Generated 10/4/2023 6:58:32 AM

JOB DESCRIPTION

OP Pesticides/pesticides PA
SDG NUMBER 3322523

JOB NUMBER

180-162453-1

Eurofins Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh PA 15238

See page two for job notes and contact information.

my EOL

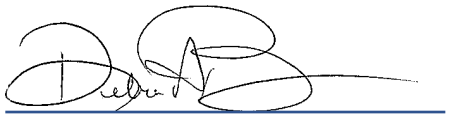
Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

PA Lab ID: 02-00416

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Pittsburgh Project Manager.

Authorization



Generated
10/4/2023 6:58:32 AM

Authorized for release by
Debra Bowen, Project Manager I
Debra.Bowen@et.eurofinsus.com
(412)963-2445

Table of Contents

Job ID: 180-162453-1

Laboratory: Eurofins Pittsburgh

Narrative

Job Narrative
180-162453-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 9/14/2023 2:30 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.3°C

Pesticides
Method 608.3_Pest_PREC: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 180-446771.

Method 608.3_Pest_PREC: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 180-446771 and analytical batch 180-447060 recovered outside control limits for the following analytes: delta-BHC which is ND in all related samples.

Method 608.3_Pest_PREC: The continuing calibration verification (CCV) associated with 180-447060 recovered low and outside the control limits for beta-BHC on one column. Results are confirmed on both columns and hits reported from the passing column. The associated samples are: (CCVIS 180-447060/32) and (CCVIS 180-447060/6).

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

Definitions/Glossary

Client: ALS Group USA, Corp
Job ID: 180-162453-1
Project/Site: OP Pesticides/pesticides PA
SDG: 3322523

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: ALS Group USA, Corp
Project/Site: OP Pesticides/pesticides PA

Job ID: 180-162453-1
SDG: 3322523

Laboratory: Eurofins Pittsburgh

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	02-00416	04-30-24

Sample Summary

Client: ALS Group USA, Corp
Project/Site: OP Pesticides/pesticides PA

Job ID: 180-162453-1
SDG: 3322523

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-162453-1	3322731-008	Water	09/12/23 09:50	09/14/23 14:30
180-162453-2	3322731-009	Water	09/12/23 11:15	09/14/23 14:30
180-162453-3	3322731-010	Water	09/12/23 12:15	09/14/23 14:30

Method Summary

Client: ALS Group USA, Corp
Job ID: 180-162453-1
Project/Site: OP Pesticides/pesticides PA
SDG: 3322523

Method	Method Description	Protocol	Laboratory
EPA 608.3	Organochlorine Pesticides in Water	40CFR136A	EET PIT
608	Liquid-Liquid Extraction (Separatory Funnel)	EPA	EET PIT

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
EPA = US Environmental Protection Agency

Laboratory References:

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: ALS Group USA, Corp
Project/Site: OP Pesticides/pesticides PA

Job ID: 180-162453-1
SDG: 3322523

Client Sample ID: 3322731-008

Date Collected: 09/12/23 09:50
Date Received: 09/14/23 14:30

Lab Sample ID: 180-162453-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	608			1050 mL	1.0 mL	446771	09/18/23 03:00	CBY	EET PIT
Total/NA	Analysis	EPA 608.3		1	1 mL	1 mL	447060	09/20/23 13:54	SMW	EET PIT
	Instrument ID: CHGC15									

Client Sample ID: 3322731-009

Date Collected: 09/12/23 11:15
Date Received: 09/14/23 14:30

Lab Sample ID: 180-162453-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	608			1050 mL	1.0 mL	446771	09/18/23 03:00	CBY	EET PIT
Total/NA	Analysis	EPA 608.3		1	1 mL	1 mL	447060	09/20/23 14:10	SMW	EET PIT
	Instrument ID: CHGC15									

Client Sample ID: 3322731-010

Date Collected: 09/12/23 12:15
Date Received: 09/14/23 14:30

Lab Sample ID: 180-162453-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	608			1050 mL	1.0 mL	446771	09/18/23 03:00	CBY	EET PIT
Total/NA	Analysis	EPA 608.3		1	1 mL	1 mL	447060	09/20/23 14:25	SMW	EET PIT
	Instrument ID: CHGC15									

Laboratory References:

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: EET PIT

Batch Type: Prep

CBY = Charles Yushinski

Batch Type: Analysis

SMW = Shelby Walters

Client: ALS Group USA, Corp
Project/Site: OP Pesticides/pesticides PA

Job ID: 180-162453-1
SDG: 3322523

Client Sample ID: 3322731-008

Date Collected: 09/12/23 09:50
Date Received: 09/14/23 14:30

Lab Sample ID: 180-162453-1

Matrix: Water

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0012	0.00034	ug/L		09/18/23 03:00	09/20/23 13:54	1
alpha-BHC	ND		0.0012	0.00023	ug/L		09/18/23 03:00	09/20/23 13:54	1
beta-BHC	ND		0.0012	0.00035	ug/L		09/18/23 03:00	09/20/23 13:54	1
gamma-BHC (Lindane)	ND		0.0012	0.00028	ug/L		09/18/23 03:00	09/20/23 13:54	1
delta-BHC	ND	*-	0.0012	0.00061	ug/L		09/18/23 03:00	09/20/23 13:54	1
Chlordane (technical)	ND		0.012	0.0069	ug/L		09/18/23 03:00	09/20/23 13:54	1
4,4'-DDD	ND		0.0012	0.00051	ug/L		09/18/23 03:00	09/20/23 13:54	1
4,4'-DDE	ND		0.0012	0.00028	ug/L		09/18/23 03:00	09/20/23 13:54	1
4,4'-DDT	ND		0.0012	0.00066	ug/L		09/18/23 03:00	09/20/23 13:54	1
Dieldrin	**0.0047**		0.0012	0.00026	ug/L		09/18/23 03:00	09/20/23 13:54	1
Endosulfan I	ND		0.0012	0.00065	ug/L		09/18/23 03:00	09/20/23 13:54	1
Endosulfan II	ND		0.0012	0.00030	ug/L		09/18/23 03:00	09/20/23 13:54	1
Endosulfan sulfate	ND		0.0012	0.00061	ug/L		09/18/23 03:00	09/20/23 13:54	1
Endrin	ND		0.0012	0.00022	ug/L		09/18/23 03:00	09/20/23 13:54	1
Endrin aldehyde	ND		0.0012	0.00049	ug/L		09/18/23 03:00	09/20/23 13:54	1
Heptachlor	ND		0.0012	0.00043	ug/L		09/18/23 03:00	09/20/23 13:54	1
Heptachlor epoxide	ND		0.0012	0.00032	ug/L		09/18/23 03:00	09/20/23 13:54	1
Methoxychlor	ND		0.0012	0.00074	ug/L		09/18/23 03:00	09/20/23 13:54	1
Toxaphene	ND		0.095	0.047	ug/L		09/18/23 03:00	09/20/23 13:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*78*		*20 - 138*	*09/18/23 03:00*	*09/20/23 13:54*	*1*
Tetrachloro-m-xylene	*92*		*20 - 138*	*09/18/23 03:00*	*09/20/23 13:54*	*1*
DCB Decachlorobiphenyl (Surr)	*98*		*43 - 143*	*09/18/23 03:00*	*09/20/23 13:54*	*1*
DCB Decachlorobiphenyl (Surr)	*128*		*43 - 143*	*09/18/23 03:00*	*09/20/23 13:54*	*1*

Client Sample ID: 3322731-009

Date Collected: 09/12/23 11:15
Date Received: 09/14/23 14:30

Lab Sample ID: 180-162453-2

Matrix: Water

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0012	0.00034	ug/L		09/18/23 03:00	09/20/23 14:10	1
alpha-BHC	ND		0.0012	0.00023	ug/L		09/18/23 03:00	09/20/23 14:10	1
beta-BHC	ND		0.0012	0.00035	ug/L		09/18/23 03:00	09/20/23 14:10	1
gamma-BHC (Lindane)	ND		0.0012	0.00028	ug/L		09/18/23 03:00	09/20/23 14:10	1
delta-BHC	ND	*-	0.0012	0.00061	ug/L		09/18/23 03:00	09/20/23 14:10	1
Chlordane (technical)	ND		0.012	0.0069	ug/L		09/18/23 03:00	09/20/23 14:10	1
4,4'-DDD	**0.0012**		0.0012	0.00051	ug/L		09/18/23 03:00	09/20/23 14:10	1
4,4'-DDE	ND		0.0012	0.00028	ug/L		09/18/23 03:00	09/20/23 14:10	1
4,4'-DDT	ND		0.0012	0.00066	ug/L		09/18/23 03:00	09/20/23 14:10	1
Dieldrin	**0.0040**		0.0012	0.00026	ug/L		09/18/23 03:00	09/20/23 14:10	1
Endosulfan I	ND		0.0012	0.00065	ug/L		09/18/23 03:00	09/20/23 14:10	1
Endosulfan II	ND		0.0012	0.00030	ug/L		09/18/23 03:00	09/20/23 14:10	1
Endosulfan sulfate	ND		0.0012	0.00061	ug/L		09/18/23 03:00	09/20/23 14:10	1
Endrin	ND		0.0012	0.00022	ug/L		09/18/23 03:00	09/20/23 14:10	1
Endrin aldehyde	ND		0.0012	0.00049	ug/L		09/18/23 03:00	09/20/23 14:10	1
Heptachlor	ND		0.0012	0.00043	ug/L		09/18/23 03:00	09/20/23 14:10	1
Heptachlor epoxide	ND		0.0012	0.00032	ug/L		09/18/23 03:00	09/20/23 14:10	1
Methoxychlor	ND		0.0012	0.00074	ug/L		09/18/23 03:00	09/20/23 14:10	1

Client: ALS Group USA, Corp
Project/Site: OP Pesticides/pesticides PA

Job ID: 180-162453-1
SDG: 3322523

Client Sample ID: 3322731-009

Lab Sample ID: 180-162453-2

Date Collected: 09/12/23 11:15
Matrix: Water
Date Received: 09/14/23 14:30

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene	ND		0.095	0.047	ug/L		09/18/23 03:00	09/20/23 14:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*73*		*20 - 138*	*09/18/23 03:00*	*09/20/23 14:10*	*1*
Tetrachloro-m-xylene	*83*		*20 - 138*	*09/18/23 03:00*	*09/20/23 14:10*	*1*
DCB Decachlorobiphenyl (Surr)	*107*		*43 - 143*	*09/18/23 03:00*	*09/20/23 14:10*	*1*
DCB Decachlorobiphenyl (Surr)	*134*		*43 - 143*	*09/18/23 03:00*	*09/20/23 14:10*	*1*

Client Sample ID: 3322731-010

Lab Sample ID: 180-162453-3

Date Collected: 09/12/23 12:15
Matrix: Water
Date Received: 09/14/23 14:30

Method: 40CFR136A EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0012	0.00034	ug/L		09/18/23 03:00	09/20/23 14:25	1
alpha-BHC	ND		0.0012	0.00023	ug/L		09/18/23 03:00	09/20/23 14:25	1
beta-BHC	ND		0.0012	0.00035	ug/L		09/18/23 03:00	09/20/23 14:25	1
gamma-BHC (Lindane)	ND		0.0012	0.00028	ug/L		09/18/23 03:00	09/20/23 14:25	1
delta-BHC	ND	*-	0.0012	0.00061	ug/L		09/18/23 03:00	09/20/23 14:25	1
Chlordane (technical)	ND		0.012	0.0069	ug/L		09/18/23 03:00	09/20/23 14:25	1
4,4'-DDD	**0.0010**	**J**	0.0012	0.00051	ug/L		09/18/23 03:00	09/20/23 14:25	1
4,4'-DDE	ND		0.0012	0.00028	ug/L		09/18/23 03:00	09/20/23 14:25	1
4,4'-DDT	ND		0.0012	0.00066	ug/L		09/18/23 03:00	09/20/23 14:25	1
Dieldrin	**0.0042**		0.0012	0.00026	ug/L		09/18/23 03:00	09/20/23 14:25	1
Endosulfan I	ND		0.0012	0.00065	ug/L		09/18/23 03:00	09/20/23 14:25	1
Endosulfan II	ND		0.0012	0.00030	ug/L		09/18/23 03:00	09/20/23 14:25	1
Endosulfan sulfate	ND		0.0012	0.00061	ug/L		09/18/23 03:00	09/20/23 14:25	1
Endrin	ND		0.0012	0.00022	ug/L		09/18/23 03:00	09/20/23 14:25	1
Endrin aldehyde	ND		0.0012	0.00049	ug/L		09/18/23 03:00	09/20/23 14:25	1
Heptachlor	ND		0.0012	0.00043	ug/L		09/18/23 03:00	09/20/23 14:25	1
Heptachlor epoxide	ND		0.0012	0.00032	ug/L		09/18/23 03:00	09/20/23 14:25	1
Methoxychlor	ND		0.0012	0.00074	ug/L		09/18/23 03:00	09/20/23 14:25	1
Toxaphene	ND		0.095	0.047	ug/L		09/18/23 03:00	09/20/23 14:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*80*		*20 - 138*	*09/18/23 03:00*	*09/20/23 14:25*	*1*
Tetrachloro-m-xylene	*79*		*20 - 138*	*09/18/23 03:00*	*09/20/23 14:25*	*1*
DCB Decachlorobiphenyl (Surr)	*108*		*43 - 143*	*09/18/23 03:00*	*09/20/23 14:25*	*1*
DCB Decachlorobiphenyl (Surr)	*128*		*43 - 143*	*09/18/23 03:00*	*09/20/23 14:25*	*1*

Method: EPA 608.3 - Organochlorine Pesticides in Water

Lab Sample ID: MB 180-446771/1-A
Matrix: Water
Analysis Batch: 447060

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 446771

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0013	0.00036	ug/L		09/18/23 03:00	09/20/23 12:20	1
alpha-BHC	ND		0.0013	0.00024	ug/L		09/18/23 03:00	09/20/23 12:20	1
beta-BHC	ND		0.0013	0.00037	ug/L		09/18/23 03:00	09/20/23 12:20	1
gamma-BHC (Lindane)	ND		0.0013	0.00029	ug/L		09/18/23 03:00	09/20/23 12:20	1
delta-BHC	ND		0.0013	0.00064	ug/L		09/18/23 03:00	09/20/23 12:20	1
Chlordane (technical)	ND		0.013	0.0073	ug/L		09/18/23 03:00	09/20/23 12:20	1
4,4'-DDD	ND		0.0013	0.00053	ug/L		09/18/23 03:00	09/20/23 12:20	1
4,4'-DDE	ND		0.0013	0.00030	ug/L		09/18/23 03:00	09/20/23 12:20	1
4,4'-DDT	ND		0.0013	0.00069	ug/L		09/18/23 03:00	09/20/23 12:20	1
Dieldrin	ND		0.0013	0.00027	ug/L		09/18/23 03:00	09/20/23 12:20	1
Endosulfan I	ND		0.0013	0.00069	ug/L		09/18/23 03:00	09/20/23 12:20	1
Endosulfan II	ND		0.0013	0.00032	ug/L		09/18/23 03:00	09/20/23 12:20	1
Endosulfan sulfate	ND		0.0013	0.00064	ug/L		09/18/23 03:00	09/20/23 12:20	1
Endrin	ND		0.0013	0.00023	ug/L		09/18/23 03:00	09/20/23 12:20	1
Endrin aldehyde	ND		0.0013	0.00052	ug/L		09/18/23 03:00	09/20/23 12:20	1
Heptachlor	ND		0.0013	0.00045	ug/L		09/18/23 03:00	09/20/23 12:20	1
Heptachlor epoxide	ND		0.0013	0.00034	ug/L		09/18/23 03:00	09/20/23 12:20	1
Methoxychlor	ND		0.0013	0.00078	ug/L		09/18/23 03:00	09/20/23 12:20	1
Toxaphene	ND		0.10	0.049	ug/L		09/18/23 03:00	09/20/23 12:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*88*		*20 - 138*	*09/18/23 03:00*	*09/20/23 12:20*	*1*
Tetrachloro-m-xylene	*88*		*20 - 138*	*09/18/23 03:00*	*09/20/23 12:20*	*1*
DCB Decachlorobiphenyl (Surr)	*105*		*43 - 143*	*09/18/23 03:00*	*09/20/23 12:20*	*1*
DCB Decachlorobiphenyl (Surr)	*116*		*43 - 143*	*09/18/23 03:00*	*09/20/23 12:20*	*1*

Lab Sample ID: LCS 180-446771/2-A
Matrix: Water
Analysis Batch: 447060

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 446771

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aldrin	0.0250	0.0192		ug/L		77	42 - 140
alpha-BHC	0.0250	0.0131		ug/L		52	37 - 140
beta-BHC	0.0250	0.0125		ug/L		50	17 - 147
gamma-BHC (Lindane)	0.0250	0.0136		ug/L		54	32 - 140
delta-BHC	0.0250	0.00200	*-	ug/L		8	19 - 140
4,4'-DDD	0.0250	0.0168		ug/L		67	31 - 141
4,4'-DDE	0.0250	0.0188		ug/L		75	30 - 145
4,4'-DDT	0.0250	0.0172		ug/L		69	25 - 150
Dieldrin	0.0250	0.0210		ug/L		84	36 - 146
Endosulfan I	0.0250	0.0193		ug/L		77	45 - 150
Endosulfan II	0.0250	0.0198		ug/L		79	10 - 150
Endosulfan sulfate	0.0250	0.0106		ug/L		42	26 - 144
Endrin	0.0250	0.0194		ug/L		78	30 - 147
Endrin aldehyde	0.0250	0.0211		ug/L		84	51 - 113
Heptachlor	0.0250	0.0177		ug/L		71	34 - 140
Heptachlor epoxide	0.0250	0.0191		ug/L		77	37 - 142
Methoxychlor	0.0250	0.0165		ug/L		66	41 - 140

Method: EPA 608.3 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: LCS 180-446771/2-A
Matrix: Water
Analysis Batch: 447060

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 446771

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	*89*		*20 - 138*
Tetrachloro-m-xylene	*84*		*20 - 138*
DCB Decachlorobiphenyl (Surr)	*100*		*43 - 143*
DCB Decachlorobiphenyl (Surr)	*112*		*43 - 143*

Lab Sample ID: LCSD 180-446771/3-A
Matrix: Water
Analysis Batch: 447060

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 446771

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aldrin			0.0250	0.0191		ug/L		76	42 - 140	1	35
alpha-BHC			0.0250	0.0130		ug/L		52	37 - 140	0	35
beta-BHC			0.0250	0.0123		ug/L		49	17 - 147	2	35
gamma-BHC (Lindane)			0.0250	0.0133		ug/L		53	32 - 140	2	35
delta-BHC			0.0250	0.00198	*-	ug/L		8	19 - 140	1	35
4,4'-DDD			0.0250	0.0166		ug/L		67	31 - 141	1	35
4,4'-DDE			0.0250	0.0183		ug/L		73	30 - 145	3	35
4,4'-DDT			0.0250	0.0170		ug/L		68	25 - 150	1	35
Dieldrin			0.0250	0.0208		ug/L		83	36 - 146	1	35
Endosulfan I			0.0250	0.0191		ug/L		77	45 - 150	1	28
Endosulfan II			0.0250	0.0205		ug/L		82	10 - 150	4	35
Endosulfan sulfate			0.0250	0.0107		ug/L		43	26 - 144	1	35
Endrin			0.0250	0.0195		ug/L		78	30 - 147	0	35
Endrin aldehyde			0.0250	0.0214		ug/L		86	51 - 113	2	26
Heptachlor			0.0250	0.0173		ug/L		69	34 - 140	2	35
Heptachlor epoxide			0.0250	0.0194		ug/L		78	37 - 142	1	26
Methoxychlor			0.0250	0.0168		ug/L		67	41 - 140	2	24

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	*92*		*20 - 138*
Tetrachloro-m-xylene	*86*		*20 - 138*
DCB Decachlorobiphenyl (Surr)	*102*		*43 - 143*
DCB Decachlorobiphenyl (Surr)	*113*		*43 - 143*

QC Association Summary

Client: ALS Group USA, Corp
Project/Site: OP Pesticides/pesticides PA

Job ID: 180-162453-1
SDG: 3322523

GC Semi VOA

Prep Batch: 446771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-162453-1	3322731-008	Total/NA	Water	608	
180-162453-2	3322731-009	Total/NA	Water	608	
180-162453-3	3322731-010	Total/NA	Water	608	
MB 180-446771/1-A	Method Blank	Total/NA	Water	608	
LCS 180-446771/2-A	Lab Control Sample	Total/NA	Water	608	
LCSD 180-446771/3-A	Lab Control Sample Dup	Total/NA	Water	608	

Analysis Batch: 447060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-162453-1	3322731-008	Total/NA	Water	EPA 608.3	446771
180-162453-2	3322731-009	Total/NA	Water	EPA 608.3	446771
180-162453-3	3322731-010	Total/NA	Water	EPA 608.3	446771
MB 180-446771/1-A	Method Blank	Total/NA	Water	EPA 608.3	446771
LCS 180-446771/2-A	Lab Control Sample	Total/NA	Water	EPA 608.3	446771
LCSD 180-446771/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 608.3	446771

301 Fulling Mill Road
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: 1 of

ALS Quote #: 40-3322731

Client Name: ALS Environmental

Address: 301 Fulling Mill Road
Middletown, PA 17057

Contact: George Methlie

Phone#: 717-944-5541

Project Name/#: 40-3322731

Bill To:

TAT [x] Normal-Standard TAT is 10-12 business days.
[ ] Rush-Subject to ALS approval and surcharges.

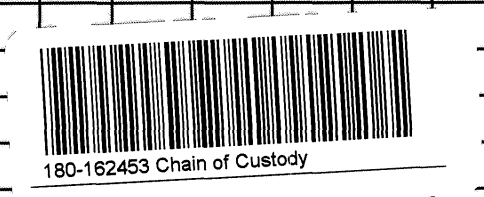
Date Required: Approved?

Email? [x] -Y namdt.subcontract@alsglobal.com

Fax? [ ] -Y No.:

	Container Type	A									
	Container Size	1L									
	Perservative	UNP									
ANALYSES/METHOD REQUESTED											

	Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	*G or C	**Matrix	608 LL Pesticides	Sub to Eurofins - Pitt	Enter Number of Containers Per Sample or Field Results Below.
1	3322731-008	9/12/23	0950	G	WW	1		
2	3322731-009	9/12/23	1115	G	WW	1		
3	3322731-010	9/12/23	1215	G	WW	1		
4								
5								
6								
7								
8								
9								
10								



Receipt Information (completed by Receiving Lab)

W.O. Temp: ____ Therm ID: ____

Courier/Tracking #:

Purchase Order #:

Project Comments:

ALS Field Services: □ Pickup □ Labor
□ Composite Sampling □ Rental Equipment
Other:

Sample/COC Comments

Please provide standard EDD

Quote 18026575-0

SAMPLED BY (Please Print): Client

Sampler Comments:

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1		9.13.23	17:00	2		9-14-23	1430
3				4			
5				6			
7				8			
9				10			

Data Deliverables: [x] Standard [ ] CLP-like [ ] USACE/DOD [ ]

Special Processing: USACE [ ] Navy [ ]

State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [x] MD [ ] other

Reportable to PADEP? Yes [ ] No [ ]

PWSID # ____

Sample Disposal: Lab [ ] Special [ ]

EDDS: Format Type- ____

* G=Grab, C=Composite

**Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil, OL=Other Liquid, SL=Sludge, SO=Soil; WP=Wipe, WW=Wastewater

ALS SHIPPING ADDRESS: 301 Fulling Mill Road, Middletown, PA 17057

Rev 11/18

Login Sample Receipt Checklist

Client: ALS Group USA, Corp

Job Number: 180-162453-1
SDG Number: 3322523

Login Number: 162453
List Number: 1
Creator: Abernathy, Eric L

List Source: Eurofins Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

Analytical Results Report For | Maryland Environmental Services - Landfills

Report ID 273531 on 9/28/2023

Certificate of Analysis

Project Name:	**Eastern Sanitary Landfill**	Workorder:	**3323048**
Purchase Order:	**MA 3680**	Workorder ID:	**Eastern Sanitary Landfill**

Enclosed are the analytical results for samples received by the laboratory on Wednesday, September 13, 2023.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP)
accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact George Methlie (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements.
The test results meet requirements of the current NELAP standards or state requirements, where applicable.
For a specific list of accredited
analytes, refer to the certifications section of the ALS website at
www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Global.
ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):
- Maryland Services-ENVOPS - Maryland Environmental Services - Landfills
- Jessica Cox - Maryland Environmental Services
- Maryland Services-LF Data - Maryland Environmental Services
- William Herpel - Maryland Environmental Service

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

George Methlie

George Methlie *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3323048001	Trip Blank	Water	09/13/2023 00:00	09/13/2023 18:30	CBC	Collected By Client
3323048002	Field Blank	Water	09/13/2023 08:45	09/13/2023 18:30	CBC	Collected By Client
3323048003	GMW-12	Water	09/13/2023 09:40	09/13/2023 18:30	CBC	Collected By Client
3323048004	GMW-5A	Water	09/13/2023 11:00	09/13/2023 18:30	CBC	Collected By Client
3323048005	GMW-14	Water	09/13/2023 11:40	09/13/2023 18:30	CBC	Collected By Client
3323048006	GMW-15A	Water	09/13/2023 12:25	09/13/2023 18:30	CBC	Collected By Client
3323048007	GMW-10	Water	09/13/2023 13:55	09/13/2023 18:30	CBC	Collected By Client
3323048008	GMW-8	Water	09/13/2023 14:55	09/13/2023 18:30	CBC	Collected By Client

Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136, including but not limited to the following EPA Method reference revisions:
  EPA 300.1 Rev. 1.0-1997
  EPA 300.0 Rev. 2.1-1993
  EPA 353.2 Rev. 2.0-1993
  EPA 410.4 Rev. 1.0-1993
  EPA 420.4 Rev. 1.0-1993
  EPA 365.1 Rev. 2.0-1993
  EPA 200.7 Rev. 4.4-1994
  EPA 200.8 Rev. 5.4-1994
  EPA 245.1 Rev. 3.0-1994
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
2	Analyte was analyzed past the 7 day holding time.
3	The sample was originally run within hold time, but required further analysis that exceeded hold time.
4	This sample result was calculated and reported using Method SM2340B-2011.
5	The QC type LLCCV for method SW846 6020A was outside the control limits for the analyte Be. The % RSD was reported as 21.3 and the control limits were 0 to 20.
6	The surrogate 1-Chloro-2-Fluorobenzene for method 8011 was outside of control limits in the associated matrix spike sample (MS). The % Recovery was reported as 132 and the control limits were 70 to 130. This result was reported at a dilution of 1.
7	The surrogate 1-Chloro-2-Fluorobenzene for method 8011 was outside of control limits in the associated duplicate sample (DUP). The % Recovery was reported as 133 and the control limits were 70 to 130. This result was reported at a dilution of 1.
8	The concentration of this analyte was greater than 4 times the concentration of the spike added to the matrix spike. According to protocol, the calculation for percent recovery of the matrix spike is not valid.
9	The Method Blank for method SW846 6020A reported a value greater than the reporting level for the analyte Calcium, Total. The concentration was 0.14 mg/L.
10	The QC type LLICV for method SW846 6020A was outside the control limits for the analyte Se. The % RSD was reported as 28.5 and the control limits were 0 to 20.
11	The QC sample type LCS for method SW846 8260C was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 144 and the control limits were 57 to 131.

Detected Results Summary

Client Sample ID	Trip Blank	Collected	09/13/2023 00:00
Lab Sample ID	3323048001	Lab Receipt	09/13/2023 18:30

Compound	Result	Units	RDL	MDL	Method	Flag
VOLATILE ORGANICS						
Bromomethane	0.96J	ug/L	1.0	0.39	SW846 8260C	#
Chloromethane	0.39J	ug/L	1.0	0.31	SW846 8260C	#

Detected Results Summary

Client Sample ID	Field Blank	Collected	09/13/2023 08:45
Lab Sample ID	3323048002	Lab Receipt	09/13/2023 18:30

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Calcium, Total	0.069J	mg/L	0.11	0.037	SW846 6020A	#
Hardness	0.22	mg/L			SW846 6020A	#
Sodium, Total	0.17	mg/L	0.11	0.037	SW846 6020A	#
VOLATILE ORGANICS						
Bromomethane	0.74J	ug/L	1.0	0.39	SW846 8260C	#
Chloromethane	0.37J	ug/L	1.0	0.31	SW846 8260C	#
WET CHEMISTRY						
Ammonia-N	0.029	mg/L	0.010	0.003	ASTM D6919-17	#

Detected Results Summary

Client Sample ID	GMW-12	Collected	09/13/2023 09:40
Lab Sample ID	3323048003	Lab Receipt	09/13/2023 18:30

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Barium, Total	0.094	mg/L	0.0056	0.0019	SW846 6020A	#
Calcium, Total	9.3	mg/L	0.11	0.037	SW846 6020A	#
Chromium, Total	0.0012J	mg/L	0.0022	0.00074	SW846 6020A	#
Cobalt, Total	0.0074	mg/L	0.0056	0.0019	SW846 6020A	#
Copper, Total	0.012	mg/L	0.0056	0.0019	SW846 6020A	#
Hardness	49.3	mg/L	0.33	0.11	EPA 200.7	#
Magnesium, Total	4.7	mg/L	0.11	0.037	SW846 6020A	#
Manganese, Total	0.026	mg/L	0.0056	0.0019	SW846 6020A	#
Mercury, Total	0.0024	mg/L	0.00050	0.00017	SW846 7470A	#
Nickel, Total	0.024	mg/L	0.0056	0.0019	SW846 6020A	#
Potassium, Total	2.0	mg/L	0.11	0.037	SW846 6020A	#
Sodium, Total	23.3	mg/L	0.11	0.037	SW846 6020A	#
Zinc, Total	0.031	mg/L	0.0056	0.0019	SW846 6020A	#
VOLATILE ORGANICS						
Bromomethane	0.56J	ug/L	1.0	0.39	SW846 8260C	#
Chloromethane	0.66J	ug/L	1.0	0.31	SW846 8260C	#
Methyl t-Butyl Ether	2.1	ug/L	1.0	0.33	SW846 8260C	#
WET CHEMISTRY						
Alkalinity, Total	11	mg/L	5	5	SM2320B-2011	#
Ammonia-N	0.255	mg/L	0.100	0.03	ASTM D6919-17	#
Chloride	60.5	mg/L	2.0	1.5	EPA 300.0	#
Nitrate-N	2.1	mg/L	1.0	0.22	EPA 300.0	#
Sulfate	1.9J	mg/L	2.0	1.5	EPA 300.0	#
Total Dissolved Solids	164	mg/L	25	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	GMW-5A	Collected	09/13/2023 11:00
Lab Sample ID	3323048004	Lab Receipt	09/13/2023 18:30

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Barium, Total	0.11	mg/L	0.0056	0.0019	SW846 6020A	#
Calcium, Total	32.4	mg/L	0.11	0.037	SW846 6020A	#
Chromium, Total	0.017	mg/L	0.0022	0.00074	SW846 6020A	#
Cobalt, Total	0.069	mg/L	0.0056	0.0019	SW846 6020A	#
Copper, Total	0.0020J	mg/L	0.0056	0.0019	SW846 6020A	#
Hardness	153	mg/L	0.33	0.11	EPA 200.7	#
Iron, Total	3.6	mg/L	0.056	0.019	SW846 6020A	#
Magnesium, Total	11.8	mg/L	0.11	0.037	SW846 6020A	#
Manganese, Total	1.3	mg/L	0.0056	0.0019	SW846 6020A	#
Mercury, Total	0.00038J	mg/L	0.00050	0.00017	SW846 7470A	#
Nickel, Total	0.017	mg/L	0.0056	0.0019	SW846 6020A	#
Potassium, Total	5.2	mg/L	0.11	0.037	SW846 6020A	#
Sodium, Total	39.7	mg/L	0.11	0.037	SW846 6020A	#
Zinc, Total	0.0073	mg/L	0.0056	0.0019	SW846 6020A	#
VOLATILE ORGANICS						
Bromomethane	0.87J	ug/L	1.0	0.39	SW846 8260C	#
Chloromethane	0.52J	ug/L	1.0	0.31	SW846 8260C	#
WET CHEMISTRY						
Alkalinity, Total	108	mg/L	5	5	SM2320B-2011	#
Ammonia-N	0.275	mg/L	0.100	0.03	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	6J	mg/L	15	5	EPA 410.4	#
Chloride	76.7	mg/L	2.0	1.5	EPA 300.0	#
Sulfate	32.4	mg/L	2.0	1.5	EPA 300.0	#
Total Dissolved Solids	320	mg/L	25	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	GMW-14	Collected	09/13/2023 11:40
Lab Sample ID	3323048005	Lab Receipt	09/13/2023 18:30

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Arsenic, Total	0.0015J	mg/L	0.0033	0.0011	SW846 6020A	#
Barium, Total	0.054	mg/L	0.0056	0.0019	SW846 6020A	#
Calcium, Total	10.8	mg/L	0.11	0.037	SW846 6020A	#
Chromium, Total	0.00092J	mg/L	0.0022	0.00074	SW846 6020A	#
Cobalt, Total	0.22	mg/L	0.0056	0.0019	SW846 6020A	#
Hardness	92.4	mg/L	0.33	0.11	EPA 200.7	#
Iron, Total	55.5	mg/L	0.056	0.019	SW846 6020A	#
Magnesium, Total	14.0	mg/L	0.11	0.037	SW846 6020A	#
Manganese, Total	2.9	mg/L	0.0056	0.0019	SW846 6020A	#
Nickel, Total	0.0080	mg/L	0.0056	0.0019	SW846 6020A	#
Potassium, Total	0.59	mg/L	0.11	0.037	SW846 6020A	#
Sodium, Total	27.4	mg/L	0.11	0.037	SW846 6020A	#
Zinc, Total	0.013	mg/L	0.0056	0.0019	SW846 6020A	#
VOLATILE ORGANICS						
Bromomethane	0.64J	ug/L	1.0	0.39	SW846 8260C	#
Chloromethane	0.54J	ug/L	1.0	0.31	SW846 8260C	#
WET CHEMISTRY						
Alkalinity, Total	152	mg/L	5	5	SM2320B-2011	#
Ammonia-N	0.341	mg/L	0.100	0.03	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	15	mg/L	15	5	EPA 410.4	#
Chloride	45.3	mg/L	2.0	1.5	EPA 300.0	#
Sulfate	16.8	mg/L	2.0	1.5	EPA 300.0	#
Total Dissolved Solids	290	mg/L	25	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	GMW-15A	Collected	09/13/2023 12:25
Lab Sample ID	3323048006	Lab Receipt	09/13/2023 18:30

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Barium, Total	0.027	mg/L	0.0056	0.0019	SW846 6020A	#
Cadmium, Total	0.0038	mg/L	0.0011	0.00037	SW846 6020A	#
Calcium, Total	2.2	mg/L	0.11	0.037	SW846 6020A	#
Cobalt, Total	0.030	mg/L	0.0056	0.0019	SW846 6020A	#
Copper, Total	0.029	mg/L	0.0056	0.0019	SW846 6020A	#
Hardness	10.3	mg/L	0.33	0.11	EPA 200.7	#
Iron, Total	0.22	mg/L	0.056	0.019	SW846 6020A	#
Magnesium, Total	1.0	mg/L	0.11	0.037	SW846 6020A	#
Manganese, Total	0.098	mg/L	0.0056	0.0019	SW846 6020A	#
Nickel, Total	0.056	mg/L	0.0056	0.0019	SW846 6020A	#
Potassium, Total	1.4	mg/L	0.11	0.037	SW846 6020A	#
Sodium, Total	2.8	mg/L	0.11	0.037	SW846 6020A	#
Zinc, Total	0.045	mg/L	0.0056	0.0019	SW846 6020A	#
VOLATILE ORGANICS						
Bromomethane	0.69J	ug/L	1.0	0.39	SW846 8260C	#
Chloromethane	0.59J	ug/L	1.0	0.31	SW846 8260C	#
WET CHEMISTRY						
Ammonia-N	0.188	mg/L	0.100	0.03	ASTM D6919-17	#
Chloride	1.6J	mg/L	2.0	1.5	EPA 300.0	#
Sulfate	16.5	mg/L	2.0	1.5	EPA 300.0	#
Total Dissolved Solids	53	mg/L	25	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	GMW-10	Collected	09/13/2023 13:55
Lab Sample ID	3323048007	Lab Receipt	09/13/2023 18:30

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Barium, Total	0.028	mg/L	0.0056	0.0019	SW846 6020A	#
Beryllium, Total	0.00039J	mg/L	0.0011	0.00037	SW846 6020A	#
Cadmium, Total	0.0050	mg/L	0.0011	0.00037	SW846 6020A	#
Calcium, Total	2.3	mg/L	0.11	0.037	SW846 6020A	#
Chromium, Total	0.00076J	mg/L	0.0022	0.00074	SW846 6020A	#
Cobalt, Total	0.031	mg/L	0.0056	0.0019	SW846 6020A	#
Copper, Total	0.025	mg/L	0.0056	0.0019	SW846 6020A	#
Hardness	10.2	mg/L	0.33	0.11	EPA 200.7	#
Iron, Total	0.23	mg/L	0.056	0.019	SW846 6020A	#
Magnesium, Total	1.0	mg/L	0.11	0.037	SW846 6020A	#
Manganese, Total	0.10	mg/L	0.0056	0.0019	SW846 6020A	#
Nickel, Total	0.056	mg/L	0.0056	0.0019	SW846 6020A	#
Potassium, Total	1.5	mg/L	0.11	0.037	SW846 6020A	#
Sodium, Total	3.0	mg/L	0.11	0.037	SW846 6020A	#
Zinc, Total	0.045	mg/L	0.0056	0.0019	SW846 6020A	#
WET CHEMISTRY						
Ammonia-N	0.189	mg/L	0.100	0.03	ASTM D6919-17	#
Chloride	1.6J	mg/L	2.0	1.5	EPA 300.0	#
Sulfate	16.5	mg/L	2.0	1.5	EPA 300.0	#
Total Dissolved Solids	50	mg/L	25	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	GMW-8	Collected	09/13/2023 14:55
Lab Sample ID	3323048008	Lab Receipt	09/13/2023 18:30

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Barium, Total	0.062	mg/L	0.0056	0.0019	SW846 6020A	#
Cadmium, Total	0.0023	mg/L	0.0011	0.00037	SW846 6020A	#
Calcium, Total	9.2	mg/L	0.11	0.037	SW846 6020A	#
Chromium, Total	0.0021J	mg/L	0.0022	0.00074	SW846 6020A	#
Cobalt, Total	0.0037J	mg/L	0.0056	0.0019	SW846 6020A	#
Hardness	29.5	mg/L	0.33	0.11	EPA 200.7	#
Iron, Total	1.2	mg/L	0.056	0.019	SW846 6020A	#
Magnesium, Total	0.94	mg/L	0.11	0.037	SW846 6020A	#
Manganese, Total	0.048	mg/L	0.0056	0.0019	SW846 6020A	#
Nickel, Total	0.0050J	mg/L	0.0056	0.0019	SW846 6020A	#
Potassium, Total	6.3	mg/L	0.11	0.037	SW846 6020A	#
Sodium, Total	48.6	mg/L	0.11	0.037	SW846 6020A	#
Zinc, Total	0.0081	mg/L	0.0056	0.0019	SW846 6020A	#
WET CHEMISTRY						
Alkalinity, Total	36	mg/L	5	5	SM2320B-2011	#
Ammonia-N	0.288	mg/L	0.100	0.03	ASTM D6919-17	#
Chloride	17.4	mg/L	2.0	1.5	EPA 300.0	#
Nitrate-N	0.50J	mg/L	1.0	0.22	EPA 300.0	#
Sulfate	86.9	mg/L	2.0	1.5	EPA 300.0	#
Total Dissolved Solids	222	mg/L	25	25	SM2540C-15	#

Results

Client Sample ID	Trip Blank	Collected	09/13/2023 00:00
Lab Sample ID	3323048001	Lab Receipt	09/13/2023 18:30

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 14:06	ILY	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/20/2023 14:06	ILY	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 14:06	ILY	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 14:06	ILY	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 14:06	ILY	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 14:06	ILY	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/20/2023 14:06	ILY	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0050	SW846 8011	1	09/15/2023 17:40	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/20/2023 14:06	ILY	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/15/2023 17:40	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 14:06	ILY	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/20/2023 14:06	ILY	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 14:06	ILY	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 14:06	ILY	C
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 14:06	ILY	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/20/2023 14:06	ILY	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/20/2023 14:06	ILY	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/20/2023 14:06	ILY	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/20/2023 14:06	ILY	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/20/2023 14:06	ILY	C
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 14:06	ILY	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 14:06	ILY	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 14:06	ILY	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/20/2023 14:06	ILY	C
Bromomethane	0.96J	J	ug/L	1.0	0.39	SW846 8260C	1	09/20/2023 14:06	ILY	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 14:06	ILY	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 14:06	ILY	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/20/2023 14:06	ILY	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 14:06	ILY	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 14:06	ILY	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/20/2023 14:06	ILY	C
Chloromethane	0.39J	J	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 14:06	ILY	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 14:06	ILY	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 14:06	ILY	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 14:06	ILY	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 14:06	ILY	C
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 14:06	ILY	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 14:06	ILY	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/20/2023 14:06	ILY	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 14:06	ILY	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 14:06	ILY	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/20/2023 14:06	ILY	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 14:06	ILY	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 14:06	ILY	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 14:06	ILY	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 14:06	ILY	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/20/2023 14:06	ILY	C

Results

Client Sample ID	Trip Blank	Collected	09/13/2023 00:00
Lab Sample ID	3323048001	Lab Receipt	09/13/2023 18:30

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/20/2023 14:06	ILY	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 14:06	ILY	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/20/2023 14:06	ILY	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 14:06	ILY	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 14:06	ILY	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/20/2023 14:06	ILY	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/20/2023 14:06	ILY	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	106%	62 – 133	09/20/2023 14:06	
1-Chloro-2-Fluorobenzene	348-51-6	84.8%	70 – 130	09/15/2023 17:40	
4-Bromofluorobenzene	460-00-4	107%	79 – 114	09/20/2023 14:06	
Dibromofluoromethane	1868-53-7	100%	78 – 116	09/20/2023 14:06	
Toluene-d8	2037-26-5	109%	76 – 127	09/20/2023 14:06	

Results

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METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/20/2023 12:12	MO	E1
Arsenic, Total	ND	ND	mg/L	0.0033	0.0011	SW846 6020A	1	09/20/2023 12:12	MO	E1
Barium, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:12	MO	E1
Beryllium, Total	ND	ND,5	mg/L	0.0011	0.00037	SW846 6020A	1	09/20/2023 12:12	MO	E1
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/20/2023 12:12	MO	E1
Calcium, Total	0.069J	J	mg/L	0.11	0.037	SW846 6020A	1	09/20/2023 12:12	MO	E1
Chromium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/20/2023 12:12	MO	E1
Cobalt, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:12	MO	E1
Copper, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:12	MO	E1
Hardness	0.22	4	mg/L			SW846 6020A	1	09/20/2023 12:12	MO	
Iron, Total	ND	ND	mg/L	0.056	0.019	SW846 6020A	1	09/20/2023 12:12	MO	E1
Lead, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/20/2023 12:12	MO	E1
Magnesium, Total	ND	ND	mg/L	0.11	0.037	SW846 6020A	1	09/20/2023 12:12	MO	E1
Manganese, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:12	MO	E1
Mercury, Total	ND	ND	mg/L	0.00050	0.00017	SW846 7470A	1	09/15/2023 14:24	JSE	E
Nickel, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:12	MO	E1
Potassium, Total	ND	ND	mg/L	0.11	0.037	SW846 6020A	1	09/20/2023 12:12	MO	E1
Selenium, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:12	MO	E1
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/20/2023 12:12	MO	E1
Sodium, Total	0.17		mg/L	0.11	0.037	SW846 6020A	1	09/20/2023 12:12	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/20/2023 12:12	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/20/2023 12:12	MO	E1
Zinc, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:12	MO	E1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 14:29	ILY	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/20/2023 14:29	ILY	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 14:29	ILY	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 14:29	ILY	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 14:29	ILY	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 14:29	ILY	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/20/2023 14:29	ILY	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0051	SW846 8011	1	09/15/2023 17:54	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/20/2023 14:29	ILY	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/15/2023 17:54	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 14:29	ILY	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/20/2023 14:29	ILY	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 14:29	ILY	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 14:29	ILY	C
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 14:29	ILY	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/20/2023 14:29	ILY	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/20/2023 14:29	ILY	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/20/2023 14:29	ILY	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/20/2023 14:29	ILY	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/20/2023 14:29	ILY	C

Results

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VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 14:29	ILY	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 14:29	ILY	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 14:29	ILY	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/20/2023 14:29	ILY	C
Bromomethane	0.74J	J	ug/L	1.0	0.39	SW846 8260C	1	09/20/2023 14:29	ILY	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 14:29	ILY	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 14:29	ILY	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/20/2023 14:29	ILY	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 14:29	ILY	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 14:29	ILY	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/20/2023 14:29	ILY	C
Chloromethane	0.37J	J	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 14:29	ILY	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 14:29	ILY	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 14:29	ILY	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 14:29	ILY	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 14:29	ILY	C
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 14:29	ILY	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 14:29	ILY	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/20/2023 14:29	ILY	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 14:29	ILY	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 14:29	ILY	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/20/2023 14:29	ILY	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 14:29	ILY	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 14:29	ILY	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 14:29	ILY	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 14:29	ILY	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/20/2023 14:29	ILY	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/20/2023 14:29	ILY	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 14:29	ILY	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/20/2023 14:29	ILY	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 14:29	ILY	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 14:29	ILY	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/20/2023 14:29	ILY	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/20/2023 14:29	ILY	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	105%	62 – 133	09/20/2023 14:29	
1-Chloro-2-Fluorobenzene	348-51-6	128%	70 – 130	09/15/2023 17:54	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	09/20/2023 14:29	
Dibromofluoromethane	1868-53-7	96.9%	78 – 116	09/20/2023 14:29	
Toluene-d8	2037-26-5	107%	76 – 127	09/20/2023 14:29	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

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WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	ND	ND,1	mg/L	5	5	SM2320B-2011	1	09/20/2023 03:59	JMS	F
Ammonia-N	0.029		mg/L	0.010	0.003	ASTM D6919-17	1	09/24/2023 07:58	NML	G
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	5	EPA 410.4	1	09/15/2023 12:39	KMS	G
Chloride	ND	ND	mg/L	2.0	1.5	EPA 300.0	2	09/14/2023 18:36	J1W	F
Nitrate-N	ND	ND	mg/L	1.0	0.22	EPA 300.0	2	09/14/2023 18:36	J1W	F
Sulfate	ND	ND	mg/L	2.0	1.5	EPA 300.0	2	09/14/2023 18:36	J1W	F
Total Dissolved Solids	ND	ND,2,3	mg/L	25	25	SM2540C-15	1	09/25/2023 18:40	JXK	F

Results

Client Sample ID	GMW-12	Collected	09/13/2023 09:40
Lab Sample ID	3323048003	Lab Receipt	09/13/2023 18:30

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/20/2023 12:14	MO	E2
Arsenic, Total	ND	ND	mg/L	0.0033	0.0011	SW846 6020A	1	09/20/2023 12:14	MO	E2
Barium, Total	0.094		mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:14	MO	E2
Beryllium, Total	ND	ND,5	mg/L	0.0011	0.00037	SW846 6020A	1	09/20/2023 12:14	MO	E2
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/20/2023 12:14	MO	E2
Calcium, Total	9.3		mg/L	0.11	0.037	SW846 6020A	1	09/20/2023 12:14	MO	E2
Chromium, Total	0.0012J	J	mg/L	0.0022	0.00074	SW846 6020A	1	09/20/2023 12:14	MO	E2
Cobalt, Total	0.0074		mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:14	MO	E2
Copper, Total	0.012		mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:14	MO	E2
Hardness	49.3	4	mg/L	0.33	0.11	EPA 200.7	1	09/16/2023 15:11	SRT	E1
Iron, Total	ND	ND	mg/L	0.056	0.019	SW846 6020A	1	09/20/2023 12:14	MO	E2
Lead, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/20/2023 12:14	MO	E2
Magnesium, Total	4.7		mg/L	0.11	0.037	SW846 6020A	1	09/20/2023 12:14	MO	E2
Manganese, Total	0.026		mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:14	MO	E2
Mercury, Total	0.0024		mg/L	0.00050	0.00017	SW846 7470A	1	09/15/2023 14:26	JSE	E
Nickel, Total	0.024		mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:14	MO	E2
Potassium, Total	2.0		mg/L	0.11	0.037	SW846 6020A	1	09/20/2023 12:14	MO	E2
Selenium, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:14	MO	E2
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/20/2023 12:14	MO	E2
Sodium, Total	23.3		mg/L	0.11	0.037	SW846 6020A	1	09/20/2023 12:14	MO	E2
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/20/2023 12:14	MO	E2
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/20/2023 12:14	MO	E2
Zinc, Total	0.031		mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:14	MO	E2

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 18:44	ILY	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/20/2023 18:44	ILY	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 18:44	ILY	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 18:44	ILY	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 18:44	ILY	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 18:44	ILY	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/20/2023 18:44	ILY	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0051	SW846 8011	1	09/15/2023 18:08	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/20/2023 18:44	ILY	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/15/2023 18:08	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 18:44	ILY	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/20/2023 18:44	ILY	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 18:44	ILY	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 18:44	ILY	C
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 18:44	ILY	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/20/2023 18:44	ILY	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/20/2023 18:44	ILY	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/20/2023 18:44	ILY	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/20/2023 18:44	ILY	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/20/2023 18:44	ILY	C

Results

Client Sample ID	GMW-12	Collected	09/13/2023 09:40
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VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 18:44	ILY	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 18:44	ILY	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 18:44	ILY	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/20/2023 18:44	ILY	C
Bromomethane	0.56J	J	ug/L	1.0	0.39	SW846 8260C	1	09/20/2023 18:44	ILY	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 18:44	ILY	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 18:44	ILY	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/20/2023 18:44	ILY	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 18:44	ILY	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 18:44	ILY	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/20/2023 18:44	ILY	C
Chloromethane	0.66J	J	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 18:44	ILY	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 18:44	ILY	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 18:44	ILY	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 18:44	ILY	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 18:44	ILY	C
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 18:44	ILY	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 18:44	ILY	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/20/2023 18:44	ILY	C
Methyl t-Butyl Ether	2.1		ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 18:44	ILY	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 18:44	ILY	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/20/2023 18:44	ILY	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 18:44	ILY	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 18:44	ILY	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 18:44	ILY	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 18:44	ILY	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/20/2023 18:44	ILY	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/20/2023 18:44	ILY	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 18:44	ILY	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/20/2023 18:44	ILY	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 18:44	ILY	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 18:44	ILY	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/20/2023 18:44	ILY	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/20/2023 18:44	ILY	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	104%	62 – 133	09/20/2023 18:44	
1-Chloro-2-Fluorobenzene	348-51-6	127%	70 – 130	09/15/2023 18:08	6
4-Bromofluorobenzene	460-00-4	102%	79 – 114	09/20/2023 18:44	
Dibromofluoromethane	1868-53-7	104%	78 – 116	09/20/2023 18:44	
Toluene-d8	2037-26-5	106%	76 – 127	09/20/2023 18:44	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	GMW-12	Collected	09/13/2023 09:40
Lab Sample ID	3323048003	Lab Receipt	09/13/2023 18:30

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	11	1	mg/L	5	5	SM2320B-2011	1	09/20/2023 04:48	JMS	F
Ammonia-N	0.255		mg/L	0.100	0.03	ASTM D6919-17	10	09/24/2023 07:44	NML	G
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	5	EPA 410.4	1	09/15/2023 12:39	KMS	G
Chloride	60.5		mg/L	2.0	1.5	EPA 300.0	2	09/14/2023 18:47	J1W	F
Nitrate-N	2.1		mg/L	1.0	0.22	EPA 300.0	2	09/14/2023 18:47	J1W	F
Sulfate	1.9J	J	mg/L	2.0	1.5	EPA 300.0	2	09/14/2023 18:47	J1W	F
Total Dissolved Solids	164		mg/L	25	25	SM2540C-15	1	09/19/2023 09:07	KRS	F

Results

Client Sample ID	GMW-5A	Collected	09/13/2023 11:00
Lab Sample ID	3323048004	Lab Receipt	09/13/2023 18:30

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/20/2023 12:16	MO	E2
Arsenic, Total	ND	ND	mg/L	0.0033	0.0011	SW846 6020A	1	09/20/2023 12:16	MO	E2
Barium, Total	0.11		mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:16	MO	E2
Beryllium, Total	ND	ND,5	mg/L	0.0011	0.00037	SW846 6020A	1	09/20/2023 12:16	MO	E2
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/20/2023 12:16	MO	E2
Calcium, Total	32.4		mg/L	0.11	0.037	SW846 6020A	1	09/20/2023 12:16	MO	E2
Chromium, Total	0.017		mg/L	0.0022	0.00074	SW846 6020A	1	09/20/2023 12:16	MO	E2
Cobalt, Total	0.069		mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:16	MO	E2
Copper, Total	0.0020J	J	mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:16	MO	E2
Hardness	153	4	mg/L	0.33	0.11	EPA 200.7	1	09/16/2023 15:15	SRT	E1
Iron, Total	3.6		mg/L	0.056	0.019	SW846 6020A	1	09/20/2023 12:16	MO	E2
Lead, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/20/2023 12:16	MO	E2
Magnesium, Total	11.8		mg/L	0.11	0.037	SW846 6020A	1	09/20/2023 12:16	MO	E2
Manganese, Total	1.3		mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:16	MO	E2
Mercury, Total	0.00038J	J	mg/L	0.00050	0.00017	SW846 7470A	1	09/15/2023 14:27	JSE	E
Nickel, Total	0.017		mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:16	MO	E2
Potassium, Total	5.2		mg/L	0.11	0.037	SW846 6020A	1	09/20/2023 12:16	MO	E2
Selenium, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:16	MO	E2
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/20/2023 12:16	MO	E2
Sodium, Total	39.7		mg/L	0.11	0.037	SW846 6020A	1	09/20/2023 12:16	MO	E2
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/20/2023 12:16	MO	E2
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/20/2023 12:16	MO	E2
Zinc, Total	0.0073		mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:16	MO	E2

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 19:07	ILY	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/20/2023 19:07	ILY	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 19:07	ILY	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 19:07	ILY	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 19:07	ILY	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 19:07	ILY	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/20/2023 19:07	ILY	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.022	0.0052	SW846 8011	1	09/15/2023 18:37	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/20/2023 19:07	ILY	C
1,2-Dibromoethane	ND	ND	ug/L	0.022	0.011	SW846 8011	1	09/15/2023 18:37	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 19:07	ILY	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/20/2023 19:07	ILY	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 19:07	ILY	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 19:07	ILY	C
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 19:07	ILY	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/20/2023 19:07	ILY	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/20/2023 19:07	ILY	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/20/2023 19:07	ILY	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/20/2023 19:07	ILY	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/20/2023 19:07	ILY	C

Results

Client Sample ID	GMW-5A	Collected	09/13/2023 11:00
Lab Sample ID	3323048004	Lab Receipt	09/13/2023 18:30

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 19:07	ILY	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 19:07	ILY	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 19:07	ILY	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/20/2023 19:07	ILY	C
Bromomethane	0.87J	J	ug/L	1.0	0.39	SW846 8260C	1	09/20/2023 19:07	ILY	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 19:07	ILY	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 19:07	ILY	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/20/2023 19:07	ILY	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 19:07	ILY	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 19:07	ILY	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/20/2023 19:07	ILY	C
Chloromethane	0.52J	J	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 19:07	ILY	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 19:07	ILY	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 19:07	ILY	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 19:07	ILY	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 19:07	ILY	C
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 19:07	ILY	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 19:07	ILY	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/20/2023 19:07	ILY	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 19:07	ILY	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 19:07	ILY	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/20/2023 19:07	ILY	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 19:07	ILY	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 19:07	ILY	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 19:07	ILY	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 19:07	ILY	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/20/2023 19:07	ILY	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/20/2023 19:07	ILY	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 19:07	ILY	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/20/2023 19:07	ILY	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 19:07	ILY	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 19:07	ILY	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/20/2023 19:07	ILY	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/20/2023 19:07	ILY	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	106%	62 – 133	09/20/2023 19:07	
1-Chloro-2-Fluorobenzene	348-51-6	127%	70 – 130	09/15/2023 18:37	7
4-Bromofluorobenzene	460-00-4	102%	79 – 114	09/20/2023 19:07	
Dibromofluoromethane	1868-53-7	106%	78 – 116	09/20/2023 19:07	
Toluene-d8	2037-26-5	111%	76 – 127	09/20/2023 19:07	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	GMW-5A	Collected	09/13/2023 11:00
Lab Sample ID	3323048004	Lab Receipt	09/13/2023 18:30

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	108	1	mg/L	5	5	SM2320B-2011	1	09/19/2023 13:38	JMS	F
Ammonia-N	0.275		mg/L	0.100	0.03	ASTM D6919-17	10	09/24/2023 09:47	NML	G
Chemical Oxygen Demand (COD)	6J	J	mg/L	15	5	EPA 410.4	1	09/15/2023 12:39	KMS	G
Chloride	76.7		mg/L	2.0	1.5	EPA 300.0	2	09/14/2023 19:49	J1W	F
Nitrate-N	ND	ND	mg/L	1.0	0.22	EPA 300.0	2	09/14/2023 19:49	J1W	F
Sulfate	32.4		mg/L	2.0	1.5	EPA 300.0	2	09/14/2023 19:49	J1W	F
Total Dissolved Solids	320		mg/L	25	25	SM2540C-15	1	09/19/2023 09:07	KRS	F

Results

Client Sample ID	GMW-14	Collected	09/13/2023 11:40
Lab Sample ID	3323048005	Lab Receipt	09/13/2023 18:30

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/20/2023 12:18	MO	E2
Arsenic, Total	0.0015J	J	mg/L	0.0033	0.0011	SW846 6020A	1	09/20/2023 12:18	MO	E2
Barium, Total	0.054		mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:18	MO	E2
Beryllium, Total	ND	ND,5	mg/L	0.0011	0.00037	SW846 6020A	1	09/20/2023 12:18	MO	E2
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/20/2023 12:18	MO	E2
Calcium, Total	10.8		mg/L	0.11	0.037	SW846 6020A	1	09/20/2023 12:18	MO	E2
Chromium, Total	0.00092J	J	mg/L	0.0022	0.00074	SW846 6020A	1	09/20/2023 12:18	MO	E2
Cobalt, Total	0.22		mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:18	MO	E2
Copper, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:18	MO	E2
Hardness	92.4	4	mg/L	0.33	0.11	EPA 200.7	1	09/16/2023 15:18	SRT	E1
Iron, Total	55.5	8	mg/L	0.056	0.019	SW846 6020A	1	09/20/2023 12:18	MO	E2
Lead, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/20/2023 12:18	MO	E2
Magnesium, Total	14.0	8	mg/L	0.11	0.037	SW846 6020A	1	09/20/2023 12:18	MO	E2
Manganese, Total	2.9	8	mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:18	MO	E2
Mercury, Total	ND	ND	mg/L	0.00050	0.00017	SW846 7470A	1	09/15/2023 14:28	JSE	E
Nickel, Total	0.0080		mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:18	MO	E2
Potassium, Total	0.59		mg/L	0.11	0.037	SW846 6020A	1	09/20/2023 12:18	MO	E2
Selenium, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:18	MO	E2
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/20/2023 12:18	MO	E2
Sodium, Total	27.4	8	mg/L	0.11	0.037	SW846 6020A	1	09/20/2023 12:18	MO	E2
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/20/2023 12:18	MO	E2
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/20/2023 12:18	MO	E2
Zinc, Total	0.013		mg/L	0.0056	0.0019	SW846 6020A	1	09/20/2023 12:18	MO	E2

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 19:30	ILY	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/20/2023 19:30	ILY	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 19:30	ILY	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 19:30	ILY	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 19:30	ILY	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 19:30	ILY	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/20/2023 19:30	ILY	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0049	SW846 8011	1	09/15/2023 19:06	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/20/2023 19:30	ILY	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/15/2023 19:06	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 19:30	ILY	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/20/2023 19:30	ILY	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 19:30	ILY	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 19:30	ILY	C
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 19:30	ILY	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/20/2023 19:30	ILY	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/20/2023 19:30	ILY	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/20/2023 19:30	ILY	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/20/2023 19:30	ILY	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/20/2023 19:30	ILY	C

Results

Client Sample ID	GMW-14	Collected	09/13/2023 11:40
Lab Sample ID	3323048005	Lab Receipt	09/13/2023 18:30

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 19:30	ILY	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 19:30	ILY	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 19:30	ILY	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/20/2023 19:30	ILY	C
Bromomethane	0.64J	J	ug/L	1.0	0.39	SW846 8260C	1	09/20/2023 19:30	ILY	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 19:30	ILY	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 19:30	ILY	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/20/2023 19:30	ILY	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 19:30	ILY	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 19:30	ILY	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/20/2023 19:30	ILY	C
Chloromethane	0.54J	J	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 19:30	ILY	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 19:30	ILY	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 19:30	ILY	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 19:30	ILY	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 19:30	ILY	C
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 19:30	ILY	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 19:30	ILY	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/20/2023 19:30	ILY	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 19:30	ILY	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 19:30	ILY	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/20/2023 19:30	ILY	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 19:30	ILY	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 19:30	ILY	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 19:30	ILY	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 19:30	ILY	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/20/2023 19:30	ILY	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/20/2023 19:30	ILY	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 19:30	ILY	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/20/2023 19:30	ILY	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 19:30	ILY	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 19:30	ILY	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/20/2023 19:30	ILY	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/20/2023 19:30	ILY	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	106%	62 – 133	09/20/2023 19:30	
1-Chloro-2-Fluorobenzene	348-51-6	113%	70 – 130	09/15/2023 19:06	
4-Bromofluorobenzene	460-00-4	105%	79 – 114	09/20/2023 19:30	
Dibromofluoromethane	1868-53-7	107%	78 – 116	09/20/2023 19:30	
Toluene-d8	2037-26-5	110%	76 – 127	09/20/2023 19:30	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	GMW-14	Collected	09/13/2023 11:40
Lab Sample ID	3323048005	Lab Receipt	09/13/2023 18:30

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	152	1	mg/L	5	5	SM2320B-2011	1	09/19/2023 13:25	JMS	F
Ammonia-N	0.341		mg/L	0.100	0.03	ASTM D6919-17	10	09/24/2023 09:34	NML	G
Chemical Oxygen Demand (COD)	15		mg/L	15	5	EPA 410.4	1	09/15/2023 12:39	KMS	G
Chloride	45.3		mg/L	2.0	1.5	EPA 300.0	2	09/14/2023 20:00	J1W	F
Nitrate-N	ND	ND	mg/L	1.0	0.22	EPA 300.0	2	09/14/2023 20:00	J1W	F
Sulfate	16.8		mg/L	2.0	1.5	EPA 300.0	2	09/14/2023 20:00	J1W	F
Total Dissolved Solids	290		mg/L	25	25	SM2540C-15	1	09/19/2023 09:07	KRS	F

Results

Client Sample ID	GMW-15A	Collected	09/13/2023 12:25
Lab Sample ID	3323048006	Lab Receipt	09/13/2023 18:30

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/22/2023 12:50	MO	E2
Arsenic, Total	ND	ND	mg/L	0.0033	0.0011	SW846 6020A	1	09/22/2023 12:50	MO	E2
Barium, Total	0.027		mg/L	0.0056	0.0019	SW846 6020A	1	09/22/2023 12:50	MO	E2
Beryllium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/22/2023 12:50	MO	E2
Cadmium, Total	0.0038		mg/L	0.0011	0.00037	SW846 6020A	1	09/22/2023 12:50	MO	E2
Calcium, Total	2.2	9	mg/L	0.11	0.037	SW846 6020A	1	09/22/2023 12:50	MO	E2
Chromium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/22/2023 12:50	MO	E2
Cobalt, Total	0.030		mg/L	0.0056	0.0019	SW846 6020A	1	09/22/2023 12:50	MO	E2
Copper, Total	0.029		mg/L	0.0056	0.0019	SW846 6020A	1	09/22/2023 12:50	MO	E2
Hardness	10.3	4	mg/L	0.33	0.11	EPA 200.7	1	09/16/2023 15:21	SRT	E1
Iron, Total	0.22		mg/L	0.056	0.019	SW846 6020A	1	09/22/2023 12:50	MO	E2
Lead, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/22/2023 12:50	MO	E2
Magnesium, Total	1.0		mg/L	0.11	0.037	SW846 6020A	1	09/22/2023 12:50	MO	E2
Manganese, Total	0.098		mg/L	0.0056	0.0019	SW846 6020A	1	09/22/2023 12:50	MO	E2
Mercury, Total	ND	ND	mg/L	0.00050	0.00017	SW846 7470A	1	09/15/2023 14:29	JSE	E
Nickel, Total	0.056		mg/L	0.0056	0.0019	SW846 6020A	1	09/22/2023 12:50	MO	E2
Potassium, Total	1.4		mg/L	0.11	0.037	SW846 6020A	1	09/22/2023 12:50	MO	E2
Selenium, Total	ND	ND,10	mg/L	0.0056	0.0019	SW846 6020A	1	09/22/2023 12:50	MO	E2
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/22/2023 12:50	MO	E2
Sodium, Total	2.8		mg/L	0.11	0.037	SW846 6020A	1	09/22/2023 12:50	MO	E2
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/22/2023 12:50	MO	E2
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/22/2023 12:50	MO	E2
Zinc, Total	0.045		mg/L	0.0056	0.0019	SW846 6020A	1	09/22/2023 12:50	MO	E2

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 19:53	ILY	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/20/2023 19:53	ILY	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 19:53	ILY	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 19:53	ILY	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 19:53	ILY	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 19:53	ILY	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/20/2023 19:53	ILY	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0051	SW846 8011	1	09/15/2023 19:20	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/20/2023 19:53	ILY	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/15/2023 19:20	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/20/2023 19:53	ILY	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/20/2023 19:53	ILY	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 19:53	ILY	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 19:53	ILY	C
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 19:53	ILY	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/20/2023 19:53	ILY	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/20/2023 19:53	ILY	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/20/2023 19:53	ILY	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/20/2023 19:53	ILY	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/20/2023 19:53	ILY	C

Results

Client Sample ID	GMW-15A	Collected	09/13/2023 12:25
Lab Sample ID	3323048006	Lab Receipt	09/13/2023 18:30

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 19:53	ILY	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 19:53	ILY	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/20/2023 19:53	ILY	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/20/2023 19:53	ILY	C
Bromomethane	0.69J	J	ug/L	1.0	0.39	SW846 8260C	1	09/20/2023 19:53	ILY	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 19:53	ILY	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 19:53	ILY	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/20/2023 19:53	ILY	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 19:53	ILY	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 19:53	ILY	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/20/2023 19:53	ILY	C
Chloromethane	0.59J	J	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 19:53	ILY	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/20/2023 19:53	ILY	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 19:53	ILY	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 19:53	ILY	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/20/2023 19:53	ILY	C
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 19:53	ILY	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/20/2023 19:53	ILY	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/20/2023 19:53	ILY	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 19:53	ILY	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/20/2023 19:53	ILY	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/20/2023 19:53	ILY	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 19:53	ILY	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 19:53	ILY	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/20/2023 19:53	ILY	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/20/2023 19:53	ILY	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/20/2023 19:53	ILY	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/20/2023 19:53	ILY	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/20/2023 19:53	ILY	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/20/2023 19:53	ILY	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/20/2023 19:53	ILY	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/20/2023 19:53	ILY	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/20/2023 19:53	ILY	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/20/2023 19:53	ILY	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	107%	62 – 133	09/20/2023 19:53	
1-Chloro-2-Fluorobenzene	348-51-6	125%	70 – 130	09/15/2023 19:20	
4-Bromofluorobenzene	460-00-4	104%	79 – 114	09/20/2023 19:53	
Dibromofluoromethane	1868-53-7	107%	78 – 116	09/20/2023 19:53	
Toluene-d8	2037-26-5	101%	76 – 127	09/20/2023 19:53	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	GMW-15A	Collected	09/13/2023 12:25
Lab Sample ID	3323048006	Lab Receipt	09/13/2023 18:30

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	ND	ND,1	mg/L	5	5	SM2320B-2011	1	09/19/2023 14:41	JMS	F
Ammonia-N	0.188		mg/L	0.100	0.03	ASTM D6919-17	10	09/24/2023 10:15	NML	G
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	5	EPA 410.4	1	09/15/2023 12:39	KMS	G
Chloride	1.6J	J	mg/L	2.0	1.5	EPA 300.0	2	09/14/2023 20:10	J1W	F
Nitrate-N	ND	ND	mg/L	1.0	0.22	EPA 300.0	2	09/14/2023 20:10	J1W	F
Sulfate	16.5		mg/L	2.0	1.5	EPA 300.0	2	09/14/2023 20:10	J1W	F
Total Dissolved Solids	53		mg/L	25	25	SM2540C-15	1	09/19/2023 09:07	KRS	F

Results

Client Sample ID	GMW-10	Collected	09/13/2023 13:55
Lab Sample ID	3323048007	Lab Receipt	09/13/2023 18:30

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/22/2023 12:57	MO	E2
Arsenic, Total	ND	ND	mg/L	0.0033	0.0011	SW846 6020A	1	09/22/2023 12:57	MO	E2
Barium, Total	0.028		mg/L	0.0056	0.0019	SW846 6020A	1	09/22/2023 12:57	MO	E2
Beryllium, Total	0.00039J	J	mg/L	0.0011	0.00037	SW846 6020A	1	09/22/2023 12:57	MO	E2
Cadmium, Total	0.0050		mg/L	0.0011	0.00037	SW846 6020A	1	09/22/2023 12:57	MO	E2
Calcium, Total	2.3	9	mg/L	0.11	0.037	SW846 6020A	1	09/22/2023 12:57	MO	E2
Chromium, Total	0.00076J	J	mg/L	0.0022	0.00074	SW846 6020A	1	09/22/2023 12:57	MO	E2
Cobalt, Total	0.031		mg/L	0.0056	0.0019	SW846 6020A	1	09/22/2023 12:57	MO	E2
Copper, Total	0.025		mg/L	0.0056	0.0019	SW846 6020A	1	09/22/2023 12:57	MO	E2
Hardness	10.2	4	mg/L	0.33	0.11	EPA 200.7	1	09/16/2023 15:24	SRT	E1
Iron, Total	0.23		mg/L	0.056	0.019	SW846 6020A	1	09/22/2023 12:57	MO	E2
Lead, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/22/2023 12:57	MO	E2
Magnesium, Total	1.0		mg/L	0.11	0.037	SW846 6020A	1	09/22/2023 12:57	MO	E2
Manganese, Total	0.10		mg/L	0.0056	0.0019	SW846 6020A	1	09/22/2023 12:57	MO	E2
Mercury, Total	ND	ND	mg/L	0.00050	0.00017	SW846 7470A	1	09/15/2023 14:30	JSE	E
Nickel, Total	0.056		mg/L	0.0056	0.0019	SW846 6020A	1	09/22/2023 12:57	MO	E2
Potassium, Total	1.5		mg/L	0.11	0.037	SW846 6020A	1	09/22/2023 12:57	MO	E2
Selenium, Total	ND	ND,10	mg/L	0.0056	0.0019	SW846 6020A	1	09/22/2023 12:57	MO	E2
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/22/2023 12:57	MO	E2
Sodium, Total	3.0		mg/L	0.11	0.037	SW846 6020A	1	09/22/2023 12:57	MO	E2
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/22/2023 12:57	MO	E2
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/22/2023 12:57	MO	E2
Zinc, Total	0.045		mg/L	0.0056	0.0019	SW846 6020A	1	09/22/2023 12:57	MO	E2

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/25/2023 18:00	TMP	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/25/2023 18:00	TMP	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/25/2023 18:00	TMP	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/25/2023 18:00	TMP	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/25/2023 18:00	TMP	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/25/2023 18:00	TMP	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/25/2023 18:00	TMP	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0051	SW846 8011	1	09/15/2023 20:31	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/25/2023 18:00	TMP	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/15/2023 20:31	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/25/2023 18:00	TMP	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/25/2023 18:00	TMP	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/25/2023 18:00	TMP	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/25/2023 18:00	TMP	C
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/25/2023 18:00	TMP	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/25/2023 18:00	TMP	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/25/2023 18:00	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/25/2023 18:00	TMP	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/25/2023 18:00	TMP	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/25/2023 18:00	TMP	C

Results

Client Sample ID	GMW-10	Collected	09/13/2023 13:55
Lab Sample ID	3323048007	Lab Receipt	09/13/2023 18:30

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/25/2023 18:00	TMP	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/25/2023 18:00	TMP	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/25/2023 18:00	TMP	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/25/2023 18:00	TMP	C
Bromomethane	ND	ND	ug/L	1.0	0.39	SW846 8260C	1	09/25/2023 18:00	TMP	C
Carbon Disulfide	ND	ND,11	ug/L	1.0	0.23	SW846 8260C	1	09/25/2023 18:00	TMP	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/25/2023 18:00	TMP	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/25/2023 18:00	TMP	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/25/2023 18:00	TMP	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/25/2023 18:00	TMP	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/25/2023 18:00	TMP	C
Chloromethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/25/2023 18:00	TMP	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/25/2023 18:00	TMP	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/25/2023 18:00	TMP	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/25/2023 18:00	TMP	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/25/2023 18:00	TMP	C
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/25/2023 18:00	TMP	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/25/2023 18:00	TMP	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/25/2023 18:00	TMP	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/25/2023 18:00	TMP	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/25/2023 18:00	TMP	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/25/2023 18:00	TMP	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/25/2023 18:00	TMP	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/25/2023 18:00	TMP	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/25/2023 18:00	TMP	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/25/2023 18:00	TMP	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/25/2023 18:00	TMP	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/25/2023 18:00	TMP	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/25/2023 18:00	TMP	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/25/2023 18:00	TMP	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/25/2023 18:00	TMP	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/25/2023 18:00	TMP	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/25/2023 18:00	TMP	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/25/2023 18:00	TMP	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	105%	62 – 133	09/25/2023 18:00	
1-Chloro-2-Fluorobenzene	348-51-6	123%	70 – 130	09/15/2023 20:31	
4-Bromofluorobenzene	460-00-4	100%	79 – 114	09/25/2023 18:00	
Dibromofluoromethane	1868-53-7	96.6%	78 – 116	09/25/2023 18:00	
Toluene-d8	2037-26-5	78.8%	76 – 127	09/25/2023 18:00	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	GMW-10	Collected	09/13/2023 13:55
Lab Sample ID	3323048007	Lab Receipt	09/13/2023 18:30

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	ND	ND,1	mg/L	50	50	SM2320B-2011	10	09/21/2023 11:54	JMS	F
Ammonia-N	0.189		mg/L	0.100	0.03	ASTM D6919-17	10	09/24/2023 10:28	NML	G
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	5	EPA 410.4	1	09/15/2023 12:39	KMS	G
Chloride	1.6J	J	mg/L	2.0	1.5	EPA 300.0	2	09/14/2023 20:21	J1W	F
Nitrate-N	ND	ND	mg/L	1.0	0.22	EPA 300.0	2	09/14/2023 20:21	J1W	F
Sulfate	16.5		mg/L	2.0	1.5	EPA 300.0	2	09/14/2023 20:21	J1W	F
Total Dissolved Solids	50		mg/L	25	25	SM2540C-15	1	09/19/2023 09:07	KRS	F

Results

Client Sample ID	GMW-8	Collected	09/13/2023 14:55
Lab Sample ID	3323048008	Lab Receipt	09/13/2023 18:30

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/22/2023 12:59	MO	E2
Arsenic, Total	ND	ND	mg/L	0.0033	0.0011	SW846 6020A	1	09/22/2023 12:59	MO	E2
Barium, Total	0.062		mg/L	0.0056	0.0019	SW846 6020A	1	09/22/2023 12:59	MO	E2
Beryllium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/22/2023 12:59	MO	E2
Cadmium, Total	0.0023		mg/L	0.0011	0.00037	SW846 6020A	1	09/22/2023 12:59	MO	E2
Calcium, Total	9.2	9	mg/L	0.11	0.037	SW846 6020A	1	09/22/2023 12:59	MO	E2
Chromium, Total	0.0021J	J	mg/L	0.0022	0.00074	SW846 6020A	1	09/22/2023 12:59	MO	E2
Cobalt, Total	0.0037J	J	mg/L	0.0056	0.0019	SW846 6020A	1	09/22/2023 12:59	MO	E2
Copper, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/22/2023 12:59	MO	E2
Hardness	29.5	4	mg/L	0.33	0.11	EPA 200.7	1	09/16/2023 15:37	SRT	E1
Iron, Total	1.2		mg/L	0.056	0.019	SW846 6020A	1	09/22/2023 12:59	MO	E2
Lead, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/22/2023 12:59	MO	E2
Magnesium, Total	0.94		mg/L	0.11	0.037	SW846 6020A	1	09/22/2023 12:59	MO	E2
Manganese, Total	0.048		mg/L	0.0056	0.0019	SW846 6020A	1	09/22/2023 12:59	MO	E2
Mercury, Total	ND	ND	mg/L	0.00050	0.00017	SW846 7470A	1	09/15/2023 14:31	JSE	E
Nickel, Total	0.0050J	J	mg/L	0.0056	0.0019	SW846 6020A	1	09/22/2023 12:59	MO	E2
Potassium, Total	6.3		mg/L	0.11	0.037	SW846 6020A	1	09/22/2023 12:59	MO	E2
Selenium, Total	ND	ND,10	mg/L	0.0056	0.0019	SW846 6020A	1	09/22/2023 12:59	MO	E2
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/22/2023 12:59	MO	E2
Sodium, Total	48.6		mg/L	0.11	0.037	SW846 6020A	1	09/22/2023 12:59	MO	E2
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/22/2023 12:59	MO	E2
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/22/2023 12:59	MO	E2
Zinc, Total	0.0081		mg/L	0.0056	0.0019	SW846 6020A	1	09/22/2023 12:59	MO	E2

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/25/2023 18:23	TMP	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/25/2023 18:23	TMP	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/25/2023 18:23	TMP	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/25/2023 18:23	TMP	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/25/2023 18:23	TMP	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/25/2023 18:23	TMP	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/25/2023 18:23	TMP	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.022	0.0052	SW846 8011	1	09/15/2023 21:00	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/25/2023 18:23	TMP	C
1,2-Dibromoethane	ND	ND	ug/L	0.022	0.011	SW846 8011	1	09/15/2023 21:00	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/25/2023 18:23	TMP	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/25/2023 18:23	TMP	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/25/2023 18:23	TMP	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/25/2023 18:23	TMP	C
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/25/2023 18:23	TMP	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/25/2023 18:23	TMP	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/25/2023 18:23	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/25/2023 18:23	TMP	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/25/2023 18:23	TMP	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/25/2023 18:23	TMP	C

Results

Client Sample ID	GMW-8	Collected	09/13/2023 14:55
Lab Sample ID	3323048008	Lab Receipt	09/13/2023 18:30

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/25/2023 18:23	TMP	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/25/2023 18:23	TMP	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/25/2023 18:23	TMP	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/25/2023 18:23	TMP	C
Bromomethane	ND	ND	ug/L	1.0	0.39	SW846 8260C	1	09/25/2023 18:23	TMP	C
Carbon Disulfide	ND	ND,11	ug/L	1.0	0.23	SW846 8260C	1	09/25/2023 18:23	TMP	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/25/2023 18:23	TMP	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/25/2023 18:23	TMP	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/25/2023 18:23	TMP	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/25/2023 18:23	TMP	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/25/2023 18:23	TMP	C
Chloromethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/25/2023 18:23	TMP	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/25/2023 18:23	TMP	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/25/2023 18:23	TMP	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/25/2023 18:23	TMP	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/25/2023 18:23	TMP	C
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/25/2023 18:23	TMP	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/25/2023 18:23	TMP	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/25/2023 18:23	TMP	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/25/2023 18:23	TMP	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/25/2023 18:23	TMP	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/25/2023 18:23	TMP	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/25/2023 18:23	TMP	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/25/2023 18:23	TMP	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/25/2023 18:23	TMP	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/25/2023 18:23	TMP	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/25/2023 18:23	TMP	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/25/2023 18:23	TMP	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/25/2023 18:23	TMP	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/25/2023 18:23	TMP	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/25/2023 18:23	TMP	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/25/2023 18:23	TMP	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/25/2023 18:23	TMP	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/25/2023 18:23	TMP	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	90.8%	62 – 133	09/25/2023 18:23	
1-Chloro-2-Fluorobenzene	348-51-6	124%	70 – 130	09/15/2023 21:00	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	09/25/2023 18:23	
Dibromofluoromethane	1868-53-7	98.5%	78 – 116	09/25/2023 18:23	
Toluene-d8	2037-26-5	108%	76 – 127	09/25/2023 18:23	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	GMW-8	Collected	09/13/2023 14:55
Lab Sample ID	3323048008	Lab Receipt	09/13/2023 18:30

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	36	1	mg/L	5	5	SM2320B-2011	1	09/19/2023 13:47	JMS	F
Ammonia-N	0.288		mg/L	0.100	0.03	ASTM D6919-17	10	09/24/2023 10:01	NML	G
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	5	EPA 410.4	1	09/15/2023 12:39	KMS	G
Chloride	17.4		mg/L	2.0	1.5	EPA 300.0	2	09/14/2023 20:31	J1W	F
Nitrate-N	0.50J	J	mg/L	1.0	0.22	EPA 300.0	2	09/14/2023 20:31	J1W	F
Sulfate	86.9		mg/L	2.0	1.5	EPA 300.0	2	09/14/2023 20:31	J1W	F
Total Dissolved Solids	222		mg/L	25	25	SM2540C-15	1	09/19/2023 09:07	KRS	F

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3323048001	Trip Blank	SW846 8011	SW846 8011	
		SW846 8260C	N/A	
3323048002	Field Blank	SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3323048003	GMW-12	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3323048004	GMW-5A	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3323048005	GMW-14	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3323048006	GMW-15A	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3323048007	GMW-10	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3323048008	GMW-8	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3323048001	Trip Blank	SW846 8011	1059515	09/15/2023 10:50	WDA	SW846 8011	1060440
		N/A	N/A	N/A		SW846 8260C	1061098
3323048002	Field Blank	SW846 3015A	1059109	09/15/2023 02:12	ANN	SW846 6020A	1060994
		SW846 7470A	1058826	09/15/2023 09:45	JSE	SW846 7470A	1059914
		SW846 8011	1059515	09/15/2023 10:50	WDA	SW846 8011	1060440
		N/A	N/A	N/A		SW846 8260C	1061098
		N/A	N/A	N/A		ASTM D6919-17	1061693
		N/A	N/A	N/A		EPA 300.0	1058610
		N/A	N/A	N/A		EPA 410.4	1059628
		N/A	N/A	N/A		SM2320B-2011	1060819
		N/A	N/A	N/A		SM2540C-15	1062224
3323048003	GMW-12	EPA TRMD	1058717	09/14/2023 08:30	MEM	EPA 200.7	1060228
		SW846 3015A	1059109	09/15/2023 02:12	ANN	SW846 6020A	1060994
		SW846 7470A	1058826	09/15/2023 09:45	JSE	SW846 7470A	1059914
		SW846 8011	1059515	09/15/2023 10:50	WDA	SW846 8011	1060440
		N/A	N/A	N/A		SW846 8260C	1061098
		N/A	N/A	N/A		ASTM D6919-17	1061693
		N/A	N/A	N/A		EPA 300.0	1058610
		N/A	N/A	N/A		EPA 410.4	1059628
		N/A	N/A	N/A		SM2320B-2011	1060819
		N/A	N/A	N/A		SM2540C-15	1060768
3323048004	GMW-5A	EPA TRMD	1058717	09/14/2023 08:30	MEM	EPA 200.7	1060228
		SW846 3015A	1059109	09/15/2023 02:12	ANN	SW846 6020A	1060994
		SW846 7470A	1058826	09/15/2023 09:45	JSE	SW846 7470A	1059914
		SW846 8011	1059515	09/15/2023 10:50	WDA	SW846 8011	1060440
		N/A	N/A	N/A		SW846 8260C	1061098
		N/A	N/A	N/A		ASTM D6919-17	1061696
		N/A	N/A	N/A		EPA 300.0	1058610
		N/A	N/A	N/A		EPA 410.4	1059628
		N/A	N/A	N/A		SM2320B-2011	1060819
		N/A	N/A	N/A		SM2540C-15	1060768
3323048005	GMW-14	EPA TRMD	1058717	09/14/2023 08:30	MEM	EPA 200.7	1060228
		SW846 3015A	1059109	09/15/2023 02:12	ANN	SW846 6020A	1060994
		SW846 7470A	1058826	09/15/2023 09:45	JSE	SW846 7470A	1059914
		SW846 8011	1059515	09/15/2023 10:50	WDA	SW846 8011	1060440
		N/A	N/A	N/A		SW846 8260C	1061098
		N/A	N/A	N/A		ASTM D6919-17	1061696
		N/A	N/A	N/A		EPA 300.0	1058610
		N/A	N/A	N/A		EPA 410.4	1059628
		N/A	N/A	N/A		SM2320B-2011	1060819
		N/A	N/A	N/A		SM2540C-15	1060768
3323048006	GMW-15A	EPA TRMD	1058717	09/14/2023 08:30	MEM	EPA 200.7	1060228
		SW846 3015A	1059110	09/15/2023 04:20	ANN	SW846 6020A	1061740
		SW846 7470A	1058826	09/15/2023 09:45	JSE	SW846 7470A	1059914
		SW846 8011	1059515	09/15/2023 10:50	WDA	SW846 8011	1060440
		N/A	N/A	N/A		SW846 8260C	1061098
		N/A	N/A	N/A		ASTM D6919-17	1061696
		N/A	N/A	N/A		EPA 300.0	1058610
		N/A	N/A	N/A		EPA 410.4	1059628
		N/A	N/A	N/A		SM2320B-2011	1060819
		N/A	N/A	N/A		SM2540C-15	1060768
3323048007	GMW-10	EPA TRMD	1058717	09/14/2023 08:30	MEM	EPA 200.7	1060228
		SW846 3015A	1059110	09/15/2023 04:20	ANN	SW846 6020A	1061740
		SW846 7470A	1058826	09/15/2023 09:45	JSE	SW846 7470A	1059914
		SW846 8011	1059516	09/15/2023 10:50	WDA	SW846 8011	1060441
		N/A	N/A	N/A		SW846 8260C	1062250
		N/A	N/A	N/A		ASTM D6919-17	1061696
		N/A	N/A	N/A		EPA 300.0	1058610
		N/A	N/A	N/A		EPA 410.4	1059628
		N/A	N/A	N/A		SM2320B-2011	1061268
		N/A	N/A	N/A		SM2540C-15	1060768

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3323048008	GMW-8	EPA TRMD	1058717	09/14/2023 08:30	MEM	EPA 200.7	1060228
		SW846 3015A	1059110	09/15/2023 04:20	ANN	SW846 6020A	1061740
		SW846 7470A	1058826	09/15/2023 09:45	JSE	SW846 7470A	1059914
		SW846 8011	1059516	09/15/2023 10:50	WDA	SW846 8011	1060441
		N/A	N/A	N/A		SW846 8260C	1062250
		N/A	N/A	N/A		ASTM D6919-17	1061696
		N/A	N/A	N/A		EPA 300.0	1058610
		N/A	N/A	N/A		EPA 410.4	1059628
		N/A	N/A	N/A		SM2320B-2011	1060819
		N/A	N/A	N/A		SM2540C-15	1060768

CHAIN OF CUSTODY / SAMPLE INFORMATION FOR

Maryland Environmental Service • 259 Najoles Rd. • Millersville, MD 21108 • (410) 729-8200 • FAX (410)

3323048
Logged By: SLS
PM: GJM

Laboratory: ALS

Sampler: Laura Russell / Brooke Zibell

Client Name: Maryland Environmental Service, Attn: Wil Herpel

Facility Name: Eastern Sanitary Landfill

Client Address: 259 Najoles Rd, Millersville, MD 21108 410-729-8356

Project# / Purpose: 3926-2000

Invoice To: Same

Turnaround Time: Routine

Sample #	Sample ID	Grab or Composite	Container Description/ Preservation Status	Matrix	# of Containers	Date	Time	Analyses Required/Comments
1	Trip Blank	N/A	40 mL G Na2S2O3	W	2	9/13/2023	--	VOCs (8011)
↓	↓	↓	40 mL G HCl	W	2	↓	--	VOCs (8260)
2	Field Blank	G	40 mL G Na2S2O3	W	2	9/13/2023	0845	VOCs (8011)
↓	↓	↓	40 mL G HCl	W	2	↓	↓	VOCs (8260)
↓	↓	↓	125 mL P HNO3	W	1	↓	↓	Metals - Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn (6020), Hg (7470), Hardness
↓	↓	↓	1 L P unpreserved	W	1	↓	↓	Alkalinity, TDS, Nitrate (EPA 300), Sulfate, Chloride
↓	↓	↓	250 mL P H2SO4	W	1	↓	↓	Ammonia, COD

Temp By: MP | WO Temp (°C): 3.6 | Therm ID: 570

Receipt Info Completed By:	DPB
Cooler Custody Seal Intact	Y N NA
Sample Custody Seal Intact	Y N NA
Received on Ice	Y N NA
Cooler & Samples Intact	Y N
Correct Containers Provided	Y N
Sample Label/COC Agree	Y N
Adequate Sample Volumes	Y N
CR6 Samples Filtered	Y N NA
OP Samples Filtered	Y N NA
VOA Trip Blank	Y N NA
NJ≤ 4 Days?	Y N
Rad Screen (uCi)	
Courier/Tracking #:	

(LAB USE ONLY)

SDWA Compliance Y N s/No If No, explain
PWSID
WV Containers 0-6°C Y N NA

Transferred by: Laura Russell	Received by: ~~Laura Russell~~ PR	Date 9/13/23	Time 1503
Transferred by:	Received by:	Date 9-13-23	Time 1705
Transferred by:	Received by:	Date	Time 1830

3°C-570TH

3323048

CHAIN OF CUSTODY / SAMPLE INFORMATION FORM

Maryland Environmental Service • 259 Najoles Rd. • Millersville, MD 21108 • (410) 729-8200 • FAX (410) 729-8340

Laboratory: ALS

Sampler: Laura Russell / Brooke Zibell

Client Name: Maryland Environmental Service, Attn: Wil Herpel

Facility Name: Eastern Sanitary Landfill

Client Address: 259 Najoles Rd, Millersville, MD 21108 410-729-8356

Project# / Purpose: 3926-2000

Invoice To: Same

Turnaround Time: Routine

Sample #	Sample ID	Grab or Composite	Container Description/ Preservation Status	Matrix	# of Containers	Date	Time	Analyses Required/Comments
3	GWM-12	G	40 mL G Na2S2O3	NPW	2	9/13/2023	0940	VOCs (8011)
			40 mL G HCl	NPW	2			VOCs (8260)
			125 mL P HNO3	NPW	2			Metals - Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn (6020), Hg (7470), Hardness
			1 L P unpreserved	NPW	1			Alkalinity, TDS, Nitrate (EPA 300), Sulfate, Chloride
			250 mL P H2SO4	NPW	1			Ammonia, COD
4	GWM-5A	G	Same as Sample # 3	NPW	8	9/13/2023	1100	Same as Sample # 3
5	GWM-14	G	Same as Sample # 3	NPW	8	9/13/2023	1140	Same as Sample # 3
6	MW-15A	G	Same as Sample # 3	NPW	8	9/13/2023	1225	Same as Sample # 3
7	GWM-10	G	Same as Sample # 3	NPW	8	9/13/2023	1355	Same as Sample # 3
8	GWM-8	G	Same as Sample #3	NPW	8	9-13-23	1455	Same as Sample #3

Transferred by: Laura Russell	Received by: RS	Date 9/13/23	Time 1508
Transferred by:	Received by:	Date 9/13/23	Time 1528
Transferred by:	Received by:	Date	Time 1830

Cooler Receipt Information **(LAB USE ONLY)**

Sufficient ice? - Yes/No Temp.= _____

Sample containers properly pres'd? - Yes/No If No, explain

Initials: Date:

301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

Analytical Results Report For | Maryland Environmental Services - Landfills

Report ID 282631 on 11/13/2023 (Revised report. See Project Notations Section.)

Certificate of Analysis

Project Name:	**Eastern Sanitary Landfill**	Workorder:	**3323398**
Purchase Order:	**MA 3680**	Workorder ID:	**Eastern Sanitary Landfill**

Enclosed are the analytical results for samples received by the laboratory on Thursday, September 14, 2023.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP)
accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact George Methlie (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements.
The test results meet requirements of the current NELAP standards or state requirements, where applicable.
For a specific list of accredited
analytes, refer to the certifications section of the ALS website at
www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Global.
ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):
- Maryland Services-ENVOPS - Maryland Environmental Services - Landfills
- Jessica Cox - Maryland Environmental Services
- Maryland Services-LF Data - Maryland Environmental Services
- William Herpel - Maryland Environmental Service

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

George Methlie

George Methlie *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3323398001	Trip Blank	Water	09/14/2023 00:00	09/14/2023 17:00	CBC	Collected By Client
3323398002	Field Blank	Water	09/14/2023 08:45	09/14/2023 17:00	CBC	Collected By Client
3323398003	GWM-19D	Water	09/14/2023 09:15	09/14/2023 17:00	CBC	Collected By Client
3323398004	GWM-6	Water	09/14/2023 10:15	09/14/2023 17:00	CBC	Collected By Client
3323398005	GWM-6	Water	09/14/2023 10:15	09/14/2023 17:00	CBC	Collected By Client
3323398006	FMW-35	Water	09/14/2023 11:50	09/14/2023 17:00	CBC	Collected By Client
3323398007	FMW-15	Water	09/14/2023 13:25	09/14/2023 17:00	CBC	Collected By Client
3323398008	SB-16	Water	09/14/2023 14:45	09/14/2023 17:00	CBC	Collected By Client

Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136, including but not limited to the following EPA Method reference revisions:
  EPA 300.1 Rev. 1.0-1997
  EPA 300.0 Rev. 2.1-1993
  EPA 353.2 Rev. 2.0-1993
  EPA 410.4 Rev. 1.0-1993
  EPA 420.4 Rev. 1.0-1993
  EPA 365.1 Rev. 2.0-1993
  EPA 200.7 Rev. 4.4-1994
  EPA 200.8 Rev. 5.4-1994
  EPA 245.1 Rev. 3.0-1994
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The initial calibration verification for method SW846 8260C was outside the control limits for the analyte dichlorodifluoromethane. The % Recovery was reported as 132% and the control limits were 70 to 130%.
2	The initial calibration verification for method SW846 8260C was outside the control limits for the analyte dichlorodifluoromethane. The % Recovery was reported as 132% and the control limits were 70 to 130%.
3	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
4	This sample result was calculated and reported using Method SM2340B-2011.
5	The surrogate 1-Chloro-2-Fluorobenzene for method SW846 8011 was outside of control limits in the associated duplicate sample (DUP). The % Recovery was reported as 133 and the control limits were 70 to 130. This result was reported at a dilution of 1.
6	The QC sample type MS for method SW846 8260C was outside the control limits for the analyte Carbon Tetrachloride. The % Recovery was reported as 139 and the control limits were 62 to 132.
7	The QC sample type MS for method SW846 8260C was outside the control limits for the analyte Trichlorofluoromethane. The % Recovery was reported as 131 and the control limits were 38 to 123.
8	Analyte was analyzed past the 28 day holding time.
9	The QC sample type MS for method EPA 300.0 was outside the control limits for the analyte Sulfate. The % Recovery was reported as 123 and the control limits were 80 to 120.

Detected Results Summary

Client Sample ID	Trip Blank	Collected	09/14/2023 00:00
Lab Sample ID	3323398001	Lab Receipt	09/14/2023 17:00

Compound	Result	Units	RDL	MDL	Method	Flag
VOLATILE ORGANICS						
1,4-Dichlorobenzene	0.91J	ug/L	1.0	0.27	SW846 8260C	#
Chlorobenzene	2.1	ug/L	1.0	0.19	SW846 8260C	#

Detected Results Summary

Client Sample ID	Field Blank	Collected	09/14/2023 08:45
Lab Sample ID	3323398002	Lab Receipt	09/14/2023 17:00

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Calcium, Total	0.061J	mg/L	0.11	0.037	SW846 6020A	#
Hardness	0.19	mg/L			SW846 6020A	#
Sodium, Total	0.19	mg/L	0.11	0.037	SW846 6020A	#
VOLATILE ORGANICS						
1,4-Dichlorobenzene	0.74J	ug/L	1.0	0.27	SW846 8260C	#
Chlorobenzene	1.6	ug/L	1.0	0.19	SW846 8260C	#
WET CHEMISTRY						
Ammonia-N	0.030	mg/L	0.010	0.003	ASTM D6919-17	#

Detected Results Summary

Client Sample ID	GWM-19D	Collected	09/14/2023 09:15
Lab Sample ID	3323398003	Lab Receipt	09/14/2023 17:00

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Barium, Total	0.062	mg/L	0.0056	0.0019	SW846 6020A	#
Beryllium, Total	0.00040J	mg/L	0.0011	0.00037	SW846 6020A	#
Calcium, Total	8.4	mg/L	0.11	0.037	SW846 6020A	#
Chromium, Total	0.0015J	mg/L	0.0022	0.00074	SW846 6020A	#
Cobalt, Total	0.013	mg/L	0.0056	0.0019	SW846 6020A	#
Copper, Total	0.0094	mg/L	0.0056	0.0019	SW846 6020A	#
Hardness	40.6	mg/L			SW846 6020A	#
Lead, Total	0.0021J	mg/L	0.0022	0.00074	SW846 6020A	#
Magnesium, Total	4.8	mg/L	0.11	0.037	SW846 6020A	#
Manganese, Total	0.070	mg/L	0.0056	0.0019	SW846 6020A	#
Mercury, Total	0.0017	mg/L	0.00050	0.00017	SW846 7470A	#
Mercury, Total	0.0021	mg/L	0.00050	0.00017	SW846 7470A	#
Nickel, Total	0.026	mg/L	0.0056	0.0019	SW846 6020A	#
Potassium, Total	2.5	mg/L	0.11	0.037	SW846 6020A	#
Sodium, Total	14.4	mg/L	0.11	0.037	SW846 6020A	#
Zinc, Total	0.031	mg/L	0.0056	0.0019	SW846 6020A	#
VOLATILE ORGANICS						
1,4-Dichlorobenzene	0.41J	ug/L	1.0	0.27	SW846 8260C	#
Chlorobenzene	0.90J	ug/L	1.0	0.19	SW846 8260C	#
Methyl t-Butyl Ether	0.36J	ug/L	1.0	0.33	SW846 8260C	#
WET CHEMISTRY						
Alkalinity, Total	12	mg/L	5	5	SM2320B-2011	#
Ammonia-N	0.208	mg/L	0.100	0.03	ASTM D6919-17	#
Chloride	37.0	mg/L	2.0	1.5	EPA 300.0	#
Nitrate-N	1.3	mg/L	1.0	0.22	EPA 300.0	#
Sulfate	14.2	mg/L	2.0	1.5	EPA 300.0	#
Total Dissolved Solids	135	mg/L	25	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	GWM-6	Collected	09/14/2023 10:15
Lab Sample ID	3323398004	Lab Receipt	09/14/2023 17:00

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Arsenic, Total	0.0015J	mg/L	0.0033	0.0011	SW846 6020A	#
Barium, Total	0.095	mg/L	0.0056	0.0019	SW846 6020A	#
Calcium, Total	12.1	mg/L	0.11	0.037	SW846 6020A	#
Chromium, Total	0.00084J	mg/L	0.0022	0.00074	SW846 6020A	#
Cobalt, Total	0.012	mg/L	0.0056	0.0019	SW846 6020A	#
Copper, Total	0.0040J	mg/L	0.0056	0.0019	SW846 6020A	#
Hardness	62.1	mg/L			SW846 6020A	#
Iron, Total	61.7	mg/L	0.056	0.019	SW846 6020A	#
Magnesium, Total	7.8	mg/L	0.11	0.037	SW846 6020A	#
Manganese, Total	0.35	mg/L	0.0056	0.0019	SW846 6020A	#
Nickel, Total	0.0053J	mg/L	0.0056	0.0019	SW846 6020A	#
Potassium, Total	1.8	mg/L	0.11	0.037	SW846 6020A	#
Sodium, Total	38.3	mg/L	0.11	0.037	SW846 6020A	#
Zinc, Total	0.0019J	mg/L	0.0056	0.0019	SW846 6020A	#
VOLATILE ORGANICS						
1,4-Dichlorobenzene	0.29J	ug/L	1.0	0.27	SW846 8260C	#
Benzene	5.5	ug/L	1.0	0.23	SW846 8260C	#
Chlorobenzene	0.69J	ug/L	1.0	0.19	SW846 8260C	#
Cyclohexane	0.81J	ug/L	1.0	0.29	SW846 8260C	#
Ethylbenzene	5.5	ug/L	1.0	0.34	SW846 8260C	#
Methyl t-Butyl Ether	2.4	ug/L	1.0	0.33	SW846 8260C	#
mp-Xylene	0.64J	ug/L	2.0	0.52	SW846 8260C	#
WET CHEMISTRY						
Alkalinity, Total	66	mg/L	5	5	SM2320B-2011	#
Ammonia-N	0.318	mg/L	0.100	0.03	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	19	mg/L	15	5	EPA 410.4	#
Chloride	77.7	mg/L	2.0	1.5	EPA 300.0	#
Sulfate	9.1	mg/L	2.0	1.5	EPA 300.0	#
Total Dissolved Solids	250	mg/L	25	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	GWM-6	Collected	09/14/2023 10:15
Lab Sample ID	3323398005	Lab Receipt	09/14/2023 17:00

Compound	Result	Units	RDL	MDL	Method	Flag
GASOLINE RANGE ORGANICS						
Gasoline Range Organics	50.8J	ug/L	100	17.0	SW846 8015D	#
PETROLEUM HC's						
Diesel Range Organics C10-C28	1.3	mg/L	0.16	0.029	SW846 8015D	#
VOLATILE ORGANICS						
Benzene	6.2	ug/L	1.0	0.23	SW846 8260B	#
Ethylbenzene	5.9	ug/L	1.0	0.34	SW846 8260B	#

Detected Results Summary

Client Sample ID	FMW-35	Collected	09/14/2023 11:50
Lab Sample ID	3323398006	Lab Receipt	09/14/2023 17:00

Compound	Result	Units	RDL	MDL	Method	Flag
GASOLINE RANGE ORGANICS						
Gasoline Range Organics	23.8J	ug/L	100	17.0	SW846 8015D	#
PETROLEUM HC's						
Diesel Range Organics C10-C28	0.47	mg/L	0.16	0.030	SW846 8015D	#
VOLATILE ORGANICS						
Benzene	0.29J	ug/L	1.0	0.23	SW846 8260B	#
Ethylbenzene	1.9	ug/L	1.0	0.34	SW846 8260B	#
Naphthalene	1.9J	ug/L	2.0	0.34	SW846 8260B	#
Total Xylenes	1.0J	ug/L	1.5	0.42	SW846 8260B	#

Detected Results Summary

Client Sample ID	FMW-15	Collected	09/14/2023 13:25
Lab Sample ID	3323398007	Lab Receipt	09/14/2023 17:00

Compound	Result	Units	RDL	MDL	Method	Flag
PETROLEUM HC's						
Diesel Range Organics C10-C28	0.18	mg/L	0.16	0.030	SW846 8015D	#
VOLATILE ORGANICS						
Naphthalene	0.49J	ug/L	2.0	0.34	SW846 8260B	#

Detected Results Summary

Client Sample ID	SB-16	Collected	09/14/2023 14:45
Lab Sample ID	3323398008	Lab Receipt	09/14/2023 17:00

Compound	Result	Units	RDL	MDL	Method	Flag
PETROLEUM HC's						
Diesel Range Organics C10-C28	0.18	mg/L	0.16	0.030	SW846 8015D	#

Results

Client Sample ID	Trip Blank	Collected	09/14/2023 00:00
Lab Sample ID	3323398001	Lab Receipt	09/14/2023 17:00

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/28/2023 03:06	PDK	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/28/2023 03:06	PDK	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/28/2023 03:06	PDK	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 03:06	PDK	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/28/2023 03:06	PDK	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/28/2023 03:06	PDK	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/28/2023 03:06	PDK	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/28/2023 03:06	PDK	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0052	SW846 8011	1	09/18/2023 13:25	WDA	A2
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/28/2023 03:06	PDK	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.011	SW846 8011	1	09/18/2023 13:25	WDA	A2
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/28/2023 03:06	PDK	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/28/2023 03:06	PDK	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/28/2023 03:06	PDK	C
1,4-Dichlorobenzene	0.91J	J	ug/L	1.0	0.27	SW846 8260C	1	09/28/2023 03:06	PDK	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/28/2023 03:06	PDK	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/28/2023 03:06	PDK	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/28/2023 03:06	PDK	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/28/2023 03:06	PDK	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/28/2023 03:06	PDK	C
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/28/2023 03:06	PDK	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/28/2023 03:06	PDK	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/28/2023 03:06	PDK	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/28/2023 03:06	PDK	C
Bromomethane	ND	ND	ug/L	1.0	0.39	SW846 8260C	1	09/28/2023 03:06	PDK	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/28/2023 03:06	PDK	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/28/2023 03:06	PDK	C
Chlorobenzene	2.1		ug/L	1.0	0.19	SW846 8260C	1	09/28/2023 03:06	PDK	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/28/2023 03:06	PDK	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 03:06	PDK	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/28/2023 03:06	PDK	C
Chloromethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/28/2023 03:06	PDK	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/28/2023 03:06	PDK	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/28/2023 03:06	PDK	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/28/2023 03:06	PDK	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/28/2023 03:06	PDK	C
Dichlorodifluoromethane	ND	ND,1	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 03:06	PDK	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/28/2023 03:06	PDK	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/28/2023 03:06	PDK	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 03:06	PDK	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/28/2023 03:06	PDK	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/28/2023 03:06	PDK	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 03:06	PDK	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/28/2023 03:06	PDK	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/28/2023 03:06	PDK	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/28/2023 03:06	PDK	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/28/2023 03:06	PDK	C

Results

Client Sample ID	Trip Blank	Collected	09/14/2023 00:00
Lab Sample ID	3323398001	Lab Receipt	09/14/2023 17:00

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/28/2023 03:06	PDK	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/28/2023 03:06	PDK	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/28/2023 03:06	PDK	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 03:06	PDK	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/28/2023 03:06	PDK	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/28/2023 03:06	PDK	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/28/2023 03:06	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	98.1%	62 – 133	09/28/2023 03:06	
1-Chloro-2-Fluorobenzene	348-51-6	123%	70 – 130	09/18/2023 13:25	
4-Bromofluorobenzene	460-00-4	104%	79 – 114	09/28/2023 03:06	
Dibromofluoromethane	1868-53-7	96.9%	78 – 116	09/28/2023 03:06	
Toluene-d8	2037-26-5	103%	76 – 127	09/28/2023 03:06	

Results

Client Sample ID	Field Blank	Collected	09/14/2023 08:45
Lab Sample ID	3323398002	Lab Receipt	09/14/2023 17:00

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/25/2023 10:30	MO	E1
Arsenic, Total	ND	ND	mg/L	0.0033	0.0011	SW846 6020A	1	09/25/2023 10:30	MO	E1
Barium, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 10:30	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/25/2023 10:30	MO	E1
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/25/2023 10:30	MO	E1
Calcium, Total	0.061J	J	mg/L	0.11	0.037	SW846 6020A	1	09/25/2023 10:30	MO	E1
Chromium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/25/2023 10:30	MO	E1
Cobalt, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 10:30	MO	E1
Copper, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 10:30	MO	E1
Hardness	0.19	4	mg/L			SW846 6020A	1	09/25/2023 10:30	MO	E2
Iron, Total	ND	ND	mg/L	0.056	0.019	SW846 6020A	1	09/25/2023 10:30	MO	E1
Lead, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/25/2023 10:30	MO	E1
Magnesium, Total	ND	ND	mg/L	0.11	0.037	SW846 6020A	1	09/25/2023 10:30	MO	E1
Manganese, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 10:30	MO	E1
Mercury, Total	ND	ND	mg/L	0.00050	0.00017	SW846 7470A	1	09/18/2023 15:39	JSE	E
Nickel, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 10:30	MO	E1
Potassium, Total	ND	ND	mg/L	0.11	0.037	SW846 6020A	1	09/25/2023 10:30	MO	E1
Selenium, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 10:30	MO	E1
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/25/2023 10:30	MO	E1
Sodium, Total	0.19		mg/L	0.11	0.037	SW846 6020A	1	09/25/2023 10:30	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/25/2023 10:30	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/25/2023 10:30	MO	E1
Zinc, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 10:30	MO	E1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/28/2023 03:26	PDK	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/28/2023 03:26	PDK	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/28/2023 03:26	PDK	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 03:26	PDK	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/28/2023 03:26	PDK	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/28/2023 03:26	PDK	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/28/2023 03:26	PDK	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0051	SW846 8011	1	09/18/2023 13:53	WDA	A2
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/28/2023 03:26	PDK	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/18/2023 13:53	WDA	A2
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/28/2023 03:26	PDK	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/28/2023 03:26	PDK	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/28/2023 03:26	PDK	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/28/2023 03:26	PDK	C
1,4-Dichlorobenzene	0.74J	J	ug/L	1.0	0.27	SW846 8260C	1	09/28/2023 03:26	PDK	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/28/2023 03:26	PDK	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/28/2023 03:26	PDK	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/28/2023 03:26	PDK	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/28/2023 03:26	PDK	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/28/2023 03:26	PDK	C

Results

Client Sample ID	Field Blank	Collected	09/14/2023 08:45
Lab Sample ID	3323398002	Lab Receipt	09/14/2023 17:00

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/28/2023 03:26	PDK	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/28/2023 03:26	PDK	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/28/2023 03:26	PDK	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/28/2023 03:26	PDK	C
Bromomethane	ND	ND	ug/L	1.0	0.39	SW846 8260C	1	09/28/2023 03:26	PDK	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/28/2023 03:26	PDK	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/28/2023 03:26	PDK	C
Chlorobenzene	1.6		ug/L	1.0	0.19	SW846 8260C	1	09/28/2023 03:26	PDK	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/28/2023 03:26	PDK	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 03:26	PDK	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/28/2023 03:26	PDK	C
Chloromethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/28/2023 03:26	PDK	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/28/2023 03:26	PDK	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/28/2023 03:26	PDK	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/28/2023 03:26	PDK	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/28/2023 03:26	PDK	C
Dichlorodifluoromethane	ND	ND,2	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 03:26	PDK	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/28/2023 03:26	PDK	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/28/2023 03:26	PDK	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 03:26	PDK	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/28/2023 03:26	PDK	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/28/2023 03:26	PDK	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 03:26	PDK	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/28/2023 03:26	PDK	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/28/2023 03:26	PDK	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/28/2023 03:26	PDK	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/28/2023 03:26	PDK	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/28/2023 03:26	PDK	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/28/2023 03:26	PDK	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/28/2023 03:26	PDK	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 03:26	PDK	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/28/2023 03:26	PDK	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/28/2023 03:26	PDK	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/28/2023 03:26	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	99.5%	62 – 133	09/28/2023 03:26	
1-Chloro-2-Fluorobenzene	348-51-6	125%	70 – 130	09/18/2023 13:53	5
4-Bromofluorobenzene	460-00-4	105%	79 – 114	09/28/2023 03:26	
Dibromofluoromethane	1868-53-7	95.4%	78 – 116	09/28/2023 03:26	
Toluene-d8	2037-26-5	105%	76 – 127	09/28/2023 03:26	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	Field Blank	Collected	09/14/2023 08:45
Lab Sample ID	3323398002	Lab Receipt	09/14/2023 17:00

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	ND	ND,3	mg/L	5	5	SM2320B-2011	1	09/19/2023 23:49	JMS	F
Ammonia-N	0.030		mg/L	0.010	0.003	ASTM D6919-17	1	09/24/2023 17:18	NML	G
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	5	EPA 410.4	1	09/20/2023 11:49	KMS	G
Chloride	ND	ND	mg/L	2.0	1.5	EPA 300.0	2	09/15/2023 19:18	J1W	F
Nitrate-N	ND	ND	mg/L	1.0	0.22	EPA 300.0	2	09/15/2023 19:18	J1W	F
Sulfate	ND	ND	mg/L	2.0	1.5	EPA 300.0	2	09/15/2023 19:18	J1W	F
Total Dissolved Solids	ND	ND	mg/L	25	25	SM2540C-15	1	09/21/2023 18:47	JXK	F

Results

Client Sample ID	GWM-19D	Collected	09/14/2023 09:15
Lab Sample ID	3323398003	Lab Receipt	09/14/2023 17:00

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/25/2023 10:32	MO	E1
Arsenic, Total	ND	ND	mg/L	0.0033	0.0011	SW846 6020A	1	09/25/2023 10:32	MO	E1
Barium, Total	0.062		mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 10:32	MO	E1
Beryllium, Total	0.00040J	J	mg/L	0.0011	0.00037	SW846 6020A	1	09/25/2023 10:32	MO	E1
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/25/2023 10:32	MO	E1
Calcium, Total	8.4		mg/L	0.11	0.037	SW846 6020A	1	09/25/2023 10:32	MO	E1
Chromium, Total	0.0015J	J	mg/L	0.0022	0.00074	SW846 6020A	1	09/25/2023 10:32	MO	E1
Cobalt, Total	0.013		mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 10:32	MO	E1
Copper, Total	0.0094		mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 10:32	MO	E1
Hardness	40.6	4	mg/L			SW846 6020A	1	09/25/2023 10:32	MO	E2
Iron, Total	ND	ND	mg/L	0.056	0.019	SW846 6020A	1	09/25/2023 10:32	MO	E1
Lead, Total	0.0021J	J	mg/L	0.0022	0.00074	SW846 6020A	1	09/25/2023 10:32	MO	E1
Magnesium, Total	4.8		mg/L	0.11	0.037	SW846 6020A	1	09/25/2023 10:32	MO	E1
Manganese, Total	0.070		mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 10:32	MO	E1
Mercury, Total	0.0017	8	mg/L	0.00050	0.00017	SW846 7470A	1	11/08/2023 13:41	JSE	
Mercury, Total	0.0021		mg/L	0.00050	0.00017	SW846 7470A	1	09/18/2023 15:54	JSE	E
Nickel, Total	0.026		mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 10:32	MO	E1
Potassium, Total	2.5		mg/L	0.11	0.037	SW846 6020A	1	09/25/2023 10:32	MO	E1
Selenium, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 10:32	MO	E1
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/25/2023 10:32	MO	E1
Sodium, Total	14.4		mg/L	0.11	0.037	SW846 6020A	1	09/25/2023 10:32	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/25/2023 10:32	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/25/2023 10:32	MO	E1
Zinc, Total	0.031		mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 10:32	MO	E1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/28/2023 05:05	PDK	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/28/2023 05:05	PDK	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/28/2023 05:05	PDK	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 05:05	PDK	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/28/2023 05:05	PDK	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/28/2023 05:05	PDK	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/28/2023 05:05	PDK	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/28/2023 05:05	PDK	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0051	SW846 8011	1	09/18/2023 14:22	WDA	A2
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/28/2023 05:05	PDK	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/18/2023 14:22	WDA	A2
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/28/2023 05:05	PDK	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/28/2023 05:05	PDK	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/28/2023 05:05	PDK	C
1,4-Dichlorobenzene	0.41J	J	ug/L	1.0	0.27	SW846 8260C	1	09/28/2023 05:05	PDK	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/28/2023 05:05	PDK	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/28/2023 05:05	PDK	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/28/2023 05:05	PDK	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/28/2023 05:05	PDK	C

Results

Client Sample ID	GWM-19D	Collected	09/14/2023 09:15
Lab Sample ID	3323398003	Lab Receipt	09/14/2023 17:00

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/28/2023 05:05	PDK	C
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/28/2023 05:05	PDK	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/28/2023 05:05	PDK	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/28/2023 05:05	PDK	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/28/2023 05:05	PDK	C
Bromomethane	ND	ND	ug/L	1.0	0.39	SW846 8260C	1	09/28/2023 05:05	PDK	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/28/2023 05:05	PDK	C
Carbon Tetrachloride	ND	ND,6	ug/L	1.0	0.31	SW846 8260C	1	09/28/2023 05:05	PDK	C
Chlorobenzene	0.90J	J	ug/L	1.0	0.19	SW846 8260C	1	09/28/2023 05:05	PDK	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/28/2023 05:05	PDK	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 05:05	PDK	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/28/2023 05:05	PDK	C
Chloromethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/28/2023 05:05	PDK	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/28/2023 05:05	PDK	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/28/2023 05:05	PDK	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/28/2023 05:05	PDK	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/28/2023 05:05	PDK	C
Dichlorodifluoromethane	ND	ND,2	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 05:05	PDK	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/28/2023 05:05	PDK	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/28/2023 05:05	PDK	C
Methyl t-Butyl Ether	0.36J	J	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 05:05	PDK	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/28/2023 05:05	PDK	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/28/2023 05:05	PDK	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 05:05	PDK	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/28/2023 05:05	PDK	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/28/2023 05:05	PDK	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/28/2023 05:05	PDK	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/28/2023 05:05	PDK	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/28/2023 05:05	PDK	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/28/2023 05:05	PDK	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/28/2023 05:05	PDK	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 05:05	PDK	C
Trichlorofluoromethane	ND	ND,7	ug/L	1.0	0.24	SW846 8260C	1	09/28/2023 05:05	PDK	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/28/2023 05:05	PDK	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/28/2023 05:05	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	99.7%	62 – 133	09/28/2023 05:05	
1-Chloro-2-Fluorobenzene	348-51-6	120%	70 – 130	09/18/2023 14:22	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	09/28/2023 05:05	
Dibromofluoromethane	1868-53-7	97.9%	78 – 116	09/28/2023 05:05	
Toluene-d8	2037-26-5	102%	76 – 127	09/28/2023 05:05	

WET CHEMISTRY

Results

Client Sample ID	GWM-19D	Collected	09/14/2023 09:15
Lab Sample ID	3323398003	Lab Receipt	09/14/2023 17:00

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	12	3	mg/L	5	5	SM2320B-2011	1	09/19/2023 23:00	JMS	F
Ammonia-N	0.208		mg/L	0.100	0.03	ASTM D6919-17	10	09/24/2023 17:04	NML	G
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	5	EPA 410.4	1	09/20/2023 11:49	KMS	G
Chloride	37.0		mg/L	2.0	1.5	EPA 300.0	2	09/15/2023 19:07	J1W	F
Nitrate-N	1.3		mg/L	1.0	0.22	EPA 300.0	2	09/15/2023 19:07	J1W	F
Sulfate	14.2		mg/L	2.0	1.5	EPA 300.0	2	09/15/2023 19:07	J1W	F
Total Dissolved Solids	135		mg/L	25	25	SM2540C-15	1	09/21/2023 18:47	JXK	F

Results

Client Sample ID	GWM-6	Collected	09/14/2023 10:15
Lab Sample ID	3323398004	Lab Receipt	09/14/2023 17:00

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/25/2023 10:34	MO	E1
Arsenic, Total	0.0015J	J	mg/L	0.0033	0.0011	SW846 6020A	1	09/25/2023 10:34	MO	E1
Barium, Total	0.095		mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 10:34	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/25/2023 10:34	MO	E1
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/25/2023 10:34	MO	E1
Calcium, Total	12.1		mg/L	0.11	0.037	SW846 6020A	1	09/25/2023 10:34	MO	E1
Chromium, Total	0.00084J	J	mg/L	0.0022	0.00074	SW846 6020A	1	09/25/2023 10:34	MO	E1
Cobalt, Total	0.012		mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 10:34	MO	E1
Copper, Total	0.0040J	J	mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 10:34	MO	E1
Hardness	62.1	4	mg/L			SW846 6020A	1	09/25/2023 10:34	MO	E2
Iron, Total	61.7		mg/L	0.056	0.019	SW846 6020A	1	09/25/2023 10:34	MO	E1
Lead, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/25/2023 10:34	MO	E1
Magnesium, Total	7.8		mg/L	0.11	0.037	SW846 6020A	1	09/25/2023 10:34	MO	E1
Manganese, Total	0.35		mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 10:34	MO	E1
Mercury, Total	ND	ND	mg/L	0.00050	0.00017	SW846 7470A	1	09/18/2023 15:55	JSE	E
Nickel, Total	0.0053J	J	mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 10:34	MO	E1
Potassium, Total	1.8		mg/L	0.11	0.037	SW846 6020A	1	09/25/2023 10:34	MO	E1
Selenium, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 10:34	MO	E1
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/25/2023 10:34	MO	E1
Sodium, Total	38.3		mg/L	0.11	0.037	SW846 6020A	1	09/25/2023 10:34	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/25/2023 10:34	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/25/2023 10:34	MO	E1
Zinc, Total	0.0019J	J	mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 10:34	MO	E1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/28/2023 05:25	PDK	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/28/2023 05:25	PDK	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/28/2023 05:25	PDK	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 05:25	PDK	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/28/2023 05:25	PDK	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/28/2023 05:25	PDK	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/28/2023 05:25	PDK	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0051	SW846 8011	1	09/18/2023 14:36	WDA	A2
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/28/2023 05:25	PDK	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/18/2023 14:36	WDA	A2
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/28/2023 05:25	PDK	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/28/2023 05:25	PDK	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/28/2023 05:25	PDK	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/28/2023 05:25	PDK	C
1,4-Dichlorobenzene	0.29J	J	ug/L	1.0	0.27	SW846 8260C	1	09/28/2023 05:25	PDK	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/28/2023 05:25	PDK	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/28/2023 05:25	PDK	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/28/2023 05:25	PDK	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/28/2023 05:25	PDK	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/28/2023 05:25	PDK	C

Results

Client Sample ID	GWM-6	Collected	09/14/2023 10:15
Lab Sample ID	3323398004	Lab Receipt	09/14/2023 17:00

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	5.5		ug/L	1.0	0.23	SW846 8260C	1	09/28/2023 05:25	PDK	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/28/2023 05:25	PDK	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/28/2023 05:25	PDK	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/28/2023 05:25	PDK	C
Bromomethane	ND	ND	ug/L	1.0	0.39	SW846 8260C	1	09/28/2023 05:25	PDK	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/28/2023 05:25	PDK	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/28/2023 05:25	PDK	C
Chlorobenzene	0.69J	J	ug/L	1.0	0.19	SW846 8260C	1	09/28/2023 05:25	PDK	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/28/2023 05:25	PDK	C
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 05:25	PDK	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/28/2023 05:25	PDK	C
Chloromethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/28/2023 05:25	PDK	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/28/2023 05:25	PDK	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/28/2023 05:25	PDK	C
Cyclohexane	0.81J	J	ug/L	1.0	0.29	SW846 8260C	1	09/28/2023 05:25	PDK	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/28/2023 05:25	PDK	C
Dichlorodifluoromethane	ND	ND,2	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 05:25	PDK	C
Ethylbenzene	5.5		ug/L	1.0	0.34	SW846 8260C	1	09/28/2023 05:25	PDK	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/28/2023 05:25	PDK	C
Methyl t-Butyl Ether	2.4		ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 05:25	PDK	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/28/2023 05:25	PDK	C
mp-Xylene	0.64J	J	ug/L	2.0	0.52	SW846 8260C	1	09/28/2023 05:25	PDK	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 05:25	PDK	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/28/2023 05:25	PDK	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/28/2023 05:25	PDK	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/28/2023 05:25	PDK	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/28/2023 05:25	PDK	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/28/2023 05:25	PDK	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/28/2023 05:25	PDK	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/28/2023 05:25	PDK	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/28/2023 05:25	PDK	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/28/2023 05:25	PDK	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/28/2023 05:25	PDK	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/28/2023 05:25	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	98.4%	62 – 133	09/28/2023 05:25	
1-Chloro-2-Fluorobenzene	348-51-6	121%	70 – 130	09/18/2023 14:36	
4-Bromofluorobenzene	460-00-4	104%	79 – 114	09/28/2023 05:25	
Dibromofluoromethane	1868-53-7	97.8%	78 – 116	09/28/2023 05:25	
Toluene-d8	2037-26-5	105%	76 – 127	09/28/2023 05:25	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	GWM-6	Collected	09/14/2023 10:15
Lab Sample ID	3323398004	Lab Receipt	09/14/2023 17:00

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	66	3	mg/L	5	5	SM2320B-2011	1	09/21/2023 14:18	JMS	F
Ammonia-N	0.318		mg/L	0.100	0.03	ASTM D6919-17	10	09/24/2023 17:59	NML	G
Chemical Oxygen Demand (COD)	19		mg/L	15	5	EPA 410.4	1	09/20/2023 11:49	KMS	G
Chloride	77.7		mg/L	2.0	1.5	EPA 300.0	2	09/15/2023 18:21	J1W	F
Nitrate-N	ND	ND	mg/L	1.0	0.22	EPA 300.0	2	09/15/2023 18:21	J1W	F
Sulfate	9.1	9	mg/L	2.0	1.5	EPA 300.0	2	09/15/2023 18:21	J1W	F
Total Dissolved Solids	250		mg/L	25	25	SM2540C-15	1	09/21/2023 18:47	JXK	F

Results

Client Sample ID	GWM-6	Collected	09/14/2023 10:15
Lab Sample ID	3323398005	Lab Receipt	09/14/2023 17:00

GASOLINE RANGE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Gasoline Range Organics	50.8J	J	ug/L	100	17.0	SW846 8015D	1	09/21/2023 10:14	JTH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
a,a,a-Trifluorotoluene	98-08-8	97.9%	90 – 129	09/21/2023 10:14	

PETROLEUM HC's

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Diesel Range Organics C10-C28	1.3		mg/L	0.16	0.029	SW846 8015D	1	09/21/2023 12:32	DXL	E

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
o-Terphenyl	84-15-1	101%	26 – 139	09/21/2023 12:32	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	6.2		ug/L	1.0	0.23	SW846 8260B	1	09/28/2023 06:00	PDK	C
Ethylbenzene	5.9		ug/L	1.0	0.34	SW846 8260B	1	09/28/2023 06:00	PDK	C
Naphthalene	ND	ND	ug/L	2.0	0.34	SW846 8260B	1	09/28/2023 06:00	PDK	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260B	1	09/28/2023 06:00	PDK	C
Total Xylenes	ND	ND	ug/L	1.5	0.42	SW846 8260B	1	09/28/2023 06:00	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.3%	62 – 133	09/28/2023 06:00	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	09/28/2023 06:00	
Dibromofluoromethane	1868-53-7	103%	78 – 116	09/28/2023 06:00	
Toluene-d8	2037-26-5	98.3%	76 – 127	09/28/2023 06:00	

Results

Client Sample ID	FMW-35	Collected	09/14/2023 11:50
Lab Sample ID	3323398006	Lab Receipt	09/14/2023 17:00

GASOLINE RANGE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Gasoline Range Organics	23.8J	J	ug/L	100	17.0	SW846 8015D	1	09/21/2023 10:39	JTH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
a,a,a-Trifluorotoluene	98-08-8	97.7%	90 – 129	09/21/2023 10:39	

PETROLEUM HC's

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Diesel Range Organics C10-C28	0.47		mg/L	0.16	0.030	SW846 8015D	1	09/21/2023 13:06	DXL	E

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
o-Terphenyl	84-15-1	92.3%	26 – 139	09/21/2023 13:06	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	0.29J	J	ug/L	1.0	0.23	SW846 8260B	1	09/28/2023 06:24	PDK	C
Ethylbenzene	1.9		ug/L	1.0	0.34	SW846 8260B	1	09/28/2023 06:24	PDK	C
Naphthalene	1.9J	J	ug/L	2.0	0.34	SW846 8260B	1	09/28/2023 06:24	PDK	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260B	1	09/28/2023 06:24	PDK	C
Total Xylenes	1.0J	J	ug/L	1.5	0.42	SW846 8260B	1	09/28/2023 06:24	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	95.6%	62 – 133	09/28/2023 06:24	
4-Bromofluorobenzene	460-00-4	98.8%	79 – 114	09/28/2023 06:24	
Dibromofluoromethane	1868-53-7	91.7%	78 – 116	09/28/2023 06:24	
Toluene-d8	2037-26-5	97.6%	76 – 127	09/28/2023 06:24	

Results

Client Sample ID	FMW-15	Collected	09/14/2023 13:25
Lab Sample ID	3323398007	Lab Receipt	09/14/2023 17:00

GASOLINE RANGE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Gasoline Range Organics	ND	ND	ug/L	100	17.0	SW846 8015D	1	09/21/2023 11:05	JTH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
a,a,a-Trifluorotoluene	98-08-8	96.3%	90 – 129	09/21/2023 11:05	

PETROLEUM HC's

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Diesel Range Organics C10-C28	0.18		mg/L	0.16	0.030	SW846 8015D	1	09/21/2023 13:40	DXL	E

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
o-Terphenyl	84-15-1	89.3%	26 – 139	09/21/2023 13:40	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260B	1	09/28/2023 06:47	PDK	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260B	1	09/28/2023 06:47	PDK	C
Naphthalene	0.49J	J	ug/L	2.0	0.34	SW846 8260B	1	09/28/2023 06:47	PDK	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260B	1	09/28/2023 06:47	PDK	C
Total Xylenes	ND	ND	ug/L	1.5	0.42	SW846 8260B	1	09/28/2023 06:47	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.1%	62 – 133	09/28/2023 06:47	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	09/28/2023 06:47	
Dibromofluoromethane	1868-53-7	94%	78 – 116	09/28/2023 06:47	
Toluene-d8	2037-26-5	99.9%	76 – 127	09/28/2023 06:47	

Results

Client Sample ID	SB-16	Collected	09/14/2023 14:45
Lab Sample ID	3323398008	Lab Receipt	09/14/2023 17:00

GASOLINE RANGE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Gasoline Range Organics	ND	ND	ug/L	100	17.0	SW846 8015D	1	09/21/2023 11:31	JTH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
a,a,a-Trifluorotoluene	98-08-8	94.9%	90 – 129	09/21/2023 11:31	

PETROLEUM HC's

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Diesel Range Organics C10-C28	0.18		mg/L	0.16	0.030	SW846 8015D	1	09/21/2023 14:13	DXL	E

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
o-Terphenyl	84-15-1	84.3%	26 – 139	09/21/2023 14:13	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260B	1	09/28/2023 07:10	PDK	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260B	1	09/28/2023 07:10	PDK	C
Naphthalene	ND	ND	ug/L	2.0	0.34	SW846 8260B	1	09/28/2023 07:10	PDK	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260B	1	09/28/2023 07:10	PDK	C
Total Xylenes	ND	ND	ug/L	1.5	0.42	SW846 8260B	1	09/28/2023 07:10	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	96.1%	62 – 133	09/28/2023 07:10	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	09/28/2023 07:10	
Dibromofluoromethane	1868-53-7	104%	78 – 116	09/28/2023 07:10	
Toluene-d8	2037-26-5	100%	76 – 127	09/28/2023 07:10	

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3323398001	Trip Blank	SW846 8011	SW846 8011	
		SW846 8260C	N/A	
3323398002	Field Blank	SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3323398003	GWM-19D	SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3323398004	GWM-6	SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3323398005	GWM-6	SW846 8015D	SW846 3510C	
		SW846 8015D	N/A	
		SW846 8260B	N/A	
3323398006	FMW-35	SW846 8015D	SW846 3510C	
		SW846 8015D	N/A	
		SW846 8260B	N/A	
3323398007	FMW-15	SW846 8015D	SW846 3510C	
		SW846 8015D	N/A	
		SW846 8260B	N/A	
3323398008	SB-16	SW846 8015D	SW846 3510C	
		SW846 8015D	N/A	
		SW846 8260B	N/A	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3323398001	Trip Blank	SW846 8011	1060443	09/18/2023 10:04	WDA	SW846 8011	1060554
		N/A	N/A	N/A		SW846 8260C	1063803
3323398002	Field Blank	SW846 3015A	1060361	09/19/2023 03:25	ANN	SW846 6020A	1062223
		SW846 7470A	1060473	09/18/2023 10:30	JSE	SW846 7470A	1060581
		SW846 8011	1060443	09/18/2023 10:04	WDA	SW846 8011	1060554
		N/A	N/A	N/A		SW846 8260C	1063803
		N/A	N/A	N/A		ASTM D6919-17	1061702
		N/A	N/A	N/A		EPA 300.0	1059609
		N/A	N/A	N/A		EPA 410.4	1060980
		N/A	N/A	N/A		SM2320B-2011	1060819
		N/A	N/A	N/A		SM2540C-15	1061168
3323398003	GWM-19D	SW846 3015A	1060361	09/19/2023 03:25	ANN	SW846 6020A	1062223
		SW846 7470A	1083855	11/08/2023 09:33	JSE	SW846 7470A	1085316
		SW846 7470A	1060474	09/18/2023 10:30	JSE	SW846 7470A	1060582
		SW846 8011	1060443	09/18/2023 10:04	WDA	SW846 8011	1060554
		N/A	N/A	N/A		SW846 8260C	1063803
		N/A	N/A	N/A		ASTM D6919-17	1061702
		N/A	N/A	N/A		EPA 300.0	1059609
		N/A	N/A	N/A		EPA 410.4	1060980
		N/A	N/A	N/A		SM2320B-2011	1060819
		N/A	N/A	N/A		SM2540C-15	1061168
3323398004	GWM-6	SW846 3015A	1060361	09/19/2023 03:25	ANN	SW846 6020A	1062223
		SW846 7470A	1060474	09/18/2023 10:30	JSE	SW846 7470A	1060582
		SW846 8011	1060443	09/18/2023 10:04	WDA	SW846 8011	1060554
		N/A	N/A	N/A		SW846 8260C	1063803
		N/A	N/A	N/A		ASTM D6919-17	1061702
		N/A	N/A	N/A		EPA 300.0	1059609
		N/A	N/A	N/A		EPA 410.4	1060980
		N/A	N/A	N/A		SM2320B-2011	1061268
		N/A	N/A	N/A		SM2540C-15	1061168
3323398005	GWM-6	SW846 3510C	1060504	09/19/2023 11:30	SRL	SW846 8015D	1061165
		N/A	N/A	N/A		SW846 8015D	1061244
		N/A	N/A	N/A		SW846 8260B	1063917
3323398006	FMW-35	SW846 3510C	1060504	09/19/2023 11:30	SRL	SW846 8015D	1061165
		N/A	N/A	N/A		SW846 8015D	1061244
		N/A	N/A	N/A		SW846 8260B	1063917
3323398007	FMW-15	SW846 3510C	1060504	09/19/2023 11:30	SRL	SW846 8015D	1061165
		N/A	N/A	N/A		SW846 8015D	1061244
		N/A	N/A	N/A		SW846 8260B	1063917
3323398008	SB-16	SW846 3510C	1060504	09/19/2023 11:30	SRL	SW846 8015D	1061165
		N/A	N/A	N/A		SW846 8015D	1061244
		N/A	N/A	N/A		SW846 8260B	1063917

CHAIN OF CUSTODY / SAMPLE INFORMATION FORM

Maryland Environmental Service • 259 Najoles Rd. • Millersville, MD 21108 • (410) 729-8200 • FAX (410) 729-8

3323398
Logged By: DXB
PM: GJM

Laboratory: ALS

Sampler: Laura Russell / Brooke Zibell

Client Name: Maryland Environmental Service, Attn: Wil Herpel

Facility Name: Eastern Sanitary Landfill

Client Address: 259 Najoles Rd, Millersville, MD 21108 410-729-8356

Project# / Purpose: 3926-2000

Invoice To: Same

Turnaround Time: Routine

Sample #	Sample ID	Grab or Composite	Container Description/ Preservation Status	Matrix	# of Containers	Date	Time	Analyses Required/Comments
1	Trip Blank	N/A	40 mL G Na2S2O3	W	2	9/14/23	--	VOCs (8011)
↓	↓	↓	40 mL G HCl	W	2	↓	--	VOCs (8260)
2	Field Blank	G	40 mL G Na2S2O3	W	2	9/14/23	0845	VOCs (8011)
↓	↓	↓	40 mL G HCl	W	2	↓	↓	VOCs (8260)
↓	↓	↓	125 mL P HNO3	W	1	↓	↓	Metals - Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn (6020), Hg (7470), Hardness
↓	↓	↓	1 L P unpreserved	W	1	↓	↓	Alkalinity, TDS, Nitrate (EPA 300), Sulfate, Chloride
↓	↓	↓	250 mL P H2SO4	W	1	↓	↓	Ammonia, COD

Transferred by: Laura Russell	Received by:	Date 9-14-23	Time 1510
Transferred by:	Received by: DAG/LAS	Date 9-14-23	Time 1700
Transferred by:	Received by:	Date	Time

Cooler Receipt Informatic
Sufficient ice? - Yes/No Temp.=
Sample containers properly pres'd? - Y
Initials: Date:

Temp By: DG | WO Temp (°C): 0 | Therm ID: 520

Receipt Info Completed By:	CW
Cooler Custody Seal Intact	Y N NA
Sample Custody Seal Intact	Y N NA
Received on Ice	Y N NA
Cooler & Samples Intact	N
Correct Containers Provided	N
Sample Label/COC Agree	N
Adequate Sample Volumes	Y N
CR6 Samples Filtered	Y N NA
OP Samples Filtered	Y N NA
VOA Trip Blank	N NA
NJ≤ 4 Days?	Y N
Rad Screen (uCi)	
Courier/Tracking #:	

SDWA Compliance Y N
PWSID
WV Containers 0-6°C Y N NA

3323398

CHAIN OF CUSTODY / SAMPLE INFORMATION FORM

Maryland Environmental Service • 259 Najoles Rd. • Millersville, MD 21108 • (410) 729-8200 • FAX (410) 729-8340

Laboratory: ALS

Sampler: Laura Russell / Brooke Zibell

Client Name: Maryland Environmental Service, Attn: Wil Herpel

Facility Name: Eastern Sanitary Landfill

Client Address: 259 Najoles Rd, Millersville, MD 21108 410-729-8356

Project# / Purpose: 3926-2000

Invoice To: Same

Turnaround Time: Routine

Sample #	Sample ID	Grab or Composite	Container Description/ Preservation Status	Matrix	# of Containers	Date	Time	Analyses Required/Comments
3	GWM-19D	G	40 mL G Na2S2O3	NPW	2	9/14/23	0915	VOCs (8011)
			40 mL G HCl	NPW	2			VOCs (8260)
			125 mL P HNO3	NPW	2			Metals - Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn (6020), Hg (7470), Hardness
			1 L P unpreserved	NPW	1			Alkalinity, TDS, Nitrate (EPA 300), Sulfate, Chloride
			250 mL P H2SO4	NPW	1			Ammonia, COD
4	GWM-6	G	Same as Sample #3	NPW	8	9/14/23	1015	Same as Sample #3
							~~1150~~ DR	

Transferred by: Laura Russell	Received by:	Date 9-14-23	Time 1510	Cooler Receipt Information **(LAB USE ONLY)**
Transferred by:	Received by: DAG/IAS	Date 9-14-23	Time 1700	Sufficient ice? - Yes/No Temp.= _____
Transferred by:	Received by:	Date	Time	Sample containers properly pres'd? - Yes/No If No, explain
				Initials: Date:

CHAIN OF CUSTODY / SAMPLE INFORMATION FORM

Maryland Environmental Service • 259 Najoles Rd. • Millersville, MD 21108 • (410) 729-8200 • FAX (410) 729-8340

Laboratory: ALS

Sampler:

Client Name: Maryland Environmental Service, Attn: Wil Herpel

Facility Name: Eastern Sanitary Landfill

Client Address: 259 Najoles Rd, Millersville, MD 21108 410-729-8356

Project# / Purpose: 3926-2000

Invoice To: Same

Turnaround Time: Routine

Sample #	Sample ID	Grab or Composite	Container Description/ Preservation Status	Matrix	# of Containers	Date	Time	Analyses Required/Comments
5	GWM-6	G	1 L G Amber H2SO4	NPW	1	9/14/23	1015	TPH DRO (8015)
		G	40 mL G HCl	NPW	2			TPH GRO (8015)
		G	40 mL G HCl	NPW	2			BTEX: Benzene, toluene ethylbenzene, xylenes, naphthalene (8260)
6	FMW-35	G	Same as Sample #5	NPW	5	9/14/23	1150	Same as Sample #5
7	FMW-15	G	Same as Sample #5	NPW	5	9/14/23	1325	Same as Sample #5
8	SB-16	G	Same as Sample #5	NPW	5	9/14/23	1445	Same as Sample #5
~~9~~		~~G~~	~~Same as Sample #5~~	~~NPW~~	~~5~~	~~9/14/23~~		~~Same as Sample #5~~

Transferred by:	Received by:	Date	Time
Laura Russell		9-14-23	1510
	DAG/ALS	9-14-23	1700

Cooler Receipt Information **(LAB USE ONLY)**

Sufficient ice? - Yes/No Temp.= _____

Sample containers properly pres'd? - Yes/No If No, explain

Initials: Date:

11/13/2023 4:08 PM

301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

Analytical Results Report For | Maryland Environmental Services - Landfills

Report ID 276490 on 10/13/2023 (Revised report. See Project Notations Section.)

Certificate of Analysis

Project Name:	**Eastern Sanitary Landfill**	Workorder:	**3323496**
Purchase Order:	**MA 3680**	Workorder ID:	**Eastern Sanitary Landfill**

Enclosed are the analytical results for samples received by the laboratory on Friday, September 15, 2023.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP)
accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact George Methlie (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements.
The test results meet requirements of the current NELAP standards or state requirements, where applicable.
For a specific list of accredited
analytes, refer to the certifications section of the ALS website at
www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Global.
ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):
- Maryland Services-ENVOPS - Maryland Environmental Services - Landfills
- Jessica Cox - Maryland Environmental Services
- Maryland Services-LF Data - Maryland Environmental Services
- William Herpel - Maryland Environmental Service

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

George Methlie

George Methlie *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3323496001	Trip Blank	Water	09/15/2023 00:00	09/15/2023 16:06	CBC	Collected By Client
3323496002	Field Blank	Water	09/15/2023 10:21	09/15/2023 16:06	CBC	Collected By Client
3323496003	L-1	Water	09/15/2023 08:50	09/15/2023 16:06	CBC	Collected By Client
3323496004	L-2	Water	09/15/2023 09:20	09/15/2023 16:06	CBC	Collected By Client
3323496005	SMW-13	Water	09/15/2023 11:45	09/15/2023 16:06	CBC	Collected By Client
3323496006	SMW-32	Water	09/15/2023 13:35	09/15/2023 16:06	CBC	Collected By Client
3323496007	FMW-41	Ground Water	09/15/2023 11:10	09/15/2023 16:06	CBC	Collected By Client
3323496008	SMW-13	Ground Water	09/15/2023 11:45	09/15/2023 16:06	CBC	Collected By Client
3323496009	SW-1	Water	09/15/2023 13:55	09/15/2023 16:06	CBC	Collected By Client

Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136, including but not limited to the following EPA Method reference revisions:
  EPA 300.1 Rev. 1.0-1997
  EPA 300.0 Rev. 2.1-1993
  EPA 353.2 Rev. 2.0-1993
  EPA 410.4 Rev. 1.0-1993
  EPA 420.4 Rev. 1.0-1993
  EPA 365.1 Rev. 2.0-1993
  EPA 200.7 Rev. 4.4-1994
  EPA 200.8 Rev. 5.4-1994
  EPA 245.1 Rev. 3.0-1994
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	This compound was recovered below the 20 percent 8260C criteria in the continuing calibration verification associated with this sample.
2	The QC sample type LCS for method SW846 8260C was outside the control limits for the analyte Chloroethane. The % Recovery was reported as 37 and the control limits were 51 to 142.
3	The initial calibration verification for method SW846 8260C was outside the control limits for the analyte dichlorodifluoromethane. The % Recovery was reported as 132% and the control limits were 70 to 130%.
4	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
5	This sample result was calculated and reported using Method SM2340B-2011.
6	The QC type LLICV for method SW846 6020A was outside the control limits for the analyte Se. The % RSD was reported as 23.5 and the control limits were 0 to 20.

Detected Results Summary

Client Sample ID	Field Blank	Collected	09/15/2023 10:21
Lab Sample ID	3323496002	Lab Receipt	09/15/2023 16:06

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Calcium, Total	0.087J	mg/L	0.11	0.037	SW846 6020A	#
Hardness	0.26	mg/L			SW846 6020A	#
Sodium, Total	0.26	mg/L	0.11	0.037	SW846 6020A	#
WET CHEMISTRY						
Ammonia-N	0.037	mg/L	0.010	0.003	ASTM D6919-17	#

Detected Results Summary

Client Sample ID	L-1	Collected	09/15/2023 08:50
Lab Sample ID	3323496003	Lab Receipt	09/15/2023 16:06

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Arsenic, Total	0.013J	mg/L	0.030	0.0099	SW846 6020A	#
Barium, Total	0.52	mg/L	0.050	0.017	SW846 6020A	#
Calcium, Total	111	mg/L	0.99	0.33	SW846 6020A	#
Chromium, Total	0.032	mg/L	0.020	0.0067	SW846 6020A	#
Cobalt, Total	0.023J	mg/L	0.050	0.017	SW846 6020A	#
Hardness	924	mg/L	3.3	1.1	EPA 200.7	#
Iron, Total	6.1	mg/L	0.50	0.17	SW846 6020A	#
Magnesium, Total	161	mg/L	0.99	0.33	SW846 6020A	#
Manganese, Total	0.17	mg/L	0.050	0.017	SW846 6020A	#
Nickel, Total	0.060	mg/L	0.050	0.017	SW846 6020A	#
Potassium, Total	295	mg/L	0.99	0.33	SW846 6020A	#
Sodium, Total	1190	mg/L	0.99	0.33	SW846 6020A	#
VOLATILE ORGANICS						
1,4-Dichlorobenzene	2.7J	ug/L	5.0	1.4	SW846 8260C	#
Acetone	55.0	ug/L	50.0	15.5	SW846 8260C	#
Chlorobenzene	3.4J	ug/L	5.0	0.95	SW846 8260C	#
Methyl t-Butyl Ether	3.1J	ug/L	5.0	1.7	SW846 8260C	#
WET CHEMISTRY						
Alkalinity, Total	253	mg/L	5	5	SM2320B-2011	#
Ammonia-N	531	mg/L	2.50	0.7	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	758	mg/L	30	10	EPA 410.4	#
Chloride	1460	mg/L	25.0	18.8	EPA 300.0	#
Total Dissolved Solids	4520	mg/L	25	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	L-2	Collected	09/15/2023 09:20
Lab Sample ID	3323496004	Lab Receipt	09/15/2023 16:06

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Antimony, Total	0.0017J	mg/L	0.0040	0.0013	SW846 6020A	#
Arsenic, Total	0.019	mg/L	0.0059	0.0020	SW846 6020A	#
Barium, Total	0.24	mg/L	0.010	0.0034	SW846 6020A	#
Calcium, Total	108	mg/L	0.20	0.067	SW846 6020A	#
Chromium, Total	0.047	mg/L	0.0040	0.0013	SW846 6020A	#
Cobalt, Total	0.015	mg/L	0.010	0.0034	SW846 6020A	#
Copper, Total	0.0046J	mg/L	0.010	0.0034	SW846 6020A	#
Hardness	721	mg/L	0.66	0.22	EPA 200.7	#
Iron, Total	14.3	mg/L	0.10	0.034	SW846 6020A	#
Magnesium, Total	99.8	mg/L	0.20	0.067	SW846 6020A	#
Manganese, Total	0.75	mg/L	0.010	0.0034	SW846 6020A	#
Nickel, Total	0.15	mg/L	0.010	0.0034	SW846 6020A	#
Potassium, Total	268	mg/L	0.20	0.067	SW846 6020A	#
Sodium, Total	925	mg/L	19.8	6.7	SW846 6020A	#
Vanadium, Total	0.026	mg/L	0.0040	0.0013	SW846 6020A	#
Zinc, Total	0.0037J	mg/L	0.010	0.0034	SW846 6020A	#
VOLATILE ORGANICS						
Acetone	93.5	ug/L	50.0	15.5	SW846 8260C	#
Benzene	6.5	ug/L	5.0	1.2	SW846 8260C	#
Ethylbenzene	11.9	ug/L	5.0	1.7	SW846 8260C	#
Methyl t-Butyl Ether	3.2J	ug/L	5.0	1.7	SW846 8260C	#
mp-Xylene	18.3	ug/L	10.0	2.6	SW846 8260C	#
o-Xylene	8.0	ug/L	5.0	1.7	SW846 8260C	#
Toluene	17.2	ug/L	5.0	1.2	SW846 8260C	#
Total Xylenes	26.3	ug/L	15.0	3.3	SW846 8260C	#
trans-1,2-Dichloroethene	2.0J	ug/L	5.0	1.3	SW846 8260C	#
WET CHEMISTRY						
Alkalinity, Total	2460	mg/L	50	50	SM2320B-2011	#
Ammonia-N	649	mg/L	5.00	1	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	604	mg/L	30	10	EPA 410.4	#
Chloride	1520	mg/L	25.0	18.8	EPA 300.0	#
Total Dissolved Solids	4090	mg/L	25	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	SMW-13	Collected	09/15/2023 11:45
Lab Sample ID	3323496005	Lab Receipt	09/15/2023 16:06

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Barium, Total	0.12	mg/L	0.0056	0.0019	SW846 6020A	#
Beryllium, Total	0.00084J	mg/L	0.0011	0.00037	SW846 6020A	#
Calcium, Total	13.3	mg/L	0.11	0.037	SW846 6020A	#
Cobalt, Total	0.011	mg/L	0.0056	0.0019	SW846 6020A	#
Copper, Total	0.050	mg/L	0.0056	0.0019	SW846 6020A	#
Hardness	69.3	mg/L	0.33	0.11	EPA 200.7	#
Lead, Total	0.013	mg/L	0.0022	0.00074	SW846 6020A	#
Magnesium, Total	7.5	mg/L	0.11	0.037	SW846 6020A	#
Manganese, Total	0.042	mg/L	0.0056	0.0019	SW846 6020A	#
Mercury, Total	0.0017	mg/L	0.00050	0.00017	SW846 7470A	#
Nickel, Total	0.047	mg/L	0.0056	0.0019	SW846 6020A	#
Potassium, Total	2.2	mg/L	0.11	0.037	SW846 6020A	#
Sodium, Total	40.9	mg/L	0.11	0.037	SW846 6020A	#
Zinc, Total	0.24	mg/L	0.0056	0.0019	SW846 6020A	#
VOLATILE ORGANICS						
Chloroform	0.31J	ug/L	1.0	0.21	SW846 8260C	#
cis-1,2-Dichloroethene	0.78J	ug/L	1.0	0.32	SW846 8260C	#
WET CHEMISTRY						
Chloride	111	mg/L	2.0	1.5	EPA 300.0	#
Nitrate-N	3.2	mg/L	1.0	0.22	EPA 300.0	#
Total Dissolved Solids	286	mg/L	25	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	SMW-32	Collected	09/15/2023 13:35
Lab Sample ID	3323496006	Lab Receipt	09/15/2023 16:06

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Barium, Total	0.12	mg/L	0.0056	0.0019	SW846 6020A	#
Beryllium, Total	0.00099J	mg/L	0.0011	0.00037	SW846 6020A	#
Calcium, Total	13.5	mg/L	0.11	0.037	SW846 6020A	#
Cobalt, Total	0.017	mg/L	0.0056	0.0019	SW846 6020A	#
Copper, Total	0.034	mg/L	0.0056	0.0019	SW846 6020A	#
Hardness	69.4	mg/L	0.33	0.11	EPA 200.7	#
Iron, Total	0.079	mg/L	0.056	0.019	SW846 6020A	#
Lead, Total	0.00076J	mg/L	0.0022	0.00074	SW846 6020A	#
Magnesium, Total	7.7	mg/L	0.11	0.037	SW846 6020A	#
Manganese, Total	0.068	mg/L	0.0056	0.0019	SW846 6020A	#
Mercury, Total	0.0027	mg/L	0.00050	0.00017	SW846 7470A	#
Nickel, Total	0.067	mg/L	0.0056	0.0019	SW846 6020A	#
Potassium, Total	2.4	mg/L	0.11	0.037	SW846 6020A	#
Sodium, Total	40.4	mg/L	0.11	0.037	SW846 6020A	#
Zinc, Total	0.077	mg/L	0.0056	0.0019	SW846 6020A	#
VOLATILE ORGANICS						
Chloroform	0.28J	ug/L	1.0	0.21	SW846 8260C	#
WET CHEMISTRY						
Chloride	110	mg/L	2.0	1.5	EPA 300.0	#
Nitrate-N	2.9	mg/L	1.0	0.22	EPA 300.0	#
Sulfate	2.2	mg/L	2.0	1.5	EPA 300.0	#
Total Dissolved Solids	288	mg/L	25	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	FMW-41	Collected	09/15/2023 11:10
Lab Sample ID	3323496007	Lab Receipt	09/15/2023 16:06

Compound	Result	Units	RDL	MDL	Method	Flag
PETROLEUM HC's						
Diesel Range Organics C10-C28	0.11J	mg/L	0.16	0.029	SW846 8015D	#

Detected Results Summary

Client Sample ID	SMW-13	Collected	09/15/2023 11:45
Lab Sample ID	3323496008	Lab Receipt	09/15/2023 16:06

Compound	Result	Units	RDL	MDL	Method	Flag
PETROLEUM HC's						
Diesel Range Organics C10-C28	0.15J	mg/L	0.16	0.030	SW846 8015D	#

Detected Results Summary

Client Sample ID	SW-1	Collected	09/15/2023 13:55
Lab Sample ID	3323496009	Lab Receipt	09/15/2023 16:06

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Barium, Dissolved	0.15	mg/L	0.0056	0.0019	SW846 6020A	#
Barium, Total	0.16	mg/L	0.0056	0.0019	SW846 6020A	#
Calcium, Dissolved	43.0	mg/L	0.11	0.037	SW846 6020A	#
Calcium, Total	38.6	mg/L	0.11	0.037	SW846 6020A	#
Chromium, Dissolved	0.00087J	mg/L	0.0022	0.00074	SW846 6020A	#
Cobalt, Dissolved	0.22	mg/L	0.0056	0.0019	SW846 6020A	#
Cobalt, Total	0.23	mg/L	0.0056	0.0019	SW846 6020A	#
Hardness	195	mg/L	0.33	0.11	EPA 200.7	#
Iron, Dissolved	0.64	mg/L	0.056	0.019	SW846 6020A	#
Iron, Total	56.5	mg/L	0.056	0.019	SW846 6020A	#
Magnesium, Dissolved	22.3	mg/L	0.11	0.037	SW846 6020A	#
Magnesium, Total	19.8	mg/L	0.11	0.037	SW846 6020A	#
Manganese, Dissolved	8.0	mg/L	0.0056	0.0019	SW846 6020A	#
Manganese, Total	7.5	mg/L	0.0056	0.0019	SW846 6020A	#
Nickel, Dissolved	0.0051J	mg/L	0.0056	0.0019	SW846 6020A	#
Nickel, Total	0.0050J	mg/L	0.0056	0.0019	SW846 6020A	#
Potassium, Dissolved	5.3	mg/L	0.11	0.037	SW846 6020A	#
Potassium, Total	5.1	mg/L	0.11	0.037	SW846 6020A	#
Sodium, Dissolved	43.3	mg/L	0.11	0.037	SW846 6020A	#
Sodium, Total	38.5	mg/L	0.11	0.037	SW846 6020A	#
Zinc, Dissolved	0.0031J	mg/L	0.0056	0.0019	SW846 6020A	#
Zinc, Total	0.0052J	mg/L	0.0056	0.0019	SW846 6020A	#
VOLATILE ORGANICS						
1,4-Dichlorobenzene	1.6	ug/L	1.0	0.27	SW846 8260C	#
Benzene	0.34J	ug/L	1.0	0.23	SW846 8260C	#
Chlorobenzene	0.22J	ug/L	1.0	0.19	SW846 8260C	#
cis-1,2-Dichloroethene	0.33J	ug/L	1.0	0.32	SW846 8260C	#
Methyl t-Butyl Ether	0.35J	ug/L	1.0	0.33	SW846 8260C	#
WET CHEMISTRY						
Alkalinity, Total	181	mg/L	5	5	SM2320B-2011	#
Ammonia-N	1.49	mg/L	0.100	0.03	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	22	mg/L	15	5	EPA 410.4	#
Chloride	78.0	mg/L	2.0	1.5	EPA 300.0	#
Sulfate	26.2	mg/L	2.0	1.5	EPA 300.0	#
Total Dissolved Solids	398	mg/L	25	25	SM2540C-15	#

Results

Client Sample ID	Trip Blank	Collected	09/15/2023 00:00
Lab Sample ID	3323496001	Lab Receipt	09/15/2023 16:06

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/29/2023 00:54	PDK	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/29/2023 00:54	PDK	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/29/2023 00:54	PDK	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 00:54	PDK	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/29/2023 00:54	PDK	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/29/2023 00:54	PDK	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/29/2023 00:54	PDK	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/29/2023 00:54	PDK	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0051	SW846 8011	1	09/19/2023 17:06	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/29/2023 00:54	PDK	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/19/2023 17:06	WDA	A1
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/29/2023 00:54	PDK	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/29/2023 00:54	PDK	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/29/2023 00:54	PDK	C
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/29/2023 00:54	PDK	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/29/2023 00:54	PDK	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/29/2023 00:54	PDK	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/29/2023 00:54	PDK	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/29/2023 00:54	PDK	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/29/2023 00:54	PDK	C
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/29/2023 00:54	PDK	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/29/2023 00:54	PDK	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/29/2023 00:54	PDK	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/29/2023 00:54	PDK	C
Bromomethane	ND	ND,1	ug/L	1.0	0.39	SW846 8260C	1	09/29/2023 00:54	PDK	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/29/2023 00:54	PDK	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/29/2023 00:54	PDK	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/29/2023 00:54	PDK	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/29/2023 00:54	PDK	C
Chloroethane	ND	ND,2	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 00:54	PDK	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/29/2023 00:54	PDK	C
Chloromethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/29/2023 00:54	PDK	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/29/2023 00:54	PDK	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/29/2023 00:54	PDK	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/29/2023 00:54	PDK	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/29/2023 00:54	PDK	C
Dichlorodifluoromethane	ND	ND,3	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 00:54	PDK	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/29/2023 00:54	PDK	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/29/2023 00:54	PDK	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 00:54	PDK	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/29/2023 00:54	PDK	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/29/2023 00:54	PDK	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 00:54	PDK	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/29/2023 00:54	PDK	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/29/2023 00:54	PDK	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/29/2023 00:54	PDK	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/29/2023 00:54	PDK	C

Results

Client Sample ID	Trip Blank	Collected	09/15/2023 00:00
Lab Sample ID	3323496001	Lab Receipt	09/15/2023 16:06

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/29/2023 00:54	PDK	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/29/2023 00:54	PDK	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/29/2023 00:54	PDK	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 00:54	PDK	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/29/2023 00:54	PDK	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/29/2023 00:54	PDK	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/29/2023 00:54	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	95.4%	62 – 133	09/29/2023 00:54	
1-Chloro-2-Fluorobenzene	348-51-6	102%	70 – 130	09/19/2023 17:06	
4-Bromofluorobenzene	460-00-4	99.7%	79 – 114	09/29/2023 00:54	
Dibromofluoromethane	1868-53-7	92.2%	78 – 116	09/29/2023 00:54	
Toluene-d8	2037-26-5	99.8%	76 – 127	09/29/2023 00:54	

Results

Client Sample ID	Field Blank	Collected	09/15/2023 10:21
Lab Sample ID	3323496002	Lab Receipt	09/15/2023 16:06

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/25/2023 11:34	MO	E1
Arsenic, Total	ND	ND	mg/L	0.0033	0.0011	SW846 6020A	1	09/25/2023 11:34	MO	E1
Barium, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 11:34	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/25/2023 11:34	MO	E1
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/25/2023 11:34	MO	E1
Calcium, Total	0.087J	J	mg/L	0.11	0.037	SW846 6020A	1	09/25/2023 11:34	MO	E1
Chromium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/25/2023 11:34	MO	E1
Cobalt, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 11:34	MO	E1
Copper, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 11:34	MO	E1
Hardness	0.26	5	mg/L			SW846 6020A	1	09/25/2023 11:34	MO	E2
Iron, Total	ND	ND	mg/L	0.056	0.019	SW846 6020A	1	09/25/2023 11:34	MO	E1
Lead, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/25/2023 11:34	MO	E1
Magnesium, Total	ND	ND	mg/L	0.11	0.037	SW846 6020A	1	09/25/2023 11:34	MO	E1
Manganese, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 11:34	MO	E1
Mercury, Total	ND	ND	mg/L	0.00050	0.00017	SW846 7470A	1	09/18/2023 16:26	JSE	E
Nickel, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 11:34	MO	E1
Potassium, Total	ND	ND	mg/L	0.11	0.037	SW846 6020A	1	09/25/2023 11:34	MO	E1
Selenium, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 11:34	MO	E1
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/25/2023 11:34	MO	E1
Sodium, Total	0.26		mg/L	0.11	0.037	SW846 6020A	1	09/25/2023 11:34	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/25/2023 11:34	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/25/2023 11:34	MO	E1
Zinc, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/25/2023 11:34	MO	E1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/29/2023 01:14	PDK	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/29/2023 01:14	PDK	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/29/2023 01:14	PDK	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 01:14	PDK	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/29/2023 01:14	PDK	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/29/2023 01:14	PDK	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/29/2023 01:14	PDK	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.022	0.0052	SW846 8011	1	09/19/2023 17:20	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/29/2023 01:14	PDK	C
1,2-Dibromoethane	ND	ND	ug/L	0.022	0.011	SW846 8011	1	09/19/2023 17:20	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/29/2023 01:14	PDK	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/29/2023 01:14	PDK	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/29/2023 01:14	PDK	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/29/2023 01:14	PDK	C
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/29/2023 01:14	PDK	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/29/2023 01:14	PDK	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/29/2023 01:14	PDK	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/29/2023 01:14	PDK	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/29/2023 01:14	PDK	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/29/2023 01:14	PDK	C

Results

Client Sample ID	Field Blank	Collected	09/15/2023 10:21
Lab Sample ID	3323496002	Lab Receipt	09/15/2023 16:06

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/29/2023 01:14	PDK	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/29/2023 01:14	PDK	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/29/2023 01:14	PDK	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/29/2023 01:14	PDK	C
Bromomethane	ND	ND,1	ug/L	1.0	0.39	SW846 8260C	1	09/29/2023 01:14	PDK	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/29/2023 01:14	PDK	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/29/2023 01:14	PDK	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/29/2023 01:14	PDK	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/29/2023 01:14	PDK	C
Chloroethane	ND	ND,2	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 01:14	PDK	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/29/2023 01:14	PDK	C
Chloromethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/29/2023 01:14	PDK	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/29/2023 01:14	PDK	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/29/2023 01:14	PDK	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/29/2023 01:14	PDK	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/29/2023 01:14	PDK	C
Dichlorodifluoromethane	ND	ND,3	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 01:14	PDK	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/29/2023 01:14	PDK	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/29/2023 01:14	PDK	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 01:14	PDK	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/29/2023 01:14	PDK	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/29/2023 01:14	PDK	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 01:14	PDK	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/29/2023 01:14	PDK	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/29/2023 01:14	PDK	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/29/2023 01:14	PDK	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/29/2023 01:14	PDK	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/29/2023 01:14	PDK	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/29/2023 01:14	PDK	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/29/2023 01:14	PDK	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 01:14	PDK	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/29/2023 01:14	PDK	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/29/2023 01:14	PDK	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/29/2023 01:14	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	94%	62 – 133	09/29/2023 01:14	
1-Chloro-2-Fluorobenzene	348-51-6	79.9%	70 – 130	09/19/2023 17:20	
4-Bromofluorobenzene	460-00-4	113%	79 – 114	09/29/2023 01:14	
Dibromofluoromethane	1868-53-7	94.3%	78 – 116	09/29/2023 01:14	
Toluene-d8	2037-26-5	105%	76 – 127	09/29/2023 01:14	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	Field Blank	Collected	09/15/2023 10:21
Lab Sample ID	3323496002	Lab Receipt	09/15/2023 16:06

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	ND	ND,4	mg/L	5	5	SM2320B-2011	1	09/21/2023 18:10	JMS	F
Ammonia-N	0.037		mg/L	0.010	0.003	ASTM D6919-17	1	09/26/2023 12:02	NML	G
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	5	EPA 410.4	1	09/20/2023 11:49	KMS	G
Chloride	ND	ND	mg/L	2.0	1.5	EPA 300.0	2	09/16/2023 15:19	J1W	F
Nitrate-N	ND	ND	mg/L	1.0	0.22	EPA 300.0	2	09/16/2023 15:19	J1W	F
Sulfate	ND	ND	mg/L	2.0	1.5	EPA 300.0	2	09/16/2023 15:19	J1W	F
Total Dissolved Solids	ND	ND	mg/L	25	25	SM2540C-15	1	09/22/2023 01:36	JXK	F

Results

Client Sample ID	L-1	Collected	09/15/2023 08:50
Lab Sample ID	3323496003	Lab Receipt	09/15/2023 16:06

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.020	0.0067	SW846 6020A	5	09/25/2023 11:36	MO	E1
Arsenic, Total	0.013J	J	mg/L	0.030	0.0099	SW846 6020A	5	09/25/2023 11:36	MO	E1
Barium, Total	0.52		mg/L	0.050	0.017	SW846 6020A	5	09/25/2023 11:36	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0099	0.0033	SW846 6020A	5	09/25/2023 11:36	MO	E1
Cadmium, Total	ND	ND	mg/L	0.0099	0.0033	SW846 6020A	5	09/25/2023 11:36	MO	E1
Calcium, Total	111		mg/L	0.99	0.33	SW846 6020A	5	09/25/2023 11:36	MO	E1
Chromium, Total	0.032		mg/L	0.020	0.0067	SW846 6020A	5	09/25/2023 11:36	MO	E1
Cobalt, Total	0.023J	J	mg/L	0.050	0.017	SW846 6020A	5	09/25/2023 11:36	MO	E1
Copper, Total	ND	ND	mg/L	0.050	0.017	SW846 6020A	5	09/25/2023 11:36	MO	E1
Hardness	924	5	mg/L	3.3	1.1	EPA 200.7	5	09/22/2023 14:52	SRT	E2
Iron, Total	6.1		mg/L	0.50	0.17	SW846 6020A	5	09/25/2023 11:36	MO	E1
Lead, Total	ND	ND	mg/L	0.020	0.0067	SW846 6020A	5	09/25/2023 11:36	MO	E1
Magnesium, Total	161		mg/L	0.99	0.33	SW846 6020A	5	09/25/2023 11:36	MO	E1
Manganese, Total	0.17		mg/L	0.050	0.017	SW846 6020A	5	09/25/2023 11:36	MO	E1
Mercury, Total	ND	ND	mg/L	0.00050	0.00017	SW846 7470A	1	09/20/2023 10:26	JSE	E
Nickel, Total	0.060		mg/L	0.050	0.017	SW846 6020A	5	09/25/2023 11:36	MO	E1
Potassium, Total	295		mg/L	0.99	0.33	SW846 6020A	5	09/25/2023 11:36	MO	E1
Selenium, Total	ND	ND	mg/L	0.050	0.017	SW846 6020A	5	09/25/2023 11:36	MO	E1
Silver, Total	ND	ND	mg/L	0.020	0.0067	SW846 6020A	5	09/25/2023 11:36	MO	E1
Sodium, Total	1190		mg/L	0.99	0.33	SW846 6020A	5	09/25/2023 11:36	MO	E1
Thallium, Total	ND	ND	mg/L	0.0099	0.0033	SW846 6020A	5	09/25/2023 11:36	MO	E1
Vanadium, Total	ND	ND	mg/L	0.020	0.0067	SW846 6020A	5	09/25/2023 11:36	MO	E1
Zinc, Total	ND	ND	mg/L	0.050	0.017	SW846 6020A	5	09/25/2023 11:36	MO	E1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	5.0	1.8	SW846 8260C	5	09/29/2023 06:33	PDK	C
1,1,1-Trichloroethane	ND	ND	ug/L	5.0	1.1	SW846 8260C	5	09/29/2023 06:33	PDK	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	5.0	1.7	SW846 8260C	5	09/29/2023 06:33	PDK	C
1,1,2-Trichloroethane	ND	ND	ug/L	5.0	1.7	SW846 8260C	5	09/29/2023 06:33	PDK	C
1,1-Dichloroethane	ND	ND	ug/L	5.0	1.4	SW846 8260C	5	09/29/2023 06:33	PDK	C
1,1-Dichloroethene	ND	ND	ug/L	5.0	1.5	SW846 8260C	5	09/29/2023 06:33	PDK	C
1,2,3-Trichloropropane	ND	ND	ug/L	10.0	3.0	SW846 8260C	5	09/29/2023 06:33	PDK	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0051	SW846 8011	1	09/19/2023 17:35	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	35.0	7.5	SW846 8260C	5	09/29/2023 06:33	PDK	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/19/2023 17:35	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	5.0	1.4	SW846 8260C	5	09/29/2023 06:33	PDK	C
1,2-Dichlorobenzene	ND	ND	ug/L	5.0	1.9	SW846 8260C	5	09/29/2023 06:33	PDK	C
1,2-Dichloroethane	ND	ND	ug/L	5.0	1.6	SW846 8260C	5	09/29/2023 06:33	PDK	C
1,2-Dichloropropane	ND	ND	ug/L	5.0	1.2	SW846 8260C	5	09/29/2023 06:33	PDK	C
1,4-Dichlorobenzene	2.7J	J	ug/L	5.0	1.4	SW846 8260C	5	09/29/2023 06:33	PDK	C
2-Butanone	ND	ND	ug/L	50.0	9.0	SW846 8260C	5	09/29/2023 06:33	PDK	C
2-Hexanone	ND	ND	ug/L	25.0	6.5	SW846 8260C	5	09/29/2023 06:33	PDK	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	25.0	7.5	SW846 8260C	5	09/29/2023 06:33	PDK	C
Acetone	55.0		ug/L	50.0	15.5	SW846 8260C	5	09/29/2023 06:33	PDK	C
Acrylonitrile	ND	ND	ug/L	25.0	6.0	SW846 8260C	5	09/29/2023 06:33	PDK	C

Results

Client Sample ID	L-1	Collected	09/15/2023 08:50
Lab Sample ID	3323496003	Lab Receipt	09/15/2023 16:06

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	5.0	1.2	SW846 8260C	5	09/29/2023 06:33	PDK	C
Bromochloromethane	ND	ND	ug/L	5.0	1.6	SW846 8260C	5	09/29/2023 06:33	PDK	C
Bromodichloromethane	ND	ND	ug/L	5.0	1.4	SW846 8260C	5	09/29/2023 06:33	PDK	C
Bromoform	ND	ND	ug/L	5.0	2.0	SW846 8260C	5	09/29/2023 06:33	PDK	C
Bromomethane	ND	ND,1	ug/L	5.0	2.0	SW846 8260C	5	09/29/2023 06:33	PDK	C
Carbon Disulfide	ND	ND	ug/L	5.0	1.2	SW846 8260C	5	09/29/2023 06:33	PDK	C
Carbon Tetrachloride	ND	ND	ug/L	5.0	1.6	SW846 8260C	5	09/29/2023 06:33	PDK	C
Chlorobenzene	3.4J	J	ug/L	5.0	0.95	SW846 8260C	5	09/29/2023 06:33	PDK	C
Chlorodibromomethane	ND	ND	ug/L	5.0	2.3	SW846 8260C	5	09/29/2023 06:33	PDK	C
Chloroethane	ND	ND,2	ug/L	5.0	1.7	SW846 8260C	5	09/29/2023 06:33	PDK	C
Chloroform	ND	ND	ug/L	5.0	1.1	SW846 8260C	5	09/29/2023 06:33	PDK	C
Chloromethane	ND	ND	ug/L	5.0	1.6	SW846 8260C	5	09/29/2023 06:33	PDK	C
cis-1,2-Dichloroethene	ND	ND	ug/L	5.0	1.6	SW846 8260C	5	09/29/2023 06:33	PDK	C
cis-1,3-Dichloropropene	ND	ND	ug/L	5.0	1.6	SW846 8260C	5	09/29/2023 06:33	PDK	C
Cyclohexane	ND	ND	ug/L	5.0	1.5	SW846 8260C	5	09/29/2023 06:33	PDK	C
Dibromomethane	ND	ND	ug/L	5.0	1.6	SW846 8260C	5	09/29/2023 06:33	PDK	C
Dichlorodifluoromethane	ND	ND,3	ug/L	5.0	1.7	SW846 8260C	5	09/29/2023 06:33	PDK	C
Ethylbenzene	ND	ND	ug/L	5.0	1.7	SW846 8260C	5	09/29/2023 06:33	PDK	C
Iodomethane	ND	ND	ug/L	5.0	2.1	SW846 8260C	5	09/29/2023 06:33	PDK	C
Methyl t-Butyl Ether	3.1J	J	ug/L	5.0	1.7	SW846 8260C	5	09/29/2023 06:33	PDK	C
Methylene Chloride	ND	ND	ug/L	5.0	2.3	SW846 8260C	5	09/29/2023 06:33	PDK	C
mp-Xylene	ND	ND	ug/L	10.0	2.6	SW846 8260C	5	09/29/2023 06:33	PDK	C
o-Xylene	ND	ND	ug/L	5.0	1.7	SW846 8260C	5	09/29/2023 06:33	PDK	C
Styrene	ND	ND	ug/L	5.0	1.2	SW846 8260C	5	09/29/2023 06:33	PDK	C
Tetrachloroethene	ND	ND	ug/L	5.0	1.8	SW846 8260C	5	09/29/2023 06:33	PDK	C
Toluene	ND	ND	ug/L	5.0	1.2	SW846 8260C	5	09/29/2023 06:33	PDK	C
Total Xylenes	ND	ND	ug/L	15.0	3.3	SW846 8260C	5	09/29/2023 06:33	PDK	C
trans-1,2-Dichloroethene	ND	ND	ug/L	5.0	1.3	SW846 8260C	5	09/29/2023 06:33	PDK	C
trans-1,3-Dichloropropene	ND	ND	ug/L	5.0	1.5	SW846 8260C	5	09/29/2023 06:33	PDK	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	15.0	4.3	SW846 8260C	5	09/29/2023 06:33	PDK	C
Trichloroethene	ND	ND	ug/L	5.0	1.7	SW846 8260C	5	09/29/2023 06:33	PDK	C
Trichlorofluoromethane	ND	ND	ug/L	5.0	1.2	SW846 8260C	5	09/29/2023 06:33	PDK	C
Vinyl Acetate	ND	ND	ug/L	25.0	8.0	SW846 8260C	5	09/29/2023 06:33	PDK	C
Vinyl Chloride	ND	ND	ug/L	5.0	1.5	SW846 8260C	5	09/29/2023 06:33	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	93.4%	62 – 133	09/29/2023 06:33	
1-Chloro-2-Fluorobenzene	348-51-6	88.6%	70 – 130	09/19/2023 17:35	
4-Bromofluorobenzene	460-00-4	104%	79 – 114	09/29/2023 06:33	
Dibromofluoromethane	1868-53-7	92.6%	78 – 116	09/29/2023 06:33	
Toluene-d8	2037-26-5	99.4%	76 – 127	09/29/2023 06:33	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	L-1	Collected	09/15/2023 08:50
Lab Sample ID	3323496003	Lab Receipt	09/15/2023 16:06

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	253	4	mg/L	5	5	SM2320B-2011	1	09/23/2023 05:25	JMS	F
Ammonia-N	531		mg/L	2.50	0.7	ASTM D6919-17	250	09/26/2023 10:54	NML	G
Chemical Oxygen Demand (COD)	758		mg/L	30	10	EPA 410.4	2	09/20/2023 13:47	KMS	G
Chloride	1460		mg/L	25.0	18.8	EPA 300.0	25	09/16/2023 15:29	J1W	F
Nitrate-N	ND	ND	mg/L	12.5	2.8	EPA 300.0	25	09/16/2023 15:29	J1W	F
Sulfate	ND	ND	mg/L	25.0	19.3	EPA 300.0	25	09/16/2023 15:29	J1W	F
Total Dissolved Solids	4520		mg/L	25	25	SM2540C-15	1	09/22/2023 01:36	JXK	F

Results

Client Sample ID	L-2	Collected	09/15/2023 09:20
Lab Sample ID	3323496004	Lab Receipt	09/15/2023 16:06

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	0.0017J	J	mg/L	0.0040	0.0013	SW846 6020A	1	09/26/2023 09:53	MO	E3
Arsenic, Total	0.019		mg/L	0.0059	0.0020	SW846 6020A	1	09/26/2023 09:53	MO	E3
Barium, Total	0.24		mg/L	0.010	0.0034	SW846 6020A	1	09/26/2023 09:53	MO	E3
Beryllium, Total	ND	ND	mg/L	0.0020	0.00067	SW846 6020A	1	09/26/2023 09:53	MO	E3
Cadmium, Total	ND	ND	mg/L	0.0020	0.00067	SW846 6020A	1	09/26/2023 09:53	MO	E3
Calcium, Total	108		mg/L	0.20	0.067	SW846 6020A	1	09/26/2023 09:53	MO	E3
Chromium, Total	0.047		mg/L	0.0040	0.0013	SW846 6020A	1	09/26/2023 09:53	MO	E3
Cobalt, Total	0.015		mg/L	0.010	0.0034	SW846 6020A	1	09/26/2023 09:53	MO	E3
Copper, Total	0.0046J	J	mg/L	0.010	0.0034	SW846 6020A	1	09/26/2023 09:53	MO	E3
Hardness	721	5	mg/L	0.66	0.22	EPA 200.7	1	09/22/2023 13:59	SRT	E2
Iron, Total	14.3		mg/L	0.10	0.034	SW846 6020A	1	09/26/2023 09:53	MO	E3
Lead, Total	ND	ND	mg/L	0.0040	0.0013	SW846 6020A	1	09/26/2023 09:53	MO	E3
Magnesium, Total	99.8		mg/L	0.20	0.067	SW846 6020A	1	09/26/2023 09:53	MO	E3
Manganese, Total	0.75		mg/L	0.010	0.0034	SW846 6020A	1	09/26/2023 09:53	MO	E3
Mercury, Total	ND	ND	mg/L	0.00050	0.00017	SW846 7470A	1	09/20/2023 10:27	JSE	E
Nickel, Total	0.15		mg/L	0.010	0.0034	SW846 6020A	1	09/26/2023 09:53	MO	E3
Potassium, Total	268		mg/L	0.20	0.067	SW846 6020A	1	09/26/2023 09:53	MO	E3
Selenium, Total	ND	ND	mg/L	0.010	0.0034	SW846 6020A	1	09/26/2023 09:53	MO	E3
Silver, Total	ND	ND	mg/L	0.0040	0.0013	SW846 6020A	1	09/26/2023 09:53	MO	E3
Sodium, Total	925		mg/L	19.8	6.7	SW846 6020A	100	09/26/2023 11:00	MO	E3
Thallium, Total	ND	ND	mg/L	0.0020	0.00067	SW846 6020A	1	09/26/2023 09:53	MO	E3
Vanadium, Total	0.026		mg/L	0.0040	0.0013	SW846 6020A	1	09/26/2023 09:53	MO	E3
Zinc, Total	0.0037J	J	mg/L	0.010	0.0034	SW846 6020A	1	09/26/2023 09:53	MO	E3

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	5.0	1.8	SW846 8260C	5	09/29/2023 06:53	PDK	C
1,1,1-Trichloroethane	ND	ND	ug/L	5.0	1.1	SW846 8260C	5	09/29/2023 06:53	PDK	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	5.0	1.7	SW846 8260C	5	09/29/2023 06:53	PDK	C
1,1,2-Trichloroethane	ND	ND	ug/L	5.0	1.7	SW846 8260C	5	09/29/2023 06:53	PDK	C
1,1-Dichloroethane	ND	ND	ug/L	5.0	1.4	SW846 8260C	5	09/29/2023 06:53	PDK	C
1,1-Dichloroethene	ND	ND	ug/L	5.0	1.5	SW846 8260C	5	09/29/2023 06:53	PDK	C
1,2,3-Trichloropropane	ND	ND	ug/L	10.0	3.0	SW846 8260C	5	09/29/2023 06:53	PDK	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0051	SW846 8011	1	09/19/2023 17:49	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	35.0	7.5	SW846 8260C	5	09/29/2023 06:53	PDK	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/19/2023 17:49	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	5.0	1.4	SW846 8260C	5	09/29/2023 06:53	PDK	C
1,2-Dichlorobenzene	ND	ND	ug/L	5.0	1.9	SW846 8260C	5	09/29/2023 06:53	PDK	C
1,2-Dichloroethane	ND	ND	ug/L	5.0	1.6	SW846 8260C	5	09/29/2023 06:53	PDK	C
1,2-Dichloropropane	ND	ND	ug/L	5.0	1.2	SW846 8260C	5	09/29/2023 06:53	PDK	C
1,4-Dichlorobenzene	ND	ND	ug/L	5.0	1.4	SW846 8260C	5	09/29/2023 06:53	PDK	C
2-Butanone	ND	ND	ug/L	50.0	9.0	SW846 8260C	5	09/29/2023 06:53	PDK	C
2-Hexanone	ND	ND	ug/L	25.0	6.5	SW846 8260C	5	09/29/2023 06:53	PDK	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	25.0	7.5	SW846 8260C	5	09/29/2023 06:53	PDK	C
Acetone	93.5		ug/L	50.0	15.5	SW846 8260C	5	09/29/2023 06:53	PDK	C
Acrylonitrile	ND	ND	ug/L	25.0	6.0	SW846 8260C	5	09/29/2023 06:53	PDK	C

Results

Client Sample ID	L-2	Collected	09/15/2023 09:20
Lab Sample ID	3323496004	Lab Receipt	09/15/2023 16:06

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	6.5		ug/L	5.0	1.2	SW846 8260C	5	09/29/2023 06:53	PDK	C
Bromochloromethane	ND	ND	ug/L	5.0	1.6	SW846 8260C	5	09/29/2023 06:53	PDK	C
Bromodichloromethane	ND	ND	ug/L	5.0	1.4	SW846 8260C	5	09/29/2023 06:53	PDK	C
Bromoform	ND	ND	ug/L	5.0	2.0	SW846 8260C	5	09/29/2023 06:53	PDK	C
Bromomethane	ND	ND,1	ug/L	5.0	2.0	SW846 8260C	5	09/29/2023 06:53	PDK	C
Carbon Disulfide	ND	ND	ug/L	5.0	1.2	SW846 8260C	5	09/29/2023 06:53	PDK	C
Carbon Tetrachloride	ND	ND	ug/L	5.0	1.6	SW846 8260C	5	09/29/2023 06:53	PDK	C
Chlorobenzene	ND	ND	ug/L	5.0	0.95	SW846 8260C	5	09/29/2023 06:53	PDK	C
Chlorodibromomethane	ND	ND	ug/L	5.0	2.3	SW846 8260C	5	09/29/2023 06:53	PDK	C
Chloroethane	ND	ND,2	ug/L	5.0	1.7	SW846 8260C	5	09/29/2023 06:53	PDK	C
Chloroform	ND	ND	ug/L	5.0	1.1	SW846 8260C	5	09/29/2023 06:53	PDK	C
Chloromethane	ND	ND	ug/L	5.0	1.6	SW846 8260C	5	09/29/2023 06:53	PDK	C
cis-1,2-Dichloroethene	ND	ND	ug/L	5.0	1.6	SW846 8260C	5	09/29/2023 06:53	PDK	C
cis-1,3-Dichloropropene	ND	ND	ug/L	5.0	1.6	SW846 8260C	5	09/29/2023 06:53	PDK	C
Cyclohexane	ND	ND	ug/L	5.0	1.5	SW846 8260C	5	09/29/2023 06:53	PDK	C
Dibromomethane	ND	ND	ug/L	5.0	1.6	SW846 8260C	5	09/29/2023 06:53	PDK	C
Dichlorodifluoromethane	ND	ND,3	ug/L	5.0	1.7	SW846 8260C	5	09/29/2023 06:53	PDK	C
Ethylbenzene	11.9		ug/L	5.0	1.7	SW846 8260C	5	09/29/2023 06:53	PDK	C
Iodomethane	ND	ND	ug/L	5.0	2.1	SW846 8260C	5	09/29/2023 06:53	PDK	C
Methyl t-Butyl Ether	3.2J	J	ug/L	5.0	1.7	SW846 8260C	5	09/29/2023 06:53	PDK	C
Methylene Chloride	ND	ND	ug/L	5.0	2.3	SW846 8260C	5	09/29/2023 06:53	PDK	C
mp-Xylene	18.3		ug/L	10.0	2.6	SW846 8260C	5	09/29/2023 06:53	PDK	C
o-Xylene	8.0		ug/L	5.0	1.7	SW846 8260C	5	09/29/2023 06:53	PDK	C
Styrene	ND	ND	ug/L	5.0	1.2	SW846 8260C	5	09/29/2023 06:53	PDK	C
Tetrachloroethene	ND	ND	ug/L	5.0	1.8	SW846 8260C	5	09/29/2023 06:53	PDK	C
Toluene	17.2		ug/L	5.0	1.2	SW846 8260C	5	09/29/2023 06:53	PDK	C
Total Xylenes	26.3		ug/L	15.0	3.3	SW846 8260C	5	09/29/2023 06:53	PDK	C
trans-1,2-Dichloroethene	2.0J	J	ug/L	5.0	1.3	SW846 8260C	5	09/29/2023 06:53	PDK	C
trans-1,3-Dichloropropene	ND	ND	ug/L	5.0	1.5	SW846 8260C	5	09/29/2023 06:53	PDK	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	15.0	4.3	SW846 8260C	5	09/29/2023 06:53	PDK	C
Trichloroethene	ND	ND	ug/L	5.0	1.7	SW846 8260C	5	09/29/2023 06:53	PDK	C
Trichlorofluoromethane	ND	ND	ug/L	5.0	1.2	SW846 8260C	5	09/29/2023 06:53	PDK	C
Vinyl Acetate	ND	ND	ug/L	25.0	8.0	SW846 8260C	5	09/29/2023 06:53	PDK	C
Vinyl Chloride	ND	ND	ug/L	5.0	1.5	SW846 8260C	5	09/29/2023 06:53	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	96%	62 – 133	09/29/2023 06:53	
1-Chloro-2-Fluorobenzene	348-51-6	110%	70 – 130	09/19/2023 17:49	
4-Bromofluorobenzene	460-00-4	95.7%	79 – 114	09/29/2023 06:53	
Dibromofluoromethane	1868-53-7	96%	78 – 116	09/29/2023 06:53	
Toluene-d8	2037-26-5	96.3%	76 – 127	09/29/2023 06:53	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	L-2	Collected	09/15/2023 09:20
Lab Sample ID	3323496004	Lab Receipt	09/15/2023 16:06

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	2460	4	mg/L	50	50	SM2320B-2011	10	09/23/2023 05:36	JMS	F
Ammonia-N	649		mg/L	5.00	1	ASTM D6919-17	500	09/26/2023 11:48	NML	G
Chemical Oxygen Demand (COD)	604		mg/L	30	10	EPA 410.4	2	09/20/2023 13:47	KMS	G
Chloride	1520		mg/L	25.0	18.8	EPA 300.0	25	09/16/2023 15:39	J1W	F
Nitrate-N	ND	ND	mg/L	12.5	2.8	EPA 300.0	25	09/16/2023 15:39	J1W	F
Sulfate	ND	ND	mg/L	25.0	19.3	EPA 300.0	25	09/16/2023 15:39	J1W	F
Total Dissolved Solids	4090		mg/L	25	25	SM2540C-15	1	09/22/2023 01:36	JXK	F

Results

Client Sample ID	SMW-13	Collected	09/15/2023 11:45
Lab Sample ID	3323496005	Lab Receipt	09/15/2023 16:06

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/26/2023 09:55	MO	E3
Arsenic, Total	ND	ND	mg/L	0.0033	0.0011	SW846 6020A	1	09/26/2023 09:55	MO	E3
Barium, Total	0.12		mg/L	0.0056	0.0019	SW846 6020A	1	09/26/2023 09:55	MO	E3
Beryllium, Total	0.00084J	J	mg/L	0.0011	0.00037	SW846 6020A	1	09/26/2023 09:55	MO	E3
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/26/2023 09:55	MO	E3
Calcium, Total	13.3		mg/L	0.11	0.037	SW846 6020A	1	09/26/2023 09:55	MO	E3
Chromium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/26/2023 09:55	MO	E3
Cobalt, Total	0.011		mg/L	0.0056	0.0019	SW846 6020A	1	09/26/2023 09:55	MO	E3
Copper, Total	0.050		mg/L	0.0056	0.0019	SW846 6020A	1	09/26/2023 09:55	MO	E3
Hardness	69.3	5	mg/L	0.33	0.11	EPA 200.7	1	09/22/2023 14:42	SRT	E2
Iron, Total	ND	ND	mg/L	0.056	0.019	SW846 6020A	1	09/26/2023 09:55	MO	E3
Lead, Total	0.013		mg/L	0.0022	0.00074	SW846 6020A	1	09/26/2023 09:55	MO	E3
Magnesium, Total	7.5		mg/L	0.11	0.037	SW846 6020A	1	09/26/2023 09:55	MO	E3
Manganese, Total	0.042		mg/L	0.0056	0.0019	SW846 6020A	1	09/26/2023 09:55	MO	E3
Mercury, Total	0.0017		mg/L	0.00050	0.00017	SW846 7470A	1	09/20/2023 10:31	JSE	E
Nickel, Total	0.047		mg/L	0.0056	0.0019	SW846 6020A	1	09/26/2023 09:55	MO	E3
Potassium, Total	2.2		mg/L	0.11	0.037	SW846 6020A	1	09/26/2023 09:55	MO	E3
Selenium, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/26/2023 09:55	MO	E3
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/26/2023 09:55	MO	E3
Sodium, Total	40.9		mg/L	0.11	0.037	SW846 6020A	1	09/26/2023 09:55	MO	E3
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/26/2023 09:55	MO	E3
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/26/2023 09:55	MO	E3
Zinc, Total	0.24		mg/L	0.0056	0.0019	SW846 6020A	1	09/26/2023 09:55	MO	E3

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/29/2023 04:14	PDK	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/29/2023 04:14	PDK	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/29/2023 04:14	PDK	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 04:14	PDK	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/29/2023 04:14	PDK	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/29/2023 04:14	PDK	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/29/2023 04:14	PDK	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0050	SW846 8011	1	09/19/2023 18:03	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/29/2023 04:14	PDK	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/19/2023 18:03	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/29/2023 04:14	PDK	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/29/2023 04:14	PDK	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/29/2023 04:14	PDK	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/29/2023 04:14	PDK	C
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/29/2023 04:14	PDK	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/29/2023 04:14	PDK	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/29/2023 04:14	PDK	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/29/2023 04:14	PDK	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/29/2023 04:14	PDK	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/29/2023 04:14	PDK	C

Results

Client Sample ID	SMW-13	Collected	09/15/2023 11:45
Lab Sample ID	3323496005	Lab Receipt	09/15/2023 16:06

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/29/2023 04:14	PDK	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/29/2023 04:14	PDK	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/29/2023 04:14	PDK	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/29/2023 04:14	PDK	C
Bromomethane	ND	ND,1	ug/L	1.0	0.39	SW846 8260C	1	09/29/2023 04:14	PDK	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/29/2023 04:14	PDK	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/29/2023 04:14	PDK	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/29/2023 04:14	PDK	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/29/2023 04:14	PDK	C
Chloroethane	ND	ND,2	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 04:14	PDK	C
Chloroform	0.31J	J	ug/L	1.0	0.21	SW846 8260C	1	09/29/2023 04:14	PDK	C
Chloromethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/29/2023 04:14	PDK	C
cis-1,2-Dichloroethene	0.78J	J	ug/L	1.0	0.32	SW846 8260C	1	09/29/2023 04:14	PDK	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/29/2023 04:14	PDK	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/29/2023 04:14	PDK	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/29/2023 04:14	PDK	C
Dichlorodifluoromethane	ND	ND,3	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 04:14	PDK	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/29/2023 04:14	PDK	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/29/2023 04:14	PDK	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 04:14	PDK	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/29/2023 04:14	PDK	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/29/2023 04:14	PDK	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 04:14	PDK	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/29/2023 04:14	PDK	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/29/2023 04:14	PDK	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/29/2023 04:14	PDK	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/29/2023 04:14	PDK	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/29/2023 04:14	PDK	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/29/2023 04:14	PDK	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/29/2023 04:14	PDK	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 04:14	PDK	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/29/2023 04:14	PDK	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/29/2023 04:14	PDK	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/29/2023 04:14	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	95.1%	62 – 133	09/29/2023 04:14	
1-Chloro-2-Fluorobenzene	348-51-6	118%	70 – 130	09/19/2023 18:03	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	09/29/2023 04:14	
Dibromofluoromethane	1868-53-7	93%	78 – 116	09/29/2023 04:14	
Toluene-d8	2037-26-5	99.9%	76 – 127	09/29/2023 04:14	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	SMW-13	Collected	09/15/2023 11:45
Lab Sample ID	3323496005	Lab Receipt	09/15/2023 16:06

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	ND	ND,4	mg/L	5	5	SM2320B-2011	1	09/21/2023 19:25	JMS	F
Ammonia-N	ND	ND	mg/L	0.100	0.03	ASTM D6919-17	10	09/26/2023 11:35	NML	G
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	5	EPA 410.4	1	09/20/2023 11:49	KMS	G
Chloride	111		mg/L	2.0	1.5	EPA 300.0	2	09/16/2023 15:50	J1W	F
Nitrate-N	3.2		mg/L	1.0	0.22	EPA 300.0	2	09/16/2023 15:50	J1W	F
Sulfate	ND	ND	mg/L	2.0	1.5	EPA 300.0	2	09/16/2023 15:50	J1W	F
Total Dissolved Solids	286		mg/L	25	25	SM2540C-15	1	09/22/2023 13:00	KRS	F

Results

Client Sample ID	SMW-32	Collected	09/15/2023 13:35
Lab Sample ID	3323496006	Lab Receipt	09/15/2023 16:06

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/26/2023 09:57	MO	E3
Arsenic, Total	ND	ND	mg/L	0.0033	0.0011	SW846 6020A	1	09/26/2023 09:57	MO	E3
Barium, Total	0.12		mg/L	0.0056	0.0019	SW846 6020A	1	09/26/2023 09:57	MO	E3
Beryllium, Total	0.00099J	J	mg/L	0.0011	0.00037	SW846 6020A	1	09/26/2023 09:57	MO	E3
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/26/2023 09:57	MO	E3
Calcium, Total	13.5		mg/L	0.11	0.037	SW846 6020A	1	09/26/2023 09:57	MO	E3
Chromium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/26/2023 09:57	MO	E3
Cobalt, Total	0.017		mg/L	0.0056	0.0019	SW846 6020A	1	09/26/2023 09:57	MO	E3
Copper, Total	0.034		mg/L	0.0056	0.0019	SW846 6020A	1	09/26/2023 09:57	MO	E3
Hardness	69.4	5	mg/L	0.33	0.11	EPA 200.7	1	09/22/2023 14:45	SRT	E2
Iron, Total	0.079		mg/L	0.056	0.019	SW846 6020A	1	09/26/2023 09:57	MO	E3
Lead, Total	0.00076J	J	mg/L	0.0022	0.00074	SW846 6020A	1	09/26/2023 09:57	MO	E3
Magnesium, Total	7.7		mg/L	0.11	0.037	SW846 6020A	1	09/26/2023 09:57	MO	E3
Manganese, Total	0.068		mg/L	0.0056	0.0019	SW846 6020A	1	09/26/2023 09:57	MO	E3
Mercury, Total	0.0027		mg/L	0.00050	0.00017	SW846 7470A	1	09/20/2023 10:32	JSE	E
Nickel, Total	0.067		mg/L	0.0056	0.0019	SW846 6020A	1	09/26/2023 09:57	MO	E3
Potassium, Total	2.4		mg/L	0.11	0.037	SW846 6020A	1	09/26/2023 09:57	MO	E3
Selenium, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/26/2023 09:57	MO	E3
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/26/2023 09:57	MO	E3
Sodium, Total	40.4		mg/L	0.11	0.037	SW846 6020A	1	09/26/2023 09:57	MO	E3
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/26/2023 09:57	MO	E3
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/26/2023 09:57	MO	E3
Zinc, Total	0.077		mg/L	0.0056	0.0019	SW846 6020A	1	09/26/2023 09:57	MO	E3

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/29/2023 04:34	PDK	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/29/2023 04:34	PDK	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/29/2023 04:34	PDK	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 04:34	PDK	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/29/2023 04:34	PDK	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/29/2023 04:34	PDK	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/29/2023 04:34	PDK	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0051	SW846 8011	1	09/19/2023 18:18	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/29/2023 04:34	PDK	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/19/2023 18:18	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/29/2023 04:34	PDK	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/29/2023 04:34	PDK	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/29/2023 04:34	PDK	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/29/2023 04:34	PDK	C
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/29/2023 04:34	PDK	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/29/2023 04:34	PDK	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/29/2023 04:34	PDK	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/29/2023 04:34	PDK	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/29/2023 04:34	PDK	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/29/2023 04:34	PDK	C

Results

Client Sample ID	SMW-32	Collected	09/15/2023 13:35
Lab Sample ID	3323496006	Lab Receipt	09/15/2023 16:06

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/29/2023 04:34	PDK	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/29/2023 04:34	PDK	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/29/2023 04:34	PDK	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/29/2023 04:34	PDK	C
Bromomethane	ND	ND,1	ug/L	1.0	0.39	SW846 8260C	1	09/29/2023 04:34	PDK	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/29/2023 04:34	PDK	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/29/2023 04:34	PDK	C
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	09/29/2023 04:34	PDK	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/29/2023 04:34	PDK	C
Chloroethane	ND	ND,2	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 04:34	PDK	C
Chloroform	0.28J	J	ug/L	1.0	0.21	SW846 8260C	1	09/29/2023 04:34	PDK	C
Chloromethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/29/2023 04:34	PDK	C
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/29/2023 04:34	PDK	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/29/2023 04:34	PDK	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/29/2023 04:34	PDK	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/29/2023 04:34	PDK	C
Dichlorodifluoromethane	ND	ND,3	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 04:34	PDK	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/29/2023 04:34	PDK	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/29/2023 04:34	PDK	C
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 04:34	PDK	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/29/2023 04:34	PDK	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/29/2023 04:34	PDK	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 04:34	PDK	C
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/29/2023 04:34	PDK	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/29/2023 04:34	PDK	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/29/2023 04:34	PDK	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/29/2023 04:34	PDK	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/29/2023 04:34	PDK	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/29/2023 04:34	PDK	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/29/2023 04:34	PDK	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 04:34	PDK	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/29/2023 04:34	PDK	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/29/2023 04:34	PDK	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/29/2023 04:34	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	96.2%	62 – 133	09/29/2023 04:34	
1-Chloro-2-Fluorobenzene	348-51-6	96.1%	70 – 130	09/19/2023 18:18	
4-Bromofluorobenzene	460-00-4	93.8%	79 – 114	09/29/2023 04:34	
Dibromofluoromethane	1868-53-7	93%	78 – 116	09/29/2023 04:34	
Toluene-d8	2037-26-5	96%	76 – 127	09/29/2023 04:34	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

Results

Client Sample ID	SMW-32	Collected	09/15/2023 13:35
Lab Sample ID	3323496006	Lab Receipt	09/15/2023 16:06

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	ND	ND,4	mg/L	5	5	SM2320B-2011	1	09/21/2023 19:36	JMS	F
Ammonia-N	ND	ND	mg/L	0.100	0.03	ASTM D6919-17	10	09/26/2023 11:21	NML	G
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	5	EPA 410.4	1	09/20/2023 11:49	KMS	G
Chloride	110		mg/L	2.0	1.5	EPA 300.0	2	09/16/2023 16:00	J1W	F
Nitrate-N	2.9		mg/L	1.0	0.22	EPA 300.0	2	09/16/2023 16:00	J1W	F
Sulfate	2.2		mg/L	2.0	1.5	EPA 300.0	2	09/16/2023 16:00	J1W	F
Total Dissolved Solids	288		mg/L	25	25	SM2540C-15	1	09/22/2023 13:00	KRS	F

Results

Client Sample ID	FMW-41	Collected	09/15/2023 11:10
Lab Sample ID	3323496007	Lab Receipt	09/15/2023 16:06

GASOLINE RANGE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Gasoline Range Organics	ND	ND	ug/L	100	17.0	SW846 8015D	1	09/22/2023 10:15	JTH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
a,a,a-Trifluorotoluene	98-08-8	103%	90 – 129	09/22/2023 10:15	

PETROLEUM HC's

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Diesel Range Organics C10-C28	0.11J	J	mg/L	0.16	0.029	SW846 8015D	1	09/21/2023 15:54	DXL	E

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
o-Terphenyl	84-15-1	80.1%	26 – 139	09/21/2023 15:54	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260B	1	09/29/2023 14:11	TMP	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260B	1	09/29/2023 14:11	TMP	C
Naphthalene	ND	ND	ug/L	2.0	0.34	SW846 8260B	1	09/29/2023 14:11	TMP	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260B	1	09/29/2023 14:11	TMP	C
Total Xylenes	ND	ND	ug/L	1.5	0.42	SW846 8260B	1	09/29/2023 14:11	TMP	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	94.4%	62 – 133	09/29/2023 14:11	
4-Bromofluorobenzene	460-00-4	108%	79 – 114	09/29/2023 14:11	
Dibromofluoromethane	1868-53-7	96.2%	78 – 116	09/29/2023 14:11	
Toluene-d8	2037-26-5	108%	76 – 127	09/29/2023 14:11	

Results

Client Sample ID	SMW-13	Collected	09/15/2023 11:45
Lab Sample ID	3323496008	Lab Receipt	09/15/2023 16:06

GASOLINE RANGE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Gasoline Range Organics	ND	ND	ug/L	100	17.0	SW846 8015D	1	09/22/2023 10:40	JTH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
a,a,a-Trifluorotoluene	98-08-8	102%	90 – 129	09/22/2023 10:40	

PETROLEUM HC's

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Diesel Range Organics C10-C28	0.15J	J	mg/L	0.16	0.030	SW846 8015D	1	09/21/2023 16:27	DXL	E

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
o-Terphenyl	84-15-1	79.4%	26 – 139	09/21/2023 16:27	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260B	1	09/29/2023 14:31	TMP	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260B	1	09/29/2023 14:31	TMP	C
Naphthalene	ND	ND	ug/L	2.0	0.34	SW846 8260B	1	09/29/2023 14:31	TMP	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260B	1	09/29/2023 14:31	TMP	C
Total Xylenes	ND	ND	ug/L	1.5	0.42	SW846 8260B	1	09/29/2023 14:31	TMP	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	96.7%	62 – 133	09/29/2023 14:31	
4-Bromofluorobenzene	460-00-4	95.6%	79 – 114	09/29/2023 14:31	
Dibromofluoromethane	1868-53-7	95.8%	78 – 116	09/29/2023 14:31	
Toluene-d8	2037-26-5	95.5%	76 – 127	09/29/2023 14:31	

Results

Client Sample ID	SW-1	Collected	09/15/2023 13:55
Lab Sample ID	3323496009	Lab Receipt	09/15/2023 16:06

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Dissolved	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	10/13/2023 18:09	MO	I2
Antimony, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/26/2023 09:59	MO	E2
Arsenic, Dissolved	ND	ND	mg/L	0.0030	0.0010	SW846 6020A	1	10/13/2023 18:09	MO	I2
Arsenic, Total	ND	ND	mg/L	0.0033	0.0011	SW846 6020A	1	09/26/2023 09:59	MO	E2
Barium, Dissolved	0.15		mg/L	0.0056	0.0019	SW846 6020A	1	10/13/2023 18:09	MO	I2
Barium, Total	0.16		mg/L	0.0056	0.0019	SW846 6020A	1	09/26/2023 09:59	MO	E2
Beryllium, Dissolved	ND	ND	mg/L	0.0010	0.00030	SW846 6020A	1	10/13/2023 18:09	MO	I2
Beryllium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/26/2023 09:59	MO	E2
Cadmium, Dissolved	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	10/13/2023 18:09	MO	I2
Cadmium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/26/2023 09:59	MO	E2
Calcium, Dissolved	43.0		mg/L	0.11	0.037	SW846 6020A	1	10/13/2023 18:09	MO	I2
Calcium, Total	38.6		mg/L	0.11	0.037	SW846 6020A	1	09/26/2023 09:59	MO	E2
Chromium, Dissolved	0.00087J	J	mg/L	0.0022	0.00074	SW846 6020A	1	10/13/2023 18:09	MO	I2
Chromium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/26/2023 09:59	MO	E2
Cobalt, Dissolved	0.22		mg/L	0.0056	0.0019	SW846 6020A	1	10/13/2023 18:09	MO	I2
Cobalt, Total	0.23		mg/L	0.0056	0.0019	SW846 6020A	1	09/26/2023 09:59	MO	E2
Copper, Dissolved	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	10/13/2023 18:09	MO	I2
Copper, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/26/2023 09:59	MO	E2
Hardness	195	5	mg/L	0.33	0.11	EPA 200.7	1	09/22/2023 14:49	SRT	H1
Iron, Dissolved	0.64		mg/L	0.056	0.019	SW846 6020A	1	10/13/2023 18:09	MO	I2
Iron, Total	56.5		mg/L	0.056	0.019	SW846 6020A	1	09/26/2023 09:59	MO	E2
Lead, Dissolved	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	10/13/2023 18:09	MO	I2
Lead, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/26/2023 09:59	MO	E2
Magnesium, Dissolved	22.3		mg/L	0.11	0.037	SW846 6020A	1	10/13/2023 18:09	MO	I2
Magnesium, Total	19.8		mg/L	0.11	0.037	SW846 6020A	1	09/26/2023 09:59	MO	E2
Manganese, Dissolved	8.0		mg/L	0.0056	0.0019	SW846 6020A	1	10/13/2023 18:09	MO	I2
Manganese, Total	7.5		mg/L	0.0056	0.0019	SW846 6020A	1	09/26/2023 09:59	MO	E2
Mercury, Dissolved	ND	ND	mg/L	0.00050	0.00017	SW846 7470A	1	10/13/2023 13:46	JSE	I
Mercury, Total	ND	ND	mg/L	0.00050	0.00017	SW846 7470A	1	09/20/2023 10:33	JSE	E
Nickel, Dissolved	0.0051J	J	mg/L	0.0056	0.0019	SW846 6020A	1	10/13/2023 18:09	MO	I2
Nickel, Total	0.0050J	J	mg/L	0.0056	0.0019	SW846 6020A	1	09/26/2023 09:59	MO	E2
Potassium, Dissolved	5.3		mg/L	0.11	0.037	SW846 6020A	1	10/13/2023 18:09	MO	I2
Potassium, Total	5.1		mg/L	0.11	0.037	SW846 6020A	1	09/26/2023 09:59	MO	E2
Selenium, Dissolved	ND	ND,6	mg/L	0.0056	0.0019	SW846 6020A	1	10/13/2023 18:09	MO	I2
Selenium, Total	ND	ND	mg/L	0.0056	0.0019	SW846 6020A	1	09/26/2023 09:59	MO	E2
Silver, Dissolved	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	10/13/2023 18:09	MO	I2
Silver, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/26/2023 09:59	MO	E2
Sodium, Dissolved	43.3		mg/L	0.11	0.037	SW846 6020A	1	10/13/2023 18:09	MO	I2
Sodium, Total	38.5		mg/L	0.11	0.037	SW846 6020A	1	09/26/2023 09:59	MO	E2
Thallium, Dissolved	ND	ND	mg/L	0.0010	0.00030	SW846 6020A	1	10/13/2023 18:09	MO	I2
Thallium, Total	ND	ND	mg/L	0.0011	0.00037	SW846 6020A	1	09/26/2023 09:59	MO	E2
Vanadium, Dissolved	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	10/13/2023 18:09	MO	I2
Vanadium, Total	ND	ND	mg/L	0.0022	0.00074	SW846 6020A	1	09/26/2023 09:59	MO	E2
Zinc, Dissolved	0.0031J	J	mg/L	0.0056	0.0019	SW846 6020A	1	10/13/2023 18:09	MO	I2
Zinc, Total	0.0052J	J	mg/L	0.0056	0.0019	SW846 6020A	1	09/26/2023 09:59	MO	E2

Results

Client Sample ID	SW-1	Collected	09/15/2023 13:55
Lab Sample ID	3323496009	Lab Receipt	09/15/2023 16:06

METALS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/29/2023 04:54	PDK	C
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	09/29/2023 04:54	PDK	C
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/29/2023 04:54	PDK	C
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 04:54	PDK	C
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/29/2023 04:54	PDK	C
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/29/2023 04:54	PDK	C
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	0.60	SW846 8260C	1	09/29/2023 04:54	PDK	C
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.021	0.0050	SW846 8011	1	09/19/2023 18:32	WDA	A1
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	09/29/2023 04:54	PDK	C
1,2-Dibromoethane	ND	ND	ug/L	0.021	0.010	SW846 8011	1	09/19/2023 18:32	WDA	A1
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	09/29/2023 04:54	PDK	C
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	0.38	SW846 8260C	1	09/29/2023 04:54	PDK	C
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/29/2023 04:54	PDK	C
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/29/2023 04:54	PDK	C
1,4-Dichlorobenzene	1.6		ug/L	1.0	0.27	SW846 8260C	1	09/29/2023 04:54	PDK	C
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	09/29/2023 04:54	PDK	C
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	09/29/2023 04:54	PDK	C
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	09/29/2023 04:54	PDK	C
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	09/29/2023 04:54	PDK	C
Acrylonitrile	ND	ND	ug/L	5.0	1.2	SW846 8260C	1	09/29/2023 04:54	PDK	C
Benzene	0.34J	J	ug/L	1.0	0.23	SW846 8260C	1	09/29/2023 04:54	PDK	C
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	09/29/2023 04:54	PDK	C
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	09/29/2023 04:54	PDK	C
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	09/29/2023 04:54	PDK	C
Bromomethane	ND	ND,1	ug/L	1.0	0.39	SW846 8260C	1	09/29/2023 04:54	PDK	C
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/29/2023 04:54	PDK	C
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/29/2023 04:54	PDK	C
Chlorobenzene	0.22J	J	ug/L	1.0	0.19	SW846 8260C	1	09/29/2023 04:54	PDK	C
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/29/2023 04:54	PDK	C
Chloroethane	ND	ND,2	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 04:54	PDK	C
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	09/29/2023 04:54	PDK	C
Chloromethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/29/2023 04:54	PDK	C
cis-1,2-Dichloroethene	0.33J	J	ug/L	1.0	0.32	SW846 8260C	1	09/29/2023 04:54	PDK	C
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/29/2023 04:54	PDK	C
Cyclohexane	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/29/2023 04:54	PDK	C
Dibromomethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	09/29/2023 04:54	PDK	C
Dichlorodifluoromethane	ND	ND,3	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 04:54	PDK	C
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	09/29/2023 04:54	PDK	C
Iodomethane	ND	ND	ug/L	1.0	0.42	SW846 8260C	1	09/29/2023 04:54	PDK	C
Methyl t-Butyl Ether	0.35J	J	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 04:54	PDK	C
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	09/29/2023 04:54	PDK	C
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	09/29/2023 04:54	PDK	C
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 04:54	PDK	C

Results

Client Sample ID	SW-1	Collected	09/15/2023 13:55
Lab Sample ID	3323496009	Lab Receipt	09/15/2023 16:06

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/29/2023 04:54	PDK	C
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	09/29/2023 04:54	PDK	C
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	09/29/2023 04:54	PDK	C
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	09/29/2023 04:54	PDK	C
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	09/29/2023 04:54	PDK	C
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	09/29/2023 04:54	PDK	C
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	0.86	SW846 8260C	1	09/29/2023 04:54	PDK	C
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	09/29/2023 04:54	PDK	C
Trichlorofluoromethane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	09/29/2023 04:54	PDK	C
Vinyl Acetate	ND	ND	ug/L	5.0	1.6	SW846 8260C	1	09/29/2023 04:54	PDK	C
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	09/29/2023 04:54	PDK	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	95.6%	62 – 133	09/29/2023 04:54	
1-Chloro-2-Fluorobenzene	348-51-6	92.4%	70 – 130	09/19/2023 18:32	
4-Bromofluorobenzene	460-00-4	109%	79 – 114	09/29/2023 04:54	
Dibromofluoromethane	1868-53-7	93.7%	78 – 116	09/29/2023 04:54	
Toluene-d8	2037-26-5	103%	76 – 127	09/29/2023 04:54	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	181	4	mg/L	5	5	SM2320B-2011	1	09/23/2023 07:16	JMS	F
Ammonia-N	1.49		mg/L	0.100	0.03	ASTM D6919-17	10	09/26/2023 11:07	NML	G
Chemical Oxygen Demand (COD)	22		mg/L	15	5	EPA 410.4	1	09/20/2023 11:49	KMS	G
Chloride	78.0		mg/L	2.0	1.5	EPA 300.0	2	09/16/2023 16:11	J1W	F
Nitrate-N	ND	ND	mg/L	1.0	0.22	EPA 300.0	2	09/16/2023 16:11	J1W	F
Sulfate	26.2		mg/L	2.0	1.5	EPA 300.0	2	09/16/2023 16:11	J1W	F
Total Dissolved Solids	398		mg/L	25	25	SM2540C-15	1	09/22/2023 13:00	KRS	F

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3323496001	Trip Blank	SW846 8011	SW846 8011	
		SW846 8260C	N/A	
3323496002	Field Blank	SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3323496003	L-1	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3323496004	L-2	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3323496005	SMW-13	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3323496006	SMW-32	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
3323496007	FMW-41	SW846 8015D	SW846 3510C	
		SW846 8015D	N/A	
		SW846 8260B	N/A	

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3323496008	SMW-13	SW846 8015D	SW846 3510C	
		SW846 8015D	N/A	
		SW846 8260B	N/A	
3323496009	SW-1	EPA 200.7	EPA TRMD	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		SW846 8011	SW846 8011	
		SW846 8260C	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3323496001	Trip Blank	SW846 8011	1060759	09/19/2023 10:20	WDA	SW846 8011	1060871
		N/A	N/A	N/A		SW846 8260C	1065304
3323496002	Field Blank	SW846 3015A	1060361	09/19/2023 03:25	ANN	SW846 6020A	1062223
		SW846 7470A	1060474	09/18/2023 10:30	JSE	SW846 7470A	1060582
		SW846 8011	1060759	09/19/2023 10:20	WDA	SW846 8011	1060871
		N/A	N/A	N/A		SW846 8260C	1065304
		N/A	N/A	N/A		ASTM D6919-17	1062262
		N/A	N/A	N/A		EPA 300.0	1060212
		N/A	N/A	N/A		EPA 410.4	1060980
		N/A	N/A	N/A		SM2320B-2011	1061268
		N/A	N/A	N/A		SM2540C-15	1062324
3323496003	L-1	EPA TRMD	1060451	09/18/2023 08:40	MEM	EPA 200.7	1061650
		SW846 3015A	1060361	09/19/2023 03:25	ANN	SW846 6020A	1062223
		SW846 7470A	1060790	09/19/2023 15:49	JSE	SW846 7470A	1061074
		SW846 8011	1060759	09/19/2023 10:20	WDA	SW846 8011	1060871
		N/A	N/A	N/A		SW846 8260C	1065304
		N/A	N/A	N/A		ASTM D6919-17	1062262
		N/A	N/A	N/A		EPA 300.0	1060212
		N/A	N/A	N/A		EPA 410.4	1061002
		N/A	N/A	N/A		SM2320B-2011	1061673
		N/A	N/A	N/A		SM2540C-15	1062324
3323496004	L-2	EPA TRMD	1060451	09/18/2023 08:40	MEM	EPA 200.7	1061650
		SW846 3015A	1060652	09/19/2023 04:34	ANN	SW846 6020A	1062648
		SW846 7470A	1060790	09/19/2023 15:49	JSE	SW846 7470A	1061074
		SW846 8011	1060759	09/19/2023 10:20	WDA	SW846 8011	1060871
		N/A	N/A	N/A		SW846 8260C	1065304
		N/A	N/A	N/A		ASTM D6919-17	1062262
		N/A	N/A	N/A		EPA 300.0	1060212
		N/A	N/A	N/A		EPA 410.4	1061002
		N/A	N/A	N/A		SM2320B-2011	1061673
		N/A	N/A	N/A		SM2540C-15	1062324
3323496005	SMW-13	EPA TRMD	1060451	09/18/2023 08:40	MEM	EPA 200.7	1061650
		SW846 3015A	1060652	09/19/2023 04:34	ANN	SW846 6020A	1062648
		SW846 7470A	1060790	09/19/2023 15:49	JSE	SW846 7470A	1061074
		SW846 8011	1060759	09/19/2023 10:20	WDA	SW846 8011	1060871
		N/A	N/A	N/A		SW846 8260C	1065304
		N/A	N/A	N/A		ASTM D6919-17	1062262
		N/A	N/A	N/A		EPA 300.0	1060212
		N/A	N/A	N/A		EPA 410.4	1060980
		N/A	N/A	N/A		SM2320B-2011	1061268
		N/A	N/A	N/A		SM2540C-15	1061609
3323496006	SMW-32	EPA TRMD	1060451	09/18/2023 08:40	MEM	EPA 200.7	1061650
		SW846 3015A	1060652	09/19/2023 04:34	ANN	SW846 6020A	1062648
		SW846 7470A	1060790	09/19/2023 15:49	JSE	SW846 7470A	1061074
		SW846 8011	1060759	09/19/2023 10:20	WDA	SW846 8011	1060871
		N/A	N/A	N/A		SW846 8260C	1065304
		N/A	N/A	N/A		ASTM D6919-17	1062262
		N/A	N/A	N/A		EPA 300.0	1060212
		N/A	N/A	N/A		EPA 410.4	1060980
		N/A	N/A	N/A		SM2320B-2011	1061268
		N/A	N/A	N/A		SM2540C-15	1061609
3323496007	FMW-41	SW846 3510C	1060504	09/19/2023 11:30	SRL	SW846 8015D	1061165
		N/A	N/A	N/A		SW846 8015D	1061652
		N/A	N/A	N/A		SW846 8260B	1065552
3323496008	SMW-13	SW846 3510C	1060504	09/19/2023 11:30	SRL	SW846 8015D	1061165
		N/A	N/A	N/A		SW846 8015D	1061652
		N/A	N/A	N/A		SW846 8260B	1065552

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3323496009	SW-1	EPA TRMD	1060451	09/18/2023 08:40	MEM	EPA 200.7	1061650
		SW846 3015A	1060652	09/19/2023 04:34	ANN	SW846 6020A	1062648
		SW846 3015A	1072308	10/10/2023 03:58	ANN	SW846 6020A	1074524
		SW846 7470A	1073731	10/13/2023 10:20	JSE	SW846 7470A	1074453
		SW846 7470A	1060790	09/19/2023 15:49	JSE	SW846 7470A	1061074
		SW846 8011	1060759	09/19/2023 10:20	WDA	SW846 8011	1060871
		N/A	N/A	N/A		SW846 8260C	1065304
		N/A	N/A	N/A		ASTM D6919-17	1062262
		N/A	N/A	N/A		EPA 300.0	1060212
		N/A	N/A	N/A		EPA 410.4	1060980
		N/A	N/A	N/A		SM2320B-2011	1061673
		N/A	N/A	N/A		SM2540C-15	1061609

CHAIN OF CUSTODY / SAMPLE INFORMATION FORM

3323496
Logged By: MJE
PM: GJM

Maryland Environmental Service • 259 Najoles Rd. • Millersville, MD 21108 • (410) 729-8200 • FAX (410) 72

Laboratory: ALS

Sampler: Laura Russell / Brooke Zibell

Client Name: Maryland Environmental Service, Attn: Wil Herpel

Facility Name: Eastern Sanitary Landfill

Client Address: 259 Najoles Rd, Millersville, MD 21108 410-729-8356

Project# / Purpose: 3926-2000

Invoice To: Same

Turnaround Time: Routine

Sample #	Sample ID	Grab or Composite	Container Description/ Preservation Status	Matrix	# of Containers	Date	Time	Analyses Required/Comments
1	Trip Blank	N/A	40 mL G Na2S2O3	W	2	9/15/23	--	VOCs (8011)
↓	↓	↓	40 mL G HCl	W	2	↓	--	VOCs (8260)
2	Field Blank	G	40 mL G Na2S2O3	W	2	9/15/23	1021	VOCs (8011)
			40 mL G HCl	W	2			VOCs (8260)
			125 mL P HNO3	W	1			Metals - Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn (6020), Hg (7470), Hardness
			1 L P unpreserved	W	1			Alkalinity, TDS, Nitrate (EPA 300), Sulfate, Chloride
↓	↓	↓	250 mL P H2SO4	W	1	↓	↓	Ammonia, COD

Transferred by: Laura Russell	Received by:	Date 9/15/23	Time 1430	Cooler Receipt I
Transferred by:	Received by: DAG/ALS	Date 9/15/23	Time 1606	Sufficient ice? - Yes/No Sample containers properly pr
Transferred by:	Received by:	Date	Time	Initials: Date:

Temp By: DAG | WO Temp (°C): 2 | Therm ID: 575

Receipt Info Completed By:	DAG
Cooler Custody Seal Intact	Y N NA
Sample Custody Seal Intact	Y N NA
Received on Ice	Y N NA
Cooler & Samples Intact	Y N
Correct Containers Provided	Y N
Sample Label/COC Agree	Y N
Adequate Sample Volumes	Y N
CR6 Samples Filtered	Y N NA
OP Samples Filtered	Y N NA
VOA Trip Blank	Y N NA
NJ≤ 4 Days?	Y N
Rad Screen (uCi)	—
Courier/Tracking #:	—
SDWA Compliance	Y N
PWSID	
WV Containers 0-6°C	Y N NA

CHAIN OF CUSTODY / SAMPLE INFORMATION FORM

Maryland Environmental Service • 259 Najoles Rd. • Millersville, MD 21108 • (410) 729-8200 • FAX (410) 729-8340

332349

Laboratory: ALS

Sampler: Laura Russell / Brooke Zibell

Client Name: Maryland Environmental Service, Attn: Wil Herpel

Facility Name: Eastern Sanitary Landfill

Client Address: 259 Najoles Rd, Millersville, MD 21108 410-729-8356

Project# / Purpose: 3926-2000

Invoice To: Same

Turnaround Time: Routine

Sample #	Sample ID	Grab or Composite	Container Description/ Preservation Status	Matrix	# of Containers	Date	Time	Analyses Required/Comments
3	L-1	G	40 mL G Na2S2O3	NPW	2	9/15/23	0850	VOCs (8011)
			40 mL G HCl	NPW	2			VOCs (8260)
			125 mL P HNO3	NPW	2			Metals - Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn (6020), Hg (7470), Hardness
			1 L P unpreserved	NPW	1			Alkalinity, TDS, Nitrate (EPA 300), Sulfate, Chloride
			250 mL P H2SO4	NPW	1			Ammonia, COD
4	L-2	G	Same as Sample #3	NPW	8	9/15/23	0920	Same as Sample #3
5	SMW-13	G	Same as Sample #3	NPW	8	9/15/23	1145	Same as Sample #3
6	SMW--32	G	Same as Sample #3	NPW	8	9/15/23	1335	Same as Sample #3

Transferred by: Laura Russell	Received by:	Date 9/15/23	Time 1430
Transferred by:	Received by: BAG/ALS	Date 9.15.23	Time 1606
Transferred by:	Received by:	Date	Time

Cooler Receipt Information **(LAB USE ONLY)**

Sufficient ice? - Yes/No Temp.= _____

Sample containers properly pres'd? - Yes/No If No, explain

Initials: Date:

10/13/2023 8:38 AM

CHAIN OF CUSTODY / SAMPLE INFORMATION FORM

Maryland Environmental Service • 259 Najoles Rd. • Millersville, MD 21108 • (410) 729-8200 • FAX (410) 729-8340

33234/94

10/13/2023 8:38 AM

atory: ALS

Name: Maryland Environmental Service, Attn: Wil Herpel

Address: 259 Najoles Rd, Millersville, MD 21108 410-729-8356

e To: Same

Sampler: Laura Russell / Brooke Zibell

Facility Name: Eastern Sanitary Landfill

Project# / Purpose: 3926-2000

Turnaround Time: Routine

mple #	Sample ID	Grab or Composite	Container Description/ Preservation Status	Matrix	# of Containers	Date	Time	Analyses Required/Comments
7	FMW-41	G	1 L G Amber H2SO4	NPW	1	9/15/23	1110	TPH DRO (8015)
	↓	G	40 mL G HCl	NPW	2	↓	↓	TPH GRO (8015)
↓	↓	G	40 mL G HCl	NPW	2	↓	↓	BTEX: Benzene, toluene ethylbenzene, xylenes, naphthalene (8260)
8	SMW-13	G	Same as Sample #	NPW	5	9/15/23	1145	Same as Sample #

sferred by: Laura Russell	Received by:	Date 9/15/23	Time 1430	Cooler Receipt Information **(LAB USE ONLY)**
sferred by:	Received by: DAG/ALS	Date 9/15/23	Time 1650	Sufficient ice? - Yes/No Temp.= _____
sferred by:	Received by:	Date	Time	Sample containers properly pres'd? - Yes/No If No, explain
				Initials: Date:

CHAIN OF CUSTODY / SAMPLE INFORMATION FORM 3323496

Maryland Environmental Service • 259 Najoles Rd. • Millersville, MD 21108 • (410) 729-8200 • FAX (410) 729-8340

atory: ALS

Name: Maryland Environmental Service, Attn: Wil Herpel

Address: 259 Najoles Rd, Millersville, MD 21108 410-729-8356

e To: Same

Sampler: Laura Russell / Brooke Zibell

Facility Name: Eastern Sanitary Landfill

Project# / Purpose: 3926-2000

Turnaround Time: Routine

mple #	Sample ID	Grab or Composite	Container Description/ Preservation Status	Matrix	# of Containers	Date	Time	Analyses Required/Comments
9	SW-1	G	40 mL G Na2S2O3	NPW	2	9/15/23	1355	VOCs (8011)
			40 mL G HCl	NPW	2			VOCs (8260)
			250 mL P unpreserved	NPW	1			**(Lab to Filter) Dissolved Metals** - Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn (6020), Hg (7470)
			1 L P unpreserved	NPW	1			Alkalinity, TDS, Nitrate (EPA 300), Sulfate, Chloride
			250 mL P H2SO4	NPW	1			Ammonia, COD
			125 ml Plastic HNO3	NPW	1			Hardness

sferred by: Laura Russell	Received by:	Date 9/15/23	Time 1430	Cooler Receipt Information **(LAB USE ONLY)**
sferred by:	Received by: DAG/ALS	Date 9.15.23	Time 1606	Sufficient ice? - Yes/No Temp.= _____
sferred by:	Received by:	Date	Time	Sample containers properly pres'd? - Yes/No If No, explain
				Initials: Date:

10/13/2023 8:38 AM
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APPENDIX D

Spring 2022 Groundwater and Surface Water Event Summary Tables (Analytical Results) for Volatile Organic Compounds (Table I), Metals (Table II) and Water Quality Parameters, and Assessment Monitoring Parameters

ESL Fall 2023 Event Summary Table I Parameters for Groundwater Wells

			Date & Well ID														
			9/11/2023							9/12/2023							
Parameter Name	Units	Compliance Limit	Field Blank	GWM-1	GWM-16D	GWM-2	GWM-3	GWM-9	Trip Blank	Field Blank	GWM-11	GWM-15D	GWM-17D	GWM-17S	GWM-4	Trip Blank
Acetone	ug/L	1400	ND	7.6 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	0.39 J	ND	0.54 J	0.78 J	ND	ND
Bromochloromethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	1	0.93 JB	1.1 B	0.76 JB	0.76 JB	0.73 JB	0.85 J	0.84 J	0.65 JB	0.73 JB	0.84 JB	1 B	0.87 JB	0.62 J
2-Butanone	ug/L	700	ND	7.1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	1.7	0.31 J	ND	ND	ND	ND	ND	0.33 J	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	0.41 J	0.76 JB	1.4 B	0.89 JB	0.71 JB	0.99 JB	0.34 J	0.36 J	0.61 JB	0.58 JB	0.5 JB	0.52 JB	0.86 JB	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND	2.2	ND	1.3	1.6	1.2	ND
trans-1,4-dichloro-2-butene	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.34 J	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	0.75 J	ND	ND	ND	ND	1	ND	0.62 J	0.67 J	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	--	ND	ND	0.78 J	0.47 J	ND	0.43 J	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	10.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	0.55 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	0.62 J	ND	ND	ND	0.57 J	ND
Trichlorofluoromethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
mp-Xylene	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	0.36 J	ND	3.4	ND	ND	ND	ND	ND	ND	ND	ND

			Date & Well ID														
			9/13/2023							9/14/2023				9/15/2023			
Parameter Name	Units	Compliance Limit	Field Blank	GWM-10	GWM-12	GWM-14	GWM-5A	GWM-8	MW-15A	Trip Blank	Field Blank	GWM-19D	GWM-6	Trip Blank	Field Blank	SMW-13	SMW-32	Trip Blank
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.5	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	0.74 J	ND	0.56 JB	0.64 JB	0.87 JB	ND	0.69 JB	0.96 J	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND	1.6	0.9 JB	0.69 JB	2.1	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	0.37 J	ND	0.66 JB	0.54 JB	0.52 JB	ND	0.59 JB	0.39 J	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND	0.74 J	0.41 JB	0.29 JB	0.91 J	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.78 J	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	2.1	ND	ND	ND	ND	ND	ND	0.36 J	2.4	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.5	ND	ND	ND	ND	ND
2-Hexanone	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
mp-Xylene	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.64 J	ND	ND	ND	ND	ND
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.31 J	0.28 J	ND

ESL Fall 2023 Event Summary Table II Metals & Water Quality Parameters for Groundwater Wells

			Sample Date & Well ID											
			9/11/2023						9/12/2023					
Parameter Name	Units	Compliance Limit	Field Blank	GWM-1	GWM-16D	GWM-2	GWM-3	GWM-9	Field Blank	GWM-11	GWM-15D	GWM-17D	GWM-17S	GWM-4
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	0.0022 J	ND	ND	ND	ND	ND	ND	ND	ND	0.0012 J	ND
Barium, Total	mg/L	2	ND	0.054	0.14	0.1	0.076	0.058	ND	0.22	0.078	0.28	0.23	0.13
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	0.053 J	26.2	12.6	8.8	9.2	8.2	0.055 J	39.6	19	40.2	38.8	63.5
Chromium, Total	mg/L	0.1	ND	0.0098	0.0027	0.0017 J	0.0057	0.0012 J	ND	ND	0.0037	0.0014 J	0.0022 J	0.0017 J
Cobalt, Total	mg/L	--	ND	ND	0.004 J	0.042	0.0021 J	ND	ND	0.19	0.027	0.32	0.69	0.0096
Copper, Total	mg/L	1.3	ND	0.0085	0.0065	0.0027 J	ND	0.013	ND	0.0065	0.016	ND	ND	0.007
Iron, Total	mg/L	0.3	ND	0.58	0.026 J	0.047 J	0.028 J	0.065	ND	67.7	0.3	0.66	66.3	0.52
Lead, Total	mg/L	0.015	ND	ND	ND	ND	0.00075 J	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/L	--	ND	6.1	7.2	6.8	7.8	4.9	ND	16.6	19	21.3	21.9	12.5
Manganese, Total	mg/L	0.043	ND	0.029	0.028	0.17	0.01	0.049	ND	2.4	0.98	3.2	7.1	0.16
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	0.00033 J	ND	ND	ND	ND	0.00054	ND	ND
Nickel, Total	mg/L	0.039	ND	0.0049 J	0.018	0.087	0.0037 J	0.0033 J	ND	0.011	0.0096	0.062	0.034	0.0051 J
Potassium, Total	mg/L	--	ND	2.6	3.3	2.9	2	1.9	ND	6.9	2.6	3.5	2.9	7.9
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	0.21	18.6	32	40.2	22.5	98.9	0.19	58.1	32.4	39.2	41	56
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	0.0051	ND	ND	ND	ND	ND	ND	0.0015 J	ND	ND	ND
Zinc, Total	mg/L	0.6	ND	0.009	0.027	0.067	0.0026 J	0.016	ND	0.0022 J	0.0074	0.03	0.011	0.0021 J
Alkalinity, Total	mg/L	--	ND	104	7	5	21	14	ND	156	51	164	166	188
Ammonia-N	mg/L	--	0.026	3.68	0.207	0.18	0.123	0.391	0.248	1.02	0.506	0.537	0.5	0.514
Chemical Oxygen Demand (COD)	mg/L	--	ND	30	ND	6 J	5 J	6 J	ND	15	ND	5 J	15	ND
Chloride	mg/L	250	ND	30	74.8	82.5	41.5	164	ND	129	77.8	102	102	112
Hardness	mg/L	--	0.23 J	93.7	62.2	50.1	54.3	39.7	0.2 J	185	131	205	200	224
Nitrate-N	mg/L	10	ND	0.26 J	2.9	2.2	2.4	0.79 J	ND	ND	ND	ND	ND	0.55 J
pH	SU	8.5	--	6.68	5.01	4.59	5.14	5.17	--	6.22	5.18	5.82	6.22	6.5
Specific Conductance	umhos/cm	--	--	276.49	299.97	327.18	232.91	573.01	--	912.48	444.01	623.01	812.63	743.17
Sulfate	mg/L	250	ND	3.8	16.1	16.3	26.9	8.8	ND	19.8	60.5	19.5	19.3	28.7
Total Dissolved Solids	mg/L	500	ND	186	210	194	154	324	ND	448	270	358	382	452
Turbidity	NTU	5	--	176.97	5.32	2.81	4.99	1.15	--	0	218.91	5.56	1.26	0

			Sample Date & Well ID												
			9/13/2023							9/14/2023			9/15/2023		
Parameter Name	Units	Compliance Limit	Field Blank	GWM-10	GWM-12	GWM-14	GWM-5A	GWM-8	MW-15A	Field Blank	GWM-19D	GWM-6	Field Blank	SMW-13	SMW-32
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	0.0015 J	ND	ND	ND	ND	ND	0.0015 J	ND	ND	ND
Barium, Total	mg/L	2	ND	0.028	0.094	0.054	0.11	0.062	0.027	ND	0.062	0.095	ND	0.12	0.12
Beryllium, Total	mg/L	0.004	ND	0.00039 J	ND	ND	ND	ND	ND	ND	0.0004 J	ND	ND	0.00084 J	0.00099 J
Cadmium, Total	mg/L	0.005	ND	0.005	ND	ND	ND	0.0023	0.0038	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	0.069 J	2.3	9.3	10.8	32.4	9.2	2.2	0.061 J	8.4	12.1	0.087 J	13.3	13.5
Chromium, Total	mg/L	0.1	ND	0.00076 J	0.0012 J	0.00092 J	0.017	0.0021 J	ND	ND	0.0015 J	0.00084 J	ND	ND	ND
Cobalt, Total	mg/L	--	ND	0.031	0.0074	0.22	0.069	0.0037 J	0.03	ND	0.013	0.012	ND	0.011	0.017
Copper, Total	mg/L	1	ND	0.025	0.012	ND	0.002 J	ND	0.029	ND	0.0094	0.004 J	ND	0.05	0.034
Iron, Total	mg/L	0.3	ND	0.23	ND	55.5	3.6	1.2	0.22	ND	ND	61.7	ND	ND	0.079
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	ND	ND	ND	0.0021 J	ND	ND	0.013	0.00076 J
Magnesium, Total	mg/L	--	ND	1	4.7	14	11.8	0.94	1	ND	4.8	7.8	ND	7.5	7.7
Manganese, Total	mg/L	0.043	ND	0.1	0.026	2.9	1.3	0.048	0.098	ND	0.07	0.35	ND	0.042	0.068
Mercury, Total	mg/L	0.002	ND	ND	0.0024	ND	0.00038 J	ND	ND	ND	0.0021	ND	ND	0.0017	0.0027
Nickel, Total	mg/L	0.039	ND	0.056	0.024	0.008	0.017	0.005 J	0.056	ND	0.026	0.0053 J	ND	0.047	0.067
Potassium, Total	mg/L	--	ND	1.5	2	0.59	5.2	6.3	1.4	ND	2.5	1.8	ND	2.2	2.4
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	0.17	3	23.3	27.4	39.7	48.6	2.8	0.19	14.4	38.3	0.26	40.9	40.4
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	ND	0.045	0.031	0.013	0.0073	0.0081	0.045	ND	0.031	0.0019 J	ND	0.24	0.077
Alkalinity, Total	mg/L	--	ND	ND	11	152	108	36	ND	ND	12	66	ND	ND	ND
Ammonia-N	mg/L	--	0.029	0.189	0.255	0.341	0.275	0.288	0.188	0.03	0.208	0.318	0.037	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	ND	ND	ND	15	6 J	ND	ND	ND	ND	19	ND	ND	ND
Chloride	mg/L	250	ND	1.6 J	60.5	45.3	76.7	17.4	1.6 J	ND	37	77.7	ND	111	110
Hardness	mg/L	--	0.22	10.2	49.3	92.4	153	29.5	10.3	0.19	40.6	62.1	0.26	69.3	69.4
Nitrate-N	mg/L	10	ND	ND	2.1	ND	ND	0.5 J	ND	ND	1.3	ND	ND	3.2	2.9
pH	SU	8.5	--	4.37	4.66	6.1	5.9	10.71	--	--	4.64	6.29	--	4.93	4.52
Specific Conductance	umhos/cm	--	--	48.28	234.64	475.52	488.96	357.96	--	--	172.35	483.99	--	338	351
Sulfate	mg/L	250	ND	16.5	1.9 J	16.8	32.4	86.9	16.5	ND	14.2	9.1	ND	ND	2.2
Total Dissolved Solids	mg/L	500	ND	50	164	290	320	222	53	ND	135	250	ND	286	288
Turbidity	NTU	--	--	0	30.34	0.53	54.14	11.39	--	--	0	0	--	0.6	1.52

ESL Spring 2023 Monitoring Event Summary - Assessment Monitoring, Organochloride Pesticides

			Date & Well ID					
			9/11/2023			9/12/2023		
Parameter Name	Units	Compliance Limit	GWM-16D	GWM-2	GWM-9	GWM-17D	GWM-17S	GWM-4
4,4'-DDD	ug/L	0.0063	ND	ND	ND	0.0012	0.001 J	ND
4,4'-DDE	ug/L	0.046	ND	ND	ND	ND	ND	ND
4,4'-DDT	ug/L	0.23	ND	ND	ND	ND	ND	ND
Aldrin	ug/L	0.00092	ND	ND	ND	ND	ND	ND
alpha-HCH (alpha-BHC)	ug/L	0.0072	ND	ND	ND	ND	ND	ND
beta-BHC	ug/L	0.025	0.00035 J	ND	ND	ND	ND	ND
Chlordane	ug/L	2	ND	ND	ND	ND	ND	ND
delta-BHC	ug/L	0.2	ND *-	ND *-	ND *-	ND *-	ND *-	ND *-
Dieldrin	ug/L	0.0018	ND	0.015	ND	0.004	0.0042	0.0047
Endosulfan I	ug/L	10	ND	ND	ND	ND	ND	ND
Endosulfan II	ug/L	10	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	ug/L	10	ND	ND	ND	ND	ND	ND
Endrin	ug/L	2	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	ug/L	2	ND	ND	ND	ND	ND	ND
gamma-BHC	ug/L	0.2	ND	ND	ND	ND	ND	ND
Heptachlor	ug/L	0.4	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	ug/L	0.2	ND	ND	ND	ND	ND	ND
Methoxychlor	ug/L	40	ND	ND	ND	ND	ND	ND
Toxaphene	ug/L	3	ND	ND	ND	ND	ND	ND

ESL Fall 2023 Monitoring Event Summary, Leachate - Table I

Name: ESL Leachate

Sample Date:	9/15/2023			
Number of Sampling Locations:	2			
Parameter Name	**Units**	**TCLP**	**L-1**	**L-2**
Acetone	ug/L	–	55	93.5
Acrylonitrile	ug/L	–	ND	ND
Benzene	ug/L	500	ND	6.5
Bromochloromethane	ug/L	–	ND	ND
Bromomethane	ug/L	–	ND	ND
2-Butanone	ug/L	200000	ND	ND
Carbon disulfide	ug/L	–	ND	ND
Carbon Tetrachloride	ug/L	500	ND	ND
Chlorobenzene	ug/L	100000	3.4 J	ND
Chloroethane	ug/L	–	ND	ND
Chloromethane	ug/L	–	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	–	ND	ND
1,2-Dibromoethane	ug/L	–	ND	ND
Dibromomethane	ug/L	–	ND	ND
1,2-Dichlorobenzene	ug/L	–	ND	ND
1,4-Dichlorobenzene	ug/L	7500	2.7 J	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND
1,1-Dichloroethane	ug/L	–	ND	ND
1,2-Dichloroethane	ug/L	500	ND	ND
1,1-Dichloroethene	ug/L	700	ND	ND
cis-1,2-Dichloroethene	ug/L	–	ND	ND
trans-1,2-Dichloroethene	ug/L	–	ND	2 J
Methylene Chloride	ug/L	–	ND	ND
Methyl t-Butyl Ether	ug/L	–	3.1 J	3.2 J
1,2-Dichloropropane	ug/L	–	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND
Ethylbenzene	ug/L	–	ND	11.9
2-Hexanone	ug/L	–	ND	ND
Iodomethane	ug/L	–	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	–	ND	ND
Styrene	ug/L	–	ND	ND

Sample Date:	9/15/2023			
Number of Sampling Locations:	2			
Parameter Name	**Units**	**TCLP**	**L-1**	**L-2**
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	–	ND	ND
Tetrachloroethene	ug/L	700	ND	ND
Toluene	ug/L	–	ND	17.2
1,1,1-Trichloroethane	ug/L	–	ND	ND
1,1,2-Trichloroethane	ug/L	–	ND	ND
Trichloroethene	ug/L	500	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND	ND
Vinyl acetate	ug/L	–	ND	ND
Vinyl chloride	ug/L	200	ND	ND
Total Xylenes	ug/L	10000	ND	26.3
mp-Xylene	ug/L	10000	ND	18.3
o-Xylene	ug/L	10000	ND	8
Bromodichloromethane	ug/L	–	ND	ND
Chlorodibromomethane	ug/L	–	ND	ND
Bromoform	ug/L	–	ND	ND
Chloroform	ug/L	6000	ND	ND

ESL Fall 2023 Monitoring Event Summary, Leachate - Table II and Water Quality Parameters

Name: ESL Leachate

Sampling Event	3/17/2023			
Number of Sampling Locations:	2			
Parameter Name	**Units**	**TCLP**	**L-1**	**L-2**
Antimony, Total	mg/L	–	ND	0.0021 J
Arsenic, Total	mg/L	5	0.0068	0.027
Barium, Total	mg/L	100	0.41	0.32
Beryllium, Total	mg/L	–	ND	ND
Cadmium, Total	mg/L	1	ND	ND
Calcium, Total	mg/L	–	129	158
Chromium, Total	mg/L	5	0.026	0.088
Cobalt, Total	mg/L	–	0.015	0.029
Copper, Total	mg/L	–	0.0043 J	0.0081 J
Iron, Total	mg/L	–	6.2	8.5
Lead, Total	mg/L	5	ND	ND
Magnesium, Total	mg/L	–	126	206
Manganese, Total	mg/L	–	0.47	1.5
Mercury, Total	mg/L	0.2	ND	ND
Nickel, Total	mg/L	–	0.043	0.26
Potassium, Total	mg/L	–	232	484
Selenium, Total	mg/L	1	ND	ND
Silver, Total	mg/L	5	ND	ND
Sodium, Total	mg/L	–	898	1550
Thallium, Total	mg/L	–	ND	ND
Vanadium, Total	mg/L	–	0.0055	0.043
Zinc, Total	mg/L	–	0.014	0.0041 J
Alkalinity, Total	mg/L	–	2300	4800
Ammonia-N	mg/L	–	391	831
Chemical Oxygen Demand (COD)	mg/L	–	622	1080
Chloride	mg/L	–	923	2270
Hardness	mg/L	–	718	1100
Nitrate-N	mg/L	–	ND	ND
pH	SU	–	7.03	7.17
Specific Conductance	umhos/cm	–	7295.1	15187
Sulfate	mg/L	–	ND	ND
Total Dissolved Solids	mg/L	–	3400	6280

Sampling Event	3/17/2023			
Number of Sampling Locations:	2			
Parameter Name	**Units**	**TCLP**	**L-1**	**L-2**
Turbidity	NTU	–	209.04	85.22

ESL Fall 2023 Monitoring Event Summary Surface Water - Table I

Name: Eastern Sanitary Landfill - Surface water

Sample Date:	9/15/2023				
Number of Sampling Locations:	3				
Parameter Name	**Units**	**NCTS**	**Field Blank**	**SW-1**	**Trip Blank**
Acetone	ug/L	–	ND	ND	ND
Acrylonitrile	ug/L	0.51	ND	ND	ND
Benzene	ug/L	22	ND	0.34 J	ND
Bromochloromethane	ug/L	–	ND	ND	ND
Bromomethane	ug/L	–	ND	ND	ND
2-Butanone	ug/L	–	ND	ND	ND
Carbon disulfide	ug/L	–	ND	ND	ND
Carbon Tetrachloride	ug/L	2.3	ND	ND	ND
Chlorobenzene	ug/L	130	ND	0.22 J	ND
Chloroethane	ug/L	–	ND	ND	ND
Chloromethane	ug/L	–	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	–	ND	ND	ND
1,2-Dibromoethane	ug/L	–	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND
1,2-Dichlorobenzene	ug/L	420	ND	ND	ND
1,4-Dichlorobenzene	ug/L	63	ND	1.6	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND
1,1-Dichloroethane	ug/L	–	ND	ND	ND
1,2-Dichloroethane	ug/L	3.8	ND	ND	ND
1,1-Dichloroethene	ug/L	330	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	–	ND	0.33 J	ND
trans-1,2-Dichloroethene	ug/L	140	ND	ND	ND
Methylene Chloride	ug/L	46	ND	ND	ND
Methyl t-Butyl Ether	ug/L	–	ND	0.35 J	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND
Ethylbenzene	ug/L	530	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	–	ND	ND	ND
Styrene	ug/L	–	ND	ND	ND

Sample Date:	9/15/2023				
Number of Sampling Locations:	3				
Parameter Name	**Units**	**NCTS**	**Field Blank**	**SW-1**	**Trip Blank**
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	1.7	ND	ND	ND
Tetrachloroethene	ug/L	6.9	ND	ND	ND
Toluene	ug/L	1300	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5.9	ND	ND	ND
Trichloroethene	ug/L	25	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND
Vinyl acetate	ug/L	–	ND	ND	ND
Vinyl chloride	ug/L	0.25	ND	ND	ND
Total Xylenes	ug/L	–	ND	ND	ND
mp-Xylene	ug/L	–	ND	ND	ND
o-Xylene	ug/L	–	ND	ND	ND
Bromodichloromethane	ug/L	80	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND

ESL Fall 2023 Monitoring Event Summary Surface Water - Table II and Water Quality Parameters

Name: Eastern Sanitary Landfill - Surface water

Sampling Event	9/15/2023			
Number of Sampling Locations:	2			
Parameter Name	**Units**	**NCTS**	**Field Blank**	**SW-1**
Antimony, Total	mg/L	0.0056	ND	ND
Antimony, Dissolved	mg/L	0.0056	–	ND
Arsenic, Total	mg/L	0.00018	ND	ND
Arsenic, Dissolved	mg/L	0.00018	–	ND
Barium, Total	mg/L	1	ND	0.16
Barium, Dissolved	mg/L	1	–	0.15
Beryllium, Total	mg/L	0.004	ND	ND
Beryllium, Dissolved	mg/L	0.004	–	ND
Cadmium, Total	mg/L	0.00025	ND	ND
Cadmium, Dissolved	mg/L	0.00025	–	ND
Calcium, Total	mg/L	–	0.087 J	38.6
Calcium, Dissolved	mg/L	–	–	43
Chromium, Total	mg/L	0.1	ND	ND
Chromium, Dissolved	mg/L	0.1	–	0.00087
Cobalt, Total	mg/L	–	ND	0.23
Cobalt, Dissolved	mg/L	–	–	0.22
Copper, Total	mg/L	0.009	ND	ND
Copper, Dissolved	mg/L	0.009	–	ND
Iron, Total	mg/L	–	ND	56.5
Iron, Dissolved	mg/L	–	–	0.64
Lead, Total	mg/L	0.0025	ND	ND
Lead, Dissolved	mg/L	0.0025	–	ND
Magnesium, Total	mg/L	–	ND	19.8
Magnesium, Dissolved	mg/L	–	–	22.3
Manganese, Total	mg/L	–	ND	7.5
Manganese, Dissolved	mg/L	–	–	8
Mercury, Total	mg/L	0.00077	ND	ND
Mercury, Dissolved	mg/L	0.00077	–	ND
Nickel, Total	mg/L	0.052	ND	0.005 J
Nickel, Dissolved	mg/L	0.052	–	0.0051
Potassium, Total	mg/L	–	ND	5.1
Potassium, Dissolved	mg/L	–	–	5.3

Sampling Event	9/15/2023			
Number of Sampling Locations:	2			
Parameter Name	**Units**	**NCTS**	**Field Blank**	**SW-1**
Selenium, Total	mg/L	0.005	ND	ND
Selenium, Dissolved	mg/L	0.005	–	ND
Silver, Total	mg/L	0.0032	ND	ND
Silver, Dissolved	mg/L	0.0032	–	ND
Sodium, Total	mg/L	–	0.26	38.5
Sodium, Dissolved	mg/L	–	–	43.3
Thallium, Total	mg/L	0.00024	ND	ND
Thallium, Dissolved	mg/L	0.00024	–	ND
Vanadium, Total	mg/L	–	ND	ND
Vanadium, Dissolved	mg/L	–	–	ND
Zinc, Total	mg/L	0.12	ND	0.0052 J
Zinc, Dissolved	mg/L	0.12	–	0.0031
Alkalinity, Total	mg/L	–	ND	181
Ammonia-N	mg/L	–	0.037	1.49
Chemical Oxygen Demand (COD)	mg/L	–	ND	22
Chloride	mg/L	–	ND	78
Hardness	mg/L	–	0.26	195
Nitrate-N	mg/L	–	ND	ND
pH	SU	–	–	6.4
Specific Conductance	umhos/cm	–	–	796
Sulfate	mg/L	–	ND	26.2
Total Dissolved Solids	mg/L	–	ND	398
Turbidity	NTU	–	–	14.9

Index for Event Summary Tables & Historical Tables

"--" - Not analyzed or not reported
B – Detected in Trip or Field Blank
- At the direction of Baltimore County, B qualifiers were continued to be entered by Reporting Staff.

ND – non-detect
- All concentrations reported as "ND" before 2014 were detected less than their Reporting Limit

J - (Before 2022) Detected below PQL, (2022-present) Detected below Reporting Limit
U – Not detected
R – Potentially biased
Shading – exceeds compliance limit (MCL, Action Level, Secondary MCL [SMCL], MDE Clean-up Standard, or TCLP standard)

Monitoring Well Information Table		
Well No.	***Well Information, including parameter analysis***	***Screened Formation***
GWM-1	Table I & II	Arundel
GWM-2*	Table I & II, and Assessment Monitoring for Organochloride Pesticides	Patapsco
GWM-3	Table I & II	Patapsco
GWM-4	Table I & II, and Assessment Monitoring for Organochloride Pesticides	Patapsco
GWM-5A	Table I & II	Patapsco
GWM-6	Table I & II	Patapsco
GWM-7	Not sampled as part of groundwater sampling program; gauged monthly.	NA
GWM-8	Table I & II	Arundel
GWM-9*	Table I & II, and Assessment Monitoring for Organochloride Pesticides	Patapsco
GWM-10	Table I & II	Arundel
GWM-11	Table I & II	Arundel
GWM-12	Table I & II	Arundel
GWM-14	Table I & II	Patapsco
GWM-15D	Table I & II	Patuxent
GWM-16S	Not sampled as part of groundwater sampling program; gauged monthly.	Patapsco
GWM-16D*	Table I & II	Patuxent
GWM-17S	Table I & II, and Assessment Monitoring for Organochloride Pesticides	Patapsco
GWM-17D	Table I & II, and Assessment Monitoring for Organochloride Pesticides	Patuxent
GWM-19D	Table I & II	Patuxent
SMW-13	Supply Monitoring Well: Table I & Table II	Patuxent
SMW-32	Supply Monitoring Well: Table I & Table II	Patuxent
P2006-03	Piezometer, not sampled	NA

* - Background well

APPENDIX E

Time Series (Historical) Data Tables

Historical Well Data Assessment Monitoring, Organochloride Pesticides

Name: Eastern Sanitary Landfill

Location ID: GWM-1
Number of Sampling Dates: 13

Parameter Name	Units	Compliance Limit	3/1/2015	9/11/2015	3/15/2016	9/20/2016	3/23/2017	9/18/2017	3/15/2018	9/17/2018
4,4'-DDD	ug/L	0.0063	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4,4'-DDE	ug/L	0.046	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4,4'-DDT	ug/L	0.23	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Aldrin	ug/L	0.00092	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
alpha-HCH (alpha-BHC)	ug/L	0.0072	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
beta-BHC	ug/L	0.025	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlordane	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
delta-BHC	ug/L	0.2	ND U	0.006 J	ND U	ND U	ND U	ND U	ND U	ND U
Dieldrin	ug/L	0.0018	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endosulfan I	ug/L	10	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endosulfan II	ug/L	10	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endosulfan Sulfate	ug/L	10	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endrin	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endrin Aldehyde	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
gamma-BHC	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Heptachlor	ug/L	0.4	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Heptachlor Epoxide	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methoxychlor	ug/L	40	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Toxaphene	ug/L	3	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID: GWM-1
Number of Sampling Dates: 13

Parameter Name	Units	Compliance Limit	3/4/2019	9/23/2019	4/7/2020	9/22/2020	3/15/2021
4,4'-DDD	ug/L	0.0063	ND U	ND U	ND U	ND U	ND U
4,4'-DDE	ug/L	0.046	ND U	ND U	ND U	ND U	ND U
4,4'-DDT	ug/L	0.23	ND U	ND U	ND U	ND U	ND U
Aldrin	ug/L	0.00092	ND U	ND U	ND U	ND U	ND U
alpha-HCH (alpha-BHC)	ug/L	0.0072	ND U	ND U	ND U	ND U	ND U
beta-BHC	ug/L	0.025	ND U	ND U	ND U	ND U	ND U
Chlordane	ug/L	2	ND U	ND U	ND U	ND U	ND U
delta-BHC	ug/L	0.2	ND U	ND U	ND U	ND U	ND U
Dieldrin	ug/L	0.0018	ND U	ND U	ND U	ND U	ND U
Endosulfan I	ug/L	10	ND U	ND U	ND U	ND U	ND U
Endosulfan II	ug/L	10	ND U	ND U	ND U	ND U	ND U
Endosulfan Sulfate	ug/L	10	ND U	ND U	ND U	ND U	ND U
Endrin	ug/L	2	ND U	ND U	ND U	ND U	ND U
Endrin Aldehyde	ug/L	2	ND U	ND U	ND U	ND U	ND U

Location ID: GWM-1
Number of Sampling Dates: 13

Parameter Name	Units	Compliance Limit	3/4/2019	9/23/2019	4/7/2020	9/22/2020	3/15/2021			
gamma-BHC	ug/L	0.2	ND U	ND U	ND U	ND U	ND U			
Heptachlor	ug/L	0.4	ND U	ND U	ND U	ND U	ND U			
Heptachlor Epoxide	ug/L	0.2	ND U	ND U	ND U	ND U	ND U			
Methoxychlor	ug/L	40	ND U	ND U	ND U	ND U	ND U			
Toxaphene	ug/L	3	ND U	ND U	ND U	ND U	ND U			

Historical Well Data Table I

Name: Eastern Sanitary Landfill

Location ID:	GWM-1									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/27/1999**	**3/30/2000**	**10/18/2000**	**3/28/2001**	**9/19/2001**	**4/16/2002**	**9/25/2002**	**3/27/2003**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	1	1	1	2	2
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-1									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/27/1999**	**3/30/2000**	**10/18/2000**	**3/28/2001**	**9/19/2001**	**4/16/2002**	**9/25/2002**	**3/27/2003**
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-1									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**11/19/2003**	**3/25/2004**	**11/10/2004**	**5/19/2005**	**11/1/2005**	**3/22/2006**	**9/26/2006**	**4/12/2007**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-1									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**11/19/2003**	**3/25/2004**	**11/10/2004**	**5/19/2005**	**11/1/2005**	**3/22/2006**	**9/26/2006**	**4/12/2007**
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	2	2	2
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-1									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**11/6/2007**	**4/9/2008**	**9/24/2008**	**4/2/2009**	**10/6/2009**	**5/4/2010**	**9/21/2010**	**3/8/2011**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-1									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**11/6/2007**	**4/9/2008**	**9/24/2008**	**4/2/2009**	**10/6/2009**	**5/4/2010**	**9/21/2010**	**3/8/2011**
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	2	2	ND	7	7	ND
1,1,2-Trichloroethane	ug/L	5	ND	2	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-1									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/7/2011**	**3/6/2012**	**8/30/2012**	**3/19/2013**	**9/25/2013**	**3/18/2014**	**9/4/2014**	**3/1/2015**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND U	5.9 J	ND U
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND U	ND U	0.45 JB
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND U	0.33 J	ND U

Location ID:	GWM-1									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/7/2011**	**3/6/2012**	**8/30/2012**	**3/19/2013**	**9/25/2013**	**3/18/2014**	**9/4/2014**	**3/1/2015**
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND U	0.87 J	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND U	ND U	ND U
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Toluene	ug/L	1000	ND	ND	ND	ND	ND	0.27 J	ND U	0.73 JB
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND U	ND U	ND U
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U

Location ID:	GWM-1									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/11/2015**	**3/15/2016**	**9/20/2016**	**3/23/2017**	**9/18/2017**	**3/15/2018**	**9/17/2018**	**3/4/2019**
Acetone	ug/L	1400	ND U	ND U	ND U	ND U	ND U	5 JB	ND U	ND U
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromomethane	ug/L	0.75	ND U	0.51 J	ND U	ND U	ND U	ND U	ND U	ND U
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloromethane	ug/L	19	ND U	0.55 J	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Iodomethane	ug/L	–	ND U	0.43 J	ND U	ND U	ND U	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	GWM-1									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/11/2015**	**3/15/2016**	**9/20/2016**	**3/23/2017**	**9/18/2017**	**3/15/2018**	**9/17/2018**	**3/4/2019**
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	GWM-1									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/23/2019**	**3/16/2020**	**4/7/2020**	**9/22/2020**	**3/15/2021**	**9/8/2021**	**3/14/2022**	**9/12/2022**
Acetone	ug/L	1400	5 JB	ND U	–	4.9 J	3.5 J	ND U	ND	ND
Acrylonitrile	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Benzene	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Bromochloromethane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Bromomethane	ug/L	0.75	ND U	ND U	–	0.62 J	ND U	ND U	ND	ND
2-Butanone	ug/L	700	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Carbon disulfide	ug/L	81	ND U	ND U	–	0.23 JB	ND U	ND U	ND	ND
Carbon Tetrachloride	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Chlorobenzene	ug/L	100	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Chloroethane	ug/L	2100	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Chloromethane	ug/L	19	ND U	ND U	–	0.69 J	ND U	ND U	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Dibromomethane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	–	ND U	ND U	ND U	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,2-Dichloroethane	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,1-Dichloroethene	ug/L	7	ND U	ND U	–	ND U	ND U	ND U	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	–	ND U	ND U	ND U	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Methylene Chloride	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,2-Dichloropropane	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Ethylbenzene	ug/L	700	ND U	ND U	–	ND U	ND U	ND U	ND	ND
2-Hexanone	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Iodomethane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND

Location ID:	GWM-1									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/23/2019**	**3/16/2020**	**4/7/2020**	**9/22/2020**	**3/15/2021**	**9/8/2021**	**3/14/2022**	**9/12/2022**
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Styrene	ug/L	100	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Tetrachloroethene	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	0.41 J	ND
Toluene	ug/L	1000	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Trichloroethene	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Trichlorofluoromethane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Vinyl acetate	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Vinyl chloride	ug/L	2	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Total Xylenes	ug/L	10000	ND U	ND U	–	ND U	ND U	ND U	ND	ND
o-Xylene	ug/L	10000	–	ND U	–	ND U	ND U	ND U	ND	ND
mp-Xylene	ug/L	10000	–	ND U	–	ND U	ND U	ND U	ND	ND
Bromodichloromethane	ug/L	80	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Chlorodibromomethane	ug/L	80	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Bromoform	ug/L	80	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Chloroform	ug/L	80	ND U	ND U	–	ND U	1.2	ND U	ND	ND

Location ID:	GWM-1			
Number of Sampling Dates:	50			
Parameter Name	**Units**	**Compliance Limit**	**3/13/2023**	**9/11/2023**
Acetone	ug/L	1400	ND	7.6 J
Acrylonitrile	ug/L	–	ND	ND
Benzene	ug/L	5	ND	ND
Bromochloromethane	ug/L	–	ND	ND
Bromomethane	ug/L	0.75	0.71 JB	0.93 JB
2-Butanone	ug/L	700	ND	7.1 J
Carbon disulfide	ug/L	81	ND	1.7
Carbon Tetrachloride	ug/L	5	ND	ND
Chlorobenzene	ug/L	100	ND	ND
Chloroethane	ug/L	2100	ND	ND
Chloromethane	ug/L	19	ND	0.76 JB
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND
Dibromomethane	ug/L	–	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND

Location ID:	GWM-1			
Number of Sampling Dates:	50			
Parameter Name	**Units**	**Compliance Limit**	**3/13/2023**	**9/11/2023**
1,1-Dichloroethene	ug/L	7	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND
Methylene Chloride	ug/L	5	0.6 J	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND
Ethylbenzene	ug/L	700	ND	ND
2-Hexanone	ug/L	–	ND	ND
Iodomethane	ug/L	–	0.77 J	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	10.5
Styrene	ug/L	100	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND
Tetrachloroethene	ug/L	5	0.42 J	ND
Toluene	ug/L	1000	ND	0.55 J
1,1,1-Trichloroethane	ug/L	200	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND
Trichloroethene	ug/L	5	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND	ND
Vinyl acetate	ug/L	–	ND	ND
Vinyl chloride	ug/L	2	ND	ND
Total Xylenes	ug/L	10000	ND	ND
o-Xylene	ug/L	10000	ND	ND
mp-Xylene	ug/L	10000	ND	ND
Bromodichloromethane	ug/L	80	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND
Bromoform	ug/L	80	ND	ND
Chloroform	ug/L	80	ND	ND

Historical Well Data Table II

Name: Eastern Sanitary Landfill

Location ID: GWM-1
Number of Sampling Dates: 50

Parameter Name	Units	Compliance Limit	10/27/1999	3/30/2000	10/18/2000	3/28/2001	9/19/2001	4/16/2002	9/25/2002	3/27/2003
Antimony, Total	mg/L	0.006	–	ND	0.003	ND	ND	ND	0.003	ND
Arsenic, Total	mg/L	0.01	–	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	ND	ND	ND	0.03	0.036	0.059	0.061	0.046
Beryllium, Total	mg/L	0.004	–	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	–	–	–	–	–	–	–	–	–
Chromium, Total	mg/L	0.1	ND	ND	0.1	ND	0.056	0.102	0.054	ND
Cobalt, Total	mg/L	–	–	ND	ND	ND	ND	ND	ND	ND
Copper, Total	mg/L	1.3	–	ND	ND	0.021	0.085	0.072	0.089	0.041
Iron, Total	mg/L	0.3	19.61	22.5	5.05	1.602	79.25	111	58.95	1.014
Lead, Total	mg/L	0.015	ND	ND	0.006	ND	0.024	0.052	0.054	0.002
Magnesium, Total	mg/L	–	–	–	–	–	–	–	–	–
Manganese, Total	mg/L	0.043	ND	0.06	0.048	0.044	0.326	0.277	0.288	0.067
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	–	ND	ND	ND	ND	0.016	0.017	ND
Potassium, Total	mg/L	–	–	–	–	–	–	–	–	–
Selenium, Total	mg/L	0.05	–	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	–	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	–	–	–	–	–	–	–	–	–
Thallium, Total	mg/L	0.002	–	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	–	ND	ND	0.109	0.49	0.39	0.354	0.03
Zinc, Total	mg/L	0.6	ND	ND	0.186	ND	0.081	0.175	0.13	ND
Alkalinity, Total	mg/L	–	–	22	30	25	25	28	30	20
Ammonia-N	mg/L	–	0.2	0.5	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	–	10	10	ND	ND	21	150	144	ND
Chloride	mg/L	250	22	28	44.28	39.21	41.41	30.39	35.8	37.72
Hardness	mg/L	–	–	210	49	54.67	147.7	144.11	203.31	86.22
Nitrate-N	mg/L	10	2.3	2.1	1.94	1.77	1.85	1.28	1.2	1.17
pH	SU	8.5	–	–	6	9.9	9.7	9.04	9.28	9.12
Specific Conductance	umhos/cm	–	–	199	ND	ND	182	254	238	252
Sulfate	mg/L	250	31	17	20	16	30	14.17	16.93	13.87
Total Dissolved Solids	mg/L	500	105	118	123	120	129	132	137	64
Turbidity	NTU	5	–	300	1590	470	420	700	228	400

Location ID: GWM-1
Number of Sampling Dates: 50

Parameter Name	Units	Compliance Limit	11/19/2003	3/25/2004	11/10/2004	5/19/2005	11/1/2005	3/22/2006	9/26/2006	4/12/2007
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.031	0.033	0.045	0.045	0.048	0.036	0.044	0.045
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND

Location ID: GWM-1
Number of Sampling Dates: 50

Parameter Name	Units	Compliance Limit	11/19/2003	3/25/2004	11/10/2004	5/19/2005	11/1/2005	3/22/2006	9/26/2006	4/12/2007
Calcium, Total	mg/L	–	–	–	–	–	–	–	–	27.2
Chromium, Total	mg/L	0.1	ND	ND	0.01	0.01	0.012	ND	ND	0.01
Cobalt, Total	mg/L	–	0.01	0.01	ND	ND	ND	ND	ND	ND
Copper, Total	mg/L	1.3	ND	ND	0.024	ND	ND	0.017	ND	0.05
Iron, Total	mg/L	0.3	0.457	0.075	3.328	2.515	3.48	0.208	0.304	1.513
Lead, Total	mg/L	0.015	0.002	0.002	0.005	0.004	0.005	0.002	ND	ND
Magnesium, Total	mg/L	–	–	–	–	–	–	–	–	1.75
Manganese, Total	mg/L	0.043	0.067	ND	ND	ND	0.019	0.026	ND	ND
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/L	–	–	–	–	–	–	–	–	6.2
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	–	–	–	–	–	–	–	–	39.9
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	0.082	ND	0.075	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	ND	ND	0.115	0.108	0.032	0.029	0.108	0.086
Alkalinity, Total	mg/L	–	22	20	28.8	14.55	31.55	26.55	43.8	31.4
Ammonia-N	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Chloride	mg/L	250	25.93	21.48	12.76	12.22	16.29	14.49	14.66	17.96
Hardness	mg/L	–	49.89	43.35	53.14	40.02	74.46	20.49	91.94	75.12
Nitrate-N	mg/L	10	1.58	ND	1.47	2.01	1.43	1.01	0.83	1.16
pH	SU	8.5	9.06	8.82	8.51	8.03	8.39	8.26	7.42	8.05
Specific Conductance	umhos/cm	–	181	165	142	147	154	160	190	170
Sulfate	mg/L	250	15.59	13.48	10.53	ND	13.18	10.36	11.23	11.05
Total Dissolved Solids	mg/L	500	95	111	47	147	106	112	350	ND
Turbidity	NTU	5	3.21	13.1	298	113	246	24	32.9	312

Location ID: GWM-1
Number of Sampling Dates: 50

Parameter Name	Units	Compliance Limit	11/6/2007	4/9/2008	9/24/2008	4/2/2009	10/6/2009	5/4/2010	9/21/2010	3/8/2011
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.039	0.045	0.049	0.055	0.059	0.056	0.051	0.042
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	–	17.1	19.45	23.23	22.63	25.04	28.46	26.89	20.36
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	mg/L	1.3	0.13	ND	0.055	ND	ND	0.02	ND	ND
Iron, Total	mg/L	0.3	0.163	0.662	0.89	1.077	2.432	0.517	0.203	0.138
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/L	–	1.08	1.64	1.712	2.56	2.115	2.05	1.775	2.04
Manganese, Total	mg/L	0.043	0.085	0.013	0.062	ND	ND	0.051	0.028	0.018

Location ID:	GWM-1									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**11/6/2007**	**4/9/2008**	**9/24/2008**	**4/2/2009**	**10/6/2009**	**5/4/2010**	**9/21/2010**	**3/8/2011**
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/L	–	1.66	1.98	1.74	1.81	1.88	1.81	1.8	1.71
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	–	12.2	28.2	15	22.5	11.8	25	37.2	25
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.013	0.046	ND	ND	ND	ND	ND	0.1
Alkalinity, Total	mg/L	–	37	28.2	27	27.2	19	17.6	18.4	5.2
Ammonia-N	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	–	16	ND	ND	ND	ND	ND	ND	–
Chloride	mg/L	250	15.9	21.55	22.48	53.86	37.14	53.01	40.59	45.79
Hardness	mg/L	–	47.15	55.32	65.06	67.05	71.23	79.51	74.45	59.24
Nitrate-N	mg/L	10	0.94	0.98	1.04	1.65	1.01	1.52	1.38	1.18
pH	SU	8.5	8.37	8.63	9.32	9.02	8.62	8.56	8.5	8.33
Specific Conductance	umhos/cm	–	161	237	197	231	251	1131	266	251
Sulfate	mg/L	250	9.52	11.91	13.14	19	13.95	15.22	14.77	15.93
Total Dissolved Solids	mg/L	500	274	166	148	108	178	194	144	148
Turbidity	NTU	5	24	210	30.2	50	21	65	32	13

Location ID:	GWM-1									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/7/2011**	**3/6/2012**	**8/30/2012**	**3/19/2013**	**9/25/2013**	**3/18/2014**	**9/4/2014**	**3/1/2015**
Antimony, Total	mg/L	0.006	ND	ND	ND	0.002	ND	ND U	ND U	ND U
Arsenic, Total	mg/L	0.01	ND	0.002	ND	ND	0.004	0.0021 J	0.0028 J	0.0024 J
Barium, Total	mg/L	2	0.056	0.05	0.102	0.071	0.03	0.029	0.019	0.019
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND U	ND U	ND U
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND U	0.00044 J	0.00045 J
Calcium, Total	mg/L	–	20	2.97	29.56	21.9	15.39	21.8	21.4	20.6
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	0.0072	0.0061	0.013
Cobalt, Total	mg/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Copper, Total	mg/L	1.3	ND	ND	ND	ND	ND	ND U	ND U	ND U
Iron, Total	mg/L	0.3	0.8	0.303	1.136	0.155	0.099	0.091	0.037 J	0.039 J
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	ND U	ND U	ND U
Magnesium, Total	mg/L	–	2.5	0.243	3.33	2.785	1.769	2.3	1.4	1.4
Manganese, Total	mg/L	0.043	ND	ND	0.013	ND	ND	0.0058	0.0026 J	0.0029 J
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND U	ND U	ND U
Nickel, Total	mg/L	0.039	ND	ND	ND	ND	ND	0.0035 J	0.0029 J	0.0056
Potassium, Total	mg/L	–	2	1.82	1.93	1.7	1.7	1.8	1.4	1.4
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND U	ND U	ND U
Sodium, Total	mg/L	–	17	1.78	15.1	18.2	17.73	19.2	13.7	15.1
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	0.027	0.037	0.025	0.032	ND	0.017	0.022	0.026

Location ID: GWM-1
Number of Sampling Dates: 50

Parameter Name	Units	Compliance Limit	10/7/2011	3/6/2012	8/30/2012	3/19/2013	9/25/2013	3/18/2014	9/4/2014	3/1/2015
Zinc, Total	mg/L	0.6	ND	ND	0.01	ND	ND	0.0035 J	0.0019 J	ND U
Alkalinity, Total	mg/L	–	5.2	32.05	82.22	29.45	47.55	44	40	46
Ammonia-N	mg/L	–	0.7	ND	ND	ND	ND	0.32	0.108	ND U
Chemical Oxygen Demand (COD)	mg/L	–	11	ND	ND	ND	ND	8	ND U	ND U
Chloride	mg/L	250	34	37.37	24	30.78	34.08	51.7	30.4	30.9
Hardness	mg/L	–	68	84.33	13.81	66.2	45.7	74	63	91
Nitrate-N	mg/L	10	1.6	1.05	1.9	1.18	ND	0.2 J	0.9	1.3
pH	SU	8.5	8.34	8.28	6.94	7.34	7.74	7.41	7.98	7.72
Specific Conductance	umhos/cm	–	265	237	329	223	273	196.5	183.9	172.5
Sulfate	mg/L	250	19	14.18	21	16.43	9.69	14.2	12.3	12.1
Total Dissolved Solids	mg/L	500	69	182	218	126	116	136	119	165
Turbidity	NTU	5	94.8	31.9	47.1	75	ND	1.2	0.86	0.23

Location ID: GWM-1
Number of Sampling Dates: 50

Parameter Name	Units	Compliance Limit	9/11/2015	3/15/2016	9/20/2016	3/23/2017	9/18/2017	3/15/2018	9/17/2018	3/4/2019
Antimony, Total	mg/L	0.006	ND U	ND U	0.0013 J	ND U	ND U	ND U	ND U	ND U
Arsenic, Total	mg/L	0.01	0.0013 J	0.0012 J	0.0012 J	0.0015 J	0.0021 J	ND U	0.0021 J	0.0014 J
Barium, Total	mg/L	2	0.022	0.021	0.023	0.022	0.024	0.027	0.033	0.033
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Cadmium, Total	mg/L	0.005	ND U	0.00058 J	0.00055 J	0.00044 J	ND U	ND U	0.00097 J	0.00057 J
Calcium, Total	mg/L	–	18	12.7	12.5	12.4	14.6	18.8	16.8	15.1
Chromium, Total	mg/L	0.1	0.0033	0.0065	0.0072	0.0078	0.014	0.0033	0.0093	0.0068
Cobalt, Total	mg/L	–	ND U	ND U	ND U	ND U	ND U	ND U	0.024	0.011
Copper, Total	mg/L	1.3	ND U	ND U	ND U	ND U	0.0038 J	ND U	1.5	1.4
Iron, Total	mg/L	0.3	0.54	0.083	0.045 J	0.1	0.07	0.22	0.44	0.15
Lead, Total	mg/L	0.015	ND U	ND U	ND U	ND U	ND U	ND U	0.023	0.015
Magnesium, Total	mg/L	–	1.6	1.1	1.2	1.4	1.8	2.7	3	2.6
Manganese, Total	mg/L	0.043	0.016	0.0037 J	0.0054 J	0.0064	0.0059	0.0095	0.0095	0.0072
Mercury, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Nickel, Total	mg/L	0.039	0.0022 J	0.0038 J	0.0041 J	0.0042 J	0.006	0.0022 J	0.0046 J	0.0045 J
Potassium, Total	mg/L	–	1.5	1.1	1.1	1.2	1.2	1.6	1.4	1.3
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Sodium, Total	mg/L	–	11.6	7.9	7.8	10.7	13.5	16.4	14.4	9.4
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	0.01	0.0094	0.011	0.012	0.016	0.014	0.016	0.0098
Zinc, Total	mg/L	0.6	0.0023 J	0.011	0.0026 J	0.0028 J	0.0022 J	ND U	0.039	0.019
Alkalinity, Total	mg/L	–	50	29	30	37	33	57	47	46
Ammonia-N	mg/L	–	0.666	ND U	0.032 J	ND U	ND U	0.276	0.065 J	ND U
Chemical Oxygen Demand (COD)	mg/L	–	9	ND U	5 J	5 J	10	8	ND U	ND U
Chloride	mg/L	250	22.3	12.9	10.9	15.1	21.1	27.7	23.2	11.2
Hardness	mg/L	–	68	38	38	39	43	58.1	54.1	48.3
Nitrate-N	mg/L	10	0.04 J	1.7	1.9	1.8	1.9	0.2	1.6	1.6
pH	SU	8.5	6.91	7.11	7.24	7.1	6.97	7.3	6.71	7.06

Location ID:	GWM-1									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/11/2015**	**3/15/2016**	**9/20/2016**	**3/23/2017**	**9/18/2017**	**3/15/2018**	**9/17/2018**	**3/4/2019**
Specific Conductance	umhos/cm	–	140.6	100.2	102.9	121.5	129.6	160.8	147.1	112.2
Sulfate	mg/L	250	7.9	50.9	4.4	7.9	10.6	13.3	8.5	5.4
Total Dissolved Solids	mg/L	500	121	92	84	111	135	109	60	107
Turbidity	NTU	5	0.77	0.41	1.3	0.19	0.7	0.77	0.81	4.68

Location ID:	GWM-1									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/23/2019**	**3/16/2020**	**4/7/2020**	**9/22/2020**	**3/15/2021**	**9/8/2021**	**3/14/2022**	**9/12/2022**
Antimony, Total	mg/L	0.006	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Arsenic, Total	mg/L	0.01	0.0011 J	ND U	–	ND U	0.0018 J	0.0011 J	ND	0.0018 J
Barium, Total	mg/L	2	0.036	0.033	–	0.037	0.04	0.032	0.022	0.044
Beryllium, Total	mg/L	0.004	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Cadmium, Total	mg/L	0.005	ND U	ND U	–	ND U	ND U	0.00031 J	0.00052 J	ND
Calcium, Total	mg/L	–	13.1	13.9	–	15.1	15.1	14.5	23	18.9
Chromium, Total	mg/L	0.1	0.0061	0.0042	–	0.004	0.028	0.011	0.015	0.012
Cobalt, Total	mg/L	–	0.011	0.017	–	0.026	0.0055 J	0.0013 J	ND	ND
Copper, Total	mg/L	1.3	0.84	1	–	0.96	0.23	0.028	0.0072	0.021
Iron, Total	mg/L	0.3	0.09	0.15	–	0.19	0.7	0.088	0.16	0.088
Lead, Total	mg/L	0.015	0.0066	0.0066	–	0.0039	0.0035	ND U	ND	ND
Magnesium, Total	mg/L	–	2.4	2.8	–	3.1	3	2.7	6.6	4
Manganese, Total	mg/L	0.043	0.0087	0.009	–	0.0096	0.018	0.0092	0.0087	0.0088
Mercury, Total	mg/L	0.002	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Nickel, Total	mg/L	0.039	0.0039 J	0.0031 J	–	0.0032 J	0.015	0.0066	0.01	0.0056
Potassium, Total	mg/L	–	1.3	1.3	–	1.5	1.4	1.4	2.8	1.6
Selenium, Total	mg/L	0.05	ND U	ND U	–	ND U	ND U	0.0011 J	ND	0.0019 J
Silver, Total	mg/L	0.0094	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Sodium, Total	mg/L	–	8.3	8.6	–	9.9	9.6	8.4	21.8	14.2
Thallium, Total	mg/L	0.002	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Vanadium, Total	mg/L	0.0086	0.013	0.0095	–	0.0086	0.015	0.0097	ND	0.015
Zinc, Total	mg/L	0.6	0.013	0.013	–	0.013	0.05	0.0071 J	0.085	0.0054 J
Alkalinity, Total	mg/L	–	44	47	–	47	45	48	58	54
Ammonia-N	mg/L	–	0.093 J	0.08 J	–	ND U	0.171	0.06 J	0.092 J	ND
Chemical Oxygen Demand (COD)	mg/L	–	ND U	ND U	–	ND U	7 J	5 J	ND	ND
Chloride	mg/L	250	9.1	10.1	–	12.2	11.1	12.9	14.8	20
Hardness	mg/L	–	42.4	54	–	49.7	47.3	41.3	58.8	69.7
Nitrate-N	mg/L	10	1.6	1.5	–	1.7	1.8	2	1.6	1.6
pH	SU	8.5	6.62	7.37	–	6.83	6.77	7.1	7.63	6.59
Specific Conductance	umhos/cm	–	93.4	112	–	124.8	117.4	109.3	77.3	179
Sulfate	mg/L	250	3.6	3.6	–	4.5	4	4.4	7.1	10.5
Total Dissolved Solids	mg/L	500	99	110	–	100	132	100	109	129
Turbidity	NTU	5	7.91	6.68	–	5.6	15.4	2.07	5.4	23.4

Location ID:	GWM-1			
Number of Sampling Dates:	50			
Parameter Name	**Units**	**Compliance Limit**	**3/13/2023**	**9/11/2023**
Antimony, Total	mg/L	0.006	ND	ND
Arsenic, Total	mg/L	0.01	0.0021 J	0.0022 J
Barium, Total	mg/L	2	0.044	0.054
Beryllium, Total	mg/L	0.004	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND
Calcium, Total	mg/L	–	21.7	26.2
Chromium, Total	mg/L	0.1	0.018	0.0098
Cobalt, Total	mg/L	–	ND	ND
Copper, Total	mg/L	1.3	0.019	0.0085
Iron, Total	mg/L	0.3	0.13	0.58
Lead, Total	mg/L	0.015	ND	ND
Magnesium, Total	mg/L	–	5.1	6.1
Manganese, Total	mg/L	0.043	0.0079	0.029
Mercury, Total	mg/L	0.002	ND	ND
Nickel, Total	mg/L	0.039	0.0084	0.0049 J
Potassium, Total	mg/L	–	1.7	2.6
Selenium, Total	mg/L	0.05	ND	ND
Silver, Total	mg/L	0.0094	ND	ND
Sodium, Total	mg/L	–	15.6	18.6
Thallium, Total	mg/L	0.002	ND	ND
Vanadium, Total	mg/L	0.0086	0.014	0.0051
Zinc, Total	mg/L	0.6	0.0065	0.009
Alkalinity, Total	mg/L	–	56	104
Ammonia-N	mg/L	–	0.148	3.68
Chemical Oxygen Demand (COD)	mg/L	–	ND	30
Chloride	mg/L	250	25.6	30
Hardness	mg/L	–	80	93.7
Nitrate-N	mg/L	10	1.6	0.26 J
pH	SU	8.5	6.64	6.68
Specific Conductance	umhos/cm	–	230.13	276.49
Sulfate	mg/L	250	11.1	3.8
Total Dissolved Solids	mg/L	500	150	186
Turbidity	NTU	5	11.53	176.97

Historical Well Data Assessment Monitoring, Organochloride Pesticides

Name: Eastern Sanitary Landfill

Location ID: GWM-2
Number of Sampling Dates: 14

Parameter Name	Units	Compliance Limit	3/24/2017	9/21/2017	3/28/2018	9/21/2018	3/12/2019	10/1/2019	4/7/2020	9/23/2020
4,4'-DDD	ug/L	0.0063	0.013 J	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4,4'-DDE	ug/L	0.046	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4,4'-DDT	ug/L	0.23	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Aldrin	ug/L	0.00092	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
alpha-HCH (alpha-BHC)	ug/L	0.0072	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
beta-BHC	ug/L	0.025	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlordane	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
delta-BHC	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Dieldrin	ug/L	0.0018	0.017 J	0.019	0.014	0.013	0.012	0.018 J	0.026	0.023
Endosulfan I	ug/L	10	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endosulfan II	ug/L	10	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endosulfan Sulfate	ug/L	10	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endrin	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endrin Aldehyde	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
gamma-BHC	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Heptachlor	ug/L	0.4	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Heptachlor Epoxide	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methoxychlor	ug/L	40	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Toxaphene	ug/L	3	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID: GWM-2
Number of Sampling Dates: 14

Parameter Name	Units	Compliance Limit	3/17/2021	9/9/2021	3/15/2022	9/12/2022	3/13/2023	9/11/2023
4,4'-DDD	ug/L	0.0063	ND U	ND U	ND	ND	ND	ND
4,4'-DDE	ug/L	0.046	ND U	ND U	ND	ND	ND	ND
4,4'-DDT	ug/L	0.23	ND U	ND U	ND	ND	ND	ND
Aldrin	ug/L	0.00092	ND U	ND U	ND	ND	ND	ND
alpha-HCH (alpha-BHC)	ug/L	0.0072	ND U	ND U	ND	ND	ND	ND
beta-BHC	ug/L	0.025	ND U	ND U	ND	ND	ND	ND
Chlordane	ug/L	2	ND U	ND U	ND	ND	ND	ND
delta-BHC	ug/L	0.2	ND U	ND U	ND	ND	ND	ND *-
Dieldrin	ug/L	0.0018	0.02	0.016	ND	0.0091	0.0189	0.015
Endosulfan I	ug/L	10	ND U	ND U	ND	ND	ND	ND
Endosulfan II	ug/L	10	ND U	ND U	ND	ND	ND	ND
Endosulfan Sulfate	ug/L	10	ND U	ND U	ND	ND	ND	ND
Endrin	ug/L	2	ND U	ND U	ND	ND	ND	ND
Endrin Aldehyde	ug/L	2	ND U	ND U	ND	ND	ND	ND

Location ID: GWM-2
Number of Sampling Dates: 14

Parameter Name	Units	Compliance Limit	3/17/2021	9/9/2021	3/15/2022	9/12/2022	3/13/2023	9/11/2023
gamma-BHC	ug/L	0.2	ND U	ND U	ND	ND	ND	ND
Heptachlor	ug/L	0.4	ND U	ND U	ND	ND	ND	ND
Heptachlor Epoxide	ug/L	0.2	ND U	ND U	ND	ND	ND	ND
Methoxychlor	ug/L	40	ND U	ND U	ND	ND	ND	ND
Toxaphene	ug/L	3	ND U	ND U	ND	ND	ND	ND

Historical Well Data Table I

Name: Eastern Sanitary Landfill

Location ID:	GWM-2									
Number of Sampling Dates:	51									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/31/2000**	**10/19/2000**	**3/28/2001**	**9/19/2001**	**4/4/2002**	**9/27/2002**	**4/2/2003**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	3	11	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	2	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-2									
Number of Sampling Dates:	51									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/31/2000**	**10/19/2000**	**3/28/2001**	**9/19/2001**	**4/4/2002**	**9/27/2002**	**4/2/2003**
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-2									
Number of Sampling Dates:	51									
Parameter Name	**Units**	**Compliance Limit**	**12/3/2003**	**3/30/2004**	**11/10/2004**	**6/14/2005**	**11/7/2005**	**3/29/2006**	**9/26/2006**	**4/19/2007**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	2	1	2
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-2									
Number of Sampling Dates:	51									
Parameter Name	**Units**	**Compliance Limit**	**12/3/2003**	**3/30/2004**	**11/10/2004**	**6/14/2005**	**11/7/2005**	**3/29/2006**	**9/26/2006**	**4/19/2007**
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	2	2	ND

Location ID:	GWM-2									
Number of Sampling Dates:	51									
Parameter Name	**Units**	**Compliance Limit**	**11/27/2007**	**4/9/2008**	**10/16/2008**	**3/26/2009**	**9/29/2009**	**5/4/2010**	**9/1/2010**	**3/15/2011**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-2									
Number of Sampling Dates:	51									
Parameter Name	**Units**	**Compliance Limit**	**11/27/2007**	**4/9/2008**	**10/16/2008**	**3/26/2009**	**9/29/2009**	**5/4/2010**	**9/1/2010**	**3/15/2011**
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	2	1	1	1	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	1	ND	ND	ND	ND	7	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	1	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	2	2	2	2	1	ND	ND	ND

Location ID:	GWM-2									
Number of Sampling Dates:	51									
Parameter Name	**Units**	**Compliance Limit**	**10/12/2011**	**3/20/2012**	**9/13/2012**	**3/12/2013**	**9/25/2013**	**3/18/2014**	**9/16/2014**	**3/18/2015**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND U	ND U	ND U
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND U	ND U	ND U
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND U	ND U	ND U

Location ID:	GWM-2									
Number of Sampling Dates:	51									
Parameter Name	**Units**	**Compliance Limit**	**10/12/2011**	**3/20/2012**	**9/13/2012**	**3/12/2013**	**9/25/2013**	**3/18/2014**	**9/16/2014**	**3/18/2015**
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	1.4	ND	ND	ND	ND	1.1	1.2	0.99 J
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND U	ND U	ND U
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND U	ND U	ND U
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND U	0.31 J	0.34 J

Location ID:	GWM-2									
Number of Sampling Dates:	51									
Parameter Name	**Units**	**Compliance Limit**	**9/15/2015**	**3/16/2016**	**9/22/2016**	**3/24/2017**	**9/21/2017**	**3/28/2018**	**9/21/2018**	**3/12/2019**
Acetone	ug/L	1400	ND U	ND U	ND U	5.5 JB	ND U	ND U	ND U	ND U
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromomethane	ug/L	0.75	0.56 J	0.72 J	ND U	ND U	ND U	ND U	ND U	ND U
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloromethane	ug/L	19	0.42 J	0.94 J	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	1.1	0.9 J	0.9 J	0.81 J	0.94 J	0.84 J	1	1.7
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	0.35 J	0.44 J	ND U	ND U
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	GWM-2									
Number of Sampling Dates:	51									
Parameter Name	**Units**	**Compliance Limit**	**9/15/2015**	**3/16/2016**	**9/22/2016**	**3/24/2017**	**9/21/2017**	**3/28/2018**	**9/21/2018**	**3/12/2019**
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroform	ug/L	80	0.34 J	ND U	0.31 J	ND U	ND U	ND U	0.62 JB	0.68 J

Location ID:	GWM-2									
Number of Sampling Dates:	51									
Parameter Name	**Units**	**Compliance Limit**	**10/1/2019**	**3/18/2020**	**4/7/2020**	**9/23/2020**	**3/17/2021**	**9/9/2021**	**3/15/2022**	**9/12/2022**
Acetone	ug/L	1400	ND U	3.2 J	–	4.3 J	3.4 J	3.2 J	ND	ND
Acrylonitrile	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Benzene	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Bromochloromethane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Bromomethane	ug/L	0.75	ND U	ND U	–	ND U	ND U	ND U	ND	ND
2-Butanone	ug/L	700	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Carbon disulfide	ug/L	81	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Carbon Tetrachloride	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Chlorobenzene	ug/L	100	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Chloroethane	ug/L	2100	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Chloromethane	ug/L	19	ND U	ND U	–	0.85 J	ND U	ND U	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Dibromomethane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	–	ND U	ND U	ND U	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,2-Dichloroethane	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,1-Dichloroethene	ug/L	7	ND U	ND U	–	ND U	ND U	ND U	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	–	ND U	ND U	ND U	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Methylene Chloride	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Methyl t-Butyl Ether	ug/L	20	1.5	1.2	–	1.3	1.2	1.4	0.99 J	0.88 J
1,2-Dichloropropane	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Ethylbenzene	ug/L	700	ND U	ND U	–	ND U	ND U	ND U	ND	ND
2-Hexanone	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Iodomethane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND

Location ID:	GWM-2									
Number of Sampling Dates:	51									
Parameter Name	**Units**	**Compliance Limit**	**10/1/2019**	**3/18/2020**	**4/7/2020**	**9/23/2020**	**3/17/2021**	**9/9/2021**	**3/15/2022**	**9/12/2022**
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Styrene	ug/L	100	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Tetrachloroethene	ug/L	5	ND U	0.41 J	–	0.37 J	0.42 J	ND U	0.6 J	0.44 J
Toluene	ug/L	1000	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Trichloroethene	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Trichlorofluoromethane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Vinyl acetate	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Vinyl chloride	ug/L	2	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Total Xylenes	ug/L	10000	ND U	ND U	–	ND U	ND U	ND U	ND	ND
o-Xylene	ug/L	10000	–	ND U	–	ND U	ND U	ND U	ND	ND
mp-Xylene	ug/L	10000	–	ND U	–	ND U	ND U	ND U	ND	ND
Bromodichloromethane	ug/L	80	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Chlorodibromomethane	ug/L	80	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Bromoform	ug/L	80	0.56 J	ND U	–	ND U	ND U	ND U	ND	ND
Chloroform	ug/L	80	0.31 J	0.34 JB	–	0.24 J	0.22 J	0.24 J	ND	ND

Location ID:	GWM-2				
Number of Sampling Dates:	51				
Parameter Name	**Units**	**Compliance Limit**	**9/13/2022**	**3/13/2023**	**9/11/2023**
Acetone	ug/L	1400	–	ND	ND
Acrylonitrile	ug/L	–	–	ND	ND
Benzene	ug/L	5	–	ND	ND
Bromochloromethane	ug/L	–	–	ND	ND
Bromomethane	ug/L	0.75	–	0.53 JB	0.76 JB
2-Butanone	ug/L	700	–	ND	ND
Carbon disulfide	ug/L	81	–	ND	ND
Carbon Tetrachloride	ug/L	5	–	ND	ND
Chlorobenzene	ug/L	100	–	ND	ND
Chloroethane	ug/L	2100	–	ND	ND
Chloromethane	ug/L	19	–	ND	0.89 JB
1,2-Dibromo-3-chloropropane	ug/L	0.2	–	ND	ND
1,2-Dibromoethane	ug/L	0.05	–	ND	ND
Dibromomethane	ug/L	–	–	ND	ND
1,2-Dichlorobenzene	ug/L	600	–	ND	ND
1,4-Dichlorobenzene	ug/L	75	–	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	–	ND	ND
1,1-Dichloroethane	ug/L	2.8	–	ND	ND
1,2-Dichloroethane	ug/L	5	–	ND	ND

Location ID:	GWM-2										
Number of Sampling Dates:	51										
Parameter Name	**Units**	**Compliance Limit**	**9/13/2022**	**3/13/2023**	**9/11/2023**						
1,1-Dichloroethene	ug/L	7	–	ND	ND						
cis-1,2-Dichloroethene	ug/L	70	–	ND	ND						
trans-1,2-Dichloroethene	ug/L	100	–	ND	ND						
Methylene Chloride	ug/L	5	–	ND	ND						
Methyl t-Butyl Ether	ug/L	20	–	1.1	0.75 J						
1,2-Dichloropropane	ug/L	5	–	ND	ND						
trans-1,3-Dichloropropene	ug/L	–	–	ND	ND						
cis-1,3-Dichloropropene	ug/L	–	–	ND	ND						
Ethylbenzene	ug/L	700	–	ND	ND						
2-Hexanone	ug/L	–	–	ND	ND						
Iodomethane	ug/L	–	–	0.49 J	0.47 J						
4-Methyl-2-Pentanone(MIBK)	ug/L	630	–	ND	ND						
Styrene	ug/L	100	–	ND	ND						
1,1,1,2-Tetrachloroethane	ug/L	–	–	ND	ND						
1,1,2,2-Tetrachloroethane	ug/L	0.076	–	ND	ND						
Tetrachloroethene	ug/L	5	–	0.57 J	ND						
Toluene	ug/L	1000	–	ND	ND						
1,1,1-Trichloroethane	ug/L	200	–	ND	ND						
1,1,2-Trichloroethane	ug/L	5	–	ND	ND						
Trichloroethene	ug/L	5	–	ND	ND						
Trichlorofluoromethane	ug/L	–	–	ND	ND						
1,2,3-Trichloropropane	ug/L	–	–	ND	ND						
Vinyl acetate	ug/L	–	–	ND	ND						
Vinyl chloride	ug/L	2	–	ND	ND						
Total Xylenes	ug/L	10000	–	ND	ND						
o-Xylene	ug/L	10000	–	ND	ND						
mp-Xylene	ug/L	10000	–	ND	ND						
Bromodichloromethane	ug/L	80	–	ND	ND						
Chlorodibromomethane	ug/L	80	–	ND	ND						
Bromoform	ug/L	80	–	ND	ND						
Chloroform	ug/L	80	–	0.29 J	0.36 J						

Historical Well Data Table II

Name: Eastern Sanitary Landfill

Location ID:	GWM-2									
Number of Sampling Dates:	51									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/31/2000**	**10/19/2000**	**3/28/2001**	**9/19/2001**	**4/4/2002**	**9/27/2002**	**4/2/2003**
Antimony, Total	mg/L	0.006	–	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	–	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	ND	ND	0.046	0.086	0.088	0.085	0.08	0.075
Beryllium, Total	mg/L	0.004	–	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	–	–	–	–	–	–	–	–	–
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	–	–	ND	0.037	ND	0.037	0.043	0.037	0.033
Copper, Total	mg/L	1.3	–	ND	0.024	0.014	ND	0.014	0.032	ND
Iron, Total	mg/L	0.3	1.66	0.52	0.62	0.183	0.208	0.7	0.363	0.083
Lead, Total	mg/L	0.015	ND	ND	ND	ND	0.002	ND	ND	0.002
Magnesium, Total	mg/L	–	–	–	–	–	–	–	–	–
Manganese, Total	mg/L	0.043	0.07	0.08	0.102	0.109	0.065	0.056	0.069	0.072
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	–	0.11	0.057	0.08	0.079	0.068	0.113	0.118
Potassium, Total	mg/L	–	–	–	–	–	–	–	–	–
Selenium, Total	mg/L	0.05	–	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	–	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	–	–	–	–	–	–	–	–	–
Thallium, Total	mg/L	0.002	–	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	–	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	4.87	ND	0.124	0.065	0.064	0.105	0.087	0.077
Alkalinity, Total	mg/L	–	–	3	2	2	1	2	ND	2
Ammonia-N	mg/L	–	0.2	0.2	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	–	10	10	ND	ND	6	ND	ND	ND
Chloride	mg/L	250	42	47	50.98	53.14	60.55	52.5	53.74	83.37
Hardness	mg/L	–	–	55	30	34.01	32.05	49.49	45.8	47.67
Nitrate-N	mg/L	10	2.9	3.2	2.73	2.77	2.67	2.13	1.96	2.65
pH	SU	8.5	–	–	4.83	4.6	4.7	4.25	4.55	4.2
Specific Conductance	umhos/cm	–	–	227	ND	ND	227	259	261	310
Sulfate	mg/L	250	15	15.1	14	ND	16	13.08	12.53	17.28
Total Dissolved Solids	mg/L	500	104	116	133	129	128	105	168	229
Turbidity	NTU	5	–	10	28	5.8	1.14	0.4	0.8	0.4

Location ID:	GWM-2									
Number of Sampling Dates:	51									
Parameter Name	**Units**	**Compliance Limit**	**12/3/2003**	**3/30/2004**	**11/10/2004**	**6/14/2005**	**11/7/2005**	**3/29/2006**	**9/26/2006**	**4/19/2007**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.077	0.068	0.066	0.071	0.075	0.059	0.063	0.06
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-2									
Number of Sampling Dates:	51									
Parameter Name	**Units**	**Compliance Limit**	**12/3/2003**	**3/30/2004**	**11/10/2004**	**6/14/2005**	**11/7/2005**	**3/29/2006**	**9/26/2006**	**4/19/2007**
Calcium, Total	mg/L	–	–	–	–	–	–	–	–	12.35
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	–	0.046	ND	0.07	0.042	0.027	0.041	0.041	0.046
Copper, Total	mg/L	1.3	ND	ND	ND	ND	ND	0.018	0.014	ND
Iron, Total	mg/L	0.3	0.148	0.181	0.221	0.318	1.045	0.106	0.225	0.057
Lead, Total	mg/L	0.015	ND	ND	ND	0.003	0.002	ND	ND	ND
Magnesium, Total	mg/L	–	–	–	–	–	–	–	–	9.7
Manganese, Total	mg/L	0.043	0.035	0.105	0.077	0.09	0.075	0.08	0.092	0.084
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	0.081	ND	0.102	0.079	0.084	0.105	0.098	0.104
Potassium, Total	mg/L	–	–	–	–	–	–	–	–	7.45
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	–	–	–	–	–	–	–	–	51.1
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.101	0.085	0.171	0.137	0.304	0.079	0.155	0.088
Alkalinity, Total	mg/L	–	4	2	3	2.4	3.9	1	4.2	3.4
Ammonia-N	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Chloride	mg/L	250	68.97	62.72	59.8	51.74	51.49	63.66	63.91	60.98
Hardness	mg/L	–	46.95	41.7	44.96	49.93	40.53	13.44	79.83	70.78
Nitrate-N	mg/L	10	1.62	1.33	1.54	1.4	1.24	1.6	1.74	1.42
pH	SU	8.5	4.16	4.13	3.78	4.02	4.11	3.82	4.17	3.99
Specific Conductance	umhos/cm	–	282	268	248	262	244	253	277	289
Sulfate	mg/L	250	16	15.93	15.78	15.97	14.19	14.92	16.09	13.58
Total Dissolved Solids	mg/L	500	166	28	112	256	154	135	144	36
Turbidity	NTU	5	11.3	13	10	12.2	144	4.11	7.89	9.18

Location ID:	GWM-2									
Number of Sampling Dates:	51									
Parameter Name	**Units**	**Compliance Limit**	**11/27/2007**	**4/9/2008**	**10/16/2008**	**3/26/2009**	**9/29/2009**	**5/4/2010**	**9/1/2010**	**3/15/2011**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.05	0.046	0.042	0.041	0.045	0.049	0.045	0.046
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	–	7.56	8.6	9	3.95	5.85	10.11	9.16	7.58
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	–	0.043	0.051	0.066	0.04	0.084	0.057	0.065	0.061
Copper, Total	mg/L	1.3	ND	0.078	0.032	0.011	0.031	ND	ND	0.053
Iron, Total	mg/L	0.3	0.276	ND	0.111	0.104	0.315	0.2	0.097	0.163
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/L	–	2.79	7	3.089	7.2	8.2	11.65	2.61	2.864
Manganese, Total	mg/L	0.043	0.101	0.095	0.108	0.067	0.078	0.143	0.042	0.136

Location ID:	GWM-2									
Number of Sampling Dates:	51									
Parameter Name	**Units**	**Compliance Limit**	**11/27/2007**	**4/9/2008**	**10/16/2008**	**3/26/2009**	**9/29/2009**	**5/4/2010**	**9/1/2010**	**3/15/2011**
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	0.075	0.111	0.104	0.09	0.147	0.096	0.162	0.129
Potassium, Total	mg/L	–	2.92	3.26	2.8	2.46	2.88	2.72	2.95	2.51
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	–	28.6	43.4	44.1	34.4	27.2	58.2	55.3	42.6
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.083	0.101	0.081	0.05	0.048	0.085	0.072	0.085
Alkalinity, Total	mg/L	–	4.8	4.2	2.4	2.8	ND	4.2	ND	ND
Ammonia-N	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	–	10	ND	12	ND	ND	ND	11	ND
Chloride	mg/L	250	61.94	64.15	58.07	58.06	69.6	119.98	75.72	86.19
Hardness	mg/L	–	30.37	50.3	35.2	39.51	48.38	73.22	33.62	30.72
Nitrate-N	mg/L	10	1.54	1.67	1.65	1.63	1.52	2.12	1.83	2.33
pH	SU	8.5	4.19	3.77	4.61	4.56	4.39	4.74	4.58	4.33
Specific Conductance	umhos/cm	–	232	315	280	272	271	368	251	313
Sulfate	mg/L	250	12.14	13.05	12.89	13.04	13.58	21.54	13.4	13.99
Total Dissolved Solids	mg/L	500	188	182	238	106	156	218	222	164
Turbidity	NTU	5	2.06	1.1	0.4	ND	0.1	11	5.7	4.4

Location ID:	GWM-2									
Number of Sampling Dates:	51									
Parameter Name	**Units**	**Compliance Limit**	**10/12/2011**	**3/20/2012**	**9/13/2012**	**3/12/2013**	**9/25/2013**	**3/18/2014**	**9/16/2014**	**3/18/2015**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND U	ND U	ND U
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND U	ND U	ND U
Barium, Total	mg/L	2	0.1	0.109	0.112	0.141	0.06	0.11	0.11	0.11
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	0.00038 J	0.0004 J	0.00032 J
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND U	ND U	0.0008 J
Calcium, Total	mg/L	–	8.3	1.8	5.73	13.17	12.88	9.5	7.2	9.2
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	0.0056	0.019	0.012
Cobalt, Total	mg/L	–	0.041	0.048	0.038	0.055	ND	0.046	0.044	0.11
Copper, Total	mg/L	1.3	ND	ND	ND	ND	ND	0.0027 J	0.0094	0.063
Iron, Total	mg/L	0.3	0.28	0.101	0.123	0.07	1.137	0.04 J	0.074	0.36
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	0.0014 J	0.00078 J	0.016
Magnesium, Total	mg/L	–	6.2	0.7	6.434	7.069	6.078	7.9	7.6	7
Manganese, Total	mg/L	0.043	0.093	0.099	0.082	0.108	0.41	0.12	0.12	0.12
Mercury, Total	mg/L	0.002	ND	ND	–	ND	ND	ND U	ND U	ND U
Nickel, Total	mg/L	0.039	0.09	0.1	0.084	0.117	ND	0.091	0.1	0.088
Potassium, Total	mg/L	–	3.1	2.96	2.62	2.87	2.75	3.1	2.9	2.9
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND U	ND U	ND U
Sodium, Total	mg/L	–	28	3.5	28.4	31.6	15.71	38.6	37.3	36.8
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND U	ND U	ND U

Location ID: GWM-2
Number of Sampling Dates: 51

Parameter Name	Units	Compliance Limit	10/12/2011	3/20/2012	9/13/2012	3/12/2013	9/25/2013	3/18/2014	9/16/2014	3/18/2015
Zinc, Total	mg/L	0.6	0.075	0.088	0.071	0.106	ND	0.069	0.078	0.072
Alkalinity, Total	mg/L	–	3	ND	7.71	2.7	3.3	2 J	3 J	4 J
Ammonia-N	mg/L	–	ND	ND	ND	ND	ND	0.13	0.124	ND U
Chemical Oxygen Demand (COD)	mg/L	–	26	ND	ND	9	ND	4 J	ND U	ND U
Chloride	mg/L	250	69	83.5	59.09	84.47	74.67	88.2	89.4	84.5
Hardness	mg/L	–	52	73.86	40.79	62	57.2	69	59	85
Nitrate-N	mg/L	10	2.3	1.36	2.37	2.69	2.65	3.1	2.9	3.4
pH	SU	8.5	4.32	4.48	4.06	6.55	4.27	4.65	4.68	4.52
Specific Conductance	umhos/cm	–	317	365	338	300	355	283	286	273
Sulfate	mg/L	250	11	10.01	14	15.44	14.05	13.3	20.2	13.5
Total Dissolved Solids	mg/L	500	140	192	176	160	173	201	253	218
Turbidity	NTU	5	13.6	10.66	3.66	1	ND	0.6	0.82	0.76

Location ID: GWM-2
Number of Sampling Dates: 51

Parameter Name	Units	Compliance Limit	9/15/2015	3/16/2016	9/22/2016	3/24/2017	9/21/2017	3/28/2018	9/21/2018	3/12/2019
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Arsenic, Total	mg/L	0.01	ND U	ND U	ND U	ND U	0.0032 J	ND U	ND U	ND U
Barium, Total	mg/L	2	0.1	0.092	0.095	0.093	0.092	0.1	0.12	0.13
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	ND U	ND U	ND U	ND U	0.00044 J
Cadmium, Total	mg/L	0.005	ND U	ND U	0.00053 J	0.0018	0.0008 J	0.00058 J	ND U	ND U
Calcium, Total	mg/L	–	8.8	8.3	8.2	7.6	8	9.1	8.8	10.4
Chromium, Total	mg/L	0.1	0.024	0.0031	0.017	0.052	0.0088	0.017	0.0023	0.0048
Cobalt, Total	mg/L	–	0.058	0.037	0.06	0.071	0.38	0.056	0.043	0.052
Copper, Total	mg/L	1.3	0.044	0.006	0.026	0.15	0.18	0.021	0.0042 J	0.0046 J
Iron, Total	mg/L	0.3	0.28	0.024 J	0.25	1	0.68	0.24	0.097	0.072
Lead, Total	mg/L	0.015	0.0062	ND U	0.0012 J	0.018	0.013	0.0017 J	ND U	ND U
Magnesium, Total	mg/L	–	6.9	6.6	6.1	5.7	6.1	7.2	7.8	6.9
Manganese, Total	mg/L	0.043	0.12	0.1	0.11	0.12	0.11	0.13	0.15	0.17
Mercury, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Nickel, Total	mg/L	0.039	0.09	0.078	0.08	0.082	0.077	0.085	0.087	0.11
Potassium, Total	mg/L	–	2.9	2.8	2.7	2.7	2.7	2.9	2.9	2.8
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Sodium, Total	mg/L	–	36.7	36.5	34.9	32.8	35.4	40.4	40.2	37.3
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Zinc, Total	mg/L	0.6	0.067	0.068	0.063	0.072	0.076	0.063	0.062	0.08
Alkalinity, Total	mg/L	–	5	3 J	4 J	4 J	4 J	4 J	7	3 J
Ammonia-N	mg/L	–	ND U	ND U	ND U	0.032 J	ND U	0.081 J	0.057 J	0.119
Chemical Oxygen Demand (COD)	mg/L	–	3 J	3 J	ND U	ND U	ND U	ND U	ND U	10 J
Chloride	mg/L	250	85.3	77.1	76.9	71.1	82.1	82.7	87.7	86.9
Hardness	mg/L	–	54	48	46	53	45.2	52.3	54.3	54.6
Nitrate-N	mg/L	10	2.9	2.7	2.4	2.3	3.1	2.9	2.7	1.4
pH	SU	8.5	4.58	4.74	4.47	4.55	4.74	4.53	4.58	4.52

Location ID:	GWM-2									
Number of Sampling Dates:	51									
Parameter Name	**Units**	**Compliance Limit**	**9/15/2015**	**3/16/2016**	**9/22/2016**	**3/24/2017**	**9/21/2017**	**3/28/2018**	**9/21/2018**	**3/12/2019**
Specific Conductance	umhos/cm	–	258	255	242	247	244	275	294	271
Sulfate	mg/L	250	15.4	20.5	16.4	15.3	15.9	14.4	14.7	16.2
Total Dissolved Solids	mg/L	500	171	179	177	168	149	156	184	194
Turbidity	NTU	5	1.5	1.23	1.91	0.37	2.13	3.12	0.59	0.83

Location ID:	GWM-2									
Number of Sampling Dates:	51									
Parameter Name	**Units**	**Compliance Limit**	**10/1/2019**	**3/18/2020**	**4/7/2020**	**9/23/2020**	**3/17/2021**	**9/9/2021**	**3/15/2022**	**9/12/2022**
Antimony, Total	mg/L	0.006	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Arsenic, Total	mg/L	0.01	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Barium, Total	mg/L	2	0.12	0.098	–	0.083	0.089	0.095	0.095	0.092
Beryllium, Total	mg/L	0.004	ND U	ND U	–	ND U	ND U	0.00032 J	ND	ND
Cadmium, Total	mg/L	0.005	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Calcium, Total	mg/L	–	10	8.5	–	7.1	8.1	8.3	8.1	7.5
Chromium, Total	mg/L	0.1	0.0019 J	0.0037	–	0.018	0.0048	0.0028 J	0.0038	0.0077
Cobalt, Total	mg/L	–	0.05	0.04	–	0.04	0.038	0.043	0.038	0.038
Copper, Total	mg/L	1.3	0.0067	0.0057	–	0.0047 J	0.0046 J	0.0043 J	0.029	0.0034 J
Iron, Total	mg/L	0.3	0.034 J	0.045 J	–	0.32	0.081	0.086	0.091	0.42
Lead, Total	mg/L	0.015	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Magnesium, Total	mg/L	–	7.7	7	–	5.5	6.4	6.3	6.4	6.2
Manganese, Total	mg/L	0.043	0.16	0.13	–	0.12	0.16	0.14	0.14	0.14
Mercury, Total	mg/L	0.002	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Nickel, Total	mg/L	0.039	0.1	0.083	–	0.079	0.078	0.088	0.084	0.079
Potassium, Total	mg/L	–	2.9	3	–	2.5	2.7	2.7	2.8	2.7
Selenium, Total	mg/L	0.05	ND U	ND U	–	ND U	ND U	0.0012 J	ND	ND
Silver, Total	mg/L	0.0094	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Sodium, Total	mg/L	–	38.6	40.9	–	34.9	37.2	36	39	35.7
Thallium, Total	mg/L	0.002	ND U	ND U	–	ND U	ND U	0.0002 J	ND	ND
Vanadium, Total	mg/L	0.0086	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Zinc, Total	mg/L	0.6	0.072	0.065	–	0.063	0.06	0.068	0.068	0.067
Alkalinity, Total	mg/L	–	2 J	5 J	–	4 J	5	6	ND	5
Ammonia-N	mg/L	–	0.198	0.096 J	–	0.058 J	0.152	ND U	0.126	ND
Chemical Oxygen Demand (COD)	mg/L	–	ND U	ND U	–	ND U	10 J	5 J	ND	ND
Chloride	mg/L	250	82.3	75.7	–	64	67.3	78.5	71.5	69.5
Hardness	mg/L	–	56.9	47.5	–	42.9	43	44.7	45.7	48.1
Nitrate-N	mg/L	10	1.4	1.9	–	1.3	2	2	1.8	1.8
pH	SU	8.5	4.52	4.65	–	4.37	4.68	4.28	4.72	4.54
Specific Conductance	umhos/cm	–	231	263	–	196.4	221	201	256	252.9
Sulfate	mg/L	250	16.6	21.1	–	21.6	21.1	21.3	15.3	16.5
Total Dissolved Solids	mg/L	500	192	208	–	172	104	198	146	162
Turbidity	NTU	5	0.4	1.06	–	3.3	1.53	1.7	1.4	5.24

Location ID:	GWM-2									
Number of Sampling Dates:	51									
Parameter Name	**Units**	**Compliance Limit**	**9/13/2022**	**3/13/2023**	**9/11/2023**					
Antimony, Total	mg/L	0.006	–	ND	ND					
Arsenic, Total	mg/L	0.01	–	ND	ND					
Barium, Total	mg/L	2	–	0.099	0.1					
Beryllium, Total	mg/L	0.004	–	ND	ND					
Cadmium, Total	mg/L	0.005	–	ND	ND					
Calcium, Total	mg/L	–	–	8.5	8.8					
Chromium, Total	mg/L	0.1	–	0.0039	0.0017 J					
Cobalt, Total	mg/L	–	–	0.042	0.042					
Copper, Total	mg/L	1.3	–	0.0023 J	0.0027 J					
Iron, Total	mg/L	0.3	–	0.11	0.047 J					
Lead, Total	mg/L	0.015	–	ND	ND					
Magnesium, Total	mg/L	–	–	6.7	6.8					
Manganese, Total	mg/L	0.043	–	0.15	0.17					
Mercury, Total	mg/L	0.002	–	ND	ND					
Nickel, Total	mg/L	0.039	–	0.087	0.087					
Potassium, Total	mg/L	–	–	2.8	2.9					
Selenium, Total	mg/L	0.05	–	ND	ND					
Silver, Total	mg/L	0.0094	–	ND	ND					
Sodium, Total	mg/L	–	–	38.3	40.2					
Thallium, Total	mg/L	0.002	–	ND	ND					
Vanadium, Total	mg/L	0.0086	–	ND	ND					
Zinc, Total	mg/L	0.6	–	0.069	0.067					
Alkalinity, Total	mg/L	–	–	10	5					
Ammonia-N	mg/L	–	–	0.132	0.18					
Chemical Oxygen Demand (COD)	mg/L	–	–	6 J	6 J					
Chloride	mg/L	250	–	77.3	82.5					
Hardness	mg/L	–	–	49.1	50.1					
Nitrate-N	mg/L	10	–	1.9	2.2					
pH	SU	8.5	–	4.6	4.59					
Specific Conductance	umhos/cm	–	–	356.68	327.18					
Sulfate	mg/L	250	–	17.1	16.3					
Total Dissolved Solids	mg/L	500	–	182	194					
Turbidity	NTU	5	–	21.41	2.81					

Historical Well Data Assessment Monitoring, Organochloride Pesticides

Name: Eastern Sanitary Landfill

Location ID:	GWM-3		
Number of Sampling Dates:	1		
Parameter Name	**Units**	**Compliance Limit**	**9/9/2021**
4,4'-DDD	ug/L	0.0063	ND U
4,4'-DDE	ug/L	0.046	ND U
4,4'-DDT	ug/L	0.23	ND U
Aldrin	ug/L	0.00092	ND U
alpha-HCH (alpha-BHC)	ug/L	0.0072	ND U
beta-BHC	ug/L	0.025	ND U
Chlordane	ug/L	2	ND U
delta-BHC	ug/L	0.2	ND U
Dieldrin	ug/L	0.0018	ND U
Endosulfan I	ug/L	10	ND U
Endosulfan II	ug/L	10	ND U
Endosulfan Sulfate	ug/L	10	ND U
Endrin	ug/L	2	ND U
Endrin Aldehyde	ug/L	2	ND U
gamma-BHC	ug/L	0.2	ND U
Heptachlor	ug/L	0.4	ND U
Heptachlor Epoxide	ug/L	0.2	ND U
Methoxychlor	ug/L	40	ND U
Toxaphene	ug/L	3	ND U

Historical Well Data Table I

Name: Eastern Sanitary Landfill

Location ID:	GWM-3									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/31/2000**	**10/19/2000**	**3/29/2001**	**10/25/2001**	**3/26/2002**	**9/23/2002**	**4/2/2003**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	17.5	11.6	ND	9	ND	7	5	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-3									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/31/2000**	**10/19/2000**	**3/29/2001**	**10/25/2001**	**3/26/2002**	**9/23/2002**	**4/2/2003**
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	1	3	5	6

Location ID:	GWM-3									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/24/2003**	**4/1/2004**	**10/14/2004**	**4/20/2005**	**11/7/2005**	**3/29/2006**	**9/21/2006**	**4/19/2007**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	3	3	ND	ND	ND	ND	ND	8
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-3									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/24/2003**	**4/1/2004**	**10/14/2004**	**4/20/2005**	**11/7/2005**	**3/29/2006**	**9/21/2006**	**4/19/2007**
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	3	2	1	ND	2	2	2

Location ID:	GWM-3									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**11/20/2007**	**4/3/2008**	**10/16/2008**	**3/26/2009**	**9/29/2009**	**5/11/2010**	**8/26/2010**	**3/8/2011**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-3									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**11/20/2007**	**4/3/2008**	**10/16/2008**	**3/26/2009**	**9/29/2009**	**5/11/2010**	**8/26/2010**	**3/8/2011**
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	2	2	2	2	ND	ND	ND	ND

Location ID:	GWM-3									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/12/2011**	**3/13/2012**	**9/5/2012**	**3/12/2013**	**9/25/2013**	**3/18/2014**	**9/16/2014**	**3/18/2015**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND U	ND U	ND U
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND U	ND U	0.48 JB
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	0.34 J	ND U	ND U

Location ID:	GWM-3									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/12/2011**	**3/13/2012**	**9/5/2012**	**3/12/2013**	**9/25/2013**	**3/18/2014**	**9/16/2014**	**3/18/2015**
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	0.38 J	ND U	ND U
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND U	ND U	ND U
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND U	ND U	0.24 JB
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND U	ND U	ND U
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND U	0.21 J	ND U

Location ID:	GWM-3									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/15/2015**	**3/16/2016**	**9/22/2016**	**3/29/2017**	**9/21/2017**	**3/28/2018**	**9/20/2018**	**3/12/2019**
Acetone	ug/L	1400	ND U	ND U	ND U	3.2 J	ND U	6.1 JB	ND U	ND U
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromomethane	ug/L	0.75	0.4 J	0.89 J	ND U	ND U	ND U	ND U	ND U	ND U
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloromethane	ug/L	19	0.5 J	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Iodomethane	ug/L	–	ND U	0.58 J	ND U	ND U	ND U	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	GWM-3									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/15/2015**	**3/16/2016**	**9/22/2016**	**3/29/2017**	**9/21/2017**	**3/28/2018**	**9/20/2018**	**3/12/2019**
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	0.41 J	0.37 J

Location ID:	GWM-3									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/1/2019**	**3/18/2020**	**9/24/2020**	**3/17/2021**	**9/9/2021**	**3/15/2022**	**9/16/2022**	**3/15/2023**
Acetone	ug/L	1400	3.3 J	ND U	ND U	ND U	ND U	ND	ND	ND
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Benzene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Bromomethane	ug/L	0.75	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chloromethane	ug/L	19	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND	ND	ND

Location ID:	GWM-3									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/1/2019**	**3/18/2020**	**9/24/2020**	**3/17/2021**	**9/9/2021**	**3/15/2022**	**9/16/2022**	**3/15/2023**
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
o-Xylene	ug/L	10000	–	ND U	ND U	ND U	ND U	ND	ND	ND
mp-Xylene	ug/L	10000	–	ND U	ND U	ND U	ND U	ND	ND	ND
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chloroform	ug/L	80	0.31 J	ND U	ND U	ND U	ND U	ND	ND	ND

Location ID:	GWM-3		
Number of Sampling Dates:	49		
Parameter Name	**Units**	**Compliance Limit**	**9/11/2023**
Acetone	ug/L	1400	ND
Acrylonitrile	ug/L	–	ND
Benzene	ug/L	5	ND
Bromochloromethane	ug/L	–	ND
Bromomethane	ug/L	0.75	0.76 JB
2-Butanone	ug/L	700	ND
Carbon disulfide	ug/L	81	ND
Carbon Tetrachloride	ug/L	5	ND
Chlorobenzene	ug/L	100	ND
Chloroethane	ug/L	2100	ND
Chloromethane	ug/L	19	0.71 JB
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND
1,2-Dibromoethane	ug/L	0.05	ND
Dibromomethane	ug/L	–	ND
1,2-Dichlorobenzene	ug/L	600	ND
1,4-Dichlorobenzene	ug/L	75	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND
1,1-Dichloroethane	ug/L	2.8	ND
1,2-Dichloroethane	ug/L	5	ND
1,1-Dichloroethene	ug/L	7	ND
cis-1,2-Dichloroethene	ug/L	70	ND

Location ID:	GWM-3
Number of Sampling Dates:	49

Parameter Name	Units	Compliance Limit	9/11/2023
trans-1,2-Dichloroethene	ug/L	100	ND
Methylene Chloride	ug/L	5	ND
Methyl t-Butyl Ether	ug/L	20	ND
1,2-Dichloropropane	ug/L	5	ND
trans-1,3-Dichloropropene	ug/L	–	ND
cis-1,3-Dichloropropene	ug/L	–	ND
Ethylbenzene	ug/L	700	ND
2-Hexanone	ug/L	–	ND
Iodomethane	ug/L	–	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND
Styrene	ug/L	100	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND
Tetrachloroethene	ug/L	5	ND
Toluene	ug/L	1000	ND
1,1,1-Trichloroethane	ug/L	200	ND
1,1,2-Trichloroethane	ug/L	5	ND
Trichloroethene	ug/L	5	ND
Trichlorofluoromethane	ug/L	–	ND
1,2,3-Trichloropropane	ug/L	–	ND
Vinyl acetate	ug/L	–	ND
Vinyl chloride	ug/L	2	ND
Total Xylenes	ug/L	10000	ND
o-Xylene	ug/L	10000	ND
mp-Xylene	ug/L	10000	ND
Bromodichloromethane	ug/L	80	ND
Chlorodibromomethane	ug/L	80	ND
Bromoform	ug/L	80	ND
Chloroform	ug/L	80	ND

Historical Well Data Table II

Name: Eastern Sanitary Landfill

Location ID:	GWM-3									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/31/2000**	**10/19/2000**	**3/29/2001**	**10/25/2001**	**3/26/2002**	**9/23/2002**	**4/2/2003**
Antimony, Total	mg/L	0.006	--	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	--	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	ND	ND	0.052	0.086	0.088	0.094	0.097	0.093
Beryllium, Total	mg/L	0.004	--	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	--	--	--	--	--	--	--	--
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	--	ND	ND	ND	ND	ND	ND	ND
Copper, Total	mg/L	1.3	--	ND	0.073	0.047	0.032	0.02	0.028	ND
Iron, Total	mg/L	0.3	3.27	0.49	0.104	ND	0.032	0.71	0.092	0.051
Lead, Total	mg/L	0.015	ND	ND	ND	ND	0.002	0.004	ND	ND
Magnesium, Total	mg/L	--	--	--	--	--	--	--	--	--
Manganese, Total	mg/L	0.043	0.1	0.09	0.095	0.096	0.037	0.049	0.043	0.038
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	--	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/L	--	--	--	--	--	--	--	--	--
Selenium, Total	mg/L	0.05	--	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	--	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	--	--	--	--	--	--	--	--
Thallium, Total	mg/L	0.002	--	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	--	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	1.24	ND	0.083	ND	ND	0.06	0.018	0.023
Alkalinity, Total	mg/L	--	--	6	8	5	5	8	6	6
Ammonia-N	mg/L	--	0.2	0.2	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	10	10	ND	ND	ND	ND	ND	ND
Chloride	mg/L	250	22	20	20.09	26.03	28.88	30.51	30.35	57.53
Hardness	mg/L	--	--	40	24	26.21	22.01	48.14	42.42	49.86
Nitrate-N	mg/L	10	2.1	2.7	2.42	3.15	1.89	1.9	1.57	2.39
pH	SU	8.5	--	--	4.96	4.9	4.72	4.8	4.52	4.4
Specific Conductance	umhos/cm	--	--	161	ND	ND	172	192	208	263
Sulfate	mg/L	250	24.6	20.7	19	9	25	16.07	15.6	19.4
Total Dissolved Solids	mg/L	500	93	90	101	104	95	119	87	101
Turbidity	NTU	5	--	23	32	65	3.15	28.1	2.6	2.3

Location ID:	GWM-3									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/24/2003**	**4/1/2004**	**10/14/2004**	**4/20/2005**	**11/7/2005**	**3/29/2006**	**9/21/2006**	**4/19/2007**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.09	0.06	0.056	0.058	0.062	0.056	0.067	0.062
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-3									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/24/2003**	**4/1/2004**	**10/14/2004**	**4/20/2005**	**11/7/2005**	**3/29/2006**	**9/21/2006**	**4/19/2007**
Calcium, Total	mg/L	--	--	--	--	--	--	--	--	9.45
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	mg/L	1.3	ND	0.013	ND	ND	ND	0.021	0.011	ND
Iron, Total	mg/L	0.3	ND	0.119	0.019	0.061	0.125	0.056	0.183	ND
Lead, Total	mg/L	0.015	ND	ND	ND	ND	0.002	ND	ND	ND
Magnesium, Total	mg/L	--	--	--	--	--	--	--	--	9.9
Manganese, Total	mg/L	0.043	0.03	0.03	0.026	0.028	0.03	0.019	0	0.02
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/L	--	--	--	--	--	--	--	--	7
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	--	--	--	--	--	--	--	47.7
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.207	ND	0.116	ND	0.033	0.049	0.086	0.026
Alkalinity, Total	mg/L	--	4	6	8.8	11	11.05	8.8	10.2	10.1
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	ND	31	ND	ND	ND	ND	ND	ND
Chloride	mg/L	250	39.6	38.36	85.52	64.85	36.27	36.45	28.89	34.92
Hardness	mg/L	--	51.03	40.67	53.93	43.73	59.45	38.85	62.92	64.36
Nitrate-N	mg/L	10	1.72	1.68	3.06	2.83	1.37	1.43	1.29	1.37
pH	SU	8.5	4.43	4.44	4.47	4.56	4.59	4.47	4.46	4.37
Specific Conductance	umhos/cm	--	231	217	258	302	228	209	200	240
Sulfate	mg/L	250	15.84	18.87	35.26	37.73	21.86	26.65	23.13	21.96
Total Dissolved Solids	mg/L	500	89	142	128	212	146	127	152	27
Turbidity	NTU	5	30	30.7	8.3	ND	25.4	51	24.4	6.71

Location ID:	GWM-3									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**11/20/2007**	**4/3/2008**	**10/16/2008**	**3/26/2009**	**9/29/2009**	**5/11/2010**	**8/26/2010**	**3/8/2011**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.04	0.047	0.04	0.035	0.039	0.041	0.039	0.038
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	6.85	6.5	1.36	2.9	4.4	5	7.15	6.53
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	ND	ND	0.081	ND	0.025	ND	ND	0.01
Copper, Total	mg/L	1.3	0.045	ND	0.073	ND	ND	0.019	ND	ND
Iron, Total	mg/L	0.3	0.187	0.006	0.501	ND	0.24	0.254	ND	0.012
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/L	--	2.86	9.9	1.243	9.8	9.25	10.7	2.681	2.924
Manganese, Total	mg/L	0.043	0.08	0.07	0.137	0.026	ND	0.017	0.071	0.081
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-3									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**11/20/2007**	**4/3/2008**	**10/16/2008**	**3/26/2009**	**9/29/2009**	**5/11/2010**	**8/26/2010**	**3/8/2011**
Nickel, Total	mg/L	0.039	ND	ND	0.067	ND	ND	ND	ND	ND
Potassium, Total	mg/L	--	1.85	2.37	2.16	1.9	2.03	2	2.05	1.9
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	30.4	32.4	3.6	25.8	6.6	35.2	35.4	33.6
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.014	0.048	0.039	ND	ND	ND	ND	0.018
Alkalinity, Total	mg/L	--	9.8	8.2	10.2	7.8	1.59	1.2	5.1	ND
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	12	ND	20	ND	ND	ND	12	--
Chloride	mg/L	250	57.81	33.41	30.9	34.96	40.46	47.89	49.31	56.84
Hardness	mg/L	--	28.88	57	8.52	47.58	49.08	56.55	28.9	28.34
Nitrate-N	mg/L	10	2.64	1.53	1.5	1.91	2.17	2.79	--	2.79
pH	SU	8.5	4.82	4.3	5.05	4.96	4.88	4.91	4.66	4.78
Specific Conductance	umhos/cm	--	221	272	272	216	245	200	276	299
Sulfate	mg/L	250	32.36	20.86	21.22	27.74	21.73	22.49	21.68	23.04
Total Dissolved Solids	mg/L	500	166	174	210	84	130	136	168	114
Turbidity	NTU	5	41.4	15.6	15.6	ND	5.2	2.4	1.1	3.3

Location ID:	GWM-3									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/12/2011**	**3/13/2012**	**9/5/2012**	**3/12/2013**	**9/25/2013**	**3/18/2014**	**9/16/2014**	**3/18/2015**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND U	ND U	ND U
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND U	ND U	ND U
Barium, Total	mg/L	2	0.084	0.097	0.118	0.121	0.09	0.08	0.074	0.084
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND U	ND U	ND U
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND U	ND U	0.00049 J
Calcium, Total	mg/L	--	7.6	2.05	6.28	13.03	5.06	7.9	7.7	8.2
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	0.0049	0.0033	0.0037
Cobalt, Total	mg/L	--	ND	ND	ND	ND	ND	0.005 J	0.0042 J	0.0059
Copper, Total	mg/L	1.3	ND	ND	ND	ND	ND	0.011	0.013	0.0034 J
Iron, Total	mg/L	0.3	0.3	0.012	ND	0.102	0.01	0.02 J	ND U	ND U
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	0.0019 J	ND U	ND U
Magnesium, Total	mg/L	--	7.2	0.858	9.004	8.373	7.429	7.6	7.1	6.1
Manganese, Total	mg/L	0.043	0.027	0.025	0.045	0.038	0.02	0.025	0.022	0.03
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	0.00034 J	0.00028 J	0.00033 J
Nickel, Total	mg/L	0.039	ND	ND	ND	ND	ND	0.0043 J	0.0029 J	0.0035 J
Potassium, Total	mg/L	--	2.1	2.27	2.05	2.07	1.79	2	1.8	1.6
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND U	ND U	ND U
Sodium, Total	mg/L	--	18	2.5	34.7	27.1	22.52	25.2	24.2	21.2
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND U	ND U	ND U
Zinc, Total	mg/L	0.6	0.01	0.014	ND	ND	ND	0.0096	0.0041 J	0.0034 J
Alkalinity, Total	mg/L	--	20	2.44	11.27	8.82	6.66	8	10	10

Location ID: GWM-3
Number of Sampling Dates: 49

Parameter Name	Units	Compliance Limit	10/12/2011	3/13/2012	9/5/2012	3/12/2013	9/25/2013	3/18/2014	9/16/2014	3/18/2015
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	0.13	0.09 J	ND U
Chemical Oxygen Demand (COD)	mg/L	--	11	ND	ND	9	ND	12	ND U	ND U
Chloride	mg/L	250	43	50.41	54.84	61.11	46.6	53.4	55.4	49.4
Hardness	mg/L	--	48	86.53	52.75	67	43.2	59	50	63
Nitrate-N	mg/L	10	3.2	2.19	3.3	2.72	2.69	3.1	3.6	3.3
pH	SU	8.5	4.72	4.78	4.53	5.82	4.73	5.12	5.23	5.07
Specific Conductance	umhos/cm	--	255	327	374	271	287	205	193.4	216
Sulfate	mg/L	250	14	22.73	31.95	32.83	26.55	25.5	28.1	29.5
Total Dissolved Solids	mg/L	500	110	188	164	148	119	93	144	189
Turbidity	NTU	5	131	0.77	2.05	4.6	ND	0.55	0.24	0.18

Location ID: GWM-3
Number of Sampling Dates: 49

Parameter Name	Units	Compliance Limit	9/15/2015	3/16/2016	9/22/2016	3/29/2017	9/21/2017	3/28/2018	9/20/2018	3/12/2019
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Arsenic, Total	mg/L	0.01	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Barium, Total	mg/L	2	0.081	0.086	0.094	0.095	0.085	0.085	0.085	0.091
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Cadmium, Total	mg/L	0.005	ND U	0.00068 J	0.00076 J	ND U	ND U	0.00054 J	0.00053 J	ND U
Calcium, Total	mg/L	--	9	9.5	9.3	9.3	8.5	9.1	9.1	10.4
Chromium, Total	mg/L	0.1	0.004	0.0082	0.014	0.0059	0.004	0.0038	0.0033	0.0047
Cobalt, Total	mg/L	--	0.0045 J	0.0062	0.013	0.0084	0.009	0.0069	0.0042 J	0.005 J
Copper, Total	mg/L	1.3	0.0046 J	0.0038 J	0.01	0.0051 J	0.016	0.0057	0.0069	0.0066
Iron, Total	mg/L	0.3	0.019 J	0.033 J	0.083	0.039 J	0.037 J	0.02 J	ND U	ND U
Lead, Total	mg/L	0.015	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Magnesium, Total	mg/L	--	8.1	8.8	8.6	8.8	7.5	8.2	8.2	7.9
Manganese, Total	mg/L	0.043	0.024	0.033	0.042	0.044	0.037	0.03	0.015	0.021
Mercury, Total	mg/L	0.002	0.00027 J	0.00033 J	0.0017	0.0004 J	0.00024 J	0.00027 J	0.00017 J	0.00019 J
Nickel, Total	mg/L	0.039	0.0034 J	0.0079	0.011	0.0067	0.0042 J	0.0035 J	0.003 J	0.0038 J
Potassium, Total	mg/L	--	2	2	2.1	2	1.9	2.1	2	2.2
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Sodium, Total	mg/L	--	27.1	31.1	33.4	31.1	27.5	30.8	29.1	29.7
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Zinc, Total	mg/L	0.6	0.0032 J	0.0072	0.0051 J	0.0057	0.0047 J	0.004 J	0.0044 J	0.0051 J
Alkalinity, Total	mg/L	--	11	12	11	11	11	12	13	11
Ammonia-N	mg/L	--	ND U	ND U	0.074 J	0.048 J	ND U	0.054 J	0.038 J	0.089 J
Chemical Oxygen Demand (COD)	mg/L	--	ND U	ND U	ND U	4 J	ND U	ND U	ND U	12 J
Chloride	mg/L	250	60.1	60.8	62.2	67.5	54.4	57.6	55.6	53.7
Hardness	mg/L	--	58	60	67	63	52.2	56.6	56.5	58.6
Nitrate-N	mg/L	10	2.9	2.6	2.7	2.5	2.7	3.2	3.3	4
pH	SU	8.5	5.02	5.25	5.14	5.01	5.19	5.33	5.24	5.22
Specific Conductance	umhos/cm	--	213	246	251	255	218	236	232	238
Sulfate	mg/L	250	32	31.6	30.6	33.2	33.3	32.4	30.8	30.4
Total Dissolved Solids	mg/L	500	148	176	177	172	173	143	141	186

Location ID:	GWM-3									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/15/2015**	**3/16/2016**	**9/22/2016**	**3/29/2017**	**9/21/2017**	**3/28/2018**	**9/20/2018**	**3/12/2019**
Turbidity	NTU	5	0.58	0.38	1.4	1.46	0.85	0.94	1.39	1.02

Location ID:	GWM-3									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/1/2019**	**3/18/2020**	**9/24/2020**	**3/17/2021**	**9/9/2021**	**3/15/2022**	**9/16/2022**	**3/15/2023**
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND U	ND U	ND U	ND U	0.0002 J	ND	ND	ND
Barium, Total	mg/L	2	0.092	0.081	0.069	0.2 R	0.082	0.078	0.068	0.067
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND U	ND U	ND U	0.00038 J	ND U	0.0012	0.0005 J	ND
Calcium, Total	mg/L	--	10.2	10.1	8.5	318 R	9.5	8.8	8	8.3
Chromium, Total	mg/L	0.1	0.003	0.003	0.0034	0.0056 R	0.0094	0.007	0.0055	0.0067
Cobalt, Total	mg/L	--	0.0044 J	0.0079	0.004 J	0.0054 J	0.0036 J	0.0084	0.0029 J	0.0037 J
Copper, Total	mg/L	1.3	0.0051 J	0.0058	0.0058	0.018 R	0.0048 J	0.0047 J	0.017	ND
Iron, Total	mg/L	0.3	ND U	ND U	ND U	4.9 R	ND U	0.085	0.041 J	0.043 J
Lead, Total	mg/L	0.015	ND U	0.00076 J	ND U	0.0012 J	ND U	ND	ND	ND
Magnesium, Total	mg/L	--	10.2	9.2	7.3	86.4 R	8.1	7.9	6.7	6.7
Manganese, Total	mg/L	0.043	0.022	0.018	0.015	2.3 R	0.025	0.018	0.012	0.012
Mercury, Total	mg/L	0.002	0.00031 J	ND U	0.00025 J	0.0018	ND U	0.00025 J	0.0012	0.00034 J
Nickel, Total	mg/L	0.039	0.0035 J	0.0032 J	0.0029 J	0.0046 J	0.0045 J	0.0038 J	0.004 J	0.004 J
Potassium, Total	mg/L	--	2.2	2.4	2	3.9 R	2.1	2.1	1.9	1.9
Selenium, Total	mg/L	0.05	ND U	0.0021 J	0.0019 J	ND U	0.0012 J	ND	ND	ND
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Sodium, Total	mg/L	--	34.6	35	28.4	706 R	33	31.1	20.8	19.1
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Zinc, Total	mg/L	0.6	0.0069	0.006	0.0069	0.0096 R	0.0097 J	0.006	0.011	0.0042 J
Alkalinity, Total	mg/L	--	18	20	17	19	17	18	18	14
Ammonia-N	mg/L	--	0.249	ND U	ND U	0.287	ND U	0.077 J	0.084 J	0.233
Chemical Oxygen Demand (COD)	mg/L	--	7 J	ND U	ND U	7 J	7 J	ND	ND	17
Chloride	mg/L	250	57.4	54	45.4	45.2	59.6	42.5	30.8	31.2
Hardness	mg/L	--	67.5	58.5	54	50	56.5	53.2	48.9	47
Nitrate-N	mg/L	10	3.1	2	1.5	1.8	2.2	1.7	1.8	2.1
pH	SU	8.5	5.18	5.24	5.28	5.17	4.99	5.26	4.72	5.04
Specific Conductance	umhos/cm	--	126.4	244	191.7	200	214	227	156.3	165.68
Sulfate	mg/L	250	31.3	31.8	28.6	31.6	35	30.5	26.2	24.2
Total Dissolved Solids	mg/L	500	210	188	152	166	210	157	125	88
Turbidity	NTU	5	0.44	1.29	0.98	11.4	1.39	1.08	3.98	8.1

Location ID:	GWM-3		
Number of Sampling Dates:	49		
Parameter Name	**Units**	**Compliance Limit**	**9/11/2023**
Antimony, Total	mg/L	0.006	ND
Arsenic, Total	mg/L	0.01	ND
Barium, Total	mg/L	2	0.076

Location ID:	GWM-3
Number of Sampling Dates:	49

Parameter Name	Units	Compliance Limit	9/11/2023
Beryllium, Total	mg/L	0.004	ND
Cadmium, Total	mg/L	0.005	ND
Calcium, Total	mg/L	--	9.2
Chromium, Total	mg/L	0.1	0.0057
Cobalt, Total	mg/L	--	0.0021 J
Copper, Total	mg/L	1.3	ND
Iron, Total	mg/L	0.3	0.028 J
Lead, Total	mg/L	0.015	0.00075 J
Magnesium, Total	mg/L	--	7.8
Manganese, Total	mg/L	0.043	0.01
Mercury, Total	mg/L	0.002	0.00033 J
Nickel, Total	mg/L	0.039	0.0037 J
Potassium, Total	mg/L	--	2
Selenium, Total	mg/L	0.05	ND
Silver, Total	mg/L	0.0094	ND
Sodium, Total	mg/L	--	22.5
Thallium, Total	mg/L	0.002	ND
Vanadium, Total	mg/L	0.0086	ND
Zinc, Total	mg/L	0.6	0.0026 J
Alkalinity, Total	mg/L	--	21
Ammonia-N	mg/L	--	0.123
Chemical Oxygen Demand (COD)	mg/L	--	5 J
Chloride	mg/L	250	41.5
Hardness	mg/L	--	54.3
Nitrate-N	mg/L	10	2.4
pH	SU	8.5	5.14
Specific Conductance	umhos/cm	--	232.91
Sulfate	mg/L	250	26.9
Total Dissolved Solids	mg/L	500	154
Turbidity	NTU	5	4.99

Historical Well Data Assessment Monitoring, Organochloride Pesticides

Name: Eastern Sanitary Landfill

Location ID: GWM-4
Number of Sampling Dates: 19

Parameter Name	Units	Compliance Limit	9/9/2014	3/16/2015	9/9/2015	3/18/2016	9/20/2016	3/23/2017	9/18/2017	3/15/2018
4,4'-DDD	ug/L	0.0063	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4,4'-DDE	ug/L	0.046	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4,4'-DDT	ug/L	0.23	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Aldrin	ug/L	0.00092	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
alpha-HCH (alpha-BHC)	ug/L	0.0072	0.0086 J	0.0093 J	0.0073 J	ND U	0.0053 J	0.0045 J	ND U	ND U
beta-BHC	ug/L	0.025	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlordane	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
delta-BHC	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Dieldrin	ug/L	0.0018	0.014 J	0.022 J	0.014 J	0.0058 J	0.01 J	0.012 J	0.012 J	0.008
Endosulfan I	ug/L	10	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endosulfan II	ug/L	10	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endosulfan Sulfate	ug/L	10	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endrin	ug/L	2	0.006 J	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endrin Aldehyde	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
gamma-BHC	ug/L	0.2	0.006 J	ND U	0.0049 J	ND U	0.0051 J	ND U	0.0038 J	ND U
Heptachlor	ug/L	0.4	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Heptachlor Epoxide	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methoxychlor	ug/L	40	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Toxaphene	ug/L	3	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID: GWM-4
Number of Sampling Dates: 19

Parameter Name	Units	Compliance Limit	9/17/2018	3/5/2019	9/24/2019	4/7/2020	9/22/2020	3/16/2021	9/14/2021	3/22/2022
4,4'-DDD	ug/L	0.0063	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND
4,4'-DDE	ug/L	0.046	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND
4,4'-DDT	ug/L	0.23	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND
Aldrin	ug/L	0.00092	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND
alpha-HCH (alpha-BHC)	ug/L	0.0072	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND
beta-BHC	ug/L	0.025	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND
Chlordane	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND
delta-BHC	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND
Dieldrin	ug/L	0.0018	0.0028 J	0.0021 J	ND U	0.017	0.015	0.0078	0.012	ND
Endosulfan I	ug/L	10	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND
Endosulfan II	ug/L	10	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND
Endosulfan Sulfate	ug/L	10	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND
Endrin	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND
Endrin Aldehyde	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND

Location ID: GWM-4
Number of Sampling Dates: 19

Parameter Name	Units	Compliance Limit	9/17/2018	3/5/2019	9/24/2019	4/7/2020	9/22/2020	3/16/2021	9/14/2021	3/22/2022
gamma-BHC	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND
Heptachlor	ug/L	0.4	ND U	ND U	ND U	ND U	ND U	ND U	0.0019 J	ND
Heptachlor Epoxide	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND
Methoxychlor	ug/L	40	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND
Toxaphene	ug/L	3	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND

Location ID: GWM-4
Number of Sampling Dates: 19

Parameter Name	Units	Compliance Limit	9/13/2022	3/14/2023	9/12/2023
4,4'-DDD	ug/L	0.0063	ND	ND	ND
4,4'-DDE	ug/L	0.046	ND	ND	ND
4,4'-DDT	ug/L	0.23	ND	ND	ND
Aldrin	ug/L	0.00092	ND	ND	ND
alpha-HCH (alpha-BHC)	ug/L	0.0072	ND	ND	ND
beta-BHC	ug/L	0.025	ND	ND	ND
Chlordane	ug/L	2	ND	ND	ND
delta-BHC	ug/L	0.2	ND	ND	ND *-
Dieldrin	ug/L	0.0018	0.0031	0.00669	0.0047
Endosulfan I	ug/L	10	ND	ND	ND
Endosulfan II	ug/L	10	ND	ND	ND
Endosulfan Sulfate	ug/L	10	ND	ND	ND
Endrin	ug/L	2	ND	ND	ND
Endrin Aldehyde	ug/L	2	ND	ND	ND
gamma-BHC	ug/L	0.2	ND	ND	ND
Heptachlor	ug/L	0.4	ND	ND	ND
Heptachlor Epoxide	ug/L	0.2	ND	ND	ND
Methoxychlor	ug/L	40	ND	ND	ND
Toxaphene	ug/L	3	ND	ND	ND

Historical Well Data Table I

Name: Eastern Sanitary Landfill

Location ID:	GWM-4									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**10/26/1999**	**3/28/2000**	**10/17/2000**	**3/26/2001**	**10/29/2001**	**3/19/2002**	**9/12/2002**	**3/25/2003**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	1	1	1	2	3	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	1	1	3	1
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	2	ND	5	2	2
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	1	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	18.9	15.5	ND	33	9	2	8	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-4									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**10/26/1999**	**3/28/2000**	**10/17/2000**	**3/26/2001**	**10/29/2001**	**3/19/2002**	**9/12/2002**	**3/25/2003**
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	1	2	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-4									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**12/3/2003**	**3/23/2004**	**10/14/2004**	**4/20/2005**	**9/28/2005**	**3/15/2006**	**9/19/2006**	**4/12/2007**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	3	3	ND	ND	ND	3	2	2
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	3
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	1	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	2	1	ND	ND	ND	3	2	2
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	1	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	12	ND	ND	ND	8	7	8
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-4									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**12/3/2003**	**3/23/2004**	**10/14/2004**	**4/20/2005**	**9/28/2005**	**3/15/2006**	**9/19/2006**	**4/12/2007**
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	2	ND	2

Location ID:	GWM-4									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**10/23/2007**	**3/18/2008**	**9/25/2008**	**3/17/2009**	**10/1/2009**	**4/15/2010**	**8/24/2010**	**3/15/2011**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	2	2	2	2	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	4	2	2	2.4
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	3	2	2	2	1	1	1	ND

Location ID:	GWM-4									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**10/23/2007**	**3/18/2008**	**9/25/2008**	**3/17/2009**	**10/1/2009**	**4/15/2010**	**8/24/2010**	**3/15/2011**
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	1	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	7	7	6	5	ND	5	4	2.7
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-4									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**10/18/2011**	**2/28/2012**	**8/28/2012**	**2/26/2013**	**9/18/2013**	**3/20/2014**	**9/9/2014**	**3/16/2015**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	5.5 J	ND U	ND U
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Benzene	ug/L	5	ND	1	ND	ND	ND	0.79 J	0.37 J	0.47 J
Bromochloromethane	ug/L	–	ND	4	ND	ND	ND	ND U	ND U	ND U
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	0.45 J	0.43 J	0.51 JB
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND U	ND U	ND U

Location ID:	GWM-4									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**10/18/2011**	**2/28/2012**	**8/28/2012**	**2/26/2013**	**9/18/2013**	**3/20/2014**	**9/9/2014**	**3/16/2015**
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	0.24 J	ND U	ND U
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	2.7	7	3	2	1	4	1.7	2.2
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND	2	1	ND	ND	ND U	0.33 J	0.33 J
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND	1	ND	ND	ND	ND U	ND U	0.39 J
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	5	7	2	2	2	2.9	3.4	2.8
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND U	ND U	ND U
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND	1	ND	ND	ND	ND U	ND U	ND U
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND U	ND U	0.69 JB
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND U	ND U	ND U
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U

Location ID:	GWM-4									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**9/9/2015**	**3/18/2016**	**9/20/2016**	**3/23/2017**	**9/18/2017**	**3/15/2018**	**9/17/2018**	**3/5/2019**
Acetone	ug/L	1400	ND U	5.1 J	ND U	ND U	ND U	ND U	ND U	ND U
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzene	ug/L	5	0.33 J	0.37 J	0.39 J	ND U	0.3 J	ND U	ND U	ND U
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromomethane	ug/L	0.75	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloromethane	ug/L	19	ND U	0.35 J	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	2	2.1	2.2	1.8	2	1.8	1.6	1.7
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	0.34 J	ND U	0.39 J	ND U	0.44 J	ND U
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	2.4	2.2	2	1.5	1.8	1.3	1.7	1.7
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	GWM-4									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**9/9/2015**	**3/18/2016**	**9/20/2016**	**3/23/2017**	**9/18/2017**	**3/15/2018**	**9/17/2018**	**3/5/2019**
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	GWM-4									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**9/24/2019**	**3/16/2020**	**4/7/2020**	**9/22/2020**	**3/16/2021**	**9/14/2021**	**3/14/2022**	**3/22/2022**
Acetone	ug/L	1400	3.1 J	ND U	–	5 J	3.4 J	ND U	–	ND
Acrylonitrile	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	–	ND
Benzene	ug/L	5	0.25 J	0.58 J	–	ND U	ND U	ND U	–	ND
Bromochloromethane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	–	ND
Bromomethane	ug/L	0.75	ND U	ND U	–	0.45 J	ND U	ND U	–	ND
2-Butanone	ug/L	700	ND U	ND U	–	ND U	ND U	ND U	–	ND
Carbon disulfide	ug/L	81	ND U	ND U	–	ND U	ND U	ND U	–	ND
Carbon Tetrachloride	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	–	ND
Chlorobenzene	ug/L	100	ND U	0.22 J	–	ND U	ND U	ND U	–	ND
Chloroethane	ug/L	2100	ND U	ND U	–	ND U	ND U	ND U	–	ND
Chloromethane	ug/L	19	ND U	ND U	–	0.72 J	ND U	ND U	–	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	–	ND U	ND U	ND U	–	ND
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	–	ND U	ND U	ND U	–	ND
Dibromomethane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	–	ND
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	–	ND U	ND U	ND U	–	ND
1,4-Dichlorobenzene	ug/L	75	1.9	3.4	–	1.6	1.3	1.4	–	1.4
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	–	ND
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	–	ND U	ND U	ND U	–	ND
1,2-Dichloroethane	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	–	ND
1,1-Dichloroethene	ug/L	7	ND U	ND U	–	ND U	ND U	ND U	–	ND
cis-1,2-Dichloroethene	ug/L	70	0.34 J	0.33 J	–	ND U	ND U	ND U	–	ND
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	–	ND U	ND U	ND U	–	ND
Methylene Chloride	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	–	ND
Methyl t-Butyl Ether	ug/L	20	2	1.3	–	1.6	1.1	1.3	–	1.1
1,2-Dichloropropane	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	–	ND
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	–	ND
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	–	ND
Ethylbenzene	ug/L	700	ND U	ND U	–	ND U	ND U	ND U	–	ND
2-Hexanone	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	–	ND
Iodomethane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	–	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	–	ND U	ND U	ND U	–	ND
Styrene	ug/L	100	ND U	ND U	–	ND U	ND U	ND U	–	ND

Location ID:	GWM-4									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**9/24/2019**	**3/16/2020**	**4/7/2020**	**9/22/2020**	**3/16/2021**	**9/14/2021**	**3/14/2022**	**3/22/2022**
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	–	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	–	ND U	ND U	ND U	–	ND
Tetrachloroethene	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	–	ND
Toluene	ug/L	1000	ND U	ND U	–	ND U	ND U	ND U	–	ND
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	–	ND U	ND U	ND U	–	ND
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	–	ND
Trichloroethene	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	–	ND
Trichlorofluoromethane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	–	ND
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	–	ND
Vinyl acetate	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	–	ND
Vinyl chloride	ug/L	2	ND U	ND U	–	ND U	ND U	ND U	–	ND
Total Xylenes	ug/L	10000	ND U	ND U	–	ND U	ND U	ND U	–	ND
o-Xylene	ug/L	10000	–	ND U	–	ND U	ND U	ND U	–	ND
mp-Xylene	ug/L	10000	–	ND U	–	ND U	ND U	ND U	–	ND
Bromodichloromethane	ug/L	80	ND U	ND U	–	ND U	ND U	ND U	–	ND
Chlorodibromomethane	ug/L	80	ND U	ND U	–	ND U	ND U	ND U	–	ND
Bromoform	ug/L	80	ND U	ND U	–	ND U	ND U	ND U	–	ND
Chloroform	ug/L	80	ND U	ND U	–	ND U	ND U	ND U	–	ND

Location ID:	GWM-4									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**9/12/2022**	**9/13/2022**	**3/14/2023**	**9/12/2023**				
Acetone	ug/L	1400	–	ND	ND	ND				
Acrylonitrile	ug/L	–	–	ND	ND	ND				
Benzene	ug/L	5	–	ND	ND	ND				
Bromochloromethane	ug/L	–	–	ND	ND	ND				
Bromomethane	ug/L	0.75	–	ND	ND	0.87 JB				
2-Butanone	ug/L	700	–	ND	ND	ND				
Carbon disulfide	ug/L	81	–	ND	ND	ND				
Carbon Tetrachloride	ug/L	5	–	ND	ND	ND				
Chlorobenzene	ug/L	100	–	ND	ND	ND				
Chloroethane	ug/L	2100	–	ND	ND	ND				
Chloromethane	ug/L	19	–	ND	ND	0.86 JB				
1,2-Dibromo-3-chloropropane	ug/L	0.2	–	ND	ND	ND				
1,2-Dibromoethane	ug/L	0.05	–	ND	ND	ND				
Dibromomethane	ug/L	–	–	ND	ND	ND				
1,2-Dichlorobenzene	ug/L	600	–	ND	ND	ND				
1,4-Dichlorobenzene	ug/L	75	–	ND	1.3	1.2				
trans-1,4-dichloro-2-butene	ug/L	–	–	ND	ND	ND				
1,1-Dichloroethane	ug/L	2.8	–	ND	ND	ND				
1,2-Dichloroethane	ug/L	5	–	ND	ND	ND				
1,1-Dichloroethene	ug/L	7	–	ND	ND	ND				
cis-1,2-Dichloroethene	ug/L	70	–	ND	ND	ND				

Location ID:	GWM-4									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**9/12/2022**	**9/13/2022**	**3/14/2023**	**9/12/2023**				
trans-1,2-Dichloroethene	ug/L	100	–	ND	ND	ND				
Methylene Chloride	ug/L	5	–	ND	ND	ND				
Methyl t-Butyl Ether	ug/L	20	–	0.78 J	1	ND				
1,2-Dichloropropane	ug/L	5	–	ND	ND	ND				
trans-1,3-Dichloropropene	ug/L	–	–	ND	ND	ND				
cis-1,3-Dichloropropene	ug/L	–	–	ND	ND	ND				
Ethylbenzene	ug/L	700	–	ND	ND	ND				
2-Hexanone	ug/L	–	–	ND	ND	ND				
Iodomethane	ug/L	–	–	ND	ND	ND				
4-Methyl-2-Pentanone(MIBK)	ug/L	630	–	ND	ND	ND				
Styrene	ug/L	100	–	ND	ND	ND				
1,1,1,2-Tetrachloroethane	ug/L	–	–	ND	ND	ND				
1,1,2,2-Tetrachloroethane	ug/L	0.076	–	ND	ND	ND				
Tetrachloroethene	ug/L	5	–	ND	ND	ND				
Toluene	ug/L	1000	–	ND	ND	ND				
1,1,1-Trichloroethane	ug/L	200	–	ND	ND	ND				
1,1,2-Trichloroethane	ug/L	5	–	ND	ND	ND				
Trichloroethene	ug/L	5	–	ND	ND	0.57 J				
Trichlorofluoromethane	ug/L	–	–	ND	ND	ND				
1,2,3-Trichloropropane	ug/L	–	–	ND	ND	ND				
Vinyl acetate	ug/L	–	–	ND	ND	ND				
Vinyl chloride	ug/L	2	–	ND	ND	ND				
Total Xylenes	ug/L	10000	–	ND	ND	ND				
o-Xylene	ug/L	10000	–	ND	ND	ND				
mp-Xylene	ug/L	10000	–	ND	ND	ND				
Bromodichloromethane	ug/L	80	–	ND	ND	ND				
Chlorodibromomethane	ug/L	80	–	ND	ND	ND				
Bromoform	ug/L	80	–	ND	ND	ND				
Chloroform	ug/L	80	–	ND	ND	ND				

Historical Well Data Table II

Name: Eastern Sanitary Landfill

Location ID:	GWM-4									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**10/26/1999**	**3/28/2000**	**10/17/2000**	**3/26/2001**	**10/29/2001**	**3/19/2002**	**9/12/2002**	**3/25/2003**
Antimony, Total	mg/L	0.006	--	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	--	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	ND	ND	0.029	0.052	0.054	0.05	0.049	0.044
Beryllium, Total	mg/L	0.004	--	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	--	--	--	--	--	--	--	--
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	--	ND	0.011	ND	0.014	0.016	0.02	0.017
Copper, Total	mg/L	1.3	--	ND	ND	0.017	ND	0.04	0.012	0.011
Iron, Total	mg/L	0.3	ND	0.95	0.208	0.348	0.862	1.343	0.376	0.122
Lead, Total	mg/L	0.015	ND	ND	0.002	ND	0.003	0.003	ND	ND
Magnesium, Total	mg/L	--	--	--	--	--	--	--	--	--
Manganese, Total	mg/L	0.043	0.1	0.12	0.085	0.12	0.137	0.122	0.282	0.18
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	--	ND	ND	ND	ND	ND	0.013	ND
Potassium, Total	mg/L	--	--	--	--	--	--	--	--	--
Selenium, Total	mg/L	0.05	--	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	--	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	--	--	--	--	--	--	--	--
Thallium, Total	mg/L	0.002	--	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	--	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	ND	ND	0.08	0.052	0.052	0.06	0.033	ND
Alkalinity, Total	mg/L	--	--	41	42	37.5	35	40	50	40
Ammonia-N	mg/L	--	0.2	0.2	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	--	10	ND	ND	17	ND	12	ND
Chloride	mg/L	250	41	41	43.58	40.46	46.89	44.64	73	44.24
Hardness	mg/L	--	--	93	62	92.07	82.66	102.02	111.9	73.53
Nitrate-N	mg/L	10	4	5.2	4.17	3.89	2.54	2.42	1.24	2.43
pH	SU	8.5	--	--	5.13	5.6	5.23	5.25	5.11	4.94
Specific Conductance	umhos/cm	--	--	280	ND	ND	288	322	441	295
Sulfate	mg/L	250	10	10	8	ND	13	8.27	12.02	7.37
Total Dissolved Solids	mg/L	500	152	156	166	163	161	167	218	150
Turbidity	NTU	5	--	13	16	39.5	56	33	33	6.83

Location ID:	GWM-4								
Number of Sampling Dates:	52								
Parameter Name	**Units**	**Compliance Limit**	**12/3/2003**	**3/23/2004**	**10/14/2004**	**4/20/2005**	**9/28/2005**	**3/15/2006**	**9/19/2006**	**4/12/2007**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.045	0.048	0.061	0.068	0.065	0.06	0.065	0.06
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND

Location ID: GWM-4
Number of Sampling Dates: 52

Parameter Name	Units	Compliance Limit	12/3/2003	3/23/2004	10/14/2004	4/20/2005	9/28/2005	3/15/2006	9/19/2006	4/12/2007
Calcium, Total	mg/L	--	--	--	--	--	--	--	--	43.55
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	0.021	0.019	0.02	0.032	0.033	0.034	0.038	0.03
Copper, Total	mg/L	1.3	ND	ND	ND	ND	ND	ND	0.018	0.019
Iron, Total	mg/L	0.3	ND	0.117	0.035	0.068	0.12	0.1	0.625	0.207
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/L	--	--	--	--	--	--	--	--	10
Manganese, Total	mg/L	0.043	0.189	0.155	0.153	0.242	0.276	0.292	8.25	0.283
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	ND	0.018	0.012	0.015	0.015	0.018	0.014	0.014
Potassium, Total	mg/L	--	--	--	--	--	--	--	--	22.35
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	--	--	--	--	--	--	--	69.2
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	ND	ND	0.087	0.021	0.04	0.071	0.1	0.07
Alkalinity, Total	mg/L	--	45	25	26.8	38.3	45.6	48.25	34	66.4
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	ND	ND	11	ND	ND	ND	ND	ND
Chloride	mg/L	250	50.31	38.71	93.39	116.87	75.09	85.96	61.9	85.82
Hardness	mg/L	--	78.08	59.27	62.2	76.49	100	79.88	92.15	149.92
Nitrate-N	mg/L	10	2.56	2.61	4.26	4.51	2.04	1.43	1.86	1.34
pH	SU	8.5	5.15	4.71	4.6	4.95	4.87	4.9	4.89	5.12
Specific Conductance	umhos/cm	--	335	273	295	760	398	526	346	465
Sulfate	mg/L	250	12.47	9.38	17.71	24.53	17.17	19.57	15.23	20.03
Total Dissolved Solids	mg/L	500	200	161	153	308	358	604	206	22
Turbidity	NTU	5	1.35	10.99	9.8	9.9	16.6	15	0	8.66

Location ID: GWM-4
Number of Sampling Dates: 52

Parameter Name	Units	Compliance Limit	10/23/2007	3/18/2008	9/25/2008	3/17/2009	10/1/2009	4/15/2010	8/24/2010	3/15/2011
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.056	0.041	0.057	0.051	0.07	0.072	0.07	0.066
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	16.71	5.1	25.24	15.03	25.9	19.83	17.62	19.16
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	0.03	0.027	0.051	0.038	0.14	0.065	0.08	0.252
Copper, Total	mg/L	1.3	0.112	ND	0.01	0.021	0.041	0.028	ND	ND
Iron, Total	mg/L	0.3	0.21	ND	1.402	0.574	1.674	2.54	1.628	3.979
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/L	--	2.98	6.6	3.211	7.95	17.6	9.25	2.626	2.934
Manganese, Total	mg/L	0.043	0.262	0.248	0.321	0.352	0.714	0.458	0.529	1.345
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-4									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**10/23/2007**	**3/18/2008**	**9/25/2008**	**3/17/2009**	**10/1/2009**	**4/15/2010**	**8/24/2010**	**3/15/2011**
Nickel, Total	mg/L	0.039	0.017	0.015	ND	0.014	0.019	0.016	0.022	0.019
Potassium, Total	mg/L	--	5.65	3.28	4	3.11	4.1	3.27	3.82	3.27
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	36.4	60.6	61.4	38.9	48	50.8	46.2	52.2
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.035	0.014	ND	0.013	ND	ND	ND	0.034
Alkalinity, Total	mg/L	--	39.6	42.2	52.7	47.2	89.4	36.9	161	46
Ammonia-N	mg/L	--	ND	ND	ND	ND	1.67	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	11	63	ND	10	ND	ND	ND	12
Chloride	mg/L	250	90.16	68.87	71.06	87.39	83.42	75.28	15.68	74.8
Hardness	mg/L	--	54	39.91	76.25	70.27	137.15	87.61	54.87	59.92
Nitrate-N	mg/L	10	1.22	0.77	0.08	0.79	0.03	0.15	ND	ND
pH	SU	8.5	4.91	4.9	5.44	5.39	5.54	5.01	5.25	5.26
Specific Conductance	umhos/cm	--	391	439	428	389	572	378	385	443
Sulfate	mg/L	250	19.8	15.3	19.94	20.68	18.41	21.2	16.1	20.21
Total Dissolved Solids	mg/L	500	336	272	232	232	226	198	216	248
Turbidity	NTU	5	13.4	6.76	89.8	8.1	8.2	30	22	9.1

Location ID:	GWM-4									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**10/18/2011**	**2/28/2012**	**8/28/2012**	**2/26/2013**	**9/18/2013**	**3/20/2014**	**9/9/2014**	**3/16/2015**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND U	ND U	ND U
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	0.0013 J	0.001 J	0.0014 J
Barium, Total	mg/L	2	0.11	0.123	0.148	0.165	0.03	0.19	0.13	0.14
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND U	ND U	ND U
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND U	ND U	ND U
Calcium, Total	mg/L	--	19	2.36	24.61	40.16	5.11	31.9	52.2	41.5
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	0.0016 J	0.0024	0.0024
Cobalt, Total	mg/L	--	0.24	0.263	0.192	0.194	ND	0.33	0.079	0.095
Copper, Total	mg/L	1.3	ND	ND	ND	ND	ND	0.0033 J	0.0088	0.0036 J
Iron, Total	mg/L	0.3	4.6	7.949	8.767	7.262	0.439	63.6	4.1	4.8
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	ND U	ND U	ND U
Magnesium, Total	mg/L	--	8.8	1.004	12.15	12.02	0.486	18.7	11.4	12.7
Manganese, Total	mg/L	0.043	1.4	1.74	1.094	1.138	0.02	3	0.92	0.91
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND U	ND U	ND U
Nickel, Total	mg/L	0.039	0.02	0.021	0.017	0.017	ND	0.022	0.01	0.014
Potassium, Total	mg/L	--	5.5	4.72	5.18	5.24	8.11	6.1	7.1	6.5
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND U	ND U	ND U
Sodium, Total	mg/L	--	36	4.8	76.4	50.4	20.44	47.1	52.7	56.2
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND U	ND U	ND U
Zinc, Total	mg/L	0.6	0.031	0.076	0.02	0.015	ND	0.0072	0.015	0.0086
Alkalinity, Total	mg/L	--	56	82.9	111.65	116.39	29.26	175	152	160

Location ID: GWM-4
Number of Sampling Dates: 52

Parameter Name	Units	Compliance Limit	10/18/2011	2/28/2012	8/28/2012	2/26/2013	9/18/2013	3/20/2014	9/9/2014	3/16/2015
Ammonia-N	mg/L	--	1	1.3	2.01	1.62	ND	0.642	1.63	1.65
Chemical Oxygen Demand (COD)	mg/L	--	15	ND	ND	ND	ND	ND U	25	ND U
Chloride	mg/L	250	63	85.76	76	89.53	8.93	74.1	98.2	99.1
Hardness	mg/L	--	76	100.35	111.48	149.8	14.8	255	191	189
Nitrate-N	mg/L	10	ND	ND	ND	0.15	ND	ND U	ND U	0.7
pH	SU	8.5	5.87	5.4	5.34	5.42	5.29	6.24	6.41	6.28
Specific Conductance	umhos/cm	--	442	532	765	497	735	659	591	561
Sulfate	mg/L	250	12	22.61	35	23.35	31.23	32.5	32.5	27.4
Total Dissolved Solids	mg/L	500	230	296	290	370	100	381	423	356
Turbidity	NTU	5	11.7	10.06	6.54	11.4	ND	1.2	9.01	3.61

Location ID: GWM-4
Number of Sampling Dates: 52

Parameter Name	Units	Compliance Limit	9/9/2015	3/18/2016	9/20/2016	3/23/2017	9/18/2017	3/15/2018	9/17/2018	3/5/2019
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	ND U	ND U	ND U	ND U	0.001 J
Arsenic, Total	mg/L	0.01	0.0014 J	0.0014 J	ND U	0.0012 J	0.0019 J	ND U	ND U	ND U
Barium, Total	mg/L	2	0.13	0.15	0.15	0.14	0.14	0.15	0.15	0.18
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Cadmium, Total	mg/L	0.005	ND U	ND U	ND U	ND U	0.0012	ND U	ND U	ND U
Calcium, Total	mg/L	--	46.4	49.5	59.3	46.7	47.2	48.5	59.6	60
Chromium, Total	mg/L	0.1	0.0023	0.0048	0.0032	0.0047	0.003	0.0033	0.0019 J	0.0019 J
Cobalt, Total	mg/L	--	0.083	0.053	0.075	0.034	0.07	0.039	0.04	0.054
Copper, Total	mg/L	1.3	0.009	0.0066	0.043	0.014	0.015	0.0038 J	0.02	0.011
Iron, Total	mg/L	0.3	6.2	5.5	7.7	3.8	7.6	4.8	2.7	3.1
Lead, Total	mg/L	0.015	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Magnesium, Total	mg/L	--	10.7	13.3	14.6	14.9	14.9	14.8	12.5	15.3
Manganese, Total	mg/L	0.043	0.84	0.67	0.78	0.42	0.79	0.49	0.62	0.82
Mercury, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Nickel, Total	mg/L	0.039	0.011	0.013	0.012	0.01	0.015	0.012	0.0098	0.011
Potassium, Total	mg/L	--	8.4	11.9	13.2	8.6	6.9	7.1	6.7	8.9
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Sodium, Total	mg/L	--	49.6	54.8	58.1	60.3	63.5	65.6	58	69
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND U	ND U	ND U	ND U	ND U	0.0022	ND U	ND U
Zinc, Total	mg/L	0.6	0.015	0.0076	0.016	0.016	0.024	0.0046 J	0.014	0.011
Alkalinity, Total	mg/L	--	148	164	192	146	160	162	198	170
Ammonia-N	mg/L	--	1.95	1.68	2.72	2.23	2.59	1.15	1.75	0.84
Chemical Oxygen Demand (COD)	mg/L	--	1 J	13	13	6 J	12	11	ND U	16
Chloride	mg/L	250	93.6	99.3	110	132	140	124	109	107
Hardness	mg/L	--	178	173	201	191	247	182	200	213
Nitrate-N	mg/L	10	ND U	0.6	ND U	1.4	0.32	1.1	0.1 J	1.2
pH	SU	8.5	6.26	6.39	6.44	6.53	6.22	6.57	6.62	6.7
Specific Conductance	umhos/cm	--	556	584	692	641	667	613	678	621
Sulfate	mg/L	250	30.4	29.4	34.5	32.9	32.3	29	33.4	31.8
Total Dissolved Solids	mg/L	500	355	352	457	411	446	366	363	538

Location ID:	GWM-4									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**9/9/2015**	**3/18/2016**	**9/20/2016**	**3/23/2017**	**9/18/2017**	**3/15/2018**	**9/17/2018**	**3/5/2019**
Turbidity	NTU	5	2.72	1.36	3.46	2.64	0.73	3.33	4.27	2.85

Location ID:	GWM-4									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**9/24/2019**	**3/16/2020**	**4/7/2020**	**9/22/2020**	**3/16/2021**	**9/14/2021**	**3/14/2022**	**3/22/2022**
Antimony, Total	mg/L	0.006	ND U	ND U	--	ND U	ND U	ND U	--	ND
Arsenic, Total	mg/L	0.01	0.0018 J	0.0013 J	--	ND U	ND U	0.0007 J	--	ND
Barium, Total	mg/L	2	0.15	0.25	--	0.14	0.18	0.16	--	0.16
Beryllium, Total	mg/L	0.004	ND U	ND U	--	ND U	ND U	ND U	--	ND
Cadmium, Total	mg/L	0.005	ND U	0.00044 J	--	ND U	ND U	ND U	--	ND
Calcium, Total	mg/L	--	51.2	52	--	69.1	64.6	73	--	66.6
Chromium, Total	mg/L	0.1	0.00086 J	0.0035	--	0.00089 J	0.00098 J	0.0051	--	0.00087 J
Cobalt, Total	mg/L	--	0.06	0.25	--	0.031	0.02	0.036	--	0.029
Copper, Total	mg/L	1.3	0.045	0.033	--	0.002 J	0.017	0.016	--	0.012
Iron, Total	mg/L	0.3	4.7	89	--	0.028 J	2.3	2	--	1.4
Lead, Total	mg/L	0.015	ND U	0.0023	--	ND U	ND U	ND U	--	ND
Magnesium, Total	mg/L	--	12.8	26.3	--	14.7	16.2	15	--	14.1
Manganese, Total	mg/L	0.043	0.72	3.2	--	0.62	0.46	0.62	--	0.64
Mercury, Total	mg/L	0.002	ND U	ND U	--	ND U	ND U	ND U	--	ND
Nickel, Total	mg/L	0.039	0.011	0.017	--	0.0081	0.0093	0.027	--	0.0096
Potassium, Total	mg/L	--	9.1	7.2	--	13.5	13.7	13	--	10.5
Selenium, Total	mg/L	0.05	ND U	ND U	--	ND U	ND U	ND U	--	ND
Silver, Total	mg/L	0.0094	ND U	ND U	--	ND U	ND U	ND U	--	ND
Sodium, Total	mg/L	--	60.5	83	--	62.9	71.4	64	--	66.6
Thallium, Total	mg/L	0.002	ND U	ND U	--	ND U	ND U	ND U	--	ND
Vanadium, Total	mg/L	0.0086	ND U	ND U	--	ND U	ND U	ND U	--	ND
Zinc, Total	mg/L	0.6	0.016	0.007	--	0.0069	0.0055 J	0.0081 J	--	0.0054 J
Alkalinity, Total	mg/L	--	169	163	--	195	188	222	--	168
Ammonia-N	mg/L	--	2.13	0.7	--	1.14	0.875	1.01	--	0.739
Chemical Oxygen Demand (COD)	mg/L	--	ND U	22	--	ND U	11 J	9 J	--	ND
Chloride	mg/L	250	111	172	--	104	106	111	--	127
Hardness	mg/L	--	181	239	--	233	202	224	--	216
Nitrate-N	mg/L	10	0.06 J	ND U	--	0.1 J	0.92	0.34	--	0.9 J
pH	SU	8.5	6.38	6.68	--	6.49	6.67	6.57	--	6.57
Specific Conductance	umhos/cm	--	643	627	--	650	663	743	--	687
Sulfate	mg/L	250	32.8	28	--	31.9	31.4	32.5	--	31.5
Total Dissolved Solids	mg/L	500	450	566	--	494	500	526	--	434
Turbidity	NTU	5	2.01	2.19	--	1.41	1.29	0.7	--	1.23

Location ID:	GWM-4									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**9/12/2022**	**9/13/2022**	**3/14/2023**	**9/12/2023**				
Antimony, Total	mg/L	0.006	--	ND	ND	ND				
Arsenic, Total	mg/L	0.01	--	ND	ND	ND				
Barium, Total	mg/L	2	--	0.15	0.15	0.13				

Location ID:	GWM-4					
Number of Sampling Dates:	52					
Parameter Name	**Units**	**Compliance Limit**	**9/12/2022**	**9/13/2022**	**3/14/2023**	**9/12/2023**
Beryllium, Total	mg/L	0.004	--	ND	ND	ND
Cadmium, Total	mg/L	0.005	--	ND	ND	ND
Calcium, Total	mg/L	--	--	67	61.3	63.5
Chromium, Total	mg/L	0.1	--	0.0014 J	0.0014 J	0.0017 J
Cobalt, Total	mg/L	--	--	0.022	0.05	0.0096
Copper, Total	mg/L	1.3	--	0.0042 J	0.0079	0.007
Iron, Total	mg/L	0.3	--	0.51	1.8	0.52
Lead, Total	mg/L	0.015	--	0.0016 J	ND	ND
Magnesium, Total	mg/L	--	--	13.3	13	12.5
Manganese, Total	mg/L	0.043	--	0.53	0.76	0.16
Mercury, Total	mg/L	0.002	--	ND	ND	ND
Nickel, Total	mg/L	0.039	--	0.0092	0.009	0.0051 J
Potassium, Total	mg/L	--	--	9.7	8.6	7.9
Selenium, Total	mg/L	0.05	--	ND	ND	ND
Silver, Total	mg/L	0.0094	--	ND	ND	ND
Sodium, Total	mg/L	--	--	60.8	56.9	56
Thallium, Total	mg/L	0.002	--	ND	ND	ND
Vanadium, Total	mg/L	0.0086	--	ND	ND	ND
Zinc, Total	mg/L	0.6	--	0.0035 J	0.0084	0.0021 J
Alkalinity, Total	mg/L	--	--	178	159	188
Ammonia-N	mg/L	--	--	0.415	0.52	0.514
Chemical Oxygen Demand (COD)	mg/L	--	--	5 J	56	ND
Chloride	mg/L	250	--	107	112	112
Hardness	mg/L	--	--	221	236	224
Nitrate-N	mg/L	10	--	0.62 J	0.53 J	0.55 J
pH	SU	8.5	--	6.25	6.45	6.5
Specific Conductance	umhos/cm	--	--	707	759.99	743.17
Sulfate	mg/L	250	--	29.6	29.2	28.7
Total Dissolved Solids	mg/L	500	--	432	396	452
Turbidity	NTU	5	--	3.18	0.41	0

Historical Well Data Table I

Name: Eastern Sanitary Landfill

Location ID:	GWM-5A									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/26/1999**	**3/28/2000**	**10/17/2000**	**3/29/2001**	**9/17/2001**	**3/19/2002**	**9/12/2002**	**3/25/2003**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	5	2	ND	6	4
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	1	1	ND	1	2	1
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	1	1	1	1	1	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-5A									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/26/1999**	**3/28/2000**	**10/17/2000**	**3/29/2001**	**9/17/2001**	**3/19/2002**	**9/12/2002**	**3/25/2003**
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-5A									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/17/2003**	**3/23/2004**	**9/27/2004**	**3/15/2005**	**9/28/2005**	**3/15/2006**	**9/19/2006**	**4/10/2007**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	2	2	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-5A									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/17/2003**	**3/23/2004**	**9/27/2004**	**3/15/2005**	**9/28/2005**	**3/15/2006**	**9/19/2006**	**4/10/2007**
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	1	ND	ND	2	2	2
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-5A									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/25/2007**	**3/18/2008**	**9/25/2008**	**3/17/2009**	**10/1/2009**	**4/13/2010**	**8/24/2010**	**3/3/2011**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	2	ND	1	1	ND

Location ID:	GWM-5A									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/25/2007**	**3/18/2008**	**9/25/2008**	**3/17/2009**	**10/1/2009**	**4/13/2010**	**8/24/2010**	**3/3/2011**
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	2	2	2	2	ND	ND	7	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-5A									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/4/2011**	**2/28/2012**	**8/28/2012**	**2/26/2013**	**9/19/2013**	**12/5/2013**	**3/19/2014**	**9/4/2014**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND U	ND U
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND U	ND U
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	0.5 J	0.76 J
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND U	ND U
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND U	ND U

Location ID:	GWM-5A									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/4/2011**	**2/28/2012**	**8/28/2012**	**2/26/2013**	**9/19/2013**	**12/5/2013**	**3/19/2014**	**9/4/2014**
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND U	ND U
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND U	ND U
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND U	ND U
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND U	ND U
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND	ND	1	ND	1	ND	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND	1	ND	ND	ND	ND	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND U	ND U
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	0.34 J	0.35 J
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND U	ND U
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND U	ND U
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	7	ND	ND	ND	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND U	ND U
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND U	ND U
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND U	ND U
1,1,1-Trichloroethane	ug/L	200	ND	7	ND	ND	ND	ND	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND U	ND U
Trichloroethene	ug/L	5	ND	ND	ND	1	ND	ND	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND U	ND U
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND U	ND U
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND U	ND U
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND U	ND U
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND U	ND U

Location ID:	GWM-5A									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**3/17/2015**	**9/11/2015**	**3/15/2016**	**9/21/2016**	**3/28/2017**	**9/19/2017**	**3/26/2018**	**9/18/2018**
Acetone	ug/L	1400	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromomethane	ug/L	0.75	ND U	ND U	ND U	ND U	ND U	0.51 JB	ND U	ND U
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloromethane	ug/L	19	ND U	ND U	0.51 J	ND U	ND U	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND U	ND U	ND U	0.51 J	ND U	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	GWM-5A									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**3/17/2015**	**9/11/2015**	**3/15/2016**	**9/21/2016**	**3/28/2017**	**9/19/2017**	**3/26/2018**	**9/18/2018**
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	GWM-5A									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**3/4/2019**	**9/23/2019**	**3/19/2020**	**9/23/2020**	**3/19/2021**	**9/15/2021**	**3/16/2022**	**9/14/2022**
Acetone	ug/L	1400	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Benzene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Bromomethane	ug/L	0.75	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Chloromethane	ug/L	19	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND

Location ID:	GWM-5A									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**3/4/2019**	**9/23/2019**	**3/19/2020**	**9/23/2020**	**3/19/2021**	**9/15/2021**	**3/16/2022**	**9/14/2022**
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
o-Xylene	ug/L	10000	–	–	ND U	ND U	ND U	ND U	ND	ND
mp-Xylene	ug/L	10000	–	–	ND U	ND U	ND U	ND U	ND	ND
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Chloroform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND

Location ID:	GWM-5A			
Number of Sampling Dates:	50			
Parameter Name	**Units**	**Compliance Limit**	**3/16/2023**	**9/13/2023**
Acetone	ug/L	1400	ND	ND
Acrylonitrile	ug/L	–	ND	ND
Benzene	ug/L	5	ND	ND
Bromochloromethane	ug/L	–	ND	ND
Bromomethane	ug/L	0.75	ND	0.87 JB
2-Butanone	ug/L	700	ND	ND
Carbon disulfide	ug/L	81	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND
Chlorobenzene	ug/L	100	ND	ND
Chloroethane	ug/L	2100	ND	ND
Chloromethane	ug/L	19	ND	0.52 JB
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND
Dibromomethane	ug/L	–	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND

Location ID:	GWM-5A			
Number of Sampling Dates:	50			
Parameter Name	**Units**	**Compliance Limit**	**3/16/2023**	**9/13/2023**
1,1-Dichloroethene	ug/L	7	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND
Methylene Chloride	ug/L	5	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND
Ethylbenzene	ug/L	700	ND	ND
2-Hexanone	ug/L	–	ND	ND
Iodomethane	ug/L	–	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND
Styrene	ug/L	100	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND
Tetrachloroethene	ug/L	5	ND	ND
Toluene	ug/L	1000	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND
Trichloroethene	ug/L	5	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND	ND
Vinyl acetate	ug/L	–	ND	ND
Vinyl chloride	ug/L	2	ND	ND
Total Xylenes	ug/L	10000	ND	ND
o-Xylene	ug/L	10000	ND	ND
mp-Xylene	ug/L	10000	ND	ND
Bromodichloromethane	ug/L	80	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND
Bromoform	ug/L	80	ND	ND
Chloroform	ug/L	80	ND	ND

Historical Well Data Table II

Name: Eastern Sanitary Landfill

Location ID:	GWM-5A									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/26/1999**	**3/28/2000**	**10/17/2000**	**3/29/2001**	**9/17/2001**	**3/19/2002**	**9/12/2002**	**3/25/2003**
Antimony, Total	mg/L	0.006	–	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	–	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	ND	ND	0.047	ND	0.046	0.069	0.064	0.067
Beryllium, Total	mg/L	0.004	–	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	–	–	–	–	–	–	–	–	–
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	–	–	ND	ND	ND	ND	ND	ND	ND
Copper, Total	mg/L	1.3	–	ND	0.011	ND	ND	0.018	0.027	0.035
Iron, Total	mg/L	0.3	ND	0.24	0.128	ND	0.029	0.185	0.152	0.068
Lead, Total	mg/L	0.015	ND	ND	0.003	ND	ND	ND	0.002	0.002
Magnesium, Total	mg/L	–	–	–	–	–	–	–	–	–
Manganese, Total	mg/L	0.043	ND	0.05	0.04	ND	0.036	0.027	0.033	0.029
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	–	ND	ND	ND	ND	ND	0.012	ND
Potassium, Total	mg/L	–	–	–	–	–	–	–	–	–
Selenium, Total	mg/L	0.05	–	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	–	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	–	–	–	–	–	–	–	–	–
Thallium, Total	mg/L	0.002	–	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	–	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	ND	ND	0.052	ND	0.02	0.038	0.055	0.018
Alkalinity, Total	mg/L	–	–	15	15	32	15	10	12	32
Ammonia-N	mg/L	–	0.2	0.2	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	–	–	10	ND	ND	7	ND	ND	ND
Chloride	mg/L	250	22	22	26.85	24.92	33.29	25.08	26.78	35.42
Hardness	mg/L	–	–	70	72	83.05	56.8	43.84	52.7	78.82
Nitrate-N	mg/L	10	2.4	3.1	2.29	2.24	2.32	1.65	1.59	1.56
pH	SU	8.5	–	–	4.95	5.5	4.9	4.92	4.6	5.07
Specific Conductance	umhos/cm	–	–	167	ND	ND	175	178	210	277
Sulfate	mg/L	250	10	12.3	17	11	18	10.07	10.66	16.31
Total Dissolved Solids	mg/L	500	80	92	95	138	133	88	18	144
Turbidity	NTU	5	–	4	3	6.2	3.82	4.6	7.5	2.54

Location ID:	GWM-5A									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/17/2003**	**3/23/2004**	**9/27/2004**	**3/15/2005**	**9/28/2005**	**3/15/2006**	**9/19/2006**	**4/10/2007**
Antimony, Total	mg/L	0.006	ND	ND	ND	0.002	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.05	0.07	0.086	0.081	0.07	0.062	0.074	0.072
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-5A									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/17/2003**	**3/23/2004**	**9/27/2004**	**3/15/2005**	**9/28/2005**	**3/15/2006**	**9/19/2006**	**4/10/2007**
Calcium, Total	mg/L	–	–	–	–	–	–	–	–	26.05
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	–	ND	ND	ND	ND	ND	0.014	ND	ND
Copper, Total	mg/L	1.3	ND	ND	ND	ND	ND	ND	0.025	0.019
Iron, Total	mg/L	0.3	0.038	0.072	0.063	0.124	0.058	0.071	0.173	0.04
Lead, Total	mg/L	0.015	ND	0.006	0.003	ND	ND	ND	0.003	ND
Magnesium, Total	mg/L	–	–	–	–	–	–	–	–	12.25
Manganese, Total	mg/L	0.043	0.015	0.02	0.014	0.036	0.039	0.066	0.294	0.065
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	0.014	0.014	ND	0.012	0.017	0.024	0.022	0.016
Potassium, Total	mg/L	–	–	–	–	–	–	–	–	6.95
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	–	–	–	–	–	–	–	–	39.8
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.042	ND	0.161	0.123	0.072	0.054	0.082	0.096
Alkalinity, Total	mg/L	–	32	28	24	23.55	19.6	16.6	18	21.5
Ammonia-N	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	–	ND	14	ND	ND	ND	ND	ND	ND
Chloride	mg/L	250	47.13	40.05	56.29	38.26	45.97	55.35	51.88	47.16
Hardness	mg/L	–	98.25	93.03	79.31	78.04	99.75	55.28	108.54	115.49
Nitrate-N	mg/L	10	1.46	1.3	1.82	1.73	2.26	1.63	1.5	1.53
pH	SU	8.5	4.95	4.91	4.54	4.71	4.58	4.59	4.48	4.61
Specific Conductance	umhos/cm	–	462	316	254	229	304	309	311	303
Sulfate	mg/L	250	30.14	24.98	21.53	16.21	30.26	33.93	28.09	25.77
Total Dissolved Solids	mg/L	500	285	189	155	243	136	152	192	782
Turbidity	NTU	5	2.89	4.77	4.6	3.43	9.69	5.8	5.72	3.87

Location ID:	GWM-5A									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/25/2007**	**3/18/2008**	**9/25/2008**	**3/17/2009**	**10/1/2009**	**4/13/2010**	**8/24/2010**	**3/3/2011**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.068	0.051	0.054	0.046	0.055	0.05	0.044	0.047
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	–	18.35	6.7	24.25	14.84	26.16	25.61	23.81	20.88
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	–	ND	ND	0.013	ND	0.014	0.025	ND	ND
Copper, Total	mg/L	1.3	ND	0.04	0.065	ND	ND	ND	0.04	0.014
Iron, Total	mg/L	0.3	ND	ND	0.106	0.008	0.499	0.112	0.016	0.049
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/L	–	19.05	9.95	3308	11.55	14.65	11.7	2.718	11.35
Manganese, Total	mg/L	0.043	0.073	0.121	0.147	0.091	0.114	0.134	0.16	0.133

Location ID:	GWM-5A									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/25/2007**	**3/18/2008**	**9/25/2008**	**3/17/2009**	**10/1/2009**	**4/13/2010**	**8/24/2010**	**3/3/2011**
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	0.02	0.018	0.014	0.014	0.018	0.013	0.017	0.015
Potassium, Total	mg/L	–	4.25	2.3	3.08	2.71	3.55	2.95	3.48	4.25
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	–	43.2	30.2	47.4	30.5	20.2	37.6	35	36.5
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.027	0.047	ND	0.02	ND	0.026	ND	0.028
Alkalinity, Total	mg/L	–	19.8	18.2	33.4	37.3	61.4	42.8	42.7	36.6
Ammonia-N	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	–	12	21	ND	ND	ND	ND	ND	10
Chloride	mg/L	250	51.27	52.67	59.25	70.07	80.14	57.16	67	66.68
Hardness	mg/L	–	124.27	57.7	74.17	84.62	125.65	112.13	70.65	98.88
Nitrate-N	mg/L	10	1.68	1.47	1.64	1.88	1.83	1.26	1.38	1.09
pH	SU	8.5	4.64	4.61	5.23	5.29	5.4	4.96	5.19	5.01
Specific Conductance	umhos/cm	–	320	348	376	364	436	312	386	363
Sulfate	mg/L	250	25.26	22.52	28.58	31.49	30.62	19.6	22.72	22.28
Total Dissolved Solids	mg/L	500	368	242	182	254	234	178	202	160
Turbidity	NTU	5	0.11	1.47	8.93	2.4	4.6	3.3	1.3	1.3

Location ID:	GWM-5A									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/4/2011**	**2/28/2012**	**8/28/2012**	**2/26/2013**	**9/19/2013**	**12/5/2013**	**3/19/2014**	**9/4/2014**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND U	0.0008 J
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND U	ND U
Barium, Total	mg/L	2	0.12	0.134	0.132	0.173	0.36	0.13	0.11	0.1
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND U	ND U
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND U	ND U
Calcium, Total	mg/L	–	24	3.41	21.73	37.84	37.13	43.62	57.3	44.8
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	0.005	0.0025
Cobalt, Total	mg/L	–	ND	ND	ND	0.012	0.02	ND	0.014	0.027
Copper, Total	mg/L	1.3	ND	ND	ND	ND	ND	ND	0.0062	0.0077
Iron, Total	mg/L	0.3	ND	0.089	0.296	0.342	4.576	0.239	0.66	1.9
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	ND	0.0012 J	ND U
Magnesium, Total	mg/L	–	11	1.123	9.668	9.907	20.02	8.26	9.8	10.9
Manganese, Total	mg/L	0.043	0.21	0.219	0.247	0.373	4.89	0.23	0.3	0.71
Mercury, Total	mg/L	0.002	0.0005	0.0006	0.0009	ND	ND	ND	0.0008	0.00061
Nickel, Total	mg/L	0.039	0.015	0.014	0.012	0.015	ND	0.011	0.031	0.014
Potassium, Total	mg/L	–	4.6	3.87	4.09	3.64	4.8	3.43	4	4.2
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND U	ND U
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	–	ND U	ND U
Sodium, Total	mg/L	–	27	3.3	29.6	31.5	244.2	24.11	25.3	27.3
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND U	ND U

Location ID:	GWM-5A									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/4/2011**	**2/28/2012**	**8/28/2012**	**2/26/2013**	**9/19/2013**	**12/5/2013**	**3/19/2014**	**9/4/2014**
Zinc, Total	mg/L	0.6	0.024	0.016	0.017	0.015	0.04	0.01	0.0073	0.012
Alkalinity, Total	mg/L	–	58	61.95	54.41	65.11	77.33	102.39	157	106
Ammonia-N	mg/L	–	ND	ND	ND	ND	ND	ND	0.26	ND U
Chemical Oxygen Demand (COD)	mg/L	–	13	ND	ND	ND	ND	ND	ND U	10
Chloride	mg/L	250	68	76.25	48	64.1	58.97	57.91	53	72.6
Hardness	mg/L	–	120	131.56	94.07	135.3	175.2	142.9	196	223
Nitrate-N	mg/L	10	1.5	1.25	1.7	1.06	0.66	0.58	0.3	0.3
pH	SU	8.5	5.21	5.14	5	5.11	5.37	6.11	6.33	5.98
Specific Conductance	umhos/cm	–	441	416	456	357	443	477	267	394
Sulfate	mg/L	250	23	25.38	26	22.76	20.24	21.06	23.5	30
Total Dissolved Solids	mg/L	500	210	236	228	246	77	–	291	256
Turbidity	NTU	5	2.3	5.69	5.58	3.51	ND	0.32	1.1	9.46

Location ID:	GWM-5A									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**3/17/2015**	**9/11/2015**	**3/15/2016**	**9/21/2016**	**3/28/2017**	**9/19/2017**	**3/26/2018**	**9/18/2018**
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Arsenic, Total	mg/L	0.01	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Barium, Total	mg/L	2	0.099	0.099	0.095	0.092	0.09	0.086	0.081	0.12
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Cadmium, Total	mg/L	0.005	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Calcium, Total	mg/L	–	43.6	39.9	38	38.4	31.5	30	34.5	47.5
Chromium, Total	mg/L	0.1	0.0017 J	0.0019 J	0.0016 J	0.0029	0.0016 J	0.0021 J	0.0017 J	ND U
Cobalt, Total	mg/L	–	0.0086	0.012	0.015	0.015	0.012	0.023	0.018	0.058
Copper, Total	mg/L	1.3	0.0075	0.01	0.015	0.0089	0.0063	0.011	0.0055 J	0.0072
Iron, Total	mg/L	0.3	0.87	1.1	1.1	1.3	0.51	2	0.69	3.1
Lead, Total	mg/L	0.015	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Magnesium, Total	mg/L	–	8.7	10	9	8.8	7.6	8.3	8.7	12.1
Manganese, Total	mg/L	0.043	0.3	0.67	0.57	0.56	0.4	0.71	0.55	2
Mercury, Total	mg/L	0.002	0.00064	0.00066	0.00083	0.00088	0.00091	0.0012	0.00095	0.00087
Nickel, Total	mg/L	0.039	0.008	0.012	0.0089	0.0081	0.0077	0.01	0.0089	0.015
Potassium, Total	mg/L	–	4.2	4.4	3.9	3.7	3.5	3.1	3.5	3.7
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND U	ND U	0.0069	ND U	ND U	ND U	ND U	ND U
Sodium, Total	mg/L	–	28.1	34.3	30.1	28.3	26	25.2	28.9	37
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Zinc, Total	mg/L	0.6	0.0063	0.0075	0.0093	0.0055 J	0.0042 J	0.0071	0.0049 J	0.008
Alkalinity, Total	mg/L	–	150	101	101	102	86	90	98	144
Ammonia-N	mg/L	–	ND U	ND U	ND U	ND U	ND U	0.01 J	0.158	0.066 J
Chemical Oxygen Demand (COD)	mg/L	–	ND U	9	1 J	8	5 J	9	ND U	ND U
Chloride	mg/L	250	58.7	67.1	65.2	63.5	64.8	59.2	62	88.4
Hardness	mg/L	–	189	165	134	93	113	109	122	169
Nitrate-N	mg/L	10	0.22	0.24	0.22	0.18 J	0.16 J	0.12 J	0.1 J	0.16 J
pH	SU	8.5	6.02	5.8	6.06	5.84	5.93	5.79	5.96	6.03

Location ID:	GWM-5A									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**3/17/2015**	**9/11/2015**	**3/15/2016**	**9/21/2016**	**3/28/2017**	**9/19/2017**	**3/26/2018**	**9/18/2018**
Specific Conductance	umhos/cm	–	376	380	373	371	332	325	306	494
Sulfate	mg/L	250	26	29.3	26.7	20.1	24.2	22.2	24.4	29.8
Total Dissolved Solids	mg/L	500	266	281	266	257	205	215	202	300
Turbidity	NTU	5	1.87	1.9	0.58	2.05	0.85	0.5	1.93	1.52

Location ID:	GWM-5A									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**3/4/2019**	**9/23/2019**	**3/19/2020**	**9/23/2020**	**3/19/2021**	**9/15/2021**	**3/16/2022**	**9/14/2022**
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Arsenic, Total	mg/L	0.01	ND U	ND U	ND U	ND U	ND U	0.00028 J	ND	ND
Barium, Total	mg/L	2	0.14	0.12	0.1	0.11	0.11	0.11	0.095	0.1
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Cadmium, Total	mg/L	0.005	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Calcium, Total	mg/L	–	56	37.4	43.2	31.4	45.3	29	23.2	33.3
Chromium, Total	mg/L	0.1	0.0011 J	0.00095 J	0.0041	0.0024	0.00098 J	0.012	0.0016 J	0.0035
Cobalt, Total	mg/L	–	0.08	0.087	0.057	0.054	0.033	0.047	0.075	0.046
Copper, Total	mg/L	1.3	0.009	0.0093	0.0078	0.0044 J	ND U	ND U	ND	ND
Iron, Total	mg/L	0.3	2.7	3.3	1.2	2.4	0.65	1.3	1.8	1.5
Lead, Total	mg/L	0.015	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Magnesium, Total	mg/L	–	13.6	12.5	9.7	10.6	10.1	11	9	9.2
Manganese, Total	mg/L	0.043	1.9	1.8	1.1	1.2	0.76	1	1.1	0.82
Mercury, Total	mg/L	0.002	ND U	0.00076	0.00033 J	0.00082	0.00077	0.00094	0.00088	0.00048 J
Nickel, Total	mg/L	0.039	0.013	0.012	0.011	0.014	0.013	0.014	0.012	0.013
Potassium, Total	mg/L	–	5.3	4.9	4.1	3.6	3.7	3.9	3.6	3.7
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Sodium, Total	mg/L	–	41.7	39.7	32	34.1	33.5	29	25.3	29.1
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Vanadium, Total	mg/L	0.0086	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Zinc, Total	mg/L	0.6	0.0076	0.01	0.0085	0.0084	0.0057	0.01	0.0099	0.006
Alkalinity, Total	mg/L	–	124	105	130	77	126	78	70	80
Ammonia-N	mg/L	–	0.149	0.118	0.041 J	ND U	ND U	0.087 J	0.186	0.128
Chemical Oxygen Demand (COD)	mg/L	–	9 J	ND U	ND U	11 J	5 J	7 J	ND	7 J
Chloride	mg/L	250	77.6	71.5	66.8	70.9	64.1	57.3	50.9	59.9
Hardness	mg/L	–	196	145	150	130	156	104	92.4	130
Nitrate-N	mg/L	10	0.08 J	ND U	0.1 J	0.08 J	0.08 J	0.08 J	ND	ND
pH	SU	8.5	6.11	5.81	5.72	5.66	6.08	5.69	5.61	5.53
Specific Conductance	umhos/cm	–	465	438	366	326	390	341	310	321.8
Sulfate	mg/L	250	29	29.3	26.7	28.5	28.3	29.4	22.5	22.8
Total Dissolved Solids	mg/L	500	346	305	246	266	264	220	220	190
Turbidity	NTU	5	7.4	4.33	5.7	2.74	1.28	1.64	0.72	3.78

Location ID:	GWM-5A			
Number of Sampling Dates:	50			
Parameter Name	**Units**	**Compliance Limit**	**3/16/2023**	**9/13/2023**
Antimony, Total	mg/L	0.006	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND
Barium, Total	mg/L	2	0.099	0.11
Beryllium, Total	mg/L	0.004	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND
Calcium, Total	mg/L	–	23.9	32.4
Chromium, Total	mg/L	0.1	0.0045	0.017
Cobalt, Total	mg/L	–	0.073	0.069
Copper, Total	mg/L	1.3	ND	0.002 J
Iron, Total	mg/L	0.3	2	3.6
Lead, Total	mg/L	0.015	ND	ND
Magnesium, Total	mg/L	–	8.5	11.8
Manganese, Total	mg/L	0.043	1	1.3
Mercury, Total	mg/L	0.002	0.00045 J	0.00038 J
Nickel, Total	mg/L	0.039	0.013	0.017
Potassium, Total	mg/L	–	3.3	5.2
Selenium, Total	mg/L	0.05	ND	ND
Silver, Total	mg/L	0.0094	ND	ND
Sodium, Total	mg/L	–	27.1	39.7
Thallium, Total	mg/L	0.002	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND
Zinc, Total	mg/L	0.6	0.0085	0.0073
Alkalinity, Total	mg/L	–	57	108
Ammonia-N	mg/L	–	ND	0.275
Chemical Oxygen Demand (COD)	mg/L	–	12 J	6 J
Chloride	mg/L	250	59.1	76.7
Hardness	mg/L	–	95.2	153
Nitrate-N	mg/L	10	ND	ND
pH	SU	8.5	5.44	5.9
Specific Conductance	umhos/cm	–	335.3	488.96
Sulfate	mg/L	250	22.4	32.4
Total Dissolved Solids	mg/L	500	218	320
Turbidity	NTU	5	0.85	54.14

Historical Well Data Table I

Name: Eastern Sanitary Landfill

Location ID:	GWM-6									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/29/1999**	**3/31/2000**	**10/19/2000**	**3/30/2001**	**10/25/2001**	**4/16/2002**	**9/27/2002**	**4/2/2003**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	13.8	27.9	24	11	12	18	22	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	26.1	42.6	ND	20	1	34	7	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	5.4	9.7	11	7	2	2	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-6									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/29/1999**	**3/31/2000**	**10/19/2000**	**3/30/2001**	**10/25/2001**	**4/16/2002**	**9/27/2002**	**4/2/2003**
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	40.3	63.1	44	13	6	8	4	3
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-6									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**12/3/2003**	**3/23/2004**	**11/17/2004**	**6/7/2005**	**11/10/2005**	**3/22/2006**	**9/26/2006**	**4/26/2007**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	11	28	9	50	50	44	44	46
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	2	ND	ND	ND	48	54	50
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	4	3	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-6									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**12/3/2003**	**3/23/2004**	**11/17/2004**	**6/7/2005**	**11/10/2005**	**3/22/2006**	**9/26/2006**	**4/26/2007**
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	3	1	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-6									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**11/27/2007**	**4/9/2008**	**10/16/2008**	**4/2/2009**	**10/14/2009**	**5/11/2010**	**9/28/2010**	**3/22/2011**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	22	21	35	42	48	33	5	4.8
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-6									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**11/27/2007**	**4/9/2008**	**10/16/2008**	**4/2/2009**	**10/14/2009**	**5/11/2010**	**9/28/2010**	**3/22/2011**
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	14	14	21	30	4	19	4	3
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	1	6	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	2	ND	ND	ND	ND

Location ID:	GWM-6									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/18/2011**	**3/21/2012**	**9/13/2012**	**3/19/2013**	**9/24/2013**	**3/21/2014**	**9/17/2014**	**3/19/2015**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND U	ND U	ND U
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Benzene	ug/L	5	9.8	14	15	21	22	5	8.6	16.8
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND U	ND U	ND U
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND U	ND U	ND U

Location ID:	GWM-6									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/18/2011**	**3/21/2012**	**9/13/2012**	**3/19/2013**	**9/24/2013**	**3/21/2014**	**9/17/2014**	**3/19/2015**
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND	1	ND	ND	ND	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	5.4	4	4	6	5	2.6	3.5	5.1
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Ethylbenzene	ug/L	700	2.8	ND	ND	ND	16	1.5	3.8	6.3
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND U	ND U	ND U
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Toluene	ug/L	1000	ND	ND	ND	ND	ND	0.37 J	0.69 J	1.4
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND U	ND U	ND U
Total Xylenes	ug/L	10000	ND	ND	8	ND	ND	ND U	1.5 J	3.2
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U

Location ID:	GWM-6									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/15/2015**	**3/21/2016**	**9/26/2016**	**3/31/2017**	**9/21/2017**	**3/30/2018**	**9/26/2018**	**3/13/2019**
Acetone	ug/L	1400	ND U	4.9 J	3.5 J	ND U	ND U	3.5 JB	ND U	5.4 J
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzene	ug/L	5	13.4	11.4	8.5	10.5	32.2	37.2	40.2	39.5
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromomethane	ug/L	0.75	0.48 J	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloromethane	ug/L	19	0.36 J	0.49 J	0.42 J	ND U	ND U	ND U	ND U	0.53 J
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	5.2	5.7	3.5	5	10	11.7	12.2	13.1
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Ethylbenzene	ug/L	700	7.8	6.6	3.6	8.9	27.2	39.9	46	47.4
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Toluene	ug/L	1000	1.7	0.87 J	0.61 J	1.5	5.1	4.2	5.7	13.3
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	GWM-6									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/15/2015**	**3/21/2016**	**9/26/2016**	**3/31/2017**	**9/21/2017**	**3/30/2018**	**9/26/2018**	**3/13/2019**
Total Xylenes	ug/L	10000	4.3	3.2	1.8 J	5.3	18	21	17.4	67.4
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	GWM-6									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/3/2019**	**4/3/2020**	**9/30/2020**	**3/22/2021**	**9/16/2021**	**3/24/2022**	**9/16/2022**	**3/17/2023**
Acetone	ug/L	1400	ND U	4.3 JB	40.4	7 JB	ND U	ND	ND	ND
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Benzene	ug/L	5	23.7	10	26.1	29.6	12.4	24.9	22	11.1
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Bromomethane	ug/L	0.75	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
2-Butanone	ug/L	700	ND U	ND U	4.2 J	ND U	ND U	ND	ND	ND
Carbon disulfide	ug/L	81	ND U	ND U	0.24 J	ND U	ND U	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	0.33 JB	ND	ND	ND
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chloromethane	ug/L	19	ND U	0.41 J	0.64 J	ND U	ND U	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	7.7	3.7	7.2	8.3	3.9	7.7	6.7	4.8
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Ethylbenzene	ug/L	700	23.7	11.9	31.6	41.4	16.2	28.8	28.1	11.9
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Iodomethane	ug/L	–	ND U	ND U	0.59 J	ND U	ND U	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Styrene	ug/L	100	ND U	ND U	0.58 J	ND U	ND U	ND	ND	ND

Location ID:	GWM-6									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/3/2019**	**4/3/2020**	**9/30/2020**	**3/22/2021**	**9/16/2021**	**3/24/2022**	**9/16/2022**	**3/17/2023**
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Toluene	ug/L	1000	7.2	3.1	7.3	9.4	3.1	2	0.75 J	0.28 J
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Total Xylenes	ug/L	10000	42.6	22.2	56.7	74.1	23.3	14.1	3.7	ND
o-Xylene	ug/L	10000	–	10	19.3	17.3	6.6	ND	ND	ND
mp-Xylene	ug/L	10000	–	12.2	37.4	56.8	16.7	14.1	3.7	ND
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chloroform	ug/L	80	ND U	ND U	ND U	0.29 J	ND U	0.22 JB	ND	ND

Location ID:	GWM-6		
Number of Sampling Dates:	49		
Parameter Name	**Units**	**Compliance Limit**	**9/14/2023**
Acetone	ug/L	1400	ND
Acrylonitrile	ug/L	–	ND
Benzene	ug/L	5	5.5
Bromochloromethane	ug/L	–	ND
Bromomethane	ug/L	0.75	ND
2-Butanone	ug/L	700	ND
Carbon disulfide	ug/L	81	ND
Carbon Tetrachloride	ug/L	5	ND
Chlorobenzene	ug/L	100	0.69 JB
Chloroethane	ug/L	2100	ND
Chloromethane	ug/L	19	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND
1,2-Dibromoethane	ug/L	0.05	ND
Dibromomethane	ug/L	–	ND
1,2-Dichlorobenzene	ug/L	600	ND
1,4-Dichlorobenzene	ug/L	75	0.29 JB
trans-1,4-dichloro-2-butene	ug/L	–	ND
1,1-Dichloroethane	ug/L	2.8	ND
1,2-Dichloroethane	ug/L	5	ND
1,1-Dichloroethene	ug/L	7	ND
cis-1,2-Dichloroethene	ug/L	70	ND

Location ID:	GWM-6		
Number of Sampling Dates:	49		
Parameter Name	**Units**	**Compliance Limit**	**9/14/2023**
trans-1,2-Dichloroethene	ug/L	100	ND
Methylene Chloride	ug/L	5	ND
Methyl t-Butyl Ether	ug/L	20	2.4
1,2-Dichloropropane	ug/L	5	ND
trans-1,3-Dichloropropene	ug/L	–	ND
cis-1,3-Dichloropropene	ug/L	–	ND
Ethylbenzene	ug/L	700	5.5
2-Hexanone	ug/L	–	ND
Iodomethane	ug/L	–	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND
Styrene	ug/L	100	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND
Tetrachloroethene	ug/L	5	ND
Toluene	ug/L	1000	ND
1,1,1-Trichloroethane	ug/L	200	ND
1,1,2-Trichloroethane	ug/L	5	ND
Trichloroethene	ug/L	5	ND
Trichlorofluoromethane	ug/L	–	ND
1,2,3-Trichloropropane	ug/L	–	ND
Vinyl acetate	ug/L	–	ND
Vinyl chloride	ug/L	2	ND
Total Xylenes	ug/L	10000	ND
o-Xylene	ug/L	10000	ND
mp-Xylene	ug/L	10000	0.64 J
Bromodichloromethane	ug/L	80	ND
Chlorodibromomethane	ug/L	80	ND
Bromoform	ug/L	80	ND
Chloroform	ug/L	80	ND

Historical Well Data Table II

Name: Eastern Sanitary Landfill

Location ID:	GWM-6									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/29/1999**	**3/31/2000**	**10/19/2000**	**3/30/2001**	**10/25/2001**	**4/16/2002**	**9/27/2002**	**4/2/2003**
Antimony, Total	mg/L	0.006	--	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	--	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	ND	ND	ND	0.017	0.022	0.041	0.05	0.046
Beryllium, Total	mg/L	0.004	--	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	--	--	--	--	--	--	--	--
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	--	ND	ND	ND	ND	ND	ND	ND
Copper, Total	mg/L	1.3	--	ND	0.03	0.055	ND	0.015	0.023	0.018
Iron, Total	mg/L	0.3	ND	0.34	0.226	ND	0.078	0.29	0.096	0.037
Lead, Total	mg/L	0.015	ND	ND	0.004	ND	0.002	0.002	0.002	ND
Magnesium, Total	mg/L	--	--	--	--	--	--	--	--	--
Manganese, Total	mg/L	0.043	ND	ND	0.465	0.083	0.045	0.033	0.056	0.07
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	--	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/L	--	--	--	--	--	--	--	--	--
Selenium, Total	mg/L	0.05	--	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	--	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	--	--	--	--	--	--	--	--
Thallium, Total	mg/L	0.002	--	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	--	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	ND	ND	0.139	0.04	0.053	0.065	0.024	0.062
Alkalinity, Total	mg/L	--	--	5	4	4	5	4	4	6
Ammonia-N	mg/L	--	0.2	0.2	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	10	10	ND	11	7	ND	ND	ND
Chloride	mg/L	250	10	10	10.69	8.98	12.31	9.68	11.94	23.67
Hardness	mg/L	--	--	17	10	8.87	14.66	14.99	15.12	16.77
Nitrate-N	mg/L	10	0.4	0.6	0.48	0.69	0.21	0.2	0.3	0.67
pH	SU	8.5	--	--	5.06	4.8	4.44	4.9	4.88	4.26
Specific Conductance	umhos/cm	--	--	64	ND	ND	76.2	493	89.8	116
Sulfate	mg/L	250	10	10	5	3	10	5.48	5.18	6.54
Total Dissolved Solids	mg/L	500	37	47	42	44	43	36	67	137
Turbidity	NTU	5	--	30	128	6.8	40.9	75	41.4	6.5

Location ID:	GWM-6								
Number of Sampling Dates:	49								
Parameter Name	**Units**	**Compliance Limit**	**12/3/2003**	**3/23/2004**	**11/17/2004**	**6/7/2005**	**11/10/2005**	**3/22/2006**	**9/26/2006**	**4/26/2007**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.04	0.036	0.034	0.038	0.07	0.051	0.046	0.05
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND

Location ID: GWM-6
Number of Sampling Dates: 49

Parameter Name	Units	Compliance Limit	12/3/2003	3/23/2004	11/17/2004	6/7/2005	11/10/2005	3/22/2006	9/26/2006	4/26/2007
Calcium, Total	mg/L	--	--	--	--	--	--	--	--	23.2
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	0.011	0.013	0.042	0.042	ND	ND	0.014	0.019
Copper, Total	mg/L	1.3	ND	ND	ND	0.013	ND	0.012	0.017	ND
Iron, Total	mg/L	0.3	0.022	0.045	0.066	0.331	0.058	1.834	0.485	1.794
Lead, Total	mg/L	0.015	0.002	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/L	--	--	--	--	--	--	--	--	6.2
Manganese, Total	mg/L	0.043	0.048	0.135	0.067	0.099	0.039	0.301	0.25	0.428
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	ND	ND	ND	ND	0.017	0.014	0.011	0.011
Potassium, Total	mg/L	--	--	--	--	--	--	--	--	5.7
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	--	--	--	--	--	--	--	40.8
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	ND	ND	0.094	0.082	0.072	0.043	0.035	ND
Alkalinity, Total	mg/L	--	8	4	9.8	19.2	19.6	53.2	34.85	43.4
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Chloride	mg/L	250	35.6	38.9	41.5	31.78	45.97	53.5	28.11	48.93
Hardness	mg/L	--	34.4	42.03	36.52	29.7	99.75	127.77	76.58	83.46
Nitrate-N	mg/L	10	0.49	0.17	0.19	ND	2.26	0.5	0.1	0.2
pH	SU	8.5	4.34	4.45	4.31	4.9	4.58	5.41	5.02	5.13
Specific Conductance	umhos/cm	--	138	179	432	171	304	3460	199	257
Sulfate	mg/L	250	5.77	7.22	16.62	13.42	30.26	14.32	8.06	10.86
Total Dissolved Solids	mg/L	500	86	110	88	196	136	634	378	71
Turbidity	NTU	5	7	13	17	32.9	9.69	80	37	22.9

Location ID: GWM-6
Number of Sampling Dates: 49

Parameter Name	Units	Compliance Limit	11/27/2007	4/9/2008	10/16/2008	4/2/2009	10/14/2009	5/11/2010	9/28/2010	3/22/2011
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.056	0.062	0.056	0.06	0.062	0.061	0.055	0.05
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	11.06	14.27	18.71	19.12	19.82	22.96	22.01	13.03
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	0.013	0.01	0.189	0.029	0.117	0.027	0.023	0.023
Copper, Total	mg/L	1.3	ND	ND	ND	ND	ND	0.043	ND	ND
Iron, Total	mg/L	0.3	0.593	1.56	2.338	1.729	2.914	2.337	1.274	1.074
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/L	--	2.83	6.35	3.247	15.55	14.75	16.8	2.2	2.927
Manganese, Total	mg/L	0.043	0.262	0.454	0.514	0.62	0.602	0.565	0.66	0.609
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-6									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**11/27/2007**	**4/9/2008**	**10/16/2008**	**4/2/2009**	**10/14/2009**	**5/11/2010**	**9/28/2010**	**3/22/2011**
Nickel, Total	mg/L	0.039	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/L	--	1.36	1.54	1.64	1.43	1.23	1.31	1.28	1.05
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	8.2	21.6	25.4	21	7.4	27	69.6	28
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.017	0.022	ND	0.01	ND	0.01	ND	ND
Alkalinity, Total	mg/L	--	40.4	45.3	53.9	71.3	67.9	55.4	48.86	31.8
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	ND	ND	23	ND	ND	ND	14	ND
Chloride	mg/L	250	28.68	23.25	31.49	60.53	51.67	49.07	74.46	54.27
Hardness	mg/L	--	39.27	61.78	60.09	111.78	110.23	126.51	54.97	44.59
Nitrate-N	mg/L	10	0.08	0.12	ND	ND	ND	ND	0.25	0.31
pH	SU	8.5	5.54	5.27	5.78	6.03	5.72	5.65	5.6	5.51
Specific Conductance	umhos/cm	--	179	255	267	299	305	216	389	237
Sulfate	mg/L	250	6.17	5.16	4.78	7.57	7.03	4.22	9.09	5.54
Total Dissolved Solids	mg/L	500	166	122	158	146	162	144	220	144
Turbidity	NTU	5	33.7	23	18	15	11	8.4	12	9.9

Location ID:	GWM-6									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/18/2011**	**3/21/2012**	**9/13/2012**	**3/19/2013**	**9/24/2013**	**3/21/2014**	**9/17/2014**	**3/19/2015**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND U	ND U	ND U
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND U	ND U	ND U
Barium, Total	mg/L	2	0.062	0.052	0.059	0.109	0.07	0.058	0.06	0.067
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND U	ND U	ND U
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND U	ND U	ND U
Calcium, Total	mg/L	--	14	2.32	8.13	17.16	9.64	10	10.8	11.6
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	0.0011 J	0.0013 J	0.0011 J
Cobalt, Total	mg/L	--	0.034	0.038	0.038	0.071	0.06	0.06	0.058	0.083
Copper, Total	mg/L	1.3	ND	ND	ND	ND	ND	0.0025 J	ND U	ND U
Iron, Total	mg/L	0.3	2.6	2.222	3.784	5.285	9.312	6.6	6.7	12.3
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	ND U	ND U	ND U
Magnesium, Total	mg/L	--	9.4	0.94	7.697	11.48	9.172	7.2	7.6	7.4
Manganese, Total	mg/L	0.043	0.78	0.706	0.554	0.826	0.62	0.52	0.55	0.67
Mercury, Total	mg/L	0.002	ND	ND	--	ND	ND	ND U	ND U	ND U
Nickel, Total	mg/L	0.039	ND	ND	ND	ND	ND	0.0094	0.01	0.011
Potassium, Total	mg/L	--	1.6	1.26	1.07	1.4	1.2	1.2	1.3	1.4
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND U	ND U	ND U
Sodium, Total	mg/L	--	20	1.9	18.9	27.9	17.74	16.8	16.7	17.5
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND U	ND U	ND U
Zinc, Total	mg/L	0.6	0.012	0.015	ND	ND	ND	0.0058	0.0085	0.0042 J
Alkalinity, Total	mg/L	--	46	28.46	45.51	39.63	42.27	42	48	45

Location ID: GWM-6
Number of Sampling Dates: 49

Parameter Name	Units	Compliance Limit	10/18/2011	3/21/2012	9/13/2012	3/19/2013	9/24/2013	3/21/2014	9/17/2014	3/19/2015
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	ND U	0.133	ND U
Chemical Oxygen Demand (COD)	mg/L	--	19	10	ND	12	16	3 J	12	2 J
Chloride	mg/L	250	56	54.99	36.8	62.33	53.27	43.2	60	48.4
Hardness	mg/L	--	72	96.77	51.99	90.1	61.8	74	67	76
Nitrate-N	mg/L	10	0.25	0.11	0.15	0.16	0.14	0.28	ND U	ND U
pH	SU	8.5	6.14	5.48	5.31	5.31	5.9	5.82	6.09	6.1
Specific Conductance	umhos/cm	--	310	279	294	337	285	198.9	204	231
Sulfate	mg/L	250	ND	18.68	9	10.78	8.84	8.6	6.9	7.3
Total Dissolved Solids	mg/L	500	160	176	156	104	118	115	126	191
Turbidity	NTU	5	53.7	11.5	39.9	13	ND	1.66	0.7	0.54

Location ID: GWM-6
Number of Sampling Dates: 49

Parameter Name	Units	Compliance Limit	9/15/2015	3/21/2016	9/26/2016	3/31/2017	9/21/2017	3/30/2018	9/26/2018	3/13/2019
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	ND U	ND U	0.0022	ND U	ND U
Arsenic, Total	mg/L	0.01	ND U	ND U	ND U	ND U	ND U	0.0012	0.0014 J	0.0011 J
Barium, Total	mg/L	2	0.068	0.075	0.079	0.081	0.1	0.12	0.14	0.13
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	ND U	ND U	0.0011	ND U	ND U
Cadmium, Total	mg/L	0.005	ND U	ND U	ND U	ND U	ND U	0.0011	ND U	ND U
Calcium, Total	mg/L	--	13.2	13.9	12.8	14.4	21.3	23.5	22	23.8
Chromium, Total	mg/L	0.1	0.0012 J	0.00094 J	0.0038	0.0013 J	0.0018 J	0.00085	ND U	0.0018 J
Cobalt, Total	mg/L	--	0.085	0.074	0.073	0.078	0.11	0.11	0.082	0.078
Copper, Total	mg/L	1.3	ND U	ND U	0.0029 J	0.0024 J	0.0061	0.0041	0.0039 J	0.0025 J
Iron, Total	mg/L	0.3	16.4	16.4	13.7	16.3	23.3	35.6	51.4	63.3
Lead, Total	mg/L	0.015	ND U	ND U	ND U	ND U	ND U	0.0022	ND U	ND U
Magnesium, Total	mg/L	--	8.5	8.5	7.9	9.4	12.4	15	15	14.3
Manganese, Total	mg/L	0.043	0.73	0.68	0.67	0.74	1.1	1.2	1	1.1
Mercury, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	0.0005	ND U	ND U
Nickel, Total	mg/L	0.039	0.012	0.013	0.014	0.015	0.018	0.017	0.013	0.011
Potassium, Total	mg/L	--	1.5	1.6	1.6	1.7	1.9	2.1	1.8	1.9
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	ND U	ND U	0.0056	ND U	ND U
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND U	0.0022	ND U	ND U
Sodium, Total	mg/L	--	18.3	19.1	16.8	18.3	24	30.7	34	34.3
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	0.0011	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND U	ND U	ND U	ND U	ND U	0.0022	ND U	ND U
Zinc, Total	mg/L	0.6	0.0033 J	0.0037 J	0.012	0.0035 J	0.0077	0.0056	ND U	0.0026 J
Alkalinity, Total	mg/L	--	53	61	62	61	73	94	113	94
Ammonia-N	mg/L	--	ND U	ND U	0.044 J	0.045 J	0.08 J	0.111	0.079 J	0.128
Chemical Oxygen Demand (COD)	mg/L	--	5	13	7 J	14	16	19	27	29
Chloride	mg/L	250	60.7	51.6	38.4	52.3	76.2	81.9	97.4	89.7
Hardness	mg/L	--	70	70	75	101	104	120	117	118
Nitrate-N	mg/L	10	ND U	0.06 J	ND U	ND U	ND U	ND U	ND U	ND U
pH	SU	8.5	5.79	6.09	6.22	6.18	5.97	6.47	6.56	6.65
Specific Conductance	umhos/cm	--	242	255	219	252	334	410	495	514
Sulfate	mg/L	250	5.9	7.3	4.4	5.7	4.4	2.9	2.3	0.92 J
Total Dissolved Solids	mg/L	500	153	132	155	160	164	203	243	278

Location ID:	GWM-6									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/15/2015**	**3/21/2016**	**9/26/2016**	**3/31/2017**	**9/21/2017**	**3/30/2018**	**9/26/2018**	**3/13/2019**
Turbidity	NTU	5	0.84	0.47	1.69	0.25	0.74	0.95	1.62	0.81

Location ID:	GWM-6									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/3/2019**	**4/3/2020**	**9/30/2020**	**3/22/2021**	**9/16/2021**	**3/24/2022**	**9/16/2022**	**3/17/2023**
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Arsenic, Total	mg/L	0.01	0.0012 J	0.0018 J	0.0013 J	0.0017 J	0.0012 J	0.0013 J	0.0015 J	0.0017 J
Barium, Total	mg/L	2	0.11	0.087	0.1	0.12	0.11	0.13	0.13	0.12
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Calcium, Total	mg/L	--	21.1	19.2	17.9	21.6	19	18.6	17	15.6
Chromium, Total	mg/L	0.1	ND U	ND U	ND U	ND U	0.0012 J	ND	0.001 J	0.0008 J
Cobalt, Total	mg/L	--	0.048	0.042	0.038	0.035	0.031	0.025	0.02	0.017
Copper, Total	mg/L	1.3	0.0064	0.0027 J	ND U	ND U	0.0036 J	0.002 J	ND	ND
Iron, Total	mg/L	0.3	49.3	43.9	61.2	84.2	63	79.2	86.2	82.1
Lead, Total	mg/L	0.015	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Magnesium, Total	mg/L	--	14.7	12.2	11.5	14.2	10	11.6	11.2	10.2
Manganese, Total	mg/L	0.043	0.78	0.64	0.6	0.65	0.51	0.54	0.53	0.48
Mercury, Total	mg/L	0.002	ND U	0.00029 J	ND U	ND U	ND U	ND	ND	ND
Nickel, Total	mg/L	0.039	0.009	0.0084	0.0077	0.009	0.0083	0.0077	0.007	0.0059
Potassium, Total	mg/L	--	1.9	1.5	1.7	1.8	1.8	1.8	1.9	1.9
Selenium, Total	mg/L	0.05	ND U	0.002 J	ND U	ND U	0.0014 J	ND	ND	ND
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Sodium, Total	mg/L	--	33.4	28.1	29	37.9	35	41.9	40	40.6
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Zinc, Total	mg/L	0.6	0.0046 J	0.0055 J	0.002 J	0.0021 J	ND U	ND	0.0022 J	ND
Alkalinity, Total	mg/L	--	125	88	72	100	70	137	ND	39
Ammonia-N	mg/L	--	0.264	0.126	0.292	0.217	0.064 J	0.191	0.079 J	0.125
Chemical Oxygen Demand (COD)	mg/L	--	28	23	21	20	25	31	29	33
Chloride	mg/L	250	69.3	71	76	96.7	90.5	91.8	90.2	87.4
Hardness	mg/L	--	113	98.3	104	102	94.5	94.2	92	79.7
Nitrate-N	mg/L	10	ND U	ND U	ND U	ND U	0.04 J	ND	ND	ND
pH	SU	8.5	6.62	6.56	6.4	6.58	6.38	6.43	6.05	6.18
Specific Conductance	umhos/cm	--	435	321	405	518	484	508	484.6	614.9
Sulfate	mg/L	250	0.78 J	0.52 J	0.46 J	0.92 J	3.2	3.1	4.8	5.2
Total Dissolved Solids	mg/L	500	110	250	258	244	228	184	264	282
Turbidity	NTU	5	1.03	0.73	0.86	0.55	1.55	0.84	3.98	2.51

Location ID:	GWM-6		
Number of Sampling Dates:	49		
Parameter Name	**Units**	**Compliance Limit**	**9/14/2023**
Antimony, Total	mg/L	0.006	ND
Arsenic, Total	mg/L	0.01	0.0015 J
Barium, Total	mg/L	2	0.095

Location ID:	GWM-6
Number of Sampling Dates:	49

Parameter Name	Units	Compliance Limit	9/14/2023
Beryllium, Total	mg/L	0.004	ND
Cadmium, Total	mg/L	0.005	ND
Calcium, Total	mg/L	--	12.1
Chromium, Total	mg/L	0.1	0.00084 J
Cobalt, Total	mg/L	--	0.012
Copper, Total	mg/L	1.3	0.004 J
Iron, Total	mg/L	0.3	61.7
Lead, Total	mg/L	0.015	ND
Magnesium, Total	mg/L	--	7.8
Manganese, Total	mg/L	0.043	0.35
Mercury, Total	mg/L	0.002	ND
Nickel, Total	mg/L	0.039	0.0053 J
Potassium, Total	mg/L	--	1.8
Selenium, Total	mg/L	0.05	ND
Silver, Total	mg/L	0.0094	ND
Sodium, Total	mg/L	--	38.3
Thallium, Total	mg/L	0.002	ND
Vanadium, Total	mg/L	0.0086	ND
Zinc, Total	mg/L	0.6	0.0019 J
Alkalinity, Total	mg/L	--	66
Ammonia-N	mg/L	--	0.318
Chemical Oxygen Demand (COD)	mg/L	--	19
Chloride	mg/L	250	77.7
Hardness	mg/L	--	62.1
Nitrate-N	mg/L	10	ND
pH	SU	8.5	6.29
Specific Conductance	umhos/cm	--	483.99
Sulfate	mg/L	250	9.1
Total Dissolved Solids	mg/L	500	250
Turbidity	NTU	5	0

Historical Well Data Table I

Name: Eastern Sanitary Landfill

Location ID:	GWM-8									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/30/2000**	**10/19/2000**	**3/30/2001**	**10/25/2001**	**3/26/2002**	**9/23/2002**	**4/9/2003**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-8									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/30/2000**	**10/19/2000**	**3/30/2001**	**10/25/2001**	**3/26/2002**	**9/23/2002**	**4/9/2003**
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-8									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**12/10/2003**	**3/30/2004**	**11/17/2004**	**6/7/2005**	**11/10/2005**	**3/22/2006**	**9/21/2006**	**4/12/2007**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	3	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	1	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-8									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**12/10/2003**	**3/30/2004**	**11/17/2004**	**6/7/2005**	**11/10/2005**	**3/22/2006**	**9/21/2006**	**4/12/2007**
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-8									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/23/2007**	**3/26/2008**	**9/25/2008**	**3/31/2009**	**10/1/2009**	**5/11/2010**	**9/28/2010**	**3/15/2011**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-8									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/23/2007**	**3/26/2008**	**9/25/2008**	**3/31/2009**	**10/1/2009**	**5/11/2010**	**9/28/2010**	**3/15/2011**
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-8									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/4/2011**	**3/13/2012**	**9/15/2012**	**3/12/2013**	**9/18/2013**	**12/5/2013**	**3/17/2014**	**3/19/2014**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND U	3.9 J
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND U	ND U
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND U	0.46 J
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND U	ND U
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND U	ND U

Location ID:	GWM-8									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/4/2011**	**3/13/2012**	**9/15/2012**	**3/12/2013**	**9/18/2013**	**12/5/2013**	**3/17/2014**	**3/19/2014**
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND U	ND U
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND U	ND U
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND U	ND U
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND U	ND U
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND U	ND U
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND U	ND U
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND U	ND U
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND U	ND U
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND U	ND U
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND U	ND U
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND U	ND U
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND U	ND U
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND U	ND U
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND U	ND U
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND U	ND U
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND U	ND U
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND U	ND U
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND U	ND U

Location ID:	GWM-8									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/17/2014**	**9/14/2015**	**3/17/2016**	**9/21/2016**	**3/27/2017**	**9/20/2017**	**3/27/2018**	**9/19/2018**
Acetone	ug/L	1400	ND U	ND U	ND U	ND U	3.6 JB	ND U	5.9 JB	ND U
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromomethane	ug/L	0.75	ND U	ND U	ND U	0.44 J	ND U	0.65 J	ND U	ND U
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloromethane	ug/L	19	0.35 J	ND U	ND U	0.4 J	ND U	ND U	0.54 J	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	GWM-8									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/17/2014**	**9/14/2015**	**3/17/2016**	**9/21/2016**	**3/27/2017**	**9/20/2017**	**3/27/2018**	**9/19/2018**
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	GWM-8									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**3/13/2019**	**9/25/2019**	**4/2/2020**	**9/28/2020**	**3/18/2021**	**9/9/2021**	**3/23/2022**	**9/15/2022**
Acetone	ug/L	1400	ND U	11.1 B	ND U	3.4 J	3.2 J	4.6 J	3.3 J	ND
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Benzene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Bromomethane	ug/L	0.75	0.56 JB	ND U	ND U	ND U	ND U	ND U	ND	ND
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Chloromethane	ug/L	19	0.37 J	ND U	0.34 J	0.46 J	ND U	ND U	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND

Location ID:	GWM-8									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**3/13/2019**	**9/25/2019**	**4/2/2020**	**9/28/2020**	**3/18/2021**	**9/9/2021**	**3/23/2022**	**9/15/2022**
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
o-Xylene	ug/L	10000	–	–	ND U	ND U	ND U	ND U	ND	ND
mp-Xylene	ug/L	10000	–	–	ND U	ND U	ND U	ND U	ND	ND
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Chloroform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND

Location ID:	GWM-8			
Number of Sampling Dates:	50			
Parameter Name	**Units**	**Compliance Limit**	**3/15/2023**	**9/13/2023**
Acetone	ug/L	1400	ND	ND
Acrylonitrile	ug/L	–	ND	ND
Benzene	ug/L	5	ND	ND
Bromochloromethane	ug/L	–	ND	ND
Bromomethane	ug/L	0.75	ND	ND
2-Butanone	ug/L	700	ND	ND
Carbon disulfide	ug/L	81	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND
Chlorobenzene	ug/L	100	ND	ND
Chloroethane	ug/L	2100	ND	ND
Chloromethane	ug/L	19	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND
Dibromomethane	ug/L	–	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND

Location ID:	GWM-8			
Number of Sampling Dates:	50			
Parameter Name	**Units**	**Compliance Limit**	**3/15/2023**	**9/13/2023**
trans-1,2-Dichloroethene	ug/L	100	ND	ND
Methylene Chloride	ug/L	5	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND
Ethylbenzene	ug/L	700	ND	ND
2-Hexanone	ug/L	–	ND	ND
Iodomethane	ug/L	–	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND
Styrene	ug/L	100	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND
Tetrachloroethene	ug/L	5	ND	ND
Toluene	ug/L	1000	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND
Trichloroethene	ug/L	5	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND	ND
Vinyl acetate	ug/L	–	ND	ND
Vinyl chloride	ug/L	2	ND	ND
Total Xylenes	ug/L	10000	ND	ND
o-Xylene	ug/L	10000	ND	ND
mp-Xylene	ug/L	10000	ND	ND
Bromodichloromethane	ug/L	80	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND
Bromoform	ug/L	80	ND	ND
Chloroform	ug/L	80	ND	ND

Historical Well Data Table II

Name: Eastern Sanitary Landfill

Location ID:	GWM-8									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/30/2000**	**10/19/2000**	**3/30/2001**	**10/25/2001**	**3/26/2002**	**9/23/2002**	**4/9/2003**
Antimony, Total	mg/L	0.006	--	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	--	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	ND	ND	ND	0.039	0.044	0.088	0.085	0.07
Beryllium, Total	mg/L	0.004	--	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	--	--	--	--	--	--	--	--
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	--	ND	0.019	ND	0.017	0.018	0.012	0.013
Copper, Total	mg/L	1.3	--	ND	0.032	0.015	0.018	0.01	0.011	ND
Iron, Total	mg/L	0.3	5.83	6.25	4.44	5.2	7.32	14.14	6.74	3.66
Lead, Total	mg/L	0.015	ND	ND	0.002	ND	0.002	0.002	ND	ND
Magnesium, Total	mg/L	--	--	--	--	--	--	--	--	--
Manganese, Total	mg/L	0.043	0.44	0.43	0.465	0.449	0.477	0.369	0.371	0.376
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	--	ND	0.016	0.024	ND	0.021	0.024	0.024
Potassium, Total	mg/L	--	--	--	--	--	--	--	--	--
Selenium, Total	mg/L	0.05	--	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	--	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	--	--	--	--	--	--	--	--
Thallium, Total	mg/L	0.002	--	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	--	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	ND	ND	0.139	0.081	0.09	0.097	0.134	0.098
Alkalinity, Total	mg/L	--	--	36	35	38	34	44	34	46
Ammonia-N	mg/L	--	0.2	0.2	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	10	10	ND	ND	7	ND	ND	ND
Chloride	mg/L	250	10	10	3.28	2.5	4.17	3.12	2.55	3.59
Hardness	mg/L	--	--	85	17	12.89	17.76	21.17	22.7	35.34
Nitrate-N	mg/L	10	0.2	0.2	ND	ND	ND	ND	ND	ND
pH	SU	8.5	--	--	6.15	5.9	5.82	5.97	5.71	5.8
Specific Conductance	umhos/cm	--	--	181	ND	ND	172	169	180	152
Sulfate	mg/L	250	42.5	41.3	138	50	56	39.18	33.06	36.38
Total Dissolved Solids	mg/L	500	108	122	103	118	103	78	91	182
Turbidity	NTU	5	--	5	26	2.04	4.02	0.99	0.55	0.95

Location ID:	GWM-8								
Number of Sampling Dates:	50								
Parameter Name	**Units**	**Compliance Limit**	**12/10/2003**	**3/30/2004**	**11/17/2004**	**6/7/2005**	**11/10/2005**	**3/22/2006**	**9/21/2006**	**4/12/2007**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.059	0.065	0.061	0.062	0.06	0.055	0.07	0.066
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND

Location ID: GWM-8
Number of Sampling Dates: 50

Parameter Name	Units	Compliance Limit	12/10/2003	3/30/2004	11/17/2004	6/7/2005	11/10/2005	3/22/2006	9/21/2006	4/12/2007
Calcium, Total	mg/L	--	--	--	--	--	--	--	--	1.72
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	0.017	ND	0.021	0.022	0.017	0.017	0.017	0.031
Copper, Total	mg/L	1.3	ND	ND	ND	ND	ND	ND	ND	0.018
Iron, Total	mg/L	0.3	4.16	6	4.64	5.36	7.3	5.536	5.2	6.19
Lead, Total	mg/L	0.015	ND	0.002	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/L	--	--	--	--	--	--	--	--	1.222
Manganese, Total	mg/L	0.043	0.415	0.525	0.534	0.46	0.332	0.337	0.374	0.315
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	0.024	0.03	0.03	0.025	0.028	0.025	0.03	0.027
Potassium, Total	mg/L	--	--	--	--	--	--	--	--	6.3
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	--	--	--	--	--	--	--	35.7
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.077	0.065	0.155	0.141	0.076	0.081	0.18	0.119
Alkalinity, Total	mg/L	--	42	40	44.8	42.7	33.95	32.1	30.5	29.1
Ammonia-N	mg/L	--	ND	1	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	ND	ND	ND	ND	12	ND	ND	ND
Chloride	mg/L	250	2.58	2.64	4.65	4.1	2.29	2.16	2.42	2.78
Hardness	mg/L	--	33.36	31.42	41	32.66	34.61	10.77	33.42	9.33
Nitrate-N	mg/L	10	ND	ND	ND	ND	ND	ND	ND	ND
pH	SU	8.5	5.71	5.63	5.48	5.51	5.43	5.3	5.28	5.24
Specific Conductance	umhos/cm	--	167	162	173	188	143	125	122	147
Sulfate	mg/L	250	28.77	29.96	49.3	46.61	24.22	21.11	24.3	28.26
Total Dissolved Solids	mg/L	500	93	88	110	240	408	698	92	ND
Turbidity	NTU	5	0.95	2.2	1.5	3.86	1.5	0.45	0.7	0.35

Location ID: GWM-8
Number of Sampling Dates: 50

Parameter Name	Units	Compliance Limit	10/23/2007	3/26/2008	9/25/2008	3/31/2009	10/1/2009	5/11/2010	9/28/2010	3/15/2011
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.06	0.062	0.056	0.05	0.052	0.057	0.061	0.054
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	3.74	7	4.62	1.02	2.27	2.5	3.67	1.94
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	0.017	0.012	0.015	0.012	0.027	0.013	0.012	0.014
Copper, Total	mg/L	1.3	0.074	ND	0.066	ND	ND	0.032	ND	0.016
Iron, Total	mg/L	0.3	3.26	2.671	4.26	3.568	3.34	5.43	3.6	3.564
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/L	--	1.36	1.48	1.509	1.405	1.839	2.95	1.034	1.347
Manganese, Total	mg/L	0.043	0.36	0.297	0.312	0.273	0.378	0.313	0.274	0.27
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-8									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/23/2007**	**3/26/2008**	**9/25/2008**	**3/31/2009**	**10/1/2009**	**5/11/2010**	**9/28/2010**	**3/15/2011**
Nickel, Total	mg/L	0.039	0.026	0.025	ND	0.021	0.044	0.026	0.031	0.019
Potassium, Total	mg/L	--	2.22	4.74	3.39	2.18	2.66	3.5	2.15	2.32
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	11	22.8	11.4	9.6	8.4	14.5	27.4	13.9
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.09	0.082	0.037	0.037	0.059	0.091	0.074	0.061
Alkalinity, Total	mg/L	--	30.2	30.7	31.1	32.7	28.2	23.9	9.8	ND
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	10	ND	ND	ND	ND	ND	ND	ND
Chloride	mg/L	250	2.24	2.01	2.36	3.08	2.61	2.47	1.67	2.13
Hardness	mg/L	--	16.71	23.57	17.74	8.34	13.24	18.39	13.43	10.39
Nitrate-N	mg/L	10	ND	ND	ND	ND	ND	ND	ND	ND
pH	SU	8.5	5.47	5.36	5.9	5.78	5.88	5.93	5.4	5.46
Specific Conductance	umhos/cm	--	117	129	120	108	105	114	97.2	100
Sulfate	mg/L	250	20.57	16.08	20	18.59	16.98	17.92	12.75	15.42
Total Dissolved Solids	mg/L	500	240	64	112	40	92	88	62	116
Turbidity	NTU	5	ND	ND	1.35	0.62	0.6	1	2.4	0.7

Location ID:	GWM-8									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/4/2011**	**3/13/2012**	**9/15/2012**	**3/12/2013**	**9/18/2013**	**12/5/2013**	**3/17/2014**	**3/19/2014**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND U	ND U
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND U	ND U
Barium, Total	mg/L	2	0.2	0.224	0.211	0.328	0.14	0.1	0.11	0.062
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND U	ND U
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	0.0038	0.0021
Calcium, Total	mg/L	--	4.8	1.88	3.6	10.08	56.73	19.06	16.3	12.3
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	0.012	0.0038
Cobalt, Total	mg/L	--	0.011	0.011	ND	0.012	0.08	ND	0.006	ND U
Copper, Total	mg/L	1.3	ND	ND	ND	ND	ND	ND	0.0041 J	0.0053 J
Iron, Total	mg/L	0.3	2	3.574	2.213	3.268	5.016	0.68	2.3	0.44
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	ND	ND U	ND U
Magnesium, Total	mg/L	--	1.3	0.182	1.542	1.938	10.81	1.64	0.56	0.38
Manganese, Total	mg/L	0.043	0.29	0.27	0.195	0.331	0.84	0.12	0.093	0.016
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND U	ND U
Nickel, Total	mg/L	0.039	0.021	0.019	0.014	0.019	ND	ND	0.012	0.003 J
Potassium, Total	mg/L	--	3.1	2.51	1.89	1.85	7.58	5.98	7.2	9
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND U	ND U
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	--	ND U	ND U
Sodium, Total	mg/L	--	6.7	0.8	7	7.5	64.25	19.48	25.9	22.2
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND U	ND U
Zinc, Total	mg/L	0.6	0.095	0.069	0.042	0.048	0.02	ND	0.012	0.0027 J
Alkalinity, Total	mg/L	--	31	27.17	38.1	27.48	165.49	50.14	28	51

Location ID: GWM-8
Number of Sampling Dates: 50

Parameter Name	Units	Compliance Limit	10/4/2011	3/13/2012	9/15/2012	3/12/2013	9/18/2013	12/5/2013	3/17/2014	3/19/2014
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	ND	ND U	0.145
Chemical Oxygen Demand (COD)	mg/L	--	28	ND	ND	8	ND	ND	ND U	4 J
Chloride	mg/L	250	1.8	1.75	2.1	2.48	88.13	6.44	11.6	10.2
Hardness	mg/L	--	24	54.47	15.33	33.2	186.2	54.3	80	38
Nitrate-N	mg/L	10	ND	ND	ND	ND	ND	ND	0.12 J	ND U
pH	SU	8.5	5.75	5.68	5.48	5.48	10.96	8.61	11.21	10.82
Specific Conductance	umhos/cm	--	104	120	124	102	244	0.2	303	260
Sulfate	mg/L	250	8.2	14.51	17	14.48	32.56	31.76	46	30.5
Total Dissolved Solids	mg/L	500	18	82	66	58	365	--	220	124
Turbidity	NTU	5	2.2	1.38	1.9	0.55	ND	5.23	17.6	3.99

Location ID: GWM-8
Number of Sampling Dates: 50

Parameter Name	Units	Compliance Limit	9/17/2014	9/14/2015	3/17/2016	9/21/2016	3/27/2017	9/20/2017	3/27/2018	9/19/2018
Antimony, Total	mg/L	0.006	0.00088 J	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Arsenic, Total	mg/L	0.01	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Barium, Total	mg/L	2	0.1	0.099	0.11	0.12	0.099	0.089	0.13	0.16
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Cadmium, Total	mg/L	0.005	0.004	0.0038	0.0035	0.002	0.0021	0.0019	0.0027	0.0021
Calcium, Total	mg/L	--	15.4	14.8	20.9	8.4	11.8	9.6	17.5	21.8
Chromium, Total	mg/L	0.1	0.017	0.0056	0.007	0.0041	0.0025	0.0018 J	0.0032	0.0041
Cobalt, Total	mg/L	--	0.0078	0.0056	0.0041 J	0.0071	0.0032 J	0.0024 J	0.0028 J	0.008
Copper, Total	mg/L	1.3	0.0062	0.0034 J	ND U	0.0027 J	ND U	0.0025 J	ND U	0.0019 J
Iron, Total	mg/L	0.3	3	2.1	1.5	2.7	1.3	0.92	1.1	2.5
Lead, Total	mg/L	0.015	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Magnesium, Total	mg/L	--	0.51	0.6	0.51	1.6	0.66	0.86	0.5	0.45
Manganese, Total	mg/L	0.043	0.11	0.08	0.062	0.1	0.05	0.035	0.037	0.12
Mercury, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Nickel, Total	mg/L	0.039	0.017	0.009	0.0078	0.0095	0.0065	0.0063	0.0058	0.012
Potassium, Total	mg/L	--	7.6	7.9	7.2	6.7	6.3	6	5.9	4.8
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Sodium, Total	mg/L	--	25.5	30.5	30.1	32.7	26.4	28.3	28.3	23.9
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Zinc, Total	mg/L	0.6	0.021	0.012	0.0088	0.016	0.0055 J	0.0068	0.0048 J	0.018
Alkalinity, Total	mg/L	--	42	30	57	27	37	26	34	45
Ammonia-N	mg/L	--	0.115	0.045 J	ND U	0.461	ND U	0.463	0.056 J	0.032 J
Chemical Oxygen Demand (COD)	mg/L	--	21	ND U	4 J	9	5 J	10	ND U	ND U
Chloride	mg/L	250	13.8	12.9	12.9	11.7	12	12.1	12.7	11.7
Hardness	mg/L	--	51	49	56	30	37	27.4	45.7	56.2
Nitrate-N	mg/L	10	0.3	0.14 J	0.12 J	0.1 J	0.48	ND U	0.5	0.32
pH	SU	8.5	11.12	10.92	11.41	10.09	11.12	10.98	11.45	11
Specific Conductance	umhos/cm	--	292	269	308	207	257	228	271	316
Sulfate	mg/L	250	60	55	53.8	59	46.2	44.8	44.7	47.5
Total Dissolved Solids	mg/L	500	133	147	172	153	148	124	334	158

Location ID:	GWM-8									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/17/2014**	**9/14/2015**	**3/17/2016**	**9/21/2016**	**3/27/2017**	**9/20/2017**	**3/27/2018**	**9/19/2018**
Turbidity	NTU	5	19.7	14.1	11.4	14.9	12.4	6.62	12.28	25.7

Location ID:	GWM-8									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**3/13/2019**	**9/25/2019**	**4/2/2020**	**9/28/2020**	**3/18/2021**	**9/9/2021**	**3/23/2022**	**9/15/2022**
Antimony, Total	mg/L	0.006	0.00093 J	ND U	ND U	ND U	ND U	ND U	ND	ND
Arsenic, Total	mg/L	0.01	ND U	ND U	ND U	ND U	ND U	0.0002 J	ND	ND
Barium, Total	mg/L	2	0.15	0.16	0.11	0.11	0.0056 UR	0.15	0.13	0.095
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Cadmium, Total	mg/L	0.005	0.0028	0.0027	0.0021	0.0022	0.0011 UR	ND U	0.0012	0.0013
Calcium, Total	mg/L	--	18.6	16.9	9.2	10.5	0.061 JR	10.5	14.4	12.2
Chromium, Total	mg/L	0.1	0.0061	0.012	0.0086	0.0041	0.0022 UR	0.0023 J	0.0038	0.0017 J
Cobalt, Total	mg/L	--	0.0056 J	0.0076	0.0031 J	0.0056 J	0.0056 UR	0.009	0.0069	0.0037 J
Copper, Total	mg/L	1.3	0.0035 J	0.0026 J	0.0047 J	ND U	ND U	ND U	0.0021 J	ND
Iron, Total	mg/L	0.3	2	3	1.3	2	0.14 R	3.3	2.7	1
Lead, Total	mg/L	0.015	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Magnesium, Total	mg/L	--	0.49	0.59	0.92	0.88	0.076 JR	1	0.88	0.78
Manganese, Total	mg/L	0.043	0.082	0.11	0.048	0.085	0.0045 JR	0.14	0.13	0.05
Mercury, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Nickel, Total	mg/L	0.039	0.01	0.014	0.0069	0.0076	0.0056 UR	0.011	0.01	0.0056 J
Potassium, Total	mg/L	--	6.5	7	5.7	6.4	0.11 UR	6	6.3	6
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Sodium, Total	mg/L	--	30.4	36	31.8	38.1	0.67 R	40	46	46.2
Thallium, Total	mg/L	0.002	0.00094 J	ND U	ND U	ND U	ND U	ND U	ND	ND
Vanadium, Total	mg/L	0.0086	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Zinc, Total	mg/L	0.6	0.013	0.015	0.011	0.015	0.0056 UR	0.023	0.019	0.0076
Alkalinity, Total	mg/L	--	32	45	35	29	45	33	37	33
Ammonia-N	mg/L	--	ND U	0.102	0.053 J	ND U	0.102	ND U	ND	0.915
Chemical Oxygen Demand (COD)	mg/L	--	14 J	9 J	10 J	12 J	17	9 J	5 J	ND
Chloride	mg/L	250	13	12.3	11.6	12.6	12.7	15	14.5	16.4
Hardness	mg/L	--	48.6	44.5	28.6	32.6	37.3	30	37.2	33.7
Nitrate-N	mg/L	10	0.18 J	0.22	0.1 J	0.28	0.18 J	0.24	0.35 J	0.52 J
pH	SU	8.5	11.51	10.8	10.95	10.64	10.66	10.8	11.24	10.71
Specific Conductance	umhos/cm	--	300	285	168	218	257	195.2	285	266.1
Sulfate	mg/L	250	58.6	62.4	57	65.6	70.5	76.5	79.9	83.8
Total Dissolved Solids	mg/L	500	195	168	306	210	190	180	122	226
Turbidity	NTU	5	19.3	20.9	12.01	135	18.5	31.7	21.4	6.46

Location ID:	GWM-8			
Number of Sampling Dates:	50			
Parameter Name	**Units**	**Compliance Limit**	**3/15/2023**	**9/13/2023**
Antimony, Total	mg/L	0.006	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND
Barium, Total	mg/L	2	0.071	0.062

Location ID:	GWM-8
Number of Sampling Dates:	50

Parameter Name	Units	Compliance Limit	3/15/2023	9/13/2023
Beryllium, Total	mg/L	0.004	ND	ND
Cadmium, Total	mg/L	0.005	0.0012	0.0023
Calcium, Total	mg/L	--	8.9	9.2
Chromium, Total	mg/L	0.1	0.003	0.0021 J
Cobalt, Total	mg/L	--	0.003 J	0.0037 J
Copper, Total	mg/L	1.3	ND	ND
Iron, Total	mg/L	0.3	0.95	1.2
Lead, Total	mg/L	0.015	ND	ND
Magnesium, Total	mg/L	--	0.9	0.94
Manganese, Total	mg/L	0.043	0.045	0.048
Mercury, Total	mg/L	0.002	ND	ND
Nickel, Total	mg/L	0.039	0.0049 J	0.005 J
Potassium, Total	mg/L	--	6.6	6.3
Selenium, Total	mg/L	0.05	ND	ND
Silver, Total	mg/L	0.0094	ND	ND
Sodium, Total	mg/L	--	49.7	48.6
Thallium, Total	mg/L	0.002	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND
Zinc, Total	mg/L	0.6	0.0072	0.0081
Alkalinity, Total	mg/L	--	29	36
Ammonia-N	mg/L	--	0.119	0.288
Chemical Oxygen Demand (COD)	mg/L	--	14 J	ND
Chloride	mg/L	250	17.5	17.4
Hardness	mg/L	--	24.9	29.5
Nitrate-N	mg/L	10	0.29 J	0.5 J
pH	SU	8.5	10.43	10.71
Specific Conductance	umhos/cm	--	265.13	357.96
Sulfate	mg/L	250	86.5	86.9
Total Dissolved Solids	mg/L	500	192	222
Turbidity	NTU	5	26.51	11.39

Historical Well Data Assessment Monitoring, Organochloride Pesticides

Name: Eastern Sanitary Landfill

Location ID: GWM-9
Number of Sampling Dates: 14

Parameter Name	Units	Compliance Limit	3/24/2017	9/1/2017	3/27/2018	9/19/2018	3/11/2019	9/25/2019	4/7/2020	9/23/2020
4,4'-DDD	ug/L	0.0063	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4,4'-DDE	ug/L	0.046	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4,4'-DDT	ug/L	0.23	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Aldrin	ug/L	0.00092	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
alpha-HCH (alpha-BHC)	ug/L	0.0072	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
beta-BHC	ug/L	0.025	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlordane	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
delta-BHC	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Dieldrin	ug/L	0.0018	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endosulfan I	ug/L	10	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endosulfan II	ug/L	10	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endosulfan Sulfate	ug/L	10	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endrin	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endrin Aldehyde	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
gamma-BHC	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Heptachlor	ug/L	0.4	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Heptachlor Epoxide	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methoxychlor	ug/L	40	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Toxaphene	ug/L	3	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID: GWM-9
Number of Sampling Dates: 14

Parameter Name	Units	Compliance Limit	3/17/2021	9/8/2021	3/15/2022	9/12/2022	3/13/2023	9/11/2023
4,4'-DDD	ug/L	0.0063	ND U	ND U	ND	ND	ND	ND
4,4'-DDE	ug/L	0.046	ND U	ND U	ND	ND	ND	ND
4,4'-DDT	ug/L	0.23	ND U	ND U	ND	ND	ND	ND
Aldrin	ug/L	0.00092	ND U	ND U	ND	ND	ND	ND
alpha-HCH (alpha-BHC)	ug/L	0.0072	ND U	ND U	ND	ND	ND	ND
beta-BHC	ug/L	0.025	ND U	ND U	ND	ND	ND	ND
Chlordane	ug/L	2	ND U	ND U	ND	ND	ND	ND
delta-BHC	ug/L	0.2	ND U	ND U	ND	ND	ND	ND *-
Dieldrin	ug/L	0.0018	ND U	ND U	ND	ND	ND	ND
Endosulfan I	ug/L	10	ND U	ND U	ND	ND	ND	ND
Endosulfan II	ug/L	10	ND U	ND U	ND	ND	ND	ND
Endosulfan Sulfate	ug/L	10	ND U	ND U	ND	ND	ND	ND
Endrin	ug/L	2	ND U	ND U	ND	ND	ND	ND

Location ID: GWM-9
Number of Sampling Dates: 14

Parameter Name	Units	Compliance Limit	3/17/2021	9/8/2021	3/15/2022	9/12/2022	3/13/2023	9/11/2023
Endrin Aldehyde	ug/L	2	ND U	ND U	ND	ND	ND	ND
gamma-BHC	ug/L	0.2	ND U	ND U	ND	ND	ND	ND
Heptachlor	ug/L	0.4	ND U	ND U	ND	ND	ND	ND
Heptachlor Epoxide	ug/L	0.2	ND U	ND U	ND	ND	ND	ND
Methoxychlor	ug/L	40	ND U	ND U	ND	ND	ND	ND
Toxaphene	ug/L	3	ND U	ND U	ND	ND	ND	ND

Historical Well Data Table I

Name: Eastern Sanitary Landfill

Location ID:	GWM-9									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/30/2000**	**10/19/2000**	**3/29/2001**	**9/17/2001**	**3/12/2002**	**9/9/2002**	**3/25/2003**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-9									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/30/2000**	**10/19/2000**	**3/29/2001**	**9/17/2001**	**3/12/2002**	**9/9/2002**	**3/25/2003**
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-9									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**9/17/2003**	**3/23/2004**	**9/27/2004**	**3/15/2005**	**9/28/2005**	**3/15/2006**	**9/19/2006**	**4/10/2007**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-9									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**9/17/2003**	**3/23/2004**	**9/27/2004**	**3/15/2005**	**9/28/2005**	**3/15/2006**	**9/19/2006**	**4/10/2007**
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-9									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**9/25/2007**	**3/18/2008**	**9/25/2008**	**3/18/2009**	**9/22/2009**	**4/13/2010**	**8/24/2010**	**3/3/2011**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-9									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**9/25/2007**	**3/18/2008**	**9/25/2008**	**3/18/2009**	**9/22/2009**	**4/13/2010**	**8/24/2010**	**3/3/2011**
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	2	2	2	ND	ND	ND	ND

Location ID:	GWM-9									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**10/4/2011**	**2/28/2012**	**8/28/2012**	**2/26/2013**	**9/24/2013**	**3/19/2014**	**9/8/2014**	**3/17/2015**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND U	ND U	ND U
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	0.64 J	ND U	ND U
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND U	ND U	ND U

Location ID:	GWM-9									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**10/4/2011**	**2/28/2012**	**8/28/2012**	**2/26/2013**	**9/24/2013**	**3/19/2014**	**9/8/2014**	**3/17/2015**
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND U	ND U	ND U
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND U	ND U	ND U
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U

Location ID:	GWM-9									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**9/14/2015**	**3/17/2016**	**9/21/2016**	**3/24/2017**	**9/1/2017**	**9/20/2017**	**3/27/2018**	**9/19/2018**
Acetone	ug/L	1400	ND U	ND U	ND U	4.2 JB	–	ND U	5.3 JB	ND U
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Benzene	ug/L	5	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Bromomethane	ug/L	0.75	ND U	ND U	ND U	ND U	–	0.44 J	ND U	ND U
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Chloromethane	ug/L	19	ND U	0.39 J	ND U	ND U	–	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND U	ND U	0.45 J	ND U	–	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Styrene	ug/L	100	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U

Location ID:	GWM-9									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**9/14/2015**	**3/17/2016**	**9/21/2016**	**3/24/2017**	**9/1/2017**	**9/20/2017**	**3/27/2018**	**9/19/2018**
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Chloroform	ug/L	80	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U

Location ID:	GWM-9									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**3/11/2019**	**9/25/2019**	**3/18/2020**	**4/7/2020**	**9/23/2020**	**3/17/2021**	**9/8/2021**	**3/15/2022**
Acetone	ug/L	1400	4.4 J	4.3 JB	3.7 J	–	ND U	3.8 J	ND U	ND
Acrylonitrile	ug/L	–	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Benzene	ug/L	5	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Bromochloromethane	ug/L	–	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Bromomethane	ug/L	0.75	0.72 JB	ND U	ND U	–	ND U	ND U	ND U	ND
2-Butanone	ug/L	700	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Carbon disulfide	ug/L	81	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Chlorobenzene	ug/L	100	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Chloroethane	ug/L	2100	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Chloromethane	ug/L	19	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Dibromomethane	ug/L	–	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Methylene Chloride	ug/L	5	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Methyl t-Butyl Ether	ug/L	20	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Ethylbenzene	ug/L	700	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
2-Hexanone	ug/L	–	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Iodomethane	ug/L	–	ND U	ND U	ND U	–	ND U	ND U	ND U	ND

Location ID:	GWM-9									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**3/11/2019**	**9/25/2019**	**3/18/2020**	**4/7/2020**	**9/23/2020**	**3/17/2021**	**9/8/2021**	**3/15/2022**
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Styrene	ug/L	100	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	–	ND U	ND U	ND U	0.35 J
Toluene	ug/L	1000	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Trichloroethene	ug/L	5	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Vinyl acetate	ug/L	–	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Vinyl chloride	ug/L	2	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Total Xylenes	ug/L	10000	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
o-Xylene	ug/L	10000	–	–	ND U	–	ND U	ND U	ND U	ND
mp-Xylene	ug/L	10000	–	–	ND U	–	ND U	ND U	ND U	ND
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Bromoform	ug/L	80	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Chloroform	ug/L	80	ND U	ND U	0.54 JB	–	0.62 J	ND U	0.24 J	7.1

Location ID:	GWM-9					
Number of Sampling Dates:	52					
Parameter Name	**Units**	**Compliance Limit**	**9/12/2022**	**9/13/2022**	**3/13/2023**	**9/11/2023**
Acetone	ug/L	1400	ND	–	ND	ND
Acrylonitrile	ug/L	–	ND	–	ND	ND
Benzene	ug/L	5	ND	–	ND	ND
Bromochloromethane	ug/L	–	ND	–	ND	ND
Bromomethane	ug/L	0.75	ND	–	0.6 JB	0.73 JB
2-Butanone	ug/L	700	ND	–	ND	ND
Carbon disulfide	ug/L	81	ND	–	ND	ND
Carbon Tetrachloride	ug/L	5	ND	–	ND	ND
Chlorobenzene	ug/L	100	ND	–	ND	ND
Chloroethane	ug/L	2100	ND	–	ND	ND
Chloromethane	ug/L	19	ND	–	ND	0.99 JB
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	–	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	–	ND	ND
Dibromomethane	ug/L	–	ND	–	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	–	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	–	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	–	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	–	ND	ND
1,2-Dichloroethane	ug/L	5	ND	–	ND	ND

Location ID:	GWM-9					
Number of Sampling Dates:	52					
Parameter Name	**Units**	**Compliance Limit**	**9/12/2022**	**9/13/2022**	**3/13/2023**	**9/11/2023**
1,1-Dichloroethene	ug/L	7	ND	–	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	–	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	–	ND	ND
Methylene Chloride	ug/L	5	ND	–	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	–	ND	ND
1,2-Dichloropropane	ug/L	5	ND	–	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	–	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	–	ND	ND
Ethylbenzene	ug/L	700	ND	–	ND	ND
2-Hexanone	ug/L	–	ND	–	ND	ND
Iodomethane	ug/L	–	0.42 J	–	0.51 JB	0.43 J
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	–	ND	ND
Styrene	ug/L	100	ND	–	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	–	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	–	ND	ND
Tetrachloroethene	ug/L	5	ND	–	ND	ND
Toluene	ug/L	1000	ND	–	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	–	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	–	ND	ND
Trichloroethene	ug/L	5	ND	–	ND	ND
Trichlorofluoromethane	ug/L	–	ND	–	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND	–	ND	ND
Vinyl acetate	ug/L	–	ND	–	ND	ND
Vinyl chloride	ug/L	2	ND	–	ND	ND
Total Xylenes	ug/L	10000	ND	–	ND	ND
o-Xylene	ug/L	10000	ND	–	ND	ND
mp-Xylene	ug/L	10000	ND	–	ND	ND
Bromodichloromethane	ug/L	80	ND	–	ND	ND
Chlorodibromomethane	ug/L	80	ND	–	ND	ND
Bromoform	ug/L	80	ND	–	ND	ND
Chloroform	ug/L	80	14	–	20.3	3.4

Historical Well Data Table II

Name: Eastern Sanitary Landfill

Location ID:	GWM-9									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/30/2000**	**10/19/2000**	**3/29/2001**	**9/17/2001**	**3/12/2002**	**9/9/2002**	**3/25/2003**
Antimony, Total	mg/L	0.006	–	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	–	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	ND	ND	ND	0.059	0.06	0.068	0.071	0.066
Beryllium, Total	mg/L	0.004	–	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	–	–	–	–	–	–	–	–	–
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	–	–	ND	ND	ND	ND	ND	ND	ND
Copper, Total	mg/L	1.3	–	ND	ND	0.014	0.014	0.011	0.024	0.013
Iron, Total	mg/L	0.3	0.59	2.43	0.22	0.08	0.338	0.539	0.536	0.1
Lead, Total	mg/L	0.015	ND	ND	0.003	ND	ND	ND	ND	0.005
Magnesium, Total	mg/L	–	–	–	–	–	–	–	–	–
Manganese, Total	mg/L	0.043	ND	ND	0.032	0.047	0.022	0.011	0.025	ND
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	–	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/L	–	–	–	–	–	–	–	–	–
Selenium, Total	mg/L	0.05	–	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	–	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	–	–	–	–	–	–	–	–	–
Thallium, Total	mg/L	0.002	–	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	–	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	ND	ND	0.051	0.029	0.029	0.064	0.069	0.015
Alkalinity, Total	mg/L	–	–	40	7	36	6	4	20	34
Ammonia-N	mg/L	–	0.2	0.4	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	–	–	10	15	ND	6	ND	ND	ND
Chloride	mg/L	250	66	75	31.72	71.05	50.02	8.16	63.71	32.13
Hardness	mg/L	–	–	79	19	88.85	37.85	23.76	66.64	55.73
Nitrate-N	mg/L	10	–	1.9	1.22	1.49	0.91	0.53	1.6	0.41
pH	SU	8.5	–	–	5.31	6	5.1	4.8	5.35	5.58
Specific Conductance	umhos/cm	–	–	408	ND	ND	210	90.7	369	280
Sulfate	mg/L	250	21.7	25.2	23	17	26	14.54	25.76	20.74
Total Dissolved Solids	mg/L	500	164	218	107	207	131	ND	–	124
Turbidity	NTU	5	–	87	16	42.3	37.1	59.5	50	8.58

Location ID:	GWM-9									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**9/17/2003**	**3/23/2004**	**9/27/2004**	**3/15/2005**	**9/28/2005**	**3/15/2006**	**9/19/2006**	**4/10/2007**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.062	0.042	0.041	0.035	0.029	0.026	0.035	0.032
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-9									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**9/17/2003**	**3/23/2004**	**9/27/2004**	**3/15/2005**	**9/28/2005**	**3/15/2006**	**9/19/2006**	**4/10/2007**
Calcium, Total	mg/L	–	–	–	–	–	–	–	–	14.25
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	mg/L	1.3	ND	ND	ND	ND	ND	ND	0.027	0.02
Iron, Total	mg/L	0.3	0.153	0.021	0.418	0.221	0.072	0.046	0.15	ND
Lead, Total	mg/L	0.015	0.005	ND	0.004	0.004	ND	ND	ND	ND
Magnesium, Total	mg/L	–	–	–	–	–	–	–	–	4.3
Manganese, Total	mg/L	0.043	ND	0.011	0.015	0.015	0.014	0.011	2.5	ND
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	ND	0.011	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/L	–	–	–	–	–	–	–	–	7.5
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	–	–	–	–	–	–	–	–	40
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.025	ND	0.261	0.138	0.013	0.05	0.057	0.091
Alkalinity, Total	mg/L	–	10	6	8.2	10.85	8.2	12.2	17.75	11.8
Ammonia-N	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Chloride	mg/L	250	9.77	9.07	27.06	50.73	14.11	33.08	20.87	30.32
Hardness	mg/L	–	19.81	15.96	16.48	46.05	23.85	16.63	35.64	53.29
Nitrate-N	mg/L	10	0.25	0.26	0.29	0.56	0.25	0.49	0.64	0.46
pH	SU	8.5	4.77	4.9	4.6	5.03	4.63	4.92	4.83	4.9
Specific Conductance	umhos/cm	–	102	92	127	223	118	180	184	186
Sulfate	mg/L	250	10.79	9.89	7.83	8.58	9.48	11.53	18.97	14.35
Total Dissolved Solids	mg/L	500	139	50	85	120	194	406	100	534
Turbidity	NTU	5	14	19.9	100	96.3	52.7	23	10.06	11.4

Location ID:	GWM-9									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**9/25/2007**	**3/18/2008**	**9/25/2008**	**3/18/2009**	**9/22/2009**	**4/13/2010**	**8/24/2010**	**3/3/2011**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.031	0.033	0.035	0.03	0.04	0.045	0.043	0.045
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	–	5.95	20.55	13.94	6.08	12.81	21.9	16.85	21.48
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	mg/L	1.3	0.021	0.03	0.052	0.014	ND	0.02	ND	ND
Iron, Total	mg/L	0.3	0.044	ND	0.387	0.099	0.313	ND	ND	0.119
Lead, Total	mg/L	0.015	ND	ND	ND	ND	0.002	ND	ND	ND
Magnesium, Total	mg/L	–	5.1	12.35	2.738	3.15	2.328	10	2.508	5.55
Manganese, Total	mg/L	0.043	0.04	0.018	0.078	ND	ND	0.037	ND	0.022

Location ID:	GWM-9									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**9/25/2007**	**3/18/2008**	**9/25/2008**	**3/18/2009**	**9/22/2009**	**4/13/2010**	**8/24/2010**	**3/3/2011**
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/L	–	2.39	4.4	2.95	2.13	4.66	7	3.26	3.56
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	–	28.2	157	82.8	42.8	75.1	161	75.8	87.6
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.032	0.024	ND	ND	0.011	0.024	0.01	0.023
Alkalinity, Total	mg/L	–	13.9	15	20.6	19.3	39.6	28.2	7.1	10.6
Ammonia-N	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	–	ND	16	ND	ND	ND	ND	ND	ND
Chloride	mg/L	250	18.34	269.95	80.61	57.28	87.9	271.69	134.17	130.29
Hardness	mg/L	–	35.91	102.17	–	28.16	73.56	95.86	52.4	76.49
Nitrate-N	mg/L	10	0.44	0.39	0.4	0.54	0.2	0.32	0.66	0.55
pH	SU	8.5	4.86	5.22	5.58	5.69	5.76	5.53	5.43	5.26
Specific Conductance	umhos/cm	–	167	1100	395	270	456	1535	545	641
Sulfate	mg/L	250	13.83	21.5	27.92	29.04	32.33	25.11	17.04	19.96
Total Dissolved Solids	mg/L	500	276	670	204	146	202	550	292	336
Turbidity	NTU	5	22	5.04	23	3.8	15	6	8.1	8.9

Location ID:	GWM-9									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**10/4/2011**	**2/28/2012**	**8/28/2012**	**2/26/2013**	**9/24/2013**	**3/19/2014**	**9/8/2014**	**3/17/2015**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND U	ND U	ND U
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND U	ND U	ND U
Barium, Total	mg/L	2	0.067	0.063	0.041	0.069	0.02	0.067	0.042	0.15
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND U	ND U	ND U
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND U	ND U	ND U
Calcium, Total	mg/L	–	8.8	1.28	4.39	13.18	1.95	16.8	5.9	37.1
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	0.0018 J	0.016	0.0055
Cobalt, Total	mg/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Copper, Total	mg/L	1.3	ND	ND	ND	ND	ND	0.01	0.019	0.014
Iron, Total	mg/L	0.3	0.076	0.028	0.121	0.076	0.022	ND U	0.064	0.042 J
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	ND U	ND U	ND U
Magnesium, Total	mg/L	–	4.1	0.385	2.024	3.326	1.495	4	2.7	7.9
Manganese, Total	mg/L	0.043	0.059	0.029	0.014	0.03	0.02	0.018	0.039	0.043
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	0.00026 J	ND U	ND U
Nickel, Total	mg/L	0.039	ND	ND	ND	ND	ND	0.005 J	0.0092	0.018
Potassium, Total	mg/L	–	3.1	2.72	2.49	2.79	1.39	4.4	2	5.4
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND U	ND U	ND U
Sodium, Total	mg/L	–	51	5.1	42.6	43.5	23.41	60.8	33.8	154
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND U	ND U	ND U

Location ID:	GWM-9									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**10/4/2011**	**2/28/2012**	**8/28/2012**	**2/26/2013**	**9/24/2013**	**3/19/2014**	**9/8/2014**	**3/17/2015**
Zinc, Total	mg/L	0.6	0.024	0.02	0.012	0.013	ND	0.0078	0.012	0.012
Alkalinity, Total	mg/L	–	13	14.05	25.57	12.57	ND	26	11	37
Ammonia-N	mg/L	–	ND	ND	ND	ND	ND	0.134	ND U	ND U
Chemical Oxygen Demand (COD)	mg/L	–	15	ND	ND	ND	ND	ND U	7	ND U
Chloride	mg/L	250	100	86.48	36	82.78	29.07	115	62.9	308
Hardness	mg/L	–	44	47.86	19.3	46.6	11	78	25	190
Nitrate-N	mg/L	10	0.54	0.36	1.2	0.57	0.39	0.52	0.5	0.56
pH	SU	8.5	5.14	5.03	4.97	5.05	5.18	5.87	5.22	5.85
Specific Conductance	umhos/cm	–	451	382	327	316	171	220	227	786
Sulfate	mg/L	250	12	15.99	20	12.26	17.73	12.4	9.2	15.4
Total Dissolved Solids	mg/L	500	220	216	142	180	62	229	130	584
Turbidity	NTU	5	16	12.8	18.7	6.53	ND	0.77	1.13	1.36

Location ID:	GWM-9									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**9/14/2015**	**3/17/2016**	**9/21/2016**	**3/24/2017**	**9/1/2017**	**9/20/2017**	**3/27/2018**	**9/19/2018**
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	0.0013 J	–	ND U	ND U	ND U
Arsenic, Total	mg/L	0.01	ND U	ND U	ND U	ND U	–	ND U	ND U	0.0016 J
Barium, Total	mg/L	2	0.1	0.069	0.094	0.071	–	0.046	0.088	0.056
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Cadmium, Total	mg/L	0.005	0.00042 J	ND U	ND U	ND U	–	ND U	ND U	0.00041 J
Calcium, Total	mg/L	–	14.2	11.7	8.5	9.2	–	11.3	28.1	12.2
Chromium, Total	mg/L	0.1	0.0037	0.0032	0.0045	0.0017 J	–	0.0018 J	0.0015 J	0.0025
Cobalt, Total	mg/L	–	0.004 J	0.0023 J	0.0043 J	0.0032 J	–	ND U	0.0019 J	0.13
Copper, Total	mg/L	1.3	0.018	0.018	0.014	0.016	–	0.0075	0.0076	0.011
Iron, Total	mg/L	0.3	0.02 J	0.044 J	0.02 J	0.021 J	–	0.027 J	0.025 J	0.5
Lead, Total	mg/L	0.015	ND U	ND U	ND U	ND U	–	ND U	ND U	0.0019 J
Magnesium, Total	mg/L	–	7	4.8	6	4.1	–	3.2	6.6	3.1
Manganese, Total	mg/L	0.043	0.14	0.077	0.11	0.082	–	0.032	0.036	0.032
Mercury, Total	mg/L	0.002	ND U	ND U	ND U	0.00099	–	0.00035 J	0.00024 J	ND U
Nickel, Total	mg/L	0.039	0.011	0.012	0.009	0.0064	–	ND U	0.0033 J	0.0029 J
Potassium, Total	mg/L	–	3.4	3.3	2.1	3.2	–	4.4	5.2	3.7
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Sodium, Total	mg/L	–	76.5	59.6	53.3	45.7	–	51.8	80.1	59.4
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND U	ND U	ND U	ND U	–	ND U	ND U	ND U
Zinc, Total	mg/L	0.6	0.023	0.016	0.019	0.016	–	0.0068	0.006	0.015
Alkalinity, Total	mg/L	–	24	22	5	25	–	52	58	47
Ammonia-N	mg/L	–	ND U	ND U	ND U	ND U	–	0.06 J	0.034 J	0.066 J
Chemical Oxygen Demand (COD)	mg/L	–	ND U	ND U	ND U	ND U	–	8	ND U	ND U
Chloride	mg/L	250	152	93.4	109	87.6	–	64.6	164	85.2
Hardness	mg/L	–	45	52	42	50	–	41.1	97.2	43.4
Nitrate-N	mg/L	10	1	1.2	0.8	0.62	–	0.28	0.4	0.28
pH	SU	8.5	5.16	5.41	4.89	5.36	–	6.09	6.37	5.8

Location ID:	GWM-9									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**9/14/2015**	**3/17/2016**	**9/21/2016**	**3/24/2017**	**9/1/2017**	**9/20/2017**	**3/27/2018**	**9/19/2018**
Specific Conductance	umhos/cm	–	431	311	332	281	–	295	494	330
Sulfate	mg/L	250	21.8	31.6	17.5	22.8	–	27.3	27.5	23.2
Total Dissolved Solids	mg/L	500	277	239	225	234	–	199	327	150
Turbidity	NTU	5	0.92	0.53	1.4	1.13	–	3.19	2.29	0.81

Location ID:	GWM-9									
Number of Sampling Dates:	52									
Parameter Name	**Units**	**Compliance Limit**	**3/11/2019**	**9/25/2019**	**3/18/2020**	**4/7/2020**	**9/23/2020**	**3/17/2021**	**9/8/2021**	**3/15/2022**
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Arsenic, Total	mg/L	0.01	0.0019 J	ND U	ND U	–	ND U	ND U	ND U	ND
Barium, Total	mg/L	2	0.049	0.13	0.093	–	0.075	0.059	0.051	0.17
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	–	ND U	ND U	0.00014 J	ND
Cadmium, Total	mg/L	0.005	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Calcium, Total	mg/L	–	7.1	11.3	11.4	–	8.6	7.6	7.4	21.5
Chromium, Total	mg/L	0.1	0.0035	0.0031	0.0016 J	–	0.0032	0.0026	0.0012 J	0.0043
Cobalt, Total	mg/L	–	0.2	0.021	0.05	–	0.0026 J	ND U	0.00062 J	0.003 J
Copper, Total	mg/L	1.3	0.025	0.016	0.019	–	0.017	0.015	0.015	0.025
Iron, Total	mg/L	0.3	0.53	0.32	0.096	–	0.11	0.031 J	ND U	0.03 J
Lead, Total	mg/L	0.015	0.0024	ND U	ND U	–	0.00079 J	ND U	ND U	ND
Magnesium, Total	mg/L	–	3	8.9	7	–	5.4	4	2.9	11.4
Manganese, Total	mg/L	0.043	0.045	0.14	0.086	–	0.065	0.032	0.016	0.1
Mercury, Total	mg/L	0.002	0.00025 J	0.0016	ND U	–	0.00024 J	0.00027 J	ND U	0.00024 J
Nickel, Total	mg/L	0.039	0.0092	0.0099	0.0094	–	0.0077	0.0092	0.0077	0.016
Potassium, Total	mg/L	–	1.9	2.3	2.5	–	2.3	2.4	2.5	3.2
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Sodium, Total	mg/L	–	47.5	99	88.4	–	62.8	58.8	45	171
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Vanadium, Total	mg/L	0.0086	ND U	ND U	ND U	–	ND U	ND U	ND U	ND
Zinc, Total	mg/L	0.6	0.028	0.025	0.021	–	0.023	0.017	0.018	0.039
Alkalinity, Total	mg/L	–	12	11	11	–	12	16	17	11
Ammonia-N	mg/L	–	0.074 J	0.149	ND U	–	0.063 J	0.118	0.067 J	0.103
Chemical Oxygen Demand (COD)	mg/L	–	9 J	ND U	ND U	–	ND U	9 J	5 J	ND
Chloride	mg/L	250	79.4	177	162	–	117	98.5	82.8	319
Hardness	mg/L	–	30	64.9	57.5	–	46.4	32.9	28.7	102
Nitrate-N	mg/L	10	0.4	0.38	0.64	–	0.5	0.8	0.88	1
pH	SU	8.5	5.21	4.93	5.21	–	5.12	5.07	5.28	5.29
Specific Conductance	umhos/cm	–	263	520	471	–	321	289	221	833
Sulfate	mg/L	250	15.6	8.3	9.5	–	8.6	9.7	10.4	6.6
Total Dissolved Solids	mg/L	500	143	286	392	–	264	160	176	570
Turbidity	NTU	5	1.67	2.05	1.53	–	5.36	0.81	1.34	1.42

Location ID:	GWM-9					
Number of Sampling Dates:	52					
Parameter Name	**Units**	**Compliance Limit**	**9/12/2022**	**9/13/2022**	**3/13/2023**	**9/11/2023**
Antimony, Total	mg/L	0.006	ND	–	ND	ND
Arsenic, Total	mg/L	0.01	ND	–	ND	ND
Barium, Total	mg/L	2	0.13	–	0.091	0.058
Beryllium, Total	mg/L	0.004	ND	–	ND	ND
Cadmium, Total	mg/L	0.005	ND	–	ND	ND
Calcium, Total	mg/L	–	14	–	11.9	8.2
Chromium, Total	mg/L	0.1	0.0016 J	–	0.0021 J	0.0012 J
Cobalt, Total	mg/L	–	0.0038 J	–	0.0029 J	ND
Copper, Total	mg/L	1.3	0.029	–	0.019	0.013
Iron, Total	mg/L	0.3	0.037 J	–	0.023 J	0.065
Lead, Total	mg/L	0.015	0.00081 J	–	ND	ND
Magnesium, Total	mg/L	–	8.5	–	6.5	4.9
Manganese, Total	mg/L	0.043	0.095	–	0.068	0.049
Mercury, Total	mg/L	0.002	0.00031 J	–	0.00039 J	ND
Nickel, Total	mg/L	0.039	0.013	–	0.01	0.0033 J
Potassium, Total	mg/L	–	2.5	–	2.8	1.9
Selenium, Total	mg/L	0.05	ND	–	ND	ND
Silver, Total	mg/L	0.0094	ND	–	ND	ND
Sodium, Total	mg/L	–	139	–	120	98.9
Thallium, Total	mg/L	0.002	ND	–	ND	ND
Vanadium, Total	mg/L	0.0086	ND	–	ND	ND
Zinc, Total	mg/L	0.6	0.044	–	0.019	0.016
Alkalinity, Total	mg/L	–	7	–	22	14
Ammonia-N	mg/L	–	ND	–	0.119	0.391
Chemical Oxygen Demand (COD)	mg/L	–	ND	–	7 J	6 J
Chloride	mg/L	250	249	–	217	164
Hardness	mg/L	–	72.5	–	56.5	39.7
Nitrate-N	mg/L	10	1	–	1.1	0.79 J
pH	SU	8.5	4.83	–	5.1	5.17
Specific Conductance	umhos/cm	–	756	–	751.49	573.01
Sulfate	mg/L	250	5.7	–	6.4	8.8
Total Dissolved Solids	mg/L	500	464	–	382	324
Turbidity	NTU	5	9.59	–	3.69	1.15

Historical Well Data Table I

Name: Eastern Sanitary Landfill

Location ID:	GWM-10									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/30/2000**	**10/19/2000**	**3/28/2001**	**9/19/2001**	**4/4/2002**	**9/27/2002**	**4/9/2003**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-10									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/30/2000**	**10/19/2000**	**3/28/2001**	**9/19/2001**	**4/4/2002**	**9/27/2002**	**4/9/2003**
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-10									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**12/10/2003**	**3/30/2004**	**11/10/2004**	**6/14/2005**	**11/1/2005**	**3/29/2006**	**9/26/2006**	**4/19/2007**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	2	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-10									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**12/10/2003**	**3/30/2004**	**11/10/2004**	**6/14/2005**	**11/1/2005**	**3/29/2006**	**9/26/2006**	**4/19/2007**
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-10									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**11/20/2007**	**4/3/2008**	**10/16/2008**	**4/2/2009**	**10/6/2009**	**5/4/2010**	**9/1/2010**	**3/22/2011**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	2	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-10									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**11/20/2007**	**4/3/2008**	**10/16/2008**	**4/2/2009**	**10/6/2009**	**5/4/2010**	**9/1/2010**	**3/22/2011**
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-10									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/12/2011**	**3/6/2012**	**9/13/2012**	**3/19/2013**	**9/25/2013**	**3/18/2014**	**9/16/2014**	**3/18/2015**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND U	ND U	4.7 J
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND U	ND U	0.54 JB
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	0.35 J	ND U	ND U

Location ID:	GWM-10									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/12/2011**	**3/6/2012**	**9/13/2012**	**3/19/2013**	**9/25/2013**	**3/18/2014**	**9/16/2014**	**3/18/2015**
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND U	ND U	ND U
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND U	ND U	0.25 JB
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND U	ND U	ND U
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U

Location ID:	GWM-10									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/15/2015**	**10/8/2015**	**3/16/2016**	**9/22/2016**	**3/28/2017**	**9/21/2017**	**3/28/2018**	**9/20/2018**
Acetone	ug/L	1400	ND U	4.7 J	ND U	ND U	ND U	ND U	ND U	ND U
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromomethane	ug/L	0.75	0.45 J	0.58 J	ND U	ND U	ND U	ND U	ND U	ND U
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND U	ND U	0.24 JB	ND U
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloromethane	ug/L	19	0.39 J	ND U	ND U	1.1	ND U	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	GWM-10									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/15/2015**	**10/8/2015**	**3/16/2016**	**9/22/2016**	**3/28/2017**	**9/21/2017**	**3/28/2018**	**9/20/2018**
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	GWM-10									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**3/12/2019**	**10/1/2019**	**3/18/2020**	**9/24/2020**	**3/17/2021**	**9/9/2021**	**3/15/2022**	**9/15/2022**
Acetone	ug/L	1400	ND U	3.5 J	ND U	ND U	3.3 J	3.5 J	ND	ND
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Benzene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Bromomethane	ug/L	0.75	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Chloromethane	ug/L	19	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND

Location ID:	GWM-10									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**3/12/2019**	**10/1/2019**	**3/18/2020**	**9/24/2020**	**3/17/2021**	**9/9/2021**	**3/15/2022**	**9/15/2022**
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
o-Xylene	ug/L	10000	–	–	ND U	ND U	ND U	ND U	ND	ND
mp-Xylene	ug/L	10000	–	–	ND U	ND U	ND U	ND U	ND	ND
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Chloroform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND

Location ID:	GWM-10			
Number of Sampling Dates:	50			
Parameter Name	**Units**	**Compliance Limit**	**3/15/2023**	**9/13/2023**
Acetone	ug/L	1400	ND	ND
Acrylonitrile	ug/L	–	ND	ND
Benzene	ug/L	5	ND	ND
Bromochloromethane	ug/L	–	ND	ND
Bromomethane	ug/L	0.75	ND	ND
2-Butanone	ug/L	700	12.8	ND
Carbon disulfide	ug/L	81	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND
Chlorobenzene	ug/L	100	ND	ND
Chloroethane	ug/L	2100	ND	ND
Chloromethane	ug/L	19	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND
Dibromomethane	ug/L	–	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND

Location ID:	GWM-10			
Number of Sampling Dates:	50			
Parameter Name	**Units**	**Compliance Limit**	**3/15/2023**	**9/13/2023**
1,1-Dichloroethene	ug/L	7	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND
Methylene Chloride	ug/L	5	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND
Ethylbenzene	ug/L	700	ND	ND
2-Hexanone	ug/L	–	ND	ND
Iodomethane	ug/L	–	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND
Styrene	ug/L	100	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND
Tetrachloroethene	ug/L	5	ND	ND
Toluene	ug/L	1000	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND
Trichloroethene	ug/L	5	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND	ND
Vinyl acetate	ug/L	–	ND	ND
Vinyl chloride	ug/L	2	ND	ND
Total Xylenes	ug/L	10000	ND	ND
o-Xylene	ug/L	10000	ND	ND
mp-Xylene	ug/L	10000	ND	ND
Bromodichloromethane	ug/L	80	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND
Bromoform	ug/L	80	ND	ND
Chloroform	ug/L	80	ND	ND

Historical Well Data Table II

Name: Eastern Sanitary Landfill

Location ID:	GWM-10									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/30/2000**	**10/19/2000**	**3/28/2001**	**9/19/2001**	**4/4/2002**	**9/27/2002**	**4/9/2003**
Antimony, Total	mg/L	0.006	--	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	--	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	ND	ND	0.028	0.037	0.04	0.069	0.078	0.065
Beryllium, Total	mg/L	0.004	--	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	--	--	--	--	--	--	--	--
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	--	ND	0.026	ND	0.026	0.028	0.022	0.024
Copper, Total	mg/L	1.3	--	ND	0.016	0.047	0.01	0.025	0.052	0.021
Iron, Total	mg/L	0.3	2.38	4.43	2.67	3.812	4.748	7.8	4.176	1.75
Lead, Total	mg/L	0.015	ND	ND	0.005	ND	0.004	0.003	0.002	ND
Magnesium, Total	mg/L	--	--	--	--	--	--	--	--	--
Manganese, Total	mg/L	0.043	0.149	0.14	0.168	0.2	0.131	0.129	0.137	0.121
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	--	ND	ND	0.056	0.052	0.043	0.073	0.059
Potassium, Total	mg/L	--	--	--	--	--	--	--	--	--
Selenium, Total	mg/L	0.05	--	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	--	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	--	--	--	--	--	--	--	--
Thallium, Total	mg/L	0.002	--	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	--	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	ND	ND	0.111	0.036	0.042	0.079	0.067	0.049
Alkalinity, Total	mg/L	--	--	14	10	11.25	17	16	10	6
Ammonia-N	mg/L	--	0.2	0.2	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	10	10	ND	11	15	ND	ND	ND
Chloride	mg/L	250	10	10	0.84	0.67	1.23	0.88	0.79	1.31
Hardness	mg/L	--	--	8	8	8.34	8.52	10.51	8.99	6.66
Nitrate-N	mg/L	10	0.2	0.2	ND	ND	ND	ND	ND	ND
pH	SU	8.5	--	--	5.21	5.7	5.7	5.41	4.71	4.96
Specific Conductance	umhos/cm	--	--	81	ND	ND	71	80	65.5	71
Sulfate	mg/L	250	24.8	20.8	22	17	22	15.68	14.34	24.6
Total Dissolved Solids	mg/L	500	48	60	63	42	70	61	ND	151
Turbidity	NTU	5	--	21	71	24.7	24	77.2	15.3	60.7

Location ID:	GWM-10								
Number of Sampling Dates:	50								
Parameter Name	**Units**	**Compliance Limit**	**12/10/2003**	**3/30/2004**	**11/10/2004**	**6/14/2005**	**11/1/2005**	**3/29/2006**	**9/26/2006**	**4/19/2007**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.066	0.06	0.041	0.045	0.049	0.046	0.049	0.045
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	--	--	--	--	--	--	--	0.72

Location ID:	GWM-10									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**12/10/2003**	**3/30/2004**	**11/10/2004**	**6/14/2005**	**11/1/2005**	**3/29/2006**	**9/26/2006**	**4/19/2007**
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	0.033	0.024	0.042	0.035	0.027	ND	0.033	0.025
Copper, Total	mg/L	1.3	ND	ND	0.011	0.017	ND	0.028	0.016	ND
Iron, Total	mg/L	0.3	1.694	4.77	0.437	1.626	3.3	3.17	2.056	3.044
Lead, Total	mg/L	0.015	ND	ND	ND	0.003	0.002	ND	ND	ND
Magnesium, Total	mg/L	--	--	--	--	--	--	--	--	0.76
Manganese, Total	mg/L	0.043	0.068	0.151	0.112	0.138	0.121	0.215	0.139	0.119
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	0.047	0.049	0.07	0.056	0.099	0.052	0.072	0.06
Potassium, Total	mg/L	--	--	--	--	--	--	--	--	10.45
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	--	--	--	--	--	--	--	30
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.045	0.024	0.143	0.116	0.093	0.054	0.126	0.08
Alkalinity, Total	mg/L	--	8	4	6	5.4	12.05	10.25	7.2	4.85
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	ND	ND	10	ND	ND	ND	ND	ND
Chloride	mg/L	250	0.89	0.95	0.92	0.92	1.11	0.91	0.9	0.81
Hardness	mg/L	--	11.57	4.55	10.83	8.19	18.95	7.76	27.27	4.94
Nitrate-N	mg/L	10	ND	ND	ND	ND	ND	ND	ND	ND
pH	SU	8.5	4.92	5.09	4.34	4.28	4.75	4.92	4.71	4.52
Specific Conductance	umhos/cm	--	69.4	76	65.5	73.8	68.1	74.6	65.4	64.1
Sulfate	mg/L	250	17.1	14.28	18.72	18.56	19.25	16.15	15.14	15.02
Total Dissolved Solids	mg/L	500	55	26	ND	282	52	65	274	22
Turbidity	NTU	5	95.9	15	54.6	17.7	48.7	35.2	44	16.3

Location ID:	GWM-10									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**11/20/2007**	**4/3/2008**	**10/16/2008**	**4/2/2009**	**10/6/2009**	**5/4/2010**	**9/1/2010**	**3/22/2011**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.041	0.046	0.038	0.035	0.033	0.039	0.042	0.036
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	1.17	1.35	8.13	0.035	0.44	ND	1.05	0.06
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	0.011	ND	ND	ND
Cobalt, Total	mg/L	--	0.03	0.025	ND	0.025	0.05	0.027	0.043	0.023
Copper, Total	mg/L	1.3	0.034	ND	0.027	ND	ND	0.033	ND	ND
Iron, Total	mg/L	0.3	2.282	4.616	0.094	2.034	0.653	5.43	2.823	0.564
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	ND	ND	0.003
Magnesium, Total	mg/L	--	1.256	1.52	3.179	1.2	0.98	1.1	1.02	1.009
Manganese, Total	mg/L	0.043	0.14	0.176	0.052	0.106	0.106	0.16	0.114	0.161
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	0.047	0.059	ND	0.049	0.081	0.053	0.064	0.079

Location ID:	GWM-10									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**11/20/2007**	**4/3/2008**	**10/16/2008**	**4/2/2009**	**10/6/2009**	**5/4/2010**	**9/1/2010**	**3/22/2011**
Potassium, Total	mg/L	--	2.15	2.26	2.15	2.4	2.4	1.88	1.88	1.96
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	5.2	13.4	42.6	4.9	3.7	6.5	11.6	12.3
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.038	0.045	ND	0.045	0.063	0.058	0.045	0.034
Alkalinity, Total	mg/L	--	5.7	11.2	2.2	5.6	ND	3.4	ND	ND
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	ND	ND	14	ND	ND	ND	ND	ND
Chloride	mg/L	250	0.93	0.75	0.81	1.51	0.97	0.87	0.84	1
Hardness	mg/L	--	8.11	9.63	33.4	5.82	5.13	4.63	6.82	4.37
Nitrate-N	mg/L	10	ND	ND	ND	ND	ND	ND	ND	ND
pH	SU	8.5	5.03	4.88	4.58	5.38	4.59	5.21	4.91	4.8
Specific Conductance	umhos/cm	--	57.6	78.3	64.6	68.7	62.1	68	52	66.8
Sulfate	mg/L	250	22.48	12.85	16.13	25.3	16.61	18.92	16.17	20.04
Total Dissolved Solids	mg/L	500	64	146	174	50	36	68	74	28
Turbidity	NTU	5	30.5	47.8	20	19	16	27	29	15

Location ID:	GWM-10									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/12/2011**	**3/6/2012**	**9/13/2012**	**3/19/2013**	**9/25/2013**	**3/18/2014**	**9/16/2014**	**3/18/2015**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	0.0011 J	0.00089 J	ND U
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND U	ND U	ND U
Barium, Total	mg/L	2	0.035	0.031	0.039	0.041	0.03	0.035	0.031	0.035
Beryllium, Total	mg/L	0.004	ND	0.002	ND	ND	ND	0.00042 J	0.00046 J	0.00033 J
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	0.0027	0.0028	0.0035
Calcium, Total	mg/L	--	1.8	0.71	1.51	1.01	0.32	1.9	1.6	2.4
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	0.004	0.0027	0.0032
Cobalt, Total	mg/L	--	0.028	0.029	0.025	0.029	0.03	0.037	0.031	0.029
Copper, Total	mg/L	1.3	ND	ND	ND	ND	ND	0.0061	0.003 J	0.0041 J
Iron, Total	mg/L	0.3	1.2	1.067	1.115	1.747	0.033	0.41	0.38	0.063
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	ND U	ND U	ND U
Magnesium, Total	mg/L	--	1.1	0.124	1.269	1.259	1.177	1.4	1.2	1.2
Manganese, Total	mg/L	0.043	0.12	0.121	0.097	0.117	0.09	0.13	0.12	0.11
Mercury, Total	mg/L	0.002	ND	ND	--	ND	ND	ND U	ND U	ND U
Nickel, Total	mg/L	0.039	0.054	0.054	0.05	0.054	0.054	0.073	0.062	0.056
Potassium, Total	mg/L	--	1.6	1.7	1.62	1.67	1.82	2.4	2	2.6
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND	ND	0.077	ND	0.01	ND U	ND U	ND U
Sodium, Total	mg/L	--	2.6	0.3	2.8	2.9	2.76	3.4	3.2	3.3
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND U	ND U	ND U
Zinc, Total	mg/L	0.6	0.052	0.052	0.044	0.046	0.05	0.048	0.039	0.04
Alkalinity, Total	mg/L	--	4	1.6	1.69	3.17	2.35	3 J	4 J	3 J
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	0.137	0.105	ND U

Location ID: GWM-10
Number of Sampling Dates: 50

Parameter Name	Units	Compliance Limit	10/12/2011	3/6/2012	9/13/2012	3/19/2013	9/25/2013	3/18/2014	9/16/2014	3/18/2015
Chemical Oxygen Demand (COD)	mg/L	--	13	ND	ND	14	ND	3 J	ND U	ND U
Chloride	mg/L	250	0.61	0.76	0.8	1.11	1.12	2.4 J	2.7	1.3 J
Hardness	mg/L	--	12	23.01	8.99	7.7	5.7	16	10	50
Nitrate-N	mg/L	10	ND	ND	ND	ND	ND	ND U	ND U	0.1 J
pH	SU	8.5	4.64	4.36	4.63	4.55	4.49	5.03	4.92	4.67
Specific Conductance	umhos/cm	--	64.8	57.8	67.4	59.8	63	44.5	45.4	44.7
Sulfate	mg/L	250	9.5	15.71	16	16.38	17.05	19.3	18.4	17.4
Total Dissolved Solids	mg/L	500	48	74	76	12	34	63	36	85
Turbidity	NTU	5	22.5	26.2	22.1	8.9	ND	0.35	0.94	0.49

Location ID: GWM-10
Number of Sampling Dates: 50

Parameter Name	Units	Compliance Limit	9/15/2015	10/8/2015	3/16/2016	9/22/2016	3/28/2017	9/21/2017	3/28/2018	9/20/2018
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Arsenic, Total	mg/L	0.01	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Barium, Total	mg/L	2	0.033	0.033	0.036	0.043	0.035	0.032	0.031	0.032
Beryllium, Total	mg/L	0.004	0.00035 J	0.00035 J	0.0004 J	0.00044 J	0.00038 J	0.00041 J	0.00048 J	0.00044 J
Cadmium, Total	mg/L	0.005	0.0078	0.0073	0.0095	0.012	0.011	0.012	0.011	0.011
Calcium, Total	mg/L	--	2.8	2.9	3.9	3.2	3	2.7	2.8	2.8
Chromium, Total	mg/L	0.1	0.0037	0.0031	0.0023	0.0034	0.0023	0.0027	0.0033	0.0043
Cobalt, Total	mg/L	--	0.066	0.074	0.052	0.053	0.045	0.042	0.038	0.034
Copper, Total	mg/L	1.3	0.022	0.034	0.027	0.036	0.034	0.031	0.024	0.025
Iron, Total	mg/L	0.3	0.052 J	0.028 J	0.027 J	0.02 J	ND U	0.029 J	0.032 J	0.044 J
Lead, Total	mg/L	0.015	ND U	ND U	ND U	ND U	0.0012 J	ND U	ND U	ND U
Magnesium, Total	mg/L	--	1.2	1.2	1.2	1.2	1.1	1.2	1.2	1.1
Manganese, Total	mg/L	0.043	0.12	0.13	0.11	0.12	0.12	0.11	0.11	0.11
Mercury, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Nickel, Total	mg/L	0.039	0.13	0.15	0.1	0.1	0.087	0.081	0.073	0.067
Potassium, Total	mg/L	--	3.4	3.3	2.4	2.7	2.1	2.2	1.9	2.3
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Sodium, Total	mg/L	--	4	4	3.5	3.7	3.3	3.4	3.3	3.5
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Zinc, Total	mg/L	0.6	0.055	0.056	0.06	0.054	0.054	0.052	0.048	0.05
Alkalinity, Total	mg/L	--	4 J	3 J	2 J	ND U	2 J	1 J	1 J	2 J
Ammonia-N	mg/L	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U	0.091 J
Chemical Oxygen Demand (COD)	mg/L	--	1 J	ND U	ND U	ND U	ND U	6 J	ND U	ND U
Chloride	mg/L	250	2.4	1.6 J	1.8 J	1.7 J	1.8 J	2	1.3 J	1.8 J
Hardness	mg/L	--	16	22	15	14	26	11.7	11.9	11.7
Nitrate-N	mg/L	10	ND U	0.04 J	0.08 J	0.06 J	0.06 J	0.08 J	ND U	0.1 J
pH	SU	8.5	4.75	4.5	5.01	4.7	4.5	4.9	4.48	4.72
Specific Conductance	umhos/cm	--	52	52.6	55	57.4	54.1	48.5	49.3	50.7
Sulfate	mg/L	250	23.4	23.8	26.8	23.8	25.3	24.4	23.6	22.6
Total Dissolved Solids	mg/L	500	51	32	67	60	52	50	30	13
Turbidity	NTU	5	0.39	0.2	0.16	1.1	0.13	0.79	0.68	0.48

Location ID:	GWM-10									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**3/12/2019**	**10/1/2019**	**3/18/2020**	**9/24/2020**	**3/17/2021**	**9/9/2021**	**3/15/2022**	**9/15/2022**
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	ND U	0.00076 JR	ND U	ND	ND
Arsenic, Total	mg/L	0.01	ND U	ND U	ND U	ND U	ND U	0.00019 J	ND	ND
Barium, Total	mg/L	2	0.035	0.032	0.029	0.027	0.044 R	0.028	0.029	0.027
Beryllium, Total	mg/L	0.004	0.00042 J	0.00038 J	0.00043 J	0.00044 J	0.00052 J	0.00042 J	0.0004 J	0.00051 J
Cadmium, Total	mg/L	0.005	0.01	0.0095	0.0089	0.0085	0.0011 UR	ND U	0.0067	0.0067
Calcium, Total	mg/L	--	3.6	2.5	2.2	2.4	51.8 R	2.3	2.3	2
Chromium, Total	mg/L	0.1	0.0041	0.0029	0.0016 J	0.0017 J	0.001 J	0.0015 J	0.0018 J	0.0015 J
Cobalt, Total	mg/L	--	0.039	0.034	0.033	0.032	0.0056 UR	0.031	0.028	0.03
Copper, Total	mg/L	1.3	0.027	0.027	0.029	0.027	0.0056 UR	0.041	0.057	0.053
Iron, Total	mg/L	0.3	0.032 J	0.039 J	0.04 J	0.031 J	0.028 J	ND U	ND	0.023 J
Lead, Total	mg/L	0.015	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Magnesium, Total	mg/L	--	1	1.1	1.1	1.1	12.2 R	1	1.1	1.1
Manganese, Total	mg/L	0.043	0.11	0.11	0.11	0.11	0.0056 UR	0.098	0.1	0.1
Mercury, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Nickel, Total	mg/L	0.039	0.073	0.066	0.063	0.059	0.0056 UR	0.059	0.057	0.057
Potassium, Total	mg/L	--	2	2.5	2	1.7	0.56 R	2.1	2	1.6
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Sodium, Total	mg/L	--	3.2	3.7	3.3	3	1.2 R	3.3	3.3	2.9
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	0.00039 J	ND U	ND	ND
Vanadium, Total	mg/L	0.0086	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Zinc, Total	mg/L	0.6	0.054	0.049	0.053	0.048	0.0076 R	0.047	0.047	0.049
Alkalinity, Total	mg/L	--	2 J	1 J	ND U	ND U	ND U	ND U	ND	ND
Ammonia-N	mg/L	--	0.131	0.214	0.118	0.05 J	0.083 J	ND U	0.103	ND
Chemical Oxygen Demand (COD)	mg/L	--	14 J	ND U	ND U	11 J	13 J	5 J	ND	39
Chloride	mg/L	250	1.5 J	1.5 J	1.3 J	1.6 J	1.9 J	1.6 J	1.5 J	1.3 J
Hardness	mg/L	--	13.3	11	10	10.9	10.2	10.2	9.7	9.5
Nitrate-N	mg/L	10	0.12 J	0.1 J	ND U	0.08 J	0.1 J	0.12 J	0.33 J	ND
pH	SU	8.5	4.38	4.93	4.7	4.03	4.59	4.6	4.28	4.79
Specific Conductance	umhos/cm	--	48.9	39.1	43.1	38.6	40.6	34.4	43.7	38.7
Sulfate	mg/L	250	21.8	21.7	20.5	20.2	21	20.5	15.1	14.4
Total Dissolved Solids	mg/L	500	56	42	ND U	42	51	52	45	33
Turbidity	NTU	5	0.3	0.27	0.27	0.17	0.25	0.22	0.53	2.62

Location ID:	GWM-10			
Number of Sampling Dates:	50			
Parameter Name	**Units**	**Compliance Limit**	**3/15/2023**	**9/13/2023**
Antimony, Total	mg/L	0.006	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND
Barium, Total	mg/L	2	0.028	0.028
Beryllium, Total	mg/L	0.004	ND	0.00039 J
Cadmium, Total	mg/L	0.005	0.0052	0.005
Calcium, Total	mg/L	--	2.3	2.3
Chromium, Total	mg/L	0.1	0.0036	0.00076 J

Location ID:	GWM-10										
Number of Sampling Dates:	50										
Parameter Name	**Units**	**Compliance Limit**	**3/15/2023**	**9/13/2023**							
Cobalt, Total	mg/L	--	0.033	0.031							
Copper, Total	mg/L	1.3	0.046	0.025							
Iron, Total	mg/L	0.3	0.078	0.23							
Lead, Total	mg/L	0.015	ND	ND							
Magnesium, Total	mg/L	--	1.1	1							
Manganese, Total	mg/L	0.043	0.11	0.1							
Mercury, Total	mg/L	0.002	ND	ND							
Nickel, Total	mg/L	0.039	0.06	0.056							
Potassium, Total	mg/L	--	1.6	1.5							
Selenium, Total	mg/L	0.05	ND	ND							
Silver, Total	mg/L	0.0094	ND	ND							
Sodium, Total	mg/L	--	3	3							
Thallium, Total	mg/L	0.002	ND	ND							
Vanadium, Total	mg/L	0.0086	ND	ND							
Zinc, Total	mg/L	0.6	0.049	0.045							
Alkalinity, Total	mg/L	--	ND	ND							
Ammonia-N	mg/L	--	0.156	0.189							
Chemical Oxygen Demand (COD)	mg/L	--	8 J	ND							
Chloride	mg/L	250	ND	1.6 J							
Hardness	mg/L	--	9.5	10.2							
Nitrate-N	mg/L	10	ND	ND							
pH	SU	8.5	4.55	4.37							
Specific Conductance	umhos/cm	--	42.44	48.28							
Sulfate	mg/L	250	16.8	16.5							
Total Dissolved Solids	mg/L	500	42	50							
Turbidity	NTU	5	0.41	0							

Historical Well Data Assessment Monitoring, Organochloride Pesticides

Name: Eastern Sanitary Landfill

Location ID: GWM-11
Number of Sampling Dates: 14

Parameter Name	Units	Compliance Limit	9/9/2014	3/16/2015	9/9/2015	3/18/2016	9/20/2016	3/23/2017	9/19/2017	3/15/2018
4,4'-DDD	ug/L	0.0063	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4,4'-DDE	ug/L	0.046	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4,4'-DDT	ug/L	0.23	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Aldrin	ug/L	0.00092	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
alpha-HCH (alpha-BHC)	ug/L	0.0072	ND U	ND U	0.0043 J	ND U	ND U	ND U	ND U	ND U
beta-BHC	ug/L	0.025	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlordane	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
delta-BHC	ug/L	0.2	ND U	ND U	0.0038 J	ND U	ND U	ND U	ND U	ND U
Dieldrin	ug/L	0.0018	0.015 J	0.0098 J	0.011 J	0.0047 J	0.0096 J	0.0075 J	0.0072 J	0.0051
Endosulfan I	ug/L	10	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endosulfan II	ug/L	10	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endosulfan Sulfate	ug/L	10	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endrin	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Endrin Aldehyde	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
gamma-BHC	ug/L	0.2	ND U	ND U	0.0054 J	ND U	ND U	ND U	ND U	ND U
Heptachlor	ug/L	0.4	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Heptachlor Epoxide	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methoxychlor	ug/L	40	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Toxaphene	ug/L	3	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID: GWM-11
Number of Sampling Dates: 14

Parameter Name	Units	Compliance Limit	9/17/2018	3/5/2019	9/24/2019	4/7/2020	9/22/2020	3/16/2021
4,4'-DDD	ug/L	0.0063	ND U	ND U	ND U	ND U	ND U	ND U
4,4'-DDE	ug/L	0.046	ND U	ND U	ND U	ND U	ND U	ND U
4,4'-DDT	ug/L	0.23	ND U	ND U	ND U	ND U	ND U	ND U
Aldrin	ug/L	0.00092	ND U	ND U	ND U	ND U	ND U	ND U
alpha-HCH (alpha-BHC)	ug/L	0.0072	ND U	ND U	ND U	ND U	ND U	ND U
beta-BHC	ug/L	0.025	ND U	ND U	ND U	ND U	ND U	ND U
Chlordane	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U
delta-BHC	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U
Dieldrin	ug/L	0.0018	0.0059	0.0036 J	ND U	0.011	0.011	0.009
Endosulfan I	ug/L	10	ND U	ND U	ND U	ND U	ND U	ND U
Endosulfan II	ug/L	10	ND U	ND U	ND U	ND U	ND U	ND U
Endosulfan Sulfate	ug/L	10	ND U	ND U	ND U	ND U	ND U	ND U
Endrin	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U
Endrin Aldehyde	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U

Location ID: GWM-11
Number of Sampling Dates: 14

Parameter Name	Units	Compliance Limit	9/17/2018	3/5/2019	9/24/2019	4/7/2020	9/22/2020	3/16/2021		
gamma-BHC	ug/L	0.2	0.0052	ND U	ND U	ND U	ND U	ND U		
Heptachlor	ug/L	0.4	ND U	ND U	ND U	ND U	ND U	ND U		
Heptachlor Epoxide	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U		
Methoxychlor	ug/L	40	ND U	ND U	ND U	ND U	ND U	ND U		
Toxaphene	ug/L	3	ND U	ND U	ND U	ND U	ND U	ND U		

Historical Well Data Table I

Name: Eastern Sanitary Landfill

Location ID:	GWM-11									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/30/2000**	**10/19/2000**	**3/28/2001**	**9/19/2001**	**7/23/2002**	**9/25/2002**	**3/27/2003**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	2	2	ND	4	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-11									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/30/2000**	**10/19/2000**	**3/28/2001**	**9/19/2001**	**7/23/2002**	**9/25/2002**	**3/27/2003**
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-11									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**11/19/2003**	**3/25/2004**	**10/22/2004**	**6/7/2005**	**11/1/2005**	**3/15/2006**	**9/21/2006**	**4/12/2007**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	1	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	2	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-11									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**11/19/2003**	**3/25/2004**	**10/22/2004**	**6/7/2005**	**11/1/2005**	**3/15/2006**	**9/21/2006**	**4/12/2007**
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-11									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/25/2007**	**3/26/2008**	**9/23/2008**	**3/31/2009**	**10/14/2009**	**4/15/2010**	**9/1/2010**	**3/22/2011**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	2	ND	ND	1	1	ND

Location ID:	GWM-11									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/25/2007**	**3/26/2008**	**9/23/2008**	**3/31/2009**	**10/14/2009**	**4/15/2010**	**9/1/2010**	**3/22/2011**
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-11									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/4/2011**	**3/6/2012**	**8/30/2012**	**3/5/2013**	**9/17/2013**	**3/20/2014**	**9/9/2014**	**3/16/2015**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	5 J	3.6 J	ND U
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Benzene	ug/L	5	ND	ND	ND	ND	1	0.28 J	1.1	1.1
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	0.45 J	0.57 J	0.47 JB
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND U	0.52 J	ND U

Location ID:	GWM-11									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/4/2011**	**3/6/2012**	**8/30/2012**	**3/5/2013**	**9/17/2013**	**3/20/2014**	**9/9/2014**	**3/16/2015**
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND U	0.3 J	0.26 J
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	5	1.5	4.5	4.2
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND U	0.32 J	0.33 J
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND U	0.36 J	0.32 J
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	2	2.8	3.5	3.4
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND U	0.69 J	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND U	ND U	ND U
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND U	ND U	0.61 JB
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND U	ND U	ND U
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U

Location ID:	GWM-11									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/9/2015**	**3/18/2016**	**9/20/2016**	**3/23/2017**	**9/19/2017**	**3/15/2018**	**9/17/2018**	**3/5/2019**
Acetone	ug/L	1400	ND U	ND U	ND U	5.7 JB	ND U	ND U	ND U	ND U
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzene	ug/L	5	0.91 J	1	0.92 J	1	0.94 J	0.75 J	0.73 J	0.72 J
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromomethane	ug/L	0.75	ND U	ND U	ND U	ND U	0.55 JB	ND U	ND U	ND U
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorobenzene	ug/L	100	0.21 J	0.27 J	0.3 J	0.33 J	0.36 J	0.26 J	0.32 J	0.28 J
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloromethane	ug/L	19	ND U	0.33 J	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	4.6	4.4	5	4.9	6	3.9	4.4	3.8
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	0.32 J	ND U	0.32 J	ND U	0.38 J	0.34 J
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	2.6	2.9	2.2	2.2	2.1	1.6	1.7	1.6
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	GWM-11									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/9/2015**	**3/18/2016**	**9/20/2016**	**3/23/2017**	**9/19/2017**	**3/15/2018**	**9/17/2018**	**3/5/2019**
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	GWM-11									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/24/2019**	**3/16/2020**	**4/7/2020**	**9/22/2020**	**3/16/2021**	**9/14/2021**	**3/22/2022**	**9/13/2022**
Acetone	ug/L	1400	5 J	ND U	–	3.1 J	ND U	ND U	ND	ND
Acrylonitrile	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Benzene	ug/L	5	0.68 J	ND U	–	0.56 J	0.51 J	0.48 J	0.55 J	0.46 J
Bromochloromethane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Bromomethane	ug/L	0.75	ND U	ND U	–	0.49 J	ND U	ND U	ND	ND
2-Butanone	ug/L	700	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Carbon disulfide	ug/L	81	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Carbon Tetrachloride	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Chlorobenzene	ug/L	100	0.26 J	ND U	–	0.2 J	ND U	ND U	0.2 J	ND
Chloroethane	ug/L	2100	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Chloromethane	ug/L	19	ND U	ND U	–	0.48 J	ND U	ND U	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Dibromomethane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,4-Dichlorobenzene	ug/L	75	3.8	1.8	–	3.1	2.7	2.9	2.7	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,2-Dichloroethane	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,1-Dichloroethene	ug/L	7	ND U	ND U	–	ND U	ND U	ND U	ND	ND
cis-1,2-Dichloroethene	ug/L	70	0.33 J	0.37 J	–	ND U	ND U	ND U	0.32 J	ND
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Methylene Chloride	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Methyl t-Butyl Ether	ug/L	20	1.5	1.3	–	1.4	1.3	1.3	1.2	1.2
1,2-Dichloropropane	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Ethylbenzene	ug/L	700	ND U	ND U	–	ND U	ND U	ND U	ND	ND
2-Hexanone	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Iodomethane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Styrene	ug/L	100	ND U	ND U	–	ND U	ND U	ND U	ND	ND

Location ID:	GWM-11									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**9/24/2019**	**3/16/2020**	**4/7/2020**	**9/22/2020**	**3/16/2021**	**9/14/2021**	**3/22/2022**	**9/13/2022**
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Tetrachloroethene	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Toluene	ug/L	1000	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Trichloroethene	ug/L	5	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Trichlorofluoromethane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Vinyl acetate	ug/L	–	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Vinyl chloride	ug/L	2	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Total Xylenes	ug/L	10000	ND U	ND U	–	ND U	ND U	ND U	ND	ND
o-Xylene	ug/L	10000	–	ND U	–	ND U	ND U	ND U	ND	ND
mp-Xylene	ug/L	10000	–	ND U	–	ND U	ND U	ND U	ND	ND
Bromodichloromethane	ug/L	80	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Chlorodibromomethane	ug/L	80	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Bromoform	ug/L	80	ND U	ND U	–	ND U	ND U	ND U	ND	ND
Chloroform	ug/L	80	ND U	ND U	–	ND U	0.41 J	ND U	ND	ND

Location ID:	GWM-11			
Number of Sampling Dates:	50			
Parameter Name	**Units**	**Compliance Limit**	**3/14/2023**	**9/12/2023**
Acetone	ug/L	1400	ND	ND
Acrylonitrile	ug/L	–	ND	ND
Benzene	ug/L	5	0.5 J	0.39 J
Bromochloromethane	ug/L	–	ND	ND
Bromomethane	ug/L	0.75	0.59 J	0.65 JB
2-Butanone	ug/L	700	ND	ND
Carbon disulfide	ug/L	81	ND	0.33 J
Carbon Tetrachloride	ug/L	5	ND	ND
Chlorobenzene	ug/L	100	ND	ND
Chloroethane	ug/L	2100	ND	ND
Chloromethane	ug/L	19	ND	0.61 JB
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND
Dibromomethane	ug/L	–	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND
1,4-Dichlorobenzene	ug/L	75	2.4	2.2
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND
cis-1,2-Dichloroethene	ug/L	70	0.4 J	ND

Location ID:	GWM-11			
Number of Sampling Dates:	50			
Parameter Name	**Units**	**Compliance Limit**	**3/14/2023**	**9/12/2023**
trans-1,2-Dichloroethene	ug/L	100	ND	ND
Methylene Chloride	ug/L	5	ND	ND
Methyl t-Butyl Ether	ug/L	20	1.4	1
1,2-Dichloropropane	ug/L	5	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND
Ethylbenzene	ug/L	700	ND	ND
2-Hexanone	ug/L	–	ND	ND
Iodomethane	ug/L	–	0.64 J	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND
Styrene	ug/L	100	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND
Tetrachloroethene	ug/L	5	ND	ND
Toluene	ug/L	1000	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND
Trichloroethene	ug/L	5	ND	0.62 J
Trichlorofluoromethane	ug/L	–	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND	ND
Vinyl acetate	ug/L	–	ND	ND
Vinyl chloride	ug/L	2	ND	ND
Total Xylenes	ug/L	10000	ND	ND
o-Xylene	ug/L	10000	ND	ND
mp-Xylene	ug/L	10000	ND	ND
Bromodichloromethane	ug/L	80	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND
Bromoform	ug/L	80	ND	ND
Chloroform	ug/L	80	ND	ND

Historical Well Data Table II

Name: Eastern Sanitary Landfill

Location ID: GWM-11
Number of Sampling Dates: 50

Parameter Name	Units	Compliance Limit	10/28/1999	3/30/2000	10/19/2000	3/28/2001	9/19/2001	7/23/2002	9/25/2002	3/27/2003
Antimony, Total	mg/L	0.006	--	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	--	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	ND	ND	ND	0.032	0.031	0.03	0.044	0.046
Beryllium, Total	mg/L	0.004	--	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	--	--	--	--	--	--	--	--
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	--	ND	ND	ND	ND	ND	ND	ND
Copper, Total	mg/L	1.3	--	ND	0.028	0.016	0.03	ND	0.037	0.041
Iron, Total	mg/L	0.3	ND	0.37	0.136	0.059	0.087	0.256	0.095	0.05
Lead, Total	mg/L	0.015	ND	ND	0.013	ND	0.008	0.009	0.003	ND
Magnesium, Total	mg/L	--	--	--	--	--	--	--	--	--
Manganese, Total	mg/L	0.043	ND	ND	0.049	0.049	0.046	ND	0.024	ND
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	--	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/L	--	--	--	--	--	--	--	--	--
Selenium, Total	mg/L	0.05	--	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	--	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	--	--	--	--	--	--	--	--
Thallium, Total	mg/L	0.002	--	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	--	ND	ND	ND	0.012	ND	ND	ND
Zinc, Total	mg/L	0.6	ND	ND	0.069	ND	0.06	0.058	0.057	0.026
Alkalinity, Total	mg/L	--	--	54	80	53	100	80	90	50
Ammonia-N	mg/L	--	0.2	0.2	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	10	10	ND	12	21	12	ND	ND
Chloride	mg/L	250	10	10	1.43	3	9.75	2.14	5.36	5.78
Hardness	mg/L	--	--	68	84	59.46	95.67	95.04	102.12	113.13
Nitrate-N	mg/L	10	0.6	0.9	0.73	0.43	0.85	0.26	0.44	2.72
pH	SU	8.5	--	--	6.54	6.6	6.8	6.72	6.43	6.13
Specific Conductance	umhos/cm	--	--	191	ND	ND	317	266	326	244
Sulfate	mg/L	250	25.6	26.7	24	23	32	25.62	26.02	22.2
Total Dissolved Solids	mg/L	500	137	122	134	129	205	161	167	126
Turbidity	NTU	5	--	4	4	5.6	11	10.12	2.88	3.6

Location ID: GWM-11
Number of Sampling Dates: 50

Parameter Name	Units	Compliance Limit	11/19/2003	3/25/2004	10/22/2004	6/7/2005	11/1/2005	3/15/2006	9/21/2006	4/12/2007
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.04	0.041	0.046	0.047	0.05	0.048	0.055	0.057
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-11									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**11/19/2003**	**3/25/2004**	**10/22/2004**	**6/7/2005**	**11/1/2005**	**3/15/2006**	**9/21/2006**	**4/12/2007**
Calcium, Total	mg/L	--	--	--	--	--	--	--	--	53.55
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	ND	ND	ND	ND	ND	ND	0.012	ND
Copper, Total	mg/L	1.3	0.041	ND	ND	0.011	ND	0.014	0.025	0.017
Iron, Total	mg/L	0.3	0.168	0.042	0.074	0.199	0.088	0.063	0.402	0.245
Lead, Total	mg/L	0.015	0.004	ND	0.002	ND	ND	ND	0.002	0.004
Magnesium, Total	mg/L	--	--	--	--	--	--	--	--	3.205
Manganese, Total	mg/L	0.043	ND	0.043	0.253	0.068	0.076	0.115	0.275	0.118
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	ND	ND	0.013	0.013	ND	ND	ND	ND
Potassium, Total	mg/L	--	--	--	--	--	--	--	--	29.2
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	--	--	--	--	--	--	--	34.6
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	ND	ND	0.094	0.081	0.051	0.031	0.071	0.059
Alkalinity, Total	mg/L	--	104	123	150.2	105.45	130.1	83	143	105.2
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	ND	ND	17	ND	11	ND	ND	ND
Chloride	mg/L	250	5.84	11.9	60.29	7.43	8.21	3.34	8.84	3.97
Hardness	mg/L	--	81.22	83.72	158.26	83.59	129.36	87.25	156.55	147.09
Nitrate-N	mg/L	10	2.41	2.36	1.12	0.69	0.55	0.2	0.41	0.31
pH	SU	8.5	7.31	6.27	5.51	6.59	6.72	6.49	6.82	6.89
Specific Conductance	umhos/cm	--	375	403	481	352	371	268	408	330
Sulfate	mg/L	250	29.48	33.31	48.59	43.29	38.53	29.81	29.56	33.64
Total Dissolved Solids	mg/L	500	222	230	133	328	206	896	234	17
Turbidity	NTU	5	15	5.39	5.5	2.47	3.73	2.8	5.87	2.33

Location ID:	GWM-11									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/25/2007**	**3/26/2008**	**9/23/2008**	**3/31/2009**	**10/14/2009**	**4/15/2010**	**9/1/2010**	**3/22/2011**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.054	0.059	0.079	0.096	0.098	0.095	0.086	0.071
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	20.1	16.75	33.97	28.35	27.32	33.88	34.79	24.66
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	ND	ND	0.014	ND	0.026	0.022	0.012	ND
Copper, Total	mg/L	1.3	0.13	0.055	0.022	ND	ND	ND	ND	0.024
Iron, Total	mg/L	0.3	0.281	ND	0.6	0.56	1.159	2.155	1.147	0.893
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/L	--	2.86	6.4	3.222	7.9	12.3	12.65	2.761	2.107
Manganese, Total	mg/L	0.043	0.139	0.07	0.182	0.034	0.198	0.421	0.121	0.129
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-11									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/25/2007**	**3/26/2008**	**9/23/2008**	**3/31/2009**	**10/14/2009**	**4/15/2010**	**9/1/2010**	**3/22/2011**
Nickel, Total	mg/L	0.039	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/L	--	44.45	11.17	12.59	35	12	50.9	47.7	1.49
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	23.2	24.1	51.4	25.6	25.1	46.4	62.2	11
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.023	0.011	ND	0.011	0.016	ND	0.011	ND
Alkalinity, Total	mg/L	--	149.3	130	164	148.6	176	181.2	194.4	44.7
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	15	11	ND	15	ND	ND	ND	ND
Chloride	mg/L	250	12.78	7.93	14.01	18.34	21.73	30.26	39.3	4.66
Hardness	mg/L	--	61.97	68.18	98.09	103.32	118.87	136.69	98.24	70.25
Nitrate-N	mg/L	10	0.71	0.41	0.53	0.67	0.58	0.66	0.66	1.02
pH	SU	8.5	6.99	6.74	7.38	6.85	6.93	6.4	6.82	6.28
Specific Conductance	umhos/cm	--	407	464	529	427	461	541	494	197
Sulfate	mg/L	250	35.2	35.18	29.85	43.39	31.09	33.41	31.11	24.67
Total Dissolved Solids	mg/L	500	384	256	432	214	274	282	348	96
Turbidity	NTU	5	1.61	2.62	2.45	5.42	4.8	11	8.9	13

Location ID:	GWM-11									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/4/2011**	**3/6/2012**	**8/30/2012**	**3/5/2013**	**9/17/2013**	**3/20/2014**	**9/9/2014**	**3/16/2015**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND U	ND U	ND U
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	0.002	0.0011 J	0.0015 J	0.0017 J
Barium, Total	mg/L	2	0.064	0.087	0.065	0.058	0.25	0.15	0.2	0.21
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND U	ND U	ND U
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND U	ND U	ND U
Calcium, Total	mg/L	--	25	3.88	22.09	43.98	38.71	44.2	33.9	33.4
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	0.0034	0.0019 J	0.0018 J
Cobalt, Total	mg/L	--	0.035	0.02	0.014	0.016	0.31	0.11	0.33	0.34
Copper, Total	mg/L	1.3	ND	ND	ND	ND	ND	0.0057	0.0019 J	0.0024 J
Iron, Total	mg/L	0.3	1.8	1.655	1.292	2.141	84.15	4.3	70.4	68.1
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	ND U	ND U	ND U
Magnesium, Total	mg/L	--	4.4	0.581	6.268	4.822	21.85	12.7	19.8	19.3
Manganese, Total	mg/L	0.043	0.43	0.236	0.161	0.174	2.91	1	3.1	3.1
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND U	ND U	ND U
Nickel, Total	mg/L	0.039	ND	ND	ND	ND	0.021	0.014	0.022	0.023
Potassium, Total	mg/L	--	15	21.52	35.63	8.31	5.79	5.7	4.8	4.3
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND	ND	0.107	ND	ND	ND U	ND U	ND U
Sodium, Total	mg/L	--	14	1.6	23.6	9.5	63.75	59	48.4	47.8
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND U	ND U	ND U
Zinc, Total	mg/L	0.6	0.01	ND	ND	ND	ND	0.0094	0.0083	0.0048 J
Alkalinity, Total	mg/L	--	88	116.9	142.75	99.05	30.59	164	236	187

Location ID: GWM-11
Number of Sampling Dates: 50

Parameter Name	Units	Compliance Limit	10/4/2011	3/6/2012	8/30/2012	3/5/2013	9/17/2013	3/20/2014	9/9/2014	3/16/2015
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	1.48	0.531	0.734
Chemical Oxygen Demand (COD)	mg/L	--	ND	ND	ND	ND	19	ND U	8	4 J
Chloride	mg/L	250	13	13.15	16	9.56	90.26	98.8	92.1	84
Hardness	mg/L	--	80	120.9	80.97	129.7	183.6	202	169	212
Nitrate-N	mg/L	10	1.2	0.91	1.2	0.42	ND	0.54	ND U	ND U
pH	SU	8.5	6.74	6.61	6.93	6.88	5.57	6.34	6.23	6.22
Specific Conductance	umhos/cm	--	313	345	449	227	0.92	613	677	653
Sulfate	mg/L	250	15	21.63	26	27.23	33.28	29.6	34.1	31.3
Total Dissolved Solids	mg/L	500	150	216	260	140	441	418	390	472
Turbidity	NTU	5	11.3	9.17	6.88	16	ND	7.5	0.15	0.18

Location ID: GWM-11
Number of Sampling Dates: 50

Parameter Name	Units	Compliance Limit	9/9/2015	3/18/2016	9/20/2016	3/23/2017	9/19/2017	3/15/2018	9/17/2018	3/5/2019
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	ND U	ND U	ND U	ND U	0.0029
Arsenic, Total	mg/L	0.01	0.0012 J	0.0014 J	ND U	0.0015 J	0.0014 J	ND U	0.0013 J	0.0013 J
Barium, Total	mg/L	2	0.21	0.25	0.22	0.22	0.22	0.22	0.27	0.27
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Cadmium, Total	mg/L	0.005	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Calcium, Total	mg/L	--	33.6	42.7	36.6	35.6	37.2	40.2	40.6	54.2
Chromium, Total	mg/L	0.1	0.0016 J	0.0011 J	0.0031	0.0028	0.0016 J	0.0012 J	ND U	0.00077 J
Cobalt, Total	mg/L	--	0.31	0.36	0.31	0.31	0.31	0.27	0.27	0.27
Copper, Total	mg/L	1.3	0.0049 J	0.0038 J	0.0086	0.0061	0.0076	0.0058	0.0097	0.0074
Iron, Total	mg/L	0.3	73.7	89.5	78.8	84.5	94.2	80.7	94	98.3
Lead, Total	mg/L	0.015	ND U	ND U	ND U	0.0014 J	0.00088 J	0.00095 J	0.0011 J	0.0015 J
Magnesium, Total	mg/L	--	18.5	23.2	20.3	22.6	21.3	21.6	23.2	27.5
Manganese, Total	mg/L	0.043	3.1	3.5	3.1	3.1	3	2.9	3	3.1
Mercury, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Nickel, Total	mg/L	0.039	0.021	0.024	0.021	0.02	0.02	0.019	0.018	0.017
Potassium, Total	mg/L	--	4.5	5.5	4.8	4.9	4.8	4.9	5	6.1
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Sodium, Total	mg/L	--	48.3	55.8	56.2	58.8	59.5	63.4	71.6	79.7
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Zinc, Total	mg/L	0.6	0.006	0.0069	0.0048 J	0.0091	0.0046 J	0.0029 J	0.0057	0.0081
Alkalinity, Total	mg/L	--	224	201	228	243	216	219	192	144
Ammonia-N	mg/L	--	0.605	0.704	0.738	0.751	0.67	0.612	0.965	1.24
Chemical Oxygen Demand (COD)	mg/L	--	6	15	20	20	28	21	30	33
Chloride	mg/L	250	88.6	93.5	105	96.3	127	144	191	186
Hardness	mg/L	--	168	175	159	190	180	189	197	249
Nitrate-N	mg/L	10	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
pH	SU	8.5	6.19	6.26	6.26	6.37	6.32	6.36	6.31	6.42
Specific Conductance	umhos/cm	--	650	693	742	769	829	764	999	954
Sulfate	mg/L	250	31.6	30.7	31.5	27.4	27	27.1	30.8	30.9
Total Dissolved Solids	mg/L	500	439	410	431	434	427	399	519	607

Location ID:	GWM-11
Number of Sampling Dates:	50

Parameter Name	Units	Compliance Limit	9/9/2015	3/18/2016	9/20/2016	3/23/2017	9/19/2017	3/15/2018	9/17/2018	3/5/2019
Turbidity	NTU	5	0.33	0.26	1.2	0.09	0.34	0.95	0.57	0.25

Location ID:	GWM-11
Number of Sampling Dates:	50

Parameter Name	Units	Compliance Limit	9/24/2019	3/16/2020	4/7/2020	9/22/2020	3/16/2021	9/14/2021	3/22/2022	9/13/2022
Antimony, Total	mg/L	0.006	ND U	ND U	--	ND U	ND U	ND U	ND	ND
Arsenic, Total	mg/L	0.01	0.0013 J	ND U	--	ND U	ND U	0.0012 J	ND	ND
Barium, Total	mg/L	2	0.28	0.16	--	0.23	0.26	0.26	0.25	0.25
Beryllium, Total	mg/L	0.004	ND U	ND U	--	ND U	ND U	ND U	ND	ND
Cadmium, Total	mg/L	0.005	ND U	ND U	--	ND U	ND U	ND U	ND	0.0022
Calcium, Total	mg/L	--	43.5	56.9	--	53.8	53.4	53	53.2	45.7
Chromium, Total	mg/L	0.1	ND U	0.00098 J	--	ND U	ND U	ND U	ND	ND
Cobalt, Total	mg/L	--	0.25	0.025	--	0.25	0.25	0.24	0.23	0.22
Copper, Total	mg/L	1.3	0.0055 J	0.0051 J	--	0.017	0.021	0.0098	0.02	0.01
Iron, Total	mg/L	0.3	93.1	3.2	--	0.2	92.4	82	83.4	75.5
Lead, Total	mg/L	0.015	0.0012 J	ND U	--	0.0025	0.0023	0.001 J	0.00081 J	ND
Magnesium, Total	mg/L	--	24.2	15.1	--	26.8	24.8	23	22.5	21.4
Manganese, Total	mg/L	0.043	3	0.46	--	3.3	3	3	2.9	2.8
Mercury, Total	mg/L	0.002	ND U	ND U	--	ND U	ND U	ND U	ND	ND
Nickel, Total	mg/L	0.039	0.016	0.0092	--	0.014	0.015	0.014	0.014	0.013
Potassium, Total	mg/L	--	5.9	13	--	8.3	8.3	7.9	8.2	8.2
Selenium, Total	mg/L	0.05	0.002 J	0.0056	--	ND U	ND U	0.00078 J	ND	ND
Silver, Total	mg/L	0.0094	ND U	ND U	--	ND U	ND U	ND U	ND	ND
Sodium, Total	mg/L	--	77	66.9	--	89.7	82.3	79	72.9	73.4
Thallium, Total	mg/L	0.002	ND U	ND U	--	ND U	ND U	ND U	ND	ND
Vanadium, Total	mg/L	0.0086	ND U	ND U	--	ND U	ND U	ND U	ND	ND
Zinc, Total	mg/L	0.6	0.0051 J	0.0083	--	0.0052 J	0.0056 J	0.0052 J	0.0038 J	0.0037 J
Alkalinity, Total	mg/L	--	154	171	--	163	195	181	197	167
Ammonia-N	mg/L	--	1.17	0.91	--	0.74	1.15	0.811	0.901	0.717
Chemical Oxygen Demand (COD)	mg/L	--	21	ND U	--	18	30	24	19	20
Chloride	mg/L	250	200	115	--	199	171	170	153	138
Hardness	mg/L	--	208	208	--	238	216	210	205	210
Nitrate-N	mg/L	10	ND U	0.86	--	ND U	0.04 J	0.14 J	ND	ND
pH	SU	8.5	6.41	6.68	--	6.22	6.04	6.24	6.3	5.93
Specific Conductance	umhos/cm	--	1015	962	--	946	911	955	872	922
Sulfate	mg/L	250	33.1	30.7	--	36.3	36.6	33.3	10.1	23.1
Total Dissolved Solids	mg/L	500	630	358	--	592	588	676	524	528
Turbidity	NTU	5	0.26	2.83	--	0.43	0.29	0.61	0.81	1.84

Location ID:	GWM-11
Number of Sampling Dates:	50

Parameter Name	Units	Compliance Limit	3/14/2023	9/12/2023
Antimony, Total	mg/L	0.006	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND
Barium, Total	mg/L	2	0.22	0.22

Location ID:	GWM-11
Number of Sampling Dates:	50

Parameter Name	Units	Compliance Limit	3/14/2023	9/12/2023
Beryllium, Total	mg/L	0.004	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND
Calcium, Total	mg/L	--	43.8	39.6
Chromium, Total	mg/L	0.1	0.0016 J	ND
Cobalt, Total	mg/L	--	0.19	0.19
Copper, Total	mg/L	1.3	0.013	0.0065
Iron, Total	mg/L	0.3	69.2	67.7
Lead, Total	mg/L	0.015	ND	ND
Magnesium, Total	mg/L	--	19.4	16.6
Manganese, Total	mg/L	0.043	2.5	2.4
Mercury, Total	mg/L	0.002	ND	ND
Nickel, Total	mg/L	0.039	0.011	0.011
Potassium, Total	mg/L	--	7.8	6.9
Selenium, Total	mg/L	0.05	ND	ND
Silver, Total	mg/L	0.0094	ND	ND
Sodium, Total	mg/L	--	66.7	58.1
Thallium, Total	mg/L	0.002	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND
Zinc, Total	mg/L	0.6	0.0033 J	0.0022 J
Alkalinity, Total	mg/L	--	155	156
Ammonia-N	mg/L	--	0.758	1.02
Chemical Oxygen Demand (COD)	mg/L	--	21	15
Chloride	mg/L	250	134	129
Hardness	mg/L	--	191	185
Nitrate-N	mg/L	10	ND	ND
pH	SU	8.5	6.09	6.22
Specific Conductance	umhos/cm	--	967.56	912.48
Sulfate	mg/L	250	21.9	19.8
Total Dissolved Solids	mg/L	500	474	448
Turbidity	NTU	5	0.03	0

Historical Well Data Table I

Name: Eastern Sanitary Landfill

Location ID:	GWM-12									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/30/2000**	**10/19/2000**	**3/30/2001**	**10/25/2001**	**3/29/2002**	**9/25/2002**	**4/9/2003**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	2	ND	ND	8	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	1	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-12									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/30/2000**	**10/19/2000**	**3/30/2001**	**10/25/2001**	**3/29/2002**	**9/25/2002**	**4/9/2003**
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-12									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**11/19/2003**	**3/25/2004**	**10/27/2004**	**5/19/2005**	**10/27/2005**	**3/29/2006**	**9/21/2006**	**3/22/2007**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	7	7	3
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-12									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**11/19/2003**	**3/25/2004**	**10/27/2004**	**5/19/2005**	**10/27/2005**	**3/29/2006**	**9/21/2006**	**3/22/2007**
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	2	1
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	2	ND

Location ID:	GWM-12									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/18/2007**	**3/26/2008**	**9/23/2008**	**3/31/2009**	**10/14/2009**	**4/15/2010**	**9/21/2010**	**3/8/2011**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	2	ND	1	ND	ND

Location ID:	GWM-12									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/18/2007**	**3/26/2008**	**9/23/2008**	**3/31/2009**	**10/14/2009**	**4/15/2010**	**9/21/2010**	**3/8/2011**
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	2	2	4	6	ND	4	3	4.9
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	1	ND	2	ND	7	7	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	2	ND	2	ND	ND	ND	ND

Location ID:	GWM-12									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/7/2011**	**3/7/2012**	**8/30/2012**	**3/5/2013**	**9/19/2013**	**3/20/2014**	**4/21/2014**	**9/4/2014**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND U	ND U	ND U
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	0.47 J	ND U	ND U
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND U	3.3 J	ND U
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND U	ND U	ND U

Location ID:	GWM-12									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/7/2011**	**3/7/2012**	**8/30/2012**	**3/5/2013**	**9/19/2013**	**3/20/2014**	**4/21/2014**	**9/4/2014**
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND U	–	ND U
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND U	–	ND U
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND	1	ND	ND	ND	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND U	ND U	0.36 J
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	3.4	ND	ND	1	4	5.2	4.3	5.2
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND U	ND U	ND U
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,1-Trichloroethane	ug/L	200	ND	7	ND	ND	ND	ND U	ND U	0.26 J
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND U	ND U	ND U
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U

Location ID:	GWM-12									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**3/19/2015**	**9/11/2015**	**3/17/2016**	**9/23/2016**	**3/29/2017**	**9/19/2017**	**3/16/2018**	**9/19/2018**
Acetone	ug/L	1400	ND U	ND U	3.7 J	ND U	ND U	ND U	4.6 JB	ND U
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromomethane	ug/L	0.75	ND U	ND U	ND U	ND U	ND U	0.51 JB	ND U	ND U
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloromethane	ug/L	19	0.32 J	ND U	0.41 J	ND U	ND U	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	0.012 J	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	0.3 J	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	0.35 J	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	5.5	4.3	4.8	4.3	5.1	3.7	3.9	3.4
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	GWM-12									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**3/19/2015**	**9/11/2015**	**3/17/2016**	**9/23/2016**	**3/29/2017**	**9/19/2017**	**3/16/2018**	**9/19/2018**
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	GWM-12									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**3/13/2019**	**9/24/2019**	**3/19/2020**	**9/25/2020**	**3/19/2021**	**9/15/2021**	**3/18/2022**	**9/14/2022**
Acetone	ug/L	1400	ND U	4.6 J	ND U	ND U	ND U	ND U	ND	ND
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Benzene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Bromomethane	ug/L	0.75	0.87 JB	ND U	ND U	ND U	ND U	0.68 JB	ND	ND
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Chloromethane	ug/L	19	ND U	ND U	ND U	0.46 J	ND U	ND U	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,2-Dichloroethane	ug/L	5	0.35 J	ND U	ND U	ND U	ND U	ND U	ND	ND
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Methyl t-Butyl Ether	ug/L	20	4.3	3.4	3.1	3.3	2.8	2.7	2.6	2.6
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND

Location ID:	GWM-12									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**3/13/2019**	**9/24/2019**	**3/19/2020**	**9/25/2020**	**3/19/2021**	**9/15/2021**	**3/18/2022**	**9/14/2022**
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
o-Xylene	ug/L	10000	–	–	ND U	ND U	ND U	ND U	ND	ND
mp-Xylene	ug/L	10000	–	–	ND U	ND U	ND U	ND U	ND	ND
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Chloroform	ug/L	80	ND U	ND U	ND U	0.23 J	ND U	ND U	ND	ND

Location ID:	GWM-12			
Number of Sampling Dates:	50			
Parameter Name	**Units**	**Compliance Limit**	**3/17/2023**	**9/13/2023**
Acetone	ug/L	1400	ND	ND
Acrylonitrile	ug/L	–	ND	ND
Benzene	ug/L	5	ND	ND
Bromochloromethane	ug/L	–	ND	ND
Bromomethane	ug/L	0.75	ND	0.56 JB
2-Butanone	ug/L	700	ND	ND
Carbon disulfide	ug/L	81	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND
Chlorobenzene	ug/L	100	ND	ND
Chloroethane	ug/L	2100	ND	ND
Chloromethane	ug/L	19	ND	0.66 JB
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND
Dibromomethane	ug/L	–	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND

Location ID:	GWM-12			
Number of Sampling Dates:	50			
Parameter Name	**Units**	**Compliance Limit**	**3/17/2023**	**9/13/2023**
trans-1,2-Dichloroethene	ug/L	100	ND	ND
Methylene Chloride	ug/L	5	ND	ND
Methyl t-Butyl Ether	ug/L	20	2.3	2.1
1,2-Dichloropropane	ug/L	5	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND
Ethylbenzene	ug/L	700	ND	ND
2-Hexanone	ug/L	–	ND	ND
Iodomethane	ug/L	–	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND
Styrene	ug/L	100	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND
Tetrachloroethene	ug/L	5	ND	ND
Toluene	ug/L	1000	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND
Trichloroethene	ug/L	5	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND	ND
Vinyl acetate	ug/L	–	ND	ND
Vinyl chloride	ug/L	2	ND	ND
Total Xylenes	ug/L	10000	ND	ND
o-Xylene	ug/L	10000	ND	ND
mp-Xylene	ug/L	10000	ND	ND
Bromodichloromethane	ug/L	80	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND
Bromoform	ug/L	80	ND	ND
Chloroform	ug/L	80	0.22 J	ND

Historical Well Data Table II

Name: Eastern Sanitary Landfill

Location ID:	GWM-12									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/30/2000**	**10/19/2000**	**3/30/2001**	**10/25/2001**	**3/29/2002**	**9/25/2002**	**4/9/2003**
Antimony, Total	mg/L	0.006	--	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	--	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	ND	ND	0.017	0.045	0.05	0.061	0.033	0.035
Beryllium, Total	mg/L	0.004	--	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	--	--	--	--	--	--	--	--
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	--	ND	ND	ND	ND	ND	ND	ND
Copper, Total	mg/L	1.3	--	ND	0.016	0.025	0.024	0.014	0.044	0.01
Iron, Total	mg/L	0.3	ND	0.28	0.14	ND	0.068	0.325	0.078	0.057
Lead, Total	mg/L	0.015	ND	ND	0.008	ND	0.006	0.005	0.002	0.003
Magnesium, Total	mg/L	--	--	--	--	--	--	--	--	--
Manganese, Total	mg/L	0.043	ND	ND	0.043	0.051	ND	ND	0.01	ND
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	--	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/L	--	--	--	--	--	--	--	--	--
Selenium, Total	mg/L	0.05	--	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	--	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	--	--	--	--	--	--	--	--
Thallium, Total	mg/L	0.002	--	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	--	ND	ND	ND	ND	ND	0.016	ND
Zinc, Total	mg/L	0.6	ND	ND	0.146	0.03	0.039	0.131	0.04	0.042
Alkalinity, Total	mg/L	--	--	11	85	9	10	10	10	10
Ammonia-N	mg/L	--	0.2	0.2	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	10	10	ND	ND	5	0	ND	ND
Chloride	mg/L	250	10	10	4.81	5.23	6.72	6.37	7.32	13.87
Hardness	mg/L	--	--	21	169	17.58	16.18	21.19	21.62	25.77
Nitrate-N	mg/L	10	2	2.3	2.15	2.15	1.53	1.48	1.5	2.7
pH	SU	8.5	--	--	6.01	5.6	5.4	5.5	5.27	4.89
Specific Conductance	umhos/cm	--	--	68	ND	ND	72.1	73.4	87	80
Sulfate	mg/L	250	10	10	1	ND	5	7.18	ND	0.96
Total Dissolved Solids	mg/L	500	43	47	53	50	40	49	44	62
Turbidity	NTU	5	--	5	9	6.9	6.5	13.8	3.15	6.91

Location ID:	GWM-12								
Number of Sampling Dates:	50								
Parameter Name	**Units**	**Compliance Limit**	**11/19/2003**	**3/25/2004**	**10/27/2004**	**5/19/2005**	**10/27/2005**	**3/29/2006**	**9/21/2006**	**3/22/2007**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.033	0.032	0.034	0.04	0.041	0.035	0.04	0.035
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-12									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**11/19/2003**	**3/25/2004**	**10/27/2004**	**5/19/2005**	**10/27/2005**	**3/29/2006**	**9/21/2006**	**3/22/2007**
Calcium, Total	mg/L	--	--	--	--	--	--	--	--	9.4
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	mg/L	1.3	ND	ND	ND	ND	ND	0.025	0.022	0.011
Iron, Total	mg/L	0.3	0.042	ND	0.032	0.096	0.085	0.057	0.19	ND
Lead, Total	mg/L	0.015	0.003	ND	ND	0.0002	ND	ND	ND	ND
Magnesium, Total	mg/L	--	--	--	--	--	--	--	--	2
Manganese, Total	mg/L	0.043	ND	ND	ND	0.012	0.017	0.017	0.028	ND
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	ND	0.026	ND	ND	ND	0.017	0.012	ND
Potassium, Total	mg/L	--	--	--	--	--	--	--	--	1.79
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	--	--	--	--	--	--	--	8.6
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	ND	ND	0.035	0.056	0.029	0.032	0.094	0.036
Alkalinity, Total	mg/L	--	12	8	13.6	10	8.8	8.85	9.85	13.6
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	ND	ND	11	ND	ND	ND	ND	ND
Chloride	mg/L	250	10.51	14.69	9.15	12.69	17.66	18.01	16.85	8.87
Hardness	mg/L	--	26.32	24	25.14	28.33	39.34	9.15	48.2	31.71
Nitrate-N	mg/L	10	1.91	2.44	1.55	1.34	2.04	2.01	1.89	1.28
pH	SU	8.5	4.92	4.73	4.78	4.78	4.55	4.6	4.49	4.99
Specific Conductance	umhos/cm	--	87.7	96.3	89.6	106	111	131	114	99.3
Sulfate	mg/L	250	ND	0.41	0.55	10.05	0.84	ND	ND	ND
Total Dissolved Solids	mg/L	500	65	49	48	58	384	80	80	--
Turbidity	NTU	5	9.3	3.32	3.1	4.95	7.97	2.07	6.6	--

Location ID:	GWM-12									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/18/2007**	**3/26/2008**	**9/23/2008**	**3/31/2009**	**10/14/2009**	**4/15/2010**	**9/21/2010**	**3/8/2011**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.038	0.04	0.044	0.028	0.025	0.03	0.033	0.03
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	6.72	7.55	8.91	6.19	5.75	6.27	7.9	5.23
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	ND	ND	0.023	ND	ND	ND	ND	ND
Copper, Total	mg/L	1.3	0.044	ND	0.031	ND	ND	0.071	ND	ND
Iron, Total	mg/L	0.3	0.112	ND	0.053	ND	ND	0.055	0.083	0.051
Lead, Total	mg/L	0.015	ND	ND	ND	0.003	ND	ND	ND	0.002
Magnesium, Total	mg/L	--	1.12	1.85	1.907	2.95	1.758	2.3	1.603	1.751
Manganese, Total	mg/L	0.043	0.079	0.012	0.066	ND	ND	0.058	0.03	0.02
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-12									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/18/2007**	**3/26/2008**	**9/23/2008**	**3/31/2009**	**10/14/2009**	**4/15/2010**	**9/21/2010**	**3/8/2011**
Nickel, Total	mg/L	0.039	ND	ND	ND	0.013	0.012	0.011	0.019	0.012
Potassium, Total	mg/L	--	1.83	2.73	1.93	1.74	1.99	2.95	2.93	2.36
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	5.3	18.6	8.8	12	6.5	13	24.4	9.8
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.046	0.076	ND	0.036	ND	0.023	ND	0.026
Alkalinity, Total	mg/L	--	14.6	15.2	11.1	10.2	14.5	9.7	6.3	ND
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	11	10	ND	11	ND	ND	ND	--
Chloride	mg/L	250	8.47	12.39	12.05	22.97	13.34	15.99	18.12	14.03
Hardness	mg/L	--	21.39	26.47	30.11	27.6	21.71	25.13	26.32	20.28
Nitrate-N	mg/L	10	1.24	1.62	1.39	2.55	1.48	2.07	2.23	1.93
pH	SU	8.5	5.03	4.8	5.28	5.02	5.11	5.36	5.25	5.2
Specific Conductance	umhos/cm	--	94.7	130	110	118	92.3	125	117	108
Sulfate	mg/L	250	ND	1.42	ND	ND	ND	ND	ND	ND
Total Dissolved Solids	mg/L	500	84	98	206	42	72	74	72	44
Turbidity	NTU	5	2.19	3.04	1.81	2.63	3.2	2.8	5	3.4

Location ID:	GWM-12									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/7/2011**	**3/7/2012**	**8/30/2012**	**3/5/2013**	**9/19/2013**	**3/20/2014**	**4/21/2014**	**9/4/2014**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND U	ND U	ND U
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND U	ND U	ND U
Barium, Total	mg/L	2	0.065	0.063	0.069	0.082	0.08	0.071	0.072	0.072
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	0.0004 J	ND U	ND U
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND U	ND U	ND U
Calcium, Total	mg/L	--	5.8	1.24	4.32	10.83	6.1	6.9	6.8	7.7
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	0.0044	0.0034	0.0043
Cobalt, Total	mg/L	--	ND	ND	ND	ND	ND	0.0058	0.006	0.0055 J
Copper, Total	mg/L	1.3	ND	ND	ND	ND	ND	0.0066	0.007	0.0068
Iron, Total	mg/L	0.3	18	0.036	0.03	0.038	0.045	0.023 J	ND U	0.029 J
Lead, Total	mg/L	0.015	0.002	ND	ND	ND	ND	0.0023	0.00086 J	0.001 J
Magnesium, Total	mg/L	--	0.59	0.196	1.883	1.896	4.152	3.7	3.7	3.8
Manganese, Total	mg/L	0.043	0.081	0.016	0.012	0.015	0.02	0.019	0.019	0.019
Mercury, Total	mg/L	0.002	0.0004	ND	ND	ND	0.00191	0.0038	0.0038	0.0042
Nickel, Total	mg/L	0.039	0.013	0.011	ND	0.011	0.021	0.022	0.021	0.021
Potassium, Total	mg/L	--	2.6	2.37	2.82	2.22	1.88	1.7	1.7	1.7
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND U	ND U	ND U
Sodium, Total	mg/L	--	5.4	0.6	6.5	6	15.4	15.3	15.4	14.6
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND U	ND U	ND U
Zinc, Total	mg/L	0.6	0.37	0.03	0.025	0.028	0.03	0.024	0.029	0.028
Alkalinity, Total	mg/L	--	14	12	22.75	11.56	3.69	7	7	6

Location ID:	GWM-12									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**10/7/2011**	**3/7/2012**	**8/30/2012**	**3/5/2013**	**9/19/2013**	**3/20/2014**	**4/21/2014**	**9/4/2014**
Ammonia-N	mg/L	--	0.3	ND	ND	ND	ND	0.14	0.106	0.157
Chemical Oxygen Demand (COD)	mg/L	--	17	ND	ND	ND	ND	ND U	6	7
Chloride	mg/L	250	13	11.95	--	13.46	39.84	38.3	38.9	38.9
Hardness	mg/L	--	24	39.14	18.54	34.9	32.3	39	25	36
Nitrate-N	mg/L	10	2.3	1.65	--	2.05	3.26	3.5	3.4	3.7
pH	SU	8.5	5.38	5.04	4.93	5.29	4.44	4.93	4.8	4.75
Specific Conductance	umhos/cm	--	108	118	121	93.9	203	145.3	168	150.7
Sulfate	mg/L	250	ND	ND	--	ND	2.15	1.3 J	1.3 J	1.4 J
Total Dissolved Solids	mg/L	500	21	96	116	58	81	121	110	133
Turbidity	NTU	5	3.48	2.83	2.04	2.5	ND	0.05	0.27	5.51

Location ID:	GWM-12									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**3/19/2015**	**9/11/2015**	**3/17/2016**	**9/23/2016**	**3/29/2017**	**9/19/2017**	**3/16/2018**	**9/19/2018**
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Arsenic, Total	mg/L	0.01	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Barium, Total	mg/L	2	0.075	0.078	0.081	0.078	0.077	0.076	0.074	0.083
Beryllium, Total	mg/L	0.004	ND U	0.00031 J	0.00034 J	ND U	ND U	ND U	ND U	ND U
Cadmium, Total	mg/L	0.005	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Calcium, Total	mg/L	--	7.3	8.3	8.7	7.9	8.2	7.9	7.7	7.8
Chromium, Total	mg/L	0.1	0.0054	0.0025	0.003	0.0042	0.0038	0.0025	0.0019 J	0.0027
Cobalt, Total	mg/L	--	0.0057	0.0066	0.0058	0.0061	0.0062	0.0064	0.0062	0.006
Copper, Total	mg/L	1.3	0.012	0.0076	0.0082	0.007	0.0082	0.0077	0.0069	0.0072
Iron, Total	mg/L	0.3	0.3	ND U	0.053 J	0.02 J	0.023 J	ND U	ND U	0.032 J
Lead, Total	mg/L	0.015	0.0014 J	ND U	0.0012 J	ND U	0.0011 J	ND U	ND U	ND U
Magnesium, Total	mg/L	--	3.8	4	4.2	3.9	4.5	3.9	4	3.4
Manganese, Total	mg/L	0.043	0.022	0.022	0.02	0.02	0.021	0.02	0.021	0.021
Mercury, Total	mg/L	0.002	0.0041	0.0041	0.0041	0.004	0.0037	0.0039	0.0038	0.0031
Nickel, Total	mg/L	0.039	0.023	0.022	0.022	0.022	0.023	0.021	0.02	0.022
Potassium, Total	mg/L	--	1.9	1.9	1.9	1.8	1.9	1.8	1.9	1.6
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Sodium, Total	mg/L	--	15.9	16.7	16.4	16.8	17.6	17.3	18.1	15.7
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Zinc, Total	mg/L	0.6	0.036	0.024	0.026	0.022	0.025	0.024	0.023	0.022
Alkalinity, Total	mg/L	--	7	11	13	7	7	9	40	11
Ammonia-N	mg/L	--	ND U	ND U	ND U	0.066 J	ND U	ND U	0.188	0.053 J
Chemical Oxygen Demand (COD)	mg/L	--	ND U	ND U	2 J	ND U	ND U	7	ND U	ND U
Chloride	mg/L	250	41.1	42.2	43.8	46.6	47.9	45.3	47.5	45.9
Hardness	mg/L	--	70	39	38	36	40	35.7	36	33.5
Nitrate-N	mg/L	10	3.2	3.2	3.2	3.3	3.1	3	3	2.5
pH	SU	8.5	4.87	4.92	4.84	4.79	4.87	4.87	4.75	4.85
Specific Conductance	umhos/cm	--	143.4	145.3	150.4	156	158	159.8	152.5	165.7
Sulfate	mg/L	250	1.4 J	1.3 J	0.94 J	0.94 J	1 J	1.2 J	1 J	0.86 J
Total Dissolved Solids	mg/L	500	142	132	117	113	121	104	91	131

Location ID:	GWM-12									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**3/19/2015**	**9/11/2015**	**3/17/2016**	**9/23/2016**	**3/29/2017**	**9/19/2017**	**3/16/2018**	**9/19/2018**
Turbidity	NTU	5	0.15	0.16	0.28	1.1	0.58	0.35	0.43	0.25

Location ID:	GWM-12									
Number of Sampling Dates:	50									
Parameter Name	**Units**	**Compliance Limit**	**3/13/2019**	**9/24/2019**	**3/19/2020**	**9/25/2020**	**3/19/2021**	**9/15/2021**	**3/18/2022**	**9/14/2022**
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Arsenic, Total	mg/L	0.01	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Barium, Total	mg/L	2	0.082	0.087	0.083	0.082	0.084	0.089	0.088	0.094
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	0.00044 J	ND U	0.00037 J	0.00042 J	0.00042 J
Cadmium, Total	mg/L	0.005	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Calcium, Total	mg/L	--	8.8	7.9	9	8.4	9.3	9.7	9.5	9.4
Chromium, Total	mg/L	0.1	0.0029	0.0013 J	0.0027	0.0033	0.01	0.002 J	0.0026	ND
Cobalt, Total	mg/L	--	0.007	0.0066	0.0065	0.0064	0.0066	0.0075	0.0069	0.0076
Copper, Total	mg/L	1.3	0.0093	0.0088	0.0071	0.008	0.0083	0.0083	0.013	0.0084
Iron, Total	mg/L	0.3	ND U	0.063	ND U	0.039 J	0.027 J	ND U	0.026 J	ND
Lead, Total	mg/L	0.015	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Magnesium, Total	mg/L	--	4	4.3	4.5	4.4	4.9	4.8	4.5	4.8
Manganese, Total	mg/L	0.043	0.024	0.023	0.023	0.023	0.024	0.024	0.033	0.026
Mercury, Total	mg/L	0.002	0.0034	0.0043	0.0024	0.0026	0.0031	0.0029	0.0029	0.0027
Nickel, Total	mg/L	0.039	0.023	0.021	0.023	0.022	0.024	0.025	0.026	0.025
Potassium, Total	mg/L	--	1.7	1.9	2	2	2	2	2	2
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Sodium, Total	mg/L	--	18.5	20.9	20.6	21.3	22.3	23	22.9	23.5
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Vanadium, Total	mg/L	0.0086	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND
Zinc, Total	mg/L	0.6	0.03	0.031	0.025	0.028	0.029	0.037	0.032	0.03
Alkalinity, Total	mg/L	--	11	9	38	7	10	12	11	10
Ammonia-N	mg/L	--	0.066 J	0.09 J	0.038 J	0.031 J	0.212	ND U	0.159	0.165
Chemical Oxygen Demand (COD)	mg/L	--	ND U	ND U	ND U	12 J	ND U	ND U	ND	ND
Chloride	mg/L	250	50	48.4	50	52	53.6	56.6	57.3	53.1
Hardness	mg/L	--	38.5	37.5	40.4	40.9	40.6	39.6	40.4	45
Nitrate-N	mg/L	10	2.6	2.4	2.4	2.5	2.6	2.6	2.2	2.1
pH	SU	8.5	4.95	4.71	4.95	4.61	5	4.5	4.53	4.38
Specific Conductance	umhos/cm	--	162.1	167.5	160.5	160	169.1	189.1	188	166.7
Sulfate	mg/L	250	1.1 J	1.2 J	1 J	ND U	1.3 J	1.2 J	ND	ND
Total Dissolved Solids	mg/L	500	145	150	128	104	102	160	158	138
Turbidity	NTU	5	0.25	0.46	0.66	0.43	0.39	0.43	0.46	4.77

Location ID:	GWM-12			
Number of Sampling Dates:	50			
Parameter Name	**Units**	**Compliance Limit**	**3/17/2023**	**9/13/2023**
Antimony, Total	mg/L	0.006	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND
Barium, Total	mg/L	2	0.094	0.094

Location ID:	GWM-12
Number of Sampling Dates:	50

Parameter Name	Units	Compliance Limit	3/17/2023	9/13/2023
Beryllium, Total	mg/L	0.004	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND
Calcium, Total	mg/L	--	9.5	9.3
Chromium, Total	mg/L	0.1	0.001 J	0.0012 J
Cobalt, Total	mg/L	--	0.0078	0.0074
Copper, Total	mg/L	1.3	0.0096	0.012
Iron, Total	mg/L	0.3	ND	ND
Lead, Total	mg/L	0.015	ND	ND
Magnesium, Total	mg/L	--	4.8	4.7
Manganese, Total	mg/L	0.043	0.027	0.026
Mercury, Total	mg/L	0.002	0.0026	0.0024
Nickel, Total	mg/L	0.039	0.025	0.024
Potassium, Total	mg/L	--	2	2
Selenium, Total	mg/L	0.05	ND	ND
Silver, Total	mg/L	0.0094	ND	ND
Sodium, Total	mg/L	--	23.9	23.3
Thallium, Total	mg/L	0.002	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND
Zinc, Total	mg/L	0.6	0.031	0.031
Alkalinity, Total	mg/L	--	10	11
Ammonia-N	mg/L	--	0.095 J	0.255
Chemical Oxygen Demand (COD)	mg/L	--	13 J	ND
Chloride	mg/L	250	55.6	60.5
Hardness	mg/L	--	44.9	49.3
Nitrate-N	mg/L	10	2.1	2.1
pH	SU	8.5	4.71	4.66
Specific Conductance	umhos/cm	--	204.82	234.64
Sulfate	mg/L	250	ND	1.9 J
Total Dissolved Solids	mg/L	500	162	164
Turbidity	NTU	5	0.2	30.34

Historical Well Data Table I

Name: Eastern Sanitary Landfill

Location ID:	GWM-14									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/30/2000**	**10/19/2000**	**3/26/2001**	**9/17/2001**	**3/12/2002**	**9/9/2002**	**3/25/2003**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-14									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/30/2000**	**10/19/2000**	**3/26/2001**	**9/17/2001**	**3/12/2002**	**9/9/2002**	**3/25/2003**
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-14									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/24/2003**	**3/23/2004**	**9/27/2004**	**3/15/2005**	**9/28/2005**	**3/15/2006**	**9/19/2006**	**4/10/2007**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	2	2
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-14									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/24/2003**	**3/23/2004**	**9/27/2004**	**3/15/2005**	**9/28/2005**	**3/15/2006**	**9/19/2006**	**4/10/2007**
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-14									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/25/2007**	**4/16/2008**	**9/24/2008**	**3/17/2009**	**9/22/2009**	**4/13/2010**	**8/24/2010**	**3/3/2011**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	2	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-14									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/25/2007**	**4/16/2008**	**9/24/2008**	**3/17/2009**	**9/22/2009**	**4/13/2010**	**8/24/2010**	**3/3/2011**
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	GWM-14									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/4/2011**	**2/28/2012**	**8/28/2012**	**2/26/2013**	**9/24/2013**	**3/21/2014**	**9/8/2014**	**3/19/2015**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND U	ND U	ND U
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND U	ND U	ND U
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND U	ND U	ND U

Location ID:	GWM-14									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/4/2011**	**2/28/2012**	**8/28/2012**	**2/26/2013**	**9/24/2013**	**3/21/2014**	**9/8/2014**	**3/19/2015**
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND U	0.37 J	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND U	ND U	ND U
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND U	ND U	ND U
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND U	ND U	ND U

Location ID:	GWM-14									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/14/2015**	**3/21/2016**	**9/23/2016**	**3/27/2017**	**9/20/2017**	**3/16/2018**	**9/20/2018**	**3/5/2019**
Acetone	ug/L	1400	ND U	4 J	ND U	3.3 JB	ND U	4.1 JB	ND U	ND U
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromomethane	ug/L	0.75	ND U	ND U	ND U	ND U	0.54 J	ND U	ND U	ND U
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloromethane	ug/L	19	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	GWM-14									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/14/2015**	**3/21/2016**	**9/23/2016**	**3/27/2017**	**9/20/2017**	**3/16/2018**	**9/20/2018**	**3/5/2019**
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	GWM-14									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/25/2019**	**3/25/2020**	**9/28/2020**	**3/18/2021**	**9/15/2021**	**3/22/2022**	**9/14/2022**	**3/16/2023**
Acetone	ug/L	1400	9.9 JB	ND U	ND U	ND U	3.7 JB	ND	ND	ND
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Benzene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Bromomethane	ug/L	0.75	ND U	ND U	ND U	ND U	0.53 JB	ND	ND	ND
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chloromethane	ug/L	19	ND U	ND U	0.34 J	ND U	ND U	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND

Location ID:	GWM-14									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/25/2019**	**3/25/2020**	**9/28/2020**	**3/18/2021**	**9/15/2021**	**3/22/2022**	**9/14/2022**	**3/16/2023**
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
o-Xylene	ug/L	10000	–	ND U	ND U	ND U	ND U	ND	ND	ND
mp-Xylene	ug/L	10000	–	ND U	ND U	ND U	ND U	ND	ND	ND
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chloroform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND	ND	ND

Location ID:	GWM-14		
Number of Sampling Dates:	49		
Parameter Name	**Units**	**Compliance Limit**	**9/13/2023**
Acetone	ug/L	1400	ND
Acrylonitrile	ug/L	–	ND
Benzene	ug/L	5	ND
Bromochloromethane	ug/L	–	ND
Bromomethane	ug/L	0.75	0.64 JB
2-Butanone	ug/L	700	ND
Carbon disulfide	ug/L	81	ND
Carbon Tetrachloride	ug/L	5	ND
Chlorobenzene	ug/L	100	ND
Chloroethane	ug/L	2100	ND
Chloromethane	ug/L	19	0.54 JB
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND
1,2-Dibromoethane	ug/L	0.05	ND
Dibromomethane	ug/L	–	ND
1,2-Dichlorobenzene	ug/L	600	ND
1,4-Dichlorobenzene	ug/L	75	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND
1,1-Dichloroethane	ug/L	2.8	ND
1,2-Dichloroethane	ug/L	5	ND

Location ID:	GWM-14		
Number of Sampling Dates:	49		
Parameter Name	**Units**	**Compliance Limit**	**9/13/2023**
1,1-Dichloroethene	ug/L	7	ND
cis-1,2-Dichloroethene	ug/L	70	ND
trans-1,2-Dichloroethene	ug/L	100	ND
Methylene Chloride	ug/L	5	ND
Methyl t-Butyl Ether	ug/L	20	ND
1,2-Dichloropropane	ug/L	5	ND
trans-1,3-Dichloropropene	ug/L	–	ND
cis-1,3-Dichloropropene	ug/L	–	ND
Ethylbenzene	ug/L	700	ND
2-Hexanone	ug/L	–	ND
Iodomethane	ug/L	–	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND
Styrene	ug/L	100	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND
Tetrachloroethene	ug/L	5	ND
Toluene	ug/L	1000	ND
1,1,1-Trichloroethane	ug/L	200	ND
1,1,2-Trichloroethane	ug/L	5	ND
Trichloroethene	ug/L	5	ND
Trichlorofluoromethane	ug/L	–	ND
1,2,3-Trichloropropane	ug/L	–	ND
Vinyl acetate	ug/L	–	ND
Vinyl chloride	ug/L	2	ND
Total Xylenes	ug/L	10000	ND
o-Xylene	ug/L	10000	ND
mp-Xylene	ug/L	10000	ND
Bromodichloromethane	ug/L	80	ND
Chlorodibromomethane	ug/L	80	ND
Bromoform	ug/L	80	ND
Chloroform	ug/L	80	ND

Historical Well Data Table II

Name: Eastern Sanitary Landfill

Location ID:	GWM-14									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/30/2000**	**10/19/2000**	**3/26/2001**	**9/17/2001**	**3/12/2002**	**9/9/2002**	**3/25/2003**
Antimony, Total	mg/L	0.006	--	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	--	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	ND	ND	0.062	0.012	0.021	0.04	0.045	0.046
Beryllium, Total	mg/L	0.004	--	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	--	--	--	--	--	--	--	--
Chromium, Total	mg/L	0.1	ND	ND	0.045	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	--	ND	0.035	ND	0.036	0.073	0.117	0.205
Copper, Total	mg/L	1.3	--	ND	0.046	0.033	0.012	0.011	0.039	0.05
Iron, Total	mg/L	0.3	1.3	4.67	20.34	0.683	1.591	4.914	1.694	0.253
Lead, Total	mg/L	0.015	ND	ND	0.012	ND	ND	ND	0.002	ND
Magnesium, Total	mg/L	--	--	--	--	--	--	--	--	--
Manganese, Total	mg/L	0.043	6.71	7.45	7	7.85	8.505	9.6	8.11	12.26
Mercury, Total	mg/L	0.002	ND	ND	0.0003	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	--	ND	0.011	ND	ND	ND	ND	ND
Potassium, Total	mg/L	--	--	--	--	--	--	--	--	--
Selenium, Total	mg/L	0.05	--	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	--	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	--	--	--	--	--	--	--	--
Thallium, Total	mg/L	0.002	--	ND	ND	0.002	0.002	ND	ND	ND
Vanadium, Total	mg/L	0.0086	--	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	ND	ND	0.116	0.022	0.132	0.096	0.032	ND
Alkalinity, Total	mg/L	--	--	59	65	60	55	70	78	110
Ammonia-N	mg/L	--	0.2	0.3	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	--	10	14	12	9	15	29	ND
Chloride	mg/L	250	13	11	24.51	23.84	15.81	15.12	10.83	19.6
Hardness	mg/L	--	--	94	69	60.34	66.44	100.99	102.75	131.67
Nitrate-N	mg/L	10	--	0.4	0.07	ND	0.06	ND	ND	ND
pH	SU	8.5	--	--	5.47	5.4	5.3	5.56	5.32	5.34
Specific Conductance	umhos/cm	--	--	247	--	ND	245	339	313	429
Sulfate	mg/L	250	41.7	35.8	42	38	45	42.37	40.2	36.07
Total Dissolved Solids	mg/L	500	126	146	182	159	148	154	--	179
Turbidity	NTU	5	--	80	885	57.2	28.9	55.6	55	5.77

Location ID:	GWM-14									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/24/2003**	**3/23/2004**	**9/27/2004**	**3/15/2005**	**9/28/2005**	**3/15/2006**	**9/19/2006**	**4/10/2007**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.05	0.05	0.061	0.061	0.078	0.074	0.08	0.075
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	--	--	--	--	--	--	--	27.7

Location ID:	GWM-14									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/24/2003**	**3/23/2004**	**9/27/2004**	**3/15/2005**	**9/28/2005**	**3/15/2006**	**9/19/2006**	**4/10/2007**
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	0.179	0.224	0.213	0.251	0.27	0.175	0.56	1.031
Copper, Total	mg/L	1.3	ND	ND	0.017	ND	ND	ND	0.025	0.019
Iron, Total	mg/L	0.3	0.859	0.459	0.656	0.979	0.519	3.512	5.84	20.7
Lead, Total	mg/L	0.015	ND	ND	0.003	ND	ND	0.002	0.002	ND
Magnesium, Total	mg/L	--	--	--	--	--	--	--	--	30.95
Manganese, Total	mg/L	0.043	9.75	10.39	16.19	20.44	18.54	21.04	24.45	19.47
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	ND	ND	ND	ND	ND	ND	ND	0.011
Potassium, Total	mg/L	--	--	--	--	--	--	--	--	4.75
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	--	--	--	--	--	--	--	37.3
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.045	ND	0.165	0.136	0.055	0.039	0.06	0.082
Alkalinity, Total	mg/L	--	130	105	166.1	165.9	166.8	165.2	167.65	172.6
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	ND	13	ND	ND	12	10	ND	ND
Chloride	mg/L	250	19.98	18.37	20.65	18.5	18.51	21.52	15.46	14.91
Hardness	mg/L	--	131.8	139.24	145.88	153.16	201.58	67.28	181.4	143.19
Nitrate-N	mg/L	10	ND	ND	ND	ND	ND	ND	ND	ND
pH	SU	8.5	5.38	5.3	5.38	5.43	5.47	5.39	5.58	5.49
Specific Conductance	umhos/cm	--	375	364	481	426	447	444	417	415
Sulfate	mg/L	250	30.92	28.11	29	23.06	27.41	25.64	17.79	15.08
Total Dissolved Solids	mg/L	500	194	168	237	377	362	450	252	844
Turbidity	NTU	5	70	7.5	50	66.7	9.58	36	72.9	14.8

Location ID:	GWM-14									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/25/2007**	**4/16/2008**	**9/24/2008**	**3/17/2009**	**9/22/2009**	**4/13/2010**	**8/24/2010**	**3/3/2011**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.07	0.062	0.052	0.055	0.058	0.07	0.061	0.058
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	19.35	13.6	16.28	7.18	6.93	5.24	7.92	7.46
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	0.68	0.855	1.24	0.9	1.571	0.895	0.785	0.954
Copper, Total	mg/L	1.3	0.013	ND	0.031	ND	0.064	0.027	0.025	ND
Iron, Total	mg/L	0.3	17.1	20.99	30.57	41.2	38.55	88.5	45.58	60.01
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/L	--	41.4	97.5	3.428	23	24.1	22.6	2.839	20
Manganese, Total	mg/L	0.043	12.44	22.05	14.69	11.526	13.35	11.05	8.724	8.14
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	ND	ND	ND	ND	ND	ND	0.019	ND

Location ID:	GWM-14									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/25/2007**	**4/16/2008**	**9/24/2008**	**3/17/2009**	**9/22/2009**	**4/13/2010**	**8/24/2010**	**3/3/2011**
Potassium, Total	mg/L	--	ND	0.064	ND	ND	ND	ND	ND	0.33
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	18.9	16.5	14.8	29.6	10.3	17.8	13.2	12.8
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.02	0.046	ND	0.019	ND	0.027	ND	0.029
Alkalinity, Total	mg/L	--	166.4	148	163	182.8	141.8	149.5	35.4	121.3
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	17	15	ND	31	ND	20	14	19
Chloride	mg/L	250	13.31	11.89	12.14	16.19	12.94	15.6	76.1	13.18
Hardness	mg/L	--	218.8	124.79	54.77	112.65	116.55	106.14	31.47	26.86
Nitrate-N	mg/L	10	ND	ND	ND	ND	ND	ND	0.15	ND
pH	SU	8.5	5.47	5.45	6.1	6.02	5.75	5.58	5.85	5.65
Specific Conductance	umhos/cm	--	422	399	437	423	412	368	447	450
Sulfate	mg/L	250	13.23	10.67	13.45	14.34	17.16	14.41	19.37	17.1
Total Dissolved Solids	mg/L	500	396	278	240	258	188	200	210	258
Turbidity	NTU	5	0.11	55	13.8	9.6	7.6	6.8	15	20

Location ID:	GWM-14									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/4/2011**	**2/28/2012**	**8/28/2012**	**2/26/2013**	**9/24/2013**	**3/21/2014**	**9/8/2014**	**3/19/2015**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND U	ND U	ND U
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND U	0.0013 J	ND U
Barium, Total	mg/L	2	0.034	0.047	0.042	0.07	0.06	0.048	0.049	0.047
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND U	ND U	ND U
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND U	ND U	ND U
Calcium, Total	mg/L	--	13	1.99	9.23	22.03	9.5	11.6	13.5	12.4
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	0.00095 J	0.0012 J	0.0016 J
Cobalt, Total	mg/L	--	0.65	0.598	0.392	0.509	0.42	0.45	0.41	0.39
Copper, Total	mg/L	1.3	ND	ND	ND	ND	ND	ND U	ND U	0.0074
Iron, Total	mg/L	0.3	38	56.05	52.13	69.2	91.07	82.1	77.2	68.7
Lead, Total	mg/L	0.015	ND	ND	ND	ND	ND	ND U	ND U	ND U
Magnesium, Total	mg/L	--	16	1.974	17.21	18.94	16.45	16.2	17	16.9
Manganese, Total	mg/L	0.043	7.4	6.447	5.028	6.001	4.77	4.3	4	4.1
Mercury, Total	mg/L	0.002	0.0003	0.0007	ND	ND	ND	ND U	ND U	ND U
Nickel, Total	mg/L	0.039	ND	ND	ND	ND	ND	0.0066	0.0066	0.0091
Potassium, Total	mg/L	--	0.51	0.51	0.51	0.62	0.52	0.5	0.55	0.52
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND U	ND U	ND U
Sodium, Total	mg/L	--	13	1.1	11.2	12.9	16.1	14.3	17.3	16.7
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND U	ND U	ND U
Zinc, Total	mg/L	0.6	0.023	0.026	0.015	0.015	0.01	0.011	0.01	0.02
Alkalinity, Total	mg/L	--	160	136.95	114.43	155.33	178.19	209	199	128
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	0.119	0.087 J	0.059 J

Location ID:	GWM-14									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**10/4/2011**	**2/28/2012**	**8/28/2012**	**2/26/2013**	**9/24/2013**	**3/21/2014**	**9/8/2014**	**3/19/2015**
Chemical Oxygen Demand (COD)	mg/L	--	53	18	16	20	29	13	11	ND U
Chloride	mg/L	250	17	14.92	14	25.82	25.7	24.6	27	25.9
Hardness	mg/L	--	140	131	93.93	133	91.5	116	104	118
Nitrate-N	mg/L	10	ND	ND	ND	ND	ND	ND U	ND U	ND U
pH	SU	8.5	5.46	5.84	5.56	5.65	6.08	6.1	6.18	6.31
Specific Conductance	umhos/cm	--	411	470	507	493	561	422	438	385
Sulfate	mg/L	250	19	20.81	21	19.67	20.56	21.5	22.7	27.9
Total Dissolved Solids	mg/L	500	170	294	246	300	277	269	291	314
Turbidity	NTU	5	37	72.9	6.9	85.6	ND	5.3	3.47	9.38

Location ID:	GWM-14									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/14/2015**	**3/21/2016**	**9/23/2016**	**3/27/2017**	**9/20/2017**	**3/16/2018**	**9/20/2018**	**3/5/2019**
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	0.0014 J	ND U	ND U	ND U	ND U
Arsenic, Total	mg/L	0.01	0.0011 J	ND U	0.0011 J	0.0013 J	0.0012 J	ND U	0.0015 J	0.0011 J
Barium, Total	mg/L	2	0.048	0.048	0.048	0.049	0.045	0.042	0.044	0.048
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Cadmium, Total	mg/L	0.005	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Calcium, Total	mg/L	--	13	14.6	12.7	12.4	11.5	11.1	10.9	12.3
Chromium, Total	mg/L	0.1	0.0021 J	0.0012 J	0.0014 J	0.0013 J	0.0019 J	ND U	0.00094 J	ND U
Cobalt, Total	mg/L	--	0.41	0.39	0.38	0.33	0.35	0.29	0.28	0.28
Copper, Total	mg/L	1.3	0.0022 J	0.0035 J	ND U	0.0024 J	0.0031 J	0.0025 J	0.0022 J	ND U
Iron, Total	mg/L	0.3	71.8	69.6	66.4	72.7	67	67.1	54.8	67.4
Lead, Total	mg/L	0.015	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Magnesium, Total	mg/L	--	16.8	18.5	16.4	15.8	15.5	15	14.8	17.1
Manganese, Total	mg/L	0.043	4.4	4.1	4	3.8	3.7	3.3	3.2	3.3
Mercury, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Nickel, Total	mg/L	0.039	0.0089	0.0082	0.0076	0.0077	0.0075	0.0078	0.0077	0.0078
Potassium, Total	mg/L	--	0.53	0.55	0.55	0.56	0.57	0.48	0.58	0.52
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Sodium, Total	mg/L	--	18.9	15.5	17.3	17.2	22.2	22.5	20.8	20.2
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Zinc, Total	mg/L	0.6	0.011	0.012	0.01	0.0097	0.011	0.012	0.013	0.012
Alkalinity, Total	mg/L	--	204	178	163	175	149	142	140	154
Ammonia-N	mg/L	--	0.054 J	ND U	0.178	0.085 J	0.104	0.209	0.1	ND U
Chemical Oxygen Demand (COD)	mg/L	--	12	16	7 J	20	24	13	19	27
Chloride	mg/L	250	26.1	24.8	27.7	26.4	34.8	32.9	34.2	30
Hardness	mg/L	--	130	110	114	114	92.5	89.3	88.2	101
Nitrate-N	mg/L	10	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
pH	SU	8.5	5.88	6.22	6.13	6.1	6.2	6.31	6.19	6.43
Specific Conductance	umhos/cm	--	395	391	405	404	410	387	378	346
Sulfate	mg/L	250	25.2	29.1	29.2	28.6	25	30.2	24.5	12.2
Total Dissolved Solids	mg/L	500	278	239	283	266	236	251	172	311
Turbidity	NTU	5	4.6	11.76	6	6.86	4.58	7.72	0.5	7.78

Location ID:	GWM-14									
Number of Sampling Dates:	49									
Parameter Name	**Units**	**Compliance Limit**	**9/25/2019**	**3/25/2020**	**9/28/2020**	**3/18/2021**	**9/15/2021**	**3/22/2022**	**9/14/2022**	**3/16/2023**
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Arsenic, Total	mg/L	0.01	0.0063	0.0012 J	0.0016 J	ND U	0.0016 J	0.0012 J	0.0014 J	ND
Barium, Total	mg/L	2	0.045	0.044	0.043	0.11 R	0.048	0.05	0.053	0.052
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	0.00077 JR	ND U	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Calcium, Total	mg/L	--	10.4	12.1	11.2	4.4 R	12	11.8	11.1	11.2
Chromium, Total	mg/L	0.1	ND U	0.00085 J	ND U	ND U	ND U	ND	ND	ND
Cobalt, Total	mg/L	--	0.24	0.25	0.27	0.0024 JR	0.25	0.26	0.25	0.23
Copper, Total	mg/L	1.3	ND U	ND U	ND U	0.0066 R	ND U	ND	ND	ND
Iron, Total	mg/L	0.3	62.3	69.4	69.3	0.11 R	62	62.9	54.7	55.6
Lead, Total	mg/L	0.015	ND U	ND U	ND U	0.0011 JR	ND U	ND	ND	ND
Magnesium, Total	mg/L	--	14.7	15.4	15.2	2.9 R	16	15.1	15.2	15.4
Manganese, Total	mg/L	0.043	3	3.3	3.3	0.033 R	3.2	3.1	3	2.9
Mercury, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Nickel, Total	mg/L	0.039	0.0067	0.0088	0.0068	0.0047 JR	0.0088	0.01	0.0086	0.0092
Potassium, Total	mg/L	--	0.5	0.49	0.64	2 R	0.62	0.62	0.85	0.59
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Sodium, Total	mg/L	--	16.6	19.2	22.6	17.2 R	25	28.2	28.7	29.9
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Vanadium, Total	mg/L	0.0086	0.0039	ND U	ND U	ND U	ND U	ND	ND	ND
Zinc, Total	mg/L	0.6	0.014	0.013	0.012	0.013 R	0.015	0.014	0.013	0.012
Alkalinity, Total	mg/L	--	150	106	158	148	161	116	126	125
Ammonia-N	mg/L	--	0.165	0.092 J	0.189	0.254	0.137	ND	0.241	0.132
Chemical Oxygen Demand (COD)	mg/L	--	21	17	23	33	20	18	21	28
Chloride	mg/L	250	24.5	28.6	36.7	34.7	36.9	40.2	40.9	43.9
Hardness	mg/L	--	86.5	97.3	96.1	90.7	86.2	89	91.6	90.2
Nitrate-N	mg/L	10	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
pH	SU	8.5	6.26	6.1	6.1	6.18	6.09	6.09	5.78	6.04
Specific Conductance	umhos/cm	--	373	352	358	375	419	388	360.8	535.45
Sulfate	mg/L	250	24.8	22.8	21.4	25.6	23.7	20.9	18.3	19.7
Total Dissolved Solids	mg/L	500	214	198	284	276	264	258	220	300
Turbidity	NTU	5	0.43	4.02	3.28	5.37	1.74	5.19	6.29	7.59

Location ID:	GWM-14		
Number of Sampling Dates:	49		
Parameter Name	**Units**	**Compliance Limit**	**9/13/2023**
Antimony, Total	mg/L	0.006	ND
Arsenic, Total	mg/L	0.01	0.0015 J
Barium, Total	mg/L	2	0.054
Beryllium, Total	mg/L	0.004	ND
Cadmium, Total	mg/L	0.005	ND
Calcium, Total	mg/L	--	10.8
Chromium, Total	mg/L	0.1	0.00092 J

Location ID:	GWM-14		
Number of Sampling Dates:	49		
Parameter Name	**Units**	**Compliance Limit**	**9/13/2023**
Cobalt, Total	mg/L	--	0.22
Copper, Total	mg/L	1.3	ND
Iron, Total	mg/L	0.3	55.5
Lead, Total	mg/L	0.015	ND
Magnesium, Total	mg/L	--	14
Manganese, Total	mg/L	0.043	2.9
Mercury, Total	mg/L	0.002	ND
Nickel, Total	mg/L	0.039	0.008
Potassium, Total	mg/L	--	0.59
Selenium, Total	mg/L	0.05	ND
Silver, Total	mg/L	0.0094	ND
Sodium, Total	mg/L	--	27.4
Thallium, Total	mg/L	0.002	ND
Vanadium, Total	mg/L	0.0086	ND
Zinc, Total	mg/L	0.6	0.013
Alkalinity, Total	mg/L	--	152
Ammonia-N	mg/L	--	0.341
Chemical Oxygen Demand (COD)	mg/L	--	15
Chloride	mg/L	250	45.3
Hardness	mg/L	--	92.4
Nitrate-N	mg/L	10	ND
pH	SU	8.5	6.1
Specific Conductance	umhos/cm	--	475.52
Sulfate	mg/L	250	16.8
Total Dissolved Solids	mg/L	500	290
Turbidity	NTU	5	0.53

Historical Well Data Table I

Name: Eastern Sanitary Landfill

Location ID:	GWM-15D									
Number of Sampling Dates:	16									
Parameter Name	**Units**	**Compliance Limit**	**3/21/2016**	**9/23/2016**	**3/28/2017**	**9/21/2017**	**3/16/2018**	**9/19/2018**	**3/5/2019**	**10/3/2019**
Acetone	ug/L	1400	ND U	ND U	4.9 JB	ND U	3.9 JB	ND U	ND U	ND U
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromomethane	ug/L	0.75	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloromethane	ug/L	19	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	GWM-15D									
Number of Sampling Dates:	16									
Parameter Name	**Units**	**Compliance Limit**	**3/21/2016**	**9/23/2016**	**3/28/2017**	**9/21/2017**	**3/16/2018**	**9/19/2018**	**3/5/2019**	**10/3/2019**
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	GWM-15D									
Number of Sampling Dates:	16									
Parameter Name	**Units**	**Compliance Limit**	**3/25/2020**	**9/28/2020**	**3/19/2021**	**9/15/2021**	**3/22/2022**	**9/14/2022**	**3/16/2023**	**9/12/2023**
Acetone	ug/L	1400	ND U	ND U	ND U	3.3 JB	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Benzene	ug/L	5	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND U	ND U	ND U	0.95 JB	ND	ND	ND	0.73 JB
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Chloromethane	ug/L	19	ND U	0.44 J	ND U	ND U	ND	ND	ND	0.58 JB
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND	ND	ND	ND

Location ID:	GWM-15D									
Number of Sampling Dates:	16									
Parameter Name	**Units**	**Compliance Limit**	**3/25/2020**	**9/28/2020**	**3/19/2021**	**9/15/2021**	**3/22/2022**	**9/14/2022**	**3/16/2023**	**9/12/2023**
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND	ND	ND	ND
o-Xylene	ug/L	10000	ND U	ND U	ND U	ND U	ND	ND	ND	ND
mp-Xylene	ug/L	10000	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Chloroform	ug/L	80	ND U	ND U	ND U	ND U	ND	ND	ND	ND

Historical Well Data Table II

Name: Eastern Sanitary Landfill

Location ID:	GWM-15D									
Number of Sampling Dates:	16									
Parameter Name	**Units**	**Compliance Limit**	**3/21/2016**	**9/23/2016**	**3/28/2017**	**9/21/2017**	**3/16/2018**	**9/19/2018**	**3/5/2019**	**10/3/2019**
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Arsenic, Total	mg/L	0.01	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Barium, Total	mg/L	2	0.19	0.14	0.13	0.11	0.11	0.1	0.11	0.096
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Cadmium, Total	mg/L	0.005	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Calcium, Total	mg/L	--	18.2	14.8	14.1	13.5	13.8	14.5	16.2	15.9
Chromium, Total	mg/L	0.1	0.0031	0.004	0.004	0.0029	0.0015 J	0.0017 J	0.0019 J	0.00096 J
Cobalt, Total	mg/L	--	0.041	0.021	0.017	0.016	0.015	0.016	0.016	0.015
Copper, Total	mg/L	1.3	0.0044 J	0.0047 J	0.0049 J	0.0047 J	0.0041 J	0.0038 J	0.0032 J	0.0039 J
Iron, Total	mg/L	0.3	0.51	0.055 J	0.067	0.049 J	0.046 J	0.043 J	0.16	0.019 J
Lead, Total	mg/L	0.015	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Magnesium, Total	mg/L	--	17.1	15.2	14.4	14.2	14.5	15	18.3	17.2
Manganese, Total	mg/L	0.043	0.69	0.39	0.38	0.35	0.38	0.44	0.5	0.54
Mercury, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Nickel, Total	mg/L	0.039	0.016	0.014	0.013	0.011	0.01	0.011	0.0011	0.01
Potassium, Total	mg/L	--	2.4	2.3	2.3	2	2.1	2.1	2.3	2.3
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Sodium, Total	mg/L	--	28.6	27.4	26.1	24.9	26.4	26.8	30.6	30.4
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	0.0015 J	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Zinc, Total	mg/L	0.6	0.023	0.011	0.01	0.0092	0.0093	0.0096	0.009	0.0096
Alkalinity, Total	mg/L	--	30	23	24	23	32	39	27	39
Ammonia-N	mg/L	--	ND U	0.033 J	ND U	ND U	ND U	0.128	ND U	0.189
Chemical Oxygen Demand (COD)	mg/L	--	13	ND U	ND U	11	ND U	ND U	17	11 J
Chloride	mg/L	250	65.8	66.9	68	58.5	93.9	58.3	57	62.4
Hardness	mg/L	--	115	114	93	92.2	57.9	98	116	110
Nitrate-N	mg/L	10	0.18 J	0.1 J	0.08 J	ND U	ND U	0.08 J	ND U	0.1 J
pH	SU	8.5	4.99	5.05	4.87	4.8	5.27	5.06	5.29	4.94
Specific Conductance	umhos/cm	--	315	308	295	283	280	283	272	302
Sulfate	mg/L	250	61.9	63	60.3	55	54.1	53.3	55.2	58
Total Dissolved Solids	mg/L	500	196	260	208	191	199	213	268	260
Turbidity	NTU	5	14.3	1.6	0.77	1.79	1.68	3	3.44	1.26

Location ID:	GWM-15D									
Number of Sampling Dates:	16									
Parameter Name	**Units**	**Compliance Limit**	**3/25/2020**	**9/28/2020**	**3/19/2021**	**9/15/2021**	**3/22/2022**	**9/14/2022**	**3/16/2023**	**9/12/2023**
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND U	ND U	ND U	0.00031 J	ND	ND	ND	ND
Barium, Total	mg/L	2	0.091	0.088	0.09	0.086	0.087	0.082	0.081	0.078
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	ND U	ND	ND	ND	ND

Location ID:	GWM-15D									
Number of Sampling Dates:	16									
Parameter Name	**Units**	**Compliance Limit**	**3/25/2020**	**9/28/2020**	**3/19/2021**	**9/15/2021**	**3/22/2022**	**9/14/2022**	**3/16/2023**	**9/12/2023**
Cadmium, Total	mg/L	0.005	ND U	ND U	ND U	0.00016 J	ND	ND	ND	ND
Calcium, Total	mg/L	--	16	17.3	18	19	20.2	18.7	20.3	19
Chromium, Total	mg/L	0.1	0.002 J	ND U	0.001 J	0.0019 J	0.00087 J	ND	0.0017 J	0.0037
Cobalt, Total	mg/L	--	0.015	0.016	0.017	0.019	0.022	0.022	0.025	0.027
Copper, Total	mg/L	1.3	0.0031 J	0.0027 J	0.0033 J	0.0023 J	0.0023 J	ND	0.0023 J	0.016
Iron, Total	mg/L	0.3	0.085	0.078	0.047 J	0.072 J	0.037 J	0.039 J	0.05 J	0.3
Lead, Total	mg/L	0.015	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Magnesium, Total	mg/L	--	17	17.4	20.4	20	20.3	20.2	20.4	19
Manganese, Total	mg/L	0.043	0.58	0.66	0.68	0.72	0.91	0.92	0.98	0.98
Mercury, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	0.0098	0.011	0.0099	0.01	0.01	0.009	0.0097	0.0096
Potassium, Total	mg/L	--	2.3	2.4	2.5	2.6	2.7	2.8	2.8	2.6
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Sodium, Total	mg/L	--	30.9	30.7	35.2	35	35.8	35.6	35.1	32.4
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND U	ND U	ND U	0.0011 J	ND	ND	ND	0.0015 J
Zinc, Total	mg/L	0.6	0.0088	0.015	0.01	0.011	0.0099	0.0083	0.0092	0.0074
Alkalinity, Total	mg/L	--	32	27	35	37	72	42	42	51
Ammonia-N	mg/L	--	0.029 J	0.029 J	ND U	0.065 J	0.106	ND	0.085 J	0.506
Chemical Oxygen Demand (COD)	mg/L	--	ND U	12 J	10 J	6 J	ND	5 J	14 J	ND
Chloride	mg/L	250	61.7	67.6	74.8	76.7	82.5	73.2	79.6	77.8
Hardness	mg/L	--	112	122	125	117	126	136	127	131
Nitrate-N	mg/L	10	ND U	0.12 J	0.1 J	0.1 J	ND	ND	ND	ND
pH	SU	8.5	4.87	5.11	4.94	5.05	5.03	5	5.2	5.18
Specific Conductance	umhos/cm	--	292	303	329	378	355	331	302.52	444.01
Sulfate	mg/L	250	56.4	60.9	64	61.8	61.9	58.9	61.7	60.5
Total Dissolved Solids	mg/L	500	222	280	252	256	258	182	288	270
Turbidity	NTU	5	3.35	2.33	2.85	3.13	1.6	2.54	15.85	218.91

Historical Well Data Assessment Monitoring, Organochloride Pesticides

Name: Eastern Sanitary Landfill

Location ID:	GWM-16D						
Number of Sampling Dates:	5						
Parameter Name	**Units**	**Compliance Limit**	**9/8/2021**	**3/14/2022**	**9/12/2022**	**3/13/2023**	**9/11/2023**
4,4'-DDD	ug/L	0.0063	ND U	ND	ND	ND	ND
4,4'-DDE	ug/L	0.046	ND U	ND	ND	ND	ND
4,4'-DDT	ug/L	0.23	ND U	ND	ND	ND	ND
Aldrin	ug/L	0.00092	ND U	ND	ND	ND	ND
alpha-HCH (alpha-BHC)	ug/L	0.0072	ND U	ND	ND	ND	ND
beta-BHC	ug/L	0.025	ND U	ND	ND	ND	0.00035 J
Chlordane	ug/L	2	ND U	ND	0.0098 J	ND	ND
delta-BHC	ug/L	0.2	ND U	ND	ND	ND	ND *-
Dieldrin	ug/L	0.0018	ND U	ND	ND	ND	ND
Endosulfan I	ug/L	10	ND U	ND	ND	ND	ND
Endosulfan II	ug/L	10	ND U	ND	ND	ND	ND
Endosulfan Sulfate	ug/L	10	ND U	ND	ND	ND	ND
Endrin	ug/L	2	ND U	ND	ND	ND	ND
Endrin Aldehyde	ug/L	2	ND U	ND	ND	ND	ND
gamma-BHC	ug/L	0.2	ND U	ND	ND	ND	ND
Heptachlor	ug/L	0.4	ND U	ND	ND	ND	ND
Heptachlor Epoxide	ug/L	0.2	ND U	ND	ND	ND	ND
Methoxychlor	ug/L	40	ND U	ND	ND	ND	ND
Toxaphene	ug/L	3	ND U	ND	ND	ND	ND

Historical Well Data Table I

Name: Eastern Sanitary Landfill

Location ID:	GWM-16D									
Number of Sampling Dates:	10									
Parameter Name	**Units**	**Compliance Limit**	**11/15/2019**	**4/2/2020**	**9/30/2020**	**3/22/2021**	**9/8/2021**	**3/14/2022**	**9/12/2022**	**9/13/2022**
Acetone	ug/L	1400	4.7 J	ND U	ND U	ND U	3.1 JB	3.2 J	ND	–
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Benzene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Bromomethane	ug/L	0.75	ND U	ND U	ND U	ND U	ND U	ND	ND	–
2-Butanone	ug/L	700	4.9 J	ND U	ND U	ND U	ND U	ND	ND	–
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Chloromethane	ug/L	19	ND U	ND U	ND U	ND U	ND U	ND	ND	–
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND	ND	–
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	–
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	ND	ND	–
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	ND U	ND	ND	–
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	–
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND U	ND	ND	–
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	–
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	ND	ND	–
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	ND U	ND	ND	–
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Methyl t-Butyl Ether	ug/L	20	0.6 J	0.52 J	0.53 J	0.42 J	0.46 J	ND	ND	–
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	–
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	–
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND	ND	–
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	0.42 J	–
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND	ND	–
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	–
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND U	ND	ND	–
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND	ND	–
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	–

Location ID:	GWM-16D									
Number of Sampling Dates:	10									
Parameter Name	**Units**	**Compliance Limit**	**11/15/2019**	**4/2/2020**	**9/30/2020**	**3/22/2021**	**9/8/2021**	**3/14/2022**	**9/12/2022**	**9/13/2022**
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	–
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND U	ND	ND	–
o-Xylene	ug/L	10000	–	ND U	ND U	ND U	ND U	ND	ND	–
mp-Xylene	ug/L	10000	–	ND U	ND U	ND U	ND U	ND	ND	–
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Chloroform	ug/L	80	0.24 J	ND U	0.24 J	ND U	0.24 J	0.21 JB	ND	–

Location ID:	GWM-16D			
Number of Sampling Dates:	10			
Parameter Name	**Units**	**Compliance Limit**	**3/13/2023**	**9/11/2023**
Acetone	ug/L	1400	ND	ND
Acrylonitrile	ug/L	–	ND	ND
Benzene	ug/L	5	ND	ND
Bromochloromethane	ug/L	–	ND	ND
Bromomethane	ug/L	0.75	0.85 JB	1.1 B
2-Butanone	ug/L	700	ND	ND
Carbon disulfide	ug/L	81	ND	0.31 J
Carbon Tetrachloride	ug/L	5	ND	ND
Chlorobenzene	ug/L	100	ND	ND
Chloroethane	ug/L	2100	ND	ND
Chloromethane	ug/L	19	ND	1.4 B
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND
Dibromomethane	ug/L	–	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND
Methylene Chloride	ug/L	5	ND	ND
Methyl t-Butyl Ether	ug/L	20	0.41 J	ND
1,2-Dichloropropane	ug/L	5	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND

Location ID:	GWM-16D			
Number of Sampling Dates:	10			
Parameter Name	**Units**	**Compliance Limit**	**3/13/2023**	**9/11/2023**
Ethylbenzene	ug/L	700	ND	ND
2-Hexanone	ug/L	–	ND	ND
Iodomethane	ug/L	–	0.75 JB	0.78 J
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND
Styrene	ug/L	100	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND
Tetrachloroethene	ug/L	5	ND	ND
Toluene	ug/L	1000	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND
Trichloroethene	ug/L	5	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND	ND
Vinyl acetate	ug/L	–	ND	ND
Vinyl chloride	ug/L	2	ND	ND
Total Xylenes	ug/L	10000	ND	ND
o-Xylene	ug/L	10000	ND	ND
mp-Xylene	ug/L	10000	ND	ND
Bromodichloromethane	ug/L	80	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND
Bromoform	ug/L	80	ND	ND
Chloroform	ug/L	80	0.3 J	ND

Historical Well Data Table II

Name: Eastern Sanitary Landfill

Location ID:	GWM-16D									
Number of Sampling Dates:	10									
Parameter Name	**Units**	**Compliance Limit**	**11/15/2019**	**4/2/2020**	**9/30/2020**	**3/22/2021**	**9/8/2021**	**3/14/2022**	**9/12/2022**	**9/13/2022**
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Arsenic, Total	mg/L	0.01	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Barium, Total	mg/L	2	0.14	0.14	0.14	0.054 R	0.14	0.13	0.14	–
Beryllium, Total	mg/L	0.004	ND U	0.00048 J	0.00073 J	0.00056 J	0.00062 J	0.00047 J	0.0004 J	–
Cadmium, Total	mg/L	0.005	ND U	ND U	ND U	ND U	0.00018 J	ND	ND	–
Calcium, Total	mg/L	–	14.4	14.9	14.7	7.1 R	13.5	13.4	13.2	–
Chromium, Total	mg/L	0.1	0.012	0.0067	0.00099 J	0.00088 J	ND U	0.0031	0.0014 J	–
Cobalt, Total	mg/L	–	0.0065	0.0093	0.0062	0.0054 J	0.0055	0.006	0.0046 J	–
Copper, Total	mg/L	1.3	0.0074	0.01	0.012	0.0056 UR	0.013	0.015	0.0094	–
Iron, Total	mg/L	0.3	0.076	0.071	ND U	0.29 R	ND U	0.11	0.058	–
Lead, Total	mg/L	0.015	0.009	0.003	0.0016 J	0.0022 UR	0.0011 J	0.00099 J	ND	–
Magnesium, Total	mg/L	–	8	8.2	7.9	2.7 R	7.7	8	7.7	–
Manganese, Total	mg/L	0.043	0.042	0.046	0.037	0.072 R	0.035	0.041	0.034	–
Mercury, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Nickel, Total	mg/L	0.039	0.023	0.031	0.021	0.0067 R	0.02	0.022	0.019	–
Potassium, Total	mg/L	–	3.4	8.1	4.4	1.4 R	6.3	4	4.1	–
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	0.0022 J	0.0019 J	ND	ND	–
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Sodium, Total	mg/L	–	30.5	37.2	32.2	0.97 R	35	34.4	32.6	–
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Vanadium, Total	mg/L	0.0086	ND U	ND U	ND U	ND U	ND U	ND	ND	–
Zinc, Total	mg/L	0.6	0.031	0.04	0.046	0.028 R	0.036	0.038	0.034	–
Alkalinity, Total	mg/L	–	13	46	21	26	42	14	14	–
Ammonia-N	mg/L	–	ND U	ND U	0.243	0.136	0.125	0.07 J	ND	–
Chemical Oxygen Demand (COD)	mg/L	–	ND U	9 J	ND U	ND U	ND U	ND	ND	–
Chloride	mg/L	250	73.9	66.6	73.4	74.1	79.1	72.6	73.3	–
Hardness	mg/L	–	68.7	77.1	72.9	65.2	62.1	62.2	70	–
Nitrate-N	mg/L	10	3.2	3.1	3.2	3.4	3.4	2.8	2.8	–
pH	SU	8.5	5.17	6.14	5.61	5.85	5.95	5.4	5.16	–
Specific Conductance	umhos/cm	–	278	239	256	276	254	145.1	289	–
Sulfate	mg/L	250	20.4	14.9	15.8	20.4	20.3	15.2	15.8	–
Total Dissolved Solids	mg/L	500	184	322	172	204	226	158	194	–
Turbidity	NTU	5	4.94	3.01	0.44	0.45	0.54	0.41	7.74	–

Location ID:	GWM-16D			
Number of Sampling Dates:	10			
Parameter Name	**Units**	**Compliance Limit**	**3/13/2023**	**9/11/2023**
Antimony, Total	mg/L	0.006	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND
Barium, Total	mg/L	2	0.14	0.14
Beryllium, Total	mg/L	0.004	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND

Location ID: GWM-16D
Number of Sampling Dates: 10

Parameter Name	Units	Compliance Limit	3/13/2023	9/11/2023
Calcium, Total	mg/L	–	13.3	12.6
Chromium, Total	mg/L	0.1	0.012	0.0027
Cobalt, Total	mg/L	–	0.0069	0.004 J
Copper, Total	mg/L	1.3	0.013	0.0065
Iron, Total	mg/L	0.3	0.074	0.026 J
Lead, Total	mg/L	0.015	0.00082 J	ND
Magnesium, Total	mg/L	–	7.7	7.2
Manganese, Total	mg/L	0.043	0.038	0.028
Mercury, Total	mg/L	0.002	ND	ND
Nickel, Total	mg/L	0.039	0.025	0.018
Potassium, Total	mg/L	–	3.4	3.3
Selenium, Total	mg/L	0.05	ND	ND
Silver, Total	mg/L	0.0094	ND	ND
Sodium, Total	mg/L	–	32.6	32
Thallium, Total	mg/L	0.002	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND
Zinc, Total	mg/L	0.6	0.032	0.027
Alkalinity, Total	mg/L	–	15	7
Ammonia-N	mg/L	–	0.13	0.207
Chemical Oxygen Demand (COD)	mg/L	–	ND	ND
Chloride	mg/L	250	74.7	74.8
Hardness	mg/L	–	65.4	62.2
Nitrate-N	mg/L	10	2.9	2.9
pH	SU	8.5	5.15	5.01
Specific Conductance	umhos/cm	–	329.77	299.97
Sulfate	mg/L	250	16	16.1
Total Dissolved Solids	mg/L	500	176	210
Turbidity	NTU	5	16.23	5.32

Historical Well Data Assessment Monitoring, Organochloride Pesticides

Name: Eastern Sanitary Landfill

Location ID:	GWM-17D							
Number of Sampling Dates:	6							
Parameter Name	**Units**	**Compliance Limit**	**3/16/2021**	**9/14/2021**	**3/18/2022**	**9/13/2022**	**3/14/2023**	**9/12/2023**
4,4'-DDD	ug/L	0.0063	ND U	ND U	ND	ND	ND	0.0012
4,4'-DDE	ug/L	0.046	ND U	ND U	ND	ND	ND	ND
4,4'-DDT	ug/L	0.23	ND U	0.0031 J	ND	ND	ND	ND
Aldrin	ug/L	0.00092	ND U	ND U	ND	ND	ND	ND
alpha-HCH (alpha-BHC)	ug/L	0.0072	ND U	ND U	ND	ND	ND	ND
beta-BHC	ug/L	0.025	ND U	ND U	ND	ND	ND	ND
Chlordane	ug/L	2	ND U	ND U	ND	ND	ND	ND
delta-BHC	ug/L	0.2	ND U	ND U	ND	ND	ND	ND *-
Dieldrin	ug/L	0.0018	0.0072	0.0072	ND	0.0035	0.00488	0.004
Endosulfan I	ug/L	10	ND U	ND U	ND	ND	ND	ND
Endosulfan II	ug/L	10	ND U	ND U	ND	ND	ND	ND
Endosulfan Sulfate	ug/L	10	ND U	ND U	ND	ND	ND	ND
Endrin	ug/L	2	ND U	ND U	ND	ND	ND	ND
Endrin Aldehyde	ug/L	2	ND U	ND U	ND	ND	ND	ND
gamma-BHC	ug/L	0.2	ND U	ND U	ND	ND	ND	ND
Heptachlor	ug/L	0.4	ND U	ND U	ND	ND	ND	ND
Heptachlor Epoxide	ug/L	0.2	ND U	ND U	ND	ND	ND	ND
Methoxychlor	ug/L	40	ND U	ND U	ND	0.00091 J	ND	ND
Toxaphene	ug/L	3	ND U	ND U	ND	ND	ND	ND

Historical Well Data Table I

Name: Eastern Sanitary Landfill

Location ID:	GWM-17D									
Number of Sampling Dates:	11									
Parameter Name	**Units**	**Compliance Limit**	**11/14/2019**	**3/26/2020**	**9/29/2020**	**3/16/2021**	**9/14/2021**	**3/14/2022**	**3/18/2022**	**9/12/2022**
Acetone	ug/L	1400	ND U	ND U	3.2 JB	ND U	ND U	--	ND	--
Acrylonitrile	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
Benzene	ug/L	5	0.97 J	0.83 J	0.97 J	0.76 J	0.78 J	--	0.69 J	--
Bromochloromethane	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
Bromomethane	ug/L	0.75	ND U	ND U	ND U	ND U	ND U	--	ND	--
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND U	--	ND	--
Carbon disulfide	ug/L	81	ND U	0.28 JB	ND U	ND U	ND U	--	ND	--
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	--	ND	--
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	ND U	--	ND	--
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	--	ND	--
Chloromethane	ug/L	19	ND U	ND U	0.42 J	ND U	ND U	--	ND	--
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	--	ND	--
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	--	ND	--
Dibromomethane	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	2.6	--	ND	--
1,4-Dichlorobenzene	ug/L	75	1.8	1.9	2	1.8	1.8	--	1.7	--
trans-1,4-dichloro-2-butene	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
1,1-Dichloroethane	ug/L	2.8	0.35 J	0.29 J	0.31 J	ND U	ND U	--	ND	--
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	--	ND	--
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	--	ND	--
cis-1,2-Dichloroethene	ug/L	70	0.34 J	ND U	0.32 J	ND U	ND U	--	ND	--
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	--	ND	--
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	--	ND	--
Methyl t-Butyl Ether	ug/L	20	1	0.9 J	0.92 J	0.88 J	0.87 J	--	0.72 J	--
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	--	ND	--
trans-1,3-Dichloropropene	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
cis-1,3-Dichloropropene	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND U	--	ND	--
2-Hexanone	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
Iodomethane	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	--	ND	--
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	--	ND	--
1,1,1,2-Tetrachloroethane	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	--	ND	--
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	--	ND	--
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND U	--	ND	--
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	--	ND	--
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	--	ND	--
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	--	ND	--

Location ID:	GWM-17D									
Number of Sampling Dates:	11									
Parameter Name	**Units**	**Compliance Limit**	**11/14/2019**	**3/26/2020**	**9/29/2020**	**3/16/2021**	**9/14/2021**	**3/14/2022**	**3/18/2022**	**9/12/2022**
Trichlorofluoromethane	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
1,2,3-Trichloropropane	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
Vinyl acetate	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	--	ND	--
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND U	--	ND	--
o-Xylene	ug/L	10000	--	ND U	ND U	ND U	ND U	--	ND	--
mp-Xylene	ug/L	10000	--	ND U	ND U	ND U	ND U	--	ND	--
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	--	ND	--
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	--	ND	--
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	--	ND	--
Chloroform	ug/L	80	ND U	ND U	ND U	ND U	ND U	--	ND	--

Location ID:	GWM-17D									
Number of Sampling Dates:	11									
Parameter Name	**Units**	**Compliance Limit**	**9/13/2022**	**3/14/2023**	**9/12/2023**					
Acetone	ug/L	1400	ND	ND	ND					
Acrylonitrile	ug/L	--	ND	ND	ND					
Benzene	ug/L	5	0.68 J	ND	0.54 J					
Bromochloromethane	ug/L	--	ND	ND	ND					
Bromomethane	ug/L	0.75	ND	ND	0.84 JB					
2-Butanone	ug/L	700	ND	ND	ND					
Carbon disulfide	ug/L	81	ND	ND	ND					
Carbon Tetrachloride	ug/L	5	ND	ND	ND					
Chlorobenzene	ug/L	100	ND	ND	ND					
Chloroethane	ug/L	2100	ND	ND	ND					
Chloromethane	ug/L	19	ND	ND	0.5 JB					
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND					
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND					
Dibromomethane	ug/L	--	ND	ND	ND					
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND					
1,4-Dichlorobenzene	ug/L	75	ND	1.4	1.3					
trans-1,4-dichloro-2-butene	ug/L	--	ND	ND	ND					
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND					
1,2-Dichloroethane	ug/L	5	ND	ND	ND					
1,1-Dichloroethene	ug/L	7	ND	ND	ND					
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND					
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND					
Methylene Chloride	ug/L	5	ND	ND	ND					
Methyl t-Butyl Ether	ug/L	20	0.74 J	0.74 J	0.62 J					
1,2-Dichloropropane	ug/L	5	ND	ND	ND					
trans-1,3-Dichloropropene	ug/L	--	ND	ND	ND					
cis-1,3-Dichloropropene	ug/L	--	ND	ND	ND					

Location ID:	GWM-17D									
Number of Sampling Dates:	11									
Parameter Name	**Units**	**Compliance Limit**	**9/13/2022**	**3/14/2023**	**9/12/2023**					
Ethylbenzene	ug/L	700	ND	ND	ND					
2-Hexanone	ug/L	--	ND	ND	ND					
Iodomethane	ug/L	--	ND	ND	ND					
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND					
Styrene	ug/L	100	ND	ND	ND					
1,1,1,2-Tetrachloroethane	ug/L	--	ND	ND	ND					
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND					
Tetrachloroethene	ug/L	5	ND	ND	ND					
Toluene	ug/L	1000	ND	ND	ND					
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND					
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND					
Trichloroethene	ug/L	5	ND	ND	ND					
Trichlorofluoromethane	ug/L	--	ND	ND	ND					
1,2,3-Trichloropropane	ug/L	--	ND	ND	ND					
Vinyl acetate	ug/L	--	ND	ND	ND					
Vinyl chloride	ug/L	2	ND	ND	ND					
Total Xylenes	ug/L	10000	ND	ND	ND					
o-Xylene	ug/L	10000	ND	ND	ND					
mp-Xylene	ug/L	10000	ND	ND	ND					
Bromodichloromethane	ug/L	80	ND	ND	ND					
Chlorodibromomethane	ug/L	80	ND	ND	ND					
Bromoform	ug/L	80	ND	ND	ND					
Chloroform	ug/L	80	ND	ND	ND					

Historical Well Data Table II

Name: Eastern Sanitary Landfill

Location ID: GWM-17D
Number of Sampling Dates: 11

Parameter Name	Units	Compliance Limit	11/14/2019	3/26/2020	9/29/2020	3/16/2021	9/14/2021	3/14/2022	3/18/2022	9/12/2022
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	ND U	ND U	–	ND	–
Arsenic, Total	mg/L	0.01	ND U	ND U	ND U	ND U	0.00034 J	–	ND	–
Barium, Total	mg/L	2	0.27	0.25	0.24	0.29	0.29	–	0.28	–
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	ND U	ND U	–	ND	–
Cadmium, Total	mg/L	0.005	ND U	ND U	ND U	ND U	ND U	–	ND	–
Calcium, Total	mg/L	–	40.3	38.7	38.4	41.3	45	–	41.7	–
Chromium, Total	mg/L	0.1	ND U	0.0018 J	0.00095 J	ND U	ND U	–	0.0013 J	–
Cobalt, Total	mg/L	–	0.14	0.16	0.19	0.23	0.24	–	0.25	–
Copper, Total	mg/L	1.3	ND U	ND U	ND U	ND U	ND U	–	ND	–
Iron, Total	mg/L	0.3	0.18	0.13	0.076	0.049 J	0.056 J	–	0.031 J	–
Lead, Total	mg/L	0.015	ND U	ND U	ND U	ND U	ND U	–	ND	–
Magnesium, Total	mg/L	–	24.3	21.8	23	24.8	24	–	22.7	–
Manganese, Total	mg/L	0.043	2	2	2.3	2.6	2.8	–	2.9	–
Mercury, Total	mg/L	0.002	0.00045 J	0.00038 J	0.00029 J	0.00049 J	0.00085	–	0.001	–
Nickel, Total	mg/L	0.039	0.056	0.056	0.055	0.064	0.063	–	0.063	–
Potassium, Total	mg/L	–	4.2	5.3	5	4.2	4	–	4.5	–
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	ND U	0.00085 J	–	ND	–
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND U	–	ND	–
Sodium, Total	mg/L	–	34.4	33.9	35.4	37.6	38	–	39.1	–
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	–	ND	–
Vanadium, Total	mg/L	0.0086	0.0012 J	ND U	0.0013 J	0.0011 J	0.0015 J	–	0.0011 J	–
Zinc, Total	mg/L	0.6	0.031	0.028	0.036	0.036	0.036	–	0.035	–
Alkalinity, Total	mg/L	–	214	191	169	175	155	–	154	–
Ammonia-N	mg/L	–	0.159	0.106	0.135	0.263	0.186	–	0.253	–
Chemical Oxygen Demand (COD)	mg/L	–	9 J	ND U	8 J	12 J	ND U	–	ND	–
Chloride	mg/L	250	67.8	65.1	76.3	78.2	87.2	–	92.5	–
Hardness	mg/L	–	201	196	201	184	190	–	190	–
Nitrate-N	mg/L	10	0.12 J	ND U	0.06 J	ND U	ND U	–	ND	–
pH	SU	8.5	6	5.87	5.86	5.71	5.65	–	5.87	–
Specific Conductance	umhos/cm	–	373	401	429	448	491	–	487	–
Sulfate	mg/L	250	17.5	16.7	21.8	20.1	21.3	–	19.1	–
Total Dissolved Solids	mg/L	500	506	268	354	352	410	–	320	–
Turbidity	NTU	5	10.36	5.37	5.44	3.15	5.68	–	13.48	–

Location ID: GWM-17D
Number of Sampling Dates: 11

Parameter Name	Units	Compliance Limit	9/13/2022	3/14/2023	9/12/2023
Antimony, Total	mg/L	0.006	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND
Barium, Total	mg/L	2	0.29	0.29	0.28
Beryllium, Total	mg/L	0.004	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND

Location ID: GWM-17D
Number of Sampling Dates: 11

Parameter Name	Units	Compliance Limit	9/13/2022	3/14/2023	9/12/2023
Calcium, Total	mg/L	–	42.5	43.2	40.2
Chromium, Total	mg/L	0.1	0.0018 J	0.0019 J	0.0014 J
Cobalt, Total	mg/L	–	0.3	0.33	0.32
Copper, Total	mg/L	1.3	ND	ND	ND
Iron, Total	mg/L	0.3	0.032 J	0.18	0.66
Lead, Total	mg/L	0.015	ND	ND	ND
Magnesium, Total	mg/L	–	23.8	23.6	21.3
Manganese, Total	mg/L	0.043	3.2	3.4	3.2
Mercury, Total	mg/L	0.002	0.0009	0.00039 J	0.00054
Nickel, Total	mg/L	0.039	0.067	0.065	0.062
Potassium, Total	mg/L	–	5.4	4.1	3.5
Selenium, Total	mg/L	0.05	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND
Sodium, Total	mg/L	–	42.1	41.4	39.2
Thallium, Total	mg/L	0.002	ND	ND	ND
Vanadium, Total	mg/L	0.0086	0.0011 J	0.0013 J	ND
Zinc, Total	mg/L	0.6	0.028	0.032	0.03
Alkalinity, Total	mg/L	–	157	150	164
Ammonia-N	mg/L	–	ND	0.287	0.537
Chemical Oxygen Demand (COD)	mg/L	–	6 J	12 J	5 J
Chloride	mg/L	250	92.7	99.7	102
Hardness	mg/L	–	208	227	205
Nitrate-N	mg/L	10	ND	ND	ND
pH	SU	8.5	5.47	5.85	5.82
Specific Conductance	umhos/cm	–	534	651.76	623.01
Sulfate	mg/L	250	17.3	18.9	19.5
Total Dissolved Solids	mg/L	500	312	344	358
Turbidity	NTU	5	21.85	3.48	5.56

Historical Well Data Assessment Monitoring, Organochloride Pesticides

Name: Eastern Sanitary Landfill

Location ID:	GWM-17S							
Number of Sampling Dates:	6							
Parameter Name	**Units**	**Compliance Limit**	**3/16/2021**	**9/14/2021**	**3/18/2022**	**9/13/2022**	**3/14/2023**	**9/12/2023**
4,4'-DDD	ug/L	0.0063	ND U	ND U	ND	ND	ND	0.001 J
4,4'-DDE	ug/L	0.046	ND U	ND U	ND	ND	ND	ND
4,4'-DDT	ug/L	0.23	ND U	ND U	ND	ND	ND	ND
Aldrin	ug/L	0.00092	ND U	ND U	ND	ND	ND	ND
alpha-HCH (alpha-BHC)	ug/L	0.0072	ND U	ND U	ND	ND	ND	ND
beta-BHC	ug/L	0.025	ND U	ND U	ND	ND	ND	ND
Chlordane	ug/L	2	ND U	ND U	ND	ND	ND	ND
delta-BHC	ug/L	0.2	ND U	ND U	ND	ND	ND	ND *-
Dieldrin	ug/L	0.0018	0.0075	0.0085	ND	0.004	0.00408	0.0042
Endosulfan I	ug/L	10	ND U	ND U	ND	ND	ND	ND
Endosulfan II	ug/L	10	ND U	ND U	ND	ND	ND	ND
Endosulfan Sulfate	ug/L	10	ND U	ND U	ND	ND	ND	ND
Endrin	ug/L	2	ND U	ND U	ND	ND	ND	ND
Endrin Aldehyde	ug/L	2	ND U	ND U	ND	ND	ND	ND
gamma-BHC	ug/L	0.2	ND U	ND U	ND	ND	ND	ND
Heptachlor	ug/L	0.4	ND U	ND U	ND	ND	ND	ND
Heptachlor Epoxide	ug/L	0.2	ND U	ND U	ND	ND	ND	ND
Methoxychlor	ug/L	40	ND U	ND U	ND	ND	ND	ND
Toxaphene	ug/L	3	ND U	ND U	ND	ND	ND	ND

Historical Well Data Table I

Name: Eastern Sanitary Landfill

Location ID:	GWM-17S									
Number of Sampling Dates:	11									
Parameter Name	**Units**	**Compliance Limit**	**11/14/2019**	**3/26/2020**	**9/29/2020**	**3/16/2021**	**9/14/2021**	**3/14/2022**	**3/18/2022**	**9/12/2022**
Acetone	ug/L	1400	4.1 J	3.5 J	5.2 JB	ND U	ND U	--	3.4 J	--
Acrylonitrile	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
Benzene	ug/L	5	0.93 J	1.1	1 J	0.81 J	0.86 J	--	0.69 J	--
Bromochloromethane	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
Bromomethane	ug/L	0.75	ND U	ND U	ND U	ND U	ND U	--	ND	--
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND U	--	ND	--
Carbon disulfide	ug/L	81	ND U	0.29 JB	ND U	ND U	ND U	--	ND	--
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	--	ND	--
Chlorobenzene	ug/L	100	ND U	0.22 J	ND U	ND U	ND U	--	ND	--
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	--	ND	--
Chloromethane	ug/L	19	ND U	ND U	0.57 J	ND U	ND U	--	ND	--
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	--	ND	--
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	--	ND	--
Dibromomethane	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	--	ND	--
1,4-Dichlorobenzene	ug/L	75	1.8	2.4	1.9	1.8	1.7	--	1.6	--
trans-1,4-dichloro-2-butene	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
1,1-Dichloroethane	ug/L	2.8	0.29 J	ND U	ND U	ND U	ND U	--	ND	--
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	--	ND	--
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	--	ND	--
cis-1,2-Dichloroethene	ug/L	70	0.36 J	0.53 J	0.41 J	ND U	ND U	--	0.36 J	--
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	--	ND	--
Methylene Chloride	ug/L	5	ND U	ND U	0.46 J	ND U	ND U	--	ND	--
Methyl t-Butyl Ether	ug/L	20	0.76 J	0.85 J	0.77 J	0.76 J	0.7 J	--	0.66 J	--
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	--	ND	--
trans-1,3-Dichloropropene	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
cis-1,3-Dichloropropene	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND U	--	ND	--
2-Hexanone	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
Iodomethane	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	--	ND	--
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	--	ND	--
1,1,1,2-Tetrachloroethane	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	--	ND	--
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	--	ND	--
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND U	--	ND	--
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	--	ND	--
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	--	ND	--
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	--	ND	--

Location ID:	GWM-17S									
Number of Sampling Dates:	11									
Parameter Name	**Units**	**Compliance Limit**	**11/14/2019**	**3/26/2020**	**9/29/2020**	**3/16/2021**	**9/14/2021**	**3/14/2022**	**3/18/2022**	**9/12/2022**
Trichlorofluoromethane	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
1,2,3-Trichloropropane	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
Vinyl acetate	ug/L	--	ND U	ND U	ND U	ND U	ND U	--	ND	--
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	--	ND	--
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND U	--	ND	--
o-Xylene	ug/L	10000	--	ND U	ND U	ND U	ND U	--	ND	--
mp-Xylene	ug/L	10000	--	ND U	ND U	ND U	ND U	--	ND	--
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	--	ND	--
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	--	ND	--
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	--	ND	--
Chloroform	ug/L	80	ND U	ND U	ND U	ND U	ND U	--	ND	--

Location ID:	GWM-17S									
Number of Sampling Dates:	11									
Parameter Name	**Units**	**Compliance Limit**	**9/13/2022**	**3/14/2023**	**9/12/2023**					
Acetone	ug/L	1400	ND	ND	ND					
Acrylonitrile	ug/L	--	ND	ND	ND					
Benzene	ug/L	5	0.68 J	ND	0.78 J					
Bromochloromethane	ug/L	--	ND	ND	ND					
Bromomethane	ug/L	0.75	ND	ND	1 B					
2-Butanone	ug/L	700	ND	ND	ND					
Carbon disulfide	ug/L	81	ND	ND	ND					
Carbon Tetrachloride	ug/L	5	ND	ND	ND					
Chlorobenzene	ug/L	100	ND	0.22 J	ND					
Chloroethane	ug/L	2100	ND	ND	ND					
Chloromethane	ug/L	19	ND	ND	0.52 JB					
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND					
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND					
Dibromomethane	ug/L	--	ND	ND	ND					
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND					
1,4-Dichlorobenzene	ug/L	75	ND	1.9	1.6					
trans-1,4-dichloro-2-butene	ug/L	--	ND	ND	ND					
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND					
1,2-Dichloroethane	ug/L	5	ND	ND	ND					
1,1-Dichloroethene	ug/L	7	ND	ND	ND					
cis-1,2-Dichloroethene	ug/L	70	ND	0.35 J	0.34 J					
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND					
Methylene Chloride	ug/L	5	ND	ND	ND					
Methyl t-Butyl Ether	ug/L	20	0.63 J	0.82 J	0.67 J					
1,2-Dichloropropane	ug/L	5	ND	ND	ND					
trans-1,3-Dichloropropene	ug/L	--	ND	ND	ND					
cis-1,3-Dichloropropene	ug/L	--	ND	ND	ND					

Location ID:	GWM-17S									
Number of Sampling Dates:	11									
Parameter Name	**Units**	**Compliance Limit**	**9/13/2022**	**3/14/2023**	**9/12/2023**					
Ethylbenzene	ug/L	700	ND	ND	ND					
2-Hexanone	ug/L	--	ND	ND	ND					
Iodomethane	ug/L	--	ND	ND	ND					
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND					
Styrene	ug/L	100	ND	ND	ND					
1,1,1,2-Tetrachloroethane	ug/L	--	ND	ND	ND					
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND					
Tetrachloroethene	ug/L	5	ND	ND	ND					
Toluene	ug/L	1000	ND	ND	ND					
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND					
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND					
Trichloroethene	ug/L	5	ND	ND	ND					
Trichlorofluoromethane	ug/L	--	ND	ND	ND					
1,2,3-Trichloropropane	ug/L	--	ND	ND	ND					
Vinyl acetate	ug/L	--	ND	ND	ND					
Vinyl chloride	ug/L	2	ND	ND	ND					
Total Xylenes	ug/L	10000	ND	ND	ND					
o-Xylene	ug/L	10000	ND	ND	ND					
mp-Xylene	ug/L	10000	ND	ND	ND					
Bromodichloromethane	ug/L	80	ND	ND	ND					
Chlorodibromomethane	ug/L	80	ND	ND	ND					
Bromoform	ug/L	80	ND	ND	ND					
Chloroform	ug/L	80	ND	ND	ND					

Historical Well Data Table II

Name: Eastern Sanitary Landfill

Location ID: GWM-17S
Number of Sampling Dates: 11

Parameter Name	Units	Compliance Limit	11/14/2019	3/26/2020	9/29/2020	3/16/2021	9/14/2021	3/14/2022	3/18/2022	9/12/2022
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	ND U	ND U	–	ND	–
Arsenic, Total	mg/L	0.01	0.0012 J	ND U	0.0013 J	ND U	0.001 J	–	ND	–
Barium, Total	mg/L	2	0.23	0.23	0.21	0.25	0.26	–	0.23	–
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	ND U	ND U	–	ND	–
Cadmium, Total	mg/L	0.005	ND U	ND U	ND U	ND U	ND U	–	ND	–
Calcium, Total	mg/L	–	38.6	39	35.4	34.9	38	–	35.7	–
Chromium, Total	mg/L	0.1	ND U	0.0016 J	0.00081 J	ND U	ND U	–	0.0015 J	–
Cobalt, Total	mg/L	–	0.46	0.57	0.42	0.43	0.41	–	0.43	–
Copper, Total	mg/L	1.3	ND U	ND U	ND U	ND U	ND U	–	ND	–
Iron, Total	mg/L	0.3	84.1	85.2	101	107	100	–	85.1	–
Lead, Total	mg/L	0.015	ND U	ND U	ND U	ND U	ND U	–	ND	–
Magnesium, Total	mg/L	–	22.4	21.6	22	21.7	21	–	20.4	–
Manganese, Total	mg/L	0.043	4.1	6.8	3.6	3.9	4	–	4.6	–
Mercury, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	–	ND	–
Nickel, Total	mg/L	0.039	0.028	0.026	0.026	0.026	0.025	–	0.027	–
Potassium, Total	mg/L	–	3.4	3.1	3.2	3.4	3.5	–	3.2	–
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	ND U	0.00064 J	–	ND	–
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	0.00094 J	ND U	–	ND	–
Sodium, Total	mg/L	–	40.5	39.5	44	45.4	47	–	45.1	–
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	0.00024 J	–	ND	–
Vanadium, Total	mg/L	0.0086	0.00086 J	ND U	ND U	ND U	ND U	–	ND	–
Zinc, Total	mg/L	0.6	0.011	0.008	0.0083	0.01	0.015	–	0.01	–
Alkalinity, Total	mg/L	–	201	188	183	192	180	–	152	–
Ammonia-N	mg/L	–	0.185	0.139	0.203	0.427	0.362	–	0.429	–
Chemical Oxygen Demand (COD)	mg/L	–	17	18	20	24	22	–	18	–
Chloride	mg/L	250	87.6	98.9	92.8	101	105	–	110	–
Hardness	mg/L	–	189	186	189	177	160	–	169	–
Nitrate-N	mg/L	10	ND U	ND U	ND U	ND U	ND U	–	ND	–
pH	SU	8.5	6.41	6.08	6.26	6.35	6.22	–	6.26	–
Specific Conductance	umhos/cm	–	545	6.23	641	672	742	–	673	–
Sulfate	mg/L	250	20.7	23.1	24.2	22.5	23.1	–	21.9	–
Total Dissolved Solids	mg/L	500	556	314	436	402	490	–	408	–
Turbidity	NTU	5	5.82	4.77	3.1	2.78	3.78	–	3.81	–

Location ID: GWM-17S
Number of Sampling Dates: 11

Parameter Name	Units	Compliance Limit	9/13/2022	3/14/2023	9/12/2023
Antimony, Total	mg/L	0.006	ND	ND	ND
Arsenic, Total	mg/L	0.01	0.0014 J	0.0012 J	0.0012 J
Barium, Total	mg/L	2	0.24	0.28	0.23
Beryllium, Total	mg/L	0.004	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND

Location ID:	GWM-17S									
Number of Sampling Dates:	11									
Parameter Name	**Units**	**Compliance Limit**	**9/13/2022**	**3/14/2023**	**9/12/2023**					
Calcium, Total	mg/L	–	36.1	39.1	38.8					
Chromium, Total	mg/L	0.1	ND	0.0018 J	0.0022 J					
Cobalt, Total	mg/L	–	0.47	0.64	0.69					
Copper, Total	mg/L	1.3	ND	ND	ND					
Iron, Total	mg/L	0.3	83.2	102	66.3					
Lead, Total	mg/L	0.015	ND	ND	ND					
Magnesium, Total	mg/L	–	21.6	24	21.9					
Manganese, Total	mg/L	0.043	4.3	7.6	7.1					
Mercury, Total	mg/L	0.002	ND	ND	ND					
Nickel, Total	mg/L	0.039	0.031	0.024	0.034					
Potassium, Total	mg/L	–	3.3	3.5	2.9					
Selenium, Total	mg/L	0.05	ND	ND	ND					
Silver, Total	mg/L	0.0094	ND	ND	ND					
Sodium, Total	mg/L	–	45.9	49.1	41					
Thallium, Total	mg/L	0.002	ND	0.00046 J	ND					
Vanadium, Total	mg/L	0.0086	ND	0.00078 J	ND					
Zinc, Total	mg/L	0.6	0.009	0.009	0.011					
Alkalinity, Total	mg/L	–	146	176	166					
Ammonia-N	mg/L	–	ND	0.548	0.5					
Chemical Oxygen Demand (COD)	mg/L	–	17	26	15					
Chloride	mg/L	250	104	110	102					
Hardness	mg/L	–	182	216	200					
Nitrate-N	mg/L	10	ND	ND	ND					
pH	SU	8.5	5.96	6.07	6.22					
Specific Conductance	umhos/cm	–	709	992.44	812.63					
Sulfate	mg/L	250	21.1	16.7	19.3					
Total Dissolved Solids	mg/L	500	394	492	382					
Turbidity	NTU	5	4.66	4.49	1.26					

Historical Well Data Table I

Name: Eastern Sanitary Landfill

Location ID:	GWM-19D									
Number of Sampling Dates:	9									
Parameter Name	**Units**	**Compliance Limit**	**11/14/2019**	**3/25/2020**	**9/29/2020**	**3/22/2021**	**9/15/2021**	**3/24/2022**	**9/15/2022**	**3/16/2023**
Acetone	ug/L	1400	3.6 J	3.6 J	4.9 JB	ND U	3.2 JB	ND	ND	ND
Acrylonitrile	ug/L	--	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Benzene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Bromochloromethane	ug/L	--	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Bromomethane	ug/L	0.75	ND U	ND U	ND U	ND U	0.67 JB	ND	ND	ND
2-Butanone	ug/L	700	ND U	3.1 J	ND U	ND U	ND U	ND	ND	ND
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chloromethane	ug/L	19	ND U	ND U	0.91 J	ND U	ND U	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Dibromomethane	ug/L	--	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	--	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	0.5 J	ND U	0.34 J	ND U	ND U	0.44 J	ND	0.36 J
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	--	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	--	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
2-Hexanone	ug/L	--	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Iodomethane	ug/L	--	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	--	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	0.67 J	ND	ND	ND

Location ID:	GWM-19D									
Number of Sampling Dates:	9									
Parameter Name	**Units**	**Compliance Limit**	**11/14/2019**	**3/25/2020**	**9/29/2020**	**3/22/2021**	**9/15/2021**	**3/24/2022**	**9/15/2022**	**3/16/2023**
Trichlorofluoromethane	ug/L	--	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2,3-Trichloropropane	ug/L	--	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Vinyl acetate	ug/L	--	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
o-Xylene	ug/L	10000	--	ND U	ND U	ND U	ND U	ND	ND	ND
mp-Xylene	ug/L	10000	--	ND U	ND U	ND U	ND U	ND	ND	ND
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chloroform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND	ND	ND

Location ID:	GWM-19D		
Number of Sampling Dates:	9		
Parameter Name	**Units**	**Compliance Limit**	**9/14/2023**
Acetone	ug/L	1400	ND
Acrylonitrile	ug/L	--	ND
Benzene	ug/L	5	ND
Bromochloromethane	ug/L	--	ND
Bromomethane	ug/L	0.75	ND
2-Butanone	ug/L	700	ND
Carbon disulfide	ug/L	81	ND
Carbon Tetrachloride	ug/L	5	ND
Chlorobenzene	ug/L	100	0.9 JB
Chloroethane	ug/L	2100	ND
Chloromethane	ug/L	19	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND
1,2-Dibromoethane	ug/L	0.05	ND
Dibromomethane	ug/L	--	ND
1,2-Dichlorobenzene	ug/L	600	ND
1,4-Dichlorobenzene	ug/L	75	0.41 JB
trans-1,4-dichloro-2-butene	ug/L	--	ND
1,1-Dichloroethane	ug/L	2.8	ND
1,2-Dichloroethane	ug/L	5	ND
1,1-Dichloroethene	ug/L	7	ND
cis-1,2-Dichloroethene	ug/L	70	ND
trans-1,2-Dichloroethene	ug/L	100	ND
Methylene Chloride	ug/L	5	ND
Methyl t-Butyl Ether	ug/L	20	0.36 J
1,2-Dichloropropane	ug/L	5	ND
trans-1,3-Dichloropropene	ug/L	--	ND
cis-1,3-Dichloropropene	ug/L	--	ND

Location ID:	GWM-19D
Number of Sampling Dates:	9

Parameter Name	Units	Compliance Limit	9/14/2023
Ethylbenzene	ug/L	700	ND
2-Hexanone	ug/L	--	ND
Iodomethane	ug/L	--	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND
Styrene	ug/L	100	ND
1,1,1,2-Tetrachloroethane	ug/L	--	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND
Tetrachloroethene	ug/L	5	ND
Toluene	ug/L	1000	ND
1,1,1-Trichloroethane	ug/L	200	ND
1,1,2-Trichloroethane	ug/L	5	ND
Trichloroethene	ug/L	5	ND
Trichlorofluoromethane	ug/L	--	ND
1,2,3-Trichloropropane	ug/L	--	ND
Vinyl acetate	ug/L	--	ND
Vinyl chloride	ug/L	2	ND
Total Xylenes	ug/L	10000	ND
o-Xylene	ug/L	10000	ND
mp-Xylene	ug/L	10000	ND
Bromodichloromethane	ug/L	80	ND
Chlorodibromomethane	ug/L	80	ND
Bromoform	ug/L	80	ND
Chloroform	ug/L	80	ND

Historical Well Data Table II

Name: Eastern Sanitary Landfill

Location ID:	GWM-19D									
Number of Sampling Dates:	9									
Parameter Name	**Units**	**MW-19D**	**11/14/2019**	**3/25/2020**	**9/29/2020**	**3/22/2021**	**9/15/2021**	**3/24/2022**	**9/15/2022**	**3/16/2023**
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	0.0012 J	ND U	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND U	ND U	ND U	ND U	0.00025 J	ND	ND	ND
Barium, Total	mg/L	2	0.068	0.059	0.049	0.054	0.057	0.06	0.06	0.061
Beryllium, Total	mg/L	0.004	0.00059 J	0.00042 J	0.00039 J	0.0006 J	0.00045 J	0.00045 J	0.00041 J	0.00038 J
Cadmium, Total	mg/L	0.005	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Calcium, Total	mg/L	--	9.9	8.4	7.5	7.7	8.5	8.4	8.1	8.5
Chromium, Total	mg/L	0.1	0.0013 J	0.0024	0.0015 J	0.0018 J	0.0016 J	0.0015 J	0.002 J	0.0021 J
Cobalt, Total	mg/L	--	0.0098	0.0083	0.0074	0.0082	0.0089	0.0089	0.0096	0.012
Copper, Total	mg/L	1.3	0.0098	0.009	0.014	0.021	0.018	0.013	0.014	0.011
Iron, Total	mg/L	0.3	0.094	0.029 J	0.24	0.061	ND U	ND	ND	ND
Lead, Total	mg/L	0.015	0.0091	ND U	ND U	ND U	ND U	0.0014 J	0.0014 J	0.0024
Magnesium, Total	mg/L	--	5.3	5.1	4.4	4.5	4.7	4.8	4.7	4.8
Manganese, Total	mg/L	0.043	0.048	0.043	0.041	0.039	0.041	0.047	0.05	0.058
Mercury, Total	mg/L	0.002	0.0019	0.0019	0.002	0.0023	0.0022	0.0018	0.002	0.0023
Nickel, Total	mg/L	0.039	0.029	0.026	0.021	0.023	0.025	0.025	0.026	0.026
Potassium, Total	mg/L	--	9.1	5.6	2.7	2.7	2.8	2.2	2.3	2.1
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	0.0021 J	0.0015 J	ND	ND	ND
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Sodium, Total	mg/L	--	23.9	18.5	14.1	15	15	15.1	13.9	14.4
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Vanadium, Total	mg/L	0.0086	0.0017 J	ND U	ND U	ND U	ND U	ND	ND	ND
Zinc, Total	mg/L	0.6	0.044	0.028	0.026	0.032	0.034	0.034	0.031	0.032
Alkalinity, Total	mg/L	--	72	36	20	16	18	13	13	11
Ammonia-N	mg/L	--	0.028 J	0.197	ND U	0.165	0.059 J	0.064 J	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	15 J	ND U	ND U	ND U	ND U	6 J	ND	7 J
Chloride	mg/L	250	32.1	32.3	35.5	36.6	36.3	34.9	34.2	35.2
Hardness	mg/L	--	46.4	41.4	39.3	36.5	36.8	37.7	39.5	43
Nitrate-N	mg/L	10	1.6	1.2	1.5	1.9	1.7	1.4	1.5	1.3
pH	SU	8.5	5.66	5.52	4.66	5.02	4.89	4.42	4.91	4.84
Specific Conductance	umhos/cm	--	173.3	166.8	143.1	150.5	164.5	154.5	141.8	193
Sulfate	mg/L	250	3.6	3.1	7	6.2	6.6	7.3	7.6	10.1
Total Dissolved Solids	mg/L	500	270	104	120	109	128	80	94	142
Turbidity	NTU	5	2.97	0.65	0.28	0.43	0.46	0.7	9.98	0.41

Location ID:	GWM-19D									
Number of Sampling Dates:	9									
Parameter Name	**Units**	**MW-19D**	**9/14/2023**							
Antimony, Total	mg/L	0.006	ND							
Arsenic, Total	mg/L	0.01	ND							

Location ID:	GWM-19D		
Number of Sampling Dates:	9		
Parameter Name	**Units**	**MW-19D**	**9/14/2023**
Barium, Total	mg/L	2	0.062
Beryllium, Total	mg/L	0.004	0.0004 J
Cadmium, Total	mg/L	0.005	ND
Calcium, Total	mg/L	--	8.4
Chromium, Total	mg/L	0.1	0.0015 J
Cobalt, Total	mg/L	--	0.013
Copper, Total	mg/L	1.3	0.0094
Iron, Total	mg/L	0.3	ND
Lead, Total	mg/L	0.015	0.0021 J
Magnesium, Total	mg/L	--	4.8
Manganese, Total	mg/L	0.043	0.07
Mercury, Total	mg/L	0.002	0.0021
Nickel, Total	mg/L	0.039	0.026
Potassium, Total	mg/L	--	2.5
Selenium, Total	mg/L	0.05	ND
Silver, Total	mg/L	0.0094	ND
Sodium, Total	mg/L	--	14.4
Thallium, Total	mg/L	0.002	ND
Vanadium, Total	mg/L	0.0086	ND
Zinc, Total	mg/L	0.6	0.031
Alkalinity, Total	mg/L	--	12
Ammonia-N	mg/L	--	0.208
Chemical Oxygen Demand (COD)	mg/L	--	ND
Chloride	mg/L	250	37
Hardness	mg/L	--	40.6
Nitrate-N	mg/L	10	1.3
pH	SU	8.5	4.64
Specific Conductance	umhos/cm	--	172.35
Sulfate	mg/L	250	14.2
Total Dissolved Solids	mg/L	500	135
Turbidity	NTU	5	0

Historical Leachate Data Table I

Name: ESL Leachate

Location ID:	L-1									
Number of Sampling Dates:	47									
Parameter Name	**Units**	**TCLP**	**3/30/2000**	**10/19/2000**	**3/26/2001**	**10/3/2001**	**3/29/2002**	**9/11/2002**	**4/2/2003**	**10/2/2003**
Acetone	ug/L	–	–	ND	35	ND	10	5	11	ND
Acrylonitrile	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	500	–	6	10	10	10	10	8	7
Bromochloromethane	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	200000	–	ND	106	8	150	25	176	15
Carbon disulfide	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	500	–	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100000	–	8	27	60	50	28	31	14
Chloroethane	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	7500	–	ND	22	29	25	32	29	36
trans-1,4-dichloro-2-butene	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	500	–	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	700	–	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	–	–	ND	ND	12	ND	15	11	ND
1,2-Dichloropropane	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	–	–	41	30	46	30	22	21	9
2-Hexanone	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	–	–	ND	15	ND	5	ND	ND	ND
Styrene	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	700	–	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	–	–	50	70	7	10	ND	16	9
1,1,1-Trichloroethane	ug/L	–	–	ND	ND	ND	ND	12	ND	ND

Location ID:	L-1									
Number of Sampling Dates:	47									
Parameter Name	**Units**	**TCLP**	**3/30/2000**	**10/19/2000**	**3/26/2001**	**10/3/2001**	**3/29/2002**	**9/11/2002**	**4/2/2003**	**10/2/2003**
1,1,2-Trichloroethane	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	500	–	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	ND	ND	ND	–	–	–	–
Vinyl acetate	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	200	–	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	–	123	105	114	90	79	65	59
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	6000	–	ND	ND	ND	ND	ND	ND	ND

Location ID:	L-1									
Number of Sampling Dates:	47									
Parameter Name	**Units**	**TCLP**	**3/25/2004**	**10/5/2004**	**4/18/2005**	**9/29/2005**	**3/23/2006**	**9/28/2006**	**11/7/2007**	**4/16/2008**
Acetone	ug/L	–	ND	20	65	ND	39	80	431	1073
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	500	10	5	7	ND	11	9	15	8
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	200000	ND	6	22	5	100	150	736	1428
Carbon disulfide	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	500	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100000	7	3	6	6	ND	3	63	2
Chloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	7500	45	26	32	28	23	37	44	79
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	–	ND	ND	ND	ND	ND	2	9	ND
1,2-Dichloroethane	ug/L	500	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	–	3	ND	ND	ND	ND	5	7	4
trans-1,2-Dichloroethene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	–	ND	ND	ND	ND	ND	2	6	ND

Location ID:	L-1									
Number of Sampling Dates:	47									
Parameter Name	**Units**	**TCLP**	**3/25/2004**	**10/5/2004**	**4/18/2005**	**9/29/2005**	**3/23/2006**	**9/28/2006**	**11/7/2007**	**4/16/2008**
Methyl t-Butyl Ether	ug/L	–	4	ND	ND	ND	11	30	8	19
1,2-Dichloropropane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	–	27	9	16	9	ND	15	55	63
2-Hexanone	ug/L	–	6	ND	ND	ND	ND	17	5	13
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	–	33	ND	ND	ND	ND	107	35	82
Styrene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	1
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	–	46	9	14	7	ND	17	ND	49
1,1,1-Trichloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	500	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	200	2	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	89	36	62	52	37	67	157	181
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	6000	ND	ND	ND	ND	ND	2	ND	ND

Location ID:	L-1									
Number of Sampling Dates:	47									
Parameter Name	**Units**	**TCLP**	**10/9/2008**	**3/18/2009**	**10/20/2009**	**5/12/2010**	**8/26/2010**	**3/15/2011**	**10/7/2011**	**3/20/2012**
Acetone	ug/L	–	408	586	275	57	80	68	13.7	5
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	500	6	8	4	4	10	4.7	2.88	5
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	200000	407	793	424	78	92	86	9.1	88
Carbon disulfide	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	500	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100000	8	28	ND	2	19	12	13.2	26

Location ID:	L-1									
Number of Sampling Dates:	47									
Parameter Name	**Units**	**TCLP**	**10/9/2008**	**3/18/2009**	**10/20/2009**	**5/12/2010**	**8/26/2010**	**3/15/2011**	**10/7/2011**	**3/20/2012**
Chloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	–	ND	ND	2	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	7500	42	75	38	13	29	25	12	13
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	–	2	2	2	1	2	ND	ND	1
1,2-Dichloroethane	ug/L	500	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	–	1	2	1	ND	2	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	–	ND	ND	ND	ND	2	ND	ND	ND
Methyl t-Butyl Ether	ug/L	–	13	12	ND	8	3	2.7	3.24	3
1,2-Dichloropropane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	–	25	41	28	15	28	8.2	ND	ND
2-Hexanone	ug/L	–	5	5	ND	6	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	–	27	43	4	5	9	ND	ND	ND
Styrene	ug/L	–	ND	ND	ND	4	5	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	–	19	36	45	20	36	7.5	ND	2
1,1,1-Trichloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	500	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	ND	ND
Vinyl acetate	ug/L	–	ND	ND	ND	82	120	ND	ND	18
Vinyl chloride	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	84	147	94	43	79	32.7	7.29	11
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	L-1									
Number of Sampling Dates:	47									
Parameter Name	**Units**	**TCLP**	**10/9/2008**	**3/18/2009**	**10/20/2009**	**5/12/2010**	**8/26/2010**	**3/15/2011**	**10/7/2011**	**3/20/2012**
Chloroform	ug/L	6000	2	ND	ND	ND	ND	ND	ND	ND

Location ID:	L-1									
Number of Sampling Dates:	47									
Parameter Name	**Units**	**TCLP**	**9/27/2012**	**3/25/2013**	**9/23/2013**	**3/20/2014**	**9/17/2014**	**3/19/2015**	**9/8/2015**	**3/14/2016**
Acetone	ug/L	–	37	ND	ND	69.9	216	78.1 B	ND U	108
Acrylonitrile	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Benzene	ug/L	500	4	5	4	2	5	2.9	3	2.9
Bromochloromethane	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Bromomethane	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
2-Butanone	ug/L	200000	ND	ND	48	14.2	180	32	31.1	70
Carbon disulfide	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	0.25 J
Carbon Tetrachloride	ug/L	500	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Chlorobenzene	ug/L	100000	25	ND	20	8.8	18.3	9	10.4	7.9
Chloroethane	ug/L	–	ND	ND	ND	ND U	0.56 J	ND U	ND U	ND U
Chloromethane	ug/L	–	ND	ND	ND	0.51 J	ND U	0.32 J	ND U	0.5 J
1,2-Dibromo-3-chloropropane	ug/L	–	ND	ND	ND	ND U	ND U	0.026	ND U	ND U
1,2-Dibromoethane	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	–	ND	ND	ND	0.79 J	0.83 J	0.65 J	ND U	ND U
1,4-Dichlorobenzene	ug/L	7500	20	29	12	13.4	11.4	8.8	13.9	18.6
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	500	ND	ND	ND	ND U	0.39 J	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	700	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	–	ND	ND	ND	0.37 J	0.68 J	0.43 J	ND U	1.1
trans-1,2-Dichloroethene	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Methylene Chloride	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	–	ND	2	2	2.7	5.3	3.7	2.8	3.5
1,2-Dichloropropane	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Ethylbenzene	ug/L	–	10	41	7	7.7	4.8	3.2	7.7	13.7
2-Hexanone	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Iodomethane	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	–	5	ND	ND	ND U	6	2.5 J	ND U	6.9
Styrene	ug/L	–	ND	ND	ND	0.31 J	0.48 J	0.32 J	0.72 J	1.1
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Tetrachloroethene	ug/L	700	ND	ND	ND	ND U	ND U	ND U	ND U	ND U

Location ID:	L-1									
Number of Sampling Dates:	47									
Parameter Name	**Units**	**TCLP**	**9/27/2012**	**3/25/2013**	**9/23/2013**	**3/20/2014**	**9/17/2014**	**3/19/2015**	**9/8/2015**	**3/14/2016**
Toluene	ug/L	–	3	27	4	3.1	5.6	5.2	6.4	15.3
1,1,1-Trichloroethane	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Trichloroethene	ug/L	500	ND	1	ND	ND U	ND U	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Vinyl acetate	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Vinyl chloride	ug/L	200	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Total Xylenes	ug/L	10000	6	53	25	18.7	13.4	10.9	14.8	26.5
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Chlorodibromomethane	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Bromoform	ug/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Chloroform	ug/L	6000	ND	ND	ND	ND U	ND U	ND U	ND U	ND U

Location ID:	L-1									
Number of Sampling Dates:	47									
Parameter Name	**Units**	**TCLP**	**9/23/2016**	**3/30/2017**	**9/22/2017**	**3/26/2018**	**9/20/2018**	**3/14/2019**	**10/9/2019**	**4/3/2020**
Acetone	ug/L	–	171	ND U	86.1 B	50.8 B	58.8 B	87.2	323	222 B
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzene	ug/L	500	3.4	1.8	ND U	1.6	1.7	3.8	2.3	2.6
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Butanone	ug/L	200000	143	ND U	14.8	23.6	33.2	96.8	442	184
Carbon disulfide	ug/L	–	0.36 J	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon Tetrachloride	ug/L	500	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorobenzene	ug/L	100000	13.3	8	2.6	3.7	5.8	6.4	3.1	5.3
Chloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	1	ND U	0.7 J
Chloromethane	ug/L	–	ND U	ND U	ND U	ND U	0.33 J	0.31 JB	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	–	0.58 J	0.41 J	ND U	ND U	0.52 J	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	7500	7	3.6	3.8	11.7	8	14.2	6.2	11.7
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	500	ND U	ND U	ND U	ND U	ND U	0.62 J	1.8	0.61 J
1,1-Dichloroethene	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	–	ND U	ND U	ND U	3.3	ND U	ND U	0.87 J	ND U

Location ID:	L-1									
Number of Sampling Dates:	47									
Parameter Name	**Units**	**TCLP**	**9/23/2016**	**3/30/2017**	**9/22/2017**	**3/26/2018**	**9/20/2018**	**3/14/2019**	**10/9/2019**	**4/3/2020**
trans-1,2-Dichloroethene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methylene Chloride	ug/L	–	ND U	ND U	ND U	ND U	10.3	5	2.4	ND U
Methyl t-Butyl Ether	ug/L	–	3.5	2.8	1.4	1.3	3.4	5.6	5.5	4.8
1,2-Dichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Ethylbenzene	ug/L	–	2.4	ND U	0.82 J	8.7	3.4	11.9	5.9	6.3
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	3.6 J	ND U
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	–	ND U	ND U	ND U	2.8 J	2.8 J	9.9	12.5	8.9
Styrene	ug/L	–	0.33 J	ND U	ND U	0.72 J	0.25 J	1	0.55 J	0.63 J
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Tetrachloroethene	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Toluene	ug/L	–	3.4	0.27 J	1.1	9.5	3.3	13.3	10.8	7.5
1,1,1-Trichloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichloroethene	ug/L	500	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl chloride	ug/L	200	ND U	ND U	ND U	ND U	ND U	0.47 J	ND U	ND U
Total Xylenes	ug/L	10000	6.3	0.75 J	2.1 J	16.2	8.2	28.6	14	17.4
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	11.3
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	6.1
Bromodichloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorodibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromoform	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroform	ug/L	6000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	L-1								
Number of Sampling Dates:	47								
Parameter Name	**Units**	**TCLP**	**9/25/2020**	**3/22/2021**	**9/16/2021**	**3/24/2022**	**9/19/2022**	**3/17/2023**	**9/15/2023**
Acetone	ug/L	–	61 B	222	144	121	50	48.6 J	55
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND	ND	ND	ND
Benzene	ug/L	500	1.3	2.9	1.9	2.6 J	2.1 J	3.6 J	ND
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND	ND	ND	ND
Bromomethane	ug/L	–	ND U	ND U	0.48 JB	ND	ND	ND	ND
2-Butanone	ug/L	200000	28	178	163	70.5	ND	ND	ND
Carbon disulfide	ug/L	–	ND U	ND U	0.36 JB	ND	ND	ND	ND

Location ID:	L-1								
Number of Sampling Dates:	47								
Parameter Name	**Units**	**TCLP**	**9/25/2020**	**3/22/2021**	**9/16/2021**	**3/24/2022**	**9/19/2022**	**3/17/2023**	**9/15/2023**
Carbon Tetrachloride	ug/L	500	ND U	ND U	ND U	ND	ND	ND	ND
Chlorobenzene	ug/L	100000	4.6	6.5	3.4 B	4.5 J	7.1	10.4	3.4 J
Chloroethane	ug/L	–	ND U	0.82 J	0.35 J	ND	ND	ND	ND
Chloromethane	ug/L	–	0.49 J	ND U	ND U	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	–	ND U	ND U	ND U	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	–	ND U	ND U	ND U	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	–	ND U	0.44 J	ND U	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	7500	3.5	6	5.8	7.2	5.1	7.4	2.7 J
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	–	ND U	ND U	ND U	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	500	0.35 J	0.53 J	0.5 J	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	700	ND U	ND U	ND U	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	–	3	ND U	5.7	ND	2.6 J	ND	ND
trans-1,2-Dichloroethene	ug/L	–	ND U	ND U	ND U	ND	ND	ND	ND
Methylene Chloride	ug/L	–	0.5 JB	ND U	ND U	2.5 J	ND	ND	ND
Methyl t-Butyl Ether	ug/L	–	4.5	5.9	4.5	5.5	5.5	5.3	3.1 J
1,2-Dichloropropane	ug/L	–	ND U	ND U	ND U	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND	ND	ND	ND
Ethylbenzene	ug/L	–	0.69 J	1.7	1.4	4.8 J	ND	2 J	ND
2-Hexanone	ug/L	–	ND U	1.9 J	ND U	ND	ND	ND	ND
Iodomethane	ug/L	–	ND U	ND U	0.55 JB	ND	9.4	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	–	ND U	6	4.9 J	ND	ND	ND	ND
Styrene	ug/L	–	ND U	ND U	ND U	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND	ND	ND	ND
Tetrachloroethene	ug/L	700	ND U	ND U	ND U	ND	ND	ND	ND
Toluene	ug/L	–	1.3	3.6	50.6	8.8	ND	2.3 J	ND
1,1,1-Trichloroethane	ug/L	–	ND U	ND U	ND U	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	–	ND U	ND U	ND U	ND	ND	ND	ND
Trichloroethene	ug/L	500	ND U	ND U	ND U	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND	ND	ND	ND
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND	ND	ND	ND
Vinyl chloride	ug/L	200	ND U	0.34 J	ND U	ND	ND	ND	ND
Total Xylenes	ug/L	10000	3.1	6.9	6.9	11.3 J	4.1 J	6.6 J	ND
mp-Xylene	ug/L	10000	1.8 J	4.5	4.6	7.6 J	4.1 J	4.3 J	ND
o-Xylene	ug/L	10000	1.3	2.4	2.3	3.7 J	ND	2.4 J	ND
Bromodichloromethane	ug/L	–	ND U	ND U	ND U	ND	ND	ND	ND

Location ID:	L-1								
Number of Sampling Dates:	47								
Parameter Name	**Units**	**TCLP**	**9/25/2020**	**3/22/2021**	**9/16/2021**	**3/24/2022**	**9/19/2022**	**3/17/2023**	**9/15/2023**
Chlorodibromomethane	ug/L	–	ND U	ND U	ND U	ND	ND	ND	ND
Bromoform	ug/L	–	ND U	ND U	ND U	ND	ND	ND	ND
Chloroform	ug/L	6000	ND U	ND U	ND U	ND	3.1 JB	ND	ND

Historical Leachate Data Table II and Water Quality Parameters

Name: ESL Leachate

Location ID: L-1
Number of Sampling Dates: 47

Parameter Name	Units	TCLP	3/30/2000	10/19/2000	3/26/2001	10/3/2001	3/29/2002	9/11/2002	4/2/2003	10/2/2003
Antimony, Total	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	100	ND	0.129	0.396	0.4	0.475	0.5	0.394	0.39
Beryllium, Total	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	1	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	–	–	–	–	–	–	–	–	–
Chromium, Total	mg/L	5	ND	0.017	0.01	0.018	0.018	0.026	0.013	0.016
Cobalt, Total	mg/L	–	ND	0.016	ND	0.016	0.014	0.016	ND	ND
Copper, Total	mg/L	–	ND	0.033	0.023	ND	0.01	0.023	ND	0.034
Iron, Total	mg/L	–	ND	54.9	22.24	28.81	46.77	19.625	21.6	23.27
Lead, Total	mg/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/L	–	–	–	–	–	–	–	–	–
Manganese, Total	mg/L	–	ND	0.331	1.09	0.364	0.54	0.299	1.846	1.039
Mercury, Total	mg/L	0.2	ND	0.0005	ND	ND	ND	0.0002	ND	ND
Nickel, Total	mg/L	–	ND	0.04	0.038	0.062	0.038	0.131	0.025	0.051
Potassium, Total	mg/L	–	–	–	–	–	–	–	–	–
Selenium, Total	mg/L	1	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	–	–	–	–	–	–	–	–	–
Thallium, Total	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	–	ND	ND	ND	ND	0.027	0.013	ND	0.011
Zinc, Total	mg/L	–	ND	0.151	0.061	0.067	0.032	0.019	0.01	0.068
Alkalinity, Total	mg/L	–	ND	2200	1560	2000	1900	2320	1225	1025
Ammonia-N	mg/L	–	ND	254	185.3	278	227.23	293.93	131.37	221.56
Chemical Oxygen Demand (COD)	mg/L	–	ND	713	472	792	557	907	228	291
Chloride	mg/L	–	ND	1027	644.67	1322.6	832.95	1411.31	361.95	599.96
Hardness	mg/L	–	ND	792	542.64	567.16	666.2	800.74	610.95	612.99
Nitrate-N	mg/L	–	ND	0.12	ND	ND	ND	ND	ND	ND
pH	SU	–	–	–	6.7	6.8	6.61	6.7	6.4	6.46
Specific Conductance	umhos/cm	–	ND	7	4.8	8220	6420	9040	6420	5070
Sulfate	mg/L	–	ND	20	6	13	19.32	13.09	3.36	5.97
Total Dissolved Solids	mg/L	–	ND	3585	2275	3982	2829	4443	1527	2170
Turbidity	NTU	–	ND	240	20.7	16	15.5	15	65	8.4

Location ID: L-1
Number of Sampling Dates: 47

Parameter Name	Units	TCLP	3/25/2004	10/5/2004	4/18/2005	9/29/2005	3/23/2006	9/28/2006	11/7/2007	4/16/2008
Antimony, Total	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	5	ND	ND	ND	ND	ND	ND	ND	ND

Location ID: L-1
Number of Sampling Dates: 47

Parameter Name	Units	TCLP	3/25/2004	10/5/2004	4/18/2005	9/29/2005	3/23/2006	9/28/2006	11/7/2007	4/16/2008
Barium, Total	mg/L	100	0.4	0.629	0.583	0.61	0.55	0.336	0.28	0.3
Beryllium, Total	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	1	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	–	–	–	–	–	–	131.5	63.5	146.75
Chromium, Total	mg/L	5	0.021	0.021	0.017	0.044	0.037	0.015	0.018	0.02
Cobalt, Total	mg/L	–	ND	ND	ND	0.018	0.013	0.013	0.019	0.02
Copper, Total	mg/L	–	0.014	0.016	0.03	ND	0.025	0.024	ND	ND
Iron, Total	mg/L	–	29.7	3.94	8.77	6.99	18.71	17.3	18.95	15.96
Lead, Total	mg/L	5	0.007	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/L	–	–	–	–	–	–	72.5	60.6	97.5
Manganese, Total	mg/L	–	1.733	0.774	0.784	0.401	0.672	0.346	0.218	0.587
Mercury, Total	mg/L	0.2	0.0003	ND	0.0003	0.0002	0.0003	0.0003	0.0004	ND
Nickel, Total	mg/L	–	0.081	0.069	0.076	0.18	0.175	0.04	0.073	0.071
Potassium, Total	mg/L	–	–	–	–	–	–	277.65	274	280
Selenium, Total	mg/L	1	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	–	–	–	–	–	–	350	540	496.8
Thallium, Total	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	–	0.011	ND	0.014	ND	ND	ND	ND	ND
Zinc, Total	mg/L	–	0.012	0.049	0.196	0.084	0.074	0.056	0.033	ND
Alkalinity, Total	mg/L	–	2100	2587	2907	3925	4474.5	2038	1925.5	213.4
Ammonia-N	mg/L	–	232.39	284.93	295.96	377.31	648.51	239.34	263.82	254.32
Chemical Oxygen Demand (COD)	mg/L	–	381	523	5.97	725	727	784	1113	779
Chloride	mg/L	–	856.8	1009.15	1334.48	2774.64	2415.43	1037.9	1088.18	961.21
Hardness	mg/L	–	766.12	405.52	672.74	1305.27	268.14	625.79	408.11	767.94
Nitrate-N	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
pH	SU	–	6.51	6.56	6.6	7.28	6.91	6.49	6.52	6.42
Specific Conductance	umhos/cm	–	6290	6590	7110	11590	12980	6200	5750	7360
Sulfate	mg/L	–	2.67	ND	ND	2.04	6.12	ND	ND	ND
Total Dissolved Solids	mg/L	–	2838	3103	3897	6066	5522	283	3336	3050
Turbidity	NTU	–	6.23	4.6	22.4	54.8	44	5.63	34	24

Location ID: L-1
Number of Sampling Dates: 47

Parameter Name	Units	TCLP	10/9/2008	3/18/2009	10/20/2009	5/12/2010	8/26/2010	3/15/2011	10/7/2011	3/20/2012
Antimony, Total	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	5	ND	ND	ND	ND	ND	ND	0.012	0.014
Barium, Total	mg/L	100	0.284	0.328	0.344	0.3	0.328	0.3	0.038	0.565
Beryllium, Total	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	1	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	–	140.35	55.57	60.2	149.87	261.2	156.8	110	15.86
Chromium, Total	mg/L	5	0.022	0.021	0.025	0.036	0.034	0.021	0.024	0.029

Location ID:	L-1									
Number of Sampling Dates:	47									
Parameter Name	**Units**	**TCLP**	**10/9/2008**	**3/18/2009**	**10/20/2009**	**5/12/2010**	**8/26/2010**	**3/15/2011**	**10/7/2011**	**3/20/2012**
Cobalt, Total	mg/L	–	0.021	0.017	0.025	0.019	0.018	0.011	0.01	0.013
Copper, Total	mg/L	–	ND	ND	0.016	0.022	0.047	0.064	ND	ND
Iron, Total	mg/L	–	19.04	23.44	68.95	33.41	19.17	28.08	18	15.09
Lead, Total	mg/L	5	0.002	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/L	–	36.86	222	158.6	90	145.3	95.75	110	12.22
Manganese, Total	mg/L	–	0.215	0.566	0.433	0.538	0.256	1.245	0.73	0.642
Mercury, Total	mg/L	0.2	ND	0.0002	0.0003	ND	ND	ND	ND	ND
Nickel, Total	mg/L	–	0.085	0.079	0.096	0.06	0.077	0.046	0.038	0.049
Potassium, Total	mg/L	–	356	368.8	318	231.3	322.7	186.95	250	281.9
Selenium, Total	mg/L	1	ND	ND	ND	ND	ND	ND	ND	0.191
Silver, Total	mg/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	–	538	1152.4	841.6	233.6	1161.6	707	580	76.4
Thallium, Total	mg/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	–	ND	ND	ND	ND	ND	ND	ND	0.011
Zinc, Total	mg/L	–	ND	0.023	0.076	ND	0.021	0.01	0.02	0.014
Alkalinity, Total	mg/L	–	1527	2302.8	3047	1824.7	2001.1	1747.2	2100	1229.05
Ammonia-N	mg/L	–	334.66	424.68	367.17	350.58	357.41	231.23	300	359.72
Chemical Oxygen Demand (COD)	mg/L	–	761	692	679	986	1072	373	500	640
Chloride	mg/L	–	982.2	141.25	1072.02	1122.48	1578.85	739.6	980	1145.75
Hardness	mg/L	–	502.24	1052.95	803.43	744.84	2150.56	785.82	710	899.24
Nitrate-N	mg/L	–	ND	ND	ND	ND	–	ND	ND	ND
pH	SU	–	6.67	6.76	6.79	6.93	6.96	6.6	7.23	6.7
Specific Conductance	umhos/cm	–	7300	7220	5740	5160	5620	4430	5480	5730
Sulfate	mg/L	–	4.68	13.25	27.41	8.57	2.33	12.96	5.6	4.86
Total Dissolved Solids	mg/L	–	5524	3436	3122	3558	4066	2366	2900	3422
Turbidity	NTU	–	37	66.8	65	14	27	33	38.9	28.4

Location ID:	L-1									
Number of Sampling Dates:	47									
Parameter Name	**Units**	**TCLP**	**9/27/2012**	**3/25/2013**	**9/23/2013**	**3/20/2014**	**9/17/2014**	**3/19/2015**	**9/8/2015**	**3/14/2016**
Antimony, Total	mg/L	–	ND	ND	ND	0.00095 J	0.0024	ND U	0.0013 J	0.00089 J
Arsenic, Total	mg/L	5	ND	ND	0.02	0.012	0.032	0.012	0.019	0.012
Barium, Total	mg/L	100	0.473	0.832	0.65	0.51	0.46	0.45	0.56	0.48
Beryllium, Total	mg/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Cadmium, Total	mg/L	1	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Calcium, Total	mg/L	–	73.59	142.3	113.4	113	94	121	120	163
Chromium, Total	mg/L	5	0.016	0.025	0.03	0.028	0.032	0.024	0.041	0.027
Cobalt, Total	mg/L	–	0.01	0.012	0.02	0.014	0.016	0.013	0.021	0.016
Copper, Total	mg/L	–	ND	ND	ND	0.009	0.0089	0.0041 J	0.0098	0.0043 J
Iron, Total	mg/L	–	4.792	28.05	15.81	23.8	13.5	17.3	15.6	18
Lead, Total	mg/L	5	ND	ND	ND	0.00076 J	ND U	ND U	0.00081 J	ND U
Magnesium, Total	mg/L	–	135.8	120	168.6	113	123	110	150	160

Location ID: L-1
Number of Sampling Dates: 47

Parameter Name	Units	TCLP	9/27/2012	3/25/2013	9/23/2013	3/20/2014	9/17/2014	3/19/2015	9/8/2015	3/14/2016
Manganese, Total	mg/L	–	0.146	1.203	0.23	0.72	0.24	0.49	0.3	0.47
Mercury, Total	mg/L	0.2	–	ND	ND	ND U	ND U	ND U	ND U	ND U
Nickel, Total	mg/L	–	0.035	0.042	0.048	0.047	0.047	0.043	0.055	0.048
Potassium, Total	mg/L	–	284.6	243.2	383.8	216	237	207	294	306
Selenium, Total	mg/L	1	0.151	0.111	0.17	0.0057	ND U	ND U	ND U	ND U
Silver, Total	mg/L	5	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Sodium, Total	mg/L	–	1070	754.4	1239	706	830	679	956	1010
Thallium, Total	mg/L	–	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Vanadium, Total	mg/L	–	ND	0.012	0.01	0.01	0.0095	0.0069	0.011	0.0082
Zinc, Total	mg/L	–	ND	ND	0.01	0.012	0.011	0.0046 J	0.0065	0.0086
Alkalinity, Total	mg/L	–	1319.4	1893.84	1841.9	2290	2580	2380	3110	2440
Ammonia-N	mg/L	–	381.81	343.46	494.01	320	395	379	520	371
Chemical Oxygen Demand (COD)	mg/L	–	658	765	747	753	867	662	928	702
Chloride	mg/L	–	1267.1	866.36	1394.28	1090	1570	1070	1490	991
Hardness	mg/L	–	742.98	849.5	977.5	913	811	847	882	1020
Nitrate-N	mg/L	–	ND	ND	0.72	ND U	ND U	ND U	ND U	ND U
pH	SU	–	6.68	6.49	6.64	6.8	6.79	6.45	7.03	6.66
Specific Conductance	umhos/cm	–	5750	3640	4780	5770	7870	5500	9910	6060
Sulfate	mg/L	–	3.36	10.54	7.91	6.9	2 J	12.2	4.3	14.7
Total Dissolved Solids	mg/L	–	33.68	2940	4188	3210	4160	3360	4730	3590
Turbidity	NTU	–	25.5	11	17.7	183	9.65	15	21.1	9.5

Location ID: L-1
Number of Sampling Dates: 47

Parameter Name	Units	TCLP	9/23/2016	3/30/2017	9/22/2017	3/26/2018	9/20/2018	3/14/2019	10/9/2019	4/3/2020
Antimony, Total	mg/L	–	0.0021 J	ND U	ND U	0.0011 J	0.0013 J	ND U	0.00075 J	ND U
Arsenic, Total	mg/L	5	0.023	0.012	0.022 J	0.01	0.013	0.0065	0.019	0.01 J
Barium, Total	mg/L	100	0.49	0.37	0.58	0.5	0.52	0.41	0.49	0.45
Beryllium, Total	mg/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Cadmium, Total	mg/L	1	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Calcium, Total	mg/L	–	105	118	133	140	119	135	101	147
Chromium, Total	mg/L	5	0.035	0.025	0.048	0.023	0.025	0.026	0.032	0.021
Cobalt, Total	mg/L	–	0.026	0.013	0.026 J	0.0092	0.014	0.013	0.019	0.012 J
Copper, Total	mg/L	–	0.0089	0.0076	0.044 J	0.0058	0.0045 J	0.0098 J	0.0056 J	ND U
Iron, Total	mg/L	–	11.8	10.6	9	15.2	16.2	17.4	12.1	25.6
Lead, Total	mg/L	5	0.00077 J	ND U	ND U	ND U	0.0014 J	ND U	ND U	ND U
Magnesium, Total	mg/L	–	149	156	184	110	125	125	142	114
Manganese, Total	mg/L	–	0.24	0.41	0.29	0.53	0.32	0.49	0.18	0.83
Mercury, Total	mg/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Nickel, Total	mg/L	–	0.057	0.048	0.082	0.037	0.045	0.044	0.052	0.041
Potassium, Total	mg/L	–	306	296	375	240	253	234	353	214
Selenium, Total	mg/L	1	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID: L-1
Number of Sampling Dates: 47

Parameter Name	Units	TCLP	9/23/2016	3/30/2017	9/22/2017	3/26/2018	9/20/2018	3/14/2019	10/9/2019	4/3/2020
Silver, Total	mg/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Sodium, Total	mg/L	–	1020	986	1380	860	838	752	1320	707
Thallium, Total	mg/L	–	ND U	ND U	ND U	ND U	ND U	ND U	0.00081 J	ND U
Vanadium, Total	mg/L	–	0.011	0.0058	0.016 J	0.0081	0.01	0.0083	0.008	0.01 J
Zinc, Total	mg/L	–	0.0075	0.0091	ND U	0.0094	0.017	0.011	0.013	0.021 J
Alkalinity, Total	mg/L	–	ND U	2350	3080	2280	2510	2440	377	2290
Ammonia-N	mg/L	–	652	347	907	337	389	255	427	247
Chemical Oxygen Demand (COD)	mg/L	–	971	706	879	533	751	555	1040	505
Chloride	mg/L	–	1680	1400	1760	1230	1530	978	1610	686
Hardness	mg/L	–	958	797	1090	802	810	851	840	838
Nitrate-N	mg/L	–	ND U	ND U	ND U	ND U	0.14 J	ND U	ND U	ND U
pH	SU	–	6.39	6.95	7.71	6.97	7.03	6.75	7.1	7.18
Specific Conductance	umhos/cm	–	8760	5970	10130	5390	7700	5580	5350	4510
Sulfate	mg/L	–	1.7 J	40.3	4.6	78.3	3.3	2.3	2.4	1.6 J
Total Dissolved Solids	mg/L	–	4350	3550	4630	3290	2640	3390	4730	2990
Turbidity	NTU	–	23	45.2	32.4	25.6	50.1	14.8	37.2	61.8

Location ID: L-1
Number of Sampling Dates: 47

Parameter Name	Units	TCLP	9/25/2020	3/22/2021	9/16/2021	3/24/2022	9/19/2022	3/17/2023	9/15/2023
Antimony, Total	mg/L	–	ND U	0.0017 J	ND U	ND	ND	ND	ND
Arsenic, Total	mg/L	5	0.02	0.022	0.02	0.0068 J	0.0071	0.0068	0.013 J
Barium, Total	mg/L	100	0.43	0.35	0.5	0.4	0.28	0.41	0.52
Beryllium, Total	mg/L	–	ND U	ND U	ND U	ND	ND	ND	ND
Cadmium, Total	mg/L	1	ND U	ND U	ND U	ND	ND	ND	ND
Calcium, Total	mg/L	–	107	114	120	134	59.2	129	111
Chromium, Total	mg/L	5	0.033	0.053	0.034	0.023	0.018	0.026	0.032
Cobalt, Total	mg/L	–	0.019	0.025	0.022	0.013 J	0.011	0.015	0.023 J
Copper, Total	mg/L	–	0.0066	0.013	ND U	ND	0.0031 J	0.0043 J	ND
Iron, Total	mg/L	–	11.5	12.2	9.2	8.9	2.8	6.2	6.1
Lead, Total	mg/L	5	ND U	0.00097 J	ND U	ND	ND	ND	ND
Magnesium, Total	mg/L	–	141	260	150	139	79	126	161
Manganese, Total	mg/L	–	0.23	1.1	0.21	0.64	0.11	0.47	0.17
Mercury, Total	mg/L	0.2	ND U	ND U	ND U	ND	ND	ND	ND
Nickel, Total	mg/L	–	0.042	0.19	0.053	0.044	0.03	0.043	0.06
Potassium, Total	mg/L	–	283	357	300	233	143	232	295
Selenium, Total	mg/L	1	ND U	0.0029 J	0.0013 J	ND	ND	ND	ND
Silver, Total	mg/L	5	ND U	ND U	ND U	ND	ND	ND	ND
Sodium, Total	mg/L	–	1080	1260	1000	812	591	898	1190
Thallium, Total	mg/L	–	ND U	ND U	ND U	ND	ND	ND	ND
Vanadium, Total	mg/L	–	0.0074	0.031	0.0086	0.007 J	0.0046	0.0055	ND
Zinc, Total	mg/L	–	0.01	0.018	0.013	0.05	0.0067	0.014	ND

Location ID: L-1
Number of Sampling Dates: 47

Parameter Name	Units	TCLP	9/25/2020	3/22/2021	9/16/2021	3/24/2022	9/19/2022	3/17/2023	9/15/2023
Alkalinity, Total	mg/L	–	2850	2620	3130	2500	2630	2300	253
Ammonia-N	mg/L	–	413	336	523	31.5	533	391	531
Chemical Oxygen Demand (COD)	mg/L	–	745	3210	975	570	1190	622	758
Chloride	mg/L	–	1640	949	1610	1150	1440	923	1460
Hardness	mg/L	–	885	1820	1000	950	900	718	924
Nitrate-N	mg/L	–	0.92	1.2	ND U	ND	ND	ND	ND
pH	SU	–	7.56	7.12	7.35	7.08	7.26	7.03	7.89
Specific Conductance	umhos/cm	–	7740	5410	9090	5910	9410	7295.1	8920
Sulfate	mg/L	–	2.6	3 J	5.9	3.1	ND	ND	ND
Total Dissolved Solids	mg/L	–	4250	3160	4340	3410	4130	3400	4520
Turbidity	NTU	–	33.4	57.7	32.4	85.9	34.1	209.04	15.2

Historical Leachate Data Table I

Name: ESL Leachate

Location ID:	L-2									
Number of Sampling Dates:	8									
Parameter Name	**Units**	**TCLP**	**4/23/2020**	**9/25/2020**	**3/22/2021**	**9/16/2021**	**3/24/2022**	**9/19/2022**	**3/17/2023**	**9/15/2023**
Acetone	ug/L	--	48.6 J	127 B	126	1100	1050	82.1	38.1 J	93.5
Acrylonitrile	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Benzene	ug/L	500	11.8	8.1	8.7	9.1	10.2	9.9	12.1	6.5
Bromochloromethane	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Bromomethane	ug/L	--	ND U	ND U	ND U	0.54 JB	ND	ND	ND	ND
2-Butanone	ug/L	200000	ND U	87	171	2070	2950	ND	ND	ND
Carbon disulfide	ug/L	--	ND U	ND U	ND U	0.4 JB	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	500	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Chlorobenzene	ug/L	100000	1.5 J	0.6 J	0.46 J	0.76 JB	ND	ND	ND	ND
Chloroethane	ug/L	--	2.2 J	1.7	3.1	ND U	2 J	ND	ND	ND
Chloromethane	ug/L	--	ND U	0.5 J	ND U	ND U	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Dibromomethane	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	7500	2.7 J	1.9	1.1	1.4	1.6 J	1.7 J	1.9 J	ND
trans-1,4-dichloro-2-butene	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	--	ND U	ND U	0.92 J	ND U	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	500	ND U	1.3	2.5	1.4	5.1	ND	2.3 J	ND
1,1-Dichloroethene	ug/L	700	ND U	ND U	ND U	ND U	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	--	ND U	ND U	1.4	6.5	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	--	ND U	1.8	0.86 J	1.5	1.6 J	2.1 J	ND	2 J
Methylene Chloride	ug/L	--	ND U	0.74 JB	2.7	ND U	7.1	ND	ND	ND
Methyl t-Butyl Ether	ug/L	--	12	8	12	7.5	7.2	8.9	6.9	3.2 J
1,2-Dichloropropane	ug/L	--	ND U	ND U	0.35 J	ND U	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Ethylbenzene	ug/L	--	23.2	17.5	16.1	17.6	19.5	16.6	20	11.9
2-Hexanone	ug/L	--	ND U	ND U	ND U	3.3 J	ND	ND	ND	ND
Iodomethane	ug/L	--	ND U	ND U	ND U	0.56 JB	ND	11.9	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	--	ND U	4.2 J	2.5 J	23.8	ND	ND	ND	ND
Styrene	ug/L	--	ND U	0.49 J	0.81 J	0.71 J	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Tetrachloroethene	ug/L	700	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Toluene	ug/L	--	15.4	44	24.9	574	87.1	9.4	12.9	17.2

Location ID:	L-2									
Number of Sampling Dates:	8									
Parameter Name	**Units**	**TCLP**	**4/23/2020**	**9/25/2020**	**3/22/2021**	**9/16/2021**	**3/24/2022**	**9/19/2022**	**3/17/2023**	**9/15/2023**
1,1,1-Trichloroethane	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Trichloroethene	ug/L	500	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Vinyl acetate	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Vinyl chloride	ug/L	200	ND U	ND U	2.7	1.5	2 J	1.9 J	ND	ND
Total Xylenes	ug/L	10000	55.5	43.4	37.3	39.3	41.3	41.7	44.6	26.3
mp-Xylene	ug/L	10000	40.9	30.9	27	27.9	29.5	29.2	31.1	18.3
o-Xylene	ug/L	10000	14.6	12.5	10.3	11.4	11.9	12.6	13.4	8
Bromodichloromethane	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Chlorodibromomethane	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Bromoform	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Chloroform	ug/L	6000	ND U	ND U	ND U	ND U	ND	ND	ND	ND

Historical Leachate Data Table II and Water Quality Parameters

Name: ESL Leachate

Location ID:	L-2									
Number of Sampling Dates:	8									
Parameter Name	**Units**	**TCLP**	**4/23/2020**	**9/25/2020**	**3/22/2021**	**9/16/2021**	**3/24/2022**	**9/19/2022**	**3/17/2023**	**9/15/2023**
Antimony, Total	mg/L	--	0.0079 J	0.0031	0.0022	0.0031 J	0.0045 J	0.0016 J	0.0021 J	0.0017 J
Arsenic, Total	mg/L	5	0.038	0.039	0.0089	0.027	0.018	0.023	0.027	0.019
Barium, Total	mg/L	100	0.35	0.38	0.38	0.44	0.22	0.2	0.32	0.24
Beryllium, Total	mg/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Cadmium, Total	mg/L	1	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Calcium, Total	mg/L	--	149	122	131	180	183	85.8	158	108
Chromium, Total	mg/L	5	0.07	0.089	0.022	0.066	0.06	0.059	0.088	0.047
Cobalt, Total	mg/L	--	0.023 J	0.027	0.011	0.018	0.017 J	0.02	0.029	0.015
Copper, Total	mg/L	--	0.056	0.01	0.0076	ND U	ND	0.0053 J	0.0081 J	0.0046 J
Iron, Total	mg/L	--	12.2	10.1	15.4	27	11.7	6.6	8.5	14.3
Lead, Total	mg/L	5	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Magnesium, Total	mg/L	--	347	368	146	190	177	155	206	99.8
Manganese, Total	mg/L	--	0.66	0.41	0.56	1.9	1.4	0.3	1.5	0.75
Mercury, Total	mg/L	0.2	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Nickel, Total	mg/L	--	0.22	0.21	0.041	0.14	0.15	0.18	0.26	0.15
Potassium, Total	mg/L	--	485	538	234	330	318	337	484	268
Selenium, Total	mg/L	1	ND U	0.003 J	ND U	0.0016 J	ND	ND	ND	ND
Silver, Total	mg/L	5	ND U	ND U	0.0011 J	ND U	ND	ND	ND	ND
Sodium, Total	mg/L	--	1760	1730	820	1000	977	1060	1550	925
Thallium, Total	mg/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Vanadium, Total	mg/L	--	0.038	0.051	0.0088	0.051	0.039	0.036	0.043	0.026
Zinc, Total	mg/L	--	ND U	0.0089	0.025	0.017	0.027 J	0.0029 J	0.0041 J	0.0037 J
Alkalinity, Total	mg/L	--	5370	5850	5330	3650	3270	6580	4800	2460
Ammonia-N	mg/L	--	857	868	623	589	455	1010	831	649
Chemical Oxygen Demand (COD)	mg/L	--	1090	1360	860	1070	1390	1470	1080	604
Chloride	mg/L	--	2640	2840	1760	1720	1390	2600	2270	1520
Hardness	mg/L	--	1800	1810	745	1350	1180	1210	1100	721
Nitrate-N	mg/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
pH	SU	--	7.25	7.31	6.85	6.65	7.31	7.06	7.17	7.08
Specific Conductance	umhos/cm	--	7240	13570	9490	10120	7500	14560	15187	8100
Sulfate	mg/L	--	1.8 J	1.6 J	19.1	1.9 J	ND	ND	ND	ND
Total Dissolved Solids	mg/L	--	6320	7560	5610	4850	4520	6880	6280	4090
Turbidity	NTU	--	30.1	36.8	22.4	53.8	15.1	53.8	85.22	46.3

Historical Well Data Table I

Name: Eastern Sanitary Landfill

Location ID:	SMW-13									
Number of Sampling Dates:	48									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/30/2001**	**10/2/2001**	**3/14/2002**	**9/27/2002**	**3/27/2003**	**12/10/2003**	**4/1/2004**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	--	ND	ND	ND	--	--	--	--	--

Location ID:	SMW-13									
Number of Sampling Dates:	48									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/30/2001**	**10/2/2001**	**3/14/2002**	**9/27/2002**	**3/27/2003**	**12/10/2003**	**4/1/2004**
Vinyl acetate	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	--	--	--	--	--	--	--	--
mp-Xylene	ug/L	10000	--	--	--	--	--	--	--	--
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	SMW-13									
Number of Sampling Dates:	48									
Parameter Name	**Units**	**Compliance Limit**	**10/5/2004**	**6/15/2005**	**9/29/2005**	**3/23/2006**	**9/28/2006**	**4/26/2007**	**11/7/2007**	**4/16/2008**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	2
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	1
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	SMW-13									
Number of Sampling Dates:	48									
Parameter Name	**Units**	**Compliance Limit**	**10/5/2004**	**6/15/2005**	**9/29/2005**	**3/23/2006**	**9/28/2006**	**4/26/2007**	**11/7/2007**	**4/16/2008**
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	1
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	1	ND	1	2	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	--	--	--	--	--	--	--	--	--
Vinyl acetate	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	--	--	--	--	--	--	--	--
mp-Xylene	ug/L	10000	--	--	--	--	--	--	--	--
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	2	ND	2

Location ID:	SMW-13									
Number of Sampling Dates:	48									
Parameter Name	**Units**	**Compliance Limit**	**10/9/2008**	**3/18/2009**	**10/20/2009**	**5/14/2010**	**9/13/2010**	**3/22/2011**	**10/18/2011**	**3/20/2012**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	2	2	ND	1	1	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	SMW-13									
Number of Sampling Dates:	48									
Parameter Name	**Units**	**Compliance Limit**	**10/9/2008**	**3/18/2009**	**10/20/2009**	**5/14/2010**	**9/13/2010**	**3/22/2011**	**10/18/2011**	**3/20/2012**
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	1	2	ND	ND	7	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	--	--	--	--	ND	ND	ND	ND	ND
Vinyl acetate	ug/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	--	--	--	--	--	--	--	--
mp-Xylene	ug/L	10000	--	--	--	--	--	--	--	--
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	2	2	ND	ND	ND	ND	ND	ND

Location ID:	SMW-13									
Number of Sampling Dates:	48									
Parameter Name	**Units**	**Compliance Limit**	**9/27/2012**	**3/25/2013**	**9/23/2013**	**3/21/2014**	**9/8/2014**	**3/18/2015**	**9/8/2015**	**3/14/2016**
Acetone	ug/L	1400	ND	ND	ND	ND U	11.2	ND U	ND U	ND U
Acrylonitrile	ug/L	--	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Benzene	ug/L	5	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Bromochloromethane	ug/L	--	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Bromomethane	ug/L	0.75	ND	ND	ND	ND U	ND U	ND U	0.45 J	ND U
2-Butanone	ug/L	700	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Chloromethane	ug/L	19	ND	ND	ND	ND U	ND U	ND U	ND U	ND U

Location ID:	SMW-13									
Number of Sampling Dates:	48									
Parameter Name	**Units**	**Compliance Limit**	**9/27/2012**	**3/25/2013**	**9/23/2013**	**3/21/2014**	**9/8/2014**	**3/18/2015**	**9/8/2015**	**3/14/2016**
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Dibromomethane	ug/L	--	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	--	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	0.43 J	ND U	ND U	ND U	ND U
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	--	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	--	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
2-Hexanone	ug/L	--	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Iodomethane	ug/L	--	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Styrene	ug/L	100	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	--	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Toluene	ug/L	1000	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	--	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	--	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Vinyl acetate	ug/L	--	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Total Xylenes	ug/L	10000	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
o-Xylene	ug/L	10000	--	--	--	--	--	--	--	--
mp-Xylene	ug/L	10000	--	--	--	--	--	--	--	--
Bromodichloromethane	ug/L	80	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Bromoform	ug/L	80	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Chloroform	ug/L	80	ND	ND	ND	ND U	ND U	ND U	ND U	ND U

Location ID:	SMW-13									
Number of Sampling Dates:	48									
Parameter Name	**Units**	**Compliance Limit**	**9/26/2016**	**10/24/2016**	**3/30/2017**	**9/20/2017**	**3/30/2018**	**9/21/2018**	**3/11/2019**	**10/3/2019**
Acetone	ug/L	1400	--	4.1 JB	ND U	ND U	ND U	ND U	ND U	ND U
Acrylonitrile	ug/L	--	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzene	ug/L	5	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromochloromethane	ug/L	--	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromomethane	ug/L	0.75	--	ND U	ND U	0.6 J	ND U	ND U	ND U	ND U
2-Butanone	ug/L	700	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon disulfide	ug/L	81	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon Tetrachloride	ug/L	5	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorobenzene	ug/L	100	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroethane	ug/L	2100	--	ND U	ND U	ND U	ND U	ND U	ND U	0.34 J
Chloromethane	ug/L	19	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Dibromomethane	ug/L	--	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	--	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methylene Chloride	ug/L	5	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloropropane	ug/L	5	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	--	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	--	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Ethylbenzene	ug/L	700	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Hexanone	ug/L	--	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Iodomethane	ug/L	--	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Styrene	ug/L	100	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	--	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Toluene	ug/L	1000	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1-Trichloroethane	ug/L	200	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichloroethene	ug/L	5	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	--	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	--	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl acetate	ug/L	--	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl chloride	ug/L	2	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Total Xylenes	ug/L	10000	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	SMW-13									
Number of Sampling Dates:	48									
Parameter Name	**Units**	**Compliance Limit**	**9/26/2016**	**10/24/2016**	**3/30/2017**	**9/20/2017**	**3/30/2018**	**9/21/2018**	**3/11/2019**	**10/3/2019**
o-Xylene	ug/L	10000	--	--	--	--	--	--	--	--
mp-Xylene	ug/L	10000	--	--	--	--	--	--	--	--
Bromodichloromethane	ug/L	80	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromoform	ug/L	80	--	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroform	ug/L	80	--	ND U	ND U	ND U	0.26 J	0.47 JB	0.31 J	0.31 J

Location ID:	SMW-13									
Number of Sampling Dates:	48									
Parameter Name	**Units**	**Compliance Limit**	**3/23/2020**	**9/25/2020**	**3/23/2021**	**9/16/2021**	**3/23/2022**	**9/16/2022**	**3/17/2023**	**9/15/2023**
Acetone	ug/L	1400	3.4 JB	4.3 JB	4.1 J	ND U	ND	ND	ND	ND
Acrylonitrile	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Benzene	ug/L	5	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Bromochloromethane	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Bromomethane	ug/L	0.75	0.52 J	ND U	ND U	0.43 JB	ND	ND	ND	ND
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND U	ND U	ND U	0.35 JB	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Chloromethane	ug/L	19	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Dibromomethane	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	ND	ND	ND	0.78 J
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND	ND	ND	ND
2-Hexanone	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Iodomethane	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND	ND	ND	ND

Location ID:	SMW-13									
Number of Sampling Dates:	48									
Parameter Name	**Units**	**Compliance Limit**	**3/23/2020**	**9/25/2020**	**3/23/2021**	**9/16/2021**	**3/23/2022**	**9/16/2022**	**3/17/2023**	**9/15/2023**
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Vinyl acetate	ug/L	--	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND	ND	ND	ND
o-Xylene	ug/L	10000	ND U	ND U	ND U	ND U	ND	ND	ND	ND
mp-Xylene	ug/L	10000	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Chloroform	ug/L	80	0.38 JB	0.31 J	0.32 J	0.32 J	0.35 JB	ND	0.3 J	0.31 J

Historical Well Data Table II

Name: Eastern Sanitary Landfill

Location ID:	SMW-13									
Number of Sampling Dates:	48									
Parameter Name	**Units**	**Compliance Limit**	**10/28/1999**	**3/30/2001**	**10/2/2001**	**3/14/2002**	**9/27/2002**	**3/27/2003**	**12/10/2003**	**4/1/2004**
Antimony, Total	mg/L	0.006	--	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	--	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	ND	0.049	0.054	0.05	0.055	0.054	0.033	0.039
Beryllium, Total	mg/L	0.004	--	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	--	--	--	--	--	--	--	--
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	--	ND	ND	ND	ND	ND	ND	ND
Copper, Total	mg/L	1.3	--	0.109	0.062	0.135	0.122	0.036	0.106	0.082
Iron, Total	mg/L	0.3	ND	0.195	0.017	0.171	0.044	0.053	0.037	0.031
Lead, Total	mg/L	0.015	ND	ND	0.011	0.01	0.015	0.032	0.024	0.021
Magnesium, Total	mg/L	--	--	--	--	--	--	--	--	--
Manganese, Total	mg/L	0.043	ND	0.062	ND	ND	0.016	ND	ND	ND
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	--	0.016	ND	0.015	0.019	0.016	0.021	0.024
Potassium, Total	mg/L	--	--	--	--	--	--	--	--	--
Selenium, Total	mg/L	0.05	--	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	--	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	--	--	--	--	--	--	--	--
Thallium, Total	mg/L	0.002	--	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	--	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	ND	0.078	0.041	0.116	0.082	0.176	0.061	0.062
Alkalinity, Total	mg/L	--	--	3.5	2.5	2	ND	2	2	2
Ammonia-N	mg/L	--	0.2	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	10	ND	ND	ND	ND	ND	ND	ND
Chloride	mg/L	250	19	18.82	21.7	25.4	21.49	23.23	26.86	27.12
Hardness	mg/L	--	--	27.07	23.08	19.79	29.78	37.21	32.8	33.09
Nitrate-N	mg/L	10	3.8	3.8	4.03	3.35	2.43	2.53	2.84	2.65
pH	SU	8.5	--	4.9	4.8	4.47	4.51	4.21	4.31	4.22
Specific Conductance	umhos/cm	--	--	ND	116	1340	138	148	1390	149
Sulfate	mg/L	250	10	ND	4	ND	ND	ND	ND	ND
Total Dissolved Solids	mg/L	500	69	80	67	60	5	83	72	83
Turbidity	NTU	5	--	2.4	0.23	4.47	0.75	0.1	0.77	0.31

Location ID:	SMW-13									
Number of Sampling Dates:	48									
Parameter Name	**Units**	**Compliance Limit**	**10/5/2004**	**6/15/2005**	**9/29/2005**	**3/23/2006**	**9/28/2006**	**4/26/2007**	**11/7/2007**	**4/16/2008**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.031	0.044	0.036	0.04	0.046	0.033	0.035	0.034
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	--	--	--	--	--	10.7	8.61	9.64

Location ID:	SMW-13									
Number of Sampling Dates:	48									
Parameter Name	**Units**	**Compliance Limit**	**10/5/2004**	**6/15/2005**	**9/29/2005**	**3/23/2006**	**9/28/2006**	**4/26/2007**	**11/7/2007**	**4/16/2008**
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	mg/L	1.3	0.067	0.021	0.019	0.073	0.0397	0.042	0.023	0.055
Iron, Total	mg/L	0.3	0.016	0.23	0.03	0.039	0.039	0.022	0.119	ND
Lead, Total	mg/L	0.015	0.01	0.01	0.015	0.007	0.014	0.005	0.01	0.011
Magnesium, Total	mg/L	--	--	--	--	--	--	6	2.46	5.3
Manganese, Total	mg/L	0.043	0.016	0.039	0.012	0.02	0.033	ND	0.109	0.028
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	0.029	0.024	0.026	0.02	0.028	0.023	0.028	0.031
Potassium, Total	mg/L	--	--	--	--	--	--	1.87	1.71	2.21
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	--	--	--	--	--	89.5	19.3	25.4
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.057	0.126	0.041	0.072	0.187	0.022	0.082	0.114
Alkalinity, Total	mg/L	--	4.7	3.4	4.8	2.6	3.2	3.6	3.5	7.6
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Chloride	mg/L	250	29.67	45.11	35.32	35.34	35.63	47.62	44.02	40.51
Hardness	mg/L	--	27.67	56.37	46.7	62.55	69.41	51.42	31.63	45.9
Nitrate-N	mg/L	10	2.48	3.83	2.96	2.27	2.16	2.95	2.36	2.36
pH	SU	8.5	4.03	4.2	4.39	4.5	4.2	4.22	4.83	4.04
Specific Conductance	umhos/cm	--	158	178	189	178	184	185	184	227
Sulfate	mg/L	250	ND	ND	ND	ND	ND	ND	ND	ND
Total Dissolved Solids	mg/L	500	42	90	120	58	432	69	372	218
Turbidity	NTU	5	0	ND	ND	14.33	2.07	0	ND	ND

Location ID:	SMW-13									
Number of Sampling Dates:	48									
Parameter Name	**Units**	**Compliance Limit**	**10/9/2008**	**3/18/2009**	**10/20/2009**	**5/14/2010**	**9/13/2010**	**3/22/2011**	**10/18/2011**	**3/20/2012**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.03	0.033	0.031	0.034	0.035	0.03	0.073	0.088
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	11.11	8.66	8.66	12.86	11.93	9.13	8.9	2.94
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	ND	ND	0.013	ND	ND	ND	ND	ND
Copper, Total	mg/L	1.3	0.135	0.013	0.076	0.071	0.051	0.06	0.078	0.062
Iron, Total	mg/L	0.3	0.052	0.07	0.038	ND	0.101	ND	0.02	0.019
Lead, Total	mg/L	0.015	0.009	0.006	0.011	0.012	0.006	0.01	0.0095	0.007
Magnesium, Total	mg/L	--	2.942	5.55	5.25	7.2	2.45	2.706	4.6	0.494
Manganese, Total	mg/L	0.043	0.053	0.012	ND	0.024	ND	0.068	0.027	0.03
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	0.0011	ND
Nickel, Total	mg/L	0.039	0.022	0.026	0.051	0.034	0.041	0.037	0.028	0.034

Location ID:	SMW-13									
Number of Sampling Dates:	48									
Parameter Name	**Units**	**Compliance Limit**	**10/9/2008**	**3/18/2009**	**10/20/2009**	**5/14/2010**	**9/13/2010**	**3/22/2011**	**10/18/2011**	**3/20/2012**
Potassium, Total	mg/L	--	1.76	1.63	1.76	1.7	1.65	1.6	2	2.34
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	16.4	21	6.1	26.8	36.9	33	17	1.2
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.039	ND	0.119	0.287	0.079	0.041	0.11	0.107
Alkalinity, Total	mg/L	--	3.8	4.6	3.04	6.5	7.1	ND	4	ND
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Chloride	mg/L	250	41.77	59.31	48.43	54.38	63.76	63.6	48	57.49
Hardness	mg/L	--	39.86	44.47	43.24	61.76	39.88	33.95	44	93.86
Nitrate-N	mg/L	10	2.16	3.35	2.42	3.09	3.37	3.2	3.6	2.72
pH	SU	8.5	4.65	4.62	4.58	4.79	4.39	4.5	4.74	4.32
Specific Conductance	umhos/cm	--	235	233	204	171	172	228	232	229
Sulfate	mg/L	250	ND	ND	ND	ND	ND	ND	ND	2.92
Total Dissolved Solids	mg/L	500	3294	158	138	172	152	128	150	156
Turbidity	NTU	5	ND	ND	0.35	ND	ND	0.1	0	0.02

Location ID:	SMW-13									
Number of Sampling Dates:	48									
Parameter Name	**Units**	**Compliance Limit**	**9/27/2012**	**3/25/2013**	**9/23/2013**	**3/21/2014**	**9/8/2014**	**3/18/2015**	**9/8/2015**	**3/14/2016**
Antimony, Total	mg/L	0.006	ND	ND	ND	ND U	ND U	ND U	0.0013 J	ND U
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Barium, Total	mg/L	2	0.087	0.117	0.09	0.076	0.08	0.08	0.086	0.084
Beryllium, Total	mg/L	0.004	ND	ND	ND	0.00054 J	0.00065 J	0.0006 J	0.00059 J	0.00059 J
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND U	ND U	ND U	0.0022	ND U
Calcium, Total	mg/L	--	6.229	10.12	7	8.9	10.2	9.7	10.1	10.8
Chromium, Total	mg/L	0.1	ND	ND	ND	0.00075 J	0.001 J	0.0015 J	0.0012 J	0.00094 J
Cobalt, Total	mg/L	--	ND	ND	ND	0.0075	0.0076	0.0078	0.0087	0.0081
Copper, Total	mg/L	1.3	0.032	0.087	0.06	0.062	0.068	0.041	0.47	0.11
Iron, Total	mg/L	0.3	0.024	0.025	0.017	0.025 J	0.061	0.085	0.053 J	0.029 J
Lead, Total	mg/L	0.015	0.003	0.009	0.009	0.0098	0.013	0.0071	0.08	0.025
Magnesium, Total	mg/L	--	4.736	5.396	5.079	4.9	5.4	4.9	5.3	5.5
Manganese, Total	mg/L	0.043	0.022	0.029	0.02	0.028	0.029	0.03	0.035	0.033
Mercury, Total	mg/L	0.002	--	ND	0.00092	0.00094	0.0014	0.0017	0.0011	0.0023
Nickel, Total	mg/L	0.039	0.028	0.037	0.029	0.033	0.032	0.034	0.051	0.037
Potassium, Total	mg/L	--	1.74	1.96	1.71	1.7	1.8	1.8	1.8	1.8
Selenium, Total	mg/L	0.05	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Sodium, Total	mg/L	--	19.2	21.6	20.51	21	22.4	21.2	23.2	23.7
Thallium, Total	mg/L	0.002	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND U	ND U	ND U	ND U	ND U
Zinc, Total	mg/L	0.6	0.029	0.175	0.09	0.11	0.14	0.087	2.8	0.25
Alkalinity, Total	mg/L	--	23.35	ND	ND	3 J	3 J	4 J	6	3 J
Ammonia-N	mg/L	--	ND	ND	ND	ND U	ND U	0.105	ND U	ND U

Location ID:	SMW-13									
Number of Sampling Dates:	48									
Parameter Name	**Units**	**Compliance Limit**	**9/27/2012**	**3/25/2013**	**9/23/2013**	**3/21/2014**	**9/8/2014**	**3/18/2015**	**9/8/2015**	**3/14/2016**
Chemical Oxygen Demand (COD)	mg/L	--	ND	9	ND	ND U	12	ND U	ND U	ND U
Chloride	mg/L	250	58.28	48.5	60.23	57.6	67.5	61	66	53.8
Hardness	mg/L	--	35.1	47.5	38.4	62	48	82	60	51
Nitrate-N	mg/L	10	4.02	2.98	3.71	3.8	3.7	3.7	3.7	3.1
pH	SU	8.5	4.25	4.59	4.17	4.83	5.96	5.22	6.02	6.5
Specific Conductance	umhos/cm	--	204	240	260	203	208	204	214	221
Sulfate	mg/L	250	ND	ND	ND	0.28 J	0.45 J	0.28 J	0.42 J	0.44 J
Total Dissolved Solids	mg/L	500	166	142	131	127	144	175	185	124
Turbidity	NTU	5	0.31	ND	17	ND	3.25	0.03	0.96	0.31

Location ID:	SMW-13									
Number of Sampling Dates:	48									
Parameter Name	**Units**	**Compliance Limit**	**9/26/2016**	**10/24/2016**	**3/30/2017**	**9/20/2017**	**3/30/2018**	**9/21/2018**	**3/11/2019**	**10/3/2019**
Antimony, Total	mg/L	0.006	ND U	--	ND U	ND U	ND U	ND U	ND U	ND U
Arsenic, Total	mg/L	0.01	ND U	--	ND U	ND U	ND U	ND U	ND U	ND U
Barium, Total	mg/L	2	0.099	--	0.096	0.091	0.11	0.11	0.11	0.11
Beryllium, Total	mg/L	0.004	0.00061 J	--	0.00073 J	0.00064 J	0.00078 J	0.00068 J	0.00072 J	0.00077 J
Cadmium, Total	mg/L	0.005	ND U	--	ND U	ND U	ND U	ND U	ND U	0.0011
Calcium, Total	mg/L	--	11.2	--	11.9	11.8	13.3	11.6	12.5	13.6
Chromium, Total	mg/L	0.1	0.0025	--	0.0012 J	0.0013 J	0.0015 J	0.0011 J	0.0012 J	ND U
Cobalt, Total	mg/L	--	0.0089	--	0.0091	0.0098	0.011	0.0094	0.0099	0.01
Copper, Total	mg/L	1.3	0.07	--	0.069	0.06	0.059	0.066	0.089	0.058
Iron, Total	mg/L	0.3	0.06	--	0.029 J	0.025 J	0.043 J	0.02 J	0.024 J	ND U
Lead, Total	mg/L	0.015	0.017	--	0.02	0.016	0.012	0.015	0.021	0.014
Magnesium, Total	mg/L	--	5.8	--	6.5	6.2	6.7	6.8	6.8	6.8
Manganese, Total	mg/L	0.043	0.035	--	0.036	0.036	0.041	0.036	0.036	0.041
Mercury, Total	mg/L	0.002	0.0024	--	0.0028	0.0027	0.0025	0.0023	0.0023	0.0021
Nickel, Total	mg/L	0.039	0.04	--	0.041	0.041	0.045	0.041	0.043	0.045
Potassium, Total	mg/L	--	1.9	--	1.9	1.9	2	2	2	2
Selenium, Total	mg/L	0.05	ND U	--	ND U	ND U	ND U	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND U	--	ND U	ND U	ND U	ND U	ND U	ND U
Sodium, Total	mg/L	--	25.4	--	26	28.2	33	31.6	33.5	32.2
Thallium, Total	mg/L	0.002	ND U	--	ND U	ND U	ND U	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND U	--	ND U	ND U	ND U	ND U	ND U	ND U
Zinc, Total	mg/L	0.6	0.075	--	0.18	0.15	0.095	0.14	0.3	0.22
Alkalinity, Total	mg/L	--	5 J	--	4 J	3 J	7	5 J	7	6
Ammonia-N	mg/L	--	0.031 J	--	ND U	ND U	0.062 J	ND U	ND U	0.238
Chemical Oxygen Demand (COD)	mg/L	--	ND U	--	ND U	4 J	ND U	ND U	ND U	7 J
Chloride	mg/L	250	68.1	--	80	81.6	87.5	82.3	83	91.4
Hardness	mg/L	--	52	--	64	55.1	60.9	57	59.1	61.9
Nitrate-N	mg/L	10	3.5	--	3.7	3.7	3.7	3.3	3.4	3.3
pH	SU	8.5	5.21	--	6.27	5.12	5.25	4.91	5.71	5.13
Specific Conductance	umhos/cm	--	238	--	251	259	269	278	280	276
Sulfate	mg/L	250	0.3 J	--	0.4 J	ND U	ND U	ND U	0.64 J	ND U
Total Dissolved Solids	mg/L	500	191	--	153	148	164	155	211	166
Turbidity	NTU	5	1.59	--	0.24	0.16	1.84	0.23	0.2	0.45

Location ID:	SMW-13									
Number of Sampling Dates:	48									
Parameter Name	**Units**	**Compliance Limit**	**3/23/2020**	**9/25/2020**	**3/23/2021**	**9/16/2021**	**3/23/2022**	**9/16/2022**	**3/17/2023**	**9/15/2023**
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND U	ND U	ND U	0.00022 J	ND	ND	ND	ND
Barium, Total	mg/L	2	0.014	0.11	ND U	0.12	0.12	0.12	0.13	0.12
Beryllium, Total	mg/L	0.004	ND U	0.00074 J	ND U	0.00088 J	0.00084 J	0.00097 J	0.00091 J	0.00084 J
Cadmium, Total	mg/L	0.005	ND U	ND U	ND U	0.00019 J	ND	ND	ND	ND
Calcium, Total	mg/L	--	12.5	13.6	7.8	15	14.5	14.2	14.7	13.3
Chromium, Total	mg/L	0.1	ND U	ND U	ND U	0.0014 J	ND	ND	0.00084 J	ND
Cobalt, Total	mg/L	--	ND U	0.011	ND U	0.011	0.011	0.012	0.012	0.011
Copper, Total	mg/L	1.3	ND U	0.16	0.011	0.079	0.074	0.1	0.06	0.05
Iron, Total	mg/L	0.3	0.18	0.51	0.02 J	0.2	0.034 J	0.032 J	0.026 J	ND
Lead, Total	mg/L	0.015	ND U	0.028	ND U	0.016	0.015	0.017	0.02	0.013
Magnesium, Total	mg/L	--	5	7	4.5	7.2	7.8	8.1	7.8	7.5
Manganese, Total	mg/L	0.043	0.0047 J	0.048	ND U	0.042	0.051	0.046	0.046	0.042
Mercury, Total	mg/L	0.002	0.002	0.0015	0.0011	0.0016	0.0017	0.0017	0.0018	0.0017
Nickel, Total	mg/L	0.039	ND U	0.049	ND U	0.048	0.052	0.051	0.051	0.047
Potassium, Total	mg/L	--	0.94	2.1	0.19	2.3	2.2	2.2	2.3	2.2
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	0.0011 J	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Sodium, Total	mg/L	--	11.8	35.6	2.1	36	42.7	41.4	43.2	40.9
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	0.00083 J	ND U	ND U	ND U	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.0025 J	0.65	0.034	0.15	0.35	0.23	0.14	0.24
Alkalinity, Total	mg/L	--	2 J	5 J	ND U	5	ND	ND	5	ND
Ammonia-N	mg/L	--	0.038 J	0.107	0.089 J	0.041 J	ND	ND	0.085 J	ND
Chemical Oxygen Demand (COD)	mg/L	--	ND U	8 J	8 J	ND U	6 J	ND	ND	ND
Chloride	mg/L	250	72.7	94.2	106	104	103	105	101	111
Hardness	mg/L	--	63.1	66.3	64.4	70.4	68.4	70.9	72.5	69.3
Nitrate-N	mg/L	10	2.5	3.4	4.3	3.6	ND	3.2	3	3.2
pH	SU	8.5	5.01	5.15	4.94	5.35	5.62	4.94	4.74	4.93
Specific Conductance	umhos/cm	--	285	289	305	312	335	367	404.12	338
Sulfate	mg/L	250	ND U	ND U	0.98 J	0.56 J	10.6	ND	ND	ND
Total Dissolved Solids	mg/L	500	222	234	250	266	156	246	262	286
Turbidity	NTU	5	0.28	0.4	0.26	2.06	1.7	1.11	0.6	0.6

Historical Well Data Table I

Name: Eastern Sanitary Landfill

Location ID:	SMW-32									
Number of Sampling Dates:	46									
Parameter Name	**Units**	**Compliance Limit**	**10/5/2001**	**3/14/2002**	**9/11/2002**	**3/27/2003**	**10/2/2003**	**4/1/2004**	**10/5/2004**	**4/18/2005**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	SMW-32									
Number of Sampling Dates:	46									
Parameter Name	**Units**	**Compliance Limit**	**10/5/2001**	**3/14/2002**	**9/11/2002**	**3/27/2003**	**10/2/2003**	**4/1/2004**	**10/5/2004**	**4/18/2005**
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	SMW-32									
Number of Sampling Dates:	46									
Parameter Name	**Units**	**Compliance Limit**	**9/29/2005**	**3/23/2006**	**9/28/2006**	**4/26/2007**	**11/6/2007**	**4/3/2008**	**10/9/2008**	**3/18/2009**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND	ND	ND	ND	2	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	SMW-32									
Number of Sampling Dates:	46									
Parameter Name	**Units**	**Compliance Limit**	**9/29/2005**	**3/23/2006**	**9/28/2006**	**4/26/2007**	**11/6/2007**	**4/3/2008**	**10/9/2008**	**3/18/2009**
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND	ND	ND	1	1	1
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	–	–	–	–	–	–	–
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	2	2	2	2	2

Location ID:	SMW-32									
Number of Sampling Dates:	46									
Parameter Name	**Units**	**Compliance Limit**	**10/6/2009**	**5/12/2010**	**9/13/2010**	**3/8/2011**	**10/7/2011**	**3/13/2012**	**8/30/2012**	**3/5/2013**
Acetone	ug/L	1400	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ug/L	19	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	SMW-32									
Number of Sampling Dates:	46									
Parameter Name	**Units**	**Compliance Limit**	**10/6/2009**	**5/12/2010**	**9/13/2010**	**3/8/2011**	**10/7/2011**	**3/13/2012**	**8/30/2012**	**3/5/2013**
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND	1	1	ND	ND	1	1	ND
1,2-Dichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-Butyl Ether	ug/L	20	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND	7	7	ND	ND	ND	7	ND
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	–	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	ug/L	–	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ug/L	10000	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/L	80	ND	ND	ND	ND	ND	ND	ND	ND

Location ID:	SMW-32									
Number of Sampling Dates:	46									
Parameter Name	**Units**	**Compliance Limit**	**9/23/2013**	**12/5/2013**	**3/19/2014**	**9/8/2014**	**3/18/2015**	**9/8/2015**	**3/14/2016**	**9/20/2016**
Acetone	ug/L	1400	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Acrylonitrile	ug/L	–	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Benzene	ug/L	5	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	SMW-32									
Number of Sampling Dates:	46									
Parameter Name	**Units**	**Compliance Limit**	**9/23/2013**	**12/5/2013**	**3/19/2014**	**9/8/2014**	**3/18/2015**	**9/8/2015**	**3/14/2016**	**9/20/2016**
Bromochloromethane	ug/L	–	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Bromomethane	ug/L	0.75	ND	ND	0.48 J	ND U	ND U	0.49 J	ND U	ND U
2-Butanone	ug/L	700	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Carbon Tetrachloride	ug/L	5	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Chloromethane	ug/L	19	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND	ND	ND U	ND U	ND U	ND U	ND U	0.47 J
Methyl t-Butyl Ether	ug/L	20	ND	ND	0.33 J	0.34 J	ND U	ND U	ND U	ND U
1,2-Dichloropropane	ug/L	5	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Iodomethane	ug/L	–	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Styrene	ug/L	100	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Toluene	ug/L	1000	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1-Trichloroethane	ug/L	200	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl acetate	ug/L	–	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Total Xylenes	ug/L	10000	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	–	–

Location ID:	SMW-32									
Number of Sampling Dates:	46									
Parameter Name	**Units**	**Compliance Limit**	**9/23/2013**	**12/5/2013**	**3/19/2014**	**9/8/2014**	**3/18/2015**	**9/8/2015**	**3/14/2016**	**9/20/2016**
mp-Xylene	ug/L	10000	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Bromoform	ug/L	80	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Chloroform	ug/L	80	ND	ND	ND U	0.31 J	ND U	ND U	ND U	0.26 J

Location ID:	SMW-32									
Number of Sampling Dates:	46									
Parameter Name	**Units**	**Compliance Limit**	**3/24/2017**	**9/20/2017**	**3/27/2018**	**9/18/2018**	**3/11/2019**	**10/3/2019**	**3/23/2020**	**9/24/2020**
Acetone	ug/L	1400	ND U	ND U	4.8 JB	ND U	ND U	ND U	ND U	3.2 J
Acrylonitrile	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromomethane	ug/L	0.75	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Butanone	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon disulfide	ug/L	81	ND U	ND U	ND U	ND U	ND U	ND U	0.27 J	ND U
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorobenzene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroethane	ug/L	2100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloromethane	ug/L	19	ND U	ND U	ND U	ND U	ND U	ND U	0.55 J	0.63 J
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methylene Chloride	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	20	0.39 J	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Ethylbenzene	ug/L	700	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Styrene	ug/L	100	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	SMW-32									
Number of Sampling Dates:	46									
Parameter Name	**Units**	**Compliance Limit**	**3/24/2017**	**9/20/2017**	**3/27/2018**	**9/18/2018**	**3/11/2019**	**10/3/2019**	**3/23/2020**	**9/24/2020**
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Tetrachloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Toluene	ug/L	1000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichloroethene	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl chloride	ug/L	2	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Total Xylenes	ug/L	10000	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
o-Xylene	ug/L	10000	–	–	–	–	–	–	ND U	ND U
mp-Xylene	ug/L	10000	–	–	–	–	–	–	ND U	ND U
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroform	ug/L	80	ND U	ND U	ND U	0.26 J	0.28 J	0.32 J	0.34 JB	0.31 J

Location ID:	SMW-32							
Number of Sampling Dates:	46							
Parameter Name	**Units**	**Compliance Limit**	**3/23/2021**	**9/16/2021**	**3/24/2022**	**9/16/2022**	**3/17/2023**	**9/15/2023**
Acetone	ug/L	1400	4.5 J	ND U	ND	ND	ND	ND
Acrylonitrile	ug/L	–	ND U	ND U	ND	ND	ND	ND
Benzene	ug/L	5	ND U	ND U	ND	ND	ND	ND
Bromochloromethane	ug/L	–	ND U	ND U	ND	ND	ND	ND
Bromomethane	ug/L	0.75	ND U	ND U	ND	ND	ND	ND
2-Butanone	ug/L	700	ND U	ND U	ND	ND	ND	ND
Carbon disulfide	ug/L	81	ND U	0.25 J	ND	ND	ND	ND
Carbon Tetrachloride	ug/L	5	ND U	ND U	ND	ND	ND	ND
Chlorobenzene	ug/L	100	ND U	0.36 J	ND	ND	ND	ND
Chloroethane	ug/L	2100	ND U	0.57 J	ND	ND	ND	ND
Chloromethane	ug/L	19	ND U	ND U	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	0.2	ND U	ND U	ND	ND	ND	ND
1,2-Dibromoethane	ug/L	0.05	ND U	ND U	ND	ND	ND	ND
Dibromomethane	ug/L	–	ND U	ND U	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	600	ND U	ND U	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	75	ND U	ND U	ND	ND	ND	ND
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND	ND	ND	ND
1,1-Dichloroethane	ug/L	2.8	ND U	ND U	ND	ND	ND	ND
1,2-Dichloroethane	ug/L	5	ND U	ND U	ND	ND	ND	ND
1,1-Dichloroethene	ug/L	7	ND U	ND U	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	70	ND U	ND U	ND	ND	ND	ND

Location ID:	SMW-32									
Number of Sampling Dates:	46									
Parameter Name	**Units**	**Compliance Limit**	**3/23/2021**	**9/16/2021**	**3/24/2022**	**9/16/2022**	**3/17/2023**	**9/15/2023**		
trans-1,2-Dichloroethene	ug/L	100	ND U	ND U	ND	ND	ND	ND		
Methylene Chloride	ug/L	5	ND U	ND U	ND	ND	ND	ND		
Methyl t-Butyl Ether	ug/L	20	ND U	ND U	ND	ND	ND	ND		
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND	ND	ND	ND		
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND	ND	ND	ND		
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND	ND	ND	ND		
Ethylbenzene	ug/L	700	ND U	ND U	ND	ND	ND	ND		
2-Hexanone	ug/L	–	ND U	ND U	ND	ND	ND	ND		
Iodomethane	ug/L	–	ND U	ND U	ND	ND	ND	ND		
4-Methyl-2-Pentanone(MIBK)	ug/L	630	ND U	ND U	ND	ND	ND	ND		
Styrene	ug/L	100	ND U	ND U	ND	ND	ND	ND		
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND	ND	ND	ND		
1,1,2,2-Tetrachloroethane	ug/L	0.076	ND U	ND U	ND	ND	ND	ND		
Tetrachloroethene	ug/L	5	ND U	ND U	ND	ND	ND	ND		
Toluene	ug/L	1000	ND U	ND U	ND	ND	ND	ND		
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND	ND	ND	ND		
1,1,2-Trichloroethane	ug/L	5	ND U	ND U	ND	ND	ND	ND		
Trichloroethene	ug/L	5	ND U	ND U	ND	ND	ND	ND		
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND	ND	ND	ND		
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND	ND	ND	ND		
Vinyl acetate	ug/L	–	ND U	ND U	ND	ND	ND	ND		
Vinyl chloride	ug/L	2	ND U	ND U	ND	ND	ND	ND		
Total Xylenes	ug/L	10000	ND U	ND U	ND	ND	ND	ND		
o-Xylene	ug/L	10000	ND U	ND U	ND	ND	ND	ND		
mp-Xylene	ug/L	10000	ND U	ND U	ND	ND	ND	ND		
Bromodichloromethane	ug/L	80	ND U	ND U	ND	ND	ND	ND		
Chlorodibromomethane	ug/L	80	ND U	ND U	ND	ND	ND	ND		
Bromoform	ug/L	80	ND U	ND U	ND	ND	ND	ND		
Chloroform	ug/L	80	0.27 J	0.33 J	0.33 JB	ND	0.31 J	0.28 J		

Historical Well Data Table II

Name: Eastern Sanitary Landfill

Location ID: SMW-32
Number of Sampling Dates: 46

Parameter Name	Units	Compliance Limit	10/5/2001	3/14/2002	9/11/2002	3/27/2003	10/2/2003	4/1/2004	10/5/2004	4/18/2005
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.048	0.064	0.069	0.059	0.057	0.045	0.046	0.05
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	--	--	--	--	--	--	--	--
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	mg/L	1.3	0.078	0.071	0.019	0.035	0.016	0.516	0.069	0.047
Iron, Total	mg/L	0.3	0.1	0.221	0.061	0.029	0.04	0.067	0.048	0.102
Lead, Total	mg/L	0.015	0.002	ND	0.005	ND	ND	0.005	0.003	0.003
Magnesium, Total	mg/L	--	--	--	--	--	--	--	--	--
Manganese, Total	mg/L	0.043	ND	0.011	ND	0.016	0.011	ND	0.053	0.019
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	0.0003	ND	ND	ND
Nickel, Total	mg/L	0.039	0.016	0.023	ND	0.019	0.028	0.032	0.026	0.028
Potassium, Total	mg/L	--	--	--	--	--	--	--	--	--
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	--	--	--	--	--	--	--	--
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	1.409	0.322	0.53	0.1	0.269	0.514	0.2	0.407
Alkalinity, Total	mg/L	--	5	2	4000	80	6	6	5.1	4.65
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	7	ND	ND	ND	ND	ND	ND	ND
Chloride	mg/L	250	18.23	22.2	21.32	21.76	22.42	20.31	18.9	43.05
Hardness	mg/L	--	16.52	26.65	30.8	24.13	36.04	14.28	19.45	33.11
Nitrate-N	mg/L	10	3.46	2.97	2.16	2.32	2.8	2.11	1.9	3.97
pH	SU	8.5	5.1	4.67	10.35	6.04	4.26	4.34	3.97	6.88
Specific Conductance	umhos/cm	--	109	476	3210	283	129	146	121	156
Sulfate	mg/L	250	5	ND	1.09	0.66	2.92	3.43	2.49	3.79
Total Dissolved Solids	mg/L	500	ND	ND	6158	165	105	98	ND	357
Turbidity	NTU	5	12	7.7	2.8	3.7	3.67	1.62	2.8	6

Location ID: SMW-32
Number of Sampling Dates: 46

Parameter Name	Units	Compliance Limit	9/29/2005	3/23/2006	9/28/2006	4/26/2007	11/6/2007	4/3/2008	10/9/2008	3/18/2009
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.048	0.036	0.039	0.031	0.027	0.03	0.025	0.03
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND

Location ID: SMW-32
Number of Sampling Dates: 46

Parameter Name	Units	Compliance Limit	9/29/2005	3/23/2006	9/28/2006	4/26/2007	11/6/2007	4/3/2008	10/9/2008	3/18/2009
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	--	--	--	9.25	7.09	9.15	11.18	7.03
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	ND	ND	0.01	0.012	ND	ND	ND	ND
Copper, Total	mg/L	1.3	0.029	0.06	0.242	0.056	0.16	0.118	0.067	0.012
Iron, Total	mg/L	0.3	0.085	0.1	0.266	0.24	0.106	ND	0.089	1.443
Lead, Total	mg/L	0.015	ND	0.002	0.005	0.004	ND	0.002	ND	0.009
Magnesium, Total	mg/L	--	--	--	--	5.9	2.37	5.3	2.949	5.1
Manganese, Total	mg/L	0.043	0.016	0.035	0.045	0.283	0.11	0.071	0.063	0.021
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	mg/L	0.039	0.033	0.025	0.032	0.028	0.032	0.043	0.033	0.081
Potassium, Total	mg/L	--	--	--	--	3.8	1.65	2.01	1.79	1.64
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	--	--	--	41.9	17.5	26.2	21.6	19.5
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.251	0.361	0.62	0.422	0.256	0.362	0.177	0.351
Alkalinity, Total	mg/L	--	4.3	7.6	3.4	4.2	3.4	3	2.8	3.8
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	ND	ND	ND	ND	11	ND	ND	ND
Chloride	mg/L	250	27.99	26.57	23.56	36.38	32.11	32.78	41.81	51.37
Hardness	mg/L	--	42.96	37.86	56.56	47.39	27.46	44.67	40.06	38.54
Nitrate-N	mg/L	10	2.63	1.89	1.74	2.56	2.14	2.05	2.08	3.03
pH	SU	8.5	4.23	4.06	4.16	4.16	4.63	4.04	4.54	4.68
Specific Conductance	umhos/cm	--	150	153	169	154	140	177	220	207
Sulfate	mg/L	250	1.13	4.45	5.91	4.29	1.76	1.3	ND	1.69
Total Dissolved Solids	mg/L	500	76	292	382	73	246	148	998	102
Turbidity	NTU	5	4.63	2.21	2.62	13.9	2.2	2.96	10.71	80

Location ID: SMW-32
Number of Sampling Dates: 46

Parameter Name	Units	Compliance Limit	10/6/2009	5/12/2010	9/13/2010	3/8/2011	10/7/2011	3/13/2012	8/30/2012	3/5/2013
Antimony, Total	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	mg/L	2	0.031	0.031	0.038	0.037	0.088	0.094	0.114	0.129
Beryllium, Total	mg/L	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	mg/L	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/L	--	8.47	11.22	11.71	8.88	10	2.08	6.39	15.83
Chromium, Total	mg/L	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt, Total	mg/L	--	0.016	0.011	0.012	0.016	0.011	0.014	0.013	0.015
Copper, Total	mg/L	1.3	0.08	0.09	0.033	0.066	0.029	0.037	0.044	0.054
Iron, Total	mg/L	0.3	0.023	0.175	0.203	0.074	ND	0.009	0.168	0.022
Lead, Total	mg/L	0.015	0.003	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/L	--	4.85	8.35	2.517	4.2	5.2	0.56	6.278	6.205

Location ID: SMW-32
Number of Sampling Dates: 46

Parameter Name	Units	Compliance Limit	10/6/2009	5/12/2010	9/13/2010	3/8/2011	10/7/2011	3/13/2012	8/30/2012	3/5/2013
Manganese, Total	mg/L	0.043	ND	0.041	0.037	0.054	0.03	0.037	0.05	0.047
Mercury, Total	mg/L	0.002	ND	ND	ND	ND	0.0017	ND	0.0014	ND
Nickel, Total	mg/L	0.039	0.068	0.053	0.054	0.056	0.043	0.053	0.041	0.057
Potassium, Total	mg/L	--	1.7	1.81	1.83	1.76	2.1	2.06	2.16	2.08
Selenium, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND	ND	ND	ND	ND	ND	ND	ND
Sodium, Total	mg/L	--	11	28.2	40.2	22.4	18	1.95	18.2	20.8
Thallium, Total	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.614	0.391	0.212	0.277	0.32	0.421	0.32	0.442
Alkalinity, Total	mg/L	--	5.2	4.6	2.7	ND	5	7.91	3.5	ND
Ammonia-N	mg/L	--	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	mg/L	--	ND	ND	ND	--	ND	ND	ND	ND
Chloride	mg/L	250	44.92	51.14	64.15	54.67	57	56.46	38	61.55
Hardness	mg/L	--	41.12	62.4	39.6	39.47	52	74.94	41.8	65.1
Nitrate-N	mg/L	10	2.21	2.89	3.25	2.66	3.7	2.54	2.5	3.16
pH	SU	8.5	4.6	4.68	4.51	4.66	4.67	4.32	4.1	4.44
Specific Conductance	umhos/cm	--	209	174	242	256	276	268	301	227
Sulfate	mg/L	250	ND	3.08	2.44	2.05	ND	ND	ND	1.94
Total Dissolved Solids	mg/L	500	130	170	178	110	89	134	212	104
Turbidity	NTU	5	2.5	4.4	9.1	2.1	1.76	3.11	3.41	0.9

Location ID: SMW-32
Number of Sampling Dates: 46

Parameter Name	Units	Compliance Limit	9/23/2013	12/5/2013	3/19/2014	9/8/2014	3/18/2015	9/8/2015	3/14/2016	9/20/2016
Antimony, Total	mg/L	0.006	ND	ND	ND U	ND U	ND U	ND U	0.0012 J	ND U
Arsenic, Total	mg/L	0.01	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Barium, Total	mg/L	2	0.1	0.12	0.091	0.097	0.1	0.11	0.1	0.11
Beryllium, Total	mg/L	0.004	ND	ND	0.00079 J	0.00089 J	0.00078 J	0.00081 J	0.00084 J	0.00077 J
Cadmium, Total	mg/L	0.005	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Calcium, Total	mg/L	--	8.24	13.87	10.9	11.9	11.8	11.7	12.6	12.9
Chromium, Total	mg/L	0.1	ND	ND	0.00092 J	0.0013 J	0.0013 J	0.0014 J	0.0012 J	0.0021 J
Cobalt, Total	mg/L	--	0.01	0.01	0.013	0.014	0.015	0.02	0.018	0.016
Copper, Total	mg/L	1.3	0.04	0.04	0.04	0.035	0.043	0.05	0.039	0.044
Iron, Total	mg/L	0.3	0.015	0.026	0.086	0.064	0.04 J	0.29	0.062	0.032 J
Lead, Total	mg/L	0.015	ND	ND	ND U	0.0011 J	0.00097 J	0.0023	0.001 J	0.0012 J
Magnesium, Total	mg/L	--	5.924	5.814	6	6.4	6.1	7.5	7.2	6.6
Manganese, Total	mg/L	0.043	0.04	0.04	0.044	0.042	0.044	0.083	0.064	0.048
Mercury, Total	mg/L	0.002	0.00202	0.0019	0.0026	0.0032	0.0033	0.0027	0.0031	0.003
Nickel, Total	mg/L	0.039	0.046	0.05	0.049	0.052	0.054	0.057	0.056	0.059
Potassium, Total	mg/L	--	1.94	1.78	2	2.1	2.1	2.4	2.3	2.2
Selenium, Total	mg/L	0.05	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND	--	ND U	ND U	ND U	ND U	ND U	ND U
Sodium, Total	mg/L	--	21.24	20.4	23.4	24	24.7	26.9	28	28.6
Thallium, Total	mg/L	0.002	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U

Location ID: SMW-32
Number of Sampling Dates: 46

Parameter Name	Units	Compliance Limit	9/23/2013	12/5/2013	3/19/2014	9/8/2014	3/18/2015	9/8/2015	3/14/2016	9/20/2016
Vanadium, Total	mg/L	0.0086	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U
Zinc, Total	mg/L	0.6	0.63	0.62	0.39	0.27	0.32	0.55	0.45	0.48
Alkalinity, Total	mg/L	--	ND	7.79	3 J	3 J	5 J	5	3 J	6
Ammonia-N	mg/L	--	ND	ND	0.132	ND U	ND U	ND U	ND U	ND U
Chemical Oxygen Demand (COD)	mg/L	--	ND	ND	ND U	10	ND U	ND U	ND U	10
Chloride	mg/L	250	68.11	66.5	63.8	74.3	71.9	81.7	66.8	82.9
Hardness	mg/L	--	45	58.6	67	59	83	70	62	59
Nitrate-N	mg/L	10	4.22	3.41	3.8	3.6	3.6	3.6	3.1	3.7
pH	SU	8.5	3.72	5.16	5.55	5.6	4.7	5.74	6.28	5.84
Specific Conductance	umhos/cm	--	295	212	210	250	221	278	253	276
Sulfate	mg/L	250	1.48	1.64	0.7 J	12 J	0.78 J	4.1	2.2	0.52 J
Total Dissolved Solids	mg/L	500	138	--	127	224	202	231	165	192
Turbidity	NTU	5	0.43	0.88	0.5	1.9	1.28	0.81	2.35	1.63

Location ID: SMW-32
Number of Sampling Dates: 46

Parameter Name	Units	Compliance Limit	3/24/2017	9/20/2017	3/27/2018	9/18/2018	3/11/2019	10/3/2019	3/23/2020	9/24/2020
Antimony, Total	mg/L	0.006	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Arsenic, Total	mg/L	0.01	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Barium, Total	mg/L	2	0.11	0.099	0.1	0.12	0.11	0.12	0.12	0.11
Beryllium, Total	mg/L	0.004	0.00075 J	0.00079 J	0.00086 J	0.00086 J	0.00093 J	0.00089 J	0.00092 J	0.001 J
Cadmium, Total	mg/L	0.005	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Calcium, Total	mg/L	--	12.3	12.6	12.4	13	13.6	14.5	14.2	14.1
Chromium, Total	mg/L	0.1	0.0011 J	0.0015 J	0.0014 J	ND U	0.0016 J	0.00077 J	0.0011 J	ND U
Cobalt, Total	mg/L	--	0.016	0.018	0.016	0.018	0.019	0.018	0.018	0.019
Copper, Total	mg/L	1.3	0.033	0.052	0.045	0.037	0.055	0.035	0.034	0.041
Iron, Total	mg/L	0.3	0.022 J	0.052 J	0.031 J	0.045 J	0.035 J	0.025 J	0.047 J	0.08
Lead, Total	mg/L	0.015	0.00077 J	0.0014 J	0.001 J	0.00088 J	0.0016 J	ND U	ND U	0.0009 J
Magnesium, Total	mg/L	--	6.5	7.3	7	7.7	7.8	7.8	8	7.9
Manganese, Total	mg/L	0.043	0.055	0.061	0.056	0.064	0.07	0.06	0.073	0.071
Mercury, Total	mg/L	0.002	0.0031	0.0031	0.0032	0.0028	0.0028	0.0033	0.003	0.0033
Nickel, Total	mg/L	0.039	0.059	0.06	0.055	0.06	0.061	0.064	0.064	0.062
Potassium, Total	mg/L	--	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.5
Selenium, Total	mg/L	0.05	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Silver, Total	mg/L	0.0094	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Sodium, Total	mg/L	--	28	29.7	32	33.5	36.4	35.3	38	38.1
Thallium, Total	mg/L	0.002	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vanadium, Total	mg/L	0.0086	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Zinc, Total	mg/L	0.6	0.38	0.31	0.42	0.31	0.5	0.3	0.23	0.36
Alkalinity, Total	mg/L	--	4 J	4 J	7	8	4 J	6	ND U	15
Ammonia-N	mg/L	--	ND U	ND U	0.043 J	0.031 J	0.054 J	0.154	0.039 J	ND U
Chemical Oxygen Demand (COD)	mg/L	--	ND U	5 J	ND U	ND U	8 J	ND U	ND U	ND U
Chloride	mg/L	250	82.6	87.3	92.4	88.7	92.6	94.5	81.5	97.3
Hardness	mg/L	--	59	61.4	60.1	64.2	66.1	68.5	68.8	71.7
Nitrate-N	mg/L	10	3.5	3.5	3.5	3.3	3.4	3	2.3	2.8

Location ID: SMW-32
Number of Sampling Dates: 46

Parameter Name	Units	Compliance Limit	3/24/2017	9/20/2017	3/27/2018	9/18/2018	3/11/2019	10/3/2019	3/23/2020	9/24/2020
pH	SU	8.5	6.11	5.4	5.58	5.29	5.52	5.14	5.29	5.05
Specific Conductance	umhos/cm	--	266	290	251	293	279	302	380	298
Sulfate	mg/L	250	1.2 J	1.5 J	1.4 J	2.3	2.5	1.3 J	1.1 J	1.7 J
Total Dissolved Solids	mg/L	500	206	100	180	190	180	186	218	210
Turbidity	NTU	5	0.39	1.44	2.36	2.21	1.13	0.94	1.35	1.88

Location ID: SMW-32
Number of Sampling Dates: 46

Parameter Name	Units	Compliance Limit	3/23/2021	9/16/2021	3/24/2022	9/16/2022	3/17/2023	9/15/2023
Antimony, Total	mg/L	0.006	ND U	ND U	ND	ND	ND	ND
Arsenic, Total	mg/L	0.01	ND U	0.00033 J	ND	ND	ND	ND
Barium, Total	mg/L	2	0.12	0.12	0.13	0.12	0.12	0.12
Beryllium, Total	mg/L	0.004	0.0011 J	0.001 J	0.0011 J	0.0012	0.0011	0.00099 J
Cadmium, Total	mg/L	0.005	ND U	0.00026 J	ND	ND	ND	ND
Calcium, Total	mg/L	--	13.8	15	14.9	13.3	14	13.5
Chromium, Total	mg/L	0.1	ND U	0.0014 J	ND	ND	0.0011 J	ND
Cobalt, Total	mg/L	--	0.023	0.02	0.018	0.02	0.018	0.017
Copper, Total	mg/L	1.3	0.042	0.035	0.036	0.048	0.035	0.034
Iron, Total	mg/L	0.3	0.11	0.11	0.028 J	0.069	0.039 J	0.079
Lead, Total	mg/L	0.015	ND U	ND U	ND	ND	ND	0.00076 J
Magnesium, Total	mg/L	--	9.2	8.1	8.5	8.3	7.9	7.7
Manganese, Total	mg/L	0.043	0.1	0.07	0.067	0.088	0.068	0.068
Mercury, Total	mg/L	0.002	0.0027	0.0032	0.003	0.0023	0.0034	0.0027
Nickel, Total	mg/L	0.039	0.063	0.062	0.068	0.069	0.07	0.067
Potassium, Total	mg/L	--	2.9	2.6	2.6	2.7	2.5	2.4
Selenium, Total	mg/L	0.05	ND U	0.0014 J	ND	ND	ND	ND
Silver, Total	mg/L	0.0094	ND U	ND U	ND	ND	ND	ND
Sodium, Total	mg/L	--	43.3	40	45.4	39.6	41.7	40.4
Thallium, Total	mg/L	0.002	ND U	ND U	ND	ND	ND	ND
Vanadium, Total	mg/L	0.0086	ND U	ND U	ND	ND	ND	ND
Zinc, Total	mg/L	0.6	0.29	0.28	0.26	0.32	0.14	0.077
Alkalinity, Total	mg/L	--	ND U	50	ND	ND	10	ND
Ammonia-N	mg/L	--	0.128	ND U	0.061 J	ND	0.089 J	ND
Chemical Oxygen Demand (COD)	mg/L	--	5 J	5 J	ND	ND	8 J	ND
Chloride	mg/L	250	120	116	108	103	101	110
Hardness	mg/L	--	73.1	76.2	69.2	71.1	71.1	69.4
Nitrate-N	mg/L	10	3.9	3.5	2.8	2.8	2.7	2.9
pH	SU	8.5	5.43	5.62	4.31	4.77	4.54	4.52
Specific Conductance	umhos/cm	--	327	344	315	363	394.71	351
Sulfate	mg/L	250	3.5	2.5	ND	3	1.9 J	2.2
Total Dissolved Solids	mg/L	500	306	302	166	210	270	288
Turbidity	NTU	5	2.2	2.32	0.94	1.2	4.54	1.52

Historical Surface Water Sampling Location Data Table I

Name: Eastern Sanitary Landfill - Surface water

Location ID:	SW-1									
Number of Sampling Dates:	17									
Parameter Name	**Units**	**NCTS**	**9/15/2015**	**4/5/2016**	**9/23/2016**	**3/30/2017**	**9/22/2017**	**3/26/2018**	**9/20/2018**	**3/14/2019**
Acetone	ug/L	–	ND U	ND U	ND U	4.9 JB	ND U	6.6 JB	ND U	ND U
Acrylonitrile	ug/L	0.51	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Benzene	ug/L	22	0.77 J	0.82 J	0.9 J	0.77 J	0.82 J	0.76 J	0.4 J	0.44 J
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromomethane	ug/L	–	0.52 J	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Butanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon disulfide	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Carbon Tetrachloride	ug/L	2.3	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorobenzene	ug/L	130	0.46 J	0.5 J	0.68 J	0.46 J	0.55 J	ND U	0.19 J	0.21 J
Chloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromo-3-chloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dibromoethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichlorobenzene	ug/L	420	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,4-Dichlorobenzene	ug/L	63	3.7	3.6	4.3	3.3	4	2.8	1.7	1.8
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2-Dichloroethane	ug/L	3.8	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1-Dichloroethene	ug/L	330	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,2-Dichloroethene	ug/L	–	ND U	ND U	ND U	ND U	0.37 J	ND U	ND U	ND U
trans-1,2-Dichloroethene	ug/L	140	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methylene Chloride	ug/L	46	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Methyl t-Butyl Ether	ug/L	–	0.74 J	0.64 J	0.72 J	0.69 J	0.63 J	0.63 J	0.41 J	0.41 J
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Ethylbenzene	ug/L	530	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
4-Methyl-2-Pentanone(MIBK)	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Styrene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2,2-Tetrachloroethane	ug/L	1.7	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Tetrachloroethene	ug/L	6.9	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Toluene	ug/L	1300	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	SW-1									
Number of Sampling Dates:	17									
Parameter Name	**Units**	**NCTS**	**9/15/2015**	**4/5/2016**	**9/23/2016**	**3/30/2017**	**9/22/2017**	**3/26/2018**	**9/20/2018**	**3/14/2019**
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,1,2-Trichloroethane	ug/L	5.9	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichloroethene	ug/L	25	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Vinyl chloride	ug/L	0.25	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Total Xylenes	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
mp-Xylene	ug/L	–	–	–	–	–	–	–	–	–
o-Xylene	ug/L	–	–	–	–	–	–	–	–	–
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Chloroform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U

Location ID:	SW-1									
Number of Sampling Dates:	17									
Parameter Name	**Units**	**NCTS**	**9/25/2019**	**3/26/2020**	**9/30/2020**	**3/22/2021**	**9/16/2021**	**3/18/2022**	**9/16/2022**	**3/20/2023**
Acetone	ug/L	–	5.1 JB	3.3 J	ND U	3.3 J	ND U	ND	ND	ND
Acrylonitrile	ug/L	0.51	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Benzene	ug/L	22	0.56 J	0.39 J	0.35 J	0.44 J	0.39 J	0.51 J	0.37 J	0.26 J
Bromochloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Bromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
2-Butanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Carbon disulfide	ug/L	–	ND U	0.27 JB	ND U	ND U	ND U	ND	ND	ND
Carbon Tetrachloride	ug/L	2.3	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chlorobenzene	ug/L	130	0.35 J	0.25 J	0.3 J	0.25 J	0.54 JB	0.23 J	0.2 J	ND
Chloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chloromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2-Dibromo-3-chloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2-Dibromoethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Dibromomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2-Dichlorobenzene	ug/L	420	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,4-Dichlorobenzene	ug/L	63	2.4	2	2.2	2	2.1	2.1	1.7	0.96 J
trans-1,4-dichloro-2-butene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1-Dichloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2-Dichloroethane	ug/L	3.8	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1-Dichloroethene	ug/L	330	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
cis-1,2-Dichloroethene	ug/L	–	ND U	0.36 J	ND U	ND U	ND U	0.33 J	ND	ND

Location ID:	SW-1									
Number of Sampling Dates:	17									
Parameter Name	**Units**	**NCTS**	**9/25/2019**	**3/26/2020**	**9/30/2020**	**3/22/2021**	**9/16/2021**	**3/18/2022**	**9/16/2022**	**3/20/2023**
trans-1,2-Dichloroethene	ug/L	140	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Methylene Chloride	ug/L	46	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Methyl t-Butyl Ether	ug/L	–	0.57 J	0.4 J	0.43 J	0.39 J	0.5 J	0.41 J	0.37 J	ND
1,2-Dichloropropane	ug/L	5	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
cis-1,3-Dichloropropene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Ethylbenzene	ug/L	530	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
2-Hexanone	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Iodomethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Styrene	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	1.7	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Tetrachloroethene	ug/L	6.9	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Toluene	ug/L	1300	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1,1-Trichloroethane	ug/L	200	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5.9	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Trichloroethene	ug/L	25	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Trichlorofluoromethane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
1,2,3-Trichloropropane	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Vinyl acetate	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Vinyl chloride	ug/L	0.25	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Total Xylenes	ug/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
mp-Xylene	ug/L	–	–	ND U	ND U	ND U	ND U	ND	ND	ND
o-Xylene	ug/L	–	–	ND U	ND U	ND U	ND U	ND	ND	ND
Bromodichloromethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chlorodibromomethane	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Bromoform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Chloroform	ug/L	80	ND U	ND U	ND U	ND U	ND U	ND	ND	ND

Location ID:	SW-1		
Number of Sampling Dates:	17		
Parameter Name	**Units**	**NCTS**	**9/15/2023**
Acetone	ug/L	–	ND
Acrylonitrile	ug/L	0.51	ND
Benzene	ug/L	22	0.34 J
Bromochloromethane	ug/L	–	ND
Bromomethane	ug/L	–	ND
2-Butanone	ug/L	–	ND

Location ID:	SW-1		
Number of Sampling Dates:	17		
Parameter Name	**Units**	**NCTS**	**9/15/2023**
Carbon disulfide	ug/L	–	ND
Carbon Tetrachloride	ug/L	2.3	ND
Chlorobenzene	ug/L	130	0.22 J
Chloroethane	ug/L	–	ND
Chloromethane	ug/L	–	ND
1,2-Dibromo-3-chloropropane	ug/L	–	ND
1,2-Dibromoethane	ug/L	–	ND
Dibromomethane	ug/L	–	ND
1,2-Dichlorobenzene	ug/L	420	ND
1,4-Dichlorobenzene	ug/L	63	1.6
trans-1,4-dichloro-2-butene	ug/L	–	ND
1,1-Dichloroethane	ug/L	–	ND
1,2-Dichloroethane	ug/L	3.8	ND
1,1-Dichloroethene	ug/L	330	ND
cis-1,2-Dichloroethene	ug/L	–	0.33 J
trans-1,2-Dichloroethene	ug/L	140	ND
Methylene Chloride	ug/L	46	ND
Methyl t-Butyl Ether	ug/L	–	0.35 J
1,2-Dichloropropane	ug/L	5	ND
trans-1,3-Dichloropropene	ug/L	–	ND
cis-1,3-Dichloropropene	ug/L	–	ND
Ethylbenzene	ug/L	530	ND
2-Hexanone	ug/L	–	ND
Iodomethane	ug/L	–	ND
4-Methyl-2-Pentanone(MIBK)	ug/L	–	ND
Styrene	ug/L	–	ND
1,1,1,2-Tetrachloroethane	ug/L	–	ND
1,1,2,2-Tetrachloroethane	ug/L	1.7	ND
Tetrachloroethene	ug/L	6.9	ND
Toluene	ug/L	1300	ND
1,1,1-Trichloroethane	ug/L	200	ND
1,1,2-Trichloroethane	ug/L	5.9	ND
Trichloroethene	ug/L	25	ND
Trichlorofluoromethane	ug/L	–	ND
1,2,3-Trichloropropane	ug/L	–	ND
Vinyl acetate	ug/L	–	ND
Vinyl chloride	ug/L	0.25	ND
Total Xylenes	ug/L	–	ND
mp-Xylene	ug/L	–	ND

Location ID:	SW-1		
Number of Sampling Dates:	17		
Parameter Name	**Units**	**NCTS**	**9/15/2023**
o-Xylene	ug/L	–	ND
Bromodichloromethane	ug/L	80	ND
Chlorodibromomethane	ug/L	80	ND
Bromoform	ug/L	80	ND
Chloroform	ug/L	80	ND

Historical Surface Water Location Data Table II and Water Quality Parameters

Name: Eastern Sanitary Landfill - Surface water

Location ID: SW-1
Number of Sampling Dates: 17

Parameter Name	Units	NCTS	9/15/2015	4/5/2016	9/23/2016	3/30/2017	9/22/2017	3/26/2018	9/20/2018	3/14/2019
Antimony, Total	mg/L	0.0056	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Antimony, Dissolved	mg/L	0.0056	–	–	–	–	–	–	–	–
Arsenic, Total	mg/L	0.00018	0.0011 J	ND U	0.001 J	ND U	0.0013 J	ND U	ND U	ND U
Arsenic, Dissolved	mg/L	0.00018	–	–	–	–	–	–	–	–
Barium, Total	mg/L	1	0.15	0.14	0.17	0.16	0.18	0.14	0.11	0.11
Barium, Dissolved	mg/L	1	–	–	–	–	–	–	–	–
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Beryllium, Dissolved	mg/L	0.004	–	–	–	–	–	–	–	–
Cadmium, Total	mg/L	0.00025	ND U	ND U	ND U	ND U	ND U	0.0016	ND U	ND U
Cadmium, Dissolved	mg/L	0.00025	–	–	–	–	–	–	–	–
Calcium, Total	mg/L	–	44.6	39.3	42.3	43.3	47.9	40.8	30.8	29.8
Calcium, Dissolved	mg/L	–	–	–	–	–	–	–	–	–
Chromium, Total	mg/L	0.1	0.0011 J	0.002 J	0.0013 J	0.0014 J	0.0019 J	0.0018 J	0.0011 J	0.0018 J
Chromium, Dissolved	mg/L	0.1	–	–	–	–	–	–	–	–
Cobalt, Total	mg/L	–	0.38	0.38	0.42	0.4	0.4	0.3	0.22	0.26
Cobalt, Dissolved	mg/L	–	–	–	–	–	–	–	–	–
Copper, Total	mg/L	0.009	ND U	ND U	ND U	ND U	0.0019 J	ND U	ND U	ND U
Copper, Dissolved	mg/L	0.009	–	–	–	–	–	–	–	–
Iron, Total	mg/L	–	48.9	48.9	63.6	71.2	81.9	52.3	28.4	49.2
Iron, Dissolved	mg/L	–	–	–	–	–	–	–	–	–
Lead, Total	mg/L	0.0025	ND U	ND U	ND U	ND U	ND U	ND U	ND U	0.00089 J
Lead, Dissolved	mg/L	0.0025	–	–	–	–	–	–	–	–
Magnesium, Total	mg/L	–	21.3	20.6	24.6	23.9	22.6	21.3	16.5	16.4
Magnesium, Dissolved	mg/L	–	–	–	–	–	–	–	–	–
Manganese, Total	mg/L	–	13.1	10.2	11.6	12.9	12.1	10.5	8.6	8.1
Manganese, Dissolved	mg/L	–	–	–	–	–	–	–	–	–
Mercury, Total	mg/L	0.00077	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Mercury, Dissolved	mg/L	0.00077	–	–	–	–	–	–	–	–
Nickel, Total	mg/L	0.052	0.0073	0.0076	0.0083	0.0081	0.0086	0.0077	0.0064	0.0071
Nickel, Dissolved	mg/L	0.052	–	–	–	–	–	–	–	–
Potassium, Total	mg/L	–	5.3	4.2	5.2	5	5.1	4.7	4.1	2.8
Potassium, Dissolved	mg/L	–	–	–	–	–	–	–	–	–
Selenium, Total	mg/L	0.005	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Selenium, Dissolved	mg/L	0.005	–	–	–	–	–	–	–	–
Silver, Total	mg/L	0.0032	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U
Silver, Dissolved	mg/L	0.0032	–	–	–	–	–	–	–	–
Sodium, Total	mg/L	–	30.3	28.7	37.3	33.7	39.7	36.1	26.6	20.8
Sodium, Dissolved	mg/L	–	–	–	–	–	–	–	–	–
Thallium, Total	mg/L	0.00024	ND U	ND U	ND U	ND U	ND U	ND U	ND U	0.00075 J

Location ID:	SW-1									
Number of Sampling Dates:	17									
Parameter Name	**Units**	**NCTS**	**9/15/2015**	**4/5/2016**	**9/23/2016**	**3/30/2017**	**9/22/2017**	**3/26/2018**	**9/20/2018**	**3/14/2019**
Thallium, Dissolved	mg/L	0.00024	–	–	–	–	–	–	–	–
Vanadium, Total	mg/L	–	ND U	ND U	ND U	ND U	ND U	ND U	ND U	0.0011 J
Vanadium, Dissolved	mg/L	–	–	–	–	–	–	–	–	–
Zinc, Total	mg/L	0.12	0.0062	0.015	0.005 J	0.004 J	0.0044 J	0.0066	0.0061	0.0098
Zinc, Dissolved	mg/L	0.12	–	–	–	–	–	–	–	–
Alkalinity, Total	mg/L	–	224	251	196	205	215	199	162	149
Ammonia-N	mg/L	–	0.512	0.656	0.734	0.973	1.47	0.753	0.444	0.295
Chemical Oxygen Demand (COD)	mg/L	–	9	4 J	10	17	19	8	ND U	20
Chloride	mg/L	–	68.9	50.1	69.7	77	75.9	76.3	49.9	40.7
Hardness	mg/L	–	199	197	205	213	213	189	145	142
Nitrate-N	mg/L	–	ND U	0.04 J	ND U	ND U	ND U	ND U	0.18 J	ND U
pH	SU	–	6.03	6.86	6.72	6.59	6.78	6.75	6.39	7.2
Specific Conductance	umhos/cm	–	590	499	689	603	749	488	509	407
Sulfate	mg/L	–	37.2	33.5	40.3	36.3	31.9	32.1	31.1	32.2
Total Dissolved Solids	mg/L	–	343	370	437	359	296	348	264	308
Turbidity	NTU	–	1.26	0.34	1.5	0.07	0.33	6.96	1.23	10.5

Location ID:	SW-1									
Number of Sampling Dates:	17									
Parameter Name	**Units**	**NCTS**	**9/25/2019**	**3/26/2020**	**9/30/2020**	**3/22/2021**	**9/16/2021**	**3/18/2022**	**9/16/2022**	**3/20/2023**
Antimony, Total	mg/L	0.0056	ND U	ND U	ND U	ND U	ND U	ND	–	ND
Antimony, Dissolved	mg/L	0.0056	–	–	–	–	–	–	ND	–
Arsenic, Total	mg/L	0.00018	ND U	ND U	ND U	ND U	0.0013 J	ND	–	0.0014 J
Arsenic, Dissolved	mg/L	0.00018	–	–	–	–	–	–	ND	–
Barium, Total	mg/L	1	0.17	0.12	0.14	0.16	0.18	0.16	–	0.15
Barium, Dissolved	mg/L	1	–	–	–	–	–	–	0.14	–
Beryllium, Total	mg/L	0.004	ND U	ND U	ND U	ND U	ND U	ND	–	ND
Beryllium, Dissolved	mg/L	0.004	–	–	–	–	–	–	ND	–
Cadmium, Total	mg/L	0.00025	ND U	ND U	ND U	ND U	ND U	ND	–	ND
Cadmium, Dissolved	mg/L	0.00025	–	–	–	–	–	–	ND	–
Calcium, Total	mg/L	–	37.8	34.6	36.4	37	43	42	–	36.5
Calcium, Dissolved	mg/L	–	–	–	–	–	–	–	44.2	–
Chromium, Total	mg/L	0.1	ND U	0.0008 J	ND U	ND U	ND U	ND	–	0.0013 J
Chromium, Dissolved	mg/L	0.1	–	–	–	–	–	–	ND	–
Cobalt, Total	mg/L	–	0.29	0.25	0.24	0.28	0.29	0.32	–	0.28
Cobalt, Dissolved	mg/L	–	–	–	–	–	–	–	0.29	–
Copper, Total	mg/L	0.009	ND U	ND U	ND U	ND U	ND U	ND	–	ND
Copper, Dissolved	mg/L	0.009	–	–	–	–	–	–	ND	–
Iron, Total	mg/L	–	73.8	54.5	67.1	80.3	73	68.7	–	75.5
Iron, Dissolved	mg/L	–	–	–	–	–	–	–	44.5	–
Lead, Total	mg/L	0.0025	ND U	ND U	ND U	ND U	ND U	ND	–	ND
Lead, Dissolved	mg/L	0.0025	–	–	–	–	–	–	ND	–

Location ID: SW-1
Number of Sampling Dates: 17

Parameter Name	Units	NCTS	9/25/2019	3/26/2020	9/30/2020	3/22/2021	9/16/2021	3/18/2022	9/16/2022	3/20/2023
Magnesium, Total	mg/L	–	20.7	17.7	19.6	20.4	21	22.3	–	18.6
Magnesium, Dissolved	mg/L	–	–	–	–	–	–	–	20.9	–
Manganese, Total	mg/L	–	9.5	9.2	9.2	9.1	11	13.4	–	9.5
Manganese, Dissolved	mg/L	–	–	–	–	–	–	–	11.3	–
Mercury, Total	mg/L	0.00077	ND U	ND U	ND U	ND U	ND U	ND	–	ND
Mercury, Dissolved	mg/L	0.00077	–	–	–	–	–	–	ND	–
Nickel, Total	mg/L	0.052	0.0076	0.0068	0.0062	0.0073	0.0071	0.0086	–	0.0074
Nickel, Dissolved	mg/L	0.052	–	–	–	–	–	–	0.0053	–
Potassium, Total	mg/L	–	3.7	3.3	3.7	3.4	4	3.6	–	4.2
Potassium, Dissolved	mg/L	–	–	–	–	–	–	–	5.2	–
Selenium, Total	mg/L	0.005	ND U	ND U	ND U	ND U	ND U	ND	–	ND
Selenium, Dissolved	mg/L	0.005	–	–	–	–	–	–	ND	–
Silver, Total	mg/L	0.0032	ND U	ND U	ND U	ND U	ND U	ND	–	ND
Silver, Dissolved	mg/L	0.0032	–	–	–	–	–	–	ND	–
Sodium, Total	mg/L	–	33.2	27.4	32.3	33.2	38	37.6	–	32.8
Sodium, Dissolved	mg/L	–	–	–	–	–	–	–	40.3	–
Thallium, Total	mg/L	0.00024	ND U	ND U	ND U	ND U	0.00019 J	ND	–	ND
Thallium, Dissolved	mg/L	0.00024	–	–	–	–	–	–	ND	–
Vanadium, Total	mg/L	–	ND U	ND U	ND U	ND U	ND U	ND	–	ND
Vanadium, Dissolved	mg/L	–	–	–	–	–	–	–	ND	–
Zinc, Total	mg/L	0.12	0.015	0.0054 J	0.0056 J	0.0086	ND U	0.0052 J	–	0.0051 J
Zinc, Dissolved	mg/L	0.12	–	–	–	–	–	–	ND	–
Alkalinity, Total	mg/L	–	185	152	165	202	181	213	203	157
Ammonia-N	mg/L	–	0.665	0.402	0.756	0.716	0.613	0.94	1.23	1.31
Chemical Oxygen Demand (COD)	mg/L	–	16	13 J	14 J	23	20	17	22	43
Chloride	mg/L	–	64.4	51.3	58.5	69.6	81.7	74.9	73.3	65.5
Hardness	mg/L	–	179	172	185	165	198	189	197	168
Nitrate-N	mg/L	–	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
pH	SU	–	6.23	6.5	6.27	6.76	6.25	–	6.26	6.26
Specific Conductance	umhos/cm	–	676	451	536	517	704	–	828	716.7
Sulfate	mg/L	–	34.6	32.3	35.5	30.8	35.5	36	28.8	28.6
Total Dissolved Solids	mg/L	–	334	258	352	370	386	424	364	358
Turbidity	NTU	–	3.99	0.54	2.09	0.81	0.74	–	0.42	40.88

Location ID: SW-1
Number of Sampling Dates: 17

Parameter Name	Units	NCTS	9/15/2023
Antimony, Total	mg/L	0.0056	ND
Antimony, Dissolved	mg/L	0.0056	ND
Arsenic, Total	mg/L	0.00018	ND
Arsenic, Dissolved	mg/L	0.00018	ND
Barium, Total	mg/L	1	0.16

Location ID: SW-1
Number of Sampling Dates: 17

Parameter Name	Units	NCTS	9/15/2023
Barium, Dissolved	mg/L	1	0.15
Beryllium, Total	mg/L	0.004	ND
Beryllium, Dissolved	mg/L	0.004	ND
Cadmium, Total	mg/L	0.00025	ND
Cadmium, Dissolved	mg/L	0.00025	ND
Calcium, Total	mg/L	–	38.6
Calcium, Dissolved	mg/L	–	43
Chromium, Total	mg/L	0.1	ND
Chromium, Dissolved	mg/L	0.1	0.00087
Cobalt, Total	mg/L	–	0.23
Cobalt, Dissolved	mg/L	–	0.22
Copper, Total	mg/L	0.009	ND
Copper, Dissolved	mg/L	0.009	ND
Iron, Total	mg/L	–	56.5
Iron, Dissolved	mg/L	–	0.64
Lead, Total	mg/L	0.0025	ND
Lead, Dissolved	mg/L	0.0025	ND
Magnesium, Total	mg/L	–	19.8
Magnesium, Dissolved	mg/L	–	22.3
Manganese, Total	mg/L	–	7.5
Manganese, Dissolved	mg/L	–	8
Mercury, Total	mg/L	0.00077	ND
Mercury, Dissolved	mg/L	0.00077	ND
Nickel, Total	mg/L	0.052	0.005 J
Nickel, Dissolved	mg/L	0.052	0.0051
Potassium, Total	mg/L	–	5.1
Potassium, Dissolved	mg/L	–	5.3
Selenium, Total	mg/L	0.005	ND
Selenium, Dissolved	mg/L	0.005	ND
Silver, Total	mg/L	0.0032	ND
Silver, Dissolved	mg/L	0.0032	ND
Sodium, Total	mg/L	–	38.5
Sodium, Dissolved	mg/L	–	43.3
Thallium, Total	mg/L	0.00024	ND
Thallium, Dissolved	mg/L	0.00024	ND
Vanadium, Total	mg/L	–	ND
Vanadium, Dissolved	mg/L	–	ND
Zinc, Total	mg/L	0.12	0.0052 J
Zinc, Dissolved	mg/L	0.12	0.0031
Alkalinity, Total	mg/L	–	181
Ammonia-N	mg/L	–	1.49
Chemical Oxygen Demand (COD)	mg/L	–	22

Location ID: SW-1
Number of Sampling Dates: 17

Parameter Name	Units	NCTS	9/15/2023
Chloride	mg/L	–	78
Hardness	mg/L	–	195
Nitrate-N	mg/L	–	ND
pH	SU	–	6.4
Specific Conductance	umhos/cm	–	796
Sulfate	mg/L	–	26.2
Total Dissolved Solids	mg/L	–	398
Turbidity	NTU	–	14.9

Index for Event Summary Tables & Historical Tables

"--" - Not analyzed or not reported
B – Detected in Trip or Field Blank
- At the direction of Baltimore County, B qualifiers were continued to be entered by Reporting Staff.

ND – non-detect
- All concentrations reported as "ND" before 2014 were detected less than their Reporting Limit

J - (Before 2022) Detected below PQL, (2022-present) Detected below Reporting Limit
U – Not detected
R – Potentially biased
Shading – exceeds compliance limit (MCL, Action Level, Secondary MCL [SMCL], MDE Clean-up Standard, or TCLP standard)

Monitoring Well Information Table		
Well No.	***Well Information, including parameter analysis***	***Screened Formation***
GWM-1	Table I & II	Arundel
GWM-2*	Table I & II, and Assessment Monitoring for Organochloride Pesticides	Patapsco
GWM-3	Table I & II	Patapsco
GWM-4	Table I & II, and Assessment Monitoring for Organochloride Pesticides	Patapsco
GWM-5A	Table I & II	Patapsco
GWM-6	Table I & II	Patapsco
GWM-7	Not sampled as part of groundwater sampling program; gauged monthly.	NA
GWM-8	Table I & II	Arundel
GWM-9*	Table I & II, and Assessment Monitoring for Organochloride Pesticides	Patapsco
GWM-10	Table I & II	Arundel
GWM-11	Table I & II	Arundel
GWM-12	Table I & II	Arundel
GWM-14	Table I & II	Patapsco
GWM-15D	Table I & II	Patuxent
GWM-16S	Not sampled as part of groundwater sampling program; gauged monthly.	Patapsco
GWM-16D*	Table I & II	Patuxent
GWM-17S	Table I & II, and Assessment Monitoring for Organochloride Pesticides	Patapsco
GWM-17D	Table I & II, and Assessment Monitoring for Organochloride Pesticides	Patuxent
GWM-19D	Table I & II	Patuxent
SMW-13	Supply Monitoring Well: Table I & Table II	Patuxent
SMW-32	Supply Monitoring Well: Table I & Table II	Patuxent
P2006-03	Piezometer, not sampled	NA

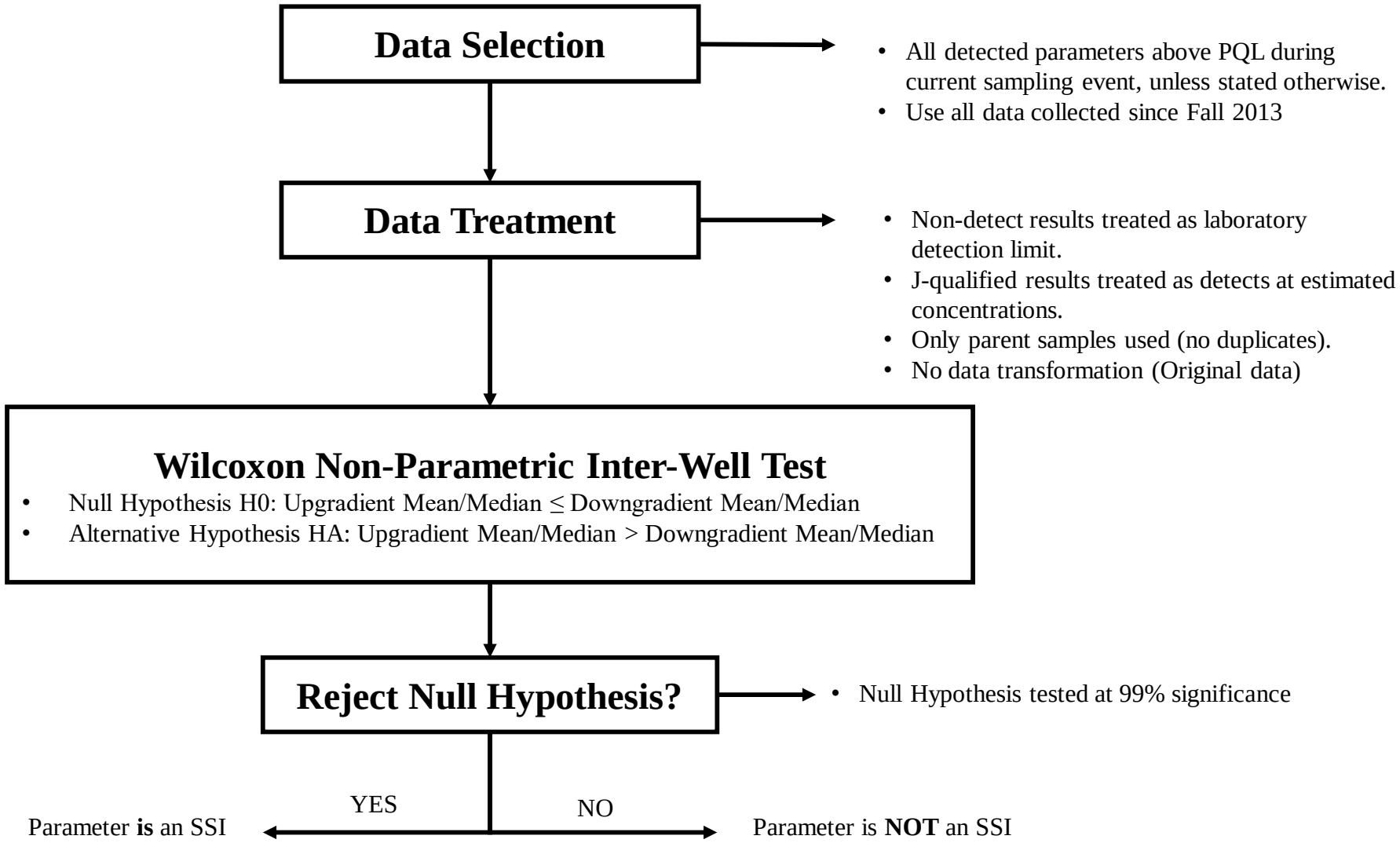
* - Background well

APPENDIX F

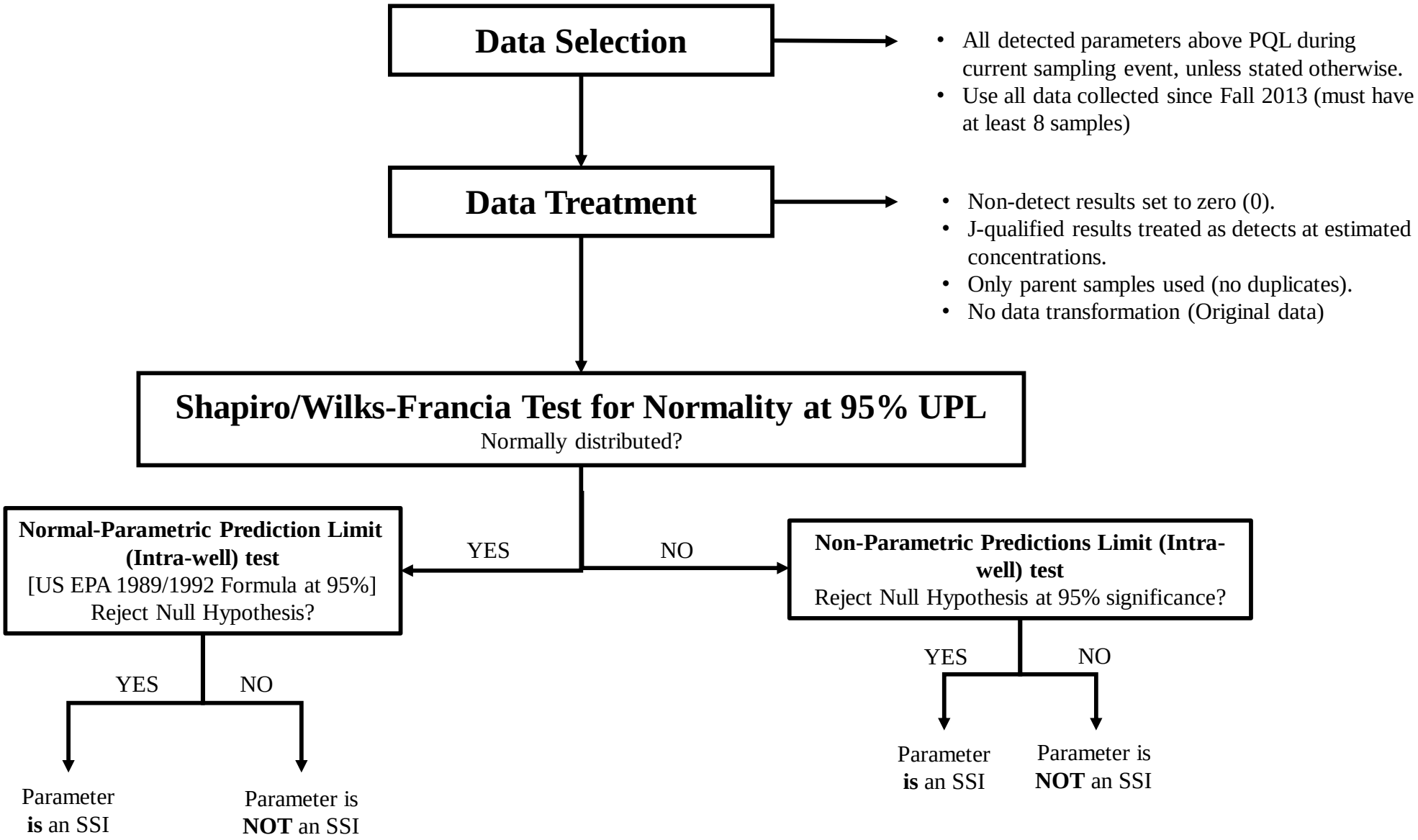
Statistical Analysis Results

1) Patapsco Aquifer VOC Inter-well Statistics
2) Patapsco Aquifer VOC Intra-well Statistics
3) Patuxent Aquifer VOC Inter-well Statistics
4) Patuxent Aquifer VOC Intra-well Statistics
5) Patapsco Aquifer Water Quality Parameters Inter-well Statistics
6) Patapsco Aquifer Water Quality Parameters Intra-well Statistics
7) Patuxent Aquifer Water Quality Parameters Inter-well Statistics
8) Patuxent Aquifer Water Quality Parameters Intra-well Statistics
9) Patapsco Aquifer Metals Inter-well Statistics
10) Patapsco Aquifer Metals Intra-well Statistics
11) Patuxent Aquifer Metals Inter-well Statistics
12) Patuxent Aquifer Metals Intra-well Statistics

INTER-WELL ANALYSIS: Determination of a Statistically Significant Increase (SSI)



INTRA-WELL ANALYSIS: Determination of a Statistically Significant Increase (SSI)



1) Patapsco Aquifer VOC Inter-well Statistics

APPENDIX F

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Bromomethane

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	32
	3/19/2014	ND<0.64 J	32
	9/8/2014	ND<1 U	32
	3/17/2015	ND<1 U	32
	9/14/2015	ND<1 U	32
	3/17/2016	ND<1 U	32
	9/21/2016	ND<1 U	32
	3/24/2017	ND<1 U	32
	9/20/2017	ND<0.44 J	32
	3/27/2018	ND<1 U	32
	9/19/2018	ND<1 U	32
	3/11/2019	ND<0.72 JB	32
	9/25/2019	ND<1 U	32
	3/18/2020	ND<1 U	32
	9/23/2020	ND<1 U	32
	3/17/2021	ND<1 U	32
	9/8/2021	ND<1 U	32
	3/15/2022	ND<1	32
	9/12/2022	ND<1	32
	3/13/2023	ND<0.6 JB	32
	9/11/2023	ND<0.73 JB	32
GWM-2	9/25/2013	ND<1	32
	3/18/2014	ND<1 U	32
	9/16/2014	ND<1 U	32
	3/18/2015	ND<1 U	32
	9/15/2015	ND<0.56 J	32
	3/16/2016	ND<0.72 J	32
	9/22/2016	ND<1 U	32
	3/24/2017	ND<1 U	32
	9/21/2017	ND<1 U	32
	3/28/2018	ND<1 U	32
	9/21/2018	ND<1 U	32
	3/12/2019	ND<1 U	32
	10/1/2019	ND<1 U	32
	3/18/2020	ND<1 U	32
	9/23/2020	ND<1 U	32
	3/17/2021	ND<1 U	32
	9/9/2021	ND<1 U	32
	3/15/2022	ND<1	32
	9/12/2022	ND<1	32
	3/13/2023	ND<0.53 JB	32
	9/11/2023	ND<0.76 JB	32
GWM-4	9/18/2013	ND<1	32

3/20/2014	ND<0.45 J	32
9/9/2014	ND<0.43 J	32
3/16/2015	ND<0.51 JB	32
9/9/2015	ND<1 U	32
3/18/2016	ND<1 U	32
9/20/2016	ND<1 U	32
3/23/2017	ND<1 U	32
9/18/2017	ND<1 U	32
3/15/2018	ND<1 U	32
9/17/2018	ND<1 U	32
3/5/2019	ND<1 U	32
9/24/2019	ND<1 U	32
3/16/2020	ND<1 U	32
9/22/2020	ND<0.45 J	32
3/16/2021	ND<1 U	32
9/14/2021	ND<1 U	32
3/22/2022	ND<1	32
9/13/2022	ND<1	32
3/14/2023	ND<1	32
9/12/2023	ND<0.87 JB	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Bromomethane

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 64
Non detect rank is 32.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	32.5
	3/19/2014	ND<0.64 J	32.5
	9/8/2014	ND<1 U	32.5
	3/17/2015	ND<1 U	32.5
	9/14/2015	ND<1 U	32.5
	3/17/2016	ND<1 U	32.5
	9/21/2016	ND<1 U	32.5
	3/24/2017	ND<1 U	32.5
	9/20/2017	ND<0.44 J	32.5
	3/27/2018	ND<1 U	32.5
	9/19/2018	ND<1 U	32.5
	3/11/2019	ND<0.72 JB	32.5
	9/25/2019	ND<1 U	32.5
	3/18/2020	ND<1 U	32.5
	9/23/2020	ND<1 U	32.5
	3/17/2021	ND<1 U	32.5
	9/8/2021	ND<1 U	32.5
	3/15/2022	ND<1	32.5
	9/12/2022	ND<1	32.5
	3/13/2023	ND<0.6 JB	32.5
	9/11/2023	ND<0.73 JB	32.5
GWM-2	9/25/2013	ND<1	32.5
	3/18/2014	ND<1 U	32.5
	9/16/2014	ND<1 U	32.5
	3/18/2015	ND<1 U	32.5
	9/15/2015	ND<0.56 J	32.5
	3/16/2016	ND<0.72 J	32.5
	9/22/2016	ND<1 U	32.5
	3/24/2017	ND<1 U	32.5
	9/21/2017	ND<1 U	32.5
	3/28/2018	ND<1 U	32.5
	9/21/2018	ND<1 U	32.5
	3/12/2019	ND<1 U	32.5
	10/1/2019	ND<1 U	32.5
	3/18/2020	ND<1 U	32.5
	9/23/2020	ND<1 U	32.5
	3/17/2021	ND<1 U	32.5
	9/9/2021	ND<1 U	32.5
	3/15/2022	ND<1	32.5
	9/12/2022	ND<1	32.5
	3/13/2023	ND<0.53 JB	32.5
	9/11/2023	ND<0.76 JB	32.5
GWM-5A	9/19/2013	ND<1	32.5

12/5/2013	ND<1	32.5
3/19/2014	ND<0.5 J	32.5
9/4/2014	ND<0.76 J	32.5
3/17/2015	ND<1 U	32.5
9/11/2015	ND<1 U	32.5
3/15/2016	ND<1 U	32.5
9/21/2016	ND<1 U	32.5
3/28/2017	ND<1 U	32.5
9/19/2017	ND<0.51 JB	32.5
3/26/2018	ND<1 U	32.5
9/18/2018	ND<1 U	32.5
3/4/2019	ND<1 U	32.5
9/23/2019	ND<1 U	32.5
3/19/2020	ND<1 U	32.5
9/23/2020	ND<1 U	32.5
3/19/2021	ND<1 U	32.5
9/15/2021	ND<1 U	32.5
3/16/2022	ND<1	32.5
9/14/2022	ND<1	32.5
3/16/2023	ND<1	32.5
9/13/2023	ND<0.87 JB	32.5

The Wilcoxon Statistic is 462
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is -0.00706753
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00706753 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Bromomethane

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	32
	3/19/2014	ND<0.64 J	32
	9/8/2014	ND<1 U	32
	3/17/2015	ND<1 U	32
	9/14/2015	ND<1 U	32
	3/17/2016	ND<1 U	32
	9/21/2016	ND<1 U	32
	3/24/2017	ND<1 U	32
	9/20/2017	ND<0.44 J	32
	3/27/2018	ND<1 U	32
	9/19/2018	ND<1 U	32
	3/11/2019	ND<0.72 JB	32
	9/25/2019	ND<1 U	32
	3/18/2020	ND<1 U	32
	9/23/2020	ND<1 U	32
	3/17/2021	ND<1 U	32
	9/8/2021	ND<1 U	32
	3/15/2022	ND<1	32
	9/12/2022	ND<1	32
	3/13/2023	ND<0.6 JB	32
	9/11/2023	ND<0.73 JB	32
GWM-2	9/25/2013	ND<1	32
	3/18/2014	ND<1 U	32
	9/16/2014	ND<1 U	32
	3/18/2015	ND<1 U	32
	9/15/2015	ND<0.56 J	32
	3/16/2016	ND<0.72 J	32
	9/22/2016	ND<1 U	32
	3/24/2017	ND<1 U	32
	9/21/2017	ND<1 U	32
	3/28/2018	ND<1 U	32
	9/21/2018	ND<1 U	32
	3/12/2019	ND<1 U	32
	10/1/2019	ND<1 U	32
	3/18/2020	ND<1 U	32
	9/23/2020	ND<1 U	32
	3/17/2021	ND<1 U	32
	9/9/2021	ND<1 U	32
	3/15/2022	ND<1	32
	9/12/2022	ND<1	32
	3/13/2023	ND<0.53 JB	32
	9/11/2023	ND<0.76 JB	32
GWM-14	9/24/2013	ND<1	32

3/21/2014	ND<1 U	32
9/8/2014	ND<1 U	32
3/19/2015	ND<1 U	32
9/14/2015	ND<1 U	32
3/21/2016	ND<1 U	32
9/23/2016	ND<1 U	32
3/27/2017	ND<1 U	32
9/20/2017	ND<0.54 J	32
3/16/2018	ND<1 U	32
9/20/2018	ND<1 U	32
3/5/2019	ND<1 U	32
9/25/2019	ND<1 U	32
3/25/2020	ND<1 U	32
9/28/2020	ND<1 U	32
3/18/2021	ND<1 U	32
9/15/2021	ND<0.53 JB	32
3/22/2022	ND<1	32
9/14/2022	ND<1	32
3/16/2023	ND<1	32
9/13/2023	ND<0.64 JB	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Bromomethane

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	32
	3/19/2014	ND<0.64 J	32
	9/8/2014	ND<1 U	32
	3/17/2015	ND<1 U	32
	9/14/2015	ND<1 U	32
	3/17/2016	ND<1 U	32
	9/21/2016	ND<1 U	32
	3/24/2017	ND<1 U	32
	9/20/2017	ND<0.44 J	32
	3/27/2018	ND<1 U	32
	9/19/2018	ND<1 U	32
	3/11/2019	ND<0.72 JB	32
	9/25/2019	ND<1 U	32
	3/18/2020	ND<1 U	32
	9/23/2020	ND<1 U	32
	3/17/2021	ND<1 U	32
	9/8/2021	ND<1 U	32
	3/15/2022	ND<1	32
	9/12/2022	ND<1	32
	3/13/2023	ND<0.6 JB	32
	9/11/2023	ND<0.73 JB	32
GWM-2	9/25/2013	ND<1	32
	3/18/2014	ND<1 U	32
	9/16/2014	ND<1 U	32
	3/18/2015	ND<1 U	32
	9/15/2015	ND<0.56 J	32
	3/16/2016	ND<0.72 J	32
	9/22/2016	ND<1 U	32
	3/24/2017	ND<1 U	32
	9/21/2017	ND<1 U	32
	3/28/2018	ND<1 U	32
	9/21/2018	ND<1 U	32
	3/12/2019	ND<1 U	32
	10/1/2019	ND<1 U	32
	3/18/2020	ND<1 U	32
	9/23/2020	ND<1 U	32
	3/17/2021	ND<1 U	32
	9/9/2021	ND<1 U	32
	3/15/2022	ND<1	32
	9/12/2022	ND<1	32
	3/13/2023	ND<0.53 JB	32
	9/11/2023	ND<0.76 JB	32
GWM-6	9/24/2013	ND<1	32

3/21/2014	ND<1 U	32
9/17/2014	ND<1 U	32
3/19/2015	ND<1 U	32
9/15/2015	ND<0.48 J	32
3/21/2016	ND<1 U	32
9/26/2016	ND<1 U	32
3/31/2017	ND<1 U	32
9/21/2017	ND<1 U	32
3/30/2018	ND<1 U	32
9/26/2018	ND<1 U	32
3/13/2019	ND<1 U	32
10/3/2019	ND<1 U	32
4/3/2020	ND<1 U	32
9/30/2020	ND<1 U	32
3/22/2021	ND<1 U	32
9/16/2021	ND<1 U	32
3/24/2022	ND<1	32
9/16/2022	ND<1	32
3/17/2023	ND<1	32
9/14/2023	ND<1	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Bromomethane

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	32
	3/19/2014	ND<0.64 J	32
	9/8/2014	ND<1 U	32
	3/17/2015	ND<1 U	32
	9/14/2015	ND<1 U	32
	3/17/2016	ND<1 U	32
	9/21/2016	ND<1 U	32
	3/24/2017	ND<1 U	32
	9/20/2017	ND<0.44 J	32
	3/27/2018	ND<1 U	32
	9/19/2018	ND<1 U	32
	3/11/2019	ND<0.72 JB	32
	9/25/2019	ND<1 U	32
	3/18/2020	ND<1 U	32
	9/23/2020	ND<1 U	32
	3/17/2021	ND<1 U	32
	9/8/2021	ND<1 U	32
	3/15/2022	ND<1	32
	9/12/2022	ND<1	32
	3/13/2023	ND<0.6 JB	32
	9/11/2023	ND<0.73 JB	32
GWM-2	9/25/2013	ND<1	32
	3/18/2014	ND<1 U	32
	9/16/2014	ND<1 U	32
	3/18/2015	ND<1 U	32
	9/15/2015	ND<0.56 J	32
	3/16/2016	ND<0.72 J	32
	9/22/2016	ND<1 U	32
	3/24/2017	ND<1 U	32
	9/21/2017	ND<1 U	32
	3/28/2018	ND<1 U	32
	9/21/2018	ND<1 U	32
	3/12/2019	ND<1 U	32
	10/1/2019	ND<1 U	32
	3/18/2020	ND<1 U	32
	9/23/2020	ND<1 U	32
	3/17/2021	ND<1 U	32
	9/9/2021	ND<1 U	32
	3/15/2022	ND<1	32
	9/12/2022	ND<1	32
	3/13/2023	ND<0.53 JB	32
	9/11/2023	ND<0.76 JB	32
GWM-3	9/25/2013	ND<1	32

3/18/2014	ND<1 U	32
9/16/2014	ND<1 U	32
3/18/2015	ND<0.48 JB	32
9/15/2015	ND<0.4 J	32
3/16/2016	ND<0.89 J	32
9/22/2016	ND<1 U	32
3/29/2017	ND<1 U	32
9/21/2017	ND<1 U	32
3/28/2018	ND<1 U	32
9/20/2018	ND<1 U	32
3/12/2019	ND<1 U	32
10/1/2019	ND<1 U	32
3/18/2020	ND<1 U	32
9/24/2020	ND<1 U	32
3/17/2021	ND<1 U	32
9/9/2021	ND<1 U	32
3/15/2022	ND<1	32
9/16/2022	ND<1	32
3/15/2023	ND<1	32
9/11/2023	ND<0.76 JB	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Bromomethane

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 50
Non detect rank is 25.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	25.5
	3/19/2014	ND<0.64 J	25.5
	9/8/2014	ND<1 U	25.5
	3/17/2015	ND<1 U	25.5
	9/14/2015	ND<1 U	25.5
	3/17/2016	ND<1 U	25.5
	9/21/2016	ND<1 U	25.5
	3/24/2017	ND<1 U	25.5
	9/20/2017	ND<0.44 J	25.5
	3/27/2018	ND<1 U	25.5
	9/19/2018	ND<1 U	25.5
	3/11/2019	ND<0.72 JB	25.5
	9/25/2019	ND<1 U	25.5
	3/18/2020	ND<1 U	25.5
	9/23/2020	ND<1 U	25.5
	3/17/2021	ND<1 U	25.5
	9/8/2021	ND<1 U	25.5
	3/15/2022	ND<1	25.5
	9/12/2022	ND<1	25.5
	3/13/2023	ND<0.6 JB	25.5
	9/11/2023	ND<0.73 JB	25.5
GWM-2	9/25/2013	ND<1	25.5
	3/18/2014	ND<1 U	25.5
	9/16/2014	ND<1 U	25.5
	3/18/2015	ND<1 U	25.5
	9/15/2015	ND<0.56 J	25.5
	3/16/2016	ND<0.72 J	25.5
	9/22/2016	ND<1 U	25.5
	3/24/2017	ND<1 U	25.5
	9/21/2017	ND<1 U	25.5
	3/28/2018	ND<1 U	25.5
	9/21/2018	ND<1 U	25.5
	3/12/2019	ND<1 U	25.5
	10/1/2019	ND<1 U	25.5
	3/18/2020	ND<1 U	25.5
	9/23/2020	ND<1 U	25.5
	3/17/2021	ND<1 U	25.5
	9/9/2021	ND<1 U	25.5
	3/15/2022	ND<1	25.5
	9/12/2022	ND<1	25.5
	3/13/2023	ND<0.53 JB	25.5
	9/11/2023	ND<0.76 JB	25.5
GWM-17S	11/14/2019	ND<1 U	25.5

3/26/2020	ND<1 U	25.5
9/29/2020	ND<1 U	25.5
3/16/2021	ND<1 U	25.5
9/14/2021	ND<1 U	25.5
3/18/2022	ND<1	25.5
9/13/2022	ND<1	25.5
3/14/2023	ND<1	25.5
9/12/2023	1 B	51

The Wilcoxon Statistic is 210
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is 0.50652
The Standard Deviation adjusted for ties is 9.72111
The Z Score adjusted for ties is 2.10881
0.50652 < 2.326 indicating no statistical significance at 1% level
2.10881 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloroform

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 59
Non detect rank is 30

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	30
	3/19/2014	ND<1 U	30
	9/8/2014	ND<1 U	30
	3/17/2015	ND<1 U	30
	9/14/2015	ND<1 U	30
	3/17/2016	ND<1 U	30
	9/21/2016	ND<1 U	30
	3/24/2017	ND<1 U	30
	9/20/2017	ND<1 U	30
	3/27/2018	ND<1 U	30
	9/19/2018	ND<1 U	30
	3/11/2019	ND<1 U	30
	9/25/2019	ND<1 U	30
	3/18/2020	ND<0.54 JB	30
	9/23/2020	ND<0.62 J	30
	3/17/2021	ND<1 U	30
	9/8/2021	ND<0.24 J	30
	3/15/2022	7.1	61
	9/12/2022	14	62
	3/13/2023	20.3	63
	9/11/2023	3.4	60
GWM-2	9/25/2013	ND<1	30
	3/18/2014	ND<1 U	30
	9/16/2014	ND<0.31 J	30
	3/18/2015	ND<0.34 J	30
	9/15/2015	ND<0.34 J	30
	3/16/2016	ND<1 U	30
	9/22/2016	ND<0.31 J	30
	3/24/2017	ND<1 U	30
	9/21/2017	ND<1 U	30
	3/28/2018	ND<1 U	30
	9/21/2018	ND<0.62 JB	30
	3/12/2019	ND<0.68 J	30
	10/1/2019	ND<0.31 J	30
	3/18/2020	ND<0.34 JB	30
	9/23/2020	ND<0.24 J	30
	3/17/2021	ND<0.22 J	30
	9/9/2021	ND<0.24 J	30
	3/15/2022	ND<1	30
	9/12/2022	ND<1	30
	3/13/2023	ND<0.29 J	30
	9/11/2023	ND<0.36 J	30
GWM-4	9/18/2013	ND<1	30

3/20/2014	ND<1 U	30
9/9/2014	ND<1 U	30
3/16/2015	ND<1 U	30
9/9/2015	ND<1 U	30
3/18/2016	ND<1 U	30
9/20/2016	ND<1 U	30
3/23/2017	ND<1 U	30
9/18/2017	ND<1 U	30
3/15/2018	ND<1 U	30
9/17/2018	ND<1 U	30
3/5/2019	ND<1 U	30
9/24/2019	ND<1 U	30
3/16/2020	ND<1 U	30
9/22/2020	ND<1 U	30
3/16/2021	ND<1 U	30
9/14/2021	ND<1 U	30
3/22/2022	ND<1	30
9/13/2022	ND<1	30
3/14/2023	ND<1	30
9/12/2023	ND<1	30

The Wilcoxon Statistic is 399
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.619663
The Standard Deviation adjusted for ties is 28.9905
The Z Score adjusted for ties is -1.466
-0.619663 < 2.326 indicating no statistical significance at 1% level
-1.466 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloroform

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 60
Non detect rank is 30.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	30.5
	3/19/2014	ND<1 U	30.5
	9/8/2014	ND<1 U	30.5
	3/17/2015	ND<1 U	30.5
	9/14/2015	ND<1 U	30.5
	3/17/2016	ND<1 U	30.5
	9/21/2016	ND<1 U	30.5
	3/24/2017	ND<1 U	30.5
	9/20/2017	ND<1 U	30.5
	3/27/2018	ND<1 U	30.5
	9/19/2018	ND<1 U	30.5
	3/11/2019	ND<1 U	30.5
	9/25/2019	ND<1 U	30.5
	3/18/2020	ND<0.54 JB	30.5
	9/23/2020	ND<0.62 J	30.5
	3/17/2021	ND<1 U	30.5
	9/8/2021	ND<0.24 J	30.5
	3/15/2022	7.1	62
	9/12/2022	14	63
	3/13/2023	20.3	64
	9/11/2023	3.4	61
GWM-2	9/25/2013	ND<1	30.5
	3/18/2014	ND<1 U	30.5
	9/16/2014	ND<0.31 J	30.5
	3/18/2015	ND<0.34 J	30.5
	9/15/2015	ND<0.34 J	30.5
	3/16/2016	ND<1 U	30.5
	9/22/2016	ND<0.31 J	30.5
	3/24/2017	ND<1 U	30.5
	9/21/2017	ND<1 U	30.5
	3/28/2018	ND<1 U	30.5
	9/21/2018	ND<0.62 JB	30.5
	3/12/2019	ND<0.68 J	30.5
	10/1/2019	ND<0.31 J	30.5
	3/18/2020	ND<0.34 JB	30.5
	9/23/2020	ND<0.24 J	30.5
	3/17/2021	ND<0.22 J	30.5
	9/9/2021	ND<0.24 J	30.5
	3/15/2022	ND<1	30.5
	9/12/2022	ND<1	30.5
	3/13/2023	ND<0.29 J	30.5
	9/11/2023	ND<0.36 J	30.5
GWM-5A	9/19/2013	ND<1	30.5

12/5/2013	ND<1	30.5
3/19/2014	ND<1 U	30.5
9/4/2014	ND<1 U	30.5
3/17/2015	ND<1 U	30.5
9/11/2015	ND<1 U	30.5
3/15/2016	ND<1 U	30.5
9/21/2016	ND<1 U	30.5
3/28/2017	ND<1 U	30.5
9/19/2017	ND<1 U	30.5
3/26/2018	ND<1 U	30.5
9/18/2018	ND<1 U	30.5
3/4/2019	ND<1 U	30.5
9/23/2019	ND<1 U	30.5
3/19/2020	ND<1 U	30.5
9/23/2020	ND<1 U	30.5
3/19/2021	ND<1 U	30.5
9/15/2021	ND<1 U	30.5
3/16/2022	ND<1	30.5
9/14/2022	ND<1	30.5
3/16/2023	ND<1	30.5
9/13/2023	ND<1	30.5

The Wilcoxon Statistic is 418
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is -0.629011
The Standard Deviation adjusted for ties is 29.6841
The Z Score adjusted for ties is -1.49912
-0.629011 < 2.326 indicating no statistical significance at 1% level
-1.49912 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloroform

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 59
Non detect rank is 30

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	30
	3/19/2014	ND<1 U	30
	9/8/2014	ND<1 U	30
	3/17/2015	ND<1 U	30
	9/14/2015	ND<1 U	30
	3/17/2016	ND<1 U	30
	9/21/2016	ND<1 U	30
	3/24/2017	ND<1 U	30
	9/20/2017	ND<1 U	30
	3/27/2018	ND<1 U	30
	9/19/2018	ND<1 U	30
	3/11/2019	ND<1 U	30
	9/25/2019	ND<1 U	30
	3/18/2020	ND<0.54 JB	30
	9/23/2020	ND<0.62 J	30
	3/17/2021	ND<1 U	30
	9/8/2021	ND<0.24 J	30
	3/15/2022	7.1	61
	9/12/2022	14	62
	3/13/2023	20.3	63
	9/11/2023	3.4	60
GWM-2	9/25/2013	ND<1	30
	3/18/2014	ND<1 U	30
	9/16/2014	ND<0.31 J	30
	3/18/2015	ND<0.34 J	30
	9/15/2015	ND<0.34 J	30
	3/16/2016	ND<1 U	30
	9/22/2016	ND<0.31 J	30
	3/24/2017	ND<1 U	30
	9/21/2017	ND<1 U	30
	3/28/2018	ND<1 U	30
	9/21/2018	ND<0.62 JB	30
	3/12/2019	ND<0.68 J	30
	10/1/2019	ND<0.31 J	30
	3/18/2020	ND<0.34 JB	30
	9/23/2020	ND<0.24 J	30
	3/17/2021	ND<0.22 J	30
	9/9/2021	ND<0.24 J	30
	3/15/2022	ND<1	30
	9/12/2022	ND<1	30
	3/13/2023	ND<0.29 J	30
	9/11/2023	ND<0.36 J	30
GWM-14	9/24/2013	ND<1	30

3/21/2014	ND<1 U	30
9/8/2014	ND<1 U	30
3/19/2015	ND<1 U	30
9/14/2015	ND<1 U	30
3/21/2016	ND<1 U	30
9/23/2016	ND<1 U	30
3/27/2017	ND<1 U	30
9/20/2017	ND<1 U	30
3/16/2018	ND<1 U	30
9/20/2018	ND<1 U	30
3/5/2019	ND<1 U	30
9/25/2019	ND<1 U	30
3/25/2020	ND<1 U	30
9/28/2020	ND<1 U	30
3/18/2021	ND<1 U	30
9/15/2021	ND<1 U	30
3/22/2022	ND<1	30
9/14/2022	ND<1	30
3/16/2023	ND<1	30
9/13/2023	ND<1	30

The Wilcoxon Statistic is 399
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.619663
The Standard Deviation adjusted for ties is 28.9905
The Z Score adjusted for ties is -1.466
-0.619663 < 2.326 indicating no statistical significance at 1% level
-1.466 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloroform

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 59
Non detect rank is 30

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	30
	3/19/2014	ND<1 U	30
	9/8/2014	ND<1 U	30
	3/17/2015	ND<1 U	30
	9/14/2015	ND<1 U	30
	3/17/2016	ND<1 U	30
	9/21/2016	ND<1 U	30
	3/24/2017	ND<1 U	30
	9/20/2017	ND<1 U	30
	3/27/2018	ND<1 U	30
	9/19/2018	ND<1 U	30
	3/11/2019	ND<1 U	30
	9/25/2019	ND<1 U	30
	3/18/2020	ND<0.54 JB	30
	9/23/2020	ND<0.62 J	30
	3/17/2021	ND<1 U	30
	9/8/2021	ND<0.24 J	30
	3/15/2022	7.1	61
	9/12/2022	14	62
	3/13/2023	20.3	63
	9/11/2023	3.4	60
GWM-2	9/25/2013	ND<1	30
	3/18/2014	ND<1 U	30
	9/16/2014	ND<0.31 J	30
	3/18/2015	ND<0.34 J	30
	9/15/2015	ND<0.34 J	30
	3/16/2016	ND<1 U	30
	9/22/2016	ND<0.31 J	30
	3/24/2017	ND<1 U	30
	9/21/2017	ND<1 U	30
	3/28/2018	ND<1 U	30
	9/21/2018	ND<0.62 JB	30
	3/12/2019	ND<0.68 J	30
	10/1/2019	ND<0.31 J	30
	3/18/2020	ND<0.34 JB	30
	9/23/2020	ND<0.24 J	30
	3/17/2021	ND<0.22 J	30
	9/9/2021	ND<0.24 J	30
	3/15/2022	ND<1	30
	9/12/2022	ND<1	30
	3/13/2023	ND<0.29 J	30
	9/11/2023	ND<0.36 J	30
GWM-6	9/24/2013	ND<1	30

3/21/2014	ND<1 U	30
9/17/2014	ND<1 U	30
3/19/2015	ND<1 U	30
9/15/2015	ND<1 U	30
3/21/2016	ND<1 U	30
9/26/2016	ND<1 U	30
3/31/2017	ND<1 U	30
9/21/2017	ND<1 U	30
3/30/2018	ND<1 U	30
9/26/2018	ND<1 U	30
3/13/2019	ND<1 U	30
10/3/2019	ND<1 U	30
4/3/2020	ND<1 U	30
9/30/2020	ND<1 U	30
3/22/2021	ND<0.29 J	30
9/16/2021	ND<1 U	30
3/24/2022	ND<0.22 JB	30
9/16/2022	ND<1	30
3/17/2023	ND<1	30
9/14/2023	ND<1	30

The Wilcoxon Statistic is 399
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.619663
The Standard Deviation adjusted for ties is 28.9905
The Z Score adjusted for ties is -1.466
-0.619663 < 2.326 indicating no statistical significance at 1% level
-1.466 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloroform

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 59
Non detect rank is 30

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	30
	3/19/2014	ND<1 U	30
	9/8/2014	ND<1 U	30
	3/17/2015	ND<1 U	30
	9/14/2015	ND<1 U	30
	3/17/2016	ND<1 U	30
	9/21/2016	ND<1 U	30
	3/24/2017	ND<1 U	30
	9/20/2017	ND<1 U	30
	3/27/2018	ND<1 U	30
	9/19/2018	ND<1 U	30
	3/11/2019	ND<1 U	30
	9/25/2019	ND<1 U	30
	3/18/2020	ND<0.54 JB	30
	9/23/2020	ND<0.62 J	30
	3/17/2021	ND<1 U	30
	9/8/2021	ND<0.24 J	30
	3/15/2022	7.1	61
	9/12/2022	14	62
	3/13/2023	20.3	63
	9/11/2023	3.4	60
GWM-2	9/25/2013	ND<1	30
	3/18/2014	ND<1 U	30
	9/16/2014	ND<0.31 J	30
	3/18/2015	ND<0.34 J	30
	9/15/2015	ND<0.34 J	30
	3/16/2016	ND<1 U	30
	9/22/2016	ND<0.31 J	30
	3/24/2017	ND<1 U	30
	9/21/2017	ND<1 U	30
	3/28/2018	ND<1 U	30
	9/21/2018	ND<0.62 JB	30
	3/12/2019	ND<0.68 J	30
	10/1/2019	ND<0.31 J	30
	3/18/2020	ND<0.34 JB	30
	9/23/2020	ND<0.24 J	30
	3/17/2021	ND<0.22 J	30
	9/9/2021	ND<0.24 J	30
	3/15/2022	ND<1	30
	9/12/2022	ND<1	30
	3/13/2023	ND<0.29 J	30
	9/11/2023	ND<0.36 J	30
GWM-3	9/25/2013	ND<1	30

3/18/2014	ND<1 U	30
9/16/2014	ND<0.21 J	30
3/18/2015	ND<1 U	30
9/15/2015	ND<1 U	30
3/16/2016	ND<1 U	30
9/22/2016	ND<1 U	30
3/29/2017	ND<1 U	30
9/21/2017	ND<1 U	30
3/28/2018	ND<1 U	30
9/20/2018	ND<0.41 J	30
3/12/2019	ND<0.37 J	30
10/1/2019	ND<0.31 J	30
3/18/2020	ND<1 U	30
9/24/2020	ND<1 U	30
3/17/2021	ND<1 U	30
9/9/2021	ND<1 U	30
3/15/2022	ND<1	30
9/16/2022	ND<1	30
3/15/2023	ND<1	30
9/11/2023	ND<1	30

The Wilcoxon Statistic is 399
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.619663
The Standard Deviation adjusted for ties is 28.9905
The Z Score adjusted for ties is -1.466
-0.619663 < 2.326 indicating no statistical significance at 1% level
-1.466 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloroform

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 47
Non detect rank is 24

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	24
	3/19/2014	ND<1 U	24
	9/8/2014	ND<1 U	24
	3/17/2015	ND<1 U	24
	9/14/2015	ND<1 U	24
	3/17/2016	ND<1 U	24
	9/21/2016	ND<1 U	24
	3/24/2017	ND<1 U	24
	9/20/2017	ND<1 U	24
	3/27/2018	ND<1 U	24
	9/19/2018	ND<1 U	24
	3/11/2019	ND<1 U	24
	9/25/2019	ND<1 U	24
	3/18/2020	ND<0.54 JB	24
	9/23/2020	ND<0.62 J	24
	3/17/2021	ND<1 U	24
	9/8/2021	ND<0.24 J	24
	3/15/2022	7.1	49
	9/12/2022	14	50
	3/13/2023	20.3	51
	9/11/2023	3.4	48
GWM-2	9/25/2013	ND<1	24
	3/18/2014	ND<1 U	24
	9/16/2014	ND<0.31 J	24
	3/18/2015	ND<0.34 J	24
	9/15/2015	ND<0.34 J	24
	3/16/2016	ND<1 U	24
	9/22/2016	ND<0.31 J	24
	3/24/2017	ND<1 U	24
	9/21/2017	ND<1 U	24
	3/28/2018	ND<1 U	24
	9/21/2018	ND<0.62 JB	24
	3/12/2019	ND<0.68 J	24
	10/1/2019	ND<0.31 J	24
	3/18/2020	ND<0.34 JB	24
	9/23/2020	ND<0.24 J	24
	3/17/2021	ND<0.22 J	24
	9/9/2021	ND<0.24 J	24
	3/15/2022	ND<1	24
	9/12/2022	ND<1	24
	3/13/2023	ND<0.29 J	24
	9/11/2023	ND<0.36 J	24
GWM-17S	11/14/2019	ND<1 U	24

3/26/2020	ND<1 U	24
9/29/2020	ND<1 U	24
3/16/2021	ND<1 U	24
9/14/2021	ND<1 U	24
3/18/2022	ND<1	24
9/13/2022	ND<1	24
3/14/2023	ND<1	24
9/12/2023	ND<1	24

The Wilcoxon Statistic is 171
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is -0.457104
The Standard Deviation adjusted for ties is 18.8696
The Z Score adjusted for ties is -0.980414
-0.457104 < 2.326 indicating no statistical significance at 1% level
-0.980414 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloromethane

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	32
	3/19/2014	ND<1 U	32
	9/8/2014	ND<1 U	32
	3/17/2015	ND<1 U	32
	9/14/2015	ND<1 U	32
	3/17/2016	ND<0.39 J	32
	9/21/2016	ND<1 U	32
	3/24/2017	ND<1 U	32
	9/20/2017	ND<1 U	32
	3/27/2018	ND<1 U	32
	9/19/2018	ND<1 U	32
	3/11/2019	ND<1 U	32
	9/25/2019	ND<1 U	32
	3/18/2020	ND<1 U	32
	9/23/2020	ND<1 U	32
	3/17/2021	ND<1 U	32
	9/8/2021	ND<1 U	32
	3/15/2022	ND<1	32
	9/12/2022	ND<1	32
	3/13/2023	ND<1	32
	9/11/2023	ND<0.99 JB	32
GWM-2	9/25/2013	ND<1	32
	3/18/2014	ND<1 U	32
	9/16/2014	ND<1 U	32
	3/18/2015	ND<1 U	32
	9/15/2015	ND<0.42 J	32
	3/16/2016	ND<0.94 J	32
	9/22/2016	ND<1 U	32
	3/24/2017	ND<1 U	32
	9/21/2017	ND<1 U	32
	3/28/2018	ND<1 U	32
	9/21/2018	ND<1 U	32
	3/12/2019	ND<1 U	32
	10/1/2019	ND<1 U	32
	3/18/2020	ND<1 U	32
	9/23/2020	ND<0.85 J	32
	3/17/2021	ND<1 U	32
	9/9/2021	ND<1 U	32
	3/15/2022	ND<1	32
	9/12/2022	ND<1	32
	3/13/2023	ND<1	32
	9/11/2023	ND<0.89 JB	32
GWM-4	9/18/2013	ND<1	32

3/20/2014	ND<1 U	32
9/9/2014	ND<1 U	32
3/16/2015	ND<1 U	32
9/9/2015	ND<1 U	32
3/18/2016	ND<0.35 J	32
9/20/2016	ND<1 U	32
3/23/2017	ND<1 U	32
9/18/2017	ND<1 U	32
3/15/2018	ND<1 U	32
9/17/2018	ND<1 U	32
3/5/2019	ND<1 U	32
9/24/2019	ND<1 U	32
3/16/2020	ND<1 U	32
9/22/2020	ND<0.72 J	32
3/16/2021	ND<1 U	32
9/14/2021	ND<1 U	32
3/22/2022	ND<1	32
9/13/2022	ND<1	32
3/14/2023	ND<1	32
9/12/2023	ND<0.86 JB	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloromethane

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 64
Non detect rank is 32.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	32.5
	3/19/2014	ND<1 U	32.5
	9/8/2014	ND<1 U	32.5
	3/17/2015	ND<1 U	32.5
	9/14/2015	ND<1 U	32.5
	3/17/2016	ND<0.39 J	32.5
	9/21/2016	ND<1 U	32.5
	3/24/2017	ND<1 U	32.5
	9/20/2017	ND<1 U	32.5
	3/27/2018	ND<1 U	32.5
	9/19/2018	ND<1 U	32.5
	3/11/2019	ND<1 U	32.5
	9/25/2019	ND<1 U	32.5
	3/18/2020	ND<1 U	32.5
	9/23/2020	ND<1 U	32.5
	3/17/2021	ND<1 U	32.5
	9/8/2021	ND<1 U	32.5
	3/15/2022	ND<1	32.5
	9/12/2022	ND<1	32.5
	3/13/2023	ND<1	32.5
	9/11/2023	ND<0.99 JB	32.5
GWM-2	9/25/2013	ND<1	32.5
	3/18/2014	ND<1 U	32.5
	9/16/2014	ND<1 U	32.5
	3/18/2015	ND<1 U	32.5
	9/15/2015	ND<0.42 J	32.5
	3/16/2016	ND<0.94 J	32.5
	9/22/2016	ND<1 U	32.5
	3/24/2017	ND<1 U	32.5
	9/21/2017	ND<1 U	32.5
	3/28/2018	ND<1 U	32.5
	9/21/2018	ND<1 U	32.5
	3/12/2019	ND<1 U	32.5
	10/1/2019	ND<1 U	32.5
	3/18/2020	ND<1 U	32.5
	9/23/2020	ND<0.85 J	32.5
	3/17/2021	ND<1 U	32.5
	9/9/2021	ND<1 U	32.5
	3/15/2022	ND<1	32.5
	9/12/2022	ND<1	32.5
	3/13/2023	ND<1	32.5
	9/11/2023	ND<0.89 JB	32.5
GWM-5A	9/19/2013	ND<1	32.5

12/5/2013	ND<1	32.5
3/19/2014	ND<1 U	32.5
9/4/2014	ND<1 U	32.5
3/17/2015	ND<1 U	32.5
9/11/2015	ND<1 U	32.5
3/15/2016	ND<0.51 J	32.5
9/21/2016	ND<1 U	32.5
3/28/2017	ND<1 U	32.5
9/19/2017	ND<1 U	32.5
3/26/2018	ND<1 U	32.5
9/18/2018	ND<1 U	32.5
3/4/2019	ND<1 U	32.5
9/23/2019	ND<1 U	32.5
3/19/2020	ND<1 U	32.5
9/23/2020	ND<1 U	32.5
3/19/2021	ND<1 U	32.5
9/15/2021	ND<1 U	32.5
3/16/2022	ND<1	32.5
9/14/2022	ND<1	32.5
3/16/2023	ND<1	32.5
9/13/2023	ND<0.52 JB	32.5

The Wilcoxon Statistic is 462
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is -0.00706753
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00706753 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloromethane

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	32
	3/19/2014	ND<1 U	32
	9/8/2014	ND<1 U	32
	3/17/2015	ND<1 U	32
	9/14/2015	ND<1 U	32
	3/17/2016	ND<0.39 J	32
	9/21/2016	ND<1 U	32
	3/24/2017	ND<1 U	32
	9/20/2017	ND<1 U	32
	3/27/2018	ND<1 U	32
	9/19/2018	ND<1 U	32
	3/11/2019	ND<1 U	32
	9/25/2019	ND<1 U	32
	3/18/2020	ND<1 U	32
	9/23/2020	ND<1 U	32
	3/17/2021	ND<1 U	32
	9/8/2021	ND<1 U	32
	3/15/2022	ND<1	32
	9/12/2022	ND<1	32
	3/13/2023	ND<1	32
	9/11/2023	ND<0.99 JB	32
GWM-2	9/25/2013	ND<1	32
	3/18/2014	ND<1 U	32
	9/16/2014	ND<1 U	32
	3/18/2015	ND<1 U	32
	9/15/2015	ND<0.42 J	32
	3/16/2016	ND<0.94 J	32
	9/22/2016	ND<1 U	32
	3/24/2017	ND<1 U	32
	9/21/2017	ND<1 U	32
	3/28/2018	ND<1 U	32
	9/21/2018	ND<1 U	32
	3/12/2019	ND<1 U	32
	10/1/2019	ND<1 U	32
	3/18/2020	ND<1 U	32
	9/23/2020	ND<0.85 J	32
	3/17/2021	ND<1 U	32
	9/9/2021	ND<1 U	32
	3/15/2022	ND<1	32
	9/12/2022	ND<1	32
	3/13/2023	ND<1	32
	9/11/2023	ND<0.89 JB	32
GWM-14	9/24/2013	ND<1	32

3/21/2014	ND<1 U	32
9/8/2014	ND<0.37 J	32
3/19/2015	ND<1 U	32
9/14/2015	ND<1 U	32
3/21/2016	ND<1 U	32
9/23/2016	ND<1 U	32
3/27/2017	ND<1 U	32
9/20/2017	ND<1 U	32
3/16/2018	ND<1 U	32
9/20/2018	ND<1 U	32
3/5/2019	ND<1 U	32
9/25/2019	ND<1 U	32
3/25/2020	ND<1 U	32
9/28/2020	ND<0.34 J	32
3/18/2021	ND<1 U	32
9/15/2021	ND<1 U	32
3/22/2022	ND<1	32
9/14/2022	ND<1	32
3/16/2023	ND<1	32
9/13/2023	ND<0.54 JB	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloromethane

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	32
	3/19/2014	ND<1 U	32
	9/8/2014	ND<1 U	32
	3/17/2015	ND<1 U	32
	9/14/2015	ND<1 U	32
	3/17/2016	ND<0.39 J	32
	9/21/2016	ND<1 U	32
	3/24/2017	ND<1 U	32
	9/20/2017	ND<1 U	32
	3/27/2018	ND<1 U	32
	9/19/2018	ND<1 U	32
	3/11/2019	ND<1 U	32
	9/25/2019	ND<1 U	32
	3/18/2020	ND<1 U	32
	9/23/2020	ND<1 U	32
	3/17/2021	ND<1 U	32
	9/8/2021	ND<1 U	32
	3/15/2022	ND<1	32
	9/12/2022	ND<1	32
	3/13/2023	ND<1	32
	9/11/2023	ND<0.99 JB	32
GWM-2	9/25/2013	ND<1	32
	3/18/2014	ND<1 U	32
	9/16/2014	ND<1 U	32
	3/18/2015	ND<1 U	32
	9/15/2015	ND<0.42 J	32
	3/16/2016	ND<0.94 J	32
	9/22/2016	ND<1 U	32
	3/24/2017	ND<1 U	32
	9/21/2017	ND<1 U	32
	3/28/2018	ND<1 U	32
	9/21/2018	ND<1 U	32
	3/12/2019	ND<1 U	32
	10/1/2019	ND<1 U	32
	3/18/2020	ND<1 U	32
	9/23/2020	ND<0.85 J	32
	3/17/2021	ND<1 U	32
	9/9/2021	ND<1 U	32
	3/15/2022	ND<1	32
	9/12/2022	ND<1	32
	3/13/2023	ND<1	32
	9/11/2023	ND<0.89 JB	32
GWM-6	9/24/2013	ND<1	32

3/21/2014	ND<1 U	32
9/17/2014	ND<1 U	32
3/19/2015	ND<1 U	32
9/15/2015	ND<0.36 J	32
3/21/2016	ND<0.49 J	32
9/26/2016	ND<0.42 J	32
3/31/2017	ND<1 U	32
9/21/2017	ND<1 U	32
3/30/2018	ND<1 U	32
9/26/2018	ND<1 U	32
3/13/2019	ND<0.53 J	32
10/3/2019	ND<1 U	32
4/3/2020	ND<0.41 J	32
9/30/2020	ND<0.64 J	32
3/22/2021	ND<1 U	32
9/16/2021	ND<1 U	32
3/24/2022	ND<1	32
9/16/2022	ND<1	32
3/17/2023	ND<1	32
9/14/2023	ND<1	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloromethane

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	32
	3/19/2014	ND<1 U	32
	9/8/2014	ND<1 U	32
	3/17/2015	ND<1 U	32
	9/14/2015	ND<1 U	32
	3/17/2016	ND<0.39 J	32
	9/21/2016	ND<1 U	32
	3/24/2017	ND<1 U	32
	9/20/2017	ND<1 U	32
	3/27/2018	ND<1 U	32
	9/19/2018	ND<1 U	32
	3/11/2019	ND<1 U	32
	9/25/2019	ND<1 U	32
	3/18/2020	ND<1 U	32
	9/23/2020	ND<1 U	32
	3/17/2021	ND<1 U	32
	9/8/2021	ND<1 U	32
	3/15/2022	ND<1	32
	9/12/2022	ND<1	32
	3/13/2023	ND<1	32
	9/11/2023	ND<0.99 JB	32
GWM-2	9/25/2013	ND<1	32
	3/18/2014	ND<1 U	32
	9/16/2014	ND<1 U	32
	3/18/2015	ND<1 U	32
	9/15/2015	ND<0.42 J	32
	3/16/2016	ND<0.94 J	32
	9/22/2016	ND<1 U	32
	3/24/2017	ND<1 U	32
	9/21/2017	ND<1 U	32
	3/28/2018	ND<1 U	32
	9/21/2018	ND<1 U	32
	3/12/2019	ND<1 U	32
	10/1/2019	ND<1 U	32
	3/18/2020	ND<1 U	32
	9/23/2020	ND<0.85 J	32
	3/17/2021	ND<1 U	32
	9/9/2021	ND<1 U	32
	3/15/2022	ND<1	32
	9/12/2022	ND<1	32
	3/13/2023	ND<1	32
	9/11/2023	ND<0.89 JB	32
GWM-3	9/25/2013	ND<1	32

3/18/2014	ND<1 U	32
9/16/2014	ND<1 U	32
3/18/2015	ND<1 U	32
9/15/2015	ND<0.5 J	32
3/16/2016	ND<1 U	32
9/22/2016	ND<1 U	32
3/29/2017	ND<1 U	32
9/21/2017	ND<1 U	32
3/28/2018	ND<1 U	32
9/20/2018	ND<1 U	32
3/12/2019	ND<1 U	32
10/1/2019	ND<1 U	32
3/18/2020	ND<1 U	32
9/24/2020	ND<1 U	32
3/17/2021	ND<1 U	32
9/9/2021	ND<1 U	32
3/15/2022	ND<1	32
9/16/2022	ND<1	32
3/15/2023	ND<1	32
9/11/2023	ND<0.71 JB	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloromethane

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 51
Non detect rank is 26

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	26
	3/19/2014	ND<1 U	26
	9/8/2014	ND<1 U	26
	3/17/2015	ND<1 U	26
	9/14/2015	ND<1 U	26
	3/17/2016	ND<0.39 J	26
	9/21/2016	ND<1 U	26
	3/24/2017	ND<1 U	26
	9/20/2017	ND<1 U	26
	3/27/2018	ND<1 U	26
	9/19/2018	ND<1 U	26
	3/11/2019	ND<1 U	26
	9/25/2019	ND<1 U	26
	3/18/2020	ND<1 U	26
	9/23/2020	ND<1 U	26
	3/17/2021	ND<1 U	26
	9/8/2021	ND<1 U	26
	3/15/2022	ND<1	26
	9/12/2022	ND<1	26
	3/13/2023	ND<1	26
	9/11/2023	ND<0.99 JB	26
GWM-2	9/25/2013	ND<1	26
	3/18/2014	ND<1 U	26
	9/16/2014	ND<1 U	26
	3/18/2015	ND<1 U	26
	9/15/2015	ND<0.42 J	26
	3/16/2016	ND<0.94 J	26
	9/22/2016	ND<1 U	26
	3/24/2017	ND<1 U	26
	9/21/2017	ND<1 U	26
	3/28/2018	ND<1 U	26
	9/21/2018	ND<1 U	26
	3/12/2019	ND<1 U	26
	10/1/2019	ND<1 U	26
	3/18/2020	ND<1 U	26
	9/23/2020	ND<0.85 J	26
	3/17/2021	ND<1 U	26
	9/9/2021	ND<1 U	26
	3/15/2022	ND<1	26
	9/12/2022	ND<1	26
	3/13/2023	ND<1	26
	9/11/2023	ND<0.89 JB	26
GWM-17S	11/14/2019	ND<1 U	26

3/26/2020	ND<1 U	26
9/29/2020	ND<0.57 J	26
3/16/2021	ND<1 U	26
9/14/2021	ND<1 U	26
3/18/2022	ND<1	26
9/13/2022	ND<1	26
3/14/2023	ND<1	26
9/12/2023	ND<0.52 JB	26

The Wilcoxon Statistic is 189
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is -0.0123542
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0123542 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Methyl t-Butyl Ether

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 33
Non detect rank is 17

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	17
	3/19/2014	ND<1 U	17
	9/8/2014	ND<1 U	17
	3/17/2015	ND<1 U	17
	9/14/2015	ND<1 U	17
	3/17/2016	ND<1 U	17
	9/21/2016	ND<1 U	17
	3/24/2017	ND<1 U	17
	9/20/2017	ND<1 U	17
	3/27/2018	ND<1 U	17
	9/19/2018	ND<1 U	17
	3/11/2019	ND<1 U	17
	9/25/2019	ND<1 U	17
	3/18/2020	ND<1 U	17
	9/23/2020	ND<1 U	17
	3/17/2021	ND<1 U	17
	9/8/2021	ND<1 U	17
	3/15/2022	ND<1	17
	9/12/2022	ND<1	17
	3/13/2023	ND<1	17
	9/11/2023	ND<1	17
GWM-2	9/25/2013	ND<1	17
	3/18/2014	1.1	36
	9/16/2014	1.2	41
	3/18/2015	ND<0.99 J	17
	9/15/2015	1.1	37
	3/16/2016	ND<0.9 J	17
	9/22/2016	ND<0.9 J	17
	3/24/2017	ND<0.81 J	17
	9/21/2017	ND<0.94 J	17
	3/28/2018	ND<0.84 J	17
	9/21/2018	1	34
	3/12/2019	1.7	52
	10/1/2019	1.5	49
	3/18/2020	1.2	42
	9/23/2020	1.3	44
	3/17/2021	1.2	43
	9/9/2021	1.4	48
	3/15/2022	ND<0.99 J	17
	9/12/2022	ND<0.88 J	17
	3/13/2023	1.1	38
	9/11/2023	ND<0.75 J	17
GWM-4	9/18/2013	2	56

3/20/2014	2.9	62
9/9/2014	3.4	63
3/16/2015	2.8	61
9/9/2015	2.4	60
3/18/2016	2.2	59
9/20/2016	2	57
3/23/2017	1.5	50
9/18/2017	1.8	55
3/15/2018	1.3	45
9/17/2018	1.7	53
3/5/2019	1.7	54
9/24/2019	2	58
3/16/2020	1.3	46
9/22/2020	1.6	51
3/16/2021	1.1	39
9/14/2021	1.3	47
3/22/2022	1.1	40
9/13/2022	ND<0.78 J	17
3/14/2023	1	35
9/12/2023	ND<1	17

The Wilcoxon Statistic is 794
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 5.13955
The Standard Deviation adjusted for ties is 63.4696
The Z Score adjusted for ties is 5.55384
5.13955 > 2.326 indicating statistical significance at 1% level
5.55384 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Methyl t-Butyl Ether

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 53
Non detect rank is 27

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	27
	3/19/2014	ND<1 U	27
	9/8/2014	ND<1 U	27
	3/17/2015	ND<1 U	27
	9/14/2015	ND<1 U	27
	3/17/2016	ND<1 U	27
	9/21/2016	ND<1 U	27
	3/24/2017	ND<1 U	27
	9/20/2017	ND<1 U	27
	3/27/2018	ND<1 U	27
	9/19/2018	ND<1 U	27
	3/11/2019	ND<1 U	27
	9/25/2019	ND<1 U	27
	3/18/2020	ND<1 U	27
	9/23/2020	ND<1 U	27
	3/17/2021	ND<1 U	27
	9/8/2021	ND<1 U	27
	3/15/2022	ND<1	27
	9/12/2022	ND<1	27
	3/13/2023	ND<1	27
	9/11/2023	ND<1	27
GWM-2	9/25/2013	ND<1	27
	3/18/2014	1.1	55
	9/16/2014	1.2	58
	3/18/2015	ND<0.99 J	27
	9/15/2015	1.1	56
	3/16/2016	ND<0.9 J	27
	9/22/2016	ND<0.9 J	27
	3/24/2017	ND<0.81 J	27
	9/21/2017	ND<0.94 J	27
	3/28/2018	ND<0.84 J	27
	9/21/2018	1	54
	3/12/2019	1.7	64
	10/1/2019	1.5	63
	3/18/2020	1.2	59
	9/23/2020	1.3	61
	3/17/2021	1.2	60
	9/9/2021	1.4	62
	3/15/2022	ND<0.99 J	27
	9/12/2022	ND<0.88 J	27
	3/13/2023	1.1	57
	9/11/2023	ND<0.75 J	27
GWM-5A	9/19/2013	ND<1	27

12/5/2013	ND<1	27
3/19/2014	ND<0.34 J	27
9/4/2014	ND<0.35 J	27
3/17/2015	ND<1 U	27
9/11/2015	ND<1 U	27
3/15/2016	ND<1 U	27
9/21/2016	ND<1 U	27
3/28/2017	ND<1 U	27
9/19/2017	ND<1 U	27
3/26/2018	ND<1 U	27
9/18/2018	ND<1 U	27
3/4/2019	ND<1 U	27
9/23/2019	ND<1 U	27
3/19/2020	ND<1 U	27
9/23/2020	ND<1 U	27
3/19/2021	ND<1 U	27
9/15/2021	ND<1 U	27
3/16/2022	ND<1	27
9/14/2022	ND<1	27
3/16/2023	ND<1	27
9/13/2023	ND<1	27

The Wilcoxon Statistic is 341
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is -1.71741
The Standard Deviation adjusted for ties is 46.5067
The Z Score adjusted for ties is -2.61253
-1.71741 < 2.326 indicating no statistical significance at 1% level
-2.61253 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Methyl t-Butyl Ether

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 52
Non detect rank is 26.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	26.5
	3/19/2014	ND<1 U	26.5
	9/8/2014	ND<1 U	26.5
	3/17/2015	ND<1 U	26.5
	9/14/2015	ND<1 U	26.5
	3/17/2016	ND<1 U	26.5
	9/21/2016	ND<1 U	26.5
	3/24/2017	ND<1 U	26.5
	9/20/2017	ND<1 U	26.5
	3/27/2018	ND<1 U	26.5
	9/19/2018	ND<1 U	26.5
	3/11/2019	ND<1 U	26.5
	9/25/2019	ND<1 U	26.5
	3/18/2020	ND<1 U	26.5
	9/23/2020	ND<1 U	26.5
	3/17/2021	ND<1 U	26.5
	9/8/2021	ND<1 U	26.5
	3/15/2022	ND<1	26.5
	9/12/2022	ND<1	26.5
	3/13/2023	ND<1	26.5
	9/11/2023	ND<1	26.5
GWM-2	9/25/2013	ND<1	26.5
	3/18/2014	1.1	54
	9/16/2014	1.2	57
	3/18/2015	ND<0.99 J	26.5
	9/15/2015	1.1	55
	3/16/2016	ND<0.9 J	26.5
	9/22/2016	ND<0.9 J	26.5
	3/24/2017	ND<0.81 J	26.5
	9/21/2017	ND<0.94 J	26.5
	3/28/2018	ND<0.84 J	26.5
	9/21/2018	1	53
	3/12/2019	1.7	63
	10/1/2019	1.5	62
	3/18/2020	1.2	58
	9/23/2020	1.3	60
	3/17/2021	1.2	59
	9/9/2021	1.4	61
	3/15/2022	ND<0.99 J	26.5
	9/12/2022	ND<0.88 J	26.5
	3/13/2023	1.1	56
	9/11/2023	ND<0.75 J	26.5
GWM-14	9/24/2013	ND<1	26.5

3/21/2014	ND<1 U	26.5
9/8/2014	ND<1 U	26.5
3/19/2015	ND<1 U	26.5
9/14/2015	ND<1 U	26.5
3/21/2016	ND<1 U	26.5
9/23/2016	ND<1 U	26.5
3/27/2017	ND<1 U	26.5
9/20/2017	ND<1 U	26.5
3/16/2018	ND<1 U	26.5
9/20/2018	ND<1 U	26.5
3/5/2019	ND<1 U	26.5
9/25/2019	ND<1 U	26.5
3/25/2020	ND<1 U	26.5
9/28/2020	ND<1 U	26.5
3/18/2021	ND<1 U	26.5
9/15/2021	ND<1 U	26.5
3/22/2022	ND<1	26.5
9/14/2022	ND<1	26.5
3/16/2023	ND<1	26.5
9/13/2023	ND<1	26.5

The Wilcoxon Statistic is 325.5
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -1.69131
The Standard Deviation adjusted for ties is 45.3776
The Z Score adjusted for ties is -2.55633
-1.69131 < 2.326 indicating no statistical significance at 1% level
-2.55633 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Methyl t-Butyl Ether

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 31
Non detect rank is 16

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	16
	3/19/2014	ND<1 U	16
	9/8/2014	ND<1 U	16
	3/17/2015	ND<1 U	16
	9/14/2015	ND<1 U	16
	3/17/2016	ND<1 U	16
	9/21/2016	ND<1 U	16
	3/24/2017	ND<1 U	16
	9/20/2017	ND<1 U	16
	3/27/2018	ND<1 U	16
	9/19/2018	ND<1 U	16
	3/11/2019	ND<1 U	16
	9/25/2019	ND<1 U	16
	3/18/2020	ND<1 U	16
	9/23/2020	ND<1 U	16
	3/17/2021	ND<1 U	16
	9/8/2021	ND<1 U	16
	3/15/2022	ND<1	16
	9/12/2022	ND<1	16
	3/13/2023	ND<1	16
	9/11/2023	ND<1	16
GWM-2	9/25/2013	ND<1	16
	3/18/2014	1.1	33
	9/16/2014	1.2	36
	3/18/2015	ND<0.99 J	16
	9/15/2015	1.1	34
	3/16/2016	ND<0.9 J	16
	9/22/2016	ND<0.9 J	16
	3/24/2017	ND<0.81 J	16
	9/21/2017	ND<0.94 J	16
	3/28/2018	ND<0.84 J	16
	9/21/2018	1	32
	3/12/2019	1.7	42
	10/1/2019	1.5	41
	3/18/2020	1.2	37
	9/23/2020	1.3	39
	3/17/2021	1.2	38
	9/9/2021	1.4	40
	3/15/2022	ND<0.99 J	16
	9/12/2022	ND<0.88 J	16
	3/13/2023	1.1	35
	9/11/2023	ND<0.75 J	16
GWM-6	9/24/2013	5	50

3/21/2014	2.6	44
9/17/2014	3.5	45
3/19/2015	5.1	52
9/15/2015	5.2	53
3/21/2016	5.7	54
9/26/2016	3.5	46
3/31/2017	5	51
9/21/2017	10	60
3/30/2018	11.7	61
9/26/2018	12.2	62
3/13/2019	13.1	63
10/3/2019	7.7	57
4/3/2020	3.7	47
9/30/2020	7.2	56
3/22/2021	8.3	59
9/16/2021	3.9	48
3/24/2022	7.7	58
9/16/2022	6.7	55
3/17/2023	4.8	49
9/14/2023	2.4	43

The Wilcoxon Statistic is 882
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 6.42262
The Standard Deviation adjusted for ties is 64.3739
The Z Score adjusted for ties is 6.84283
6.42262 > 2.326 indicating statistical significance at 1% level
6.84283 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Methyl t-Butyl Ether

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 52
Non detect rank is 26.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	26.5
	3/19/2014	ND<1 U	26.5
	9/8/2014	ND<1 U	26.5
	3/17/2015	ND<1 U	26.5
	9/14/2015	ND<1 U	26.5
	3/17/2016	ND<1 U	26.5
	9/21/2016	ND<1 U	26.5
	3/24/2017	ND<1 U	26.5
	9/20/2017	ND<1 U	26.5
	3/27/2018	ND<1 U	26.5
	9/19/2018	ND<1 U	26.5
	3/11/2019	ND<1 U	26.5
	9/25/2019	ND<1 U	26.5
	3/18/2020	ND<1 U	26.5
	9/23/2020	ND<1 U	26.5
	3/17/2021	ND<1 U	26.5
	9/8/2021	ND<1 U	26.5
	3/15/2022	ND<1	26.5
	9/12/2022	ND<1	26.5
	3/13/2023	ND<1	26.5
	9/11/2023	ND<1	26.5
GWM-2	9/25/2013	ND<1	26.5
	3/18/2014	1.1	54
	9/16/2014	1.2	57
	3/18/2015	ND<0.99 J	26.5
	9/15/2015	1.1	55
	3/16/2016	ND<0.9 J	26.5
	9/22/2016	ND<0.9 J	26.5
	3/24/2017	ND<0.81 J	26.5
	9/21/2017	ND<0.94 J	26.5
	3/28/2018	ND<0.84 J	26.5
	9/21/2018	1	53
	3/12/2019	1.7	63
	10/1/2019	1.5	62
	3/18/2020	1.2	58
	9/23/2020	1.3	60
	3/17/2021	1.2	59
	9/9/2021	1.4	61
	3/15/2022	ND<0.99 J	26.5
	9/12/2022	ND<0.88 J	26.5
	3/13/2023	1.1	56
	9/11/2023	ND<0.75 J	26.5
GWM-3	9/25/2013	ND<1	26.5

3/18/2014	ND<0.38 J	26.5
9/16/2014	ND<1 U	26.5
3/18/2015	ND<1 U	26.5
9/15/2015	ND<1 U	26.5
3/16/2016	ND<1 U	26.5
9/22/2016	ND<1 U	26.5
3/29/2017	ND<1 U	26.5
9/21/2017	ND<1 U	26.5
3/28/2018	ND<1 U	26.5
9/20/2018	ND<1 U	26.5
3/12/2019	ND<1 U	26.5
10/1/2019	ND<1 U	26.5
3/18/2020	ND<1 U	26.5
9/24/2020	ND<1 U	26.5
3/17/2021	ND<1 U	26.5
9/9/2021	ND<1 U	26.5
3/15/2022	ND<1	26.5
9/16/2022	ND<1	26.5
3/15/2023	ND<1	26.5
9/11/2023	ND<1	26.5

The Wilcoxon Statistic is 325.5
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -1.69131
The Standard Deviation adjusted for ties is 45.3776
The Z Score adjusted for ties is -2.55633
-1.69131 < 2.326 indicating no statistical significance at 1% level
-2.55633 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Methyl t-Butyl Ether

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 40
Non detect rank is 20.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<1	20.5
	3/19/2014	ND<1 U	20.5
	9/8/2014	ND<1 U	20.5
	3/17/2015	ND<1 U	20.5
	9/14/2015	ND<1 U	20.5
	3/17/2016	ND<1 U	20.5
	9/21/2016	ND<1 U	20.5
	3/24/2017	ND<1 U	20.5
	9/20/2017	ND<1 U	20.5
	3/27/2018	ND<1 U	20.5
	9/19/2018	ND<1 U	20.5
	3/11/2019	ND<1 U	20.5
	9/25/2019	ND<1 U	20.5
	3/18/2020	ND<1 U	20.5
	9/23/2020	ND<1 U	20.5
	3/17/2021	ND<1 U	20.5
	9/8/2021	ND<1 U	20.5
	3/15/2022	ND<1	20.5
	9/12/2022	ND<1	20.5
	3/13/2023	ND<1	20.5
	9/11/2023	ND<1	20.5
GWM-2	9/25/2013	ND<1	20.5
	3/18/2014	1.1	42
	9/16/2014	1.2	45
	3/18/2015	ND<0.99 J	20.5
	9/15/2015	1.1	43
	3/16/2016	ND<0.9 J	20.5
	9/22/2016	ND<0.9 J	20.5
	3/24/2017	ND<0.81 J	20.5
	9/21/2017	ND<0.94 J	20.5
	3/28/2018	ND<0.84 J	20.5
	9/21/2018	1	41
	3/12/2019	1.7	51
	10/1/2019	1.5	50
	3/18/2020	1.2	46
	9/23/2020	1.3	48
	3/17/2021	1.2	47
	9/9/2021	1.4	49
	3/15/2022	ND<0.99 J	20.5
	9/12/2022	ND<0.88 J	20.5
	3/13/2023	1.1	44
	9/11/2023	ND<0.75 J	20.5
GWM-17S	11/14/2019	ND<0.76 J	20.5

3/26/2020	ND<0.85 J	20.5
9/29/2020	ND<0.77 J	20.5
3/16/2021	ND<0.76 J	20.5
9/14/2021	ND<0.7 J	20.5
3/18/2022	ND<0.66 J	20.5
9/13/2022	ND<0.63 J	20.5
3/14/2023	ND<0.82 J	20.5
9/12/2023	ND<0.67 J	20.5

The Wilcoxon Statistic is 139.5
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is -1.23542
The Standard Deviation adjusted for ties is 29.1188
The Z Score adjusted for ties is -1.7171
-1.23542 < 2.326 indicating no statistical significance at 1% level
-1.7171 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

2) Patapsco Aquifer VOC Intra-well Statistics

APPENDIX F

Shapiro-Francia Test of Normality

Parameter: Benzene

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	0	-0.725736	68.2338	0
38	0	-0.706302	68.7327	0
39	0	-0.687131	69.2049	0
40	0	-0.665079	69.6472	0
41	0	-0.646431	70.0651	0
42	0	-0.628006	70.4595	0
43	0	-0.606775	70.8276	0
44	0	-0.588793	71.1743	0
45	0	-0.570999	71.5003	0
46	0	-0.550465	71.8034	0
47	0	-0.533048	72.0875	0

48	0	-0.515791	72.3535	0
49	0	-0.49585	72.5994	0
50	0	-0.478914	72.8288	0
51	0	-0.462114	73.0423	0
52	0	-0.442676	73.2383	0
53	0	-0.426148	73.4199	0
54	0	-0.409735	73.5878	0
55	0	-0.390726	73.7404	0
56	0	-0.374544	73.8807	0
57	0	-0.358459	74.0092	0
58	0	-0.33981	74.1247	0
59	0	-0.323919	74.2296	0
60	0	-0.308108	74.3245	0
61	0	-0.28976	74.4085	0
62	0	-0.27411	74.4836	0
63	0	-0.258527	74.5505	0
64	0	-0.240426	74.6083	0
65	0	-0.224974	74.6589	0
66	0	-0.209575	74.7028	0
67	0	-0.191671	74.7395	0
68	0	-0.176374	74.7706	0
69	0	-0.161119	74.7966	0
70	0	-0.143367	74.8172	0
71	0	-0.128189	74.8336	0
72	0	-0.113039	74.8464	0
73	0	-0.0953969	74.8555	0
74	0	-0.0802981	74.8619	0
75	0	-0.0652187	74.8662	0
76	0	-0.0476439	74.8684	0
77	0	-0.0325917	74.8695	0
78	0	-0.0175476	74.8698	0
79	0	0	74.8698	0
80	0	0.0175476	74.8701	0
81	0	0.0325917	74.8712	0
82	0	0.0476439	74.8735	0
83	0	0.0652187	74.8777	0
84	0	0.0802981	74.8842	0
85	0	0.0953969	74.8933	0
86	0	0.113039	74.906	0
87	0	0.128189	74.9225	0
88	0	0.143367	74.943	0
89	0	0.161119	74.969	0
90	0	0.176374	75.0001	0
91	0	0.191671	75.0368	0
92	0	0.209575	75.0807	0
93	0	0.224974	75.1314	0
94	0	0.240426	75.1892	0
95	0	0.258527	75.256	0
96	0	0.27411	75.3311	0
97	0	0.28976	75.4151	0
98	0	0.308108	75.51	0
99	0	0.323919	75.615	0
100	0	0.33981	75.7304	0
101	0	0.358459	75.8589	0
102	0	0.374544	75.9992	0
103	0	0.390726	76.1519	0
104	0	0.409735	76.3198	0

105	0	0.426148	76.5014	0
106	0	0.442676	76.6973	0
107	0	0.462114	76.9109	0
108	0	0.478914	77.1402	0
109	0	0.49585	77.3861	0
110	0	0.515791	77.6521	0
111	0	0.533048	77.9363	0
112	0	0.550465	78.2393	0
113	0	0.570999	78.5653	0
114	0	0.588793	78.912	0
115	0	0.606775	79.2802	0
116	0	0.628006	79.6746	0
117	0	0.646431	80.0924	0
118	0	0.665079	80.5348	0
119	0	0.687131	81.0069	0
120	0	0.706302	81.5058	0
121	0	0.725736	82.0325	0
122	0	0.748762	82.5931	0
123	0	0.768821	83.1842	0
124	0	0.789191	83.807	0
125	0	0.813379	84.4686	0
126	0	0.834498	85.165	0
127	0	0.855996	85.8977	0
128	0	0.881587	86.6749	0
129	0	0.903992	87.4921	0
130	0	0.926859	88.3512	0
131	0	0.954165	89.2616	0
132	0	0.97815	90.2184	0
133	0	1.00271	91.2238	0
134	0	1.03215	92.2892	0
135	0	1.05812	93.4088	0
136	1.1	1.08482	94.5856	1.1933
137	5	1.11699	95.8333	6.77824
138	5.5	1.1455	97.1455	13.0785
139	8.5	1.17499	98.5261	23.0659
140	8.6	1.21073	99.9919	33.4782
141	10	1.24264	101.536	45.9046
142	10.5	1.27588	103.164	59.3013
143	11.1	1.31652	104.897	73.9147
144	11.4	1.35317	106.728	89.3408
145	12.4	1.39175	108.665	106.598
146	13.4	1.43953	110.737	125.888
147	16.8	1.48328	112.938	150.807
148	22	1.53007	115.279	184.469
149	22	1.58927	117.804	219.433
150	23.7	1.64485	120.51	258.416
151	24.9	1.70604	123.421	300.896
152	26.1	1.78661	126.613	347.527
153	29.6	1.86629	130.096	402.769
154	32.2	1.95996	133.937	465.88
155	37.2	2.09693	138.334	543.886
156	39.5	2.25713	143.429	633.042
157	40.2	2.51213	149.74	734.03

Data Set Standard Deviation = 7.80618
Numerator = 538800

Denominator = 1.42344e+006
W Statistic = 0.37852 = 538800 / 1.42344e+006

5% Critical value of 0.976 exceeds 0.37852
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.37852
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Benzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	ND<0 J
	9/9/2014	ND<0 J
	3/16/2015	ND<0 J
	9/9/2015	ND<0 J
	3/18/2016	ND<0 J
	9/20/2016	ND<0 J
	3/23/2017	ND<0 U
	9/18/2017	ND<0 J
	3/15/2018	ND<0 U
	9/17/2018	ND<0 U
	3/5/2019	ND<0 U
	9/24/2019	ND<0 J
	3/16/2020	ND<0 J
	9/22/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/22/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Benzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 0
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/4/2014	ND<0 U
	3/17/2015	ND<0 U
	9/11/2015	ND<0 U
	3/15/2016	ND<0 U
	9/21/2016	ND<0 U
	3/28/2017	ND<0 U
	9/19/2017	ND<0 U
	3/26/2018	ND<0 U
	9/18/2018	ND<0 U
	3/4/2019	ND<0 U
	9/23/2019	ND<0 U
	3/19/2020	ND<0 U
	9/23/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/16/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Benzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/19/2015	ND<0 U
	9/14/2015	ND<0 U
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/27/2017	ND<0 U
	9/20/2017	ND<0 U
	3/16/2018	ND<0 U
	9/20/2018	ND<0 U
	3/5/2019	ND<0 U
	9/25/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/18/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Benzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 40.2
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	22
	3/21/2014	5
	9/17/2014	8.6
	3/19/2015	16.8
	9/15/2015	13.4
	3/21/2016	11.4
	9/26/2016	8.5
	3/31/2017	10.5
	9/21/2017	32.2
	3/30/2018	37.2
	9/26/2018	40.2
	3/13/2019	39.5
	10/3/2019	23.7
	4/3/2020	10
	9/30/2020	26.1
	3/22/2021	29.6
	9/16/2021	12.4
	3/24/2022	24.9
	9/16/2022	22
	3/17/2023	11.1

Date	Count	Mean	Significant
9/14/2023	1	5.5	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Benzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	ND<0 U
	9/16/2014	ND<0 U
	3/18/2015	ND<0 U
	9/15/2015	ND<0 U
	3/16/2016	ND<0 U
	9/22/2016	ND<0 U
	3/29/2017	ND<0 U
	9/21/2017	ND<0 U
	3/28/2018	ND<0 U
	9/20/2018	ND<0 U
	3/12/2019	ND<0 U
	10/1/2019	ND<0 U
	3/18/2020	ND<0 U
	9/24/2020	ND<0 U
	3/17/2021	ND<0 U
	9/9/2021	ND<0 U
	3/15/2022	ND<0
	9/16/2022	ND<0
	3/15/2023	ND<0

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Benzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 87.5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 1.1
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 J
	3/26/2020	1.1
	9/29/2020	ND<0 J
	3/16/2021	ND<0 J
	9/14/2021	ND<0 J
	3/18/2022	ND<0 J
	9/13/2022	ND<0 J
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: Bromomethane

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	0	-0.725736	68.2338	0
38	0	-0.706302	68.7327	0
39	0	-0.687131	69.2049	0
40	0	-0.665079	69.6472	0
41	0	-0.646431	70.0651	0
42	0	-0.628006	70.4595	0
43	0	-0.606775	70.8276	0
44	0	-0.588793	71.1743	0
45	0	-0.570999	71.5003	0
46	0	-0.550465	71.8034	0
47	0	-0.533048	72.0875	0

48	0	-0.515791	72.3535	0
49	0	-0.49585	72.5994	0
50	0	-0.478914	72.8288	0
51	0	-0.462114	73.0423	0
52	0	-0.442676	73.2383	0
53	0	-0.426148	73.4199	0
54	0	-0.409735	73.5878	0
55	0	-0.390726	73.7404	0
56	0	-0.374544	73.8807	0
57	0	-0.358459	74.0092	0
58	0	-0.33981	74.1247	0
59	0	-0.323919	74.2296	0
60	0	-0.308108	74.3245	0
61	0	-0.28976	74.4085	0
62	0	-0.27411	74.4836	0
63	0	-0.258527	74.5505	0
64	0	-0.240426	74.6083	0
65	0	-0.224974	74.6589	0
66	0	-0.209575	74.7028	0
67	0	-0.191671	74.7395	0
68	0	-0.176374	74.7706	0
69	0	-0.161119	74.7966	0
70	0	-0.143367	74.8172	0
71	0	-0.128189	74.8336	0
72	0	-0.113039	74.8464	0
73	0	-0.0953969	74.8555	0
74	0	-0.0802981	74.8619	0
75	0	-0.0652187	74.8662	0
76	0	-0.0476439	74.8684	0
77	0	-0.0325917	74.8695	0
78	0	-0.0175476	74.8698	0
79	0	0	74.8698	0
80	0	0.0175476	74.8701	0
81	0	0.0325917	74.8712	0
82	0	0.0476439	74.8735	0
83	0	0.0652187	74.8777	0
84	0	0.0802981	74.8842	0
85	0	0.0953969	74.8933	0
86	0	0.113039	74.906	0
87	0	0.128189	74.9225	0
88	0	0.143367	74.943	0
89	0	0.161119	74.969	0
90	0	0.176374	75.0001	0
91	0	0.191671	75.0368	0
92	0	0.209575	75.0807	0
93	0	0.224974	75.1314	0
94	0	0.240426	75.1892	0
95	0	0.258527	75.256	0
96	0	0.27411	75.3311	0
97	0	0.28976	75.4151	0
98	0	0.308108	75.51	0
99	0	0.323919	75.615	0
100	0	0.33981	75.7304	0
101	0	0.358459	75.8589	0
102	0	0.374544	75.9992	0
103	0	0.390726	76.1519	0
104	0	0.409735	76.3198	0

105	0	0.426148	76.5014	0
106	0	0.442676	76.6973	0
107	0	0.462114	76.9109	0
108	0	0.478914	77.1402	0
109	0	0.49585	77.3861	0
110	0	0.515791	77.6521	0
111	0	0.533048	77.9363	0
112	0	0.550465	78.2393	0
113	0	0.570999	78.5653	0
114	0	0.588793	78.912	0
115	0	0.606775	79.2802	0
116	0	0.628006	79.6746	0
117	0	0.646431	80.0924	0
118	0	0.665079	80.5348	0
119	0	0.687131	81.0069	0
120	0	0.706302	81.5058	0
121	0	0.725736	82.0325	0
122	0	0.748762	82.5931	0
123	0	0.768821	83.1842	0
124	0	0.789191	83.807	0
125	0	0.813379	84.4686	0
126	0	0.834498	85.165	0
127	0	0.855996	85.8977	0
128	0	0.881587	86.6749	0
129	0	0.903992	87.4921	0
130	0	0.926859	88.3512	0
131	0	0.954165	89.2616	0
132	0	0.97815	90.2184	0
133	0	1.00271	91.2238	0
134	0	1.03215	92.2892	0
135	0	1.05812	93.4088	0
136	0	1.08482	94.5856	0
137	0	1.11699	95.8333	0
138	0	1.1455	97.1455	0
139	0	1.17499	98.5261	0
140	0	1.21073	99.9919	0
141	0	1.24264	101.536	0
142	0	1.27588	103.164	0
143	0	1.31652	104.897	0
144	0	1.35317	106.728	0
145	0	1.39175	108.665	0
146	0	1.43953	110.737	0
147	0	1.48328	112.938	0
148	0	1.53007	115.279	0
149	0	1.58927	117.804	0
150	0	1.64485	120.51	0
151	0	1.70604	123.421	0
152	0	1.78661	126.613	0
153	0	1.86629	130.096	0
154	0	1.95996	133.937	0
155	0	2.09693	138.334	0
156	0	2.25713	143.429	0
157	1	2.51213	149.74	2.51213

Data Set Standard Deviation = 0.0798087
Numerator = 6.31081

Denominator = 148.786
W Statistic = 0.0424154 = 6.31081 / 148.786

5% Critical value of 0.976 exceeds 0.0424154
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.0424154
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Bromomethane

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	ND<0 J
	9/9/2014	ND<0 J
	3/16/2015	ND<0 JB
	9/9/2015	ND<0 U
	3/18/2016	ND<0 U
	9/20/2016	ND<0 U
	3/23/2017	ND<0 U
	9/18/2017	ND<0 U
	3/15/2018	ND<0 U
	9/17/2018	ND<0 U
	3/5/2019	ND<0 U
	9/24/2019	ND<0 U
	3/16/2020	ND<0 U
	9/22/2020	ND<0 J
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/22/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Bromomethane

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 0
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 J
	9/4/2014	ND<0 J
	3/17/2015	ND<0 U
	9/11/2015	ND<0 U
	3/15/2016	ND<0 U
	9/21/2016	ND<0 U
	3/28/2017	ND<0 U
	9/19/2017	ND<0 JB
	3/26/2018	ND<0 U
	9/18/2018	ND<0 U
	3/4/2019	ND<0 U
	9/23/2019	ND<0 U
	3/19/2020	ND<0 U
	9/23/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/16/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Bromomethane

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/19/2015	ND<0 U
	9/14/2015	ND<0 U
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/27/2017	ND<0 U
	9/20/2017	ND<0 J
	3/16/2018	ND<0 U
	9/20/2018	ND<0 U
	3/5/2019	ND<0 U
	9/25/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/18/2021	ND<0 U
	9/15/2021	ND<0 JB
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Bromomethane

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/17/2014	ND<0 U
	3/19/2015	ND<0 U
	9/15/2015	ND<0 J
	3/21/2016	ND<0 U
	9/26/2016	ND<0 U
	3/31/2017	ND<0 U
	9/21/2017	ND<0 U
	3/30/2018	ND<0 U
	9/26/2018	ND<0 U
	3/13/2019	ND<0 U
	10/3/2019	ND<0 U
	4/3/2020	ND<0 U
	9/30/2020	ND<0 U
	3/22/2021	ND<0 U
	9/16/2021	ND<0 U
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Bromomethane

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	ND<0 U
	9/16/2014	ND<0 U
	3/18/2015	ND<0 JB
	9/15/2015	ND<0 J
	3/16/2016	ND<0 J
	9/22/2016	ND<0 U
	3/29/2017	ND<0 U
	9/21/2017	ND<0 U
	3/28/2018	ND<0 U
	9/20/2018	ND<0 U
	3/12/2019	ND<0 U
	10/1/2019	ND<0 U
	3/18/2020	ND<0 U
	9/24/2020	ND<0 U
	3/17/2021	ND<0 U
	9/9/2021	ND<0 U
	3/15/2022	ND<0
	9/16/2022	ND<0
	3/15/2023	ND<0

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Bromomethane

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	1	TRUE

Shapiro-Francia Test of Normality

Parameter: Chloroform

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	0	-0.725736	68.2338	0
38	0	-0.706302	68.7327	0
39	0	-0.687131	69.2049	0
40	0	-0.665079	69.6472	0
41	0	-0.646431	70.0651	0
42	0	-0.628006	70.4595	0
43	0	-0.606775	70.8276	0
44	0	-0.588793	71.1743	0
45	0	-0.570999	71.5003	0
46	0	-0.550465	71.8034	0
47	0	-0.533048	72.0875	0

48	0	-0.515791	72.3535	0
49	0	-0.49585	72.5994	0
50	0	-0.478914	72.8288	0
51	0	-0.462114	73.0423	0
52	0	-0.442676	73.2383	0
53	0	-0.426148	73.4199	0
54	0	-0.409735	73.5878	0
55	0	-0.390726	73.7404	0
56	0	-0.374544	73.8807	0
57	0	-0.358459	74.0092	0
58	0	-0.33981	74.1247	0
59	0	-0.323919	74.2296	0
60	0	-0.308108	74.3245	0
61	0	-0.28976	74.4085	0
62	0	-0.27411	74.4836	0
63	0	-0.258527	74.5505	0
64	0	-0.240426	74.6083	0
65	0	-0.224974	74.6589	0
66	0	-0.209575	74.7028	0
67	0	-0.191671	74.7395	0
68	0	-0.176374	74.7706	0
69	0	-0.161119	74.7966	0
70	0	-0.143367	74.8172	0
71	0	-0.128189	74.8336	0
72	0	-0.113039	74.8464	0
73	0	-0.0953969	74.8555	0
74	0	-0.0802981	74.8619	0
75	0	-0.0652187	74.8662	0
76	0	-0.0476439	74.8684	0
77	0	-0.0325917	74.8695	0
78	0	-0.0175476	74.8698	0
79	0	0	74.8698	0
80	0	0.0175476	74.8701	0
81	0	0.0325917	74.8712	0
82	0	0.0476439	74.8735	0
83	0	0.0652187	74.8777	0
84	0	0.0802981	74.8842	0
85	0	0.0953969	74.8933	0
86	0	0.113039	74.906	0
87	0	0.128189	74.9225	0
88	0	0.143367	74.943	0
89	0	0.161119	74.969	0
90	0	0.176374	75.0001	0
91	0	0.191671	75.0368	0
92	0	0.209575	75.0807	0
93	0	0.224974	75.1314	0
94	0	0.240426	75.1892	0
95	0	0.258527	75.256	0
96	0	0.27411	75.3311	0
97	0	0.28976	75.4151	0
98	0	0.308108	75.51	0
99	0	0.323919	75.615	0
100	0	0.33981	75.7304	0
101	0	0.358459	75.8589	0
102	0	0.374544	75.9992	0
103	0	0.390726	76.1519	0
104	0	0.409735	76.3198	0

105	0	0.426148	76.5014	0
106	0	0.442676	76.6973	0
107	0	0.462114	76.9109	0
108	0	0.478914	77.1402	0
109	0	0.49585	77.3861	0
110	0	0.515791	77.6521	0
111	0	0.533048	77.9363	0
112	0	0.550465	78.2393	0
113	0	0.570999	78.5653	0
114	0	0.588793	78.912	0
115	0	0.606775	79.2802	0
116	0	0.628006	79.6746	0
117	0	0.646431	80.0924	0
118	0	0.665079	80.5348	0
119	0	0.687131	81.0069	0
120	0	0.706302	81.5058	0
121	0	0.725736	82.0325	0
122	0	0.748762	82.5931	0
123	0	0.768821	83.1842	0
124	0	0.789191	83.807	0
125	0	0.813379	84.4686	0
126	0	0.834498	85.165	0
127	0	0.855996	85.8977	0
128	0	0.881587	86.6749	0
129	0	0.903992	87.4921	0
130	0	0.926859	88.3512	0
131	0	0.954165	89.2616	0
132	0	0.97815	90.2184	0
133	0	1.00271	91.2238	0
134	0	1.03215	92.2892	0
135	0	1.05812	93.4088	0
136	0	1.08482	94.5856	0
137	0	1.11699	95.8333	0
138	0	1.1455	97.1455	0
139	0	1.17499	98.5261	0
140	0	1.21073	99.9919	0
141	0	1.24264	101.536	0
142	0	1.27588	103.164	0
143	0	1.31652	104.897	0
144	0	1.35317	106.728	0
145	0	1.39175	108.665	0
146	0	1.43953	110.737	0
147	0	1.48328	112.938	0
148	0	1.53007	115.279	0
149	0	1.58927	117.804	0
150	0	1.64485	120.51	0
151	0	1.70604	123.421	0
152	0	1.78661	126.613	0
153	0	1.86629	130.096	0
154	3.4	1.95996	133.937	6.66387
155	7.1	2.09693	138.334	21.5521
156	14	2.25713	143.429	53.1519
157	20.3	2.51213	149.74	104.148

Data Set Standard Deviation = 2.05263
Numerator = 10846.8

Denominator = 98420.3
W Statistic = 0.110209 = 10846.8 / 98420.3

5% Critical value of 0.976 exceeds 0.110209
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.110209
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Chloroform

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	ND<0 U
	9/9/2014	ND<0 U
	3/16/2015	ND<0 U
	9/9/2015	ND<0 U
	3/18/2016	ND<0 U
	9/20/2016	ND<0 U
	3/23/2017	ND<0 U
	9/18/2017	ND<0 U
	3/15/2018	ND<0 U
	9/17/2018	ND<0 U
	3/5/2019	ND<0 U
	9/24/2019	ND<0 U
	3/16/2020	ND<0 U
	9/22/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/22/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Chloroform

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 0
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/4/2014	ND<0 U
	3/17/2015	ND<0 U
	9/11/2015	ND<0 U
	3/15/2016	ND<0 U
	9/21/2016	ND<0 U
	3/28/2017	ND<0 U
	9/19/2017	ND<0 U
	3/26/2018	ND<0 U
	9/18/2018	ND<0 U
	3/4/2019	ND<0 U
	9/23/2019	ND<0 U
	3/19/2020	ND<0 U
	9/23/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/16/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Chloroform

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/19/2015	ND<0 U
	9/14/2015	ND<0 U
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/27/2017	ND<0 U
	9/20/2017	ND<0 U
	3/16/2018	ND<0 U
	9/20/2018	ND<0 U
	3/5/2019	ND<0 U
	9/25/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/18/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Chloroform

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/17/2014	ND<0 U
	3/19/2015	ND<0 U
	9/15/2015	ND<0 U
	3/21/2016	ND<0 U
	9/26/2016	ND<0 U
	3/31/2017	ND<0 U
	9/21/2017	ND<0 U
	3/30/2018	ND<0 U
	9/26/2018	ND<0 U
	3/13/2019	ND<0 U
	10/3/2019	ND<0 U
	4/3/2020	ND<0 U
	9/30/2020	ND<0 U
	3/22/2021	ND<0 J
	9/16/2021	ND<0 U
	3/24/2022	ND<0 JB
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Chloroform

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	ND<0 U
	9/16/2014	ND<0 J
	3/18/2015	ND<0 U
	9/15/2015	ND<0 U
	3/16/2016	ND<0 U
	9/22/2016	ND<0 U
	3/29/2017	ND<0 U
	9/21/2017	ND<0 U
	3/28/2018	ND<0 U
	9/20/2018	ND<0 J
	3/12/2019	ND<0 J
	10/1/2019	ND<0 J
	3/18/2020	ND<0 U
	9/24/2020	ND<0 U
	3/17/2021	ND<0 U
	9/9/2021	ND<0 U
	3/15/2022	ND<0
	9/16/2022	ND<0
	3/15/2023	ND<0

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Chloroform

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: Chloromethane

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	0	-0.725736	68.2338	0
38	0	-0.706302	68.7327	0
39	0	-0.687131	69.2049	0
40	0	-0.665079	69.6472	0
41	0	-0.646431	70.0651	0
42	0	-0.628006	70.4595	0
43	0	-0.606775	70.8276	0
44	0	-0.588793	71.1743	0
45	0	-0.570999	71.5003	0
46	0	-0.550465	71.8034	0
47	0	-0.533048	72.0875	0

48	0	-0.515791	72.3535	0
49	0	-0.49585	72.5994	0
50	0	-0.478914	72.8288	0
51	0	-0.462114	73.0423	0
52	0	-0.442676	73.2383	0
53	0	-0.426148	73.4199	0
54	0	-0.409735	73.5878	0
55	0	-0.390726	73.7404	0
56	0	-0.374544	73.8807	0
57	0	-0.358459	74.0092	0
58	0	-0.33981	74.1247	0
59	0	-0.323919	74.2296	0
60	0	-0.308108	74.3245	0
61	0	-0.28976	74.4085	0
62	0	-0.27411	74.4836	0
63	0	-0.258527	74.5505	0
64	0	-0.240426	74.6083	0
65	0	-0.224974	74.6589	0
66	0	-0.209575	74.7028	0
67	0	-0.191671	74.7395	0
68	0	-0.176374	74.7706	0
69	0	-0.161119	74.7966	0
70	0	-0.143367	74.8172	0
71	0	-0.128189	74.8336	0
72	0	-0.113039	74.8464	0
73	0	-0.0953969	74.8555	0
74	0	-0.0802981	74.8619	0
75	0	-0.0652187	74.8662	0
76	0	-0.0476439	74.8684	0
77	0	-0.0325917	74.8695	0
78	0	-0.0175476	74.8698	0
79	0	0	74.8698	0
80	0	0.0175476	74.8701	0
81	0	0.0325917	74.8712	0
82	0	0.0476439	74.8735	0
83	0	0.0652187	74.8777	0
84	0	0.0802981	74.8842	0
85	0	0.0953969	74.8933	0
86	0	0.113039	74.906	0
87	0	0.128189	74.9225	0
88	0	0.143367	74.943	0
89	0	0.161119	74.969	0
90	0	0.176374	75.0001	0
91	0	0.191671	75.0368	0
92	0	0.209575	75.0807	0
93	0	0.224974	75.1314	0
94	0	0.240426	75.1892	0
95	0	0.258527	75.256	0
96	0	0.27411	75.3311	0
97	0	0.28976	75.4151	0
98	0	0.308108	75.51	0
99	0	0.323919	75.615	0
100	0	0.33981	75.7304	0
101	0	0.358459	75.8589	0
102	0	0.374544	75.9992	0
103	0	0.390726	76.1519	0
104	0	0.409735	76.3198	0

105	0	0.426148	76.5014	0
106	0	0.442676	76.6973	0
107	0	0.462114	76.9109	0
108	0	0.478914	77.1402	0
109	0	0.49585	77.3861	0
110	0	0.515791	77.6521	0
111	0	0.533048	77.9363	0
112	0	0.550465	78.2393	0
113	0	0.570999	78.5653	0
114	0	0.588793	78.912	0
115	0	0.606775	79.2802	0
116	0	0.628006	79.6746	0
117	0	0.646431	80.0924	0
118	0	0.665079	80.5348	0
119	0	0.687131	81.0069	0
120	0	0.706302	81.5058	0
121	0	0.725736	82.0325	0
122	0	0.748762	82.5931	0
123	0	0.768821	83.1842	0
124	0	0.789191	83.807	0
125	0	0.813379	84.4686	0
126	0	0.834498	85.165	0
127	0	0.855996	85.8977	0
128	0	0.881587	86.6749	0
129	0	0.903992	87.4921	0
130	0	0.926859	88.3512	0
131	0	0.954165	89.2616	0
132	0	0.97815	90.2184	0
133	0	1.00271	91.2238	0
134	0	1.03215	92.2892	0
135	0	1.05812	93.4088	0
136	0	1.08482	94.5856	0
137	0	1.11699	95.8333	0
138	0	1.1455	97.1455	0
139	0	1.17499	98.5261	0
140	0	1.21073	99.9919	0
141	0	1.24264	101.536	0
142	0	1.27588	103.164	0
143	0	1.31652	104.897	0
144	0	1.35317	106.728	0
145	0	1.39175	108.665	0
146	0	1.43953	110.737	0
147	0	1.48328	112.938	0
148	0	1.53007	115.279	0
149	0	1.58927	117.804	0
150	0	1.64485	120.51	0
151	0	1.70604	123.421	0
152	0	1.78661	126.613	0
153	0	1.86629	130.096	0
154	0	1.95996	133.937	0
155	0	2.09693	138.334	0
156	0	2.25713	143.429	0
157	0	2.51213	149.74	0

Data Set Standard Deviation = 0

Divide by Zero Error

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Chloromethane

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	ND<0 U
	9/9/2014	ND<0 U
	3/16/2015	ND<0 U
	9/9/2015	ND<0 U
	3/18/2016	ND<0 J
	9/20/2016	ND<0 U
	3/23/2017	ND<0 U
	9/18/2017	ND<0 U
	3/15/2018	ND<0 U
	9/17/2018	ND<0 U
	3/5/2019	ND<0 U
	9/24/2019	ND<0 U
	3/16/2020	ND<0 U
	9/22/2020	ND<0 J
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/22/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Chloromethane

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 0
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/4/2014	ND<0 U
	3/17/2015	ND<0 U
	9/11/2015	ND<0 U
	3/15/2016	ND<0 J
	9/21/2016	ND<0 U
	3/28/2017	ND<0 U
	9/19/2017	ND<0 U
	3/26/2018	ND<0 U
	9/18/2018	ND<0 U
	3/4/2019	ND<0 U
	9/23/2019	ND<0 U
	3/19/2020	ND<0 U
	9/23/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/16/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Chloromethane

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 J
	3/19/2015	ND<0 U
	9/14/2015	ND<0 U
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/27/2017	ND<0 U
	9/20/2017	ND<0 U
	3/16/2018	ND<0 U
	9/20/2018	ND<0 U
	3/5/2019	ND<0 U
	9/25/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 J
	3/18/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Chloromethane

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/17/2014	ND<0 U
	3/19/2015	ND<0 U
	9/15/2015	ND<0 J
	3/21/2016	ND<0 J
	9/26/2016	ND<0 J
	3/31/2017	ND<0 U
	9/21/2017	ND<0 U
	3/30/2018	ND<0 U
	9/26/2018	ND<0 U
	3/13/2019	ND<0 J
	10/3/2019	ND<0 U
	4/3/2020	ND<0 J
	9/30/2020	ND<0 J
	3/22/2021	ND<0 U
	9/16/2021	ND<0 U
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Chloromethane

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	ND<0 U
	9/16/2014	ND<0 U
	3/18/2015	ND<0 U
	9/15/2015	ND<0 J
	3/16/2016	ND<0 U
	9/22/2016	ND<0 U
	3/29/2017	ND<0 U
	9/21/2017	ND<0 U
	3/28/2018	ND<0 U
	9/20/2018	ND<0 U
	3/12/2019	ND<0 U
	10/1/2019	ND<0 U
	3/18/2020	ND<0 U
	9/24/2020	ND<0 U
	3/17/2021	ND<0 U
	9/9/2021	ND<0 U
	3/15/2022	ND<0
	9/16/2022	ND<0
	3/15/2023	ND<0

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Chloromethane

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 J
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: 1,4-Dichlorobenzene

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	0	-0.725736	68.2338	0
38	0	-0.706302	68.7327	0
39	0	-0.687131	69.2049	0
40	0	-0.665079	69.6472	0
41	0	-0.646431	70.0651	0
42	0	-0.628006	70.4595	0
43	0	-0.606775	70.8276	0
44	0	-0.588793	71.1743	0
45	0	-0.570999	71.5003	0
46	0	-0.550465	71.8034	0
47	0	-0.533048	72.0875	0

48	0	-0.515791	72.3535	0
49	0	-0.49585	72.5994	0
50	0	-0.478914	72.8288	0
51	0	-0.462114	73.0423	0
52	0	-0.442676	73.2383	0
53	0	-0.426148	73.4199	0
54	0	-0.409735	73.5878	0
55	0	-0.390726	73.7404	0
56	0	-0.374544	73.8807	0
57	0	-0.358459	74.0092	0
58	0	-0.33981	74.1247	0
59	0	-0.323919	74.2296	0
60	0	-0.308108	74.3245	0
61	0	-0.28976	74.4085	0
62	0	-0.27411	74.4836	0
63	0	-0.258527	74.5505	0
64	0	-0.240426	74.6083	0
65	0	-0.224974	74.6589	0
66	0	-0.209575	74.7028	0
67	0	-0.191671	74.7395	0
68	0	-0.176374	74.7706	0
69	0	-0.161119	74.7966	0
70	0	-0.143367	74.8172	0
71	0	-0.128189	74.8336	0
72	0	-0.113039	74.8464	0
73	0	-0.0953969	74.8555	0
74	0	-0.0802981	74.8619	0
75	0	-0.0652187	74.8662	0
76	0	-0.0476439	74.8684	0
77	0	-0.0325917	74.8695	0
78	0	-0.0175476	74.8698	0
79	0	0	74.8698	0
80	0	0.0175476	74.8701	0
81	0	0.0325917	74.8712	0
82	0	0.0476439	74.8735	0
83	0	0.0652187	74.8777	0
84	0	0.0802981	74.8842	0
85	0	0.0953969	74.8933	0
86	0	0.113039	74.906	0
87	0	0.128189	74.9225	0
88	0	0.143367	74.943	0
89	0	0.161119	74.969	0
90	0	0.176374	75.0001	0
91	0	0.191671	75.0368	0
92	0	0.209575	75.0807	0
93	0	0.224974	75.1314	0
94	0	0.240426	75.1892	0
95	0	0.258527	75.256	0
96	0	0.27411	75.3311	0
97	0	0.28976	75.4151	0
98	0	0.308108	75.51	0
99	0	0.323919	75.615	0
100	0	0.33981	75.7304	0
101	0	0.358459	75.8589	0
102	0	0.374544	75.9992	0
103	0	0.390726	76.1519	0
104	0	0.409735	76.3198	0

105	0	0.426148	76.5014	0
106	0	0.442676	76.6973	0
107	0	0.462114	76.9109	0
108	0	0.478914	77.1402	0
109	0	0.49585	77.3861	0
110	0	0.515791	77.6521	0
111	0	0.533048	77.9363	0
112	0	0.550465	78.2393	0
113	0	0.570999	78.5653	0
114	0	0.588793	78.912	0
115	0	0.606775	79.2802	0
116	0	0.628006	79.6746	0
117	0	0.646431	80.0924	0
118	0	0.665079	80.5348	0
119	0	0.687131	81.0069	0
120	0	0.706302	81.5058	0
121	0	0.725736	82.0325	0
122	0	0.748762	82.5931	0
123	0	0.768821	83.1842	0
124	0	0.789191	83.807	0
125	0	0.813379	84.4686	0
126	0	0.834498	85.165	0
127	0	0.855996	85.8977	0
128	0	0.881587	86.6749	0
129	0	0.903992	87.4921	0
130	1	0.926859	88.3512	0.926859
131	1.2	0.954165	89.2616	2.07186
132	1.3	0.97815	90.2184	3.34345
133	1.3	1.00271	91.2238	4.64698
134	1.4	1.03215	92.2892	6.09199
135	1.4	1.05812	93.4088	7.57336
136	1.6	1.08482	94.5856	9.30908
137	1.6	1.11699	95.8333	11.0963
138	1.6	1.1455	97.1455	12.9291
139	1.6	1.17499	98.5261	14.809
140	1.7	1.21073	99.9919	16.8673
141	1.7	1.24264	101.536	18.9798
142	1.7	1.27588	103.164	21.1488
143	1.8	1.31652	104.897	23.5185
144	1.8	1.35317	106.728	25.9542
145	1.8	1.39175	108.665	28.4594
146	1.8	1.43953	110.737	31.0505
147	1.9	1.48328	112.938	33.8687
148	1.9	1.53007	115.279	36.7759
149	1.9	1.58927	117.804	39.7955
150	2	1.64485	120.51	43.0852
151	2	1.70604	123.421	46.4973
152	2.1	1.78661	126.613	50.2492
153	2.2	1.86629	130.096	54.355
154	2.2	1.95996	133.937	58.6669
155	2.4	2.09693	138.334	63.6995
156	3.4	2.25713	143.429	71.3738
157	4	2.51213	149.74	81.4223

Data Set Standard Deviation = 0.761357
Numerator = 6629.59

Denominator = 13540.6
W Statistic = 0.489608 = 6629.59 / 13540.6

5% Critical value of 0.976 exceeds 0.489608
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.489608
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: 1,4-Dichlorobenzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 4
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	1
	3/20/2014	4
	9/9/2014	1.7
	3/16/2015	2.2
	9/9/2015	2
	3/18/2016	2.1
	9/20/2016	2.2
	3/23/2017	1.8
	9/18/2017	2
	3/15/2018	1.8
	9/17/2018	1.6
	3/5/2019	1.7
	9/24/2019	1.9
	3/16/2020	3.4
	9/22/2020	1.6
	3/16/2021	1.3
	9/14/2021	1.4
	3/22/2022	1.4
	9/13/2022	ND<0
	3/14/2023	1.3

Date	Count	Mean	Significant
9/12/2023	1	1.2	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: 1,4-Dichlorobenzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 0
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/4/2014	ND<0 U
	3/17/2015	ND<0 U
	9/11/2015	ND<0 U
	3/15/2016	ND<0 U
	9/21/2016	ND<0 U
	3/28/2017	ND<0 U
	9/19/2017	ND<0 U
	3/26/2018	ND<0 U
	9/18/2018	ND<0 U
	3/4/2019	ND<0 U
	9/23/2019	ND<0 U
	3/19/2020	ND<0 U
	9/23/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/16/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: 1,4-Dichlorobenzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/19/2015	ND<0 U
	9/14/2015	ND<0 U
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/27/2017	ND<0 U
	9/20/2017	ND<0 U
	3/16/2018	ND<0 U
	9/20/2018	ND<0 U
	3/5/2019	ND<0 U
	9/25/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/18/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: 1,4-Dichlorobenzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/17/2014	ND<0 U
	3/19/2015	ND<0 U
	9/15/2015	ND<0 U
	3/21/2016	ND<0 U
	9/26/2016	ND<0 U
	3/31/2017	ND<0 U
	9/21/2017	ND<0 U
	3/30/2018	ND<0 U
	9/26/2018	ND<0 U
	3/13/2019	ND<0 U
	10/3/2019	ND<0 U
	4/3/2020	ND<0 U
	9/30/2020	ND<0 U
	3/22/2021	ND<0 U
	9/16/2021	ND<0 U
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: 1,4-Dichlorobenzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	ND<0 U
	9/16/2014	ND<0 U
	3/18/2015	ND<0 U
	9/15/2015	ND<0 U
	3/16/2016	ND<0 U
	9/22/2016	ND<0 U
	3/29/2017	ND<0 U
	9/21/2017	ND<0 U
	3/28/2018	ND<0 U
	9/20/2018	ND<0 U
	3/12/2019	ND<0 U
	10/1/2019	ND<0 U
	3/18/2020	ND<0 U
	9/24/2020	ND<0 U
	3/17/2021	ND<0 U
	9/9/2021	ND<0 U
	3/15/2022	ND<0
	9/16/2022	ND<0
	3/15/2023	ND<0

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: 1,4-Dichlorobenzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 12.5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 2.4
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	1.8
	3/26/2020	2.4
	9/29/2020	1.9
	3/16/2021	1.8
	9/14/2021	1.7
	3/18/2022	1.6
	9/13/2022	ND<0
	3/14/2023	1.9

Date	Count	Mean	Significant
9/12/2023	1	1.6	FALSE

Shapiro-Francia Test of Normality

Parameter: Ethylbenzene

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	0	-0.725736	68.2338	0
38	0	-0.706302	68.7327	0
39	0	-0.687131	69.2049	0
40	0	-0.665079	69.6472	0
41	0	-0.646431	70.0651	0
42	0	-0.628006	70.4595	0
43	0	-0.606775	70.8276	0
44	0	-0.588793	71.1743	0
45	0	-0.570999	71.5003	0
46	0	-0.550465	71.8034	0
47	0	-0.533048	72.0875	0

48	0	-0.515791	72.3535	0
49	0	-0.49585	72.5994	0
50	0	-0.478914	72.8288	0
51	0	-0.462114	73.0423	0
52	0	-0.442676	73.2383	0
53	0	-0.426148	73.4199	0
54	0	-0.409735	73.5878	0
55	0	-0.390726	73.7404	0
56	0	-0.374544	73.8807	0
57	0	-0.358459	74.0092	0
58	0	-0.33981	74.1247	0
59	0	-0.323919	74.2296	0
60	0	-0.308108	74.3245	0
61	0	-0.28976	74.4085	0
62	0	-0.27411	74.4836	0
63	0	-0.258527	74.5505	0
64	0	-0.240426	74.6083	0
65	0	-0.224974	74.6589	0
66	0	-0.209575	74.7028	0
67	0	-0.191671	74.7395	0
68	0	-0.176374	74.7706	0
69	0	-0.161119	74.7966	0
70	0	-0.143367	74.8172	0
71	0	-0.128189	74.8336	0
72	0	-0.113039	74.8464	0
73	0	-0.0953969	74.8555	0
74	0	-0.0802981	74.8619	0
75	0	-0.0652187	74.8662	0
76	0	-0.0476439	74.8684	0
77	0	-0.0325917	74.8695	0
78	0	-0.0175476	74.8698	0
79	0	0	74.8698	0
80	0	0.0175476	74.8701	0
81	0	0.0325917	74.8712	0
82	0	0.0476439	74.8735	0
83	0	0.0652187	74.8777	0
84	0	0.0802981	74.8842	0
85	0	0.0953969	74.8933	0
86	0	0.113039	74.906	0
87	0	0.128189	74.9225	0
88	0	0.143367	74.943	0
89	0	0.161119	74.969	0
90	0	0.176374	75.0001	0
91	0	0.191671	75.0368	0
92	0	0.209575	75.0807	0
93	0	0.224974	75.1314	0
94	0	0.240426	75.1892	0
95	0	0.258527	75.256	0
96	0	0.27411	75.3311	0
97	0	0.28976	75.4151	0
98	0	0.308108	75.51	0
99	0	0.323919	75.615	0
100	0	0.33981	75.7304	0
101	0	0.358459	75.8589	0
102	0	0.374544	75.9992	0
103	0	0.390726	76.1519	0
104	0	0.409735	76.3198	0

105	0	0.426148	76.5014	0
106	0	0.442676	76.6973	0
107	0	0.462114	76.9109	0
108	0	0.478914	77.1402	0
109	0	0.49585	77.3861	0
110	0	0.515791	77.6521	0
111	0	0.533048	77.9363	0
112	0	0.550465	78.2393	0
113	0	0.570999	78.5653	0
114	0	0.588793	78.912	0
115	0	0.606775	79.2802	0
116	0	0.628006	79.6746	0
117	0	0.646431	80.0924	0
118	0	0.665079	80.5348	0
119	0	0.687131	81.0069	0
120	0	0.706302	81.5058	0
121	0	0.725736	82.0325	0
122	0	0.748762	82.5931	0
123	0	0.768821	83.1842	0
124	0	0.789191	83.807	0
125	0	0.813379	84.4686	0
126	0	0.834498	85.165	0
127	0	0.855996	85.8977	0
128	0	0.881587	86.6749	0
129	0	0.903992	87.4921	0
130	0	0.926859	88.3512	0
131	0	0.954165	89.2616	0
132	0	0.97815	90.2184	0
133	0	1.00271	91.2238	0
134	0	1.03215	92.2892	0
135	0	1.05812	93.4088	0
136	0	1.08482	94.5856	0
137	1.5	1.11699	95.8333	1.67548
138	3.6	1.1455	97.1455	5.79929
139	3.8	1.17499	98.5261	10.2642
140	5.5	1.21073	99.9919	16.9233
141	6.3	1.24264	101.536	24.7519
142	6.6	1.27588	103.164	33.1727
143	7.8	1.31652	104.897	43.4415
144	8.9	1.35317	106.728	55.4848
145	11.9	1.39175	108.665	72.0466
146	11.9	1.43953	110.737	89.177
147	16	1.48328	112.938	112.909
148	16.2	1.53007	115.279	137.697
149	23.7	1.58927	117.804	175.362
150	27.2	1.64485	120.51	220.102
151	28.1	1.70604	123.421	268.042
152	28.8	1.78661	126.613	319.496
153	31.6	1.86629	130.096	378.471
154	39.9	1.95996	133.937	456.674
155	41.4	2.09693	138.334	543.487
156	46	2.25713	143.429	647.315
157	47.4	2.51213	149.74	766.39

Data Set Standard Deviation = 8.61592
Numerator = 587353

Denominator = 1.73406e+006
W Statistic = 0.338715 = 587353 / 1.73406e+006

5% Critical value of 0.976 exceeds 0.338715
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.338715
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Ethylbenzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	ND<0 U
	9/9/2014	ND<0 U
	3/16/2015	ND<0 U
	9/9/2015	ND<0 U
	3/18/2016	ND<0 U
	9/20/2016	ND<0 U
	3/23/2017	ND<0 U
	9/18/2017	ND<0 U
	3/15/2018	ND<0 U
	9/17/2018	ND<0 U
	3/5/2019	ND<0 U
	9/24/2019	ND<0 U
	3/16/2020	ND<0 U
	9/22/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/22/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Ethylbenzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 0
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/4/2014	ND<0 U
	3/17/2015	ND<0 U
	9/11/2015	ND<0 U
	3/15/2016	ND<0 U
	9/21/2016	ND<0 U
	3/28/2017	ND<0 U
	9/19/2017	ND<0 U
	3/26/2018	ND<0 U
	9/18/2018	ND<0 U
	3/4/2019	ND<0 U
	9/23/2019	ND<0 U
	3/19/2020	ND<0 U
	9/23/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/16/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Ethylbenzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/19/2015	ND<0 U
	9/14/2015	ND<0 U
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/27/2017	ND<0 U
	9/20/2017	ND<0 U
	3/16/2018	ND<0 U
	9/20/2018	ND<0 U
	3/5/2019	ND<0 U
	9/25/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/18/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Ethylbenzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 47.4
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	16
	3/21/2014	1.5
	9/17/2014	3.8
	3/19/2015	6.3
	9/15/2015	7.8
	3/21/2016	6.6
	9/26/2016	3.6
	3/31/2017	8.9
	9/21/2017	27.2
	3/30/2018	39.9
	9/26/2018	46
	3/13/2019	47.4
	10/3/2019	23.7
	4/3/2020	11.9
	9/30/2020	31.6
	3/22/2021	41.4
	9/16/2021	16.2
	3/24/2022	28.8
	9/16/2022	28.1
	3/17/2023	11.9

Date	Count	Mean	Significant
9/14/2023	1	5.5	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Ethylbenzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	ND<0 U
	9/16/2014	ND<0 U
	3/18/2015	ND<0 U
	9/15/2015	ND<0 U
	3/16/2016	ND<0 U
	9/22/2016	ND<0 U
	3/29/2017	ND<0 U
	9/21/2017	ND<0 U
	3/28/2018	ND<0 U
	9/20/2018	ND<0 U
	3/12/2019	ND<0 U
	10/1/2019	ND<0 U
	3/18/2020	ND<0 U
	9/24/2020	ND<0 U
	3/17/2021	ND<0 U
	9/9/2021	ND<0 U
	3/15/2022	ND<0
	9/16/2022	ND<0
	3/15/2023	ND<0

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Ethylbenzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: Methyl t-Butyl Ether

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	0	-0.725736	68.2338	0
38	0	-0.706302	68.7327	0
39	0	-0.687131	69.2049	0
40	0	-0.665079	69.6472	0
41	0	-0.646431	70.0651	0
42	0	-0.628006	70.4595	0
43	0	-0.606775	70.8276	0
44	0	-0.588793	71.1743	0
45	0	-0.570999	71.5003	0
46	0	-0.550465	71.8034	0
47	0	-0.533048	72.0875	0

48	0	-0.515791	72.3535	0
49	0	-0.49585	72.5994	0
50	0	-0.478914	72.8288	0
51	0	-0.462114	73.0423	0
52	0	-0.442676	73.2383	0
53	0	-0.426148	73.4199	0
54	0	-0.409735	73.5878	0
55	0	-0.390726	73.7404	0
56	0	-0.374544	73.8807	0
57	0	-0.358459	74.0092	0
58	0	-0.33981	74.1247	0
59	0	-0.323919	74.2296	0
60	0	-0.308108	74.3245	0
61	0	-0.28976	74.4085	0
62	0	-0.27411	74.4836	0
63	0	-0.258527	74.5505	0
64	0	-0.240426	74.6083	0
65	0	-0.224974	74.6589	0
66	0	-0.209575	74.7028	0
67	0	-0.191671	74.7395	0
68	0	-0.176374	74.7706	0
69	0	-0.161119	74.7966	0
70	0	-0.143367	74.8172	0
71	0	-0.128189	74.8336	0
72	0	-0.113039	74.8464	0
73	0	-0.0953969	74.8555	0
74	0	-0.0802981	74.8619	0
75	0	-0.0652187	74.8662	0
76	0	-0.0476439	74.8684	0
77	0	-0.0325917	74.8695	0
78	0	-0.0175476	74.8698	0
79	0	0	74.8698	0
80	0	0.0175476	74.8701	0
81	0	0.0325917	74.8712	0
82	0	0.0476439	74.8735	0
83	0	0.0652187	74.8777	0
84	0	0.0802981	74.8842	0
85	0	0.0953969	74.8933	0
86	0	0.113039	74.906	0
87	0	0.128189	74.9225	0
88	0	0.143367	74.943	0
89	0	0.161119	74.969	0
90	0	0.176374	75.0001	0
91	0	0.191671	75.0368	0
92	0	0.209575	75.0807	0
93	0	0.224974	75.1314	0
94	0	0.240426	75.1892	0
95	0	0.258527	75.256	0
96	0	0.27411	75.3311	0
97	0	0.28976	75.4151	0
98	0	0.308108	75.51	0
99	0	0.323919	75.615	0
100	0	0.33981	75.7304	0
101	0	0.358459	75.8589	0
102	0	0.374544	75.9992	0
103	0	0.390726	76.1519	0
104	0	0.409735	76.3198	0

105	0	0.426148	76.5014	0
106	0	0.442676	76.6973	0
107	1	0.462114	76.9109	0.462114
108	1	0.478914	77.1402	0.941028
109	1.1	0.49585	77.3861	1.48646
110	1.1	0.515791	77.6521	2.05383
111	1.1	0.533048	77.9363	2.64019
112	1.1	0.550465	78.2393	3.2457
113	1.1	0.570999	78.5653	3.8738
114	1.2	0.588793	78.912	4.58035
115	1.2	0.606775	79.2802	5.30848
116	1.2	0.628006	79.6746	6.06209
117	1.3	0.646431	80.0924	6.90245
118	1.3	0.665079	80.5348	7.76705
119	1.3	0.687131	81.0069	8.66032
120	1.3	0.706302	81.5058	9.57851
121	1.4	0.725736	82.0325	10.5945
122	1.5	0.748762	82.5931	11.7177
123	1.5	0.768821	83.1842	12.8709
124	1.6	0.789191	83.807	14.1336
125	1.7	0.813379	84.4686	15.5164
126	1.7	0.834498	85.165	16.935
127	1.7	0.855996	85.8977	18.3902
128	1.8	0.881587	86.6749	19.9771
129	2	0.903992	87.4921	21.785
130	2	0.926859	88.3512	23.6388
131	2	0.954165	89.2616	25.5471
132	2.2	0.97815	90.2184	27.699
133	2.4	1.00271	91.2238	30.1055
134	2.4	1.03215	92.2892	32.5827
135	2.6	1.05812	93.4088	35.3338
136	2.8	1.08482	94.5856	38.3713
137	2.9	1.11699	95.8333	41.6106
138	3.4	1.1455	97.1455	45.5053
139	3.5	1.17499	98.5261	49.6178
140	3.5	1.21073	99.9919	53.8553
141	3.7	1.24264	101.536	58.4531
142	3.9	1.27588	103.164	63.429
143	4.8	1.31652	104.897	69.7483
144	5	1.35317	106.728	76.5142
145	5	1.39175	108.665	83.4729
146	5.1	1.43953	110.737	90.8145
147	5.2	1.48328	112.938	98.5276
148	5.7	1.53007	115.279	107.249
149	6.7	1.58927	117.804	117.897
150	7.2	1.64485	120.51	129.74
151	7.7	1.70604	123.421	142.877
152	7.7	1.78661	126.613	156.633
153	8.3	1.86629	130.096	172.124
154	10	1.95996	133.937	191.723
155	11.7	2.09693	138.334	216.257
156	12.2	2.25713	143.429	243.794
157	13.1	2.51213	149.74	276.703

Data Set Standard Deviation = 2.45616
Numerator = 76564.7

Denominator = 140920
W Statistic = 0.54332 = 76564.7 / 140920

5% Critical value of 0.976 exceeds 0.54332
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.54332
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Methyl t-Butyl Ether

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 3.4
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	2
	3/20/2014	2.9
	9/9/2014	3.4
	3/16/2015	2.8
	9/9/2015	2.4
	3/18/2016	2.2
	9/20/2016	2
	3/23/2017	1.5
	9/18/2017	1.8
	3/15/2018	1.3
	9/17/2018	1.7
	3/5/2019	1.7
	9/24/2019	2
	3/16/2020	1.3
	9/22/2020	1.6
	3/16/2021	1.1
	9/14/2021	1.3
	3/22/2022	1.1
	9/13/2022	ND<0 J
	3/14/2023	1

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Methyl t-Butyl Ether

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 0
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 J
	9/4/2014	ND<0 J
	3/17/2015	ND<0 U
	9/11/2015	ND<0 U
	3/15/2016	ND<0 U
	9/21/2016	ND<0 U
	3/28/2017	ND<0 U
	9/19/2017	ND<0 U
	3/26/2018	ND<0 U
	9/18/2018	ND<0 U
	3/4/2019	ND<0 U
	9/23/2019	ND<0 U
	3/19/2020	ND<0 U
	9/23/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/16/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Methyl t-Butyl Ether

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/19/2015	ND<0 U
	9/14/2015	ND<0 U
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/27/2017	ND<0 U
	9/20/2017	ND<0 U
	3/16/2018	ND<0 U
	9/20/2018	ND<0 U
	3/5/2019	ND<0 U
	9/25/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/18/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Methyl t-Butyl Ether

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 13.1
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	5
	3/21/2014	2.6
	9/17/2014	3.5
	3/19/2015	5.1
	9/15/2015	5.2
	3/21/2016	5.7
	9/26/2016	3.5
	3/31/2017	5
	9/21/2017	10
	3/30/2018	11.7
	9/26/2018	12.2
	3/13/2019	13.1
	10/3/2019	7.7
	4/3/2020	3.7
	9/30/2020	7.2
	3/22/2021	8.3
	9/16/2021	3.9
	3/24/2022	7.7
	9/16/2022	6.7
	3/17/2023	4.8

Date	Count	Mean	Significant
9/14/2023	1	2.4	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Methyl t-Butyl Ether

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	ND<0 J
	9/16/2014	ND<0 U
	3/18/2015	ND<0 U
	9/15/2015	ND<0 U
	3/16/2016	ND<0 U
	9/22/2016	ND<0 U
	3/29/2017	ND<0 U
	9/21/2017	ND<0 U
	3/28/2018	ND<0 U
	9/20/2018	ND<0 U
	3/12/2019	ND<0 U
	10/1/2019	ND<0 U
	3/18/2020	ND<0 U
	9/24/2020	ND<0 U
	3/17/2021	ND<0 U
	9/9/2021	ND<0 U
	3/15/2022	ND<0
	9/16/2022	ND<0
	3/15/2023	ND<0

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Methyl t-Butyl Ether

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 J
	3/26/2020	ND<0 J
	9/29/2020	ND<0 J
	3/16/2021	ND<0 J
	9/14/2021	ND<0 J
	3/18/2022	ND<0 J
	9/13/2022	ND<0 J
	3/14/2023	ND<0 J

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

3) Patuxent Aquifer VOC Inter-well Statistics

APPENDIX F

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Bromomethane

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 30
Non detect rank is 15.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<1 U	15.5
	4/2/2020	ND<1 U	15.5
	9/30/2020	ND<1 U	15.5
	3/22/2021	ND<1 U	15.5
	9/8/2021	ND<1 U	15.5
	3/14/2022	ND<1	15.5
	9/12/2022	ND<1	15.5
	3/13/2023	ND<0.85 JB	15.5
	9/11/2023	1.1 B	31
SMW-32	9/23/2013	ND<1	15.5
	12/5/2013	ND<1	15.5
	3/19/2014	ND<0.48 J	15.5
	9/8/2014	ND<1 U	15.5
	3/18/2015	ND<1 U	15.5
	9/8/2015	ND<0.49 J	15.5
	3/14/2016	ND<1 U	15.5
	9/20/2016	ND<1 U	15.5
	3/24/2017	ND<1 U	15.5
	9/20/2017	ND<1 U	15.5
	3/27/2018	ND<1 U	15.5
	9/18/2018	ND<1 U	15.5
	3/11/2019	ND<1 U	15.5
	10/3/2019	ND<1 U	15.5
	3/23/2020	ND<1 U	15.5
	9/24/2020	ND<1 U	15.5
	3/23/2021	ND<1 U	15.5
	9/16/2021	ND<1 U	15.5
	3/24/2022	ND<1	15.5
	9/16/2022	ND<1	15.5
	3/17/2023	ND<1	15.5
	9/15/2023	ND<1	15.5

The Wilcoxon Statistic is 88
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is -0.500473
The Standard Deviation adjusted for ties is 7.03562
The Z Score adjusted for ties is -1.63454
-0.500473 < 2.326 indicating no statistical significance at 1% level
-1.63454 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Bromomethane

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 29
Non detect rank is 15

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<1 U	15
	4/2/2020	ND<1 U	15
	9/30/2020	ND<1 U	15
	3/22/2021	ND<1 U	15
	9/8/2021	ND<1 U	15
	3/14/2022	ND<1	15
	9/12/2022	ND<1	15
	3/13/2023	ND<0.85 JB	15
	9/11/2023	1.1 B	30
SMW-13	9/23/2013	ND<1	15
	3/21/2014	ND<1 U	15
	9/8/2014	ND<1 U	15
	3/18/2015	ND<1 U	15
	9/8/2015	ND<0.45 J	15
	3/14/2016	ND<1 U	15
	10/24/2016	ND<1 U	15
	3/30/2017	ND<1 U	15
	9/20/2017	ND<0.6 J	15
	3/30/2018	ND<1 U	15
	9/21/2018	ND<1 U	15
	3/11/2019	ND<1 U	15
	10/3/2019	ND<1 U	15
	3/23/2020	ND<0.52 J	15
	9/25/2020	ND<1 U	15
	3/23/2021	ND<1 U	15
	9/16/2021	ND<0.43 JB	15
	3/23/2022	ND<1	15
	9/16/2022	ND<1	15
	3/17/2023	ND<1	15
	9/15/2023	ND<1	15

The Wilcoxon Statistic is 84
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -0.497819
The Standard Deviation adjusted for ties is 6.87386
The Z Score adjusted for ties is -1.60026
-0.497819 < 2.326 indicating no statistical significance at 1% level
-1.60026 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Bromomethane

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 24
Non detect rank is 12.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<1 U	12.5
	4/2/2020	ND<1 U	12.5
	9/30/2020	ND<1 U	12.5
	3/22/2021	ND<1 U	12.5
	9/8/2021	ND<1 U	12.5
	3/14/2022	ND<1	12.5
	9/12/2022	ND<1	12.5
	3/13/2023	ND<0.85 JB	12.5
	9/11/2023	1.1 B	25
GWM-15D	3/21/2016	ND<1 U	12.5
	9/23/2016	ND<1 U	12.5
	3/28/2017	ND<1 U	12.5
	9/21/2017	ND<1 U	12.5
	3/16/2018	ND<1 U	12.5
	9/19/2018	ND<1 U	12.5
	3/5/2019	ND<1 U	12.5
	10/3/2019	ND<1 U	12.5
	3/25/2020	ND<1 U	12.5
	9/28/2020	ND<1 U	12.5
	3/19/2021	ND<1 U	12.5
	9/15/2021	ND<0.95 JB	12.5
	3/22/2022	ND<1	12.5
	9/14/2022	ND<1	12.5
	3/16/2023	ND<1	12.5
	9/12/2023	ND<0.73 JB	12.5

The Wilcoxon Statistic is 64
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -0.481218
The Standard Deviation adjusted for ties is 6
The Z Score adjusted for ties is -1.41667
-0.481218 < 2.326 indicating no statistical significance at 1% level
-1.41667 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Bromomethane

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 17
Non detect rank is 9

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<1 U	9
	4/2/2020	ND<1 U	9
	9/30/2020	ND<1 U	9
	3/22/2021	ND<1 U	9
	9/8/2021	ND<1 U	9
	3/14/2022	ND<1	9
	9/12/2022	ND<1	9
	3/13/2023	ND<0.85 JB	9
	9/11/2023	1.1 B	18
GWM-17D	11/14/2019	ND<1 U	9
	3/26/2020	ND<1 U	9
	9/29/2020	ND<1 U	9
	3/16/2021	ND<1 U	9
	9/14/2021	ND<1 U	9
	3/18/2022	ND<1	9
	9/13/2022	ND<1	9
	3/14/2023	ND<1	9
	9/12/2023	ND<0.84 JB	9

The Wilcoxon Statistic is 36
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.441511
The Standard Deviation adjusted for ties is 4.5
The Z Score adjusted for ties is -1.11111
-0.441511 < 2.326 indicating no statistical significance at 1% level
-1.11111 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Bromomethane

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 17
Non detect rank is 9

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<1 U	9
	4/2/2020	ND<1 U	9
	9/30/2020	ND<1 U	9
	3/22/2021	ND<1 U	9
	9/8/2021	ND<1 U	9
	3/14/2022	ND<1	9
	9/12/2022	ND<1	9
	3/13/2023	ND<0.85 JB	9
	9/11/2023	1.1 B	18
GWM-19D	11/14/2019	ND<1 U	9
	3/25/2020	ND<1 U	9
	9/29/2020	ND<1 U	9
	3/22/2021	ND<1 U	9
	9/15/2021	ND<0.67 JB	9
	3/24/2022	ND<1	9
	9/15/2022	ND<1	9
	3/16/2023	ND<1	9
	9/14/2023	ND<1	9

The Wilcoxon Statistic is 36
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.441511
The Standard Deviation adjusted for ties is 4.5
The Z Score adjusted for ties is -1.11111
-0.441511 < 2.326 indicating no statistical significance at 1% level
-1.11111 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloromethane

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 30
Non detect rank is 15.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<1 U	15.5
	4/2/2020	ND<1 U	15.5
	9/30/2020	ND<1 U	15.5
	3/22/2021	ND<1 U	15.5
	9/8/2021	ND<1 U	15.5
	3/14/2022	ND<1	15.5
	9/12/2022	ND<1	15.5
	3/13/2023	ND<1	15.5
	9/11/2023	1.4 B	31
SMW-32	9/23/2013	ND<1	15.5
	12/5/2013	ND<1	15.5
	3/19/2014	ND<1 U	15.5
	9/8/2014	ND<1 U	15.5
	3/18/2015	ND<1 U	15.5
	9/8/2015	ND<1 U	15.5
	3/14/2016	ND<1 U	15.5
	9/20/2016	ND<1 U	15.5
	3/24/2017	ND<1 U	15.5
	9/20/2017	ND<1 U	15.5
	3/27/2018	ND<1 U	15.5
	9/18/2018	ND<1 U	15.5
	3/11/2019	ND<1 U	15.5
	10/3/2019	ND<1 U	15.5
	3/23/2020	ND<0.55 J	15.5
	9/24/2020	ND<0.63 J	15.5
	3/23/2021	ND<1 U	15.5
	9/16/2021	ND<1 U	15.5
	3/24/2022	ND<1	15.5
	9/16/2022	ND<1	15.5
	3/17/2023	ND<1	15.5
	9/15/2023	ND<1	15.5

The Wilcoxon Statistic is 88
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is -0.500473
The Standard Deviation adjusted for ties is 7.03562
The Z Score adjusted for ties is -1.63454
-0.500473 < 2.326 indicating no statistical significance at 1% level
-1.63454 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloromethane

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 29
Non detect rank is 15

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<1 U	15
	4/2/2020	ND<1 U	15
	9/30/2020	ND<1 U	15
	3/22/2021	ND<1 U	15
	9/8/2021	ND<1 U	15
	3/14/2022	ND<1	15
	9/12/2022	ND<1	15
	3/13/2023	ND<1	15
	9/11/2023	1.4 B	30
SMW-13	9/23/2013	ND<1	15
	3/21/2014	ND<1 U	15
	9/8/2014	ND<1 U	15
	3/18/2015	ND<1 U	15
	9/8/2015	ND<1 U	15
	3/14/2016	ND<1 U	15
	10/24/2016	ND<1 U	15
	3/30/2017	ND<1 U	15
	9/20/2017	ND<1 U	15
	3/30/2018	ND<1 U	15
	9/21/2018	ND<1 U	15
	3/11/2019	ND<1 U	15
	10/3/2019	ND<1 U	15
	3/23/2020	ND<1 U	15
	9/25/2020	ND<1 U	15
	3/23/2021	ND<1 U	15
	9/16/2021	ND<1 U	15
	3/23/2022	ND<1	15
	9/16/2022	ND<1	15
	3/17/2023	ND<1	15
	9/15/2023	ND<1	15

The Wilcoxon Statistic is 84
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -0.497819
The Standard Deviation adjusted for ties is 6.87386
The Z Score adjusted for ties is -1.60026
-0.497819 < 2.326 indicating no statistical significance at 1% level
-1.60026 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloromethane

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 24
Non detect rank is 12.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<1 U	12.5
	4/2/2020	ND<1 U	12.5
	9/30/2020	ND<1 U	12.5
	3/22/2021	ND<1 U	12.5
	9/8/2021	ND<1 U	12.5
	3/14/2022	ND<1	12.5
	9/12/2022	ND<1	12.5
	3/13/2023	ND<1	12.5
	9/11/2023	1.4 B	25
GWM-15D	3/21/2016	ND<1 U	12.5
	9/23/2016	ND<1 U	12.5
	3/28/2017	ND<1 U	12.5
	9/21/2017	ND<1 U	12.5
	3/16/2018	ND<1 U	12.5
	9/19/2018	ND<1 U	12.5
	3/5/2019	ND<1 U	12.5
	10/3/2019	ND<1 U	12.5
	3/25/2020	ND<1 U	12.5
	9/28/2020	ND<0.44 J	12.5
	3/19/2021	ND<1 U	12.5
	9/15/2021	ND<1 U	12.5
	3/22/2022	ND<1	12.5
	9/14/2022	ND<1	12.5
	3/16/2023	ND<1	12.5
	9/12/2023	ND<0.58 JB	12.5

The Wilcoxon Statistic is 64
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -0.481218
The Standard Deviation adjusted for ties is 6
The Z Score adjusted for ties is -1.41667
-0.481218 < 2.326 indicating no statistical significance at 1% level
-1.41667 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloromethane

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 17
Non detect rank is 9

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<1 U	9
	4/2/2020	ND<1 U	9
	9/30/2020	ND<1 U	9
	3/22/2021	ND<1 U	9
	9/8/2021	ND<1 U	9
	3/14/2022	ND<1	9
	9/12/2022	ND<1	9
	3/13/2023	ND<1	9
	9/11/2023	1.4 B	18
GWM-17D	11/14/2019	ND<1 U	9
	3/26/2020	ND<1 U	9
	9/29/2020	ND<0.42 J	9
	3/16/2021	ND<1 U	9
	9/14/2021	ND<1 U	9
	3/18/2022	ND<1	9
	9/13/2022	ND<1	9
	3/14/2023	ND<1	9
	9/12/2023	ND<0.5 JB	9

The Wilcoxon Statistic is 36
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.441511
The Standard Deviation adjusted for ties is 4.5
The Z Score adjusted for ties is -1.11111
-0.441511 < 2.326 indicating no statistical significance at 1% level
-1.11111 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloromethane

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 17
Non detect rank is 9

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<1 U	9
	4/2/2020	ND<1 U	9
	9/30/2020	ND<1 U	9
	3/22/2021	ND<1 U	9
	9/8/2021	ND<1 U	9
	3/14/2022	ND<1	9
	9/12/2022	ND<1	9
	3/13/2023	ND<1	9
	9/11/2023	1.4 B	18
GWM-19D	11/14/2019	ND<1 U	9
	3/25/2020	ND<1 U	9
	9/29/2020	ND<0.91 J	9
	3/22/2021	ND<1 U	9
	9/15/2021	ND<1 U	9
	3/24/2022	ND<1	9
	9/15/2022	ND<1	9
	3/16/2023	ND<1	9
	9/14/2023	ND<1	9

The Wilcoxon Statistic is 36
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.441511
The Standard Deviation adjusted for ties is 4.5
The Z Score adjusted for ties is -1.11111
-0.441511 < 2.326 indicating no statistical significance at 1% level
-1.11111 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: 1,4-Dichlorobenzene

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 31
Non detect rank is 16

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<1 U	16
	4/2/2020	ND<1 U	16
	9/30/2020	ND<1 U	16
	3/22/2021	ND<1 U	16
	9/8/2021	ND<1 U	16
	3/14/2022	ND<1	16
	9/12/2022	ND<1	16
	3/13/2023	ND<1	16
	9/11/2023	ND<1	16
SMW-32	9/23/2013	ND<1	16
	12/5/2013	ND<1	16
	3/19/2014	ND<1 U	16
	9/8/2014	ND<1 U	16
	3/18/2015	ND<1 U	16
	9/8/2015	ND<1 U	16
	3/14/2016	ND<1 U	16
	9/20/2016	ND<1 U	16
	3/24/2017	ND<1 U	16
	9/20/2017	ND<1 U	16
	3/27/2018	ND<1 U	16
	9/18/2018	ND<1 U	16
	3/11/2019	ND<1 U	16
	10/3/2019	ND<1 U	16
	3/23/2020	ND<1 U	16
	9/24/2020	ND<1 U	16
	3/23/2021	ND<1 U	16
	9/16/2021	ND<1 U	16
	3/24/2022	ND<1	16
	9/16/2022	ND<1	16
	3/17/2023	ND<1	16
	9/15/2023	ND<1	16

The Wilcoxon Statistic is 99
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is -0.0217597
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0217597 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: 1,4-Dichlorobenzene

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 30
Non detect rank is 15.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<1 U	15.5
	4/2/2020	ND<1 U	15.5
	9/30/2020	ND<1 U	15.5
	3/22/2021	ND<1 U	15.5
	9/8/2021	ND<1 U	15.5
	3/14/2022	ND<1	15.5
	9/12/2022	ND<1	15.5
	3/13/2023	ND<1	15.5
	9/11/2023	ND<1	15.5
SMW-13	9/23/2013	ND<1	15.5
	3/21/2014	ND<1 U	15.5
	9/8/2014	ND<1 U	15.5
	3/18/2015	ND<1 U	15.5
	9/8/2015	ND<1 U	15.5
	3/14/2016	ND<1 U	15.5
	10/24/2016	ND<1 U	15.5
	3/30/2017	ND<1 U	15.5
	9/20/2017	ND<1 U	15.5
	3/30/2018	ND<1 U	15.5
	9/21/2018	ND<1 U	15.5
	3/11/2019	ND<1 U	15.5
	10/3/2019	ND<1 U	15.5
	3/23/2020	ND<1 U	15.5
	9/25/2020	ND<1 U	15.5
	3/23/2021	ND<1 U	15.5
	9/16/2021	ND<1 U	15.5
	3/23/2022	ND<1	15.5
	9/16/2022	ND<1	15.5
	3/17/2023	ND<1	15.5
	9/15/2023	ND<1	15.5

The Wilcoxon Statistic is 94.5
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -0.0226281
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0226281 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: 1,4-Dichlorobenzene

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 25
Non detect rank is 13

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<1 U	13
	4/2/2020	ND<1 U	13
	9/30/2020	ND<1 U	13
	3/22/2021	ND<1 U	13
	9/8/2021	ND<1 U	13
	3/14/2022	ND<1	13
	9/12/2022	ND<1	13
	3/13/2023	ND<1	13
	9/11/2023	ND<1	13
GWM-15D	3/21/2016	ND<1 U	13
	9/23/2016	ND<1 U	13
	3/28/2017	ND<1 U	13
	9/21/2017	ND<1 U	13
	3/16/2018	ND<1 U	13
	9/19/2018	ND<1 U	13
	3/5/2019	ND<1 U	13
	10/3/2019	ND<1 U	13
	3/25/2020	ND<1 U	13
	9/28/2020	ND<1 U	13
	3/19/2021	ND<1 U	13
	9/15/2021	ND<1 U	13
	3/22/2022	ND<1	13
	9/14/2022	ND<1	13
	3/16/2023	ND<1	13
	9/12/2023	ND<1	13

The Wilcoxon Statistic is 72
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -0.0283069
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0283069 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: 1,4-Dichlorobenzene

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 10
Non detect rank is 5.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<1 U	5.5
	4/2/2020	ND<1 U	5.5
	9/30/2020	ND<1 U	5.5
	3/22/2021	ND<1 U	5.5
	9/8/2021	ND<1 U	5.5
	3/14/2022	ND<1	5.5
	9/12/2022	ND<1	5.5
	3/13/2023	ND<1	5.5
	9/11/2023	ND<1	5.5
GWM-17D	11/14/2019	1.8	14
	3/26/2020	1.9	17
	9/29/2020	2	18
	3/16/2021	1.8	15
	9/14/2021	1.8	16
	3/18/2022	1.7	13
	9/13/2022	ND<1	5.5
	3/14/2023	1.4	12
	9/12/2023	1.3	11

The Wilcoxon Statistic is 76.5
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 3.13473
The Standard Deviation adjusted for ties is 10.3156
The Z Score adjusted for ties is 3.44139

3.13473 > 2.326 indicating statistical significance at 1% level

3.44139 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: 1,4-Dichlorobenzene

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<1 U	9.5
	4/2/2020	ND<1 U	9.5
	9/30/2020	ND<1 U	9.5
	3/22/2021	ND<1 U	9.5
	9/8/2021	ND<1 U	9.5
	3/14/2022	ND<1	9.5
	9/12/2022	ND<1	9.5
	3/13/2023	ND<1	9.5
	9/11/2023	ND<1	9.5
GWM-19D	11/14/2019	ND<1 U	9.5
	3/25/2020	ND<1 U	9.5
	9/29/2020	ND<1 U	9.5
	3/22/2021	ND<1 U	9.5
	9/15/2021	ND<1 U	9.5
	3/24/2022	ND<1	9.5
	9/15/2022	ND<1	9.5
	3/16/2023	ND<1	9.5
	9/14/2023	ND<0.41 JB	9.5

The Wilcoxon Statistic is 40.5
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.0441511
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0441511 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

4) Patuxent Aquifer VOC Intra-well Statistics

APPENDIX F

Shapiro-Francia Test of Normality

Parameter: Bromomethane

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	0	-1.82501	12.633	0
4	0	-1.6954	15.5074	0
5	0	-1.58047	18.0052	0
6	0	-1.49085	20.2279	0
7	0	-1.40507	22.2021	0
8	0	-1.33462	23.9833	0
9	0	-1.26464	25.5826	0
10	0	-1.20553	27.0359	0
11	0	-1.1455	28.3481	0
12	0	-1.0939	29.5447	0
13	0	-1.04073	30.6278	0
14	0	-0.994457	31.6168	0
15	0	-0.946291	32.5123	0
16	0	-0.903992	33.3295	0
17	0	-0.859618	34.0684	0
18	0	-0.820379	34.7414	0
19	0	-0.778966	35.3482	0
20	0	-0.742143	35.899	0
21	0	-0.703089	36.3933	0
22	0	-0.668209	36.8398	0
23	0	-0.631062	37.2381	0
24	0	-0.597761	37.5954	0
25	0	-0.56217	37.9114	0
26	0	-0.530162	38.1925	0
27	0	-0.49585	38.4384	0
28	0	-0.464904	38.6545	0
29	0	-0.431644	38.8408	0
30	0	-0.401571	39.0021	0
31	0	-0.369171	39.1384	0
32	0	-0.33981	39.2538	0
33	0	-0.308108	39.3488	0
34	0	-0.279319	39.4268	0
35	0	-0.248174	39.4884	0
36	0	-0.219834	39.5367	0
37	0	-0.189118	39.5725	0
38	0	-0.161119	39.5984	0
39	0	-0.130716	39.6155	0
40	0	-0.102953	39.6261	0
41	0	-0.0727562	39.6314	0
42	0	-0.0451348	39.6334	0
43	0	-0.0150408	39.6337	0
44	0	0.0150408	39.6339	0
45	0	0.0451348	39.6359	0
46	0	0.0727562	39.6412	0
47	0	0.102953	39.6518	0

48	0	0.130716	39.6689	0
49	0	0.161119	39.6949	0
50	0	0.189118	39.7306	0
51	0	0.219834	39.779	0
52	0	0.248174	39.8405	0
53	0	0.279319	39.9186	0
54	0	0.308108	40.0135	0
55	0	0.33981	40.129	0
56	0	0.369171	40.2653	0
57	0	0.401571	40.4265	0
58	0	0.431644	40.6128	0
59	0	0.464904	40.829	0
60	0	0.49585	41.0748	0
61	0	0.530162	41.3559	0
62	0	0.56217	41.6719	0
63	0	0.597761	42.0293	0
64	0	0.631062	42.4275	0
65	0	0.668209	42.874	0
66	0	0.703089	43.3683	0
67	0	0.742143	43.9191	0
68	0	0.778966	44.5259	0
69	0	0.820379	45.1989	0
70	0	0.859618	45.9379	0
71	0	0.903992	46.7551	0
72	0	0.946291	47.6505	0
73	0	0.994457	48.6395	0
74	0	1.04073	49.7226	0
75	0	1.0939	50.9192	0
76	0	1.1455	52.2314	0
77	0	1.20553	53.6847	0
78	0	1.26464	55.284	0
79	0	1.33462	57.0652	0
80	0	1.40507	59.0395	0
81	0	1.49085	61.2621	0
82	0	1.58047	63.76	0
83	0	1.6954	66.6343	0
84	0	1.82501	69.965	0
85	0	2.01409	74.0216	0
86	1.1	2.29036	79.2673	2.5194

Data Set Standard Deviation = 0.118616
Numerator = 6.34737
Denominator = 94.7982
W Statistic = 0.0669566 = 6.34737 / 94.7982

5% Critical value of 0.972 exceeds 0.0669566
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.0669566
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Bromomethane

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 0
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 J
	9/8/2014	ND<0 U
	3/18/2015	ND<0 U
	9/8/2015	ND<0 J
	3/14/2016	ND<0 U
	9/20/2016	ND<0 U
	3/24/2017	ND<0 U
	9/20/2017	ND<0 U
	3/27/2018	ND<0 U
	9/18/2018	ND<0 U
	3/11/2019	ND<0 U
	10/3/2019	ND<0 U
	3/23/2020	ND<0 U
	9/24/2020	ND<0 U
	3/23/2021	ND<0 U
	9/16/2021	ND<0 U
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/15/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Bromomethane

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/18/2015	ND<0 U
	9/8/2015	ND<0 J
	3/14/2016	ND<0 U
	10/24/2016	ND<0 U
	3/30/2017	ND<0 U
	9/20/2017	ND<0 J
	3/30/2018	ND<0 U
	9/21/2018	ND<0 U
	3/11/2019	ND<0 U
	10/3/2019	ND<0 U
	3/23/2020	ND<0 J
	9/25/2020	ND<0 U
	3/23/2021	ND<0 U
	9/16/2021	ND<0 JB
	3/23/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/15/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Bromomethane

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 0
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/28/2017	ND<0 U
	9/21/2017	ND<0 U
	3/16/2018	ND<0 U
	9/19/2018	ND<0 U
	3/5/2019	ND<0 U
	10/3/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 JB
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Bromomethane

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Bromomethane

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/25/2020	ND<0 U
	9/29/2020	ND<0 U
	3/22/2021	ND<0 U
	9/15/2021	ND<0 JB
	3/24/2022	ND<0
	9/15/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: Chloromethane

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	0	-1.82501	12.633	0
4	0	-1.6954	15.5074	0
5	0	-1.58047	18.0052	0
6	0	-1.49085	20.2279	0
7	0	-1.40507	22.2021	0
8	0	-1.33462	23.9833	0
9	0	-1.26464	25.5826	0
10	0	-1.20553	27.0359	0
11	0	-1.1455	28.3481	0
12	0	-1.0939	29.5447	0
13	0	-1.04073	30.6278	0
14	0	-0.994457	31.6168	0
15	0	-0.946291	32.5123	0
16	0	-0.903992	33.3295	0
17	0	-0.859618	34.0684	0
18	0	-0.820379	34.7414	0
19	0	-0.778966	35.3482	0
20	0	-0.742143	35.899	0
21	0	-0.703089	36.3933	0
22	0	-0.668209	36.8398	0
23	0	-0.631062	37.2381	0
24	0	-0.597761	37.5954	0
25	0	-0.56217	37.9114	0
26	0	-0.530162	38.1925	0
27	0	-0.49585	38.4384	0
28	0	-0.464904	38.6545	0
29	0	-0.431644	38.8408	0
30	0	-0.401571	39.0021	0
31	0	-0.369171	39.1384	0
32	0	-0.33981	39.2538	0
33	0	-0.308108	39.3488	0
34	0	-0.279319	39.4268	0
35	0	-0.248174	39.4884	0
36	0	-0.219834	39.5367	0
37	0	-0.189118	39.5725	0
38	0	-0.161119	39.5984	0
39	0	-0.130716	39.6155	0
40	0	-0.102953	39.6261	0
41	0	-0.0727562	39.6314	0
42	0	-0.0451348	39.6334	0
43	0	-0.0150408	39.6337	0
44	0	0.0150408	39.6339	0
45	0	0.0451348	39.6359	0
46	0	0.0727562	39.6412	0
47	0	0.102953	39.6518	0

48	0	0.130716	39.6689	0
49	0	0.161119	39.6949	0
50	0	0.189118	39.7306	0
51	0	0.219834	39.779	0
52	0	0.248174	39.8405	0
53	0	0.279319	39.9186	0
54	0	0.308108	40.0135	0
55	0	0.33981	40.129	0
56	0	0.369171	40.2653	0
57	0	0.401571	40.4265	0
58	0	0.431644	40.6128	0
59	0	0.464904	40.829	0
60	0	0.49585	41.0748	0
61	0	0.530162	41.3559	0
62	0	0.56217	41.6719	0
63	0	0.597761	42.0293	0
64	0	0.631062	42.4275	0
65	0	0.668209	42.874	0
66	0	0.703089	43.3683	0
67	0	0.742143	43.9191	0
68	0	0.778966	44.5259	0
69	0	0.820379	45.1989	0
70	0	0.859618	45.9379	0
71	0	0.903992	46.7551	0
72	0	0.946291	47.6505	0
73	0	0.994457	48.6395	0
74	0	1.04073	49.7226	0
75	0	1.0939	50.9192	0
76	0	1.1455	52.2314	0
77	0	1.20553	53.6847	0
78	0	1.26464	55.284	0
79	0	1.33462	57.0652	0
80	0	1.40507	59.0395	0
81	0	1.49085	61.2621	0
82	0	1.58047	63.76	0
83	0	1.6954	66.6343	0
84	0	1.82501	69.965	0
85	0	2.01409	74.0216	0
86	1.4	2.29036	79.2673	3.20651

Data Set Standard Deviation = 0.150966
Numerator = 10.2817
Denominator = 153.557
W Statistic = 0.0669566 = 10.2817 / 153.557

5% Critical value of 0.972 exceeds 0.0669566
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.0669566
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Chloromethane

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 0
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/8/2014	ND<0 U
	3/18/2015	ND<0 U
	9/8/2015	ND<0 U
	3/14/2016	ND<0 U
	9/20/2016	ND<0 U
	3/24/2017	ND<0 U
	9/20/2017	ND<0 U
	3/27/2018	ND<0 U
	9/18/2018	ND<0 U
	3/11/2019	ND<0 U
	10/3/2019	ND<0 U
	3/23/2020	ND<0 J
	9/24/2020	ND<0 J
	3/23/2021	ND<0 U
	9/16/2021	ND<0 U
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/15/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Chloromethane

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/18/2015	ND<0 U
	9/8/2015	ND<0 U
	3/14/2016	ND<0 U
	10/24/2016	ND<0 U
	3/30/2017	ND<0 U
	9/20/2017	ND<0 U
	3/30/2018	ND<0 U
	9/21/2018	ND<0 U
	3/11/2019	ND<0 U
	10/3/2019	ND<0 U
	3/23/2020	ND<0 U
	9/25/2020	ND<0 U
	3/23/2021	ND<0 U
	9/16/2021	ND<0 U
	3/23/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/15/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Chloromethane

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 0
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/28/2017	ND<0 U
	9/21/2017	ND<0 U
	3/16/2018	ND<0 U
	9/19/2018	ND<0 U
	3/5/2019	ND<0 U
	10/3/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 J
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Chloromethane

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 J
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Chloromethane

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/25/2020	ND<0 U
	9/29/2020	ND<0 J
	3/22/2021	ND<0 U
	9/15/2021	ND<0 U
	3/24/2022	ND<0
	9/15/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: 1,4-Dichlorobenzene

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	0	-1.82501	12.633	0
4	0	-1.6954	15.5074	0
5	0	-1.58047	18.0052	0
6	0	-1.49085	20.2279	0
7	0	-1.40507	22.2021	0
8	0	-1.33462	23.9833	0
9	0	-1.26464	25.5826	0
10	0	-1.20553	27.0359	0
11	0	-1.1455	28.3481	0
12	0	-1.0939	29.5447	0
13	0	-1.04073	30.6278	0
14	0	-0.994457	31.6168	0
15	0	-0.946291	32.5123	0
16	0	-0.903992	33.3295	0
17	0	-0.859618	34.0684	0
18	0	-0.820379	34.7414	0
19	0	-0.778966	35.3482	0
20	0	-0.742143	35.899	0
21	0	-0.703089	36.3933	0
22	0	-0.668209	36.8398	0
23	0	-0.631062	37.2381	0
24	0	-0.597761	37.5954	0
25	0	-0.56217	37.9114	0
26	0	-0.530162	38.1925	0
27	0	-0.49585	38.4384	0
28	0	-0.464904	38.6545	0
29	0	-0.431644	38.8408	0
30	0	-0.401571	39.0021	0
31	0	-0.369171	39.1384	0
32	0	-0.33981	39.2538	0
33	0	-0.308108	39.3488	0
34	0	-0.279319	39.4268	0
35	0	-0.248174	39.4884	0
36	0	-0.219834	39.5367	0
37	0	-0.189118	39.5725	0
38	0	-0.161119	39.5984	0
39	0	-0.130716	39.6155	0
40	0	-0.102953	39.6261	0
41	0	-0.0727562	39.6314	0
42	0	-0.0451348	39.6334	0
43	0	-0.0150408	39.6337	0
44	0	0.0150408	39.6339	0
45	0	0.0451348	39.6359	0
46	0	0.0727562	39.6412	0
47	0	0.102953	39.6518	0

48	0	0.130716	39.6689	0
49	0	0.161119	39.6949	0
50	0	0.189118	39.7306	0
51	0	0.219834	39.779	0
52	0	0.248174	39.8405	0
53	0	0.279319	39.9186	0
54	0	0.308108	40.0135	0
55	0	0.33981	40.129	0
56	0	0.369171	40.2653	0
57	0	0.401571	40.4265	0
58	0	0.431644	40.6128	0
59	0	0.464904	40.829	0
60	0	0.49585	41.0748	0
61	0	0.530162	41.3559	0
62	0	0.56217	41.6719	0
63	0	0.597761	42.0293	0
64	0	0.631062	42.4275	0
65	0	0.668209	42.874	0
66	0	0.703089	43.3683	0
67	0	0.742143	43.9191	0
68	0	0.778966	44.5259	0
69	0	0.820379	45.1989	0
70	0	0.859618	45.9379	0
71	0	0.903992	46.7551	0
72	0	0.946291	47.6505	0
73	0	0.994457	48.6395	0
74	0	1.04073	49.7226	0
75	0	1.0939	50.9192	0
76	0	1.1455	52.2314	0
77	0	1.20553	53.6847	0
78	0	1.26464	55.284	0
79	1.3	1.33462	57.0652	1.73501
80	1.4	1.40507	59.0395	3.70212
81	1.7	1.49085	61.2621	6.23656
82	1.8	1.58047	63.76	9.0814
83	1.8	1.6954	66.6343	12.1331
84	1.8	1.82501	69.965	15.4181
85	1.9	2.01409	74.0216	19.2449
86	2	2.29036	79.2673	23.8256

Data Set Standard Deviation = 0.505122
Numerator = 567.661
Denominator = 1719.11
W Statistic = 0.330205 = 567.661 / 1719.11

5% Critical value of 0.972 exceeds 0.330205
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.330205
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: 1,4-Dichlorobenzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 0
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/8/2014	ND<0 U
	3/18/2015	ND<0 U
	9/8/2015	ND<0 U
	3/14/2016	ND<0 U
	9/20/2016	ND<0 U
	3/24/2017	ND<0 U
	9/20/2017	ND<0 U
	3/27/2018	ND<0 U
	9/18/2018	ND<0 U
	3/11/2019	ND<0 U
	10/3/2019	ND<0 U
	3/23/2020	ND<0 U
	9/24/2020	ND<0 U
	3/23/2021	ND<0 U
	9/16/2021	ND<0 U
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/15/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: 1,4-Dichlorobenzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/18/2015	ND<0 U
	9/8/2015	ND<0 U
	3/14/2016	ND<0 U
	10/24/2016	ND<0 U
	3/30/2017	ND<0 U
	9/20/2017	ND<0 U
	3/30/2018	ND<0 U
	9/21/2018	ND<0 U
	3/11/2019	ND<0 U
	10/3/2019	ND<0 U
	3/23/2020	ND<0 U
	9/25/2020	ND<0 U
	3/23/2021	ND<0 U
	9/16/2021	ND<0 U
	3/23/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/15/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: 1,4-Dichlorobenzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 0
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/28/2017	ND<0 U
	9/21/2017	ND<0 U
	3/16/2018	ND<0 U
	9/19/2018	ND<0 U
	3/5/2019	ND<0 U
	10/3/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: 1,4-Dichlorobenzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 12.5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 2
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	1.8
	3/26/2020	1.9
	9/29/2020	2
	3/16/2021	1.8
	9/14/2021	1.8
	3/18/2022	1.7
	9/13/2022	ND<0
	3/14/2023	1.4

Date	Count	Mean	Significant
9/12/2023	1	1.3	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: 1,4-Dichlorobenzene

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/25/2020	ND<0 U
	9/29/2020	ND<0 U
	3/22/2021	ND<0 U
	9/15/2021	ND<0 U
	3/24/2022	ND<0
	9/15/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

5) Patapsco Aquifer Water Quality Parameters Inter-well Statistics

APPENDIX F

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Alkalinity, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 14
Non detect rank is 7.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5000	7.5
	3/19/2014	26000	38
	9/8/2014	11000	25
	3/17/2015	37000	40
	9/14/2015	24000	36
	3/17/2016	22000	34
	9/21/2016	5000	16
	3/24/2017	25000	37
	9/20/2017	52000	42
	3/27/2018	58000	43
	9/19/2018	47000	41
	3/11/2019	12000	29
	9/25/2019	11000	26
	3/18/2020	11000	27
	9/23/2020	12000	30
	3/17/2021	16000	32
	9/8/2021	17000	33
	3/15/2022	11000	28
	9/12/2022	7000	22
	3/13/2023	22000	35
	9/11/2023	14000	31
GWM-2	9/25/2013	3300	15
	3/18/2014	ND<2000 J	7.5
	9/16/2014	ND<3000 J	7.5
	3/18/2015	ND<4000 J	7.5
	9/15/2015	5000	17
	3/16/2016	ND<3000 J	7.5
	9/22/2016	ND<4000 J	7.5
	3/24/2017	ND<4000 J	7.5
	9/21/2017	ND<4000 J	7.5
	3/28/2018	ND<4000 J	7.5
	9/21/2018	7000	23
	3/12/2019	ND<3000 J	7.5
	10/1/2019	ND<2000 J	7.5
	3/18/2020	ND<5000 J	7.5
	9/23/2020	ND<4000 J	7.5
	3/17/2021	5000	18
	9/9/2021	6000	21
	3/15/2022	ND<5000	7.5
	9/12/2022	5000	19
	3/13/2023	10000	24
	9/11/2023	5000	20
GWM-4	9/18/2013	29260	39

3/20/2014	175000	56
9/9/2014	152000	46
3/16/2015	160000	48
9/9/2015	148000	45
3/18/2016	164000	52
9/20/2016	192000	60
3/23/2017	146000	44
9/18/2017	160000	49
3/15/2018	162000	50
9/17/2018	198000	62
3/5/2019	170000	55
9/24/2019	169000	54
3/16/2020	163000	51
9/22/2020	195000	61
3/16/2021	188000	58
9/14/2021	222000	63
3/22/2022	168000	53
9/13/2022	178000	57
3/14/2023	159000	47
9/12/2023	188000	59

The Wilcoxon Statistic is 878
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 6.3643
The Standard Deviation adjusted for ties is 68.2102
The Z Score adjusted for ties is 6.39934
6.3643 > 2.326 indicating statistical significance at 1% level
6.39934 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Alkalinity, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 14
Non detect rank is 7.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5000	7.5
	3/19/2014	26000	38
	9/8/2014	11000	25
	3/17/2015	37000	39
	9/14/2015	24000	36
	3/17/2016	22000	34
	9/21/2016	5000	16
	3/24/2017	25000	37
	9/20/2017	52000	41
	3/27/2018	58000	43
	9/19/2018	47000	40
	3/11/2019	12000	29
	9/25/2019	11000	26
	3/18/2020	11000	27
	9/23/2020	12000	30
	3/17/2021	16000	32
	9/8/2021	17000	33
	3/15/2022	11000	28
	9/12/2022	7000	22
	3/13/2023	22000	35
	9/11/2023	14000	31
GWM-2	9/25/2013	3300	15
	3/18/2014	ND<2000 J	7.5
	9/16/2014	ND<3000 J	7.5
	3/18/2015	ND<4000 J	7.5
	9/15/2015	5000	17
	3/16/2016	ND<3000 J	7.5
	9/22/2016	ND<4000 J	7.5
	3/24/2017	ND<4000 J	7.5
	9/21/2017	ND<4000 J	7.5
	3/28/2018	ND<4000 J	7.5
	9/21/2018	7000	23
	3/12/2019	ND<3000 J	7.5
	10/1/2019	ND<2000 J	7.5
	3/18/2020	ND<5000 J	7.5
	9/23/2020	ND<4000 J	7.5
	3/17/2021	5000	18
	9/9/2021	6000	21
	3/15/2022	ND<5000	7.5
	9/12/2022	5000	19
	3/13/2023	10000	24
	9/11/2023	5000	20
GWM-5A	9/19/2013	77330	46

12/5/2013	102390	55
3/19/2014	157000	64
9/4/2014	106000	57
3/17/2015	150000	63
9/11/2015	101000	52
3/15/2016	101000	53
9/21/2016	102000	54
3/28/2017	86000	49
9/19/2017	90000	50
3/26/2018	98000	51
9/18/2018	144000	62
3/4/2019	124000	59
9/23/2019	105000	56
3/19/2020	130000	61
9/23/2020	77000	45
3/19/2021	126000	60
9/15/2021	78000	47
3/16/2022	70000	44
9/14/2022	80000	48
3/16/2023	57000	42
9/13/2023	108000	58

The Wilcoxon Statistic is 923
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is 6.5092
The Standard Deviation adjusted for ties is 70.3766
The Z Score adjusted for ties is 6.54337
6.5092 > 2.326 indicating statistical significance at 1% level
6.54337 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Alkalinity, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 14
Non detect rank is 7.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5000	7.5
	3/19/2014	26000	38
	9/8/2014	11000	25
	3/17/2015	37000	39
	9/14/2015	24000	36
	3/17/2016	22000	34
	9/21/2016	5000	16
	3/24/2017	25000	37
	9/20/2017	52000	41
	3/27/2018	58000	42
	9/19/2018	47000	40
	3/11/2019	12000	29
	9/25/2019	11000	26
	3/18/2020	11000	27
	9/23/2020	12000	30
	3/17/2021	16000	32
	9/8/2021	17000	33
	3/15/2022	11000	28
	9/12/2022	7000	22
	3/13/2023	22000	35
	9/11/2023	14000	31
GWM-2	9/25/2013	3300	15
	3/18/2014	ND<2000 J	7.5
	9/16/2014	ND<3000 J	7.5
	3/18/2015	ND<4000 J	7.5
	9/15/2015	5000	17
	3/16/2016	ND<3000 J	7.5
	9/22/2016	ND<4000 J	7.5
	3/24/2017	ND<4000 J	7.5
	9/21/2017	ND<4000 J	7.5
	3/28/2018	ND<4000 J	7.5
	9/21/2018	7000	23
	3/12/2019	ND<3000 J	7.5
	10/1/2019	ND<2000 J	7.5
	3/18/2020	ND<5000 J	7.5
	9/23/2020	ND<4000 J	7.5
	3/17/2021	5000	18
	9/9/2021	6000	21
	3/15/2022	ND<5000	7.5
	9/12/2022	5000	19
	3/13/2023	10000	24
	9/11/2023	5000	20
GWM-14	9/24/2013	178190	60

3/21/2014	209000	63
9/8/2014	199000	61
3/19/2015	128000	47
9/14/2015	204000	62
3/21/2016	178000	59
9/23/2016	163000	57
3/27/2017	175000	58
9/20/2017	149000	51
3/16/2018	142000	49
9/20/2018	140000	48
3/5/2019	154000	54
9/25/2019	150000	52
3/25/2020	106000	43
9/28/2020	158000	55
3/18/2021	148000	50
9/15/2021	161000	56
3/22/2022	116000	44
9/14/2022	126000	46
3/16/2023	125000	45
9/13/2023	152000	53

The Wilcoxon Statistic is 882
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 6.42262
The Standard Deviation adjusted for ties is 68.2102
The Z Score adjusted for ties is 6.45798
6.42262 > 2.326 indicating statistical significance at 1% level
6.45798 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Alkalinity, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 15
Non detect rank is 8

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5000	8
	3/19/2014	26000	39
	9/8/2014	11000	26
	3/17/2015	37000	40
	9/14/2015	24000	37
	3/17/2016	22000	35
	9/21/2016	5000	17
	3/24/2017	25000	38
	9/20/2017	52000	47
	3/27/2018	58000	49
	9/19/2018	47000	45
	3/11/2019	12000	30
	9/25/2019	11000	27
	3/18/2020	11000	28
	9/23/2020	12000	31
	3/17/2021	16000	33
	9/8/2021	17000	34
	3/15/2022	11000	29
	9/12/2022	7000	23
	3/13/2023	22000	36
	9/11/2023	14000	32
GWM-2	9/25/2013	3300	16
	3/18/2014	ND<2000 J	8
	9/16/2014	ND<3000 J	8
	3/18/2015	ND<4000 J	8
	9/15/2015	5000	18
	3/16/2016	ND<3000 J	8
	9/22/2016	ND<4000 J	8
	3/24/2017	ND<4000 J	8
	9/21/2017	ND<4000 J	8
	3/28/2018	ND<4000 J	8
	9/21/2018	7000	24
	3/12/2019	ND<3000 J	8
	10/1/2019	ND<2000 J	8
	3/18/2020	ND<5000 J	8
	9/23/2020	ND<4000 J	8
	3/17/2021	5000	19
	9/9/2021	6000	22
	3/15/2022	ND<5000	8
	9/12/2022	5000	20
	3/13/2023	10000	25
	9/11/2023	5000	21
GWM-6	9/24/2013	42270	43

3/21/2014	42000	42
9/17/2014	48000	46
3/19/2015	45000	44
9/15/2015	53000	48
3/21/2016	61000	50
9/26/2016	62000	52
3/31/2017	61000	51
9/21/2017	73000	56
3/30/2018	94000	58
9/26/2018	113000	61
3/13/2019	94000	59
10/3/2019	125000	62
4/3/2020	88000	57
9/30/2020	72000	55
3/22/2021	100000	60
9/16/2021	70000	54
3/24/2022	137000	63
9/16/2022	ND<50000	8
3/17/2023	39000	41
9/14/2023	66000	53

The Wilcoxon Statistic is 832
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 5.69361
The Standard Deviation adjusted for ties is 68.1232
The Z Score adjusted for ties is 5.73226
5.69361 > 2.326 indicating statistical significance at 1% level
5.73226 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Alkalinity, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 14
Non detect rank is 7.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5000	7.5
	3/19/2014	26000	59
	9/8/2014	11000	29
	3/17/2015	37000	60
	9/14/2015	24000	57
	3/17/2016	22000	55
	9/21/2016	5000	16
	3/24/2017	25000	58
	9/20/2017	52000	62
	3/27/2018	58000	63
	9/19/2018	47000	61
	3/11/2019	12000	38
	9/25/2019	11000	30
	3/18/2020	11000	31
	9/23/2020	12000	39
	3/17/2021	16000	45
	9/8/2021	17000	46
	3/15/2022	11000	32
	9/12/2022	7000	23
	3/13/2023	22000	56
	9/11/2023	14000	43
GWM-2	9/25/2013	3300	15
	3/18/2014	ND<2000 J	7.5
	9/16/2014	ND<3000 J	7.5
	3/18/2015	ND<4000 J	7.5
	9/15/2015	5000	17
	3/16/2016	ND<3000 J	7.5
	9/22/2016	ND<4000 J	7.5
	3/24/2017	ND<4000 J	7.5
	9/21/2017	ND<4000 J	7.5
	3/28/2018	ND<4000 J	7.5
	9/21/2018	7000	24
	3/12/2019	ND<3000 J	7.5
	10/1/2019	ND<2000 J	7.5
	3/18/2020	ND<5000 J	7.5
	9/23/2020	ND<4000 J	7.5
	3/17/2021	5000	18
	9/9/2021	6000	21
	3/15/2022	ND<5000	7.5
	9/12/2022	5000	19
	3/13/2023	10000	26
	9/11/2023	5000	20
GWM-3	9/25/2013	6660	22

3/18/2014	8000	25
9/16/2014	10000	27
3/18/2015	10000	28
9/15/2015	11000	33
3/16/2016	12000	40
9/22/2016	11000	34
3/29/2017	11000	35
9/21/2017	11000	36
3/28/2018	12000	41
9/20/2018	13000	42
3/12/2019	11000	37
10/1/2019	18000	49
3/18/2020	20000	53
9/24/2020	17000	47
3/17/2021	19000	52
9/9/2021	17000	48
3/15/2022	18000	50
9/16/2022	18000	51
3/15/2023	14000	44
9/11/2023	21000	54

The Wilcoxon Statistic is 617
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 2.55884
The Standard Deviation adjusted for ties is 68.2102
The Z Score adjusted for ties is 2.57293
2.55884 > 2.326 indicating statistical significance at 1% level
2.57293 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Alkalinity, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 14
Non detect rank is 7.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5000	7.5
	3/19/2014	26000	38
	9/8/2014	11000	25
	3/17/2015	37000	39
	9/14/2015	24000	36
	3/17/2016	22000	34
	9/21/2016	5000	16
	3/24/2017	25000	37
	9/20/2017	52000	41
	3/27/2018	58000	42
	9/19/2018	47000	40
	3/11/2019	12000	29
	9/25/2019	11000	26
	3/18/2020	11000	27
	9/23/2020	12000	30
	3/17/2021	16000	32
	9/8/2021	17000	33
	3/15/2022	11000	28
	9/12/2022	7000	22
	3/13/2023	22000	35
	9/11/2023	14000	31
GWM-2	9/25/2013	3300	15
	3/18/2014	ND<2000 J	7.5
	9/16/2014	ND<3000 J	7.5
	3/18/2015	ND<4000 J	7.5
	9/15/2015	5000	17
	3/16/2016	ND<3000 J	7.5
	9/22/2016	ND<4000 J	7.5
	3/24/2017	ND<4000 J	7.5
	9/21/2017	ND<4000 J	7.5
	3/28/2018	ND<4000 J	7.5
	9/21/2018	7000	23
	3/12/2019	ND<3000 J	7.5
	10/1/2019	ND<2000 J	7.5
	3/18/2020	ND<5000 J	7.5
	9/23/2020	ND<4000 J	7.5
	3/17/2021	5000	18
	9/9/2021	6000	21
	3/15/2022	ND<5000	7.5
	9/12/2022	5000	19
	3/13/2023	10000	24
	9/11/2023	5000	20
GWM-17S	11/14/2019	201000	51

3/26/2020	188000	49
9/29/2020	183000	48
3/16/2021	192000	50
9/14/2021	180000	47
3/18/2022	152000	44
9/13/2022	146000	43
3/14/2023	176000	46
9/12/2023	166000	45

The Wilcoxon Statistic is 378
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is 4.65752
The Standard Deviation adjusted for ties is 40.0534
The Z Score adjusted for ties is 4.70621
4.65752 > 2.326 indicating statistical significance at 1% level
4.70621 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Ammonia-N

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 29
Non detect rank is 15

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<100	15
	3/19/2014	134	38
	9/8/2014	ND<100 U	15
	3/17/2015	ND<100 U	15
	9/14/2015	ND<100 U	15
	3/17/2016	ND<100 U	15
	9/21/2016	ND<100 U	15
	3/24/2017	ND<100 U	15
	9/20/2017	ND<60 J	15
	3/27/2018	ND<34 J	15
	9/19/2018	ND<66 J	15
	3/11/2019	ND<74 J	15
	9/25/2019	149	39
	3/18/2020	ND<100 U	15
	9/23/2020	ND<63 J	15
	3/17/2021	118	31
	9/8/2021	ND<67 J	15
	3/15/2022	103	30
	9/12/2022	ND<100	15
	3/13/2023	119	32
	9/11/2023	391	43
GWM-2	9/25/2013	ND<100	15
	3/18/2014	130	36
	9/16/2014	124	34
	3/18/2015	ND<100 U	15
	9/15/2015	ND<100 U	15
	3/16/2016	ND<100 U	15
	9/22/2016	ND<100 U	15
	3/24/2017	ND<32 J	15
	9/21/2017	ND<100 U	15
	3/28/2018	ND<81 J	15
	9/21/2018	ND<57 J	15
	3/12/2019	119	33
	10/1/2019	198	42
	3/18/2020	ND<96 J	15
	9/23/2020	ND<58 J	15
	3/17/2021	152	40
	9/9/2021	ND<100 U	15
	3/15/2022	126	35
	9/12/2022	ND<100	15
	3/13/2023	132	37
	9/11/2023	180	41
GWM-4	9/18/2013	ND<100	15

3/20/2014	642	47
9/9/2014	1630	55
3/16/2015	1650	56
9/9/2015	1950	59
3/18/2016	1680	57
9/20/2016	2720	63
3/23/2017	2230	61
9/18/2017	2590	62
3/15/2018	1150	54
9/17/2018	1750	58
3/5/2019	840	50
9/24/2019	2130	60
3/16/2020	700	48
9/22/2020	1140	53
3/16/2021	875	51
9/14/2021	1010	52
3/22/2022	739	49
9/13/2022	415	44
3/14/2023	520	46
9/12/2023	514	45

The Wilcoxon Statistic is 854
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 6.01437
The Standard Deviation adjusted for ties is 65.1584
The Z Score adjusted for ties is 6.33073
6.01437 > 2.326 indicating statistical significance at 1% level
6.33073 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Ammonia-N

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 43
Non detect rank is 22

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<100	22
	3/19/2014	134	54
	9/8/2014	ND<100 U	22
	3/17/2015	ND<100 U	22
	9/14/2015	ND<100 U	22
	3/17/2016	ND<100 U	22
	9/21/2016	ND<100 U	22
	3/24/2017	ND<100 U	22
	9/20/2017	ND<60 J	22
	3/27/2018	ND<34 J	22
	9/19/2018	ND<66 J	22
	3/11/2019	ND<74 J	22
	9/25/2019	149	55
	3/18/2020	ND<100 U	22
	9/23/2020	ND<63 J	22
	3/17/2021	118	45
	9/8/2021	ND<67 J	22
	3/15/2022	103	44
	9/12/2022	ND<100	22
	3/13/2023	119	47
	9/11/2023	391	64
GWM-2	9/25/2013	ND<100	22
	3/18/2014	130	52
	9/16/2014	124	49
	3/18/2015	ND<100 U	22
	9/15/2015	ND<100 U	22
	3/16/2016	ND<100 U	22
	9/22/2016	ND<100 U	22
	3/24/2017	ND<32 J	22
	9/21/2017	ND<100 U	22
	3/28/2018	ND<81 J	22
	9/21/2018	ND<57 J	22
	3/12/2019	119	48
	10/1/2019	198	61
	3/18/2020	ND<96 J	22
	9/23/2020	ND<58 J	22
	3/17/2021	152	57
	9/9/2021	ND<100 U	22
	3/15/2022	126	50
	9/12/2022	ND<100	22
	3/13/2023	132	53
	9/11/2023	180	59
GWM-5A	9/19/2013	ND<100	22

12/5/2013	ND<100	22
3/19/2014	260	62
9/4/2014	ND<100 U	22
3/17/2015	ND<100 U	22
9/11/2015	ND<100 U	22
3/15/2016	ND<100 U	22
9/21/2016	ND<100 U	22
3/28/2017	ND<100 U	22
9/19/2017	ND<10 J	22
3/26/2018	158	58
9/18/2018	ND<66 J	22
3/4/2019	149	56
9/23/2019	118	46
3/19/2020	ND<41 J	22
9/23/2020	ND<100 U	22
3/19/2021	ND<100 U	22
9/15/2021	ND<87 J	22
3/16/2022	186	60
9/14/2022	128	51
3/16/2023	ND<100	22
9/13/2023	275	63

The Wilcoxon Statistic is 473
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is 0.148418
The Standard Deviation adjusted for ties is 59.0547
The Z Score adjusted for ties is 0.177801
0.148418 < 2.326 indicating no statistical significance at 1% level
0.177801 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Ammonia-N

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 37
Non detect rank is 19

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<100	19
	3/19/2014	134	50
	9/8/2014	ND<100 U	19
	3/17/2015	ND<100 U	19
	9/14/2015	ND<100 U	19
	3/17/2016	ND<100 U	19
	9/21/2016	ND<100 U	19
	3/24/2017	ND<100 U	19
	9/20/2017	ND<60 J	19
	3/27/2018	ND<34 J	19
	9/19/2018	ND<66 J	19
	3/11/2019	ND<74 J	19
	9/25/2019	149	52
	3/18/2020	ND<100 U	19
	9/23/2020	ND<63 J	19
	3/17/2021	118	41
	9/8/2021	ND<67 J	19
	3/15/2022	103	39
	9/12/2022	ND<100	19
	3/13/2023	119	42
	9/11/2023	391	63
GWM-2	9/25/2013	ND<100	19
	3/18/2014	130	47
	9/16/2014	124	45
	3/18/2015	ND<100 U	19
	9/15/2015	ND<100 U	19
	3/16/2016	ND<100 U	19
	9/22/2016	ND<100 U	19
	3/24/2017	ND<32 J	19
	9/21/2017	ND<100 U	19
	3/28/2018	ND<81 J	19
	9/21/2018	ND<57 J	19
	3/12/2019	119	43
	10/1/2019	198	58
	3/18/2020	ND<96 J	19
	9/23/2020	ND<58 J	19
	3/17/2021	152	53
	9/9/2021	ND<100 U	19
	3/15/2022	126	46
	9/12/2022	ND<100	19
	3/13/2023	132	48
	9/11/2023	180	56
GWM-14	9/24/2013	ND<100	19

3/21/2014	119	44
9/8/2014	ND<87 J	19
3/19/2015	ND<59 J	19
9/14/2015	ND<54 J	19
3/21/2016	ND<100 U	19
9/23/2016	178	55
3/27/2017	ND<85 J	19
9/20/2017	104	40
3/16/2018	209	59
9/20/2018	100	38
3/5/2019	ND<100 U	19
9/25/2019	165	54
3/25/2020	ND<92 J	19
9/28/2020	189	57
3/18/2021	254	61
9/15/2021	137	51
3/22/2022	ND<100	19
9/14/2022	241	60
3/16/2023	132	49
9/13/2023	341	62

The Wilcoxon Statistic is 570
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 1.87357
The Standard Deviation adjusted for ties is 61.2499
The Z Score adjusted for ties is 2.09796
1.87357 < 2.326 indicating no statistical significance at 1% level
2.09796 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Ammonia-N

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 39
Non detect rank is 20

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<100	20
	3/19/2014	134	53
	9/8/2014	ND<100 U	20
	3/17/2015	ND<100 U	20
	9/14/2015	ND<100 U	20
	3/17/2016	ND<100 U	20
	9/21/2016	ND<100 U	20
	3/24/2017	ND<100 U	20
	9/20/2017	ND<60 J	20
	3/27/2018	ND<34 J	20
	9/19/2018	ND<66 J	20
	3/11/2019	ND<74 J	20
	9/25/2019	149	54
	3/18/2020	ND<100 U	20
	9/23/2020	ND<63 J	20
	3/17/2021	118	42
	9/8/2021	ND<67 J	20
	3/15/2022	103	40
	9/12/2022	ND<100	20
	3/13/2023	119	43
	9/11/2023	391	63
GWM-2	9/25/2013	ND<100	20
	3/18/2014	130	50
	9/16/2014	124	45
	3/18/2015	ND<100 U	20
	9/15/2015	ND<100 U	20
	3/16/2016	ND<100 U	20
	9/22/2016	ND<100 U	20
	3/24/2017	ND<32 J	20
	9/21/2017	ND<100 U	20
	3/28/2018	ND<81 J	20
	9/21/2018	ND<57 J	20
	3/12/2019	119	44
	10/1/2019	198	58
	3/18/2020	ND<96 J	20
	9/23/2020	ND<58 J	20
	3/17/2021	152	55
	9/9/2021	ND<100 U	20
	3/15/2022	126	47
	9/12/2022	ND<100	20
	3/13/2023	132	51
	9/11/2023	180	56
GWM-6	9/24/2013	ND<100	20

3/21/2014	ND<100 U	20
9/17/2014	133	52
3/19/2015	ND<100 U	20
9/15/2015	ND<100 U	20
3/21/2016	ND<100 U	20
9/26/2016	ND<44 J	20
3/31/2017	ND<45 J	20
9/21/2017	ND<80 J	20
3/30/2018	111	41
9/26/2018	ND<79 J	20
3/13/2019	128	49
10/3/2019	264	60
4/3/2020	126	48
9/30/2020	292	61
3/22/2021	217	59
9/16/2021	ND<64 J	20
3/24/2022	191	57
9/16/2022	ND<79 J	20
3/17/2023	125	46
9/14/2023	318	62

The Wilcoxon Statistic is 524
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 1.20287
The Standard Deviation adjusted for ties is 59.9042
The Z Score adjusted for ties is 1.3772
1.20287 < 2.326 indicating no statistical significance at 1% level
1.3772 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Ammonia-N

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 44
Non detect rank is 22.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<100	22.5
	3/19/2014	134	55
	9/8/2014	ND<100 U	22.5
	3/17/2015	ND<100 U	22.5
	9/14/2015	ND<100 U	22.5
	3/17/2016	ND<100 U	22.5
	9/21/2016	ND<100 U	22.5
	3/24/2017	ND<100 U	22.5
	9/20/2017	ND<60 J	22.5
	3/27/2018	ND<34 J	22.5
	9/19/2018	ND<66 J	22.5
	3/11/2019	ND<74 J	22.5
	9/25/2019	149	56
	3/18/2020	ND<100 U	22.5
	9/23/2020	ND<63 J	22.5
	3/17/2021	118	46
	9/8/2021	ND<67 J	22.5
	3/15/2022	103	45
	9/12/2022	ND<100	22.5
	3/13/2023	119	47
	9/11/2023	391	63
GWM-2	9/25/2013	ND<100	22.5
	3/18/2014	130	52
	9/16/2014	124	50
	3/18/2015	ND<100 U	22.5
	9/15/2015	ND<100 U	22.5
	3/16/2016	ND<100 U	22.5
	9/22/2016	ND<100 U	22.5
	3/24/2017	ND<32 J	22.5
	9/21/2017	ND<100 U	22.5
	3/28/2018	ND<81 J	22.5
	9/21/2018	ND<57 J	22.5
	3/12/2019	119	48
	10/1/2019	198	59
	3/18/2020	ND<96 J	22.5
	9/23/2020	ND<58 J	22.5
	3/17/2021	152	57
	9/9/2021	ND<100 U	22.5
	3/15/2022	126	51
	9/12/2022	ND<100	22.5
	3/13/2023	132	54
	9/11/2023	180	58
GWM-3	9/25/2013	ND<100	22.5

3/18/2014	130	53
9/16/2014	ND<90 J	22.5
3/18/2015	ND<100 U	22.5
9/15/2015	ND<100 U	22.5
3/16/2016	ND<100 U	22.5
9/22/2016	ND<74 J	22.5
3/29/2017	ND<48 J	22.5
9/21/2017	ND<100 U	22.5
3/28/2018	ND<54 J	22.5
9/20/2018	ND<38 J	22.5
3/12/2019	ND<89 J	22.5
10/1/2019	249	61
3/18/2020	ND<100 U	22.5
9/24/2020	ND<100 U	22.5
3/17/2021	287	62
9/9/2021	ND<100 U	22.5
3/15/2022	ND<77 J	22.5
9/16/2022	ND<84 J	22.5
3/15/2023	233	60
9/11/2023	123	49

The Wilcoxon Statistic is 414
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.400958
The Standard Deviation adjusted for ties is 55.6947
The Z Score adjusted for ties is -0.493763
-0.400958 < 2.326 indicating no statistical significance at 1% level
-0.493763 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Ammonia-N

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 29
Non detect rank is 15

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<100	15
	3/19/2014	134	38
	9/8/2014	ND<100 U	15
	3/17/2015	ND<100 U	15
	9/14/2015	ND<100 U	15
	3/17/2016	ND<100 U	15
	9/21/2016	ND<100 U	15
	3/24/2017	ND<100 U	15
	9/20/2017	ND<60 J	15
	3/27/2018	ND<34 J	15
	9/19/2018	ND<66 J	15
	3/11/2019	ND<74 J	15
	9/25/2019	149	40
	3/18/2020	ND<100 U	15
	9/23/2020	ND<63 J	15
	3/17/2021	118	31
	9/8/2021	ND<67 J	15
	3/15/2022	103	30
	9/12/2022	ND<100	15
	3/13/2023	119	32
	9/11/2023	391	47
GWM-2	9/25/2013	ND<100	15
	3/18/2014	130	36
	9/16/2014	124	34
	3/18/2015	ND<100 U	15
	9/15/2015	ND<100 U	15
	3/16/2016	ND<100 U	15
	9/22/2016	ND<100 U	15
	3/24/2017	ND<32 J	15
	9/21/2017	ND<100 U	15
	3/28/2018	ND<81 J	15
	9/21/2018	ND<57 J	15
	3/12/2019	119	33
	10/1/2019	198	44
	3/18/2020	ND<96 J	15
	9/23/2020	ND<58 J	15
	3/17/2021	152	41
	9/9/2021	ND<100 U	15
	3/15/2022	126	35
	9/12/2022	ND<100	15
	3/13/2023	132	37
	9/11/2023	180	42
GWM-17S	11/14/2019	185	43

3/26/2020	139	39
9/29/2020	203	45
3/16/2021	427	48
9/14/2021	362	46
3/18/2022	429	49
9/13/2022	ND<100	15
3/14/2023	548	51
9/12/2023	500	50

The Wilcoxon Statistic is 341
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is 3.74331
The Standard Deviation adjusted for ties is 36.5661
The Z Score adjusted for ties is 4.14318
3.74331 > 2.326 indicating statistical significance at 1% level
4.14318 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chemical Oxygen Demand (COD)

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 53
Non detect rank is 27

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<15000	27
	3/19/2014	ND<15000 U	27
	9/8/2014	7000	54
	3/17/2015	ND<15000 U	27
	9/14/2015	ND<15000 U	27
	3/17/2016	ND<15000 U	27
	9/21/2016	ND<15000 U	27
	3/24/2017	ND<15000 U	27
	9/20/2017	8000	55
	3/27/2018	ND<15000 U	27
	9/19/2018	ND<15000 U	27
	3/11/2019	ND<9000 J	27
	9/25/2019	ND<15000 U	27
	3/18/2020	ND<15000 U	27
	9/23/2020	ND<15000 U	27
	3/17/2021	ND<9000 J	27
	9/8/2021	ND<5000 J	27
	3/15/2022	ND<15000	27
	9/12/2022	ND<15000	27
	3/13/2023	ND<7000 J	27
	9/11/2023	ND<6000 J	27
GWM-2	9/25/2013	ND<15000	27
	3/18/2014	ND<4000 J	27
	9/16/2014	ND<15000 U	27
	3/18/2015	ND<15000 U	27
	9/15/2015	ND<3000 J	27
	3/16/2016	ND<3000 J	27
	9/22/2016	ND<15000 U	27
	3/24/2017	ND<15000 U	27
	9/21/2017	ND<15000 U	27
	3/28/2018	ND<15000 U	27
	9/21/2018	ND<15000 U	27
	3/12/2019	ND<10000 J	27
	10/1/2019	ND<15000 U	27
	3/18/2020	ND<15000 U	27
	9/23/2020	ND<15000 U	27
	3/17/2021	ND<10000 J	27
	9/9/2021	ND<5000 J	27
	3/15/2022	ND<15000	27
	9/12/2022	ND<15000	27
	3/13/2023	ND<6000 J	27
	9/11/2023	ND<6000 J	27
GWM-4	9/18/2013	ND<15000	27

3/20/2014	ND<15000 U	27
9/9/2014	25000	62
3/16/2015	ND<15000 U	27
9/9/2015	ND<1000 J	27
3/18/2016	13000	58
9/20/2016	13000	59
3/23/2017	ND<6000 J	27
9/18/2017	12000	57
3/15/2018	11000	56
9/17/2018	ND<15000 U	27
3/5/2019	16000	60
9/24/2019	ND<15000 U	27
3/16/2020	22000	61
9/22/2020	ND<15000 U	27
3/16/2021	ND<11000 J	27
9/14/2021	ND<9000 J	27
3/22/2022	ND<15000	27
9/13/2022	ND<5000 J	27
3/14/2023	56000	63
9/12/2023	ND<15000	27

The Wilcoxon Statistic is 596
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 2.25266
The Standard Deviation adjusted for ties is 43.6297
The Z Score adjusted for ties is 3.54117
2.25266 < 2.326 indicating no statistical significance at 1% level
3.54117 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chemical Oxygen Demand (COD)

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 58
Non detect rank is 29.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<15000	29.5
	3/19/2014	ND<15000 U	29.5
	9/8/2014	7000	59
	3/17/2015	ND<15000 U	29.5
	9/14/2015	ND<15000 U	29.5
	3/17/2016	ND<15000 U	29.5
	9/21/2016	ND<15000 U	29.5
	3/24/2017	ND<15000 U	29.5
	9/20/2017	8000	60
	3/27/2018	ND<15000 U	29.5
	9/19/2018	ND<15000 U	29.5
	3/11/2019	ND<9000 J	29.5
	9/25/2019	ND<15000 U	29.5
	3/18/2020	ND<15000 U	29.5
	9/23/2020	ND<15000 U	29.5
	3/17/2021	ND<9000 J	29.5
	9/8/2021	ND<5000 J	29.5
	3/15/2022	ND<15000	29.5
	9/12/2022	ND<15000	29.5
	3/13/2023	ND<7000 J	29.5
	9/11/2023	ND<6000 J	29.5
GWM-2	9/25/2013	ND<15000	29.5
	3/18/2014	ND<4000 J	29.5
	9/16/2014	ND<15000 U	29.5
	3/18/2015	ND<15000 U	29.5
	9/15/2015	ND<3000 J	29.5
	3/16/2016	ND<3000 J	29.5
	9/22/2016	ND<15000 U	29.5
	3/24/2017	ND<15000 U	29.5
	9/21/2017	ND<15000 U	29.5
	3/28/2018	ND<15000 U	29.5
	9/21/2018	ND<15000 U	29.5
	3/12/2019	ND<10000 J	29.5
	10/1/2019	ND<15000 U	29.5
	3/18/2020	ND<15000 U	29.5
	9/23/2020	ND<15000 U	29.5
	3/17/2021	ND<10000 J	29.5
	9/9/2021	ND<5000 J	29.5
	3/15/2022	ND<15000	29.5
	9/12/2022	ND<15000	29.5
	3/13/2023	ND<6000 J	29.5
	9/11/2023	ND<6000 J	29.5
GWM-5A	9/19/2013	ND<15000	29.5

12/5/2013	ND<15000	29.5
3/19/2014	ND<15000 U	29.5
9/4/2014	10000	64
3/17/2015	ND<15000 U	29.5
9/11/2015	9000	62
3/15/2016	ND<1000 J	29.5
9/21/2016	8000	61
3/28/2017	ND<5000 J	29.5
9/19/2017	9000	63
3/26/2018	ND<15000 U	29.5
9/18/2018	ND<15000 U	29.5
3/4/2019	ND<9000 J	29.5
9/23/2019	ND<15000 U	29.5
3/19/2020	ND<15000 U	29.5
9/23/2020	ND<11000 J	29.5
3/19/2021	ND<5000 J	29.5
9/15/2021	ND<7000 J	29.5
3/16/2022	ND<15000	29.5
9/14/2022	ND<7000 J	29.5
3/16/2023	ND<12000 J	29.5
9/13/2023	ND<6000 J	29.5

The Wilcoxon Statistic is 528
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is 0.925847
The Standard Deviation adjusted for ties is 35.7772
The Z Score adjusted for ties is 1.83077
0.925847 < 2.326 indicating no statistical significance at 1% level
1.83077 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chemical Oxygen Demand (COD)

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 42
Non detect rank is 21.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<15000	21.5
	3/19/2014	ND<15000 U	21.5
	9/8/2014	7000	43
	3/17/2015	ND<15000 U	21.5
	9/14/2015	ND<15000 U	21.5
	3/17/2016	ND<15000 U	21.5
	9/21/2016	ND<15000 U	21.5
	3/24/2017	ND<15000 U	21.5
	9/20/2017	8000	44
	3/27/2018	ND<15000 U	21.5
	9/19/2018	ND<15000 U	21.5
	3/11/2019	ND<9000 J	21.5
	9/25/2019	ND<15000 U	21.5
	3/18/2020	ND<15000 U	21.5
	9/23/2020	ND<15000 U	21.5
	3/17/2021	ND<9000 J	21.5
	9/8/2021	ND<5000 J	21.5
	3/15/2022	ND<15000	21.5
	9/12/2022	ND<15000	21.5
	3/13/2023	ND<7000 J	21.5
	9/11/2023	ND<6000 J	21.5
GWM-2	9/25/2013	ND<15000	21.5
	3/18/2014	ND<4000 J	21.5
	9/16/2014	ND<15000 U	21.5
	3/18/2015	ND<15000 U	21.5
	9/15/2015	ND<3000 J	21.5
	3/16/2016	ND<3000 J	21.5
	9/22/2016	ND<15000 U	21.5
	3/24/2017	ND<15000 U	21.5
	9/21/2017	ND<15000 U	21.5
	3/28/2018	ND<15000 U	21.5
	9/21/2018	ND<15000 U	21.5
	3/12/2019	ND<10000 J	21.5
	10/1/2019	ND<15000 U	21.5
	3/18/2020	ND<15000 U	21.5
	9/23/2020	ND<15000 U	21.5
	3/17/2021	ND<10000 J	21.5
	9/9/2021	ND<5000 J	21.5
	3/15/2022	ND<15000	21.5
	9/12/2022	ND<15000	21.5
	3/13/2023	ND<6000 J	21.5
	9/11/2023	ND<6000 J	21.5
GWM-14	9/24/2013	29000	62

3/21/2014	13000	47
9/8/2014	11000	45
3/19/2015	ND<15000 U	21.5
9/14/2015	12000	46
3/21/2016	16000	50
9/23/2016	ND<7000 J	21.5
3/27/2017	20000	54
9/20/2017	24000	59
3/16/2018	13000	48
9/20/2018	19000	53
3/5/2019	27000	60
9/25/2019	21000	56
3/25/2020	17000	51
9/28/2020	23000	58
3/18/2021	33000	63
9/15/2021	20000	55
3/22/2022	18000	52
9/14/2022	21000	57
3/16/2023	28000	61
9/13/2023	15000	49

The Wilcoxon Statistic is 838
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 5.78109
The Standard Deviation adjusted for ties is 57.5383
The Z Score adjusted for ties is 6.89106
5.78109 > 2.326 indicating statistical significance at 1% level
6.89106 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chemical Oxygen Demand (COD)

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 43
Non detect rank is 22

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<15000	22
	3/19/2014	ND<15000 U	22
	9/8/2014	7000	45
	3/17/2015	ND<15000 U	22
	9/14/2015	ND<15000 U	22
	3/17/2016	ND<15000 U	22
	9/21/2016	ND<15000 U	22
	3/24/2017	ND<15000 U	22
	9/20/2017	8000	46
	3/27/2018	ND<15000 U	22
	9/19/2018	ND<15000 U	22
	3/11/2019	ND<9000 J	22
	9/25/2019	ND<15000 U	22
	3/18/2020	ND<15000 U	22
	9/23/2020	ND<15000 U	22
	3/17/2021	ND<9000 J	22
	9/8/2021	ND<5000 J	22
	3/15/2022	ND<15000	22
	9/12/2022	ND<15000	22
	3/13/2023	ND<7000 J	22
	9/11/2023	ND<6000 J	22
GWM-2	9/25/2013	ND<15000	22
	3/18/2014	ND<4000 J	22
	9/16/2014	ND<15000 U	22
	3/18/2015	ND<15000 U	22
	9/15/2015	ND<3000 J	22
	3/16/2016	ND<3000 J	22
	9/22/2016	ND<15000 U	22
	3/24/2017	ND<15000 U	22
	9/21/2017	ND<15000 U	22
	3/28/2018	ND<15000 U	22
	9/21/2018	ND<15000 U	22
	3/12/2019	ND<10000 J	22
	10/1/2019	ND<15000 U	22
	3/18/2020	ND<15000 U	22
	9/23/2020	ND<15000 U	22
	3/17/2021	ND<10000 J	22
	9/9/2021	ND<5000 J	22
	3/15/2022	ND<15000	22
	9/12/2022	ND<15000	22
	3/13/2023	ND<6000 J	22
	9/11/2023	ND<6000 J	22
GWM-6	9/24/2013	16000	50

3/21/2014	ND<3000 J	22
9/17/2014	12000	47
3/19/2015	ND<2000 J	22
9/15/2015	5000	44
3/21/2016	13000	48
9/26/2016	ND<7000 J	22
3/31/2017	14000	49
9/21/2017	16000	51
3/30/2018	19000	52
9/26/2018	27000	58
3/13/2019	29000	60
10/3/2019	28000	59
4/3/2020	23000	56
9/30/2020	21000	55
3/22/2021	20000	54
9/16/2021	25000	57
3/24/2022	31000	62
9/16/2022	29000	61
3/17/2023	33000	63
9/14/2023	19000	53

The Wilcoxon Statistic is 814
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 5.43116
The Standard Deviation adjusted for ties is 56.6455
The Z Score adjusted for ties is 6.57599
5.43116 > 2.326 indicating statistical significance at 1% level
6.57599 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chemical Oxygen Demand (COD)

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 59
Non detect rank is 30

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<15000	30
	3/19/2014	ND<15000 U	30
	9/8/2014	7000	60
	3/17/2015	ND<15000 U	30
	9/14/2015	ND<15000 U	30
	3/17/2016	ND<15000 U	30
	9/21/2016	ND<15000 U	30
	3/24/2017	ND<15000 U	30
	9/20/2017	8000	61
	3/27/2018	ND<15000 U	30
	9/19/2018	ND<15000 U	30
	3/11/2019	ND<9000 J	30
	9/25/2019	ND<15000 U	30
	3/18/2020	ND<15000 U	30
	9/23/2020	ND<15000 U	30
	3/17/2021	ND<9000 J	30
	9/8/2021	ND<5000 J	30
	3/15/2022	ND<15000	30
	9/12/2022	ND<15000	30
	3/13/2023	ND<7000 J	30
	9/11/2023	ND<6000 J	30
GWM-2	9/25/2013	ND<15000	30
	3/18/2014	ND<4000 J	30
	9/16/2014	ND<15000 U	30
	3/18/2015	ND<15000 U	30
	9/15/2015	ND<3000 J	30
	3/16/2016	ND<3000 J	30
	9/22/2016	ND<15000 U	30
	3/24/2017	ND<15000 U	30
	9/21/2017	ND<15000 U	30
	3/28/2018	ND<15000 U	30
	9/21/2018	ND<15000 U	30
	3/12/2019	ND<10000 J	30
	10/1/2019	ND<15000 U	30
	3/18/2020	ND<15000 U	30
	9/23/2020	ND<15000 U	30
	3/17/2021	ND<10000 J	30
	9/9/2021	ND<5000 J	30
	3/15/2022	ND<15000	30
	9/12/2022	ND<15000	30
	3/13/2023	ND<6000 J	30
	9/11/2023	ND<6000 J	30
GWM-3	9/25/2013	ND<15000	30

3/18/2014	12000	62
9/16/2014	ND<15000 U	30
3/18/2015	ND<15000 U	30
9/15/2015	ND<15000 U	30
3/16/2016	ND<15000 U	30
9/22/2016	ND<15000 U	30
3/29/2017	ND<4000 J	30
9/21/2017	ND<15000 U	30
3/28/2018	ND<15000 U	30
9/20/2018	ND<15000 U	30
3/12/2019	ND<12000 J	30
10/1/2019	ND<7000 J	30
3/18/2020	ND<15000 U	30
9/24/2020	ND<15000 U	30
3/17/2021	ND<7000 J	30
9/9/2021	ND<7000 J	30
3/15/2022	ND<15000	30
9/16/2022	ND<15000	30
3/15/2023	17000	63
9/11/2023	ND<5000 J	30

The Wilcoxon Statistic is 464
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 0.328057
The Standard Deviation adjusted for ties is 28.9905
The Z Score adjusted for ties is 0.776115
0.328057 < 2.326 indicating no statistical significance at 1% level
0.776115 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chemical Oxygen Demand (COD)

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 40
Non detect rank is 20.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<15000	20.5
	3/19/2014	ND<15000 U	20.5
	9/8/2014	7000	41
	3/17/2015	ND<15000 U	20.5
	9/14/2015	ND<15000 U	20.5
	3/17/2016	ND<15000 U	20.5
	9/21/2016	ND<15000 U	20.5
	3/24/2017	ND<15000 U	20.5
	9/20/2017	8000	42
	3/27/2018	ND<15000 U	20.5
	9/19/2018	ND<15000 U	20.5
	3/11/2019	ND<9000 J	20.5
	9/25/2019	ND<15000 U	20.5
	3/18/2020	ND<15000 U	20.5
	9/23/2020	ND<15000 U	20.5
	3/17/2021	ND<9000 J	20.5
	9/8/2021	ND<5000 J	20.5
	3/15/2022	ND<15000	20.5
	9/12/2022	ND<15000	20.5
	3/13/2023	ND<7000 J	20.5
	9/11/2023	ND<6000 J	20.5
GWM-2	9/25/2013	ND<15000	20.5
	3/18/2014	ND<4000 J	20.5
	9/16/2014	ND<15000 U	20.5
	3/18/2015	ND<15000 U	20.5
	9/15/2015	ND<3000 J	20.5
	3/16/2016	ND<3000 J	20.5
	9/22/2016	ND<15000 U	20.5
	3/24/2017	ND<15000 U	20.5
	9/21/2017	ND<15000 U	20.5
	3/28/2018	ND<15000 U	20.5
	9/21/2018	ND<15000 U	20.5
	3/12/2019	ND<10000 J	20.5
	10/1/2019	ND<15000 U	20.5
	3/18/2020	ND<15000 U	20.5
	9/23/2020	ND<15000 U	20.5
	3/17/2021	ND<10000 J	20.5
	9/9/2021	ND<5000 J	20.5
	3/15/2022	ND<15000	20.5
	9/12/2022	ND<15000	20.5
	3/13/2023	ND<6000 J	20.5
	9/11/2023	ND<6000 J	20.5
GWM-17S	11/14/2019	17000	44

3/26/2020	18000	46
9/29/2020	20000	48
3/16/2021	24000	50
9/14/2021	22000	49
3/18/2022	18000	47
9/13/2022	17000	45
3/14/2023	26000	51
9/12/2023	15000	43

The Wilcoxon Statistic is 378
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is 4.65752
The Standard Deviation adjusted for ties is 29.1188
The Z Score adjusted for ties is 6.47348
4.65752 > 2.326 indicating statistical significance at 1% level
6.47348 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloride

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	29070	2
	3/19/2014	115000	48
	9/8/2014	62900	3
	3/17/2015	308000	62
	9/14/2015	152000	54
	3/17/2016	93400	31
	9/21/2016	109000	41
	3/24/2017	87600	27
	9/20/2017	64600	5
	3/27/2018	164000	56
	9/19/2018	85200	24
	3/11/2019	79400	17
	9/25/2019	177000	59
	3/18/2020	162000	55
	9/23/2020	117000	49
	3/17/2021	98500	34
	9/8/2021	82800	22
	3/15/2022	319000	63
	9/12/2022	249000	61
	3/13/2023	217000	60
	9/11/2023	164000	57
GWM-2	9/25/2013	74670	11
	3/18/2014	88200	29
	9/16/2014	89400	30
	3/18/2015	84500	23
	9/15/2015	85300	25
	3/16/2016	77100	14
	9/22/2016	76900	13
	3/24/2017	71100	8
	9/21/2017	82100	18
	3/28/2018	82700	21
	9/21/2018	87700	28
	3/12/2019	86900	26
	10/1/2019	82300	19
	3/18/2020	75700	12
	9/23/2020	64000	4
	3/17/2021	67300	6
	9/9/2021	78500	16
	3/15/2022	71500	9
	9/12/2022	69500	7
	3/13/2023	77300	15
	9/11/2023	82500	20
GWM-4	9/18/2013	8930	1

3/20/2014	74100	10
9/9/2014	98200	33
3/16/2015	99100	35
9/9/2015	93600	32
3/18/2016	99300	36
9/20/2016	110000	43
3/23/2017	132000	52
9/18/2017	140000	53
3/15/2018	124000	50
9/17/2018	109000	42
3/5/2019	107000	39
9/24/2019	111000	44
3/16/2020	172000	58
9/22/2020	104000	37
3/16/2021	106000	38
9/14/2021	111000	45
3/22/2022	127000	51
9/13/2022	107000	40
3/14/2023	112000	46
9/12/2023	112000	47

The Wilcoxon Statistic is 601
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 2.32556
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 2.32556
2.32556 < 2.326 indicating no statistical significance at 1% level
2.32556 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloride

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	29070	1
	3/19/2014	115000	54
	9/8/2014	62900	12
	3/17/2015	308000	63
	9/14/2015	152000	56
	3/17/2016	93400	51
	9/21/2016	109000	53
	3/24/2017	87600	46
	9/20/2017	64600	16
	3/27/2018	164000	58
	9/19/2018	85200	43
	3/11/2019	79400	36
	9/25/2019	177000	60
	3/18/2020	162000	57
	9/23/2020	117000	55
	3/17/2021	98500	52
	9/8/2021	82800	41
	3/15/2022	319000	64
	9/12/2022	249000	62
	3/13/2023	217000	61
	9/11/2023	164000	59
GWM-2	9/25/2013	74670	28
	3/18/2014	88200	48
	9/16/2014	89400	50
	3/18/2015	84500	42
	9/15/2015	85300	44
	3/16/2016	77100	32
	9/22/2016	76900	31
	3/24/2017	71100	24
	9/21/2017	82100	37
	3/28/2018	82700	40
	9/21/2018	87700	47
	3/12/2019	86900	45
	10/1/2019	82300	38
	3/18/2020	75700	29
	9/23/2020	64000	14
	3/17/2021	67300	21
	9/9/2021	78500	35
	3/15/2022	71500	25
	9/12/2022	69500	22
	3/13/2023	77300	33
	9/11/2023	82500	39
GWM-5A	9/19/2013	58970	7

12/5/2013	57910	5
3/19/2014	53000	3
9/4/2014	72600	27
3/17/2015	58700	6
9/11/2015	67100	20
3/15/2016	65200	18
9/21/2016	63500	13
3/28/2017	64800	17
9/19/2017	59200	9
3/26/2018	62000	11
9/18/2018	88400	49
3/4/2019	77600	34
9/23/2019	71500	26
3/19/2020	66800	19
9/23/2020	70900	23
3/19/2021	64100	15
9/15/2021	57300	4
3/16/2022	50900	2
9/14/2022	59900	10
3/16/2023	59100	8
9/13/2023	76700	30

The Wilcoxon Statistic is 103
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is -5.08156
The Standard Deviation adjusted for ties is 70.746
The Z Score adjusted for ties is -5.08156
-5.08156 < 2.326 indicating no statistical significance at 1% level
-5.08156 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloride

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	29070	11
	3/19/2014	115000	53
	9/8/2014	62900	23
	3/17/2015	308000	62
	9/14/2015	152000	55
	3/17/2016	93400	50
	9/21/2016	109000	52
	3/24/2017	87600	46
	9/20/2017	64600	25
	3/27/2018	164000	57
	9/19/2018	85200	43
	3/11/2019	79400	36
	9/25/2019	177000	59
	3/18/2020	162000	56
	9/23/2020	117000	54
	3/17/2021	98500	51
	9/8/2021	82800	41
	3/15/2022	319000	63
	9/12/2022	249000	61
	3/13/2023	217000	60
	9/11/2023	164000	58
GWM-2	9/25/2013	74670	30
	3/18/2014	88200	48
	9/16/2014	89400	49
	3/18/2015	84500	42
	9/15/2015	85300	44
	3/16/2016	77100	33
	9/22/2016	76900	32
	3/24/2017	71100	28
	9/21/2017	82100	37
	3/28/2018	82700	40
	9/21/2018	87700	47
	3/12/2019	86900	45
	10/1/2019	82300	38
	3/18/2020	75700	31
	9/23/2020	64000	24
	3/17/2021	67300	26
	9/9/2021	78500	35
	3/15/2022	71500	29
	9/12/2022	69500	27
	3/13/2023	77300	34
	9/11/2023	82500	39
GWM-14	9/24/2013	25700	4

3/21/2014	24600	2
9/8/2014	27000	8
3/19/2015	25900	5
9/14/2015	26100	6
3/21/2016	24800	3
9/23/2016	27700	9
3/27/2017	26400	7
9/20/2017	34800	16
3/16/2018	32900	13
9/20/2018	34200	14
3/5/2019	30000	12
9/25/2019	24500	1
3/25/2020	28600	10
9/28/2020	36700	17
3/18/2021	34700	15
9/15/2021	36900	18
3/22/2022	40200	19
9/14/2022	40900	20
3/16/2023	43900	21
9/13/2023	45300	22

The Wilcoxon Statistic is 11
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -6.27682
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is -6.27682
-6.27682 < 2.326 indicating no statistical significance at 1% level
-6.27682 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloride

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	29070	1
	3/19/2014	115000	53
	9/8/2014	62900	10
	3/17/2015	308000	62
	9/14/2015	152000	55
	3/17/2016	93400	48
	9/21/2016	109000	52
	3/24/2017	87600	40
	9/20/2017	64600	12
	3/27/2018	164000	57
	9/19/2018	85200	36
	3/11/2019	79400	28
	9/25/2019	177000	59
	3/18/2020	162000	56
	9/23/2020	117000	54
	3/17/2021	98500	51
	9/8/2021	82800	34
	3/15/2022	319000	63
	9/12/2022	249000	61
	3/13/2023	217000	60
	9/11/2023	164000	58
GWM-2	9/25/2013	74670	19
	3/18/2014	88200	42
	9/16/2014	89400	43
	3/18/2015	84500	35
	9/15/2015	85300	37
	3/16/2016	77100	24
	9/22/2016	76900	23
	3/24/2017	71100	17
	9/21/2017	82100	30
	3/28/2018	82700	33
	9/21/2018	87700	41
	3/12/2019	86900	38
	10/1/2019	82300	31
	3/18/2020	75700	20
	9/23/2020	64000	11
	3/17/2021	67300	13
	9/9/2021	78500	27
	3/15/2022	71500	18
	9/12/2022	69500	15
	3/13/2023	77300	25
	9/11/2023	82500	32
GWM-6	9/24/2013	53270	7

3/21/2014	43200	3
9/17/2014	60000	8
3/19/2015	48400	4
9/15/2015	60700	9
3/21/2016	51600	5
9/26/2016	38400	2
3/31/2017	52300	6
9/21/2017	76200	22
3/30/2018	81900	29
9/26/2018	97400	50
3/13/2019	89700	44
10/3/2019	69300	14
4/3/2020	71000	16
9/30/2020	76000	21
3/22/2021	96700	49
9/16/2021	90500	46
3/24/2022	91800	47
9/16/2022	90200	45
3/17/2023	87400	39
9/14/2023	77700	26

The Wilcoxon Statistic is 261
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -2.63174
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is -2.63174
-2.63174 < 2.326 indicating no statistical significance at 1% level
-2.63174 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloride

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	29070	1
	3/19/2014	115000	53
	9/8/2014	62900	22
	3/17/2015	308000	62
	9/14/2015	152000	55
	3/17/2016	93400	50
	9/21/2016	109000	52
	3/24/2017	87600	46
	9/20/2017	64600	24
	3/27/2018	164000	57
	9/19/2018	85200	43
	3/11/2019	79400	36
	9/25/2019	177000	59
	3/18/2020	162000	56
	9/23/2020	117000	54
	3/17/2021	98500	51
	9/8/2021	82800	41
	3/15/2022	319000	63
	9/12/2022	249000	61
	3/13/2023	217000	60
	9/11/2023	164000	58
GWM-2	9/25/2013	74670	30
	3/18/2014	88200	48
	9/16/2014	89400	49
	3/18/2015	84500	42
	9/15/2015	85300	44
	3/16/2016	77100	33
	9/22/2016	76900	32
	3/24/2017	71100	28
	9/21/2017	82100	37
	3/28/2018	82700	40
	9/21/2018	87700	47
	3/12/2019	86900	45
	10/1/2019	82300	38
	3/18/2020	75700	31
	9/23/2020	64000	23
	3/17/2021	67300	25
	9/9/2021	78500	35
	3/15/2022	71500	29
	9/12/2022	69500	27
	3/13/2023	77300	34
	9/11/2023	82500	39
GWM-3	9/25/2013	46600	8

3/18/2014	53400	10
9/16/2014	55400	14
3/18/2015	49400	9
9/15/2015	60100	19
3/16/2016	60800	20
9/22/2016	62200	21
3/29/2017	67500	26
9/21/2017	54400	13
3/28/2018	57600	17
9/20/2018	55600	15
3/12/2019	53700	11
10/1/2019	57400	16
3/18/2020	54000	12
9/24/2020	45400	7
3/17/2021	45200	6
9/9/2021	59600	18
3/15/2022	42500	5
9/16/2022	30800	2
3/15/2023	31200	3
9/11/2023	41500	4

The Wilcoxon Statistic is 25
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -6.07269
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is -6.07269
-6.07269 < 2.326 indicating no statistical significance at 1% level
-6.07269 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloride

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	29070	1
	3/19/2014	115000	41
	9/8/2014	62900	2
	3/17/2015	308000	50
	9/14/2015	152000	43
	3/17/2016	93400	31
	9/21/2016	109000	38
	3/24/2017	87600	25
	9/20/2017	64600	4
	3/27/2018	164000	45
	9/19/2018	85200	22
	3/11/2019	79400	15
	9/25/2019	177000	47
	3/18/2020	162000	44
	9/23/2020	117000	42
	3/17/2021	98500	32
	9/8/2021	82800	20
	3/15/2022	319000	51
	9/12/2022	249000	49
	3/13/2023	217000	48
	9/11/2023	164000	46
GWM-2	9/25/2013	74670	9
	3/18/2014	88200	28
	9/16/2014	89400	29
	3/18/2015	84500	21
	9/15/2015	85300	23
	3/16/2016	77100	12
	9/22/2016	76900	11
	3/24/2017	71100	7
	9/21/2017	82100	16
	3/28/2018	82700	19
	9/21/2018	87700	27
	3/12/2019	86900	24
	10/1/2019	82300	17
	3/18/2020	75700	10
	9/23/2020	64000	3
	3/17/2021	67300	5
	9/9/2021	78500	14
	3/15/2022	71500	8
	9/12/2022	69500	6
	3/13/2023	77300	13
	9/11/2023	82500	18
GWM-17S	11/14/2019	87600	26

3/26/2020	98900	33
9/29/2020	92800	30
3/16/2021	101000	34
9/14/2021	105000	37
3/18/2022	110000	39
9/13/2022	104000	36
3/14/2023	110000	40
9/12/2023	102000	35

The Wilcoxon Statistic is 265
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is 1.86548
The Standard Deviation adjusted for ties is 40.4722
The Z Score adjusted for ties is 1.86548
1.86548 < 2.326 indicating no statistical significance at 1% level
1.86548 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Hardness

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	11000	1
	3/19/2014	78000	39
	9/8/2014	25000	3
	3/17/2015	190000	48
	9/14/2015	45000	14
	3/17/2016	52000	25
	9/21/2016	42000	9
	3/24/2017	50000	23
	9/20/2017	41100	8
	3/27/2018	97200	41
	9/19/2018	43400	12
	3/11/2019	30000	5
	9/25/2019	64900	36
	3/18/2020	57500	34
	9/23/2020	46400	18
	3/17/2021	32900	6
	9/8/2021	28700	4
	3/15/2022	102000	42
	9/12/2022	72500	38
	3/13/2023	56500	31
	9/11/2023	39700	7
GWM-2	9/25/2013	57200	33
	3/18/2014	69000	37
	9/16/2014	59000	35
	3/18/2015	85000	40
	9/15/2015	54000	28
	3/16/2016	48000	20
	9/22/2016	46000	17
	3/24/2017	53000	27
	9/21/2017	45200	15
	3/28/2018	52300	26
	9/21/2018	54300	29
	3/12/2019	54600	30
	10/1/2019	56900	32
	3/18/2020	47500	19
	9/23/2020	42900	10
	3/17/2021	43000	11
	9/9/2021	44700	13
	3/15/2022	45700	16
	9/12/2022	48100	21
	3/13/2023	49100	22
	9/11/2023	50100	24
GWM-4	9/18/2013	14800	2

3/20/2014	255000	63
9/9/2014	191000	49
3/16/2015	189000	47
9/9/2015	178000	44
3/18/2016	173000	43
9/20/2016	201000	52
3/23/2017	191000	50
9/18/2017	247000	62
3/15/2018	182000	46
9/17/2018	200000	51
3/5/2019	213000	54
9/24/2019	181000	45
3/16/2020	239000	61
9/22/2020	233000	59
3/16/2021	202000	53
9/14/2021	224000	57
3/22/2022	216000	55
9/13/2022	221000	56
3/14/2023	236000	60
9/12/2023	224000	58

The Wilcoxon Statistic is 836
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 5.75193
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 5.75193
5.75193 > 2.326 indicating statistical significance at 1% level
5.75193 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Hardness

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	11000	1
	3/19/2014	78000	38
	9/8/2014	25000	2
	3/17/2015	190000	61
	9/14/2015	45000	13
	3/17/2016	52000	24
	9/21/2016	42000	8
	3/24/2017	50000	22
	9/20/2017	41100	7
	3/27/2018	97200	43
	9/19/2018	43400	11
	3/11/2019	30000	4
	9/25/2019	64900	35
	3/18/2020	57500	33
	9/23/2020	46400	17
	3/17/2021	32900	5
	9/8/2021	28700	3
	3/15/2022	102000	44
	9/12/2022	72500	37
	3/13/2023	56500	30
	9/11/2023	39700	6
GWM-2	9/25/2013	57200	32
	3/18/2014	69000	36
	9/16/2014	59000	34
	3/18/2015	85000	39
	9/15/2015	54000	27
	3/16/2016	48000	19
	9/22/2016	46000	16
	3/24/2017	53000	26
	9/21/2017	45200	14
	3/28/2018	52300	25
	9/21/2018	54300	28
	3/12/2019	54600	29
	10/1/2019	56900	31
	3/18/2020	47500	18
	9/23/2020	42900	9
	3/17/2021	43000	10
	9/9/2021	44700	12
	3/15/2022	45700	15
	9/12/2022	48100	20
	3/13/2023	49100	21
	9/11/2023	50100	23
GWM-5A	9/19/2013	175200	59

12/5/2013	142900	52
3/19/2014	196000	62
9/4/2014	223000	64
3/17/2015	189000	60
9/11/2015	165000	57
3/15/2016	134000	51
9/21/2016	93000	41
3/28/2017	113000	47
9/19/2017	109000	46
3/26/2018	122000	48
9/18/2018	169000	58
3/4/2019	196000	63
9/23/2019	145000	53
3/19/2020	150000	54
9/23/2020	130000	49
3/19/2021	156000	56
9/15/2021	104000	45
3/16/2022	92400	40
9/14/2022	130000	50
3/16/2023	95200	42
9/13/2023	153000	55

The Wilcoxon Statistic is 899
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is 6.16996
The Standard Deviation adjusted for ties is 70.746
The Z Score adjusted for ties is 6.16996
6.16996 > 2.326 indicating statistical significance at 1% level
6.16996 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Hardness

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	11000	1
	3/19/2014	78000	38
	9/8/2014	25000	2
	3/17/2015	190000	63
	9/14/2015	45000	13
	3/17/2016	52000	24
	9/21/2016	42000	8
	3/24/2017	50000	22
	9/20/2017	41100	7
	3/27/2018	97200	52
	9/19/2018	43400	11
	3/11/2019	30000	4
	9/25/2019	64900	35
	3/18/2020	57500	33
	9/23/2020	46400	17
	3/17/2021	32900	5
	9/8/2021	28700	3
	3/15/2022	102000	55
	9/12/2022	72500	37
	3/13/2023	56500	30
	9/11/2023	39700	6
GWM-2	9/25/2013	57200	32
	3/18/2014	69000	36
	9/16/2014	59000	34
	3/18/2015	85000	39
	9/15/2015	54000	27
	3/16/2016	48000	19
	9/22/2016	46000	16
	3/24/2017	53000	26
	9/21/2017	45200	14
	3/28/2018	52300	25
	9/21/2018	54300	28
	3/12/2019	54600	29
	10/1/2019	56900	31
	3/18/2020	47500	18
	9/23/2020	42900	9
	3/17/2021	43000	10
	9/9/2021	44700	12
	3/15/2022	45700	15
	9/12/2022	48100	20
	3/13/2023	49100	21
	9/11/2023	50100	23
GWM-14	9/24/2013	91500	47

3/21/2014	116000	60
9/8/2014	104000	56
3/19/2015	118000	61
9/14/2015	130000	62
3/21/2016	110000	57
9/23/2016	114000	58
3/27/2017	114000	59
9/20/2017	92500	50
3/16/2018	89300	44
9/20/2018	88200	42
3/5/2019	101000	54
9/25/2019	86500	41
3/25/2020	97300	53
9/28/2020	96100	51
3/18/2021	90700	46
9/15/2021	86200	40
3/22/2022	89000	43
9/14/2022	91600	48
3/16/2023	90200	45
9/13/2023	92400	49

The Wilcoxon Statistic is 835
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 5.73735
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 5.73735
5.73735 > 2.326 indicating statistical significance at 1% level
5.73735 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Hardness

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	11000	1
	3/19/2014	78000	46
	9/8/2014	25000	2
	3/17/2015	190000	63
	9/14/2015	45000	13
	3/17/2016	52000	24
	9/21/2016	42000	8
	3/24/2017	50000	22
	9/20/2017	41100	7
	3/27/2018	97200	52
	9/19/2018	43400	11
	3/11/2019	30000	4
	9/25/2019	64900	37
	3/18/2020	57500	33
	9/23/2020	46400	17
	3/17/2021	32900	5
	9/8/2021	28700	3
	3/15/2022	102000	55
	9/12/2022	72500	42
	3/13/2023	56500	30
	9/11/2023	39700	6
GWM-2	9/25/2013	57200	32
	3/18/2014	69000	39
	9/16/2014	59000	34
	3/18/2015	85000	48
	9/15/2015	54000	27
	3/16/2016	48000	19
	9/22/2016	46000	16
	3/24/2017	53000	26
	9/21/2017	45200	14
	3/28/2018	52300	25
	9/21/2018	54300	28
	3/12/2019	54600	29
	10/1/2019	56900	31
	3/18/2020	47500	18
	9/23/2020	42900	9
	3/17/2021	43000	10
	9/9/2021	44700	12
	3/15/2022	45700	15
	9/12/2022	48100	20
	3/13/2023	49100	21
	9/11/2023	50100	23
GWM-6	9/24/2013	61800	35

3/21/2014	74000	43
9/17/2014	67000	38
3/19/2015	76000	45
9/15/2015	70000	40
3/21/2016	70000	41
9/26/2016	75000	44
3/31/2017	101000	54
9/21/2017	104000	57
3/30/2018	120000	62
9/26/2018	117000	60
3/13/2019	118000	61
10/3/2019	113000	59
4/3/2020	98300	53
9/30/2020	104000	58
3/22/2021	102000	56
9/16/2021	94500	51
3/24/2022	94200	50
9/16/2022	92000	49
3/17/2023	79700	47
9/14/2023	62100	36

The Wilcoxon Statistic is 808
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 5.34368
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 5.34368
5.34368 > 2.326 indicating statistical significance at 1% level
5.34368 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Hardness

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	11000	1
	3/19/2014	78000	59
	9/8/2014	25000	2
	3/17/2015	190000	63
	9/14/2015	45000	14
	3/17/2016	52000	29
	9/21/2016	42000	8
	3/24/2017	50000	25
	9/20/2017	41100	7
	3/27/2018	97200	61
	9/19/2018	43400	12
	3/11/2019	30000	4
	9/25/2019	64900	54
	3/18/2020	57500	45
	9/23/2020	46400	18
	3/17/2021	32900	5
	9/8/2021	28700	3
	3/15/2022	102000	62
	9/12/2022	72500	58
	3/13/2023	56500	39
	9/11/2023	39700	6
GWM-2	9/25/2013	57200	44
	3/18/2014	69000	57
	9/16/2014	59000	49
	3/18/2015	85000	60
	9/15/2015	54000	34
	3/16/2016	48000	21
	9/22/2016	46000	17
	3/24/2017	53000	32
	9/21/2017	45200	15
	3/28/2018	52300	31
	9/21/2018	54300	36
	3/12/2019	54600	38
	10/1/2019	56900	43
	3/18/2020	47500	20
	9/23/2020	42900	9
	3/17/2021	43000	10
	9/9/2021	44700	13
	3/15/2022	45700	16
	9/12/2022	48100	22
	3/13/2023	49100	24
	9/11/2023	50100	28
GWM-3	9/25/2013	43200	11

3/18/2014	59000	50
9/16/2014	50000	26
3/18/2015	63000	52
9/15/2015	58000	46
3/16/2016	60000	51
9/22/2016	67000	55
3/29/2017	63000	53
9/21/2017	52200	30
3/28/2018	56600	42
9/20/2018	56500	40
3/12/2019	58600	48
10/1/2019	67500	56
3/18/2020	58500	47
9/24/2020	54000	35
3/17/2021	50000	27
9/9/2021	56500	41
3/15/2022	53200	33
9/16/2022	48900	23
3/15/2023	47000	19
9/11/2023	54300	37

The Wilcoxon Statistic is 591
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 2.17975
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 2.17975
2.17975 < 2.326 indicating no statistical significance at 1% level
2.17975 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Hardness

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	11000	1
	3/19/2014	78000	38
	9/8/2014	25000	2
	3/17/2015	190000	49
	9/14/2015	45000	13
	3/17/2016	52000	24
	9/21/2016	42000	8
	3/24/2017	50000	22
	9/20/2017	41100	7
	3/27/2018	97200	40
	9/19/2018	43400	11
	3/11/2019	30000	4
	9/25/2019	64900	35
	3/18/2020	57500	33
	9/23/2020	46400	17
	3/17/2021	32900	5
	9/8/2021	28700	3
	3/15/2022	102000	41
	9/12/2022	72500	37
	3/13/2023	56500	30
	9/11/2023	39700	6
GWM-2	9/25/2013	57200	32
	3/18/2014	69000	36
	9/16/2014	59000	34
	3/18/2015	85000	39
	9/15/2015	54000	27
	3/16/2016	48000	19
	9/22/2016	46000	16
	3/24/2017	53000	26
	9/21/2017	45200	14
	3/28/2018	52300	25
	9/21/2018	54300	28
	3/12/2019	54600	29
	10/1/2019	56900	31
	3/18/2020	47500	18
	9/23/2020	42900	9
	3/17/2021	43000	10
	9/9/2021	44700	12
	3/15/2022	45700	15
	9/12/2022	48100	20
	3/13/2023	49100	21
	9/11/2023	50100	23
GWM-17S	11/14/2019	189000	47

3/26/2020	186000	46
9/29/2020	189000	48
3/16/2021	177000	44
9/14/2021	160000	42
3/18/2022	169000	43
9/13/2022	182000	45
3/14/2023	216000	51
9/12/2023	200000	50

The Wilcoxon Statistic is 371
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is 4.48456
The Standard Deviation adjusted for ties is 40.4722
The Z Score adjusted for ties is 4.48456
4.48456 > 2.326 indicating statistical significance at 1% level
4.48456 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Nitrate-N

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 14
Non detect rank is 7.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	390	20
	3/19/2014	520	25
	9/8/2014	500	23
	3/17/2015	560	26
	9/14/2015	1000	35
	3/17/2016	1200	40
	9/21/2016	800	31
	3/24/2017	620	28
	9/20/2017	280	15
	3/27/2018	400	21
	9/19/2018	280	16
	3/11/2019	400	22
	9/25/2019	380	19
	3/18/2020	640	29
	9/23/2020	500	24
	3/17/2021	800	32
	9/8/2021	880	33
	3/15/2022	1000	36
	9/12/2022	1000	37
	3/13/2023	1100	38
	9/11/2023	ND<790 J	7.5
GWM-2	9/25/2013	2650	55
	3/18/2014	3100	61
	9/16/2014	2900	58
	3/18/2015	3400	63
	9/15/2015	2900	59
	3/16/2016	2700	56
	9/22/2016	2400	54
	3/24/2017	2300	53
	9/21/2017	3100	62
	3/28/2018	2900	60
	9/21/2018	2700	57
	3/12/2019	1400	43
	10/1/2019	1400	44
	3/18/2020	1900	48
	9/23/2020	1300	42
	3/17/2021	2000	50
	9/9/2021	2000	51
	3/15/2022	1800	46
	9/12/2022	1800	47
	3/13/2023	1900	49
	9/11/2023	2200	52
GWM-4	9/18/2013	ND<200	7.5

3/20/2014	ND<200 U	7.5
9/9/2014	ND<200 U	7.5
3/16/2015	700	30
9/9/2015	ND<200 U	7.5
3/18/2016	600	27
9/20/2016	ND<200 U	7.5
3/23/2017	1400	45
9/18/2017	320	17
3/15/2018	1100	39
9/17/2018	ND<100 J	7.5
3/5/2019	1200	41
9/24/2019	ND<60 J	7.5
3/16/2020	ND<200 U	7.5
9/22/2020	ND<100 J	7.5
3/16/2021	920	34
9/14/2021	340	18
3/22/2022	ND<900 J	7.5
9/13/2022	ND<620 J	7.5
3/14/2023	ND<530 J	7.5
9/12/2023	ND<550 J	7.5

The Wilcoxon Statistic is 117.5
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -4.72402
The Standard Deviation adjusted for ties is 68.2102
The Z Score adjusted for ties is -4.75002
-4.72402 < 2.326 indicating no statistical significance at 1% level
-4.75002 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Nitrate-N

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 16
Non detect rank is 8.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	390	25
	3/19/2014	520	30
	9/8/2014	500	28
	3/17/2015	560	31
	9/14/2015	1000	39
	3/17/2016	1200	43
	9/21/2016	800	36
	3/24/2017	620	33
	9/20/2017	280	20
	3/27/2018	400	26
	9/19/2018	280	21
	3/11/2019	400	27
	9/25/2019	380	24
	3/18/2020	640	34
	9/23/2020	500	29
	3/17/2021	800	37
	9/8/2021	880	38
	3/15/2022	1000	40
	9/12/2022	1000	41
	3/13/2023	1100	42
	9/11/2023	ND<790 J	8.5
GWM-2	9/25/2013	2650	56
	3/18/2014	3100	62
	9/16/2014	2900	59
	3/18/2015	3400	64
	9/15/2015	2900	60
	3/16/2016	2700	57
	9/22/2016	2400	55
	3/24/2017	2300	54
	9/21/2017	3100	63
	3/28/2018	2900	61
	9/21/2018	2700	58
	3/12/2019	1400	45
	10/1/2019	1400	46
	3/18/2020	1900	49
	9/23/2020	1300	44
	3/17/2021	2000	51
	9/9/2021	2000	52
	3/15/2022	1800	47
	9/12/2022	1800	48
	3/13/2023	1900	50
	9/11/2023	2200	53
GWM-5A	9/19/2013	660	35

12/5/2013	580	32
3/19/2014	300	22
9/4/2014	300	23
3/17/2015	220	17
9/11/2015	240	19
3/15/2016	220	18
9/21/2016	ND<180 J	8.5
3/28/2017	ND<160 J	8.5
9/19/2017	ND<120 J	8.5
3/26/2018	ND<100 J	8.5
9/18/2018	ND<160 J	8.5
3/4/2019	ND<80 J	8.5
9/23/2019	ND<200 U	8.5
3/19/2020	ND<100 J	8.5
9/23/2020	ND<80 J	8.5
3/19/2021	ND<80 J	8.5
9/15/2021	ND<80 J	8.5
3/16/2022	ND<1000	8.5
9/14/2022	ND<1000	8.5
3/16/2023	ND<1000	8.5
9/13/2023	ND<1000	8.5

The Wilcoxon Statistic is 40.5
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is -5.965
The Standard Deviation adjusted for ties is 70.1932
The Z Score adjusted for ties is -6.01198
-5.965 < 2.326 indicating no statistical significance at 1% level
-6.01198 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Nitrate-N

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 22
Non detect rank is 11.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	390	26
	3/19/2014	520	31
	9/8/2014	500	29
	3/17/2015	560	32
	9/14/2015	1000	38
	3/17/2016	1200	42
	9/21/2016	800	35
	3/24/2017	620	33
	9/20/2017	280	23
	3/27/2018	400	27
	9/19/2018	280	24
	3/11/2019	400	28
	9/25/2019	380	25
	3/18/2020	640	34
	9/23/2020	500	30
	3/17/2021	800	36
	9/8/2021	880	37
	3/15/2022	1000	39
	9/12/2022	1000	40
	3/13/2023	1100	41
	9/11/2023	ND<790 J	11.5
GWM-2	9/25/2013	2650	55
	3/18/2014	3100	61
	9/16/2014	2900	58
	3/18/2015	3400	63
	9/15/2015	2900	59
	3/16/2016	2700	56
	9/22/2016	2400	54
	3/24/2017	2300	53
	9/21/2017	3100	62
	3/28/2018	2900	60
	9/21/2018	2700	57
	3/12/2019	1400	44
	10/1/2019	1400	45
	3/18/2020	1900	48
	9/23/2020	1300	43
	3/17/2021	2000	50
	9/9/2021	2000	51
	3/15/2022	1800	46
	9/12/2022	1800	47
	3/13/2023	1900	49
	9/11/2023	2200	52
GWM-14	9/24/2013	ND<200	11.5

3/21/2014	ND<200 U	11.5
9/8/2014	ND<200 U	11.5
3/19/2015	ND<200 U	11.5
9/14/2015	ND<200 U	11.5
3/21/2016	ND<200 U	11.5
9/23/2016	ND<200 U	11.5
3/27/2017	ND<200 U	11.5
9/20/2017	ND<200 U	11.5
3/16/2018	ND<200 U	11.5
9/20/2018	ND<200 U	11.5
3/5/2019	ND<200 U	11.5
9/25/2019	ND<200 U	11.5
3/25/2020	ND<200 U	11.5
9/28/2020	ND<200 U	11.5
3/18/2021	ND<200 U	11.5
9/15/2021	ND<200 U	11.5
3/22/2022	ND<1000	11.5
9/14/2022	ND<1000	11.5
3/16/2023	ND<1000	11.5
9/13/2023	ND<1000	11.5

The Wilcoxon Statistic is 10.5
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -6.28411
The Standard Deviation adjusted for ties is 67.1122
The Z Score adjusted for ties is -6.42208
-6.28411 < 2.326 indicating no statistical significance at 1% level
-6.42208 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Nitrate-N

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 20
Non detect rank is 10.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	390	26
	3/19/2014	520	31
	9/8/2014	500	29
	3/17/2015	560	32
	9/14/2015	1000	38
	3/17/2016	1200	42
	9/21/2016	800	35
	3/24/2017	620	33
	9/20/2017	280	22
	3/27/2018	400	27
	9/19/2018	280	23
	3/11/2019	400	28
	9/25/2019	380	25
	3/18/2020	640	34
	9/23/2020	500	30
	3/17/2021	800	36
	9/8/2021	880	37
	3/15/2022	1000	39
	9/12/2022	1000	40
	3/13/2023	1100	41
	9/11/2023	ND<790 J	10.5
GWM-2	9/25/2013	2650	55
	3/18/2014	3100	61
	9/16/2014	2900	58
	3/18/2015	3400	63
	9/15/2015	2900	59
	3/16/2016	2700	56
	9/22/2016	2400	54
	3/24/2017	2300	53
	9/21/2017	3100	62
	3/28/2018	2900	60
	9/21/2018	2700	57
	3/12/2019	1400	44
	10/1/2019	1400	45
	3/18/2020	1900	48
	9/23/2020	1300	43
	3/17/2021	2000	50
	9/9/2021	2000	51
	3/15/2022	1800	46
	9/12/2022	1800	47
	3/13/2023	1900	49
	9/11/2023	2200	52
GWM-6	9/24/2013	140	21

3/21/2014	280	24
9/17/2014	ND<200 U	10.5
3/19/2015	ND<200 U	10.5
9/15/2015	ND<200 U	10.5
3/21/2016	ND<60 J	10.5
9/26/2016	ND<200 U	10.5
3/31/2017	ND<200 U	10.5
9/21/2017	ND<200 U	10.5
3/30/2018	ND<200 U	10.5
9/26/2018	ND<200 U	10.5
3/13/2019	ND<200 U	10.5
10/3/2019	ND<200 U	10.5
4/3/2020	ND<200 U	10.5
9/30/2020	ND<200 U	10.5
3/22/2021	ND<200 U	10.5
9/16/2021	ND<40 J	10.5
3/24/2022	ND<1000	10.5
9/16/2022	ND<1000	10.5
3/17/2023	ND<1000	10.5
9/14/2023	ND<1000	10.5

The Wilcoxon Statistic is 13.5
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -6.24037
The Standard Deviation adjusted for ties is 67.4821
The Z Score adjusted for ties is -6.34242
-6.24037 < 2.326 indicating no statistical significance at 1% level
-6.34242 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Nitrate-N

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 1
Non detect rank is 1

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	390	5
	3/19/2014	520	10
	9/8/2014	500	8
	3/17/2015	560	11
	9/14/2015	1000	17
	3/17/2016	1200	21
	9/21/2016	800	14
	3/24/2017	620	12
	9/20/2017	280	2
	3/27/2018	400	6
	9/19/2018	280	3
	3/11/2019	400	7
	9/25/2019	380	4
	3/18/2020	640	13
	9/23/2020	500	9
	3/17/2021	800	15
	9/8/2021	880	16
	3/15/2022	1000	18
	9/12/2022	1000	19
	3/13/2023	1100	20
	9/11/2023	ND<790 J	1
GWM-2	9/25/2013	2650	44
	3/18/2014	3100	54
	9/16/2014	2900	50
	3/18/2015	3400	61
	9/15/2015	2900	51
	3/16/2016	2700	46
	9/22/2016	2400	40
	3/24/2017	2300	39
	9/21/2017	3100	55
	3/28/2018	2900	52
	9/21/2018	2700	47
	3/12/2019	1400	23
	10/1/2019	1400	24
	3/18/2020	1900	31
	9/23/2020	1300	22
	3/17/2021	2000	33
	9/9/2021	2000	34
	3/15/2022	1800	27
	9/12/2022	1800	28
	3/13/2023	1900	32
	9/11/2023	2200	37
GWM-3	9/25/2013	2690	45

3/18/2014	3100	56
9/16/2014	3600	62
3/18/2015	3300	59
9/15/2015	2900	53
3/16/2016	2600	43
9/22/2016	2700	48
3/29/2017	2500	42
9/21/2017	2700	49
3/28/2018	3200	58
9/20/2018	3300	60
3/12/2019	4000	63
10/1/2019	3100	57
3/18/2020	2000	35
9/24/2020	1500	25
3/17/2021	1800	29
9/9/2021	2200	38
3/15/2022	1700	26
9/16/2022	1800	30
3/15/2023	2100	36
9/11/2023	2400	41

The Wilcoxon Statistic is 724
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 4.11893
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 4.11893
4.11893 > 2.326 indicating statistical significance at 1% level
4.11893 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Nitrate-N

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 10
Non detect rank is 5.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	390	14
	3/19/2014	520	19
	9/8/2014	500	17
	3/17/2015	560	20
	9/14/2015	1000	26
	3/17/2016	1200	30
	9/21/2016	800	23
	3/24/2017	620	21
	9/20/2017	280	11
	3/27/2018	400	15
	9/19/2018	280	12
	3/11/2019	400	16
	9/25/2019	380	13
	3/18/2020	640	22
	9/23/2020	500	18
	3/17/2021	800	24
	9/8/2021	880	25
	3/15/2022	1000	27
	9/12/2022	1000	28
	3/13/2023	1100	29
	9/11/2023	ND<790 J	5.5
GWM-2	9/25/2013	2650	43
	3/18/2014	3100	49
	9/16/2014	2900	46
	3/18/2015	3400	51
	9/15/2015	2900	47
	3/16/2016	2700	44
	9/22/2016	2400	42
	3/24/2017	2300	41
	9/21/2017	3100	50
	3/28/2018	2900	48
	9/21/2018	2700	45
	3/12/2019	1400	32
	10/1/2019	1400	33
	3/18/2020	1900	36
	9/23/2020	1300	31
	3/17/2021	2000	38
	9/9/2021	2000	39
	3/15/2022	1800	34
	9/12/2022	1800	35
	3/13/2023	1900	37
	9/11/2023	2200	40
GWM-17S	11/14/2019	ND<200 U	5.5

3/26/2020	ND<200 U	5.5
9/29/2020	ND<200 U	5.5
3/16/2021	ND<200 U	5.5
9/14/2021	ND<200 U	5.5
3/18/2022	ND<1000	5.5
9/13/2022	ND<1000	5.5
3/14/2023	ND<1000	5.5
9/12/2023	ND<1000	5.5

The Wilcoxon Statistic is 4.5
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is -4.57104
The Standard Deviation adjusted for ties is 40.3208
The Z Score adjusted for ties is -4.5882
-4.57104 < 2.326 indicating no statistical significance at 1% level
-4.5882 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: pH

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	5.18	30
	3/19/2014	5.87	41
	9/8/2014	5.22	33
	3/17/2015	5.85	40
	9/14/2015	5.16	28
	3/17/2016	5.41	38
	9/21/2016	4.89	23
	3/24/2017	5.36	37
	9/20/2017	6.09	42
	3/27/2018	6.37	48
	9/19/2018	5.8	39
	3/11/2019	5.21	31
	9/25/2019	4.93	24
	3/18/2020	5.21	32
	9/23/2020	5.12	27
	3/17/2021	5.07	25
	9/8/2021	5.28	34
	3/15/2022	5.29	35
	9/12/2022	4.83	22
	3/13/2023	5.1	26
	9/11/2023	5.17	29
GWM-2	9/25/2013	4.27	1
	3/18/2014	4.65	15
	9/16/2014	4.68	17
	3/18/2015	4.52	5
	9/15/2015	4.58	11
	3/16/2016	4.74	20
	9/22/2016	4.47	4
	3/24/2017	4.55	10
	9/21/2017	4.74	21
	3/28/2018	4.53	8
	9/21/2018	4.58	12
	3/12/2019	4.52	6
	10/1/2019	4.52	7
	3/18/2020	4.65	16
	9/23/2020	4.37	3
	3/17/2021	4.68	18
	9/9/2021	4.28	2
	3/15/2022	4.72	19
	9/12/2022	4.54	9
	3/13/2023	4.6	14
	9/11/2023	4.59	13
GWM-4	9/18/2013	5.29	36

3/20/2014	6.24	44
9/9/2014	6.41	51
3/16/2015	6.28	47
9/9/2015	6.26	46
3/18/2016	6.39	50
9/20/2016	6.44	52
3/23/2017	6.53	56
9/18/2017	6.22	43
3/15/2018	6.57	57
9/17/2018	6.62	60
3/5/2019	6.7	63
9/24/2019	6.38	49
3/16/2020	6.68	62
9/22/2020	6.49	54
3/16/2021	6.67	61
9/14/2021	6.57	58
3/22/2022	6.57	59
9/13/2022	6.25	45
3/14/2023	6.45	53
9/12/2023	6.5	55

The Wilcoxon Statistic is 870
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 6.24766
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 6.24766
6.24766 > 2.326 indicating statistical significance at 1% level
6.24766 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: pH

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	5.18	30
	3/19/2014	5.87	51
	9/8/2014	5.22	33
	3/17/2015	5.85	50
	9/14/2015	5.16	28
	3/17/2016	5.41	38
	9/21/2016	4.89	23
	3/24/2017	5.36	36
	9/20/2017	6.09	60
	3/27/2018	6.37	64
	9/19/2018	5.8	46
	3/11/2019	5.21	31
	9/25/2019	4.93	24
	3/18/2020	5.21	32
	9/23/2020	5.12	27
	3/17/2021	5.07	25
	9/8/2021	5.28	34
	3/15/2022	5.29	35
	9/12/2022	4.83	22
	3/13/2023	5.1	26
	9/11/2023	5.17	29
GWM-2	9/25/2013	4.27	1
	3/18/2014	4.65	15
	9/16/2014	4.68	17
	3/18/2015	4.52	5
	9/15/2015	4.58	11
	3/16/2016	4.74	20
	9/22/2016	4.47	4
	3/24/2017	4.55	10
	9/21/2017	4.74	21
	3/28/2018	4.53	8
	9/21/2018	4.58	12
	3/12/2019	4.52	6
	10/1/2019	4.52	7
	3/18/2020	4.65	16
	9/23/2020	4.37	3
	3/17/2021	4.68	18
	9/9/2021	4.28	2
	3/15/2022	4.72	19
	9/12/2022	4.54	9
	3/13/2023	4.6	14
	9/11/2023	4.59	13
GWM-5A	9/19/2013	5.37	37

12/5/2013	6.11	61
3/19/2014	6.33	63
9/4/2014	5.98	55
3/17/2015	6.02	56
9/11/2015	5.8	47
3/15/2016	6.06	58
9/21/2016	5.84	49
3/28/2017	5.93	53
9/19/2017	5.79	45
3/26/2018	5.96	54
9/18/2018	6.03	57
3/4/2019	6.11	62
9/23/2019	5.81	48
3/19/2020	5.72	44
9/23/2020	5.66	42
3/19/2021	6.08	59
9/15/2021	5.69	43
3/16/2022	5.61	41
9/14/2022	5.53	40
3/16/2023	5.44	39
9/13/2023	5.9	52

The Wilcoxon Statistic is 852
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is 5.50561
The Standard Deviation adjusted for ties is 70.746
The Z Score adjusted for ties is 5.50561
5.50561 > 2.326 indicating statistical significance at 1% level
5.50561 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: pH

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	5.18	30
	3/19/2014	5.87	41
	9/8/2014	5.22	33
	3/17/2015	5.85	40
	9/14/2015	5.16	28
	3/17/2016	5.41	37
	9/21/2016	4.89	23
	3/24/2017	5.36	36
	9/20/2017	6.09	45
	3/27/2018	6.37	62
	9/19/2018	5.8	39
	3/11/2019	5.21	31
	9/25/2019	4.93	24
	3/18/2020	5.21	32
	9/23/2020	5.12	27
	3/17/2021	5.07	25
	9/8/2021	5.28	34
	3/15/2022	5.29	35
	9/12/2022	4.83	22
	3/13/2023	5.1	26
	9/11/2023	5.17	29
GWM-2	9/25/2013	4.27	1
	3/18/2014	4.65	15
	9/16/2014	4.68	17
	3/18/2015	4.52	5
	9/15/2015	4.58	11
	3/16/2016	4.74	20
	9/22/2016	4.47	4
	3/24/2017	4.55	10
	9/21/2017	4.74	21
	3/28/2018	4.53	8
	9/21/2018	4.58	12
	3/12/2019	4.52	6
	10/1/2019	4.52	7
	3/18/2020	4.65	16
	9/23/2020	4.37	3
	3/17/2021	4.68	18
	9/9/2021	4.28	2
	3/15/2022	4.72	19
	9/12/2022	4.54	9
	3/13/2023	4.6	14
	9/11/2023	4.59	13
GWM-14	9/24/2013	6.08	44

3/21/2014	6.1	48
9/8/2014	6.18	54
3/19/2015	6.31	60
9/14/2015	5.88	42
3/21/2016	6.22	58
9/23/2016	6.13	53
3/27/2017	6.1	49
9/20/2017	6.2	57
3/16/2018	6.31	61
9/20/2018	6.19	56
3/5/2019	6.43	63
9/25/2019	6.26	59
3/25/2020	6.1	50
9/28/2020	6.1	51
3/18/2021	6.18	55
9/15/2021	6.09	46
3/22/2022	6.09	47
9/14/2022	5.78	38
3/16/2023	6.04	43
9/13/2023	6.1	52

The Wilcoxon Statistic is 855
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 6.02895
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 6.02895
6.02895 > 2.326 indicating statistical significance at 1% level
6.02895 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: pH

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	5.18	30
	3/19/2014	5.87	42
	9/8/2014	5.22	33
	3/17/2015	5.85	41
	9/14/2015	5.16	28
	3/17/2016	5.41	37
	9/21/2016	4.89	23
	3/24/2017	5.36	36
	9/20/2017	6.09	46
	3/27/2018	6.37	54
	9/19/2018	5.8	39
	3/11/2019	5.21	31
	9/25/2019	4.93	24
	3/18/2020	5.21	32
	9/23/2020	5.12	27
	3/17/2021	5.07	25
	9/8/2021	5.28	34
	3/15/2022	5.29	35
	9/12/2022	4.83	22
	3/13/2023	5.1	26
	9/11/2023	5.17	29
GWM-2	9/25/2013	4.27	1
	3/18/2014	4.65	15
	9/16/2014	4.68	17
	3/18/2015	4.52	5
	9/15/2015	4.58	11
	3/16/2016	4.74	20
	9/22/2016	4.47	4
	3/24/2017	4.55	10
	9/21/2017	4.74	21
	3/28/2018	4.53	8
	9/21/2018	4.58	12
	3/12/2019	4.52	6
	10/1/2019	4.52	7
	3/18/2020	4.65	16
	9/23/2020	4.37	3
	3/17/2021	4.68	18
	9/9/2021	4.28	2
	3/15/2022	4.72	19
	9/12/2022	4.54	9
	3/13/2023	4.6	14
	9/11/2023	4.59	13
GWM-6	9/24/2013	5.9	43

3/21/2014	5.82	40
9/17/2014	6.09	47
3/19/2015	6.1	49
9/15/2015	5.79	38
3/21/2016	6.09	48
9/26/2016	6.22	52
3/31/2017	6.18	50
9/21/2017	5.97	44
3/30/2018	6.47	58
9/26/2018	6.56	59
3/13/2019	6.65	63
10/3/2019	6.62	62
4/3/2020	6.56	60
9/30/2020	6.4	56
3/22/2021	6.58	61
9/16/2021	6.38	55
3/24/2022	6.43	57
9/16/2022	6.05	45
3/17/2023	6.18	51
9/14/2023	6.29	53

The Wilcoxon Statistic is 860
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 6.10185
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 6.10185
6.10185 > 2.326 indicating statistical significance at 1% level
6.10185 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: pH

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	5.18	41
	3/19/2014	5.87	61
	9/8/2014	5.22	46
	3/17/2015	5.85	60
	9/14/2015	5.16	38
	3/17/2016	5.41	58
	9/21/2016	4.89	25
	3/24/2017	5.36	57
	9/20/2017	6.09	62
	3/27/2018	6.37	63
	9/19/2018	5.8	59
	3/11/2019	5.21	44
	9/25/2019	4.93	26
	3/18/2020	5.21	45
	9/23/2020	5.12	34
	3/17/2021	5.07	31
	9/8/2021	5.28	53
	3/15/2022	5.29	55
	9/12/2022	4.83	24
	3/13/2023	5.1	33
	9/11/2023	5.17	39
GWM-2	9/25/2013	4.27	1
	3/18/2014	4.65	15
	9/16/2014	4.68	17
	3/18/2015	4.52	5
	9/15/2015	4.58	11
	3/16/2016	4.74	22
	9/22/2016	4.47	4
	3/24/2017	4.55	10
	9/21/2017	4.74	23
	3/28/2018	4.53	8
	9/21/2018	4.58	12
	3/12/2019	4.52	6
	10/1/2019	4.52	7
	3/18/2020	4.65	16
	9/23/2020	4.37	3
	3/17/2021	4.68	18
	9/9/2021	4.28	2
	3/15/2022	4.72	19
	9/12/2022	4.54	9
	3/13/2023	4.6	14
	9/11/2023	4.59	13
GWM-3	9/25/2013	4.73	21

3/18/2014	5.12	35
9/16/2014	5.23	48
3/18/2015	5.07	32
9/15/2015	5.02	29
3/16/2016	5.25	51
9/22/2016	5.14	36
3/29/2017	5.01	28
9/21/2017	5.19	43
3/28/2018	5.33	56
9/20/2018	5.24	49
3/12/2019	5.22	47
10/1/2019	5.18	42
3/18/2020	5.24	50
9/24/2020	5.28	54
3/17/2021	5.17	40
9/9/2021	4.99	27
3/15/2022	5.26	52
9/16/2022	4.72	20
3/15/2023	5.04	30
9/11/2023	5.14	37

The Wilcoxon Statistic is 596
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 2.25266
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 2.25266
2.25266 < 2.326 indicating no statistical significance at 1% level
2.25266 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: pH

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	5.18	30
	3/19/2014	5.87	40
	9/8/2014	5.22	33
	3/17/2015	5.85	39
	9/14/2015	5.16	28
	3/17/2016	5.41	37
	9/21/2016	4.89	23
	3/24/2017	5.36	36
	9/20/2017	6.09	44
	3/27/2018	6.37	50
	9/19/2018	5.8	38
	3/11/2019	5.21	31
	9/25/2019	4.93	24
	3/18/2020	5.21	32
	9/23/2020	5.12	27
	3/17/2021	5.07	25
	9/8/2021	5.28	34
	3/15/2022	5.29	35
	9/12/2022	4.83	22
	3/13/2023	5.1	26
	9/11/2023	5.17	29
GWM-2	9/25/2013	4.27	1
	3/18/2014	4.65	15
	9/16/2014	4.68	17
	3/18/2015	4.52	5
	9/15/2015	4.58	11
	3/16/2016	4.74	20
	9/22/2016	4.47	4
	3/24/2017	4.55	10
	9/21/2017	4.74	21
	3/28/2018	4.53	8
	9/21/2018	4.58	12
	3/12/2019	4.52	6
	10/1/2019	4.52	7
	3/18/2020	4.65	16
	9/23/2020	4.37	3
	3/17/2021	4.68	18
	9/9/2021	4.28	2
	3/15/2022	4.72	19
	9/12/2022	4.54	9
	3/13/2023	4.6	14
	9/11/2023	4.59	13
GWM-17S	11/14/2019	6.41	51

3/26/2020	6.08	43
9/29/2020	6.26	47
3/16/2021	6.35	49
9/14/2021	6.22	45
3/18/2022	6.26	48
9/13/2022	5.96	41
3/14/2023	6.07	42
9/12/2023	6.22	46

The Wilcoxon Statistic is 367
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is 4.38573
The Standard Deviation adjusted for ties is 40.4722
The Z Score adjusted for ties is 4.38573
4.38573 > 2.326 indicating statistical significance at 1% level
4.38573 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Specific Conductance

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	171	1
	3/19/2014	220	4
	9/8/2014	227	7
	3/17/2015	786	62
	9/14/2015	431	34
	3/17/2016	311	27
	9/21/2016	332	31
	3/24/2017	281	21
	9/20/2017	295	26
	3/27/2018	494	36
	9/19/2018	330	30
	3/11/2019	263	16
	9/25/2019	520	37
	3/18/2020	471	35
	9/23/2020	321	28
	3/17/2021	289	24
	9/8/2021	221	5
	3/15/2022	833	63
	9/12/2022	756	60
	3/13/2023	751.49	59
	9/11/2023	573.01	40
GWM-2	9/25/2013	355	32
	3/18/2014	283	22
	9/16/2014	286	23
	3/18/2015	273	19
	9/15/2015	258	15
	3/16/2016	255	13
	9/22/2016	242	9
	3/24/2017	247	11
	9/21/2017	244	10
	3/28/2018	275	20
	9/21/2018	294	25
	3/12/2019	271	18
	10/1/2019	231	8
	3/18/2020	263	17
	9/23/2020	196.4	2
	3/17/2021	221	6
	9/9/2021	201	3
	3/15/2022	256	14
	9/12/2022	252.9	12
	3/13/2023	356.68	33
	9/11/2023	327.18	29
GWM-4	9/18/2013	735	56

3/20/2014	659	49
9/9/2014	591	42
3/16/2015	561	39
9/9/2015	556	38
3/18/2016	584	41
9/20/2016	692	54
3/23/2017	641	46
9/18/2017	667	51
3/15/2018	613	43
9/17/2018	678	52
3/5/2019	621	44
9/24/2019	643	47
3/16/2020	627	45
9/22/2020	650	48
3/16/2021	663	50
9/14/2021	743	57
3/22/2022	687	53
9/13/2022	707	55
3/14/2023	759.99	61
9/12/2023	743.17	58

The Wilcoxon Statistic is 798
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 5.19788
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 5.19788
5.19788 > 2.326 indicating statistical significance at 1% level
5.19788 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Specific Conductance

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	171	1
	3/19/2014	220	4
	9/8/2014	227	7
	3/17/2015	786	63
	9/14/2015	431	50
	3/17/2016	311	30
	9/21/2016	332	37
	3/24/2017	281	22
	9/20/2017	295	27
	3/27/2018	494	57
	9/19/2018	330	36
	3/11/2019	263	16
	9/25/2019	520	59
	3/18/2020	471	54
	9/23/2020	321	31
	3/17/2021	289	25
	9/8/2021	221	5
	3/15/2022	833	64
	9/12/2022	756	62
	3/13/2023	751.49	61
	9/11/2023	573.01	60
GWM-2	9/25/2013	355	41
	3/18/2014	283	23
	9/16/2014	286	24
	3/18/2015	273	20
	9/15/2015	258	15
	3/16/2016	255	13
	9/22/2016	242	9
	3/24/2017	247	11
	9/21/2017	244	10
	3/28/2018	275	21
	9/21/2018	294	26
	3/12/2019	271	19
	10/1/2019	231	8
	3/18/2020	263	17
	9/23/2020	196.4	2
	3/17/2021	221	6
	9/9/2021	201	3
	3/15/2022	256	14
	9/12/2022	252.9	12
	3/13/2023	356.68	42
	9/11/2023	327.18	35
GWM-5A	9/19/2013	443	52

12/5/2013	477	55
3/19/2014	267	18
9/4/2014	394	49
3/17/2015	376	46
9/11/2015	380	47
3/15/2016	373	45
9/21/2016	371	44
3/28/2017	332	38
9/19/2017	325	33
3/26/2018	306	28
9/18/2018	494	58
3/4/2019	465	53
9/23/2019	438	51
3/19/2020	366	43
9/23/2020	326	34
3/19/2021	390	48
9/15/2021	341	40
3/16/2022	310	29
9/14/2022	321.8	32
3/16/2023	335.3	39
9/13/2023	488.96	56

The Wilcoxon Statistic is 685
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is 3.14505
The Standard Deviation adjusted for ties is 70.746
The Z Score adjusted for ties is 3.14505
3.14505 > 2.326 indicating statistical significance at 1% level
3.14505 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Specific Conductance

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	171	1
	3/19/2014	220	4
	9/8/2014	227	7
	3/17/2015	786	62
	9/14/2015	431	51
	3/17/2016	311	27
	9/21/2016	332	31
	3/24/2017	281	21
	9/20/2017	295	26
	3/27/2018	494	55
	9/19/2018	330	30
	3/11/2019	263	16
	9/25/2019	520	56
	3/18/2020	471	53
	9/23/2020	321	28
	3/17/2021	289	24
	9/8/2021	221	5
	3/15/2022	833	63
	9/12/2022	756	61
	3/13/2023	751.49	60
	9/11/2023	573.01	59
GWM-2	9/25/2013	355	34
	3/18/2014	283	22
	9/16/2014	286	23
	3/18/2015	273	19
	9/15/2015	258	15
	3/16/2016	255	13
	9/22/2016	242	9
	3/24/2017	247	11
	9/21/2017	244	10
	3/28/2018	275	20
	9/21/2018	294	25
	3/12/2019	271	18
	10/1/2019	231	8
	3/18/2020	263	17
	9/23/2020	196.4	2
	3/17/2021	221	6
	9/9/2021	201	3
	3/15/2022	256	14
	9/12/2022	252.9	12
	3/13/2023	356.68	35
	9/11/2023	327.18	29
GWM-14	9/24/2013	561	58

3/21/2014	422	50
9/8/2014	438	52
3/19/2015	385	41
9/14/2015	395	45
3/21/2016	391	44
9/23/2016	405	47
3/27/2017	404	46
9/20/2017	410	48
3/16/2018	387	42
9/20/2018	378	40
3/5/2019	346	32
9/25/2019	373	38
3/25/2020	352	33
9/28/2020	358	36
3/18/2021	375	39
9/15/2021	419	49
3/22/2022	388	43
9/14/2022	360.8	37
3/16/2023	535.45	57
9/13/2023	475.52	54

The Wilcoxon Statistic is 700
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 3.76901
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 3.76901
3.76901 > 2.326 indicating statistical significance at 1% level
3.76901 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Specific Conductance

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	171	1
	3/19/2014	220	7
	9/8/2014	227	10
	3/17/2015	786	62
	9/14/2015	431	46
	3/17/2016	311	35
	9/21/2016	332	40
	3/24/2017	281	28
	9/20/2017	295	34
	3/27/2018	494	52
	9/19/2018	330	39
	3/11/2019	263	23
	9/25/2019	520	57
	3/18/2020	471	48
	9/23/2020	321	36
	3/17/2021	289	32
	9/8/2021	221	8
	3/15/2022	833	63
	9/12/2022	756	61
	3/13/2023	751.49	60
	9/11/2023	573.01	58
GWM-2	9/25/2013	355	42
	3/18/2014	283	29
	9/16/2014	286	31
	3/18/2015	273	26
	9/15/2015	258	22
	3/16/2016	255	19
	9/22/2016	242	13
	3/24/2017	247	16
	9/21/2017	244	15
	3/28/2018	275	27
	9/21/2018	294	33
	3/12/2019	271	25
	10/1/2019	231	11
	3/18/2020	263	24
	9/23/2020	196.4	2
	3/17/2021	221	9
	9/9/2021	201	4
	3/15/2022	256	21
	9/12/2022	252.9	18
	3/13/2023	356.68	43
	9/11/2023	327.18	38
GWM-6	9/24/2013	285	30

3/21/2014	198.9	3
9/17/2014	204	5
3/19/2015	231	12
9/15/2015	242	14
3/21/2016	255	20
9/26/2016	219	6
3/31/2017	252	17
9/21/2017	334	41
3/30/2018	410	45
9/26/2018	495	53
3/13/2019	514	55
10/3/2019	435	47
4/3/2020	321	37
9/30/2020	405	44
3/22/2021	518	56
9/16/2021	484	50
3/24/2022	508	54
9/16/2022	484.6	51
3/17/2023	614.9	59
9/14/2023	483.99	49

The Wilcoxon Statistic is 517
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 1.10081
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 1.10081
1.10081 < 2.326 indicating no statistical significance at 1% level
1.10081 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Specific Conductance

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	171	4
	3/19/2014	220	15
	9/8/2014	227	18
	3/17/2015	786	62
	9/14/2015	431	55
	3/17/2016	311	48
	9/21/2016	332	52
	3/24/2017	281	41
	9/20/2017	295	47
	3/27/2018	494	57
	9/19/2018	330	51
	3/11/2019	263	36
	9/25/2019	520	58
	3/18/2020	471	56
	9/23/2020	321	49
	3/17/2021	289	45
	9/8/2021	221	16
	3/15/2022	833	63
	9/12/2022	756	61
	3/13/2023	751.49	60
	9/11/2023	573.01	59
GWM-2	9/25/2013	355	53
	3/18/2014	283	42
	9/16/2014	286	43
	3/18/2015	273	39
	9/15/2015	258	35
	3/16/2016	255	32
	9/22/2016	242	25
	3/24/2017	247	29
	9/21/2017	244	26
	3/28/2018	275	40
	9/21/2018	294	46
	3/12/2019	271	38
	10/1/2019	231	20
	3/18/2020	263	37
	9/23/2020	196.4	7
	3/17/2021	221	17
	9/9/2021	201	9
	3/15/2022	256	34
	9/12/2022	252.9	31
	3/13/2023	356.68	54
	9/11/2023	327.18	50
GWM-3	9/25/2013	287	44

3/18/2014	205	10
9/16/2014	193.4	6
3/18/2015	216	13
9/15/2015	213	11
3/16/2016	246	28
9/22/2016	251	30
3/29/2017	255	33
9/21/2017	218	14
3/28/2018	236	23
9/20/2018	232	21
3/12/2019	238	24
10/1/2019	126.4	1
3/18/2020	244	27
9/24/2020	191.7	5
3/17/2021	200	8
9/9/2021	214	12
3/15/2022	227	19
9/16/2022	156.3	2
3/15/2023	165.68	3
9/11/2023	232.91	22

The Wilcoxon Statistic is 125
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -4.61466
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is -4.61466
-4.61466 < 2.326 indicating no statistical significance at 1% level
-4.61466 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Specific Conductance

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	171	2
	3/19/2014	220	5
	9/8/2014	227	8
	3/17/2015	786	48
	9/14/2015	431	35
	3/17/2016	311	28
	9/21/2016	332	32
	3/24/2017	281	22
	9/20/2017	295	27
	3/27/2018	494	37
	9/19/2018	330	31
	3/11/2019	263	17
	9/25/2019	520	38
	3/18/2020	471	36
	9/23/2020	321	29
	3/17/2021	289	25
	9/8/2021	221	6
	3/15/2022	833	50
	9/12/2022	756	47
	3/13/2023	751.49	46
	9/11/2023	573.01	40
GWM-2	9/25/2013	355	33
	3/18/2014	283	23
	9/16/2014	286	24
	3/18/2015	273	20
	9/15/2015	258	16
	3/16/2016	255	14
	9/22/2016	242	10
	3/24/2017	247	12
	9/21/2017	244	11
	3/28/2018	275	21
	9/21/2018	294	26
	3/12/2019	271	19
	10/1/2019	231	9
	3/18/2020	263	18
	9/23/2020	196.4	3
	3/17/2021	221	7
	9/9/2021	201	4
	3/15/2022	256	15
	9/12/2022	252.9	13
	3/13/2023	356.68	34
	9/11/2023	327.18	30
GWM-17S	11/14/2019	545	39

3/26/2020	6.23	1
9/29/2020	641	41
3/16/2021	672	42
9/14/2021	742	45
3/18/2022	673	43
9/13/2022	709	44
3/14/2023	992.44	51
9/12/2023	812.63	49

The Wilcoxon Statistic is 310
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is 2.97735
The Standard Deviation adjusted for ties is 40.4722
The Z Score adjusted for ties is 2.97735
2.97735 > 2.326 indicating statistical significance at 1% level
2.97735 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Sulfate

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	17730	30
	3/19/2014	12400	11
	9/8/2014	9200	7
	3/17/2015	15400	19
	9/14/2015	21800	37
	3/17/2016	31600	53
	9/21/2016	17500	29
	3/24/2017	22800	38
	9/20/2017	27300	40
	3/27/2018	27500	42
	9/19/2018	23200	39
	3/11/2019	15600	21
	9/25/2019	8300	4
	3/18/2020	9500	8
	9/23/2020	8600	5
	3/17/2021	9700	9
	9/8/2021	10400	10
	3/15/2022	6600	3
	9/12/2022	5700	1
	3/13/2023	6400	2
	9/11/2023	8800	6
GWM-2	9/25/2013	14050	14
	3/18/2014	13300	12
	9/16/2014	20200	31
	3/18/2015	13500	13
	9/15/2015	15400	20
	3/16/2016	20500	32
	9/22/2016	16400	25
	3/24/2017	15300	17
	9/21/2017	15900	22
	3/28/2018	14400	15
	9/21/2018	14700	16
	3/12/2019	16200	23
	10/1/2019	16600	27
	3/18/2020	21100	33
	9/23/2020	21600	36
	3/17/2021	21100	34
	9/9/2021	21300	35
	3/15/2022	15300	18
	9/12/2022	16500	26
	3/13/2023	17100	28
	9/11/2023	16300	24
GWM-4	9/18/2013	31230	50

3/20/2014	32500	57
9/9/2014	32500	58
3/16/2015	27400	41
9/9/2015	30400	49
3/18/2016	29400	47
9/20/2016	34500	63
3/23/2017	32900	61
9/18/2017	32300	56
3/15/2018	29000	45
9/17/2018	33400	62
3/5/2019	31800	54
9/24/2019	32800	60
3/16/2020	28000	43
9/22/2020	31900	55
3/16/2021	31400	51
9/14/2021	32500	59
3/22/2022	31500	52
9/13/2022	29600	48
3/14/2023	29200	46
9/12/2023	28700	44

The Wilcoxon Statistic is 870
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 6.24766
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 6.24766
6.24766 > 2.326 indicating statistical significance at 1% level
6.24766 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Sulfate

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	17730	30
	3/19/2014	12400	11
	9/8/2014	9200	7
	3/17/2015	15400	19
	9/14/2015	21800	40
	3/17/2016	31600	63
	9/21/2016	17500	29
	3/24/2017	22800	44
	9/20/2017	27300	53
	3/27/2018	27500	54
	9/19/2018	23200	46
	3/11/2019	15600	21
	9/25/2019	8300	4
	3/18/2020	9500	8
	9/23/2020	8600	5
	3/17/2021	9700	9
	9/8/2021	10400	10
	3/15/2022	6600	3
	9/12/2022	5700	1
	3/13/2023	6400	2
	9/11/2023	8800	6
GWM-2	9/25/2013	14050	14
	3/18/2014	13300	12
	9/16/2014	20200	32
	3/18/2015	13500	13
	9/15/2015	15400	20
	3/16/2016	20500	34
	9/22/2016	16400	25
	3/24/2017	15300	17
	9/21/2017	15900	22
	3/28/2018	14400	15
	9/21/2018	14700	16
	3/12/2019	16200	23
	10/1/2019	16600	27
	3/18/2020	21100	36
	9/23/2020	21600	39
	3/17/2021	21100	37
	9/9/2021	21300	38
	3/15/2022	15300	18
	9/12/2022	16500	26
	3/13/2023	17100	28
	9/11/2023	16300	24
GWM-5A	9/19/2013	20240	33

12/5/2013	21060	35
3/19/2014	23500	47
9/4/2014	30000	62
3/17/2015	26000	50
9/11/2015	29300	58
3/15/2016	26700	51
9/21/2016	20100	31
3/28/2017	24200	48
9/19/2017	22200	41
3/26/2018	24400	49
9/18/2018	29800	61
3/4/2019	29000	57
9/23/2019	29300	59
3/19/2020	26700	52
9/23/2020	28500	56
3/19/2021	28300	55
9/15/2021	29400	60
3/16/2022	22500	43
9/14/2022	22800	45
3/16/2023	22400	42
9/13/2023	32400	64

The Wilcoxon Statistic is 846
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is 5.4208
The Standard Deviation adjusted for ties is 70.746
The Z Score adjusted for ties is 5.4208
5.4208 > 2.326 indicating statistical significance at 1% level
5.4208 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Sulfate

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	17730	32
	3/19/2014	12400	12
	9/8/2014	9200	7
	3/17/2015	15400	20
	9/14/2015	21800	45
	3/17/2016	31600	63
	9/21/2016	17500	31
	3/24/2017	22800	47
	9/20/2017	27300	56
	3/27/2018	27500	57
	9/19/2018	23200	49
	3/11/2019	15600	22
	9/25/2019	8300	4
	3/18/2020	9500	8
	9/23/2020	8600	5
	3/17/2021	9700	9
	9/8/2021	10400	10
	3/15/2022	6600	3
	9/12/2022	5700	1
	3/13/2023	6400	2
	9/11/2023	8800	6
GWM-2	9/25/2013	14050	15
	3/18/2014	13300	13
	9/16/2014	20200	35
	3/18/2015	13500	14
	9/15/2015	15400	21
	3/16/2016	20500	36
	9/22/2016	16400	26
	3/24/2017	15300	18
	9/21/2017	15900	23
	3/28/2018	14400	16
	9/21/2018	14700	17
	3/12/2019	16200	24
	10/1/2019	16600	28
	3/18/2020	21100	39
	9/23/2020	21600	44
	3/17/2021	21100	40
	9/9/2021	21300	41
	3/15/2022	15300	19
	9/12/2022	16500	27
	3/13/2023	17100	30
	9/11/2023	16300	25
GWM-14	9/24/2013	20560	37

3/21/2014	21500	43
9/8/2014	22700	46
3/19/2015	27900	58
9/14/2015	25200	54
3/21/2016	29100	60
9/23/2016	29200	61
3/27/2017	28600	59
9/20/2017	25000	53
3/16/2018	30200	62
9/20/2018	24500	51
3/5/2019	12200	11
9/25/2019	24800	52
3/25/2020	22800	48
9/28/2020	21400	42
3/18/2021	25600	55
9/15/2021	23700	50
3/22/2022	20900	38
9/14/2022	18300	33
3/16/2023	19700	34
9/13/2023	16800	29

The Wilcoxon Statistic is 745
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 4.42512
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 4.42512
4.42512 > 2.326 indicating statistical significance at 1% level
4.42512 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Sulfate

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 5
Non detect rank is 3

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	17730	51
	3/19/2014	12400	32
	9/8/2014	9200	28
	3/17/2015	15400	40
	9/14/2015	21800	58
	3/17/2016	31600	63
	9/21/2016	17500	50
	3/24/2017	22800	59
	9/20/2017	27300	61
	3/27/2018	27500	62
	9/19/2018	23200	60
	3/11/2019	15600	42
	9/25/2019	8300	22
	3/18/2020	9500	29
	9/23/2020	8600	23
	3/17/2021	9700	30
	9/8/2021	10400	31
	3/15/2022	6600	18
	9/12/2022	5700	14
	3/13/2023	6400	17
	9/11/2023	8800	25
GWM-2	9/25/2013	14050	35
	3/18/2014	13300	33
	9/16/2014	20200	52
	3/18/2015	13500	34
	9/15/2015	15400	41
	3/16/2016	20500	53
	9/22/2016	16400	46
	3/24/2017	15300	38
	9/21/2017	15900	43
	3/28/2018	14400	36
	9/21/2018	14700	37
	3/12/2019	16200	44
	10/1/2019	16600	48
	3/18/2020	21100	54
	9/23/2020	21600	57
	3/17/2021	21100	55
	9/9/2021	21300	56
	3/15/2022	15300	39
	9/12/2022	16500	47
	3/13/2023	17100	49
	9/11/2023	16300	45
GWM-6	9/24/2013	8840	26

3/21/2014	8600	24
9/17/2014	6900	19
3/19/2015	7300	20
9/15/2015	5900	16
3/21/2016	7300	21
9/26/2016	4400	10
3/31/2017	5700	15
9/21/2017	4400	11
3/30/2018	2900	7
9/26/2018	2300	6
3/13/2019	ND<920 J	3
10/3/2019	ND<780 J	3
4/3/2020	ND<520 J	3
9/30/2020	ND<460 J	3
3/22/2021	ND<920 J	3
9/16/2021	3200	9
3/24/2022	3100	8
9/16/2022	4800	12
3/17/2023	5200	13
9/14/2023	9100	27

The Wilcoxon Statistic is 28
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -6.02895
The Standard Deviation adjusted for ties is 68.5692
The Z Score adjusted for ties is -6.0304
-6.02895 < 2.326 indicating no statistical significance at 1% level
-6.0304 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Sulfate

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	17730	30
	3/19/2014	12400	11
	9/8/2014	9200	7
	3/17/2015	15400	19
	9/14/2015	21800	37
	3/17/2016	31600	55
	9/21/2016	17500	29
	3/24/2017	22800	38
	9/20/2017	27300	45
	3/27/2018	27500	46
	9/19/2018	23200	39
	3/11/2019	15600	21
	9/25/2019	8300	4
	3/18/2020	9500	8
	9/23/2020	8600	5
	3/17/2021	9700	9
	9/8/2021	10400	10
	3/15/2022	6600	3
	9/12/2022	5700	1
	3/13/2023	6400	2
	9/11/2023	8800	6
GWM-2	9/25/2013	14050	14
	3/18/2014	13300	12
	9/16/2014	20200	31
	3/18/2015	13500	13
	9/15/2015	15400	20
	3/16/2016	20500	32
	9/22/2016	16400	25
	3/24/2017	15300	17
	9/21/2017	15900	22
	3/28/2018	14400	15
	9/21/2018	14700	16
	3/12/2019	16200	23
	10/1/2019	16600	27
	3/18/2020	21100	33
	9/23/2020	21600	36
	3/17/2021	21100	34
	9/9/2021	21300	35
	3/15/2022	15300	18
	9/12/2022	16500	26
	3/13/2023	17100	28
	9/11/2023	16300	24
GWM-3	9/25/2013	26550	43

3/18/2014	25500	41
9/16/2014	28100	47
3/18/2015	29500	49
9/15/2015	32000	59
3/16/2016	31600	56
9/22/2016	30600	52
3/29/2017	33200	61
9/21/2017	33300	62
3/28/2018	32400	60
9/20/2018	30800	53
3/12/2019	30400	50
10/1/2019	31300	54
3/18/2020	31800	58
9/24/2020	28600	48
3/17/2021	31600	57
9/9/2021	35000	63
3/15/2022	30500	51
9/16/2022	26200	42
3/15/2023	24200	40
9/11/2023	26900	44

The Wilcoxon Statistic is 859
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 6.08727
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 6.08727
6.08727 > 2.326 indicating statistical significance at 1% level
6.08727 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Sulfate

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	17730	31
	3/19/2014	12400	11
	9/8/2014	9200	7
	3/17/2015	15400	19
	9/14/2015	21800	41
	3/17/2016	31600	51
	9/21/2016	17500	30
	3/24/2017	22800	44
	9/20/2017	27300	49
	3/27/2018	27500	50
	9/19/2018	23200	47
	3/11/2019	15600	21
	9/25/2019	8300	4
	3/18/2020	9500	8
	9/23/2020	8600	5
	3/17/2021	9700	9
	9/8/2021	10400	10
	3/15/2022	6600	3
	9/12/2022	5700	1
	3/13/2023	6400	2
	9/11/2023	8800	6
GWM-2	9/25/2013	14050	14
	3/18/2014	13300	12
	9/16/2014	20200	33
	3/18/2015	13500	13
	9/15/2015	15400	20
	3/16/2016	20500	34
	9/22/2016	16400	25
	3/24/2017	15300	17
	9/21/2017	15900	22
	3/28/2018	14400	15
	9/21/2018	14700	16
	3/12/2019	16200	23
	10/1/2019	16600	27
	3/18/2020	21100	36
	9/23/2020	21600	40
	3/17/2021	21100	37
	9/9/2021	21300	39
	3/15/2022	15300	18
	9/12/2022	16500	26
	3/13/2023	17100	29
	9/11/2023	16300	24
GWM-17S	11/14/2019	20700	35

3/26/2020	23100	45
9/29/2020	24200	48
3/16/2021	22500	43
9/14/2021	23100	46
3/18/2022	21900	42
9/13/2022	21100	38
3/14/2023	16700	28
9/12/2023	19300	32

The Wilcoxon Statistic is 312
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is 3.02677
The Standard Deviation adjusted for ties is 40.4722
The Z Score adjusted for ties is 3.02677
3.02677 > 2.326 indicating statistical significance at 1% level
3.02677 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)
Parameter: Total Dissolved Solids
Location: GWM-4
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	62000	1
	3/19/2014	229000	30
	9/8/2014	130000	4
	3/17/2015	584000	63
	9/14/2015	277000	35
	3/17/2016	239000	32
	9/21/2016	225000	29
	3/24/2017	234000	31
	9/20/2017	199000	25
	3/27/2018	327000	38
	9/19/2018	150000	8
	3/11/2019	143000	5
	9/25/2019	286000	36
	3/18/2020	392000	46
	9/23/2020	264000	34
	3/17/2021	160000	10
	9/8/2021	176000	16
	3/15/2022	570000	62
	9/12/2022	464000	56
	3/13/2023	382000	45
	9/11/2023	324000	37
GWM-2	9/25/2013	173000	15
	3/18/2014	201000	26
	9/16/2014	253000	33
	3/18/2015	218000	28
	9/15/2015	171000	13
	3/16/2016	179000	18
	9/22/2016	177000	17
	3/24/2017	168000	12
	9/21/2017	149000	7
	3/28/2018	156000	9
	9/21/2018	184000	20
	3/12/2019	194000	22
	10/1/2019	192000	21
	3/18/2020	208000	27
	9/23/2020	172000	14
	3/17/2021	104000	3
	9/9/2021	198000	24
	3/15/2022	146000	6
	9/12/2022	162000	11
	3/13/2023	182000	19
	9/11/2023	194000	23
GWM-4	9/18/2013	100000	2

3/20/2014	381000	44
9/9/2014	423000	49
3/16/2015	356000	41
9/9/2015	355000	40
3/18/2016	352000	39
9/20/2016	457000	55
3/23/2017	411000	48
9/18/2017	446000	52
3/15/2018	366000	43
9/17/2018	363000	42
3/5/2019	538000	60
9/24/2019	450000	53
3/16/2020	566000	61
9/22/2020	494000	57
3/16/2021	500000	58
9/14/2021	526000	59
3/22/2022	434000	51
9/13/2022	432000	50
3/14/2023	396000	47
9/12/2023	452000	54

The Wilcoxon Statistic is 774
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 4.84795
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 4.84795
4.84795 > 2.326 indicating statistical significance at 1% level
4.84795 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Total Dissolved Solids

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	62000	1
	3/19/2014	229000	37
	9/8/2014	130000	4
	3/17/2015	584000	63
	9/14/2015	277000	49
	3/17/2016	239000	39
	9/21/2016	225000	36
	3/24/2017	234000	38
	9/20/2017	199000	26
	3/27/2018	327000	57
	9/19/2018	150000	8
	3/11/2019	143000	5
	9/25/2019	286000	51
	3/18/2020	392000	60
	9/23/2020	264000	44
	3/17/2021	160000	10
	9/8/2021	176000	16
	3/15/2022	570000	62
	9/12/2022	464000	61
	3/13/2023	382000	59
	9/11/2023	324000	56
GWM-2	9/25/2013	173000	15
	3/18/2014	201000	27
	9/16/2014	253000	41
	3/18/2015	218000	32
	9/15/2015	171000	13
	3/16/2016	179000	18
	9/22/2016	177000	17
	3/24/2017	168000	12
	9/21/2017	149000	7
	3/28/2018	156000	9
	9/21/2018	184000	20
	3/12/2019	194000	23
	10/1/2019	192000	22
	3/18/2020	208000	30
	9/23/2020	172000	14
	3/17/2021	104000	3
	9/9/2021	198000	25
	3/15/2022	146000	6
	9/12/2022	162000	11
	3/13/2023	182000	19
	9/11/2023	194000	24
GWM-5A	9/19/2013	77000	2

3/19/2014	291000	52
9/4/2014	256000	42
3/17/2015	266000	46
9/11/2015	281000	50
3/15/2016	266000	47
9/21/2016	257000	43
3/28/2017	205000	29
9/19/2017	215000	31
3/26/2018	202000	28
9/18/2018	300000	53
3/4/2019	346000	58
9/23/2019	305000	54
3/19/2020	246000	40
9/23/2020	266000	48
3/19/2021	264000	45
9/15/2021	220000	34
3/16/2022	220000	35
9/14/2022	190000	21
3/16/2023	218000	33
9/13/2023	320000	55

The Wilcoxon Statistic is 615
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 2.52968
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 2.52968
2.52968 > 2.326 indicating statistical significance at 1% level
2.52968 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Total Dissolved Solids

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	62000	1
	3/19/2014	229000	33
	9/8/2014	130000	3
	3/17/2015	584000	63
	9/14/2015	277000	46
	3/17/2016	239000	36
	9/21/2016	225000	32
	3/24/2017	234000	34
	9/20/2017	199000	26
	3/27/2018	327000	58
	9/19/2018	150000	7
	3/11/2019	143000	4
	9/25/2019	286000	51
	3/18/2020	392000	60
	9/23/2020	264000	41
	3/17/2021	160000	9
	9/8/2021	176000	16
	3/15/2022	570000	62
	9/12/2022	464000	61
	3/13/2023	382000	59
	9/11/2023	324000	57
GWM-2	9/25/2013	173000	15
	3/18/2014	201000	27
	9/16/2014	253000	39
	3/18/2015	218000	30
	9/15/2015	171000	12
	3/16/2016	179000	18
	9/22/2016	177000	17
	3/24/2017	168000	11
	9/21/2017	149000	6
	3/28/2018	156000	8
	9/21/2018	184000	20
	3/12/2019	194000	22
	10/1/2019	192000	21
	3/18/2020	208000	28
	9/23/2020	172000	13
	3/17/2021	104000	2
	9/9/2021	198000	24
	3/15/2022	146000	5
	9/12/2022	162000	10
	3/13/2023	182000	19
	9/11/2023	194000	23
GWM-14	9/24/2013	277000	47

3/21/2014	269000	44
9/8/2014	291000	53
3/19/2015	314000	56
9/14/2015	278000	48
3/21/2016	239000	37
9/23/2016	283000	49
3/27/2017	266000	43
9/20/2017	236000	35
3/16/2018	251000	38
9/20/2018	172000	14
3/5/2019	311000	55
9/25/2019	214000	29
3/25/2020	198000	25
9/28/2020	284000	50
3/18/2021	276000	45
9/15/2021	264000	42
3/22/2022	258000	40
9/14/2022	220000	31
3/16/2023	300000	54
9/13/2023	290000	52

The Wilcoxon Statistic is 656
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 3.12747
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 3.12747
3.12747 > 2.326 indicating statistical significance at 1% level
3.12747 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Total Dissolved Solids

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	62000	1
	3/19/2014	229000	42
	9/8/2014	130000	7
	3/17/2015	584000	63
	9/14/2015	277000	53
	3/17/2016	239000	44
	9/21/2016	225000	40
	3/24/2017	234000	43
	9/20/2017	199000	35
	3/27/2018	327000	58
	9/19/2018	150000	12
	3/11/2019	143000	9
	9/25/2019	286000	56
	3/18/2020	392000	60
	9/23/2020	264000	51
	3/17/2021	160000	16
	9/8/2021	176000	24
	3/15/2022	570000	62
	9/12/2022	464000	61
	3/13/2023	382000	59
	9/11/2023	324000	57
GWM-2	9/25/2013	173000	23
	3/18/2014	201000	36
	9/16/2014	253000	49
	3/18/2015	218000	39
	9/15/2015	171000	21
	3/16/2016	179000	26
	9/22/2016	177000	25
	3/24/2017	168000	20
	9/21/2017	149000	11
	3/28/2018	156000	15
	9/21/2018	184000	28
	3/12/2019	194000	32
	10/1/2019	192000	31
	3/18/2020	208000	38
	9/23/2020	172000	22
	3/17/2021	104000	2
	9/9/2021	198000	34
	3/15/2022	146000	10
	9/12/2022	162000	18
	3/13/2023	182000	27
	9/11/2023	194000	33
GWM-6	9/24/2013	118000	5

3/21/2014	115000	4
9/17/2014	126000	6
3/19/2015	191000	30
9/15/2015	153000	13
3/21/2016	132000	8
9/26/2016	155000	14
3/31/2017	160000	17
9/21/2017	164000	19
3/30/2018	203000	37
9/26/2018	243000	45
3/13/2019	278000	54
10/3/2019	110000	3
4/3/2020	250000	47
9/30/2020	258000	50
3/22/2021	244000	46
9/16/2021	228000	41
3/24/2022	184000	29
9/16/2022	264000	52
3/17/2023	282000	55
9/14/2023	250000	48

The Wilcoxon Statistic is 392
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.721725
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is -0.721725
-0.721725 < 2.326 indicating no statistical significance at 1% level
-0.721725 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Total Dissolved Solids

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	62000	1
	3/19/2014	229000	50
	9/8/2014	130000	7
	3/17/2015	584000	63
	9/14/2015	277000	55
	3/17/2016	239000	52
	9/21/2016	225000	49
	3/24/2017	234000	51
	9/20/2017	199000	43
	3/27/2018	327000	58
	9/19/2018	150000	15
	3/11/2019	143000	9
	9/25/2019	286000	56
	3/18/2020	392000	60
	9/23/2020	264000	54
	3/17/2021	160000	20
	9/8/2021	176000	29
	3/15/2022	570000	62
	9/12/2022	464000	61
	3/13/2023	382000	59
	9/11/2023	324000	57
GWM-2	9/25/2013	173000	27
	3/18/2014	201000	44
	9/16/2014	253000	53
	3/18/2015	218000	48
	9/15/2015	171000	24
	3/16/2016	179000	33
	9/22/2016	177000	31
	3/24/2017	168000	23
	9/21/2017	149000	14
	3/28/2018	156000	18
	9/21/2018	184000	35
	3/12/2019	194000	40
	10/1/2019	192000	39
	3/18/2020	208000	45
	9/23/2020	172000	25
	3/17/2021	104000	4
	9/9/2021	198000	42
	3/15/2022	146000	12
	9/12/2022	162000	21
	3/13/2023	182000	34
	9/11/2023	194000	41
GWM-3	9/25/2013	119000	5

3/18/2014	93000	3
9/16/2014	144000	11
3/18/2015	189000	38
9/15/2015	148000	13
3/16/2016	176000	30
9/22/2016	177000	32
3/29/2017	172000	26
9/21/2017	173000	28
3/28/2018	143000	10
9/20/2018	141000	8
3/12/2019	186000	36
10/1/2019	210000	46
3/18/2020	188000	37
9/24/2020	152000	16
3/17/2021	166000	22
9/9/2021	210000	47
3/15/2022	157000	19
9/16/2022	125000	6
3/15/2023	88000	2
9/11/2023	154000	17

The Wilcoxon Statistic is 221
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -3.21496
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is -3.21496
-3.21496 < 2.326 indicating no statistical significance at 1% level
-3.21496 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Total Dissolved Solids

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	62000	1
	3/19/2014	229000	29
	9/8/2014	130000	3
	3/17/2015	584000	51
	9/14/2015	277000	34
	3/17/2016	239000	31
	9/21/2016	225000	28
	3/24/2017	234000	30
	9/20/2017	199000	24
	3/27/2018	327000	38
	9/19/2018	150000	7
	3/11/2019	143000	4
	9/25/2019	286000	35
	3/18/2020	392000	41
	9/23/2020	264000	33
	3/17/2021	160000	9
	9/8/2021	176000	15
	3/15/2022	570000	50
	9/12/2022	464000	46
	3/13/2023	382000	39
	9/11/2023	324000	37
GWM-2	9/25/2013	173000	14
	3/18/2014	201000	25
	9/16/2014	253000	32
	3/18/2015	218000	27
	9/15/2015	171000	12
	3/16/2016	179000	17
	9/22/2016	177000	16
	3/24/2017	168000	11
	9/21/2017	149000	6
	3/28/2018	156000	8
	9/21/2018	184000	19
	3/12/2019	194000	21
	10/1/2019	192000	20
	3/18/2020	208000	26
	9/23/2020	172000	13
	3/17/2021	104000	2
	9/9/2021	198000	23
	3/15/2022	146000	5
	9/12/2022	162000	10
	3/13/2023	182000	18
	9/11/2023	194000	22
GWM-17S	11/14/2019	556000	49

3/26/2020	314000	36
9/29/2020	436000	45
3/16/2021	402000	43
9/14/2021	490000	47
3/18/2022	408000	44
9/13/2022	394000	42
3/14/2023	492000	48
9/12/2023	382000	40

The Wilcoxon Statistic is 349
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is 3.94098
The Standard Deviation adjusted for ties is 40.4722
The Z Score adjusted for ties is 3.94098
3.94098 > 2.326 indicating statistical significance at 1% level
3.94098 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Turbidity

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 4
Non detect rank is 2.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<0.01	2.5
	3/19/2014	0.77	14
	9/8/2014	1.13	21
	3/17/2015	1.36	29
	9/14/2015	0.92	19
	3/17/2016	0.53	8
	9/21/2016	1.4	31
	3/24/2017	1.13	22
	9/20/2017	3.19	52
	3/27/2018	2.29	45
	9/19/2018	0.81	15
	3/11/2019	1.67	38
	9/25/2019	2.05	42
	3/18/2020	1.53	36
	9/23/2020	5.36	60
	3/17/2021	0.81	16
	9/8/2021	1.34	28
	3/15/2022	1.42	34
	9/12/2022	9.59	62
	3/13/2023	3.69	57
	9/11/2023	1.15	23
GWM-2	9/25/2013	ND<0.01	2.5
	3/18/2014	0.6	10
	9/16/2014	0.82	17
	3/18/2015	0.76	13
	9/15/2015	1.5	35
	3/16/2016	1.23	25
	9/22/2016	1.91	40
	3/24/2017	0.37	5
	9/21/2017	2.13	43
	3/28/2018	3.12	50
	9/21/2018	0.59	9
	3/12/2019	0.83	18
	10/1/2019	0.4	6
	3/18/2020	1.06	20
	9/23/2020	3.3	53
	3/17/2021	1.53	37
	9/9/2021	1.7	39
	3/15/2022	1.4	32
	9/12/2022	5.24	59
	3/13/2023	21.41	63
	9/11/2023	2.81	48
GWM-4	9/18/2013	ND<0.01	2.5

3/20/2014	1.2	24
9/9/2014	9.01	61
3/16/2015	3.61	56
9/9/2015	2.72	47
3/18/2016	1.36	30
9/20/2016	3.46	55
3/23/2017	2.64	46
9/18/2017	0.73	12
3/15/2018	3.33	54
9/17/2018	4.27	58
3/5/2019	2.85	49
9/24/2019	2.01	41
3/16/2020	2.19	44
9/22/2020	1.41	33
3/16/2021	1.29	27
9/14/2021	0.7	11
3/22/2022	1.23	26
9/13/2022	3.18	51
3/14/2023	0.41	7
9/12/2023	ND<0	2.5

The Wilcoxon Statistic is 506
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 0.940429
The Standard Deviation adjusted for ties is 68.5775
The Z Score adjusted for ties is 0.940542
0.940429 < 2.326 indicating no statistical significance at 1% level
0.940542 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Turbidity

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 3
Non detect rank is 2

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<0.01	2
	3/19/2014	0.77	14
	9/8/2014	1.13	24
	3/17/2015	1.36	30
	9/14/2015	0.92	21
	3/17/2016	0.53	8
	9/21/2016	1.4	31
	3/24/2017	1.13	25
	9/20/2017	3.19	52
	3/27/2018	2.29	48
	9/19/2018	0.81	15
	3/11/2019	1.67	39
	9/25/2019	2.05	45
	3/18/2020	1.53	36
	9/23/2020	5.36	58
	3/17/2021	0.81	16
	9/8/2021	1.34	29
	3/15/2022	1.42	33
	9/12/2022	9.59	62
	3/13/2023	3.69	54
	9/11/2023	1.15	26
GWM-2	9/25/2013	ND<0.01	2
	3/18/2014	0.6	11
	9/16/2014	0.82	17
	3/18/2015	0.76	13
	9/15/2015	1.5	34
	3/16/2016	1.23	27
	9/22/2016	1.91	43
	3/24/2017	0.37	5
	9/21/2017	2.13	47
	3/28/2018	3.12	51
	9/21/2018	0.59	10
	3/12/2019	0.83	18
	10/1/2019	0.4	6
	3/18/2020	1.06	22
	9/23/2020	3.3	53
	3/17/2021	1.53	37
	9/9/2021	1.7	40
	3/15/2022	1.4	32
	9/12/2022	5.24	57
	3/13/2023	21.41	63
	9/11/2023	2.81	50
GWM-5A	9/19/2013	ND<0.01	2

12/5/2013	0.32	4
3/19/2014	1.1	23
9/4/2014	9.46	61
3/17/2015	1.87	41
9/11/2015	1.9	42
3/15/2016	0.58	9
9/21/2016	2.05	46
3/28/2017	0.85	19
9/19/2017	0.5	7
3/26/2018	1.93	44
9/18/2018	1.52	35
3/4/2019	7.4	60
9/23/2019	4.33	56
3/19/2020	5.7	59
9/23/2020	2.74	49
3/19/2021	1.28	28
9/15/2021	1.64	38
3/16/2022	0.72	12
9/14/2022	3.78	55
3/16/2023	0.85	20
9/13/2023	54.14	64

The Wilcoxon Statistic is 521
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is 0.826902
The Standard Deviation adjusted for ties is 70.7428
The Z Score adjusted for ties is 0.826939
0.826902 < 2.326 indicating no statistical significance at 1% level
0.826939 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Turbidity

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 3
Non detect rank is 2

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<0.01	2
	3/19/2014	0.77	13
	9/8/2014	1.13	20
	3/17/2015	1.36	25
	9/14/2015	0.92	18
	3/17/2016	0.53	8
	9/21/2016	1.4	26
	3/24/2017	1.13	21
	9/20/2017	3.19	41
	3/27/2018	2.29	38
	9/19/2018	0.81	14
	3/11/2019	1.67	32
	9/25/2019	2.05	36
	3/18/2020	1.53	30
	9/23/2020	5.36	52
	3/17/2021	0.81	15
	9/8/2021	1.34	24
	3/15/2022	1.42	28
	9/12/2022	9.59	61
	3/13/2023	3.69	45
	9/11/2023	1.15	22
GWM-2	9/25/2013	ND<0.01	2
	3/18/2014	0.6	11
	9/16/2014	0.82	16
	3/18/2015	0.76	12
	9/15/2015	1.5	29
	3/16/2016	1.23	23
	9/22/2016	1.91	35
	3/24/2017	0.37	4
	9/21/2017	2.13	37
	3/28/2018	3.12	40
	9/21/2018	0.59	10
	3/12/2019	0.83	17
	10/1/2019	0.4	5
	3/18/2020	1.06	19
	9/23/2020	3.3	43
	3/17/2021	1.53	31
	9/9/2021	1.7	33
	3/15/2022	1.4	27
	9/12/2022	5.24	50
	3/13/2023	21.41	63
	9/11/2023	2.81	39
GWM-14	9/24/2013	ND<0.01	2

3/21/2014	5.3	51
9/8/2014	3.47	44
3/19/2015	9.38	60
9/14/2015	4.6	48
3/21/2016	11.76	62
9/23/2016	6	54
3/27/2017	6.86	56
9/20/2017	4.58	47
3/16/2018	7.72	58
9/20/2018	0.5	7
3/5/2019	7.78	59
9/25/2019	0.43	6
3/25/2020	4.02	46
9/28/2020	3.28	42
3/18/2021	5.37	53
9/15/2021	1.74	34
3/22/2022	5.19	49
9/14/2022	6.29	55
3/16/2023	7.59	57
9/13/2023	0.53	9

The Wilcoxon Statistic is 668
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 3.30244
The Standard Deviation adjusted for ties is 68.5824
The Z Score adjusted for ties is 3.3026
3.30244 > 2.326 indicating statistical significance at 1% level
3.3026 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Turbidity

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 4
Non detect rank is 2.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<0.01	2.5
	3/19/2014	0.77	18
	9/8/2014	1.13	31
	3/17/2015	1.36	36
	9/14/2015	0.92	27
	3/17/2016	0.53	9
	9/21/2016	1.4	37
	3/24/2017	1.13	32
	9/20/2017	3.19	56
	3/27/2018	2.29	52
	9/19/2018	0.81	19
	3/11/2019	1.67	46
	9/25/2019	2.05	50
	3/18/2020	1.53	41
	9/23/2020	5.36	61
	3/17/2021	0.81	20
	9/8/2021	1.34	35
	3/15/2022	1.42	39
	9/12/2022	9.59	62
	3/13/2023	3.69	58
	9/11/2023	1.15	33
GWM-2	9/25/2013	ND<0.01	2.5
	3/18/2014	0.6	13
	9/16/2014	0.82	22
	3/18/2015	0.76	17
	9/15/2015	1.5	40
	3/16/2016	1.23	34
	9/22/2016	1.91	49
	3/24/2017	0.37	6
	9/21/2017	2.13	51
	3/28/2018	3.12	55
	9/21/2018	0.59	12
	3/12/2019	0.83	23
	10/1/2019	0.4	7
	3/18/2020	1.06	30
	9/23/2020	3.3	57
	3/17/2021	1.53	42
	9/9/2021	1.7	48
	3/15/2022	1.4	38
	9/12/2022	5.24	60
	3/13/2023	21.41	63
	9/11/2023	2.81	54
GWM-6	9/24/2013	ND<0.01	2.5

3/21/2014	1.66	45
9/17/2014	0.7	14
3/19/2015	0.54	10
9/15/2015	0.84	24
3/21/2016	0.47	8
9/26/2016	1.69	47
3/31/2017	0.25	5
9/21/2017	0.74	16
3/30/2018	0.95	28
9/26/2018	1.62	44
3/13/2019	0.81	21
10/3/2019	1.03	29
4/3/2020	0.73	15
9/30/2020	0.86	26
3/22/2021	0.55	11
9/16/2021	1.55	43
3/24/2022	0.84	25
9/16/2022	3.98	59
3/17/2023	2.51	53
9/14/2023	ND<0	2.5

The Wilcoxon Statistic is 297
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -2.10685
The Standard Deviation adjusted for ties is 68.5775
The Z Score adjusted for ties is -2.10711
-2.10685 < 2.326 indicating no statistical significance at 1% level
-2.10711 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Turbidity

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 3
Non detect rank is 2

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<0.01	2
	3/19/2014	0.77	16
	9/8/2014	1.13	28
	3/17/2015	1.36	34
	9/14/2015	0.92	22
	3/17/2016	0.53	10
	9/21/2016	1.4	37
	3/24/2017	1.13	29
	9/20/2017	3.19	53
	3/27/2018	2.29	50
	9/19/2018	0.81	17
	3/11/2019	1.67	45
	9/25/2019	2.05	48
	3/18/2020	1.53	43
	9/23/2020	5.36	59
	3/17/2021	0.81	18
	9/8/2021	1.34	33
	3/15/2022	1.42	40
	9/12/2022	9.59	61
	3/13/2023	3.69	55
	9/11/2023	1.15	30
GWM-2	9/25/2013	ND<0.01	2
	3/18/2014	0.6	14
	9/16/2014	0.82	19
	3/18/2015	0.76	15
	9/15/2015	1.5	42
	3/16/2016	1.23	31
	9/22/2016	1.91	47
	3/24/2017	0.37	6
	9/21/2017	2.13	49
	3/28/2018	3.12	52
	9/21/2018	0.59	13
	3/12/2019	0.83	20
	10/1/2019	0.4	8
	3/18/2020	1.06	26
	9/23/2020	3.3	54
	3/17/2021	1.53	44
	9/9/2021	1.7	46
	3/15/2022	1.4	38
	9/12/2022	5.24	58
	3/13/2023	21.41	63
	9/11/2023	2.81	51
GWM-3	9/25/2013	ND<0.01	2

3/18/2014	0.55	11
9/16/2014	0.24	5
3/18/2015	0.18	4
9/15/2015	0.58	12
3/16/2016	0.38	7
9/22/2016	1.4	39
3/29/2017	1.46	41
9/21/2017	0.85	21
3/28/2018	0.94	23
9/20/2018	1.39	35
3/12/2019	1.02	25
10/1/2019	0.44	9
3/18/2020	1.29	32
9/24/2020	0.98	24
3/17/2021	11.4	62
9/9/2021	1.39	36
3/15/2022	1.08	27
9/16/2022	3.98	56
3/15/2023	8.1	60
9/11/2023	4.99	57

The Wilcoxon Statistic is 357
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -1.23204
The Standard Deviation adjusted for ties is 68.5824
The Z Score adjusted for ties is -1.23209
-1.23204 < 2.326 indicating no statistical significance at 1% level
-1.23209 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Turbidity

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 2
Non detect rank is 1.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<0.01	1.5
	3/19/2014	0.77	9
	9/8/2014	1.13	16
	3/17/2015	1.36	22
	9/14/2015	0.92	14
	3/17/2016	0.53	5
	9/21/2016	1.4	23
	3/24/2017	1.13	17
	9/20/2017	3.19	39
	3/27/2018	2.29	34
	9/19/2018	0.81	10
	3/11/2019	1.67	29
	9/25/2019	2.05	32
	3/18/2020	1.53	27
	9/23/2020	5.36	48
	3/17/2021	0.81	11
	9/8/2021	1.34	21
	3/15/2022	1.42	25
	9/12/2022	9.59	50
	3/13/2023	3.69	41
	9/11/2023	1.15	18
GWM-2	9/25/2013	ND<0.01	1.5
	3/18/2014	0.6	7
	9/16/2014	0.82	12
	3/18/2015	0.76	8
	9/15/2015	1.5	26
	3/16/2016	1.23	19
	9/22/2016	1.91	31
	3/24/2017	0.37	3
	9/21/2017	2.13	33
	3/28/2018	3.12	38
	9/21/2018	0.59	6
	3/12/2019	0.83	13
	10/1/2019	0.4	4
	3/18/2020	1.06	15
	9/23/2020	3.3	40
	3/17/2021	1.53	28
	9/9/2021	1.7	30
	3/15/2022	1.4	24
	9/12/2022	5.24	47
	3/13/2023	21.41	51
	9/11/2023	2.81	36
GWM-17S	11/14/2019	5.82	49

3/26/2020	4.77	46
9/29/2020	3.1	37
3/16/2021	2.78	35
9/14/2021	3.78	42
3/18/2022	3.81	43
9/13/2022	4.66	45
3/14/2023	4.49	44
9/12/2023	1.26	20

The Wilcoxon Statistic is 316
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is 3.1256
The Standard Deviation adjusted for ties is 40.4713
The Z Score adjusted for ties is 3.12567
3.1256 > 2.326 indicating statistical significance at 1% level
3.12567 > 2.326 indicating statistical significance at 1% level when adjusted for ties

6) Patapsco Aquifer Water Quality Parameters Intra-well Statistics

APPENDIX F

Shapiro-Francia Test of Normality

Parameter: Alkalinity, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	3300	-1.27588	48.2035	-4210.39
17	5000	-1.24264	49.7477	-10423.6
18	5000	-1.21073	51.2136	-16477.2
19	5000	-1.17499	52.5942	-22352.2
20	5000	-1.1455	53.9063	-28079.7
21	5000	-1.11699	55.154	-33664.6
22	6000	-1.08482	56.3308	-40173.6
23	6660	-1.05812	57.4505	-47220.7
24	7000	-1.03215	58.5158	-54445.7
25	7000	-1.00271	59.5212	-61464.7
26	8000	-0.97815	60.478	-69289.9
27	10000	-0.954165	61.3884	-78831.6
28	10000	-0.926859	62.2475	-88100.2
29	10000	-0.903992	63.0647	-97140.1
30	11000	-0.881587	63.8419	-106838
31	11000	-0.855996	64.5746	-116253
32	11000	-0.834498	65.271	-125433
33	11000	-0.813379	65.9326	-134380
34	11000	-0.789191	66.5554	-143061
35	11000	-0.768821	67.1465	-151518
36	11000	-0.748762	67.7072	-159755
37	11000	-0.725736	68.2338	-167738
38	11000	-0.706302	68.7327	-175507
39	12000	-0.687131	69.2049	-183753
40	12000	-0.665079	69.6472	-191734
41	12000	-0.646431	70.0651	-199491
42	12000	-0.628006	70.4595	-207027
43	13000	-0.606775	70.8276	-214915
44	14000	-0.588793	71.1743	-223158
45	14000	-0.570999	71.5003	-231152
46	16000	-0.550465	71.8034	-239959
47	17000	-0.533048	72.0875	-249021

48	17000	-0.515791	72.3535	-257790
49	17000	-0.49585	72.5994	-266219
50	18000	-0.478914	72.8288	-274840
51	18000	-0.462114	73.0423	-283158
52	18000	-0.442676	73.2383	-291126
53	19000	-0.426148	73.4199	-299223
54	20000	-0.409735	73.5878	-307417
55	21000	-0.390726	73.7404	-315623
56	22000	-0.374544	73.8807	-323863
57	22000	-0.358459	74.0092	-331749
58	24000	-0.33981	74.1247	-339904
59	25000	-0.323919	74.2296	-348002
60	26000	-0.308108	74.3245	-356013
61	29260	-0.28976	74.4085	-364491
62	37000	-0.27411	74.4836	-374633
63	39000	-0.258527	74.5505	-384716
64	42000	-0.240426	74.6083	-394814
65	42270	-0.224974	74.6589	-404323
66	45000	-0.209575	74.7028	-413754
67	47000	-0.191671	74.7395	-422763
68	48000	-0.176374	74.7706	-431229
69	52000	-0.161119	74.7966	-439607
70	53000	-0.143367	74.8172	-447205
71	57000	-0.128189	74.8336	-454512
72	58000	-0.113039	74.8464	-461069
73	61000	-0.0953969	74.8555	-466888
74	61000	-0.0802981	74.8619	-471786
75	62000	-0.0652187	74.8662	-475829
76	66000	-0.0476439	74.8684	-478974
77	70000	-0.0325917	74.8695	-481255
78	70000	-0.0175476	74.8698	-482484
79	72000	0	74.8698	-482484
80	73000	0.0175476	74.8701	-481203
81	77000	0.0325917	74.8712	-478693
82	77330	0.0476439	74.8735	-475009
83	78000	0.0652187	74.8777	-469922
84	80000	0.0802981	74.8842	-463498
85	86000	0.0953969	74.8933	-455294
86	88000	0.113039	74.906	-445346
87	90000	0.128189	74.9225	-433809
88	94000	0.143367	74.943	-420333
89	94000	0.161119	74.969	-405188
90	98000	0.176374	75.0001	-387903
91	100000	0.191671	75.0368	-368736
92	101000	0.209575	75.0807	-347569
93	101000	0.224974	75.1314	-324847
94	102000	0.240426	75.1892	-300323
95	102390	0.258527	75.256	-273852
96	105000	0.27411	75.3311	-245071
97	106000	0.28976	75.4151	-214356
98	106000	0.308108	75.51	-181697
99	108000	0.323919	75.615	-146714
100	113000	0.33981	75.7304	-108315
101	116000	0.358459	75.8589	-66733.8
102	124000	0.374544	75.9992	-20290.4
103	125000	0.390726	76.1519	28550.4
104	125000	0.409735	76.3198	79767.3

105	126000	0.426148	76.5014	133462
106	126000	0.442676	76.6973	189239
107	128000	0.462114	76.9109	248390
108	130000	0.478914	77.1402	310649
109	137000	0.49585	77.3861	378580
110	140000	0.515791	77.6521	450791
111	142000	0.533048	77.9363	526484
112	144000	0.550465	78.2393	605751
113	146000	0.570999	78.5653	689116
114	146000	0.588793	78.912	775080
115	148000	0.606775	79.2802	864883
116	148000	0.628006	79.6746	957828
117	149000	0.646431	80.0924	1.05415e+006
118	150000	0.665079	80.5348	1.15391e+006
119	150000	0.687131	81.0069	1.25698e+006
120	152000	0.706302	81.5058	1.36434e+006
121	152000	0.725736	82.0325	1.47465e+006
122	152000	0.748762	82.5931	1.58846e+006
123	154000	0.768821	83.1842	1.70686e+006
124	157000	0.789191	83.807	1.83076e+006
125	158000	0.813379	84.4686	1.95927e+006
126	159000	0.834498	85.165	2.09196e+006
127	160000	0.855996	85.8977	2.22892e+006
128	160000	0.881587	86.6749	2.36997e+006
129	161000	0.903992	87.4921	2.51552e+006
130	162000	0.926859	88.3512	2.66567e+006
131	163000	0.954165	89.2616	2.8212e+006
132	163000	0.97815	90.2184	2.98063e+006
133	164000	1.00271	91.2238	3.14508e+006
134	166000	1.03215	92.2892	3.31642e+006
135	168000	1.05812	93.4088	3.49418e+006
136	169000	1.08482	94.5856	3.67752e+006
137	170000	1.11699	95.8333	3.8674e+006
138	175000	1.1455	97.1455	4.06787e+006
139	175000	1.17499	98.5261	4.27349e+006
140	176000	1.21073	99.9919	4.48658e+006
141	178000	1.24264	101.536	4.70777e+006
142	178000	1.27588	103.164	4.93487e+006
143	178190	1.31652	104.897	5.16947e+006
144	180000	1.35317	106.728	5.41304e+006
145	183000	1.39175	108.665	5.66773e+006
146	188000	1.43953	110.737	5.93836e+006
147	188000	1.48328	112.938	6.21721e+006
148	188000	1.53007	115.279	6.50487e+006
149	192000	1.58927	117.804	6.81001e+006
150	192000	1.64485	120.51	7.12582e+006
151	195000	1.70604	123.421	7.4585e+006
152	198000	1.78661	126.613	7.81225e+006
153	199000	1.86629	130.096	8.18364e+006
154	201000	1.95996	133.937	8.57759e+006
155	204000	2.09693	138.334	9.00536e+006
156	209000	2.25713	143.429	9.4771e+006
157	222000	2.51213	149.74	1.00348e+007

Data Set Standard Deviation = 69286
Numerator = 1.00697e+014

Denominator = 1.12138e+014
W Statistic = 0.897977 = 1.00697e+014 / 1.12138e+014

5% Critical value of 0.976 exceeds 0.897977
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.897977
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Alkalinity, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 222000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	29260
	3/20/2014	175000
	9/9/2014	152000
	3/16/2015	160000
	9/9/2015	148000
	3/18/2016	164000
	9/20/2016	192000
	3/23/2017	146000
	9/18/2017	160000
	3/15/2018	162000
	9/17/2018	198000
	3/5/2019	170000
	9/24/2019	169000
	3/16/2020	163000
	9/22/2020	195000
	3/16/2021	188000
	9/14/2021	222000
	3/22/2022	168000
	9/13/2022	178000
	3/14/2023	159000

Date	Count	Mean	Significant
9/12/2023	1	188000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Alkalinity, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 157000
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	77330
	12/5/2013	102390
	3/19/2014	157000
	9/4/2014	106000
	3/17/2015	150000
	9/11/2015	101000
	3/15/2016	101000
	9/21/2016	102000
	3/28/2017	86000
	9/19/2017	90000
	3/26/2018	98000
	9/18/2018	144000
	3/4/2019	124000
	9/23/2019	105000
	3/19/2020	130000
	9/23/2020	77000
	3/19/2021	126000
	9/15/2021	78000
	3/16/2022	70000
	9/14/2022	80000
	3/16/2023	57000

Date	Count	Mean	Significant
9/13/2023	1	108000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Alkalinity, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 209000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	178190
	3/21/2014	209000
	9/8/2014	199000
	3/19/2015	128000
	9/14/2015	204000
	3/21/2016	178000
	9/23/2016	163000
	3/27/2017	175000
	9/20/2017	149000
	3/16/2018	142000
	9/20/2018	140000
	3/5/2019	154000
	9/25/2019	150000
	3/25/2020	106000
	9/28/2020	158000
	3/18/2021	148000
	9/15/2021	161000
	3/22/2022	116000
	9/14/2022	126000
	3/16/2023	125000

Date	Count	Mean	Significant
9/13/2023	1	152000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Alkalinity, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 137000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	42270
	3/21/2014	42000
	9/17/2014	48000
	3/19/2015	45000
	9/15/2015	53000
	3/21/2016	61000
	9/26/2016	62000
	3/31/2017	61000
	9/21/2017	73000
	3/30/2018	94000
	9/26/2018	113000
	3/13/2019	94000
	10/3/2019	125000
	4/3/2020	88000
	9/30/2020	72000
	3/22/2021	100000
	9/16/2021	70000
	3/24/2022	137000
	9/16/2022	ND<0
	3/17/2023	39000

Date	Count	Mean	Significant
9/14/2023	1	66000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Alkalinity, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 20000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	6660
	3/18/2014	8000
	9/16/2014	10000
	3/18/2015	10000
	9/15/2015	11000
	3/16/2016	12000
	9/22/2016	11000
	3/29/2017	11000
	9/21/2017	11000
	3/28/2018	12000
	9/20/2018	13000
	3/12/2019	11000
	10/1/2019	18000
	3/18/2020	20000
	9/24/2020	17000
	3/17/2021	19000
	9/9/2021	17000
	3/15/2022	18000
	9/16/2022	18000
	3/15/2023	14000

Date	Count	Mean	Significant
9/11/2023	1	21000	TRUE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Alkalinity, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 201000
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	201000
	3/26/2020	188000
	9/29/2020	183000
	3/16/2021	192000
	9/14/2021	180000
	3/18/2022	152000
	9/13/2022	146000
	3/14/2023	176000

Date	Count	Mean	Significant
9/12/2023	1	166000	FALSE

Shapiro-Francia Test of Normality

Parameter: Ammonia-N

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	0	-0.725736	68.2338	0
38	0	-0.706302	68.7327	0
39	0	-0.687131	69.2049	0
40	0	-0.665079	69.6472	0
41	0	-0.646431	70.0651	0
42	0	-0.628006	70.4595	0
43	0	-0.606775	70.8276	0
44	0	-0.588793	71.1743	0
45	0	-0.570999	71.5003	0
46	0	-0.550465	71.8034	0
47	0	-0.533048	72.0875	0

48	0	-0.515791	72.3535	0
49	0	-0.49585	72.5994	0
50	0	-0.478914	72.8288	0
51	0	-0.462114	73.0423	0
52	0	-0.442676	73.2383	0
53	0	-0.426148	73.4199	0
54	0	-0.409735	73.5878	0
55	0	-0.390726	73.7404	0
56	0	-0.374544	73.8807	0
57	0	-0.358459	74.0092	0
58	0	-0.33981	74.1247	0
59	0	-0.323919	74.2296	0
60	0	-0.308108	74.3245	0
61	0	-0.28976	74.4085	0
62	0	-0.27411	74.4836	0
63	0	-0.258527	74.5505	0
64	0	-0.240426	74.6083	0
65	0	-0.224974	74.6589	0
66	0	-0.209575	74.7028	0
67	0	-0.191671	74.7395	0
68	0	-0.176374	74.7706	0
69	0	-0.161119	74.7966	0
70	0	-0.143367	74.8172	0
71	0	-0.128189	74.8336	0
72	0	-0.113039	74.8464	0
73	0	-0.0953969	74.8555	0
74	0	-0.0802981	74.8619	0
75	0	-0.0652187	74.8662	0
76	0	-0.0476439	74.8684	0
77	0	-0.0325917	74.8695	0
78	0	-0.0175476	74.8698	0
79	0	0	74.8698	0
80	0	0.0175476	74.8701	0
81	0	0.0325917	74.8712	0
82	100	0.0476439	74.8735	4.76439
83	103	0.0652187	74.8777	11.4819
84	104	0.0802981	74.8842	19.8329
85	111	0.0953969	74.8933	30.422
86	118	0.113039	74.906	43.7606
87	118	0.128189	74.9225	58.8868
88	119	0.143367	74.943	75.9475
89	119	0.161119	74.969	95.1207
90	119	0.176374	75.0001	116.109
91	123	0.191671	75.0368	139.685
92	124	0.209575	75.0807	165.672
93	125	0.224974	75.1314	193.794
94	126	0.240426	75.1892	224.087
95	126	0.258527	75.256	256.662
96	128	0.27411	75.3311	291.748
97	128	0.28976	75.4151	328.837
98	130	0.308108	75.51	368.891
99	130	0.323919	75.615	411.001
100	132	0.33981	75.7304	455.856
101	132	0.358459	75.8589	503.172
102	133	0.374544	75.9992	552.987
103	134	0.390726	76.1519	605.344
104	137	0.409735	76.3198	661.478

105	139	0.426148	76.5014	720.712
106	149	0.442676	76.6973	786.671
107	149	0.462114	76.9109	855.526
108	152	0.478914	77.1402	928.321
109	158	0.49585	77.3861	1006.67
110	165	0.515791	77.6521	1091.77
111	178	0.533048	77.9363	1186.65
112	180	0.550465	78.2393	1285.74
113	185	0.570999	78.5653	1391.37
114	186	0.588793	78.912	1500.89
115	189	0.606775	79.2802	1615.57
116	191	0.628006	79.6746	1735.52
117	198	0.646431	80.0924	1863.51
118	203	0.665079	80.5348	1998.52
119	209	0.687131	81.0069	2142.13
120	217	0.706302	81.5058	2295.4
121	233	0.725736	82.0325	2464.5
122	241	0.748762	82.5931	2644.95
123	249	0.768821	83.1842	2836.38
124	254	0.789191	83.807	3036.84
125	260	0.813379	84.4686	3248.32
126	264	0.834498	85.165	3468.62
127	275	0.855996	85.8977	3704.02
128	287	0.881587	86.6749	3957.04
129	292	0.903992	87.4921	4221
130	318	0.926859	88.3512	4515.75
131	341	0.954165	89.2616	4841.12
132	362	0.97815	90.2184	5195.21
133	391	1.00271	91.2238	5587.27
134	415	1.03215	92.2892	6015.61
135	427	1.05812	93.4088	6467.43
136	429	1.08482	94.5856	6932.82
137	500	1.11699	95.8333	7491.31
138	514	1.1455	97.1455	8080.1
139	520	1.17499	98.5261	8691.09
140	548	1.21073	99.9919	9354.57
141	642	1.24264	101.536	10152.3
142	700	1.27588	103.164	11045.5
143	739	1.31652	104.897	12018.4
144	840	1.35317	106.728	13155
145	875	1.39175	108.665	14372.8
146	1010	1.43953	110.737	15826.7
147	1140	1.48328	112.938	17517.7
148	1150	1.53007	115.279	19277.3
149	1630	1.58927	117.804	21867.8
150	1650	1.64485	120.51	24581.8
151	1680	1.70604	123.421	27447.9
152	1750	1.78661	126.613	30574.5
153	1950	1.86629	130.096	34213.8
154	2130	1.95996	133.937	38388.5
155	2230	2.09693	138.334	43064.6
156	2590	2.25713	143.429	48910.6
157	2720	2.51213	149.74	55743.6

Data Set Standard Deviation = 503.522
Numerator = 3.10735e+009

Denominator = 5.9224e+009
W Statistic = 0.524677 = 3.10735e+009 / 5.9224e+009

5% Critical value of 0.976 exceeds 0.524677
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.524677
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Ammonia-N

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 2720
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	642
	9/9/2014	1630
	3/16/2015	1650
	9/9/2015	1950
	3/18/2016	1680
	9/20/2016	2720
	3/23/2017	2230
	9/18/2017	2590
	3/15/2018	1150
	9/17/2018	1750
	3/5/2019	840
	9/24/2019	2130
	3/16/2020	700
	9/22/2020	1140
	3/16/2021	875
	9/14/2021	1010
	3/22/2022	739
	9/13/2022	415
	3/14/2023	520

Date	Count	Mean	Significant
9/12/2023	1	514	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Ammonia-N

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 71.4286%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 260
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	260
	9/4/2014	ND<0 U
	3/17/2015	ND<0 U
	9/11/2015	ND<0 U
	3/15/2016	ND<0 U
	9/21/2016	ND<0 U
	3/28/2017	ND<0 U
	9/19/2017	ND<0 J
	3/26/2018	158
	9/18/2018	ND<0 J
	3/4/2019	149
	9/23/2019	118
	3/19/2020	ND<0 J
	9/23/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 J
	3/16/2022	186
	9/14/2022	128
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	275	TRUE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Ammonia-N

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 45%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 254
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	119
	9/8/2014	ND<0 J
	3/19/2015	ND<0 J
	9/14/2015	ND<0 J
	3/21/2016	ND<0 U
	9/23/2016	178
	3/27/2017	ND<0 J
	9/20/2017	104
	3/16/2018	209
	9/20/2018	100
	3/5/2019	ND<0 U
	9/25/2019	165
	3/25/2020	ND<0 J
	9/28/2020	189
	3/18/2021	254
	9/15/2021	137
	3/22/2022	ND<0
	9/14/2022	241
	3/16/2023	132

Date	Count	Mean	Significant
9/13/2023	1	341	TRUE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Ammonia-N

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 55%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 292
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/17/2014	133
	3/19/2015	ND<0 U
	9/15/2015	ND<0 U
	3/21/2016	ND<0 U
	9/26/2016	ND<0 J
	3/31/2017	ND<0 J
	9/21/2017	ND<0 J
	3/30/2018	111
	9/26/2018	ND<0 J
	3/13/2019	128
	10/3/2019	264
	4/3/2020	126
	9/30/2020	292
	3/22/2021	217
	9/16/2021	ND<0 J
	3/24/2022	191
	9/16/2022	ND<0 J
	3/17/2023	125

Date	Count	Mean	Significant
9/14/2023	1	318	TRUE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Ammonia-N

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 80%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 287
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	130
	9/16/2014	ND<0 J
	3/18/2015	ND<0 U
	9/15/2015	ND<0 U
	3/16/2016	ND<0 U
	9/22/2016	ND<0 J
	3/29/2017	ND<0 J
	9/21/2017	ND<0 U
	3/28/2018	ND<0 J
	9/20/2018	ND<0 J
	3/12/2019	ND<0 J
	10/1/2019	249
	3/18/2020	ND<0 U
	9/24/2020	ND<0 U
	3/17/2021	287
	9/9/2021	ND<0 U
	3/15/2022	ND<0 J
	9/16/2022	ND<0 J
	3/15/2023	233

Date	Count	Mean	Significant
9/11/2023	1	123	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Ammonia-N

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 12.5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 548
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	185
	3/26/2020	139
	9/29/2020	203
	3/16/2021	427
	9/14/2021	362
	3/18/2022	429
	9/13/2022	ND<0
	3/14/2023	548

Date	Count	Mean	Significant
9/12/2023	1	500	FALSE

Shapiro-Francia Test of Normality

Parameter: Chemical Oxygen Demand (COD)

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	0	-0.725736	68.2338	0
38	0	-0.706302	68.7327	0
39	0	-0.687131	69.2049	0
40	0	-0.665079	69.6472	0
41	0	-0.646431	70.0651	0
42	0	-0.628006	70.4595	0
43	0	-0.606775	70.8276	0
44	0	-0.588793	71.1743	0
45	0	-0.570999	71.5003	0
46	0	-0.550465	71.8034	0
47	0	-0.533048	72.0875	0

48	0	-0.515791	72.3535	0
49	0	-0.49585	72.5994	0
50	0	-0.478914	72.8288	0
51	0	-0.462114	73.0423	0
52	0	-0.442676	73.2383	0
53	0	-0.426148	73.4199	0
54	0	-0.409735	73.5878	0
55	0	-0.390726	73.7404	0
56	0	-0.374544	73.8807	0
57	0	-0.358459	74.0092	0
58	0	-0.33981	74.1247	0
59	0	-0.323919	74.2296	0
60	0	-0.308108	74.3245	0
61	0	-0.28976	74.4085	0
62	0	-0.27411	74.4836	0
63	0	-0.258527	74.5505	0
64	0	-0.240426	74.6083	0
65	0	-0.224974	74.6589	0
66	0	-0.209575	74.7028	0
67	0	-0.191671	74.7395	0
68	0	-0.176374	74.7706	0
69	0	-0.161119	74.7966	0
70	0	-0.143367	74.8172	0
71	0	-0.128189	74.8336	0
72	0	-0.113039	74.8464	0
73	0	-0.0953969	74.8555	0
74	0	-0.0802981	74.8619	0
75	0	-0.0652187	74.8662	0
76	0	-0.0476439	74.8684	0
77	0	-0.0325917	74.8695	0
78	0	-0.0175476	74.8698	0
79	0	0	74.8698	0
80	0	0.0175476	74.8701	0
81	0	0.0325917	74.8712	0
82	0	0.0476439	74.8735	0
83	0	0.0652187	74.8777	0
84	0	0.0802981	74.8842	0
85	0	0.0953969	74.8933	0
86	0	0.113039	74.906	0
87	0	0.128189	74.9225	0
88	0	0.143367	74.943	0
89	0	0.161119	74.969	0
90	0	0.176374	75.0001	0
91	0	0.191671	75.0368	0
92	0	0.209575	75.0807	0
93	0	0.224974	75.1314	0
94	0	0.240426	75.1892	0
95	0	0.258527	75.256	0
96	5000	0.27411	75.3311	1370.55
97	7000	0.28976	75.4151	3398.87
98	8000	0.308108	75.51	5863.74
99	8000	0.323919	75.615	8455.09
100	9000	0.33981	75.7304	11513.4
101	9000	0.358459	75.8589	14739.5
102	10000	0.374544	75.9992	18485
103	11000	0.390726	76.1519	22782.9
104	11000	0.409735	76.3198	27290

105	12000	0.426148	76.5014	32403.8
106	12000	0.442676	76.6973	37715.9
107	12000	0.462114	76.9109	43261.3
108	12000	0.478914	77.1402	49008.3
109	13000	0.49585	77.3861	55454.3
110	13000	0.515791	77.6521	62159.6
111	13000	0.533048	77.9363	69089.2
112	13000	0.550465	78.2393	76245.3
113	13000	0.570999	78.5653	83668.2
114	14000	0.588793	78.912	91911.3
115	15000	0.606775	79.2802	101013
116	15000	0.628006	79.6746	110433
117	16000	0.646431	80.0924	120776
118	16000	0.665079	80.5348	131417
119	16000	0.687131	81.0069	142411
120	16000	0.706302	81.5058	153712
121	17000	0.725736	82.0325	166050
122	17000	0.748762	82.5931	178779
123	17000	0.768821	83.1842	191849
124	17000	0.789191	83.807	205265
125	18000	0.813379	84.4686	219906
126	18000	0.834498	85.165	234927
127	18000	0.855996	85.8977	250335
128	19000	0.881587	86.6749	267085
129	19000	0.903992	87.4921	284261
130	19000	0.926859	88.3512	301871
131	20000	0.954165	89.2616	320954
132	20000	0.97815	90.2184	340517
133	20000	1.00271	91.2238	360571
134	20000	1.03215	92.2892	381214
135	21000	1.05812	93.4088	403435
136	21000	1.08482	94.5856	426216
137	21000	1.11699	95.8333	449673
138	22000	1.1455	97.1455	474874
139	22000	1.17499	98.5261	500724
140	23000	1.21073	99.9919	528571
141	23000	1.24264	101.536	557151
142	24000	1.27588	103.164	587772
143	24000	1.31652	104.897	619369
144	25000	1.35317	106.728	653198
145	25000	1.39175	108.665	687992
146	26000	1.43953	110.737	725420
147	27000	1.48328	112.938	765468
148	27000	1.53007	115.279	806780
149	28000	1.58927	117.804	851280
150	28000	1.64485	120.51	897335
151	29000	1.70604	123.421	946811
152	29000	1.78661	126.613	998622
153	29000	1.86629	130.096	1.05274e+006
154	31000	1.95996	133.937	1.1135e+006
155	33000	2.09693	138.334	1.1827e+006
156	33000	2.25713	143.429	1.25719e+006
157	56000	2.51213	149.74	1.39787e+006

Data Set Standard Deviation = 10716.3
Numerator = 1.95403e+012

Denominator = 2.68257e+012
W Statistic = 0.728418 = 1.95403e+012 / 2.68257e+012

5% Critical value of 0.976 exceeds 0.728418
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.728418
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Chemical Oxygen Demand (COD)

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 60%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 56000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	ND<0 U
	9/9/2014	25000
	3/16/2015	ND<0 U
	9/9/2015	ND<0 J
	3/18/2016	13000
	9/20/2016	13000
	3/23/2017	ND<0 J
	9/18/2017	12000
	3/15/2018	11000
	9/17/2018	ND<0 U
	3/5/2019	16000
	9/24/2019	ND<0 U
	3/16/2020	22000
	9/22/2020	ND<0 U
	3/16/2021	ND<0 J
	9/14/2021	ND<0 J
	3/22/2022	ND<0
	9/13/2022	ND<0 J
	3/14/2023	56000

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Chemical Oxygen Demand (COD)

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 80.9524%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 10000
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/4/2014	10000
	3/17/2015	ND<0 U
	9/11/2015	9000
	3/15/2016	ND<0 J
	9/21/2016	8000
	3/28/2017	ND<0 J
	9/19/2017	9000
	3/26/2018	ND<0 U
	9/18/2018	ND<0 U
	3/4/2019	ND<0 J
	9/23/2019	ND<0 U
	3/19/2020	ND<0 U
	9/23/2020	ND<0 J
	3/19/2021	ND<0 J
	9/15/2021	ND<0 J
	3/16/2022	ND<0
	9/14/2022	ND<0 J
	3/16/2023	ND<0 J

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Chemical Oxygen Demand (COD)

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 10%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 33000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	29000
	3/21/2014	13000
	9/8/2014	11000
	3/19/2015	ND<0 U
	9/14/2015	12000
	3/21/2016	16000
	9/23/2016	ND<0 J
	3/27/2017	20000
	9/20/2017	24000
	3/16/2018	13000
	9/20/2018	19000
	3/5/2019	27000
	9/25/2019	21000
	3/25/2020	17000
	9/28/2020	23000
	3/18/2021	33000
	9/15/2021	20000
	3/22/2022	18000
	9/14/2022	21000
	3/16/2023	28000

Date	Count	Mean	Significant
9/13/2023	1	15000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Chemical Oxygen Demand (COD)

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 15%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 33000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	16000
	3/21/2014	ND<0 J
	9/17/2014	12000
	3/19/2015	ND<0 J
	9/15/2015	5000
	3/21/2016	13000
	9/26/2016	ND<0 J
	3/31/2017	14000
	9/21/2017	16000
	3/30/2018	19000
	9/26/2018	27000
	3/13/2019	29000
	10/3/2019	28000
	4/3/2020	23000
	9/30/2020	21000
	3/22/2021	20000
	9/16/2021	25000
	3/24/2022	31000
	9/16/2022	29000
	3/17/2023	33000

Date	Count	Mean	Significant
9/14/2023	1	19000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Chemical Oxygen Demand (COD)

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 90%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 17000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	12000
	9/16/2014	ND<0 U
	3/18/2015	ND<0 U
	9/15/2015	ND<0 U
	3/16/2016	ND<0 U
	9/22/2016	ND<0 U
	3/29/2017	ND<0 J
	9/21/2017	ND<0 U
	3/28/2018	ND<0 U
	9/20/2018	ND<0 U
	3/12/2019	ND<0 J
	10/1/2019	ND<0 J
	3/18/2020	ND<0 U
	9/24/2020	ND<0 U
	3/17/2021	ND<0 J
	9/9/2021	ND<0 J
	3/15/2022	ND<0
	9/16/2022	ND<0
	3/15/2023	17000

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Chemical Oxygen Demand (COD)

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 26000
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	17000
	3/26/2020	18000
	9/29/2020	20000
	3/16/2021	24000
	9/14/2021	22000
	3/18/2022	18000
	9/13/2022	17000
	3/14/2023	26000

Date	Count	Mean	Significant
9/12/2023	1	15000	FALSE

Shapiro-Francia Test of Normality

Parameter: Chloride

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	8930	-2.51213	6.31081	-22433.4
2	24500	-2.25713	11.4054	-77733
3	24600	-2.09693	15.8026	-129318
4	24800	-1.95996	19.644	-177925
5	25700	-1.86629	23.1271	-225888
6	25900	-1.78661	26.319	-272162
7	26100	-1.70604	29.2296	-316689
8	26400	-1.64485	31.9352	-360113
9	27000	-1.58927	34.4609	-403024
10	27700	-1.53007	36.802	-445406
11	28600	-1.48328	39.0022	-487828
12	29070	-1.43953	41.0744	-529675
13	30000	-1.39175	43.0114	-571428
14	30800	-1.35317	44.8424	-613106
15	31200	-1.31652	46.5757	-654181
16	32900	-1.27588	48.2035	-696157
17	34200	-1.24264	49.7477	-738656
18	34700	-1.21073	51.2136	-780668
19	34800	-1.17499	52.5942	-821558
20	36700	-1.1455	53.9063	-863598
21	36900	-1.11699	55.154	-904814
22	38400	-1.08482	56.3308	-946472
23	40200	-1.05812	57.4505	-989008
24	40900	-1.03215	58.5158	-1.03122e+006
25	41500	-1.00271	59.5212	-1.07284e+006
26	42500	-0.97815	60.478	-1.11441e+006
27	43200	-0.954165	61.3884	-1.15563e+006
28	43900	-0.926859	62.2475	-1.19632e+006
29	45200	-0.903992	63.0647	-1.23718e+006
30	45300	-0.881587	63.8419	-1.27711e+006
31	45400	-0.855996	64.5746	-1.31597e+006
32	46600	-0.834498	65.271	-1.35486e+006
33	48400	-0.813379	65.9326	-1.39423e+006
34	49400	-0.789191	66.5554	-1.43322e+006
35	50900	-0.768821	67.1465	-1.47235e+006
36	51600	-0.748762	67.7072	-1.51098e+006
37	52300	-0.725736	68.2338	-1.54894e+006
38	53000	-0.706302	68.7327	-1.58637e+006
39	53270	-0.687131	69.2049	-1.62298e+006
40	53400	-0.665079	69.6472	-1.65849e+006
41	53700	-0.646431	70.0651	-1.69321e+006
42	54000	-0.628006	70.4595	-1.72712e+006
43	54400	-0.606775	70.8276	-1.76013e+006
44	55400	-0.588793	71.1743	-1.79275e+006
45	55600	-0.570999	71.5003	-1.82449e+006
46	57300	-0.550465	71.8034	-1.85604e+006
47	57400	-0.533048	72.0875	-1.88663e+006

48	57600	-0.515791	72.3535	-1.91634e+006
49	57910	-0.49585	72.5994	-1.94506e+006
50	58700	-0.478914	72.8288	-1.97317e+006
51	58970	-0.462114	73.0423	-2.00042e+006
52	59100	-0.442676	73.2383	-2.02658e+006
53	59200	-0.426148	73.4199	-2.05181e+006
54	59600	-0.409735	73.5878	-2.07623e+006
55	59900	-0.390726	73.7404	-2.09964e+006
56	60000	-0.374544	73.8807	-2.12211e+006
57	60100	-0.358459	74.0092	-2.14365e+006
58	60700	-0.33981	74.1247	-2.16428e+006
59	60800	-0.323919	74.2296	-2.18397e+006
60	62000	-0.308108	74.3245	-2.20307e+006
61	62200	-0.28976	74.4085	-2.2211e+006
62	62900	-0.27411	74.4836	-2.23834e+006
63	63500	-0.258527	74.5505	-2.25476e+006
64	64000	-0.240426	74.6083	-2.27014e+006
65	64100	-0.224974	74.6589	-2.28456e+006
66	64600	-0.209575	74.7028	-2.2981e+006
67	64800	-0.191671	74.7395	-2.31052e+006
68	65200	-0.176374	74.7706	-2.32202e+006
69	66800	-0.161119	74.7966	-2.33279e+006
70	67100	-0.143367	74.8172	-2.34241e+006
71	67300	-0.128189	74.8336	-2.35103e+006
72	67500	-0.113039	74.8464	-2.35866e+006
73	69300	-0.0953969	74.8555	-2.36527e+006
74	69500	-0.0802981	74.8619	-2.37085e+006
75	70900	-0.0652187	74.8662	-2.37548e+006
76	71000	-0.0476439	74.8684	-2.37886e+006
77	71100	-0.0325917	74.8695	-2.38118e+006
78	71500	-0.0175476	74.8698	-2.38243e+006
79	71500	0	74.8698	-2.38243e+006
80	72600	0.0175476	74.8701	-2.38116e+006
81	74100	0.0325917	74.8712	-2.37874e+006
82	74670	0.0476439	74.8735	-2.37519e+006
83	75700	0.0652187	74.8777	-2.37025e+006
84	76000	0.0802981	74.8842	-2.36415e+006
85	76200	0.0953969	74.8933	-2.35688e+006
86	76700	0.113039	74.906	-2.34821e+006
87	76900	0.128189	74.9225	-2.33835e+006
88	77100	0.143367	74.943	-2.3273e+006
89	77300	0.161119	74.969	-2.31484e+006
90	77600	0.176374	75.0001	-2.30115e+006
91	77700	0.191671	75.0368	-2.28626e+006
92	78500	0.209575	75.0807	-2.26981e+006
93	79400	0.224974	75.1314	-2.25195e+006
94	81900	0.240426	75.1892	-2.23226e+006
95	82100	0.258527	75.256	-2.21103e+006
96	82300	0.27411	75.3311	-2.18847e+006
97	82500	0.28976	75.4151	-2.16457e+006
98	82700	0.308108	75.51	-2.13909e+006
99	82800	0.323919	75.615	-2.11227e+006
100	84500	0.33981	75.7304	-2.08355e+006
101	85200	0.358459	75.8589	-2.05301e+006
102	85300	0.374544	75.9992	-2.02106e+006
103	86900	0.390726	76.1519	-1.98711e+006
104	87400	0.409735	76.3198	-1.9513e+006

105	87600	0.426148	76.5014	-1.91397e+006
106	87600	0.442676	76.6973	-1.87519e+006
107	87700	0.462114	76.9109	-1.83466e+006
108	88200	0.478914	77.1402	-1.79242e+006
109	88400	0.49585	77.3861	-1.74859e+006
110	89400	0.515791	77.6521	-1.70248e+006
111	89700	0.533048	77.9363	-1.65466e+006
112	90200	0.550465	78.2393	-1.60501e+006
113	90500	0.570999	78.5653	-1.55333e+006
114	91800	0.588793	78.912	-1.49928e+006
115	92800	0.606775	79.2802	-1.44297e+006
116	93400	0.628006	79.6746	-1.38432e+006
117	93600	0.646431	80.0924	-1.32381e+006
118	96700	0.665079	80.5348	-1.2595e+006
119	97400	0.687131	81.0069	-1.19257e+006
120	98200	0.706302	81.5058	-1.12321e+006
121	98500	0.725736	82.0325	-1.05173e+006
122	98900	0.748762	82.5931	-977676
123	99100	0.768821	83.1842	-901486
124	99300	0.789191	83.807	-823120
125	101000	0.813379	84.4686	-740968
126	102000	0.834498	85.165	-655850
127	104000	0.855996	85.8977	-566826
128	104000	0.881587	86.6749	-475141
129	105000	0.903992	87.4921	-380222
130	106000	0.926859	88.3512	-281975
131	107000	0.954165	89.2616	-179879
132	107000	0.97815	90.2184	-75217
133	109000	1.00271	91.2238	34078.6
134	109000	1.03215	92.2892	146583
135	110000	1.05812	93.4088	262977
136	110000	1.08482	94.5856	382307
137	110000	1.11699	95.8333	505176
138	111000	1.1455	97.1455	632327
139	111000	1.17499	98.5261	762750
140	112000	1.21073	99.9919	898352
141	112000	1.24264	101.536	1.03753e+006
142	115000	1.27588	103.164	1.18425e+006
143	117000	1.31652	104.897	1.33829e+006
144	124000	1.35317	106.728	1.50608e+006
145	127000	1.39175	108.665	1.68283e+006
146	132000	1.43953	110.737	1.87285e+006
147	140000	1.48328	112.938	2.08051e+006
148	152000	1.53007	115.279	2.31308e+006
149	162000	1.58927	117.804	2.57054e+006
150	164000	1.64485	120.51	2.8403e+006
151	164000	1.70604	123.421	3.12009e+006
152	172000	1.78661	126.613	3.42738e+006
153	177000	1.86629	130.096	3.75772e+006
154	217000	1.95996	133.937	4.18303e+006
155	249000	2.09693	138.334	4.70517e+006
156	308000	2.25713	143.429	5.40036e+006
157	319000	2.51213	149.74	6.20173e+006

Data Set Standard Deviation = 45391.2
Numerator = 3.84615e+013

Denominator = 4.81288e+013
W Statistic = 0.799136 = 3.84615e+013 / 4.81288e+013

5% Critical value of 0.976 exceeds 0.799136
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.799136
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Chloride

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 172000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	8930
	3/20/2014	74100
	9/9/2014	98200
	3/16/2015	99100
	9/9/2015	93600
	3/18/2016	99300
	9/20/2016	110000
	3/23/2017	132000
	9/18/2017	140000
	3/15/2018	124000
	9/17/2018	109000
	3/5/2019	107000
	9/24/2019	111000
	3/16/2020	172000
	9/22/2020	104000
	3/16/2021	106000
	9/14/2021	111000
	3/22/2022	127000
	9/13/2022	107000
	3/14/2023	112000

Date	Count	Mean	Significant
9/12/2023	1	112000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Chloride

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 88400
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	58970
	12/5/2013	57910
	3/19/2014	53000
	9/4/2014	72600
	3/17/2015	58700
	9/11/2015	67100
	3/15/2016	65200
	9/21/2016	63500
	3/28/2017	64800
	9/19/2017	59200
	3/26/2018	62000
	9/18/2018	88400
	3/4/2019	77600
	9/23/2019	71500
	3/19/2020	66800
	9/23/2020	70900
	3/19/2021	64100
	9/15/2021	57300
	3/16/2022	50900
	9/14/2022	59900
	3/16/2023	59100

Date	Count	Mean	Significant
9/13/2023	1	76700	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Chloride

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 43900
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	25700
	3/21/2014	24600
	9/8/2014	27000
	3/19/2015	25900
	9/14/2015	26100
	3/21/2016	24800
	9/23/2016	27700
	3/27/2017	26400
	9/20/2017	34800
	3/16/2018	32900
	9/20/2018	34200
	3/5/2019	30000
	9/25/2019	24500
	3/25/2020	28600
	9/28/2020	36700
	3/18/2021	34700
	9/15/2021	36900
	3/22/2022	40200
	9/14/2022	40900
	3/16/2023	43900

Date	Count	Mean	Significant
9/13/2023	1	45300	TRUE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Chloride

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 97400
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	53270
	3/21/2014	43200
	9/17/2014	60000
	3/19/2015	48400
	9/15/2015	60700
	3/21/2016	51600
	9/26/2016	38400
	3/31/2017	52300
	9/21/2017	76200
	3/30/2018	81900
	9/26/2018	97400
	3/13/2019	89700
	10/3/2019	69300
	4/3/2020	71000
	9/30/2020	76000
	3/22/2021	96700
	9/16/2021	90500
	3/24/2022	91800
	9/16/2022	90200
	3/17/2023	87400

Date	Count	Mean	Significant
9/14/2023	1	77700	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Chloride

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 67500
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	46600
	3/18/2014	53400
	9/16/2014	55400
	3/18/2015	49400
	9/15/2015	60100
	3/16/2016	60800
	9/22/2016	62200
	3/29/2017	67500
	9/21/2017	54400
	3/28/2018	57600
	9/20/2018	55600
	3/12/2019	53700
	10/1/2019	57400
	3/18/2020	54000
	9/24/2020	45400
	3/17/2021	45200
	9/9/2021	59600
	3/15/2022	42500
	9/16/2022	30800
	3/15/2023	31200

Date	Count	Mean	Significant
9/11/2023	1	41500	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Chloride

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 110000
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	87600
	3/26/2020	98900
	9/29/2020	92800
	3/16/2021	101000
	9/14/2021	105000
	3/18/2022	110000
	9/13/2022	104000
	3/14/2023	110000

Date	Count	Mean	Significant
9/12/2023	1	102000	FALSE

Shapiro-Francia Test of Normality

Parameter: Hardness

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	11000	-2.51213	6.31081	-27633.5
2	14800	-2.25713	11.4054	-61039
3	25000	-2.09693	15.8026	-113462
4	28700	-1.95996	19.644	-169713
5	30000	-1.86629	23.1271	-225702
6	32900	-1.78661	26.319	-284481
7	39700	-1.70604	29.2296	-352211
8	41100	-1.64485	31.9352	-419815
9	42000	-1.58927	34.4609	-486564
10	42900	-1.53007	36.802	-552204
11	43000	-1.48328	39.0022	-615985
12	43200	-1.43953	41.0744	-678173
13	43400	-1.39175	43.0114	-738574
14	44700	-1.35317	44.8424	-799061
15	45000	-1.31652	46.5757	-858305
16	45200	-1.27588	48.2035	-915974
17	45700	-1.24264	49.7477	-972763
18	46000	-1.21073	51.2136	-1.02846e+006
19	46400	-1.17499	52.5942	-1.08298e+006
20	47000	-1.1455	53.9063	-1.13681e+006
21	47500	-1.11699	55.154	-1.18987e+006
22	48000	-1.08482	56.3308	-1.24194e+006
23	48100	-1.05812	57.4505	-1.29284e+006
24	48900	-1.03215	58.5158	-1.34331e+006
25	49100	-1.00271	59.5212	-1.39254e+006
26	50000	-0.97815	60.478	-1.44145e+006
27	50000	-0.954165	61.3884	-1.48916e+006
28	50000	-0.926859	62.2475	-1.5355e+006
29	50100	-0.903992	63.0647	-1.58079e+006
30	52000	-0.881587	63.8419	-1.62664e+006
31	52200	-0.855996	64.5746	-1.67132e+006
32	52300	-0.834498	65.271	-1.71496e+006
33	53000	-0.813379	65.9326	-1.75807e+006
34	53200	-0.789191	66.5554	-1.80006e+006
35	54000	-0.768821	67.1465	-1.84157e+006
36	54000	-0.748762	67.7072	-1.88201e+006
37	54300	-0.725736	68.2338	-1.92141e+006
38	54300	-0.706302	68.7327	-1.95977e+006
39	54600	-0.687131	69.2049	-1.99728e+006
40	56500	-0.665079	69.6472	-2.03486e+006
41	56500	-0.646431	70.0651	-2.07138e+006
42	56500	-0.628006	70.4595	-2.10687e+006
43	56600	-0.606775	70.8276	-2.14121e+006
44	56900	-0.588793	71.1743	-2.17471e+006
45	57200	-0.570999	71.5003	-2.20737e+006
46	57500	-0.550465	71.8034	-2.23902e+006
47	58000	-0.533048	72.0875	-2.26994e+006

48	58500	-0.515791	72.3535	-2.30012e+006
49	58600	-0.49585	72.5994	-2.32917e+006
50	59000	-0.478914	72.8288	-2.35743e+006
51	59000	-0.462114	73.0423	-2.38469e+006
52	60000	-0.442676	73.2383	-2.41125e+006
53	61800	-0.426148	73.4199	-2.43759e+006
54	62100	-0.409735	73.5878	-2.46303e+006
55	63000	-0.390726	73.7404	-2.48765e+006
56	63000	-0.374544	73.8807	-2.51125e+006
57	64900	-0.358459	74.0092	-2.53451e+006
58	67000	-0.33981	74.1247	-2.55728e+006
59	67000	-0.323919	74.2296	-2.57898e+006
60	67500	-0.308108	74.3245	-2.59978e+006
61	69000	-0.28976	74.4085	-2.61977e+006
62	70000	-0.27411	74.4836	-2.63896e+006
63	70000	-0.258527	74.5505	-2.65705e+006
64	72500	-0.240426	74.6083	-2.67449e+006
65	74000	-0.224974	74.6589	-2.69113e+006
66	75000	-0.209575	74.7028	-2.70685e+006
67	76000	-0.191671	74.7395	-2.72142e+006
68	78000	-0.176374	74.7706	-2.73518e+006
69	79700	-0.161119	74.7966	-2.74802e+006
70	85000	-0.143367	74.8172	-2.7602e+006
71	86200	-0.128189	74.8336	-2.77125e+006
72	86500	-0.113039	74.8464	-2.78103e+006
73	88200	-0.0953969	74.8555	-2.78945e+006
74	89000	-0.0802981	74.8619	-2.79659e+006
75	89300	-0.0652187	74.8662	-2.80242e+006
76	90200	-0.0476439	74.8684	-2.80671e+006
77	90700	-0.0325917	74.8695	-2.80967e+006
78	91500	-0.0175476	74.8698	-2.81128e+006
79	91600	0	74.8698	-2.81128e+006
80	92000	0.0175476	74.8701	-2.80966e+006
81	92400	0.0325917	74.8712	-2.80665e+006
82	92400	0.0476439	74.8735	-2.80225e+006
83	92500	0.0652187	74.8777	-2.79621e+006
84	93000	0.0802981	74.8842	-2.78875e+006
85	94200	0.0953969	74.8933	-2.77976e+006
86	94500	0.113039	74.906	-2.76908e+006
87	95200	0.128189	74.9225	-2.75687e+006
88	96100	0.143367	74.943	-2.7431e+006
89	97200	0.161119	74.969	-2.72744e+006
90	97300	0.176374	75.0001	-2.71027e+006
91	98300	0.191671	75.0368	-2.69143e+006
92	101000	0.209575	75.0807	-2.67027e+006
93	101000	0.224974	75.1314	-2.64754e+006
94	102000	0.240426	75.1892	-2.62302e+006
95	102000	0.258527	75.256	-2.59665e+006
96	104000	0.27411	75.3311	-2.56814e+006
97	104000	0.28976	75.4151	-2.53801e+006
98	104000	0.308108	75.51	-2.50596e+006
99	104000	0.323919	75.615	-2.47228e+006
100	109000	0.33981	75.7304	-2.43524e+006
101	110000	0.358459	75.8589	-2.39581e+006
102	113000	0.374544	75.9992	-2.35348e+006
103	113000	0.390726	76.1519	-2.30933e+006
104	114000	0.409735	76.3198	-2.26262e+006

105	114000	0.426148	76.5014	-2.21404e+006
106	116000	0.442676	76.6973	-2.16269e+006
107	117000	0.462114	76.9109	-2.10862e+006
108	118000	0.478914	77.1402	-2.05211e+006
109	118000	0.49585	77.3861	-1.9936e+006
110	120000	0.515791	77.6521	-1.93171e+006
111	122000	0.533048	77.9363	-1.86667e+006
112	130000	0.550465	78.2393	-1.79511e+006
113	130000	0.570999	78.5653	-1.72088e+006
114	130000	0.588793	78.912	-1.64434e+006
115	134000	0.606775	79.2802	-1.56303e+006
116	142900	0.628006	79.6746	-1.47329e+006
117	145000	0.646431	80.0924	-1.37956e+006
118	150000	0.665079	80.5348	-1.2798e+006
119	153000	0.687131	81.0069	-1.17467e+006
120	156000	0.706302	81.5058	-1.06448e+006
121	160000	0.725736	82.0325	-948365
122	165000	0.748762	82.5931	-824819
123	169000	0.768821	83.1842	-694889
124	169000	0.789191	83.807	-561515
125	173000	0.813379	84.4686	-420801
126	175200	0.834498	85.165	-274597
127	177000	0.855996	85.8977	-123085
128	178000	0.881587	86.6749	33837.2
129	181000	0.903992	87.4921	197460
130	182000	0.926859	88.3512	366148
131	182000	0.954165	89.2616	539806
132	186000	0.97815	90.2184	721742
133	189000	1.00271	91.2238	911254
134	189000	1.03215	92.2892	1.10633e+006
135	189000	1.05812	93.4088	1.30632e+006
136	189000	1.08482	94.5856	1.51135e+006
137	190000	1.11699	95.8333	1.72358e+006
138	191000	1.1455	97.1455	1.94237e+006
139	191000	1.17499	98.5261	2.16679e+006
140	196000	1.21073	99.9919	2.40409e+006
141	196000	1.24264	101.536	2.64765e+006
142	200000	1.27588	103.164	2.90283e+006
143	200000	1.31652	104.897	3.16613e+006
144	201000	1.35317	106.728	3.43812e+006
145	202000	1.39175	108.665	3.71925e+006
146	213000	1.43953	110.737	4.02587e+006
147	216000	1.48328	112.938	4.34626e+006
148	216000	1.53007	115.279	4.67675e+006
149	221000	1.58927	117.804	5.02798e+006
150	223000	1.64485	120.51	5.39478e+006
151	224000	1.70604	123.421	5.77694e+006
152	224000	1.78661	126.613	6.17714e+006
153	233000	1.86629	130.096	6.61198e+006
154	236000	1.95996	133.937	7.07454e+006
155	239000	2.09693	138.334	7.5757e+006
156	247000	2.25713	143.429	8.13321e+006
157	255000	2.51213	149.74	8.77381e+006

Data Set Standard Deviation = 60182.3
Numerator = 7.69797e+013

Denominator = 8.46055e+013
W Statistic = 0.909867 = 7.69797e+013 / 8.46055e+013

5% Critical value of 0.976 exceeds 0.909867
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.909867
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Hardness

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 255000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	14800
	3/20/2014	255000
	9/9/2014	191000
	3/16/2015	189000
	9/9/2015	178000
	3/18/2016	173000
	9/20/2016	201000
	3/23/2017	191000
	9/18/2017	247000
	3/15/2018	182000
	9/17/2018	200000
	3/5/2019	213000
	9/24/2019	181000
	3/16/2020	239000
	9/22/2020	233000
	3/16/2021	202000
	9/14/2021	224000
	3/22/2022	216000
	9/13/2022	221000
	3/14/2023	236000

Date	Count	Mean	Significant
9/12/2023	1	224000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Hardness

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 223000
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	175200
	12/5/2013	142900
	3/19/2014	196000
	9/4/2014	223000
	3/17/2015	189000
	9/11/2015	165000
	3/15/2016	134000
	9/21/2016	93000
	3/28/2017	113000
	9/19/2017	109000
	3/26/2018	122000
	9/18/2018	169000
	3/4/2019	196000
	9/23/2019	145000
	3/19/2020	150000
	9/23/2020	130000
	3/19/2021	156000
	9/15/2021	104000
	3/16/2022	92400
	9/14/2022	130000
	3/16/2023	95200

Date	Count	Mean	Significant
9/13/2023	1	153000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Hardness

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 130000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	91500
	3/21/2014	116000
	9/8/2014	104000
	3/19/2015	118000
	9/14/2015	130000
	3/21/2016	110000
	9/23/2016	114000
	3/27/2017	114000
	9/20/2017	92500
	3/16/2018	89300
	9/20/2018	88200
	3/5/2019	101000
	9/25/2019	86500
	3/25/2020	97300
	9/28/2020	96100
	3/18/2021	90700
	9/15/2021	86200
	3/22/2022	89000
	9/14/2022	91600
	3/16/2023	90200

Date	Count	Mean	Significant
9/13/2023	1	92400	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Hardness

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 120000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	61800
	3/21/2014	74000
	9/17/2014	67000
	3/19/2015	76000
	9/15/2015	70000
	3/21/2016	70000
	9/26/2016	75000
	3/31/2017	101000
	9/21/2017	104000
	3/30/2018	120000
	9/26/2018	117000
	3/13/2019	118000
	10/3/2019	113000
	4/3/2020	98300
	9/30/2020	104000
	3/22/2021	102000
	9/16/2021	94500
	3/24/2022	94200
	9/16/2022	92000
	3/17/2023	79700

Date	Count	Mean	Significant
9/14/2023	1	62100	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Hardness

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 67500
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	43200
	3/18/2014	59000
	9/16/2014	50000
	3/18/2015	63000
	9/15/2015	58000
	3/16/2016	60000
	9/22/2016	67000
	3/29/2017	63000
	9/21/2017	52200
	3/28/2018	56600
	9/20/2018	56500
	3/12/2019	58600
	10/1/2019	67500
	3/18/2020	58500
	9/24/2020	54000
	3/17/2021	50000
	9/9/2021	56500
	3/15/2022	53200
	9/16/2022	48900
	3/15/2023	47000

Date	Count	Mean	Significant
9/11/2023	1	54300	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Hardness

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 216000
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	189000
	3/26/2020	186000
	9/29/2020	189000
	3/16/2021	177000
	9/14/2021	160000
	3/18/2022	169000
	9/13/2022	182000
	3/14/2023	216000

Date	Count	Mean	Significant
9/12/2023	1	200000	FALSE

Shapiro-Francia Test of Normality

Parameter: Nitrate-N

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	0	-0.725736	68.2338	0
38	0	-0.706302	68.7327	0
39	0	-0.687131	69.2049	0
40	0	-0.665079	69.6472	0
41	0	-0.646431	70.0651	0
42	0	-0.628006	70.4595	0
43	0	-0.606775	70.8276	0
44	0	-0.588793	71.1743	0
45	0	-0.570999	71.5003	0
46	0	-0.550465	71.8034	0
47	0	-0.533048	72.0875	0

48	0	-0.515791	72.3535	0
49	0	-0.49585	72.5994	0
50	0	-0.478914	72.8288	0
51	0	-0.462114	73.0423	0
52	0	-0.442676	73.2383	0
53	0	-0.426148	73.4199	0
54	0	-0.409735	73.5878	0
55	0	-0.390726	73.7404	0
56	0	-0.374544	73.8807	0
57	0	-0.358459	74.0092	0
58	0	-0.33981	74.1247	0
59	0	-0.323919	74.2296	0
60	0	-0.308108	74.3245	0
61	0	-0.28976	74.4085	0
62	0	-0.27411	74.4836	0
63	0	-0.258527	74.5505	0
64	0	-0.240426	74.6083	0
65	0	-0.224974	74.6589	0
66	0	-0.209575	74.7028	0
67	0	-0.191671	74.7395	0
68	0	-0.176374	74.7706	0
69	0	-0.161119	74.7966	0
70	0	-0.143367	74.8172	0
71	0	-0.128189	74.8336	0
72	0	-0.113039	74.8464	0
73	0	-0.0953969	74.8555	0
74	0	-0.0802981	74.8619	0
75	0	-0.0652187	74.8662	0
76	0	-0.0476439	74.8684	0
77	0	-0.0325917	74.8695	0
78	0	-0.0175476	74.8698	0
79	140	0	74.8698	0
80	220	0.0175476	74.8701	3.86046
81	220	0.0325917	74.8712	11.0306
82	240	0.0476439	74.8735	22.4652
83	280	0.0652187	74.8777	40.7264
84	280	0.0802981	74.8842	63.2099
85	280	0.0953969	74.8933	89.921
86	300	0.113039	74.906	123.833
87	300	0.128189	74.9225	162.289
88	320	0.143367	74.943	208.167
89	340	0.161119	74.969	262.947
90	380	0.176374	75.0001	329.969
91	390	0.191671	75.0368	404.721
92	400	0.209575	75.0807	488.551
93	400	0.224974	75.1314	578.541
94	500	0.240426	75.1892	698.754
95	500	0.258527	75.256	828.017
96	520	0.27411	75.3311	970.555
97	560	0.28976	75.4151	1132.82
98	580	0.308108	75.51	1311.52
99	600	0.323919	75.615	1505.87
100	620	0.33981	75.7304	1716.56
101	640	0.358459	75.8589	1945.97
102	660	0.374544	75.9992	2193.17
103	700	0.390726	76.1519	2466.68
104	800	0.409735	76.3198	2794.47

105	800	0.426148	76.5014	3135.38
106	880	0.442676	76.6973	3524.94
107	920	0.462114	76.9109	3950.08
108	1000	0.478914	77.1402	4429
109	1000	0.49585	77.3861	4924.85
110	1000	0.515791	77.6521	5440.64
111	1100	0.533048	77.9363	6026.99
112	1100	0.550465	78.2393	6632.5
113	1200	0.570999	78.5653	7317.7
114	1200	0.588793	78.912	8024.25
115	1300	0.606775	79.2802	8813.06
116	1400	0.628006	79.6746	9692.27
117	1400	0.646431	80.0924	10597.3
118	1400	0.665079	80.5348	11528.4
119	1500	0.687131	81.0069	12559.1
120	1700	0.706302	81.5058	13759.8
121	1800	0.725736	82.0325	15066.1
122	1800	0.748762	82.5931	16413.9
123	1800	0.768821	83.1842	17797.8
124	1800	0.789191	83.807	19218.3
125	1900	0.813379	84.4686	20763.7
126	1900	0.834498	85.165	22349.3
127	2000	0.855996	85.8977	24061.3
128	2000	0.881587	86.6749	25824.4
129	2000	0.903992	87.4921	27632.4
130	2100	0.926859	88.3512	29578.8
131	2200	0.954165	89.2616	31678
132	2200	0.97815	90.2184	33829.9
133	2300	1.00271	91.2238	36136.2
134	2400	1.03215	92.2892	38613.3
135	2400	1.05812	93.4088	41152.8
136	2500	1.08482	94.5856	43864.9
137	2600	1.11699	95.8333	46769
138	2650	1.1455	97.1455	49804.6
139	2690	1.17499	98.5261	52965.3
140	2700	1.21073	99.9919	56234.3
141	2700	1.24264	101.536	59589.5
142	2700	1.27588	103.164	63034.3
143	2700	1.31652	104.897	66588.9
144	2900	1.35317	106.728	70513.1
145	2900	1.39175	108.665	74549.2
146	2900	1.43953	110.737	78723.8
147	2900	1.48328	112.938	83025.3
148	3100	1.53007	115.279	87768.5
149	3100	1.58927	117.804	92695.3
150	3100	1.64485	120.51	97794.3
151	3100	1.70604	123.421	103083
152	3200	1.78661	126.613	108800
153	3300	1.86629	130.096	114959
154	3300	1.95996	133.937	121427
155	3400	2.09693	138.334	128556
156	3600	2.25713	143.429	136682
157	4000	2.51213	149.74	146731

Data Set Standard Deviation = 1105.64
Numerator = 2.15299e+010

Denominator = 2.85552e+010
W Statistic = 0.753973 = 2.15299e+010 / 2.85552e+010

5% Critical value of 0.976 exceeds 0.753973
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.753973
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Nitrate-N

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 60%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 1400
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	ND<0 U
	9/9/2014	ND<0 U
	3/16/2015	700
	9/9/2015	ND<0 U
	3/18/2016	600
	9/20/2016	ND<0 U
	3/23/2017	1400
	9/18/2017	320
	3/15/2018	1100
	9/17/2018	ND<0 J
	3/5/2019	1200
	9/24/2019	ND<0 J
	3/16/2020	ND<0 U
	9/22/2020	ND<0 J
	3/16/2021	920
	9/14/2021	340
	3/22/2022	ND<0 J
	9/13/2022	ND<0 J
	3/14/2023	ND<0 J

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Nitrate-N

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 66.6667%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 660
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	660
	12/5/2013	580
	3/19/2014	300
	9/4/2014	300
	3/17/2015	220
	9/11/2015	240
	3/15/2016	220
	9/21/2016	ND<0 J
	3/28/2017	ND<0 J
	9/19/2017	ND<0 J
	3/26/2018	ND<0 J
	9/18/2018	ND<0 J
	3/4/2019	ND<0 J
	9/23/2019	ND<0 U
	3/19/2020	ND<0 J
	9/23/2020	ND<0 J
	3/19/2021	ND<0 J
	9/15/2021	ND<0 J
	3/16/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Nitrate-N

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/19/2015	ND<0 U
	9/14/2015	ND<0 U
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/27/2017	ND<0 U
	9/20/2017	ND<0 U
	3/16/2018	ND<0 U
	9/20/2018	ND<0 U
	3/5/2019	ND<0 U
	9/25/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/18/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Nitrate-N

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 90%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 280
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	140
	3/21/2014	280
	9/17/2014	ND<0 U
	3/19/2015	ND<0 U
	9/15/2015	ND<0 U
	3/21/2016	ND<0 J
	9/26/2016	ND<0 U
	3/31/2017	ND<0 U
	9/21/2017	ND<0 U
	3/30/2018	ND<0 U
	9/26/2018	ND<0 U
	3/13/2019	ND<0 U
	10/3/2019	ND<0 U
	4/3/2020	ND<0 U
	9/30/2020	ND<0 U
	3/22/2021	ND<0 U
	9/16/2021	ND<0 J
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Nitrate-N

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 4000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	2690
	3/18/2014	3100
	9/16/2014	3600
	3/18/2015	3300
	9/15/2015	2900
	3/16/2016	2600
	9/22/2016	2700
	3/29/2017	2500
	9/21/2017	2700
	3/28/2018	3200
	9/20/2018	3300
	3/12/2019	4000
	10/1/2019	3100
	3/18/2020	2000
	9/24/2020	1500
	3/17/2021	1800
	9/9/2021	2200
	3/15/2022	1700
	9/16/2022	1800
	3/15/2023	2100

Date	Count	Mean	Significant
9/11/2023	1	2400	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Nitrate-N

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: pH

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	4.27	-2.51213	6.31081	-10.7268
2	4.28	-2.25713	11.4054	-20.3873
3	4.37	-2.09693	15.8026	-29.5509
4	4.47	-1.95996	19.644	-38.3119
5	4.52	-1.86629	23.1271	-46.7476
6	4.52	-1.78661	26.319	-54.8231
7	4.52	-1.70604	29.2296	-62.5344
8	4.53	-1.64485	31.9352	-69.9856
9	4.54	-1.58927	34.4609	-77.2008
10	4.55	-1.53007	36.802	-84.1626
11	4.58	-1.48328	39.0022	-90.9561
12	4.58	-1.43953	41.0744	-97.5491
13	4.59	-1.39175	43.0114	-103.937
14	4.6	-1.35317	44.8424	-110.162
15	4.65	-1.31652	46.5757	-116.284
16	4.65	-1.27588	48.2035	-122.216
17	4.68	-1.24264	49.7477	-128.032
18	4.68	-1.21073	51.2136	-133.698
19	4.72	-1.17499	52.5942	-139.244
20	4.72	-1.1455	53.9063	-144.651
21	4.73	-1.11699	55.154	-149.934
22	4.74	-1.08482	56.3308	-155.076
23	4.74	-1.05812	57.4505	-160.092
24	4.83	-1.03215	58.5158	-165.077
25	4.89	-1.00271	59.5212	-169.98
26	4.93	-0.97815	60.478	-174.803
27	4.99	-0.954165	61.3884	-179.564
28	5.01	-0.926859	62.2475	-184.208
29	5.02	-0.903992	63.0647	-188.746
30	5.04	-0.881587	63.8419	-193.189
31	5.07	-0.855996	64.5746	-197.529
32	5.07	-0.834498	65.271	-201.76
33	5.1	-0.813379	65.9326	-205.908
34	5.12	-0.789191	66.5554	-209.948
35	5.12	-0.768821	67.1465	-213.885
36	5.14	-0.748762	67.7072	-217.733
37	5.14	-0.725736	68.2338	-221.464
38	5.16	-0.706302	68.7327	-225.108
39	5.17	-0.687131	69.2049	-228.661
40	5.17	-0.665079	69.6472	-232.099
41	5.18	-0.646431	70.0651	-235.448
42	5.18	-0.628006	70.4595	-238.701
43	5.19	-0.606775	70.8276	-241.85
44	5.21	-0.588793	71.1743	-244.918
45	5.21	-0.570999	71.5003	-247.892
46	5.22	-0.550465	71.8034	-250.766
47	5.22	-0.533048	72.0875	-253.548

48	5.23	-0.515791	72.3535	-256.246
49	5.24	-0.49585	72.5994	-258.844
50	5.24	-0.478914	72.8288	-261.354
51	5.25	-0.462114	73.0423	-263.78
52	5.26	-0.442676	73.2383	-266.108
53	5.28	-0.426148	73.4199	-268.358
54	5.28	-0.409735	73.5878	-270.522
55	5.29	-0.390726	73.7404	-272.589
56	5.29	-0.374544	73.8807	-274.57
57	5.33	-0.358459	74.0092	-276.481
58	5.36	-0.33981	74.1247	-278.302
59	5.37	-0.323919	74.2296	-280.042
60	5.41	-0.308108	74.3245	-281.708
61	5.44	-0.28976	74.4085	-283.285
62	5.53	-0.27411	74.4836	-284.801
63	5.61	-0.258527	74.5505	-286.251
64	5.66	-0.240426	74.6083	-287.612
65	5.69	-0.224974	74.6589	-288.892
66	5.72	-0.209575	74.7028	-290.091
67	5.78	-0.191671	74.7395	-291.198
68	5.79	-0.176374	74.7706	-292.22
69	5.79	-0.161119	74.7966	-293.152
70	5.8	-0.143367	74.8172	-293.984
71	5.8	-0.128189	74.8336	-294.727
72	5.81	-0.113039	74.8464	-295.384
73	5.82	-0.0953969	74.8555	-295.939
74	5.84	-0.0802981	74.8619	-296.408
75	5.85	-0.0652187	74.8662	-296.79
76	5.87	-0.0476439	74.8684	-297.07
77	5.88	-0.0325917	74.8695	-297.261
78	5.9	-0.0175476	74.8698	-297.365
79	5.9	0	74.8698	-297.365
80	5.93	0.0175476	74.8701	-297.261
81	5.96	0.0325917	74.8712	-297.066
82	5.96	0.0476439	74.8735	-296.783
83	5.97	0.0652187	74.8777	-296.393
84	5.98	0.0802981	74.8842	-295.913
85	6.02	0.0953969	74.8933	-295.339
86	6.03	0.113039	74.906	-294.657
87	6.04	0.128189	74.9225	-293.883
88	6.05	0.143367	74.943	-293.015
89	6.06	0.161119	74.969	-292.039
90	6.07	0.176374	75.0001	-290.968
91	6.08	0.191671	75.0368	-289.803
92	6.08	0.209575	75.0807	-288.529
93	6.08	0.224974	75.1314	-287.161
94	6.09	0.240426	75.1892	-285.697
95	6.09	0.258527	75.256	-284.122
96	6.09	0.27411	75.3311	-282.453
97	6.09	0.28976	75.4151	-280.688
98	6.09	0.308108	75.51	-278.812
99	6.1	0.323919	75.615	-276.836
100	6.1	0.33981	75.7304	-274.763
101	6.1	0.358459	75.8589	-272.577
102	6.1	0.374544	75.9992	-270.292
103	6.1	0.390726	76.1519	-267.909
104	6.1	0.409735	76.3198	-265.409

105	6.11	0.426148	76.5014	-262.805
106	6.11	0.442676	76.6973	-260.101
107	6.13	0.462114	76.9109	-257.268
108	6.18	0.478914	77.1402	-254.308
109	6.18	0.49585	77.3861	-251.244
110	6.18	0.515791	77.6521	-248.056
111	6.18	0.533048	77.9363	-244.762
112	6.19	0.550465	78.2393	-241.355
113	6.2	0.570999	78.5653	-237.814
114	6.22	0.588793	78.912	-234.152
115	6.22	0.606775	79.2802	-230.378
116	6.22	0.628006	79.6746	-226.472
117	6.22	0.646431	80.0924	-222.451
118	6.22	0.665079	80.5348	-218.314
119	6.24	0.687131	81.0069	-214.027
120	6.25	0.706302	81.5058	-209.612
121	6.26	0.725736	82.0325	-205.069
122	6.26	0.748762	82.5931	-200.382
123	6.26	0.768821	83.1842	-195.569
124	6.26	0.789191	83.807	-190.629
125	6.28	0.813379	84.4686	-185.521
126	6.29	0.834498	85.165	-180.272
127	6.31	0.855996	85.8977	-174.87
128	6.31	0.881587	86.6749	-169.307
129	6.33	0.903992	87.4921	-163.585
130	6.35	0.926859	88.3512	-157.7
131	6.37	0.954165	89.2616	-151.622
132	6.38	0.97815	90.2184	-145.381
133	6.38	1.00271	91.2238	-138.984
134	6.39	1.03215	92.2892	-132.388
135	6.4	1.05812	93.4088	-125.616
136	6.41	1.08482	94.5856	-118.663
137	6.41	1.11699	95.8333	-111.503
138	6.43	1.1455	97.1455	-104.137
139	6.43	1.17499	98.5261	-96.5819
140	6.44	1.21073	99.9919	-88.7848
141	6.45	1.24264	101.536	-80.7698
142	6.47	1.27588	103.164	-72.5149
143	6.49	1.31652	104.897	-63.9707
144	6.5	1.35317	106.728	-55.175
145	6.53	1.39175	108.665	-46.0869
146	6.56	1.43953	110.737	-36.6436
147	6.56	1.48328	112.938	-26.9133
148	6.57	1.53007	115.279	-16.8608
149	6.57	1.58927	117.804	-6.41925
150	6.57	1.64485	120.51	4.38743
151	6.58	1.70604	123.421	15.6132
152	6.62	1.78661	126.613	27.4406
153	6.62	1.86629	130.096	39.7954
154	6.65	1.95996	133.937	52.8292
155	6.67	2.09693	138.334	66.8157
156	6.68	2.25713	143.429	81.8933
157	6.7	2.51213	149.74	98.7246

Data Set Standard Deviation = 0.668173
Numerator = 9746.55

Denominator = 10428.9
W Statistic = 0.934571 = 9746.55 / 10428.9

5% Critical value of 0.976 exceeds 0.934571
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.934571
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: pH

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 6.7
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	5.29
	3/20/2014	6.24
	9/9/2014	6.41
	3/16/2015	6.28
	9/9/2015	6.26
	3/18/2016	6.39
	9/20/2016	6.44
	3/23/2017	6.53
	9/18/2017	6.22
	3/15/2018	6.57
	9/17/2018	6.62
	3/5/2019	6.7
	9/24/2019	6.38
	3/16/2020	6.68
	9/22/2020	6.49
	3/16/2021	6.67
	9/14/2021	6.57
	3/22/2022	6.57
	9/13/2022	6.25
	3/14/2023	6.45

Date	Count	Mean	Significant
9/12/2023	1	6.5	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: pH

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 6.33
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	5.37
	12/5/2013	6.11
	3/19/2014	6.33
	9/4/2014	5.98
	3/17/2015	6.02
	9/11/2015	5.8
	3/15/2016	6.06
	9/21/2016	5.84
	3/28/2017	5.93
	9/19/2017	5.79
	3/26/2018	5.96
	9/18/2018	6.03
	3/4/2019	6.11
	9/23/2019	5.81
	3/19/2020	5.72
	9/23/2020	5.66
	3/19/2021	6.08
	9/15/2021	5.69
	3/16/2022	5.61
	9/14/2022	5.53
	3/16/2023	5.44

Date	Count	Mean	Significant
9/13/2023	1	5.9	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: pH

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 6.43
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	6.08
	3/21/2014	6.1
	9/8/2014	6.18
	3/19/2015	6.31
	9/14/2015	5.88
	3/21/2016	6.22
	9/23/2016	6.13
	3/27/2017	6.1
	9/20/2017	6.2
	3/16/2018	6.31
	9/20/2018	6.19
	3/5/2019	6.43
	9/25/2019	6.26
	3/25/2020	6.1
	9/28/2020	6.1
	3/18/2021	6.18
	9/15/2021	6.09
	3/22/2022	6.09
	9/14/2022	5.78
	3/16/2023	6.04

Date	Count	Mean	Significant
9/13/2023	1	6.1	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: pH

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 6.65
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	5.9
	3/21/2014	5.82
	9/17/2014	6.09
	3/19/2015	6.1
	9/15/2015	5.79
	3/21/2016	6.09
	9/26/2016	6.22
	3/31/2017	6.18
	9/21/2017	5.97
	3/30/2018	6.47
	9/26/2018	6.56
	3/13/2019	6.65
	10/3/2019	6.62
	4/3/2020	6.56
	9/30/2020	6.4
	3/22/2021	6.58
	9/16/2021	6.38
	3/24/2022	6.43
	9/16/2022	6.05
	3/17/2023	6.18

Date	Count	Mean	Significant
9/14/2023	1	6.29	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: pH

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 5.33
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	4.73
	3/18/2014	5.12
	9/16/2014	5.23
	3/18/2015	5.07
	9/15/2015	5.02
	3/16/2016	5.25
	9/22/2016	5.14
	3/29/2017	5.01
	9/21/2017	5.19
	3/28/2018	5.33
	9/20/2018	5.24
	3/12/2019	5.22
	10/1/2019	5.18
	3/18/2020	5.24
	9/24/2020	5.28
	3/17/2021	5.17
	9/9/2021	4.99
	3/15/2022	5.26
	9/16/2022	4.72
	3/15/2023	5.04

Date	Count	Mean	Significant
9/11/2023	1	5.14	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: pH

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 6.41
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	6.41
	3/26/2020	6.08
	9/29/2020	6.26
	3/16/2021	6.35
	9/14/2021	6.22
	3/18/2022	6.26
	9/13/2022	5.96
	3/14/2023	6.07

Date	Count	Mean	Significant
9/12/2023	1	6.22	FALSE

Shapiro-Francia Test of Normality

Parameter: Specific Conductance

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	6.23	-2.51213	6.31081	-15.6506
2	126.4	-2.25713	11.4054	-300.952
3	156.3	-2.09693	15.8026	-628.702
4	165.68	-1.95996	19.644	-953.428
5	171	-1.86629	23.1271	-1272.56
6	191.7	-1.78661	26.319	-1615.06
7	193.4	-1.70604	29.2296	-1945.01
8	196.4	-1.64485	31.9352	-2268.06
9	198.9	-1.58927	34.4609	-2584.16
10	200	-1.53007	36.802	-2890.17
11	201	-1.48328	39.0022	-3188.31
12	204	-1.43953	41.0744	-3481.98
13	205	-1.39175	43.0114	-3767.29
14	213	-1.35317	44.8424	-4055.51
15	214	-1.31652	46.5757	-4337.25
16	216	-1.27588	48.2035	-4612.84
17	218	-1.24264	49.7477	-4883.73
18	219	-1.21073	51.2136	-5148.88
19	220	-1.17499	52.5942	-5407.38
20	221	-1.1455	53.9063	-5660.54
21	221	-1.11699	55.154	-5907.39
22	227	-1.08482	56.3308	-6153.64
23	227	-1.05812	57.4505	-6393.84
24	231	-1.03215	58.5158	-6632.27
25	231	-1.00271	59.5212	-6863.89
26	232	-0.97815	60.478	-7090.82
27	232.91	-0.954165	61.3884	-7313.06
28	236	-0.926859	62.2475	-7531.8
29	238	-0.903992	63.0647	-7746.95
30	242	-0.881587	63.8419	-7960.29
31	242	-0.855996	64.5746	-8167.44
32	244	-0.834498	65.271	-8371.06
33	244	-0.813379	65.9326	-8569.52
34	246	-0.789191	66.5554	-8763.66
35	247	-0.768821	67.1465	-8953.56
36	251	-0.748762	67.7072	-9141.5
37	252	-0.725736	68.2338	-9324.39
38	252.9	-0.706302	68.7327	-9503.01
39	255	-0.687131	69.2049	-9678.23
40	255	-0.665079	69.6472	-9847.83
41	255	-0.646431	70.0651	-10012.7
42	256	-0.628006	70.4595	-10173.4
43	258	-0.606775	70.8276	-10330
44	263	-0.588793	71.1743	-10484.8
45	263	-0.570999	71.5003	-10635
46	267	-0.550465	71.8034	-10782
47	271	-0.533048	72.0875	-10926.4

48	273	-0.515791	72.3535	-11067.2
49	275	-0.49585	72.5994	-11203.6
50	281	-0.478914	72.8288	-11338.2
51	283	-0.462114	73.0423	-11469
52	285	-0.442676	73.2383	-11595.1
53	286	-0.426148	73.4199	-11717
54	287	-0.409735	73.5878	-11834.6
55	289	-0.390726	73.7404	-11947.5
56	294	-0.374544	73.8807	-12057.6
57	295	-0.358459	74.0092	-12163.4
58	306	-0.33981	74.1247	-12267.4
59	310	-0.323919	74.2296	-12367.8
60	311	-0.308108	74.3245	-12463.6
61	321	-0.28976	74.4085	-12556.6
62	321	-0.27411	74.4836	-12644.6
63	321.8	-0.258527	74.5505	-12727.8
64	325	-0.240426	74.6083	-12805.9
65	326	-0.224974	74.6589	-12879.3
66	327.18	-0.209575	74.7028	-12947.8
67	330	-0.191671	74.7395	-13011.1
68	332	-0.176374	74.7706	-13069.6
69	332	-0.161119	74.7966	-13123.1
70	334	-0.143367	74.8172	-13171
71	335.3	-0.128189	74.8336	-13214
72	341	-0.113039	74.8464	-13252.6
73	346	-0.0953969	74.8555	-13285.6
74	352	-0.0802981	74.8619	-13313.8
75	355	-0.0652187	74.8662	-13337
76	356.68	-0.0476439	74.8684	-13354
77	358	-0.0325917	74.8695	-13365.6
78	360.8	-0.0175476	74.8698	-13372
79	366	0	74.8698	-13372
80	371	0.0175476	74.8701	-13365.5
81	373	0.0325917	74.8712	-13353.3
82	373	0.0476439	74.8735	-13335.5
83	375	0.0652187	74.8777	-13311.1
84	376	0.0802981	74.8842	-13280.9
85	378	0.0953969	74.8933	-13244.8
86	380	0.113039	74.906	-13201.9
87	385	0.128189	74.9225	-13152.5
88	387	0.143367	74.943	-13097
89	388	0.161119	74.969	-13034.5
90	390	0.176374	75.0001	-12965.7
91	391	0.191671	75.0368	-12890.8
92	394	0.209575	75.0807	-12808.2
93	395	0.224974	75.1314	-12719.4
94	404	0.240426	75.1892	-12622.2
95	405	0.258527	75.256	-12517.5
96	405	0.27411	75.3311	-12406.5
97	410	0.28976	75.4151	-12287.7
98	410	0.308108	75.51	-12161.4
99	419	0.323919	75.615	-12025.7
100	422	0.33981	75.7304	-11882.3
101	431	0.358459	75.8589	-11727.8
102	435	0.374544	75.9992	-11564.8
103	438	0.390726	76.1519	-11393.7
104	438	0.409735	76.3198	-11214.2

105	443	0.426148	76.5014	-11025.4
106	465	0.442676	76.6973	-10819.6
107	471	0.462114	76.9109	-10601.9
108	475.52	0.478914	77.1402	-10374.2
109	477	0.49585	77.3861	-10137.7
110	483.99	0.515791	77.6521	-9888.05
111	484	0.533048	77.9363	-9630.06
112	484.6	0.550465	78.2393	-9363.3
113	488.96	0.570999	78.5653	-9084.11
114	494	0.588793	78.912	-8793.24
115	494	0.606775	79.2802	-8493.5
116	495	0.628006	79.6746	-8182.63
117	508	0.646431	80.0924	-7854.25
118	514	0.665079	80.5348	-7512.4
119	518	0.687131	81.0069	-7156.46
120	520	0.706302	81.5058	-6789.19
121	535.45	0.725736	82.0325	-6400.59
122	545	0.748762	82.5931	-5992.51
123	556	0.768821	83.1842	-5565.05
124	561	0.789191	83.807	-5122.31
125	561	0.813379	84.4686	-4666.01
126	573.01	0.834498	85.165	-4187.83
127	584	0.855996	85.8977	-3687.93
128	591	0.881587	86.6749	-3166.91
129	613	0.903992	87.4921	-2612.77
130	614.9	0.926859	88.3512	-2042.84
131	621	0.954165	89.2616	-1450.3
132	627	0.97815	90.2184	-837.004
133	641	1.00271	91.2238	-194.266
134	641	1.03215	92.2892	467.345
135	643	1.05812	93.4088	1147.72
136	650	1.08482	94.5856	1852.85
137	659	1.11699	95.8333	2588.95
138	663	1.1455	97.1455	3348.42
139	667	1.17499	98.5261	4132.13
140	672	1.21073	99.9919	4945.74
141	673	1.24264	101.536	5782.04
142	678	1.27588	103.164	6647.08
143	687	1.31652	104.897	7551.53
144	692	1.35317	106.728	8487.93
145	707	1.39175	108.665	9471.89
146	709	1.43953	110.737	10492.5
147	735	1.48328	112.938	11582.7
148	742	1.53007	115.279	12718
149	743	1.58927	117.804	13898.9
150	743.17	1.64485	120.51	15121.3
151	751.49	1.70604	123.421	16403.3
152	756	1.78661	126.613	17754
153	759.99	1.86629	130.096	19172.4
154	786	1.95996	133.937	20712.9
155	812.63	2.09693	138.334	22416.9
156	833	2.25713	143.429	24297.1
157	992.44	2.51213	149.74	26790.3

Data Set Standard Deviation = 181.02
Numerator = 7.17719e+008

Denominator = 7.65443e+008
W Statistic = 0.937652 = 7.17719e+008 / 7.65443e+008

5% Critical value of 0.976 exceeds 0.937652
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.937652
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Specific Conductance

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 759.99
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	735
	3/20/2014	659
	9/9/2014	591
	3/16/2015	561
	9/9/2015	556
	3/18/2016	584
	9/20/2016	692
	3/23/2017	641
	9/18/2017	667
	3/15/2018	613
	9/17/2018	678
	3/5/2019	621
	9/24/2019	643
	3/16/2020	627
	9/22/2020	650
	3/16/2021	663
	9/14/2021	743
	3/22/2022	687
	9/13/2022	707
	3/14/2023	759.99

Date	Count	Mean	Significant
9/12/2023	1	743.17	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Specific Conductance

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 494
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	443
	12/5/2013	477
	3/19/2014	267
	9/4/2014	394
	3/17/2015	376
	9/11/2015	380
	3/15/2016	373
	9/21/2016	371
	3/28/2017	332
	9/19/2017	325
	3/26/2018	306
	9/18/2018	494
	3/4/2019	465
	9/23/2019	438
	3/19/2020	366
	9/23/2020	326
	3/19/2021	390
	9/15/2021	341
	3/16/2022	310
	9/14/2022	321.8
	3/16/2023	335.3

Date	Count	Mean	Significant
9/13/2023	1	488.96	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Specific Conductance

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 561
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	561
	3/21/2014	422
	9/8/2014	438
	3/19/2015	385
	9/14/2015	395
	3/21/2016	391
	9/23/2016	405
	3/27/2017	404
	9/20/2017	410
	3/16/2018	387
	9/20/2018	378
	3/5/2019	346
	9/25/2019	373
	3/25/2020	352
	9/28/2020	358
	3/18/2021	375
	9/15/2021	419
	3/22/2022	388
	9/14/2022	360.8
	3/16/2023	535.45

Date	Count	Mean	Significant
9/13/2023	1	475.52	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Specific Conductance

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 614.9
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	285
	3/21/2014	198.9
	9/17/2014	204
	3/19/2015	231
	9/15/2015	242
	3/21/2016	255
	9/26/2016	219
	3/31/2017	252
	9/21/2017	334
	3/30/2018	410
	9/26/2018	495
	3/13/2019	514
	10/3/2019	435
	4/3/2020	321
	9/30/2020	405
	3/22/2021	518
	9/16/2021	484
	3/24/2022	508
	9/16/2022	484.6
	3/17/2023	614.9

Date	Count	Mean	Significant
9/14/2023	1	483.99	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Specific Conductance

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 287
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	287
	3/18/2014	205
	9/16/2014	193.4
	3/18/2015	216
	9/15/2015	213
	3/16/2016	246
	9/22/2016	251
	3/29/2017	255
	9/21/2017	218
	3/28/2018	236
	9/20/2018	232
	3/12/2019	238
	10/1/2019	126.4
	3/18/2020	244
	9/24/2020	191.7
	3/17/2021	200
	9/9/2021	214
	3/15/2022	227
	9/16/2022	156.3
	3/15/2023	165.68

Date	Count	Mean	Significant
9/11/2023	1	232.91	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Specific Conductance

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 992.44
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	545
	3/26/2020	6.23
	9/29/2020	641
	3/16/2021	672
	9/14/2021	742
	3/18/2022	673
	9/13/2022	709
	3/14/2023	992.44

Date	Count	Mean	Significant
9/12/2023	1	812.63	FALSE

Shapiro-Francia Test of Normality

Parameter: Sulfate

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	2300	-1.78661	26.319	-4109.21
7	2900	-1.70604	29.2296	-9056.73
8	3100	-1.64485	31.9352	-14155.8
9	3200	-1.58927	34.4609	-19241.4
10	4400	-1.53007	36.802	-25973.7
11	4400	-1.48328	39.0022	-32500.2
12	4800	-1.43953	41.0744	-39409.9
13	5200	-1.39175	43.0114	-46647
14	5700	-1.35317	44.8424	-54360.1
15	5700	-1.31652	46.5757	-61864.2
16	5900	-1.27588	48.2035	-69391.9
17	6400	-1.24264	49.7477	-77344.8
18	6600	-1.21073	51.2136	-85335.6
19	6900	-1.17499	52.5942	-93443
20	7300	-1.1455	53.9063	-101805
21	7300	-1.11699	55.154	-109959
22	8300	-1.08482	56.3308	-118963
23	8600	-1.05812	57.4505	-128063
24	8600	-1.03215	58.5158	-136940
25	8800	-1.00271	59.5212	-145763
26	8840	-0.97815	60.478	-154410
27	9100	-0.954165	61.3884	-163093
28	9200	-0.926859	62.2475	-171620
29	9500	-0.903992	63.0647	-180208
30	9700	-0.881587	63.8419	-188760
31	10400	-0.855996	64.5746	-197662
32	12200	-0.834498	65.271	-207843
33	12400	-0.813379	65.9326	-217929
34	13300	-0.789191	66.5554	-228425
35	13500	-0.768821	67.1465	-238804
36	14050	-0.748762	67.7072	-249324
37	14400	-0.725736	68.2338	-259775
38	14700	-0.706302	68.7327	-270157
39	15300	-0.687131	69.2049	-280671
40	15300	-0.665079	69.6472	-290846
41	15400	-0.646431	70.0651	-300801
42	15400	-0.628006	70.4595	-310473
43	15600	-0.606775	70.8276	-319938
44	15900	-0.588793	71.1743	-329300
45	16200	-0.570999	71.5003	-338550
46	16300	-0.550465	71.8034	-347523
47	16400	-0.533048	72.0875	-356265

48	16500	-0.515791	72.3535	-364775
49	16600	-0.49585	72.5994	-373007
50	16700	-0.478914	72.8288	-381004
51	16800	-0.462114	73.0423	-388768
52	17100	-0.442676	73.2383	-396338
53	17500	-0.426148	73.4199	-403795
54	17730	-0.409735	73.5878	-411060
55	18300	-0.390726	73.7404	-418210
56	19300	-0.374544	73.8807	-425439
57	19700	-0.358459	74.0092	-432500
58	20100	-0.33981	74.1247	-439331
59	20200	-0.323919	74.2296	-445874
60	20240	-0.308108	74.3245	-452110
61	20500	-0.28976	74.4085	-458050
62	20560	-0.27411	74.4836	-463686
63	20700	-0.258527	74.5505	-469037
64	20900	-0.240426	74.6083	-474062
65	21060	-0.224974	74.6589	-478800
66	21100	-0.209575	74.7028	-483222
67	21100	-0.191671	74.7395	-487266
68	21100	-0.176374	74.7706	-490988
69	21300	-0.161119	74.7966	-494420
70	21400	-0.143367	74.8172	-497488
71	21500	-0.128189	74.8336	-500244
72	21600	-0.113039	74.8464	-502685
73	21800	-0.0953969	74.8555	-504765
74	21900	-0.0802981	74.8619	-506524
75	22200	-0.0652187	74.8662	-507972
76	22400	-0.0476439	74.8684	-509039
77	22500	-0.0325917	74.8695	-509772
78	22500	-0.0175476	74.8698	-510167
79	22700	0	74.8698	-510167
80	22800	0.0175476	74.8701	-509767
81	22800	0.0325917	74.8712	-509024
82	22800	0.0476439	74.8735	-507937
83	23100	0.0652187	74.8777	-506431
84	23100	0.0802981	74.8842	-504576
85	23200	0.0953969	74.8933	-502363
86	23500	0.113039	74.906	-499706
87	23700	0.128189	74.9225	-496668
88	24200	0.143367	74.943	-493199
89	24200	0.161119	74.969	-489300
90	24200	0.176374	75.0001	-485031
91	24400	0.191671	75.0368	-480355
92	24500	0.209575	75.0807	-475220
93	24800	0.224974	75.1314	-469641
94	25000	0.240426	75.1892	-463630
95	25200	0.258527	75.256	-457115
96	25500	0.27411	75.3311	-450125
97	25600	0.28976	75.4151	-442708
98	26000	0.308108	75.51	-434697
99	26200	0.323919	75.615	-426210
100	26550	0.33981	75.7304	-417188
101	26700	0.358459	75.8589	-407617
102	26700	0.374544	75.9992	-397617
103	26900	0.390726	76.1519	-387106
104	27300	0.409735	76.3198	-375921

105	27400	0.426148	76.5014	-364244
106	27500	0.442676	76.6973	-352071
107	27900	0.462114	76.9109	-339178
108	28000	0.478914	77.1402	-325768
109	28100	0.49585	77.3861	-311835
110	28300	0.515791	77.6521	-297238
111	28500	0.533048	77.9363	-282046
112	28600	0.550465	78.2393	-266303
113	28600	0.570999	78.5653	-249972
114	28700	0.588793	78.912	-233074
115	29000	0.606775	79.2802	-215477
116	29000	0.628006	79.6746	-197265
117	29100	0.646431	80.0924	-178454
118	29200	0.665079	80.5348	-159033
119	29200	0.687131	81.0069	-138969
120	29300	0.706302	81.5058	-118275
121	29300	0.725736	82.0325	-97010.5
122	29400	0.748762	82.5931	-74996.9
123	29400	0.768821	83.1842	-52393.6
124	29500	0.789191	83.807	-29112.5
125	29600	0.813379	84.4686	-5036.44
126	29800	0.834498	85.165	19831.6
127	30000	0.855996	85.8977	45511.5
128	30200	0.881587	86.6749	72135.4
129	30400	0.903992	87.4921	99616.8
130	30400	0.926859	88.3512	127793
131	30500	0.954165	89.2616	156895
132	30600	0.97815	90.2184	186827
133	30800	1.00271	91.2238	217710
134	31230	1.03215	92.2892	249944
135	31300	1.05812	93.4088	283064
136	31400	1.08482	94.5856	317127
137	31500	1.11699	95.8333	352312
138	31600	1.1455	97.1455	388510
139	31600	1.17499	98.5261	425640
140	31600	1.21073	99.9919	463899
141	31800	1.24264	101.536	503415
142	31800	1.27588	103.164	543988
143	31900	1.31652	104.897	585985
144	32000	1.35317	106.728	629286
145	32300	1.39175	108.665	674239
146	32400	1.43953	110.737	720880
147	32400	1.48328	112.938	768939
148	32500	1.53007	115.279	818666
149	32500	1.58927	117.804	870317
150	32500	1.64485	120.51	923775
151	32800	1.70604	123.421	979733
152	32900	1.78661	126.613	1.03851e+006
153	33200	1.86629	130.096	1.10047e+006
154	33300	1.95996	133.937	1.16574e+006
155	33400	2.09693	138.334	1.23578e+006
156	34500	2.25713	143.429	1.31365e+006
157	35000	2.51213	149.74	1.40157e+006

Data Set Standard Deviation = 9469.04
Numerator = 1.96441e+012

Denominator = 2.09447e+012
W Statistic = 0.937903 = 1.96441e+012 / 2.09447e+012

5% Critical value of 0.976 exceeds 0.937903
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.937903
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Sulfate

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 34500
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	31230
	3/20/2014	32500
	9/9/2014	32500
	3/16/2015	27400
	9/9/2015	30400
	3/18/2016	29400
	9/20/2016	34500
	3/23/2017	32900
	9/18/2017	32300
	3/15/2018	29000
	9/17/2018	33400
	3/5/2019	31800
	9/24/2019	32800
	3/16/2020	28000
	9/22/2020	31900
	3/16/2021	31400
	9/14/2021	32500
	3/22/2022	31500
	9/13/2022	29600
	3/14/2023	29200

Date	Count	Mean	Significant
9/12/2023	1	28700	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Sulfate

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 30000
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	20240
	12/5/2013	21060
	3/19/2014	23500
	9/4/2014	30000
	3/17/2015	26000
	9/11/2015	29300
	3/15/2016	26700
	9/21/2016	20100
	3/28/2017	24200
	9/19/2017	22200
	3/26/2018	24400
	9/18/2018	29800
	3/4/2019	29000
	9/23/2019	29300
	3/19/2020	26700
	9/23/2020	28500
	3/19/2021	28300
	9/15/2021	29400
	3/16/2022	22500
	9/14/2022	22800
	3/16/2023	22400

Date	Count	Mean	Significant
9/13/2023	1	32400	TRUE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Sulfate

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 30200
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	20560
	3/21/2014	21500
	9/8/2014	22700
	3/19/2015	27900
	9/14/2015	25200
	3/21/2016	29100
	9/23/2016	29200
	3/27/2017	28600
	9/20/2017	25000
	3/16/2018	30200
	9/20/2018	24500
	3/5/2019	12200
	9/25/2019	24800
	3/25/2020	22800
	9/28/2020	21400
	3/18/2021	25600
	9/15/2021	23700
	3/22/2022	20900
	9/14/2022	18300
	3/16/2023	19700

Date	Count	Mean	Significant
9/13/2023	1	16800	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Sulfate

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 25%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 8840
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	8840
	3/21/2014	8600
	9/17/2014	6900
	3/19/2015	7300
	9/15/2015	5900
	3/21/2016	7300
	9/26/2016	4400
	3/31/2017	5700
	9/21/2017	4400
	3/30/2018	2900
	9/26/2018	2300
	3/13/2019	ND<0 J
	10/3/2019	ND<0 J
	4/3/2020	ND<0 J
	9/30/2020	ND<0 J
	3/22/2021	ND<0 J
	9/16/2021	3200
	3/24/2022	3100
	9/16/2022	4800
	3/17/2023	5200

Date	Count	Mean	Significant
9/14/2023	1	9100	TRUE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Sulfate

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 35000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	26550
	3/18/2014	25500
	9/16/2014	28100
	3/18/2015	29500
	9/15/2015	32000
	3/16/2016	31600
	9/22/2016	30600
	3/29/2017	33200
	9/21/2017	33300
	3/28/2018	32400
	9/20/2018	30800
	3/12/2019	30400
	10/1/2019	31300
	3/18/2020	31800
	9/24/2020	28600
	3/17/2021	31600
	9/9/2021	35000
	3/15/2022	30500
	9/16/2022	26200
	3/15/2023	24200

Date	Count	Mean	Significant
9/11/2023	1	26900	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Sulfate

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 24200
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	20700
	3/26/2020	23100
	9/29/2020	24200
	3/16/2021	22500
	9/14/2021	23100
	3/18/2022	21900
	9/13/2022	21100
	3/14/2023	16700

Date	Count	Mean	Significant
9/12/2023	1	19300	FALSE

Shapiro-Francia Test of Normality

Parameter: Total Dissolved Solids

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 156

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	62000	-2.51213	6.31081	-155752
2	77000	-2.25713	11.4054	-329551
3	88000	-2.07485	15.7104	-512138
4	93000	-1.95996	19.5519	-694414
5	100000	-1.86629	23.0349	-881044
6	104000	-1.77438	26.1834	-1.06558e+006
7	110000	-1.70604	29.0939	-1.25324e+006
8	115000	-1.64485	31.7995	-1.4424e+006
9	118000	-1.58047	34.2974	-1.6289e+006
10	119000	-1.53007	36.6385	-1.81097e+006
11	125000	-1.47579	38.8164	-1.99545e+006
12	126000	-1.4325	40.8685	-2.17594e+006
13	130000	-1.39175	42.8054	-2.35687e+006
14	132000	-1.34694	44.6197	-2.53467e+006
15	141000	-1.31058	46.3373	-2.71946e+006
16	143000	-1.27588	47.9652	-2.90191e+006
17	143000	-1.23724	49.4959	-3.07883e+006
18	144000	-1.20553	50.9492	-3.25243e+006
19	146000	-1.17	52.3181	-3.42325e+006
20	148000	-1.14069	53.6193	-3.59207e+006
21	149000	-1.11232	54.8565	-3.75781e+006
22	150000	-1.08032	56.0236	-3.91986e+006
23	152000	-1.05375	57.134	-4.08002e+006
24	153000	-1.02789	58.1906	-4.23729e+006
25	154000	-0.998575	59.1877	-4.39107e+006
26	155000	-0.974114	60.1366	-4.54206e+006
27	156000	-0.950222	61.0395	-4.69029e+006
28	157000	-0.923014	61.8915	-4.83521e+006
29	160000	-0.900227	62.7019	-4.97924e+006
30	160000	-0.874218	63.4662	-5.11912e+006
31	162000	-0.852385	64.1927	-5.25721e+006
32	164000	-0.830953	64.8832	-5.39348e+006
33	166000	-0.806422	65.5335	-5.52735e+006
34	168000	-0.785774	66.151	-5.65936e+006
35	171000	-0.765456	66.7369	-5.79025e+006
36	172000	-0.742143	67.2877	-5.9179e+006
37	172000	-0.722479	67.8096	-6.04217e+006
38	172000	-0.699883	68.2995	-6.16255e+006
39	173000	-0.680797	68.763	-6.28032e+006
40	173000	-0.661955	69.2011	-6.39484e+006
41	176000	-0.640266	69.6111	-6.50753e+006
42	176000	-0.621911	69.9979	-6.61699e+006
43	177000	-0.603765	70.3624	-6.72385e+006
44	177000	-0.582841	70.7021	-6.82701e+006
45	179000	-0.565108	71.0214	-6.92817e+006
46	182000	-0.547551	71.3213	-7.02782e+006
47	184000	-0.52728	71.5993	-7.12484e+006

48	184000	-0.510074	71.8595	-7.2187e+006
49	186000	-0.490189	72.0997	-7.30987e+006
50	188000	-0.473299	72.3238	-7.39885e+006
51	189000	-0.456542	72.5322	-7.48514e+006
52	190000	-0.437153	72.7233	-7.5682e+006
53	191000	-0.420664	72.9002	-7.64854e+006
54	192000	-0.40429	73.0637	-7.72617e+006
55	194000	-0.385321	73.2122	-7.80092e+006
56	194000	-0.369171	73.3485	-7.87254e+006
57	198000	-0.350451	73.4713	-7.94193e+006
58	198000	-0.334503	73.5832	-8.00816e+006
59	199000	-0.318639	73.6847	-8.07157e+006
60	201000	-0.300232	73.7748	-8.13192e+006
61	202000	-0.284535	73.8558	-8.18939e+006
62	203000	-0.268908	73.9281	-8.24398e+006
63	205000	-0.250759	73.991	-8.29539e+006
64	208000	-0.235269	74.0463	-8.34432e+006
65	210000	-0.217267	74.0935	-8.38995e+006
66	210000	-0.201894	74.1343	-8.43235e+006
67	214000	-0.186567	74.1691	-8.47227e+006
68	215000	-0.168741	74.1976	-8.50855e+006
69	218000	-0.153505	74.2211	-8.54201e+006
70	218000	-0.138305	74.2403	-8.57216e+006
71	220000	-0.12061	74.2548	-8.5987e+006
72	220000	-0.105474	74.2659	-8.6219e+006
73	220000	-0.0903606	74.2741	-8.64178e+006
74	225000	-0.0727562	74.2794	-8.65815e+006
75	228000	-0.0576847	74.2827	-8.6713e+006
76	229000	-0.0401167	74.2843	-8.68049e+006
77	234000	-0.0250691	74.285	-8.68636e+006
78	236000	-0.0100272	74.2851	-8.68872e+006
79	239000	0.0100272	74.2852	-8.68633e+006
80	239000	0.0250691	74.2858	-8.68034e+006
81	243000	0.0401167	74.2874	-8.67059e+006
82	244000	0.0576847	74.2907	-8.65651e+006
83	246000	0.0727562	74.296	-8.63861e+006
84	250000	0.0903606	74.3042	-8.61602e+006
85	250000	0.105474	74.3153	-8.58966e+006
86	251000	0.12061	74.3299	-8.55938e+006
87	253000	0.138305	74.349	-8.52439e+006
88	256000	0.153505	74.3726	-8.48509e+006
89	257000	0.168741	74.401	-8.44173e+006
90	258000	0.186567	74.4358	-8.39359e+006
91	258000	0.201894	74.4766	-8.34151e+006
92	264000	0.217267	74.5238	-8.28415e+006
93	264000	0.235269	74.5792	-8.22204e+006
94	264000	0.250759	74.642	-8.15584e+006
95	264000	0.268908	74.7143	-8.08484e+006
96	266000	0.284535	74.7953	-8.00916e+006
97	266000	0.300232	74.8854	-7.9293e+006
98	266000	0.318639	74.987	-7.84454e+006
99	266000	0.334503	75.0989	-7.75556e+006
100	269000	0.350451	75.2217	-7.66129e+006
101	276000	0.369171	75.358	-7.5594e+006
102	277000	0.385321	75.5064	-7.45266e+006
103	277000	0.40429	75.6699	-7.34067e+006
104	278000	0.420664	75.8469	-7.22373e+006

105	278000	0.437153	76.038	-7.1022e+006
106	281000	0.456542	76.2464	-6.97391e+006
107	282000	0.473299	76.4704	-6.84044e+006
108	283000	0.490189	76.7107	-6.70172e+006
109	284000	0.510074	76.9709	-6.55686e+006
110	286000	0.52728	77.2489	-6.40606e+006
111	290000	0.547551	77.5487	-6.24727e+006
112	291000	0.565108	77.868	-6.08282e+006
113	291000	0.582841	78.2077	-5.91321e+006
114	300000	0.603765	78.5723	-5.73208e+006
115	300000	0.621911	78.9591	-5.54551e+006
116	305000	0.640266	79.369	-5.35023e+006
117	311000	0.661955	79.8072	-5.14436e+006
118	314000	0.680797	80.2707	-4.93059e+006
119	314000	0.699883	80.7605	-4.71083e+006
120	320000	0.722479	81.2825	-4.47963e+006
121	324000	0.742143	81.8332	-4.23918e+006
122	327000	0.765456	82.4192	-3.98888e+006
123	346000	0.785774	83.0366	-3.717e+006
124	352000	0.806422	83.6869	-3.43314e+006
125	355000	0.830953	84.3774	-3.13815e+006
126	356000	0.852385	85.104	-2.8347e+006
127	363000	0.874218	85.8682	-2.51736e+006
128	366000	0.900227	86.6786	-2.18788e+006
129	381000	0.923014	87.5306	-1.83621e+006
130	382000	0.950222	88.4335	-1.47322e+006
131	382000	0.974114	89.3824	-1.10111e+006
132	392000	0.998575	90.3796	-709670
133	394000	1.02789	91.4361	-304681
134	396000	1.05375	92.5465	112602
135	402000	1.08032	93.7136	546891
136	408000	1.11232	94.9509	1.00072e+006
137	411000	1.14069	96.252	1.46954e+006
138	423000	1.17	97.6209	1.96445e+006
139	432000	1.20553	99.0742	2.48524e+006
140	434000	1.23724	100.605	3.0222e+006
141	436000	1.27588	102.233	3.57848e+006
142	446000	1.31058	103.95	4.163e+006
143	450000	1.34694	105.765	4.76912e+006
144	452000	1.39175	107.702	5.39819e+006
145	457000	1.4325	109.754	6.05285e+006
146	464000	1.47579	111.932	6.73761e+006
147	490000	1.53007	114.273	7.48734e+006
148	492000	1.58047	116.771	8.26493e+006
149	494000	1.64485	119.476	9.07749e+006
150	500000	1.70604	122.387	9.93051e+006
151	526000	1.77438	125.535	1.08638e+007
152	538000	1.86629	129.018	1.18679e+007
153	556000	1.95996	132.86	1.29576e+007
154	566000	2.07485	137.165	1.4132e+007
155	570000	2.25713	142.259	1.54186e+007
156	584000	2.51213	148.57	1.68857e+007

Data Set Standard Deviation = 115175
Numerator = 2.85125e+014
Denominator = 3.0548e+014

W Statistic = 0.933368 = 2.85125e+014 / 3.0548e+014

5% Critical value of 0.976 exceeds 0.933368
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.933368
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Total Dissolved Solids

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 566000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	100000
	3/20/2014	381000
	9/9/2014	423000
	3/16/2015	356000
	9/9/2015	355000
	3/18/2016	352000
	9/20/2016	457000
	3/23/2017	411000
	9/18/2017	446000
	3/15/2018	366000
	9/17/2018	363000
	3/5/2019	538000
	9/24/2019	450000
	3/16/2020	566000
	9/22/2020	494000
	3/16/2021	500000
	9/14/2021	526000
	3/22/2022	434000
	9/13/2022	432000
	3/14/2023	396000

Date	Count	Mean	Significant
9/12/2023	1	452000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Total Dissolved Solids

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 346000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/19/2013	77000
	3/19/2014	291000
	9/4/2014	256000
	3/17/2015	266000
	9/11/2015	281000
	3/15/2016	266000
	9/21/2016	257000
	3/28/2017	205000
	9/19/2017	215000
	3/26/2018	202000
	9/18/2018	300000
	3/4/2019	346000
	9/23/2019	305000
	3/19/2020	246000
	9/23/2020	266000
	3/19/2021	264000
	9/15/2021	220000
	3/16/2022	220000
	9/14/2022	190000
	3/16/2023	218000

Date	Count	Mean	Significant
9/13/2023	1	320000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Total Dissolved Solids

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 314000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	277000
	3/21/2014	269000
	9/8/2014	291000
	3/19/2015	314000
	9/14/2015	278000
	3/21/2016	239000
	9/23/2016	283000
	3/27/2017	266000
	9/20/2017	236000
	3/16/2018	251000
	9/20/2018	172000
	3/5/2019	311000
	9/25/2019	214000
	3/25/2020	198000
	9/28/2020	284000
	3/18/2021	276000
	9/15/2021	264000
	3/22/2022	258000
	9/14/2022	220000
	3/16/2023	300000

Date	Count	Mean	Significant
9/13/2023	1	290000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Total Dissolved Solids

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 282000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	118000
	3/21/2014	115000
	9/17/2014	126000
	3/19/2015	191000
	9/15/2015	153000
	3/21/2016	132000
	9/26/2016	155000
	3/31/2017	160000
	9/21/2017	164000
	3/30/2018	203000
	9/26/2018	243000
	3/13/2019	278000
	10/3/2019	110000
	4/3/2020	250000
	9/30/2020	258000
	3/22/2021	244000
	9/16/2021	228000
	3/24/2022	184000
	9/16/2022	264000
	3/17/2023	282000

Date	Count	Mean	Significant
9/14/2023	1	250000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Total Dissolved Solids

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 210000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	119000
	3/18/2014	93000
	9/16/2014	144000
	3/18/2015	189000
	9/15/2015	148000
	3/16/2016	176000
	9/22/2016	177000
	3/29/2017	172000
	9/21/2017	173000
	3/28/2018	143000
	9/20/2018	141000
	3/12/2019	186000
	10/1/2019	210000
	3/18/2020	188000
	9/24/2020	152000
	3/17/2021	166000
	9/9/2021	210000
	3/15/2022	157000
	9/16/2022	125000
	3/15/2023	88000

Date	Count	Mean	Significant
9/11/2023	1	154000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Total Dissolved Solids

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 556000
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	556000
	3/26/2020	314000
	9/29/2020	436000
	3/16/2021	402000
	9/14/2021	490000
	3/18/2022	408000
	9/13/2022	394000
	3/14/2023	492000

Date	Count	Mean	Significant
9/12/2023	1	382000	FALSE

Shapiro-Francia Test of Normality

Parameter: Turbidity

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0.18	-1.53007	36.802	-0.275412
11	0.24	-1.48328	39.0022	-0.631399
12	0.25	-1.43953	41.0744	-0.991282
13	0.32	-1.39175	43.0114	-1.43664
14	0.37	-1.35317	44.8424	-1.93731
15	0.38	-1.31652	46.5757	-2.43759
16	0.4	-1.27588	48.2035	-2.94794
17	0.41	-1.24264	49.7477	-3.45743
18	0.43	-1.21073	51.2136	-3.97804
19	0.44	-1.17499	52.5942	-4.49503
20	0.47	-1.1455	53.9063	-5.03342
21	0.5	-1.11699	55.154	-5.59191
22	0.5	-1.08482	56.3308	-6.13433
23	0.53	-1.05812	57.4505	-6.69513
24	0.53	-1.03215	58.5158	-7.24217
25	0.54	-1.00271	59.5212	-7.78364
26	0.55	-0.97815	60.478	-8.32162
27	0.55	-0.954165	61.3884	-8.84641
28	0.58	-0.926859	62.2475	-9.38399
29	0.58	-0.903992	63.0647	-9.9083
30	0.59	-0.881587	63.8419	-10.4284
31	0.6	-0.855996	64.5746	-10.942
32	0.7	-0.834498	65.271	-11.5262
33	0.7	-0.813379	65.9326	-12.0956
34	0.72	-0.789191	66.5554	-12.6638
35	0.73	-0.768821	67.1465	-13.225
36	0.73	-0.748762	67.7072	-13.7716
37	0.74	-0.725736	68.2338	-14.3086
38	0.76	-0.706302	68.7327	-14.8454
39	0.77	-0.687131	69.2049	-15.3745
40	0.81	-0.665079	69.6472	-15.9132
41	0.81	-0.646431	70.0651	-16.4369
42	0.81	-0.628006	70.4595	-16.9455
43	0.82	-0.606775	70.8276	-17.4431
44	0.83	-0.588793	71.1743	-17.9318
45	0.84	-0.570999	71.5003	-18.4114
46	0.84	-0.550465	71.8034	-18.8738
47	0.85	-0.533048	72.0875	-19.3269

48	0.85	-0.515791	72.3535	-19.7653
49	0.85	-0.49585	72.5994	-20.1868
50	0.86	-0.478914	72.8288	-20.5987
51	0.92	-0.462114	73.0423	-21.0238
52	0.94	-0.442676	73.2383	-21.4399
53	0.95	-0.426148	73.4199	-21.8448
54	0.98	-0.409735	73.5878	-22.2463
55	1.02	-0.390726	73.7404	-22.6449
56	1.03	-0.374544	73.8807	-23.0306
57	1.06	-0.358459	74.0092	-23.4106
58	1.08	-0.33981	74.1247	-23.7776
59	1.1	-0.323919	74.2296	-24.1339
60	1.13	-0.308108	74.3245	-24.4821
61	1.13	-0.28976	74.4085	-24.8095
62	1.15	-0.27411	74.4836	-25.1247
63	1.2	-0.258527	74.5505	-25.435
64	1.23	-0.240426	74.6083	-25.7307
65	1.23	-0.224974	74.6589	-26.0074
66	1.26	-0.209575	74.7028	-26.2715
67	1.28	-0.191671	74.7395	-26.5168
68	1.29	-0.176374	74.7706	-26.7443
69	1.29	-0.161119	74.7966	-26.9522
70	1.34	-0.143367	74.8172	-27.1443
71	1.36	-0.128189	74.8336	-27.3186
72	1.36	-0.113039	74.8464	-27.4724
73	1.39	-0.0953969	74.8555	-27.605
74	1.39	-0.0802981	74.8619	-27.7166
75	1.4	-0.0652187	74.8662	-27.8079
76	1.4	-0.0476439	74.8684	-27.8746
77	1.4	-0.0325917	74.8695	-27.9202
78	1.41	-0.0175476	74.8698	-27.9449
79	1.42	0	74.8698	-27.9449
80	1.46	0.0175476	74.8701	-27.9193
81	1.5	0.0325917	74.8712	-27.8704
82	1.52	0.0476439	74.8735	-27.798
83	1.53	0.0652187	74.8777	-27.6982
84	1.53	0.0802981	74.8842	-27.5754
85	1.55	0.0953969	74.8933	-27.4275
86	1.62	0.113039	74.906	-27.2444
87	1.64	0.128189	74.9225	-27.0342
88	1.66	0.143367	74.943	-26.7962
89	1.67	0.161119	74.969	-26.5271
90	1.69	0.176374	75.0001	-26.229
91	1.7	0.191671	75.0368	-25.9032
92	1.74	0.209575	75.0807	-25.5385
93	1.87	0.224974	75.1314	-25.1178
94	1.9	0.240426	75.1892	-24.661
95	1.91	0.258527	75.256	-24.1672
96	1.93	0.27411	75.3311	-23.6382
97	2.01	0.28976	75.4151	-23.0558
98	2.05	0.308108	75.51	-22.4242
99	2.05	0.323919	75.615	-21.7601
100	2.13	0.33981	75.7304	-21.0363
101	2.19	0.358459	75.8589	-20.2513
102	2.29	0.374544	75.9992	-19.3936
103	2.51	0.390726	76.1519	-18.4129
104	2.64	0.409735	76.3198	-17.3312

105	2.72	0.426148	76.5014	-16.1721
106	2.74	0.442676	76.6973	-14.9591
107	2.78	0.462114	76.9109	-13.6744
108	2.81	0.478914	77.1402	-12.3287
109	2.85	0.49585	77.3861	-10.9155
110	3.1	0.515791	77.6521	-9.31657
111	3.12	0.533048	77.9363	-7.65346
112	3.18	0.550465	78.2393	-5.90298
113	3.19	0.570999	78.5653	-4.0815
114	3.28	0.588793	78.912	-2.15025
115	3.3	0.606775	79.2802	-0.147896
116	3.33	0.628006	79.6746	1.94336
117	3.46	0.646431	80.0924	4.18002
118	3.47	0.665079	80.5348	6.48784
119	3.61	0.687131	81.0069	8.96839
120	3.69	0.706302	81.5058	11.5746
121	3.78	0.725736	82.0325	14.3179
122	3.78	0.748762	82.5931	17.1482
123	3.81	0.768821	83.1842	20.0775
124	3.98	0.789191	83.807	23.2184
125	3.98	0.813379	84.4686	26.4557
126	4.02	0.834498	85.165	29.8104
127	4.27	0.855996	85.8977	33.4655
128	4.33	0.881587	86.6749	37.2827
129	4.49	0.903992	87.4921	41.3417
130	4.58	0.926859	88.3512	45.5867
131	4.6	0.954165	89.2616	49.9758
132	4.66	0.97815	90.2184	54.534
133	4.77	1.00271	91.2238	59.3169
134	4.99	1.03215	92.2892	64.4674
135	5.19	1.05812	93.4088	69.959
136	5.24	1.08482	94.5856	75.6435
137	5.3	1.11699	95.8333	81.5635
138	5.36	1.1455	97.1455	87.7034
139	5.37	1.17499	98.5261	94.0131
140	5.7	1.21073	99.9919	100.914
141	5.82	1.24264	101.536	108.146
142	6	1.27588	103.164	115.802
143	6.29	1.31652	104.897	124.083
144	6.86	1.35317	106.728	133.365
145	7.4	1.39175	108.665	143.664
146	7.59	1.43953	110.737	154.59
147	7.72	1.48328	112.938	166.041
148	7.78	1.53007	115.279	177.945
149	8.1	1.58927	117.804	190.818
150	9.01	1.64485	120.51	205.638
151	9.38	1.70604	123.421	221.641
152	9.46	1.78661	126.613	238.542
153	9.59	1.86629	130.096	256.44
154	11.4	1.95996	133.937	278.784
155	11.76	2.09693	138.334	303.444
156	21.41	2.25713	143.429	351.769
157	54.14	2.51213	149.74	487.776

Data Set Standard Deviation = 5.01369
Numerator = 237925

Denominator = 587186
W Statistic = 0.405195 = 237925 / 587186

5% Critical value of 0.976 exceeds 0.405195
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.405195
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Turbidity

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 9.01
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	1.2
	9/9/2014	9.01
	3/16/2015	3.61
	9/9/2015	2.72
	3/18/2016	1.36
	9/20/2016	3.46
	3/23/2017	2.64
	9/18/2017	0.73
	3/15/2018	3.33
	9/17/2018	4.27
	3/5/2019	2.85
	9/24/2019	2.01
	3/16/2020	2.19
	9/22/2020	1.41
	3/16/2021	1.29
	9/14/2021	0.7
	3/22/2022	1.23
	9/13/2022	3.18
	3/14/2023	0.41

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Turbidity

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 4.7619%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 9.46
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	12/5/2013	0.32
	3/19/2014	1.1
	9/4/2014	9.46
	3/17/2015	1.87
	9/11/2015	1.9
	3/15/2016	0.58
	9/21/2016	2.05
	3/28/2017	0.85
	9/19/2017	0.5
	3/26/2018	1.93
	9/18/2018	1.52
	3/4/2019	7.4
	9/23/2019	4.33
	3/19/2020	5.7
	9/23/2020	2.74
	3/19/2021	1.28
	9/15/2021	1.64
	3/16/2022	0.72
	9/14/2022	3.78
	3/16/2023	0.85

Date	Count	Mean	Significant
9/13/2023	1	54.14	TRUE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Turbidity

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 11.76
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	5.3
	9/8/2014	3.47
	3/19/2015	9.38
	9/14/2015	4.6
	3/21/2016	11.76
	9/23/2016	6
	3/27/2017	6.86
	9/20/2017	4.58
	3/16/2018	7.72
	9/20/2018	0.5
	3/5/2019	7.78
	9/25/2019	0.43
	3/25/2020	4.02
	9/28/2020	3.28
	3/18/2021	5.37
	9/15/2021	1.74
	3/22/2022	5.19
	9/14/2022	6.29
	3/16/2023	7.59

Date	Count	Mean	Significant
9/13/2023	1	0.53	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Turbidity

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 3.98
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	1.66
	9/17/2014	0.7
	3/19/2015	0.54
	9/15/2015	0.84
	3/21/2016	0.47
	9/26/2016	1.69
	3/31/2017	0.25
	9/21/2017	0.74
	3/30/2018	0.95
	9/26/2018	1.62
	3/13/2019	0.81
	10/3/2019	1.03
	4/3/2020	0.73
	9/30/2020	0.86
	3/22/2021	0.55
	9/16/2021	1.55
	3/24/2022	0.84
	9/16/2022	3.98
	3/17/2023	2.51

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Turbidity

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 11.4
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	0.55
	9/16/2014	0.24
	3/18/2015	0.18
	9/15/2015	0.58
	3/16/2016	0.38
	9/22/2016	1.4
	3/29/2017	1.46
	9/21/2017	0.85
	3/28/2018	0.94
	9/20/2018	1.39
	3/12/2019	1.02
	10/1/2019	0.44
	3/18/2020	1.29
	9/24/2020	0.98
	3/17/2021	11.4
	9/9/2021	1.39
	3/15/2022	1.08
	9/16/2022	3.98
	3/15/2023	8.1

Date	Count	Mean	Significant
9/11/2023	1	4.99	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Turbidity

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 5.82
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	5.82
	3/26/2020	4.77
	9/29/2020	3.1
	3/16/2021	2.78
	9/14/2021	3.78
	3/18/2022	3.81
	9/13/2022	4.66
	3/14/2023	4.49

Date	Count	Mean	Significant
9/12/2023	1	1.26	FALSE

7) Patuxent Aquifer Water Quality Parameters Inter-well Statistics

APPENDIX F

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Alkalinity, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 15
Non detect rank is 8

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	13000	23
	4/2/2020	46000	30
	9/30/2020	21000	27
	3/22/2021	26000	28
	9/8/2021	42000	29
	3/14/2022	14000	24
	9/12/2022	14000	25
	3/13/2023	15000	26
	9/11/2023	7000	20
SMW-13	9/23/2013	ND<5000	8
	3/21/2014	ND<3000 J	8
	9/8/2014	ND<3000 J	8
	3/18/2015	ND<4000 J	8
	9/8/2015	6000	18
	3/14/2016	ND<3000 J	8
	9/26/2016	ND<5000 J	8
	3/30/2017	ND<4000 J	8
	9/20/2017	ND<3000 J	8
	3/30/2018	7000	21
	9/21/2018	ND<5000 J	8
	3/11/2019	7000	22
	10/3/2019	6000	19
	3/23/2020	ND<2000 J	8
	9/25/2020	ND<5000 J	8
	3/23/2021	ND<5000 U	8
	9/16/2021	5000	16
	3/23/2022	ND<5000	8
	9/16/2022	ND<5000	8
	3/17/2023	5000	17
	9/15/2023	ND<5000	8

The Wilcoxon Statistic is 2
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -4.20883
The Standard Deviation adjusted for ties is 20.6742
The Z Score adjusted for ties is -4.49836
-4.20883 < 2.326 indicating no statistical significance at 1% level
-4.49836 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Alkalinity, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 13
Non detect rank is 7

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	13000	22
	4/2/2020	46000	30
	9/30/2020	21000	27
	3/22/2021	26000	28
	9/8/2021	42000	29
	3/14/2022	14000	23
	9/12/2022	14000	24
	3/13/2023	15000	25
	9/11/2023	7000	17
SMW-32	9/23/2013	ND<5000	7
	12/5/2013	7790	19
	3/19/2014	ND<3000 J	7
	9/8/2014	ND<3000 J	7
	3/18/2015	ND<5000 J	7
	9/8/2015	5000	14
	3/14/2016	ND<3000 J	7
	9/20/2016	6000	15
	3/24/2017	ND<4000 J	7
	9/20/2017	ND<4000 J	7
	3/27/2018	7000	18
	9/18/2018	8000	20
	3/11/2019	ND<4000 J	7
	10/3/2019	6000	16
	3/23/2020	ND<5000 U	7
	9/24/2020	15000	26
	3/23/2021	ND<5000 U	7
	9/16/2021	50000	31
	3/24/2022	ND<5000	7
	9/16/2022	ND<5000	7
	3/17/2023	10000	21
	9/15/2023	ND<5000	7

The Wilcoxon Statistic is 18
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is -3.54683
The Standard Deviation adjusted for ties is 22.119
The Z Score adjusted for ties is -3.68461
-3.54683 < 2.326 indicating no statistical significance at 1% level
-3.68461 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Alkalinity, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	13000	2
	4/2/2020	46000	23
	9/30/2020	21000	6
	3/22/2021	26000	10
	9/8/2021	42000	20
	3/14/2022	14000	3
	9/12/2022	14000	4
	3/13/2023	15000	5
	9/11/2023	7000	1
GWM-15D	3/21/2016	30000	13
	9/23/2016	23000	7
	3/28/2017	24000	9
	9/21/2017	23000	8
	3/16/2018	32000	14
	9/19/2018	39000	18
	3/5/2019	27000	11
	10/3/2019	39000	19
	3/25/2020	32000	15
	9/28/2020	27000	12
	3/19/2021	35000	16
	9/15/2021	37000	17
	3/22/2022	72000	25
	9/14/2022	42000	21
	3/16/2023	42000	22
	9/12/2023	51000	24

The Wilcoxon Statistic is 115
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is 2.40609
The Standard Deviation adjusted for ties is 17.6635
The Z Score adjusted for ties is 2.40609
2.40609 > 2.326 indicating statistical significance at 1% level
2.40609 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Alkalinity, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	13000	2
	4/2/2020	46000	9
	9/30/2020	21000	6
	3/22/2021	26000	7
	9/8/2021	42000	8
	3/14/2022	14000	3
	9/12/2022	14000	4
	3/13/2023	15000	5
	9/11/2023	7000	1
GWM-17D	11/14/2019	214000	18
	3/26/2020	191000	17
	9/29/2020	169000	15
	3/16/2021	175000	16
	9/14/2021	155000	12
	3/18/2022	154000	11
	9/13/2022	157000	13
	3/14/2023	150000	10
	9/12/2023	164000	14

The Wilcoxon Statistic is 81
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 3.53209
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is 3.53209
3.53209 > 2.326 indicating statistical significance at 1% level
3.53209 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Alkalinity, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	13000	4
	4/2/2020	46000	17
	9/30/2020	21000	13
	3/22/2021	26000	14
	9/8/2021	42000	16
	3/14/2022	14000	7
	9/12/2022	14000	8
	3/13/2023	15000	9
	9/11/2023	7000	1
GWM-19D	11/14/2019	72000	18
	3/25/2020	36000	15
	9/29/2020	20000	12
	3/22/2021	16000	10
	9/15/2021	18000	11
	3/24/2022	13000	5
	9/15/2022	13000	6
	3/16/2023	11000	2
	9/14/2023	12000	3

The Wilcoxon Statistic is 37
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.353209
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is -0.353209
-0.353209 < 2.326 indicating no statistical significance at 1% level
-0.353209 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Ammonia-N

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 23
Non detect rank is 12

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<100 U	12
	4/2/2020	ND<100 U	12
	9/30/2020	243	31
	3/22/2021	136	28
	9/8/2021	125	24
	3/14/2022	ND<70 J	12
	9/12/2022	ND<100	12
	3/13/2023	130	26
	9/11/2023	207	30
SMW-32	9/23/2013	ND<100	12
	12/5/2013	ND<100	12
	3/19/2014	132	27
	9/8/2014	ND<100 U	12
	3/18/2015	ND<100 U	12
	9/8/2015	ND<100 U	12
	3/14/2016	ND<100 U	12
	9/20/2016	ND<100 U	12
	3/24/2017	ND<100 U	12
	9/20/2017	ND<100 U	12
	3/27/2018	ND<43 J	12
	9/18/2018	ND<31 J	12
	3/11/2019	ND<54 J	12
	10/3/2019	154	29
	3/23/2020	ND<39 J	12
	9/24/2020	ND<100 U	12
	3/23/2021	128	25
	9/16/2021	ND<100 U	12
	3/24/2022	ND<61 J	12
	9/16/2022	ND<100	12
	3/17/2023	ND<89 J	12
	9/15/2023	ND<100	12

The Wilcoxon Statistic is 56
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is -1.89309
The Standard Deviation adjusted for ties is 17.6789
The Z Score adjusted for ties is -2.46057
-1.89309 < 2.326 indicating no statistical significance at 1% level
-2.46057 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Ammonia-N

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 22
Non detect rank is 11.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<100 U	11.5
	4/2/2020	ND<100 U	11.5
	9/30/2020	243	30
	3/22/2021	136	27
	9/8/2021	125	25
	3/14/2022	ND<70 J	11.5
	9/12/2022	ND<100	11.5
	3/13/2023	130	26
	9/11/2023	207	28
SMW-13	9/23/2013	ND<100	11.5
	3/21/2014	ND<100 U	11.5
	9/8/2014	ND<100 U	11.5
	3/18/2015	105	23
	9/8/2015	ND<100 U	11.5
	3/14/2016	ND<100 U	11.5
	9/26/2016	ND<31 J	11.5
	3/30/2017	ND<100 U	11.5
	9/20/2017	ND<100 U	11.5
	3/30/2018	ND<62 J	11.5
	9/21/2018	ND<100 U	11.5
	3/11/2019	ND<100 U	11.5
	10/3/2019	238	29
	3/23/2020	ND<38 J	11.5
	9/25/2020	107	24
	3/23/2021	ND<89 J	11.5
	9/16/2021	ND<41 J	11.5
	3/23/2022	ND<100	11.5
	9/16/2022	ND<100	11.5
	3/17/2023	ND<85 J	11.5
	9/15/2023	ND<100	11.5

The Wilcoxon Statistic is 52
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -1.94602
The Standard Deviation adjusted for ties is 17.2012
The Z Score adjusted for ties is -2.49982
-1.94602 < 2.326 indicating no statistical significance at 1% level
-2.49982 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Ammonia-N

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 16
Non detect rank is 8.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<100 U	8.5
	4/2/2020	ND<100 U	8.5
	9/30/2020	243	24
	3/22/2021	136	21
	9/8/2021	125	18
	3/14/2022	ND<70 J	8.5
	9/12/2022	ND<100	8.5
	3/13/2023	130	20
	9/11/2023	207	23
GWM-15D	3/21/2016	ND<100 U	8.5
	9/23/2016	ND<33 J	8.5
	3/28/2017	ND<100 U	8.5
	9/21/2017	ND<100 U	8.5
	3/16/2018	ND<100 U	8.5
	9/19/2018	128	19
	3/5/2019	ND<100 U	8.5
	10/3/2019	189	22
	3/25/2020	ND<29 J	8.5
	9/28/2020	ND<29 J	8.5
	3/19/2021	ND<100 U	8.5
	9/15/2021	ND<65 J	8.5
	3/22/2022	106	17
	9/14/2022	ND<100	8.5
	3/16/2023	ND<85 J	8.5
	9/12/2023	506	25

The Wilcoxon Statistic is 49
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -1.33043
The Standard Deviation adjusted for ties is 15.1789
The Z Score adjusted for ties is -1.5482
-1.33043 < 2.326 indicating no statistical significance at 1% level
-1.5482 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Ammonia-N

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 5
Non detect rank is 3

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<100 U	3
	4/2/2020	ND<100 U	3
	9/30/2020	243	14
	3/22/2021	136	10
	9/8/2021	125	7
	3/14/2022	ND<70 J	3
	9/12/2022	ND<100	3
	3/13/2023	130	8
	9/11/2023	207	13
GWM-17D	11/14/2019	159	11
	3/26/2020	106	6
	9/29/2020	135	9
	3/16/2021	263	16
	9/14/2021	186	12
	3/18/2022	253	15
	9/13/2022	ND<100	3
	3/14/2023	287	17
	9/12/2023	537	18

The Wilcoxon Statistic is 62
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 1.85435
The Standard Deviation adjusted for ties is 11.2073
The Z Score adjusted for ties is 1.87378
1.85435 < 2.326 indicating no statistical significance at 1% level
1.87378 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Ammonia-N

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 10
Non detect rank is 5.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<100 U	5.5
	4/2/2020	ND<100 U	5.5
	9/30/2020	243	18
	3/22/2021	136	13
	9/8/2021	125	11
	3/14/2022	ND<70 J	5.5
	9/12/2022	ND<100	5.5
	3/13/2023	130	12
	9/11/2023	207	16
GWM-19D	11/14/2019	ND<28 J	5.5
	3/25/2020	197	15
	9/29/2020	ND<100 U	5.5
	3/22/2021	165	14
	9/15/2021	ND<59 J	5.5
	3/24/2022	ND<64 J	5.5
	9/15/2022	ND<100	5.5
	3/16/2023	ND<100	5.5
	9/14/2023	208	17

The Wilcoxon Statistic is 34
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.618115
The Standard Deviation adjusted for ties is 10.3156
The Z Score adjusted for ties is -0.678583
-0.618115 < 2.326 indicating no statistical significance at 1% level
-0.678583 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chemical Oxygen Demand (COD)

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 29
Non detect rank is 15

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<15000 U	15
	4/2/2020	ND<9000 J	15
	9/30/2020	ND<15000 U	15
	3/22/2021	ND<15000 U	15
	9/8/2021	ND<15000 U	15
	3/14/2022	ND<15000	15
	9/12/2022	ND<15000	15
	3/13/2023	ND<15000	15
	9/11/2023	ND<15000	15
SMW-32	9/23/2013	ND<15000	15
	12/5/2013	ND<15000	15
	3/19/2014	ND<15000 U	15
	9/8/2014	10000	30
	3/18/2015	ND<15000 U	15
	9/8/2015	ND<15000 U	15
	3/14/2016	ND<15000 U	15
	9/20/2016	10000	31
	3/24/2017	ND<15000 U	15
	9/20/2017	ND<5000 J	15
	3/27/2018	ND<15000 U	15
	9/18/2018	ND<15000 U	15
	3/11/2019	ND<8000 J	15
	10/3/2019	ND<15000 U	15
	3/23/2020	ND<15000 U	15
	9/24/2020	ND<15000 U	15
	3/23/2021	ND<5000 J	15
	9/16/2021	ND<5000 J	15
	3/24/2022	ND<15000	15
	9/16/2022	ND<15000	15
	3/17/2023	ND<8000 J	15
	9/15/2023	ND<15000	15

The Wilcoxon Statistic is 108
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is 0.369915
The Standard Deviation adjusted for ties is 9.78808
The Z Score adjusted for ties is 0.868403
0.369915 < 2.326 indicating no statistical significance at 1% level
0.868403 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chemical Oxygen Demand (COD)

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 29
Non detect rank is 15

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<15000 U	15
	4/2/2020	ND<9000 J	15
	9/30/2020	ND<15000 U	15
	3/22/2021	ND<15000 U	15
	9/8/2021	ND<15000 U	15
	3/14/2022	ND<15000	15
	9/12/2022	ND<15000	15
	3/13/2023	ND<15000	15
	9/11/2023	ND<15000	15
SMW-13	9/23/2013	ND<15000	15
	3/21/2014	ND<15000 U	15
	9/8/2014	12000	30
	3/18/2015	ND<15000 U	15
	9/8/2015	ND<15000 U	15
	3/14/2016	ND<15000 U	15
	9/26/2016	ND<15000 U	15
	3/30/2017	ND<15000 U	15
	9/20/2017	ND<4000 J	15
	3/30/2018	ND<15000 U	15
	9/21/2018	ND<15000 U	15
	3/11/2019	ND<15000 U	15
	10/3/2019	ND<7000 J	15
	3/23/2020	ND<15000 U	15
	9/25/2020	ND<8000 J	15
	3/23/2021	ND<8000 J	15
	9/16/2021	ND<15000 U	15
	3/23/2022	ND<6000 J	15
	9/16/2022	ND<15000	15
	3/17/2023	ND<15000	15
	9/15/2023	ND<15000	15

The Wilcoxon Statistic is 99
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is 0.181025
The Standard Deviation adjusted for ties is 6.87386
The Z Score adjusted for ties is 0.581914
0.181025 < 2.326 indicating no statistical significance at 1% level
0.581914 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chemical Oxygen Demand (COD)

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 22
Non detect rank is 11.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<15000 U	11.5
	4/2/2020	ND<9000 J	11.5
	9/30/2020	ND<15000 U	11.5
	3/22/2021	ND<15000 U	11.5
	9/8/2021	ND<15000 U	11.5
	3/14/2022	ND<15000	11.5
	9/12/2022	ND<15000	11.5
	3/13/2023	ND<15000	11.5
	9/11/2023	ND<15000	11.5
GWM-15D	3/21/2016	13000	24
	9/23/2016	ND<15000 U	11.5
	3/28/2017	ND<15000 U	11.5
	9/21/2017	11000	23
	3/16/2018	ND<15000 U	11.5
	9/19/2018	ND<15000 U	11.5
	3/5/2019	17000	25
	10/3/2019	ND<11000 J	11.5
	3/25/2020	ND<15000 U	11.5
	9/28/2020	ND<12000 J	11.5
	3/19/2021	ND<10000 J	11.5
	9/15/2021	ND<6000 J	11.5
	3/22/2022	ND<15000	11.5
	9/14/2022	ND<5000 J	11.5
	3/16/2023	ND<14000 J	11.5
	9/12/2023	ND<15000	11.5

The Wilcoxon Statistic is 85.5
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is 0.73598
The Standard Deviation adjusted for ties is 9.97397
The Z Score adjusted for ties is 1.30339
0.73598 < 2.326 indicating no statistical significance at 1% level
1.30339 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chemical Oxygen Demand (COD)

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<15000 U	9.5
	4/2/2020	ND<9000 J	9.5
	9/30/2020	ND<15000 U	9.5
	3/22/2021	ND<15000 U	9.5
	9/8/2021	ND<15000 U	9.5
	3/14/2022	ND<15000	9.5
	9/12/2022	ND<15000	9.5
	3/13/2023	ND<15000	9.5
	9/11/2023	ND<15000	9.5
GWM-17D	11/14/2019	ND<9000 J	9.5
	3/26/2020	ND<15000 U	9.5
	9/29/2020	ND<8000 J	9.5
	3/16/2021	ND<12000 J	9.5
	9/14/2021	ND<15000 U	9.5
	3/18/2022	ND<15000	9.5
	9/13/2022	ND<6000 J	9.5
	3/14/2023	ND<12000 J	9.5
	9/12/2023	ND<5000 J	9.5

The Wilcoxon Statistic is 40.5
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.0441511
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0441511 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chemical Oxygen Demand (COD)

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<15000 U	9.5
	4/2/2020	ND<9000 J	9.5
	9/30/2020	ND<15000 U	9.5
	3/22/2021	ND<15000 U	9.5
	9/8/2021	ND<15000 U	9.5
	3/14/2022	ND<15000	9.5
	9/12/2022	ND<15000	9.5
	3/13/2023	ND<15000	9.5
	9/11/2023	ND<15000	9.5
GWM-19D	11/14/2019	ND<15000 J	9.5
	3/25/2020	ND<15000 U	9.5
	9/29/2020	ND<15000 U	9.5
	3/22/2021	ND<15000 U	9.5
	9/15/2021	ND<15000 U	9.5
	3/24/2022	ND<6000 J	9.5
	9/15/2022	ND<15000	9.5
	3/16/2023	ND<7000 J	9.5
	9/14/2023	ND<15000	9.5

The Wilcoxon Statistic is 40.5
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.0441511
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0441511 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloride

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	73900	10
	4/2/2020	66600	3
	9/30/2020	73400	9
	3/22/2021	74100	11
	9/8/2021	79100	15
	3/14/2022	72600	7
	9/12/2022	73300	8
	3/13/2023	74700	13
	9/11/2023	74800	14
SMW-32	9/23/2013	68110	5
	12/5/2013	66500	2
	3/19/2014	63800	1
	9/8/2014	74300	12
	3/18/2015	71900	6
	9/8/2015	81700	17
	3/14/2016	66800	4
	9/20/2016	82900	19
	3/24/2017	82600	18
	9/20/2017	87300	20
	3/27/2018	92400	22
	9/18/2018	88700	21
	3/11/2019	92600	23
	10/3/2019	94500	24
	3/23/2020	81500	16
	9/24/2020	97300	25
	3/23/2021	120000	31
	9/16/2021	116000	30
	3/24/2022	108000	28
	9/16/2022	103000	27
	3/17/2023	101000	26
	9/15/2023	110000	29

The Wilcoxon Statistic is 153
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is 2.32829
The Standard Deviation adjusted for ties is 22.9783
The Z Score adjusted for ties is 2.32829
2.32829 > 2.326 indicating statistical significance at 1% level
2.32829 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloride

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	73900	13
	4/2/2020	66600	6
	9/30/2020	73400	12
	3/22/2021	74100	14
	9/8/2021	79100	17
	3/14/2022	72600	9
	9/12/2022	73300	11
	3/13/2023	74700	15
	9/11/2023	74800	16
SMW-13	9/23/2013	60230	3
	3/21/2014	57600	2
	9/8/2014	67500	7
	3/18/2015	61000	4
	9/8/2015	66000	5
	3/14/2016	53800	1
	9/26/2016	68100	8
	3/30/2017	80000	18
	9/20/2017	81600	19
	3/30/2018	87500	22
	9/21/2018	82300	20
	3/11/2019	83000	21
	10/3/2019	91400	23
	3/23/2020	72700	10
	9/25/2020	94200	24
	3/23/2021	106000	29
	9/16/2021	104000	27
	3/23/2022	103000	26
	9/16/2022	105000	28
	3/17/2023	101000	25
	9/15/2023	111000	30

The Wilcoxon Statistic is 121
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is 1.17666
The Standard Deviation adjusted for ties is 22.0964
The Z Score adjusted for ties is 1.17666
1.17666 < 2.326 indicating no statistical significance at 1% level
1.17666 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloride

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	73900	15
	4/2/2020	66600	7
	9/30/2020	73400	14
	3/22/2021	74100	16
	9/8/2021	79100	22
	3/14/2022	72600	11
	9/12/2022	73300	13
	3/13/2023	74700	17
	9/11/2023	74800	18
GWM-15D	3/21/2016	65800	6
	9/23/2016	66900	8
	3/28/2017	68000	10
	9/21/2017	58500	3
	3/16/2018	93900	25
	9/19/2018	58300	2
	3/5/2019	57000	1
	10/3/2019	62400	5
	3/25/2020	61700	4
	9/28/2020	67600	9
	3/19/2021	74800	19
	9/15/2021	76700	20
	3/22/2022	82500	24
	9/14/2022	73200	12
	3/16/2023	79600	23
	9/12/2023	77800	21

The Wilcoxon Statistic is 56
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -0.934129
The Standard Deviation adjusted for ties is 17.6635
The Z Score adjusted for ties is -0.934129
-0.934129 < 2.326 indicating no statistical significance at 1% level
-0.934129 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloride

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	73900	7
	4/2/2020	66600	2
	9/30/2020	73400	6
	3/22/2021	74100	8
	9/8/2021	79100	13
	3/14/2022	72600	4
	9/12/2022	73300	5
	3/13/2023	74700	9
	9/11/2023	74800	10
GWM-17D	11/14/2019	67800	3
	3/26/2020	65100	1
	9/29/2020	76300	11
	3/16/2021	78200	12
	9/14/2021	87200	14
	3/18/2022	92500	15
	9/13/2022	92700	16
	3/14/2023	99700	17
	9/12/2023	102000	18

The Wilcoxon Statistic is 62
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 1.85435
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is 1.85435
1.85435 < 2.326 indicating no statistical significance at 1% level
1.85435 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chloride

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	73900	14
	4/2/2020	66600	10
	9/30/2020	73400	13
	3/22/2021	74100	15
	9/8/2021	79100	18
	3/14/2022	72600	11
	9/12/2022	73300	12
	3/13/2023	74700	16
	9/11/2023	74800	17
GWM-19D	11/14/2019	32100	1
	3/25/2020	32300	2
	9/29/2020	35500	6
	3/22/2021	36600	8
	9/15/2021	36300	7
	3/24/2022	34900	4
	9/15/2022	34200	3
	3/16/2023	35200	5
	9/14/2023	37000	9

The Wilcoxon Statistic is 0
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -3.62039
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is -3.62039
-3.62039 < 2.326 indicating no statistical significance at 1% level
-3.62039 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Hardness

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	68700	22
	4/2/2020	77100	29
	9/30/2020	72900	28
	3/22/2021	65200	18
	9/8/2021	62100	12
	3/14/2022	62200	13
	9/12/2022	70000	24
	3/13/2023	65400	19
	9/11/2023	62200	14
SMW-13	9/23/2013	38400	1
	3/21/2014	62000	11
	9/8/2014	48000	2
	3/18/2015	82000	30
	9/8/2015	60000	8
	3/14/2016	51000	3
	9/26/2016	52000	4
	3/30/2017	64000	16
	9/20/2017	55100	5
	3/30/2018	60900	9
	9/21/2018	57000	6
	3/11/2019	59100	7
	10/3/2019	61900	10
	3/23/2020	63100	15
	9/25/2020	66300	20
	3/23/2021	64400	17
	9/16/2021	70400	25
	3/23/2022	68400	21
	9/16/2022	70900	26
	3/17/2023	72500	27
	9/15/2023	69300	23

The Wilcoxon Statistic is 55
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -1.81025
The Standard Deviation adjusted for ties is 22.0964
The Z Score adjusted for ties is -1.81025
-1.81025 < 2.326 indicating no statistical significance at 1% level
-1.81025 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Hardness

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	68700	18
	4/2/2020	77100	30
	9/30/2020	72900	27
	3/22/2021	65200	13
	9/8/2021	62100	9
	3/14/2022	62200	10
	9/12/2022	70000	22
	3/13/2023	65400	14
	9/11/2023	62200	11
SMW-32	9/23/2013	45000	1
	12/5/2013	58600	2
	3/19/2014	67000	16
	9/8/2014	59000	3
	3/18/2015	83000	31
	9/8/2015	70000	23
	3/14/2016	62000	8
	9/20/2016	59000	4
	3/24/2017	59000	5
	9/20/2017	61400	7
	3/27/2018	60100	6
	9/18/2018	64200	12
	3/11/2019	66100	15
	10/3/2019	68500	17
	3/23/2020	68800	19
	9/24/2020	71700	26
	3/23/2021	73100	28
	9/16/2021	76200	29
	3/24/2022	69200	20
	9/16/2022	71100	24
	3/17/2023	71100	25
	9/15/2023	69400	21

The Wilcoxon Statistic is 89
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is -0.456954
The Standard Deviation adjusted for ties is 22.9783
The Z Score adjusted for ties is -0.456954
-0.456954 < 2.326 indicating no statistical significance at 1% level
-0.456954 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Hardness

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	68700	7
	4/2/2020	77100	10
	9/30/2020	72900	9
	3/22/2021	65200	5
	9/8/2021	62100	2
	3/14/2022	62200	3
	9/12/2022	70000	8
	3/13/2023	65400	6
	9/11/2023	62200	4
GWM-15D	3/21/2016	115000	17
	9/23/2016	114000	16
	3/28/2017	93000	12
	9/21/2017	92200	11
	3/16/2018	57900	1
	9/19/2018	98000	13
	3/5/2019	116000	18
	10/3/2019	110000	14
	3/25/2020	112000	15
	9/28/2020	122000	20
	3/19/2021	125000	21
	9/15/2021	117000	19
	3/22/2022	126000	22
	9/14/2022	136000	25
	3/16/2023	127000	23
	9/12/2023	131000	24

The Wilcoxon Statistic is 135
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is 3.53837
The Standard Deviation adjusted for ties is 17.6635
The Z Score adjusted for ties is 3.53837
3.53837 > 2.326 indicating statistical significance at 1% level
3.53837 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Hardness

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	68700	6
	4/2/2020	77100	9
	9/30/2020	72900	8
	3/22/2021	65200	4
	9/8/2021	62100	1
	3/14/2022	62200	2
	9/12/2022	70000	7
	3/13/2023	65400	5
	9/11/2023	62200	3
GWM-17D	11/14/2019	201000	14
	3/26/2020	196000	13
	9/29/2020	201000	15
	3/16/2021	184000	10
	9/14/2021	190000	11
	3/18/2022	190000	12
	9/13/2022	208000	17
	3/14/2023	227000	18
	9/12/2023	205000	16

The Wilcoxon Statistic is 81
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 3.53209
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is 3.53209
3.53209 > 2.326 indicating statistical significance at 1% level
3.53209 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Hardness

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	68700	15
	4/2/2020	77100	18
	9/30/2020	72900	17
	3/22/2021	65200	13
	9/8/2021	62100	10
	3/14/2022	62200	11
	9/12/2022	70000	16
	3/13/2023	65400	14
	9/11/2023	62200	12
GWM-19D	11/14/2019	46400	9
	3/25/2020	41400	7
	9/29/2020	39300	4
	3/22/2021	36500	1
	9/15/2021	36800	2
	3/24/2022	37700	3
	9/15/2022	39500	5
	3/16/2023	43000	8
	9/14/2023	40600	6

The Wilcoxon Statistic is 0
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -3.62039
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is -3.62039
-3.62039 < 2.326 indicating no statistical significance at 1% level
-3.62039 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Nitrate-N

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	3200	14
	4/2/2020	3100	12
	9/30/2020	3200	15
	3/22/2021	3400	17
	9/8/2021	3400	18
	3/14/2022	2800	3
	9/12/2022	2800	4
	3/13/2023	2900	8
	9/11/2023	2900	9
SMW-32	9/23/2013	4220	31
	12/5/2013	3410	20
	3/19/2014	3800	29
	9/8/2014	3600	25
	3/18/2015	3600	26
	9/8/2015	3600	27
	3/14/2016	3100	13
	9/20/2016	3700	28
	3/24/2017	3500	21
	9/20/2017	3500	22
	3/27/2018	3500	23
	9/18/2018	3300	16
	3/11/2019	3400	19
	10/3/2019	3000	11
	3/23/2020	2300	1
	9/24/2020	2800	5
	3/23/2021	3900	30
	9/16/2021	3500	24
	3/24/2022	2800	6
	9/16/2022	2800	7
	3/17/2023	2700	2
	9/15/2023	2900	10

The Wilcoxon Statistic is 143
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is 1.89309
The Standard Deviation adjusted for ties is 22.9783
The Z Score adjusted for ties is 1.89309
1.89309 < 2.326 indicating no statistical significance at 1% level
1.89309 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Nitrate-N

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 1
Non detect rank is 1

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	3200	10
	4/2/2020	3100	8
	9/30/2020	3200	11
	3/22/2021	3400	16
	9/8/2021	3400	17
	3/14/2022	2800	3
	9/12/2022	2800	4
	3/13/2023	2900	5
	9/11/2023	2900	6
SMW-13	9/23/2013	3710	28
	3/21/2014	3800	29
	9/8/2014	3700	22
	3/18/2015	3700	23
	9/8/2015	3700	24
	3/14/2016	3100	9
	9/26/2016	3500	20
	3/30/2017	3700	25
	9/20/2017	3700	26
	3/30/2018	3700	27
	9/21/2018	3300	14
	3/11/2019	3400	18
	10/3/2019	3300	15
	3/23/2020	2500	2
	9/25/2020	3400	19
	3/23/2021	4300	30
	9/16/2021	3600	21
	3/23/2022	ND<1000	1
	9/16/2022	3200	12
	3/17/2023	3000	7
	9/15/2023	3200	13

The Wilcoxon Statistic is 154
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is 2.67012
The Standard Deviation adjusted for ties is 22.0964
The Z Score adjusted for ties is 2.67012
2.67012 > 2.326 indicating statistical significance at 1% level
2.67012 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Nitrate-N

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 16
Non detect rank is 8.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	3200	22
	4/2/2020	3100	21
	9/30/2020	3200	23
	3/22/2021	3400	24
	9/8/2021	3400	25
	3/14/2022	2800	17
	9/12/2022	2800	18
	3/13/2023	2900	19
	9/11/2023	2900	20
GWM-15D	3/21/2016	ND<180 J	8.5
	9/23/2016	ND<100 J	8.5
	3/28/2017	ND<80 J	8.5
	9/21/2017	ND<200 U	8.5
	3/16/2018	ND<200 U	8.5
	9/19/2018	ND<80 J	8.5
	3/5/2019	ND<200 U	8.5
	10/3/2019	ND<100 J	8.5
	3/25/2020	ND<200 U	8.5
	9/28/2020	ND<120 J	8.5
	3/19/2021	ND<100 J	8.5
	9/15/2021	ND<100 J	8.5
	3/22/2022	ND<1000	8.5
	9/14/2022	ND<1000	8.5
	3/16/2023	ND<1000	8.5
	9/12/2023	ND<1000	8.5

The Wilcoxon Statistic is 0
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -4.1045
The Standard Deviation adjusted for ties is 15.1789
The Z Score adjusted for ties is -4.77636
-4.1045 < 2.326 indicating no statistical significance at 1% level
-4.77636 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Nitrate-N

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 9
Non detect rank is 5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	3200	15
	4/2/2020	3100	14
	9/30/2020	3200	16
	3/22/2021	3400	17
	9/8/2021	3400	18
	3/14/2022	2800	10
	9/12/2022	2800	11
	3/13/2023	2900	12
	9/11/2023	2900	13
GWM-17D	11/14/2019	ND<120 J	5
	3/26/2020	ND<200 U	5
	9/29/2020	ND<60 J	5
	3/16/2021	ND<200 U	5
	9/14/2021	ND<200 U	5
	3/18/2022	ND<1000	5
	9/13/2022	ND<1000	5
	3/14/2023	ND<1000	5
	9/12/2023	ND<1000	5

The Wilcoxon Statistic is 0
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -3.62039
The Standard Deviation adjusted for ties is 10.6004
The Z Score adjusted for ties is -3.86779
-3.62039 < 2.326 indicating no statistical significance at 1% level
-3.86779 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Nitrate-N

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	3200	15
	4/2/2020	3100	14
	9/30/2020	3200	16
	3/22/2021	3400	17
	9/8/2021	3400	18
	3/14/2022	2800	10
	9/12/2022	2800	11
	3/13/2023	2900	12
	9/11/2023	2900	13
GWM-19D	11/14/2019	1600	7
	3/25/2020	1200	1
	9/29/2020	1500	5
	3/22/2021	1900	9
	9/15/2021	1700	8
	3/24/2022	1400	4
	9/15/2022	1500	6
	3/16/2023	1300	2
	9/14/2023	1300	3

The Wilcoxon Statistic is 0
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -3.62039
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is -3.62039
-3.62039 < 2.326 indicating no statistical significance at 1% level
-3.62039 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: pH

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	5.17	15
	4/2/2020	6.14	28
	9/30/2020	5.61	21
	3/22/2021	5.85	24
	9/8/2021	5.95	25
	3/14/2022	5.4	20
	9/12/2022	5.16	14
	3/13/2023	5.15	12
	9/11/2023	5.01	8
SMW-13	9/23/2013	4.17	1
	3/21/2014	4.83	3
	9/8/2014	5.96	26
	3/18/2015	5.22	17
	9/8/2015	6.02	27
	3/14/2016	6.5	30
	9/26/2016	5.21	16
	3/30/2017	6.27	29
	9/20/2017	5.12	10
	3/30/2018	5.25	18
	9/21/2018	4.91	4
	3/11/2019	5.71	23
	10/3/2019	5.13	11
	3/23/2020	5.01	9
	9/25/2020	5.15	13
	3/23/2021	4.94	6
	9/16/2021	5.35	19
	3/23/2022	5.62	22
	9/16/2022	4.94	7
	3/17/2023	4.74	2
	9/15/2023	4.93	5

The Wilcoxon Statistic is 67
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -1.26718
The Standard Deviation adjusted for ties is 22.0964
The Z Score adjusted for ties is -1.26718
-1.26718 < 2.326 indicating no statistical significance at 1% level
-1.26718 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: pH

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	5.17	13
	4/2/2020	6.14	30
	9/30/2020	5.61	23
	3/22/2021	5.85	27
	9/8/2021	5.95	28
	3/14/2022	5.4	16
	9/12/2022	5.16	11
	3/13/2023	5.15	10
	9/11/2023	5.01	7
SMW-32	9/23/2013	3.72	1
	12/5/2013	5.16	12
	3/19/2014	5.55	20
	9/8/2014	5.6	22
	3/18/2015	4.7	5
	9/8/2015	5.74	25
	3/14/2016	6.28	31
	9/20/2016	5.84	26
	3/24/2017	6.11	29
	9/20/2017	5.4	17
	3/27/2018	5.58	21
	9/18/2018	5.29	14
	3/11/2019	5.52	19
	10/3/2019	5.14	9
	3/23/2020	5.29	15
	9/24/2020	5.05	8
	3/23/2021	5.43	18
	9/16/2021	5.62	24
	3/24/2022	4.31	2
	9/16/2022	4.77	6
	3/17/2023	4.54	4
	9/15/2023	4.52	3

The Wilcoxon Statistic is 78
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is -0.935667
The Standard Deviation adjusted for ties is 22.9783
The Z Score adjusted for ties is -0.935667
-0.935667 < 2.326 indicating no statistical significance at 1% level
-0.935667 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: pH

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	5.17	16
	4/2/2020	6.14	25
	9/30/2020	5.61	22
	3/22/2021	5.85	23
	9/8/2021	5.95	24
	3/14/2022	5.4	21
	9/12/2022	5.16	15
	3/13/2023	5.15	14
	9/11/2023	5.01	8
GWM-15D	3/21/2016	4.99	6
	9/23/2016	5.05	10
	3/28/2017	4.87	2
	9/21/2017	4.8	1
	3/16/2018	5.27	19
	9/19/2018	5.06	12
	3/5/2019	5.29	20
	10/3/2019	4.94	4
	3/25/2020	4.87	3
	9/28/2020	5.11	13
	3/19/2021	4.94	5
	9/15/2021	5.05	11
	3/22/2022	5.03	9
	9/14/2022	5	7
	3/16/2023	5.2	18
	9/12/2023	5.18	17

The Wilcoxon Statistic is 21
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -2.91561
The Standard Deviation adjusted for ties is 17.6635
The Z Score adjusted for ties is -2.91561
-2.91561 < 2.326 indicating no statistical significance at 1% level
-2.91561 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: pH

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	5.17	4
	4/2/2020	6.14	18
	9/30/2020	5.61	7
	3/22/2021	5.85	11
	9/8/2021	5.95	16
	3/14/2022	5.4	5
	9/12/2022	5.16	3
	3/13/2023	5.15	2
	9/11/2023	5.01	1
GWM-17D	11/14/2019	6	17
	3/26/2020	5.87	14
	9/29/2020	5.86	13
	3/16/2021	5.71	9
	9/14/2021	5.65	8
	3/18/2022	5.87	15
	9/13/2022	5.47	6
	3/14/2023	5.85	12
	9/12/2023	5.82	10

The Wilcoxon Statistic is 59
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 1.58944
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is 1.58944
1.58944 < 2.326 indicating no statistical significance at 1% level
1.58944 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: pH

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	5.17	11
	4/2/2020	6.14	18
	9/30/2020	5.61	14
	3/22/2021	5.85	16
	9/8/2021	5.95	17
	3/14/2022	5.4	12
	9/12/2022	5.16	10
	3/13/2023	5.15	9
	9/11/2023	5.01	7
GWM-19D	11/14/2019	5.66	15
	3/25/2020	5.52	13
	9/29/2020	4.66	3
	3/22/2021	5.02	8
	9/15/2021	4.89	5
	3/24/2022	4.42	1
	9/15/2022	4.91	6
	3/16/2023	4.84	4
	9/14/2023	4.64	2

The Wilcoxon Statistic is 12
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -2.56076
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is -2.56076
-2.56076 < 2.326 indicating no statistical significance at 1% level
-2.56076 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Specific Conductance

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	278	17
	4/2/2020	239	8
	9/30/2020	256	11
	3/22/2021	276	15
	9/8/2021	254	10
	3/14/2022	145.1	1
	9/12/2022	289	21
	3/13/2023	329.77	26
	9/11/2023	299.97	23
SMW-13	9/23/2013	260	13
	3/21/2014	203	2
	9/8/2014	208	4
	3/18/2015	204	3
	9/8/2015	214	5
	3/14/2016	221	6
	9/26/2016	238	7
	3/30/2017	251	9
	9/20/2017	259	12
	3/30/2018	269	14
	9/21/2018	278	18
	3/11/2019	280	19
	10/3/2019	276	16
	3/23/2020	285	20
	9/25/2020	289	22
	3/23/2021	305	24
	9/16/2021	312	25
	3/23/2022	335	27
	9/16/2022	367	29
	3/17/2023	404.12	30
	9/15/2023	338	28

The Wilcoxon Statistic is 102
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is 0.316794
The Standard Deviation adjusted for ties is 22.0964
The Z Score adjusted for ties is 0.316794
0.316794 < 2.326 indicating no statistical significance at 1% level
0.316794 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Specific Conductance

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	278	14
	4/2/2020	239	5
	9/30/2020	256	10
	3/22/2021	276	12
	9/8/2021	254	9
	3/14/2022	145.1	1
	9/12/2022	289	17
	3/13/2023	329.77	26
	9/11/2023	299.97	22
SMW-32	9/23/2013	295	20
	12/5/2013	212	3
	3/19/2014	210	2
	9/8/2014	250	6
	3/18/2015	221	4
	9/8/2015	278	15
	3/14/2016	253	8
	9/20/2016	276	13
	3/24/2017	266	11
	9/20/2017	290	18
	3/27/2018	251	7
	9/18/2018	293	19
	3/11/2019	279	16
	10/3/2019	302	23
	3/23/2020	380	30
	9/24/2020	298	21
	3/23/2021	327	25
	9/16/2021	344	27
	3/24/2022	315	24
	9/16/2022	363	29
	3/17/2023	394.71	31
	9/15/2023	351	28

The Wilcoxon Statistic is 127
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is 1.19678
The Standard Deviation adjusted for ties is 22.9783
The Z Score adjusted for ties is 1.19678
1.19678 < 2.326 indicating no statistical significance at 1% level
1.19678 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Specific Conductance

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	278	7
	4/2/2020	239	2
	9/30/2020	256	4
	3/22/2021	276	6
	9/8/2021	254	3
	3/14/2022	145.1	1
	9/12/2022	289	11
	3/13/2023	329.77	21
	9/11/2023	299.97	14
GWM-15D	3/21/2016	315	19
	9/23/2016	308	18
	3/28/2017	295	13
	9/21/2017	283	9
	3/16/2018	280	8
	9/19/2018	283	10
	3/5/2019	272	5
	10/3/2019	302	15
	3/25/2020	292	12
	9/28/2020	303	17
	3/19/2021	329	20
	9/15/2021	378	24
	3/22/2022	355	23
	9/14/2022	331	22
	3/16/2023	302.52	16
	9/12/2023	444.01	25

The Wilcoxon Statistic is 120
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is 2.68916
The Standard Deviation adjusted for ties is 17.6635
The Z Score adjusted for ties is 2.68916
2.68916 > 2.326 indicating statistical significance at 1% level
2.68916 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Specific Conductance

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	278	6
	4/2/2020	239	2
	9/30/2020	256	4
	3/22/2021	276	5
	9/8/2021	254	3
	3/14/2022	145.1	1
	9/12/2022	289	7
	3/13/2023	329.77	9
	9/11/2023	299.97	8
GWM-17D	11/14/2019	373	10
	3/26/2020	401	11
	9/29/2020	429	12
	3/16/2021	448	13
	9/14/2021	491	15
	3/18/2022	487	14
	9/13/2022	534	16
	3/14/2023	651.76	18
	9/12/2023	623.01	17

The Wilcoxon Statistic is 81
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 3.53209
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is 3.53209
3.53209 > 2.326 indicating statistical significance at 1% level
3.53209 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Specific Conductance

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	278	15
	4/2/2020	239	11
	9/30/2020	256	13
	3/22/2021	276	14
	9/8/2021	254	12
	3/14/2022	145.1	3
	9/12/2022	289	16
	3/13/2023	329.77	18
	9/11/2023	299.97	17
GWM-19D	11/14/2019	173.3	9
	3/25/2020	166.8	7
	9/29/2020	143.1	2
	3/22/2021	150.5	4
	9/15/2021	164.5	6
	3/24/2022	154.5	5
	9/15/2022	141.8	1
	3/16/2023	193	10
	9/14/2023	172.35	8

The Wilcoxon Statistic is 7
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -3.00227
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is -3.00227
-3.00227 < 2.326 indicating no statistical significance at 1% level
-3.00227 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Sulfate

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 20
Non detect rank is 10.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	20400	29
	4/2/2020	14900	22
	9/30/2020	15800	24
	3/22/2021	20400	30
	9/8/2021	20300	28
	3/14/2022	15200	23
	9/12/2022	15800	25
	3/13/2023	16000	26
	9/11/2023	16100	27
SMW-13	9/23/2013	ND<2000	10.5
	3/21/2014	ND<280 J	10.5
	9/8/2014	ND<450 J	10.5
	3/18/2015	ND<280 J	10.5
	9/8/2015	ND<420 J	10.5
	3/14/2016	ND<440 J	10.5
	9/26/2016	ND<300 J	10.5
	3/30/2017	ND<400 J	10.5
	9/20/2017	ND<2000 U	10.5
	3/30/2018	ND<2000 U	10.5
	9/21/2018	ND<2000 U	10.5
	3/11/2019	ND<640 J	10.5
	10/3/2019	ND<2000 U	10.5
	3/23/2020	ND<2000 U	10.5
	9/25/2020	ND<2000 U	10.5
	3/23/2021	ND<980 J	10.5
	9/16/2021	ND<560 J	10.5
	3/23/2022	10600	21
	9/16/2022	ND<2000	10.5
	3/17/2023	ND<2000	10.5
	9/15/2023	ND<2000	10.5

The Wilcoxon Statistic is 0
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -4.29935
The Standard Deviation adjusted for ties is 18.5414
The Z Score adjusted for ties is -5.12366
-4.29935 < 2.326 indicating no statistical significance at 1% level
-5.12366 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Sulfate

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 12
Non detect rank is 6.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	20400	30
	4/2/2020	14900	23
	9/30/2020	15800	25
	3/22/2021	20400	31
	9/8/2021	20300	29
	3/14/2022	15200	24
	9/12/2022	15800	26
	3/13/2023	16000	27
	9/11/2023	16100	28
SMW-32	9/23/2013	1480	13
	12/5/2013	1640	14
	3/19/2014	ND<700 J	6.5
	9/8/2014	ND<12000 J	6.5
	3/18/2015	ND<780 J	6.5
	9/8/2015	4100	22
	3/14/2016	2200	15
	9/20/2016	ND<520 J	6.5
	3/24/2017	ND<1200 J	6.5
	9/20/2017	ND<1500 J	6.5
	3/27/2018	ND<1400 J	6.5
	9/18/2018	2300	17
	3/11/2019	2500	18
	10/3/2019	ND<1300 J	6.5
	3/23/2020	ND<1100 J	6.5
	9/24/2020	ND<1700 J	6.5
	3/23/2021	3500	21
	9/16/2021	2500	19
	3/24/2022	ND<2000	6.5
	9/16/2022	3000	20
	3/17/2023	ND<1900 J	6.5
	9/15/2023	2200	16

The Wilcoxon Statistic is 0
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is -4.33018
The Standard Deviation adjusted for ties is 22.3059
The Z Score adjusted for ties is -4.4607
-4.33018 < 2.326 indicating no statistical significance at 1% level
-4.4607 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Sulfate

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	20400	8
	4/2/2020	14900	1
	9/30/2020	15800	3
	3/22/2021	20400	9
	9/8/2021	20300	7
	3/14/2022	15200	2
	9/12/2022	15800	4
	3/13/2023	16000	5
	9/11/2023	16100	6
GWM-15D	3/21/2016	61900	22
	9/23/2016	63000	24
	3/28/2017	60300	17
	9/21/2017	55000	12
	3/16/2018	54100	11
	9/19/2018	53300	10
	3/5/2019	55200	13
	10/3/2019	58000	15
	3/25/2020	56400	14
	9/28/2020	60900	19
	3/19/2021	64000	25
	9/15/2021	61800	21
	3/22/2022	61900	23
	9/14/2022	58900	16
	3/16/2023	61700	20
	9/12/2023	60500	18

The Wilcoxon Statistic is 144
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is 4.04789
The Standard Deviation adjusted for ties is 17.6635
The Z Score adjusted for ties is 4.04789
4.04789 > 2.326 indicating statistical significance at 1% level
4.04789 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Sulfate

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	20400	15
	4/2/2020	14900	1
	9/30/2020	15800	3
	3/22/2021	20400	16
	9/8/2021	20300	14
	3/14/2022	15200	2
	9/12/2022	15800	4
	3/13/2023	16000	5
	9/11/2023	16100	6
GWM-17D	11/14/2019	17500	9
	3/26/2020	16700	7
	9/29/2020	21800	18
	3/16/2021	20100	13
	9/14/2021	21300	17
	3/18/2022	19100	11
	9/13/2022	17300	8
	3/14/2023	18900	10
	9/12/2023	19500	12

The Wilcoxon Statistic is 60
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 1.67774
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is 1.67774
1.67774 < 2.326 indicating no statistical significance at 1% level
1.67774 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Sulfate

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	20400	17
	4/2/2020	14900	10
	9/30/2020	15800	12
	3/22/2021	20400	18
	9/8/2021	20300	16
	3/14/2022	15200	11
	9/12/2022	15800	13
	3/13/2023	16000	14
	9/11/2023	16100	15
GWM-19D	11/14/2019	3600	2
	3/25/2020	3100	1
	9/29/2020	7000	5
	3/22/2021	6200	3
	9/15/2021	6600	4
	3/24/2022	7300	6
	9/15/2022	7600	7
	3/16/2023	10100	8
	9/14/2023	14200	9

The Wilcoxon Statistic is 0
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -3.62039
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is -3.62039
-3.62039 < 2.326 indicating no statistical significance at 1% level
-3.62039 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Total Dissolved Solids

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	184000	15
	4/2/2020	322000	30
	9/30/2020	172000	12
	3/22/2021	204000	19
	9/8/2021	226000	23
	3/14/2022	158000	9
	9/12/2022	194000	18
	3/13/2023	176000	14
	9/11/2023	210000	20
SMW-13	9/23/2013	131000	3
	3/21/2014	127000	2
	9/8/2014	144000	4
	3/18/2015	175000	13
	9/8/2015	185000	16
	3/14/2016	124000	1
	9/26/2016	191000	17
	3/30/2017	153000	6
	9/20/2017	148000	5
	3/30/2018	164000	10
	9/21/2018	155000	7
	3/11/2019	211000	21
	10/3/2019	166000	11
	3/23/2020	222000	22
	9/25/2020	234000	24
	3/23/2021	250000	26
	9/16/2021	266000	28
	3/23/2022	156000	8
	9/16/2022	246000	25
	3/17/2023	262000	27
	9/15/2023	286000	29

The Wilcoxon Statistic is 74
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -0.950382
The Standard Deviation adjusted for ties is 22.0964
The Z Score adjusted for ties is -0.950382
-0.950382 < 2.326 indicating no statistical significance at 1% level
-0.950382 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Total Dissolved Solids

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	184000	11
	4/2/2020	322000	30
	9/30/2020	172000	7
	3/22/2021	204000	17
	9/8/2021	226000	24
	3/14/2022	158000	4
	9/12/2022	194000	15
	3/13/2023	176000	8
	9/11/2023	210000	19
SMW-32	9/23/2013	138000	3
	3/19/2014	127000	2
	9/8/2014	224000	23
	3/18/2015	202000	16
	9/8/2015	231000	25
	3/14/2016	165000	5
	9/20/2016	192000	14
	3/24/2017	206000	18
	9/20/2017	100000	1
	3/27/2018	180000	9
	9/18/2018	190000	13
	3/11/2019	180000	10
	10/3/2019	186000	12
	3/23/2020	218000	22
	9/24/2020	210000	20
	3/23/2021	306000	29
	9/16/2021	302000	28
	3/24/2022	166000	6
	9/16/2022	210000	21
	3/17/2023	270000	26
	9/15/2023	288000	27

The Wilcoxon Statistic is 99
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is 0.181025
The Standard Deviation adjusted for ties is 22.0964
The Z Score adjusted for ties is 0.181025
0.181025 < 2.326 indicating no statistical significance at 1% level
0.181025 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Total Dissolved Solids

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	184000	5
	4/2/2020	322000	25
	9/30/2020	172000	2
	3/22/2021	204000	10
	9/8/2021	226000	15
	3/14/2022	158000	1
	9/12/2022	194000	7
	3/13/2023	176000	3
	9/11/2023	210000	12
GWM-15D	3/21/2016	196000	8
	9/23/2016	260000	19
	3/28/2017	208000	11
	9/21/2017	191000	6
	3/16/2018	199000	9
	9/19/2018	213000	13
	3/5/2019	268000	21
	10/3/2019	260000	20
	3/25/2020	222000	14
	9/28/2020	280000	23
	3/19/2021	252000	16
	9/15/2021	256000	17
	3/22/2022	258000	18
	9/14/2022	182000	4
	3/16/2023	288000	24
	9/12/2023	270000	22

The Wilcoxon Statistic is 109
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is 2.06641
The Standard Deviation adjusted for ties is 17.6635
The Z Score adjusted for ties is 2.06641
2.06641 < 2.326 indicating no statistical significance at 1% level
2.06641 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Total Dissolved Solids

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	184000	4
	4/2/2020	322000	12
	9/30/2020	172000	2
	3/22/2021	204000	6
	9/8/2021	226000	8
	3/14/2022	158000	1
	9/12/2022	194000	5
	3/13/2023	176000	3
	9/11/2023	210000	7
GWM-17D	11/14/2019	506000	18
	3/26/2020	268000	9
	9/29/2020	354000	15
	3/16/2021	352000	14
	9/14/2021	410000	17
	3/18/2022	320000	11
	9/13/2022	312000	10
	3/14/2023	344000	13
	9/12/2023	358000	16

The Wilcoxon Statistic is 78
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 3.26718
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is 3.26718
3.26718 > 2.326 indicating statistical significance at 1% level
3.26718 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Total Dissolved Solids

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	184000	12
	4/2/2020	322000	18
	9/30/2020	172000	10
	3/22/2021	204000	14
	9/8/2021	226000	16
	3/14/2022	158000	9
	9/12/2022	194000	13
	3/13/2023	176000	11
	9/11/2023	210000	15
GWM-19D	11/14/2019	270000	17
	3/25/2020	104000	3
	9/29/2020	120000	5
	3/22/2021	109000	4
	9/15/2021	128000	6
	3/24/2022	80000	1
	9/15/2022	94000	2
	3/16/2023	142000	8
	9/14/2023	135000	7

The Wilcoxon Statistic is 8
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -2.91397
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is -2.91397
-2.91397 < 2.326 indicating no statistical significance at 1% level
-2.91397 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Turbidity

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 1
Non detect rank is 1

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	4.94	26
	4/2/2020	3.01	24
	9/30/2020	0.44	12
	3/22/2021	0.45	13
	9/8/2021	0.54	15
	3/14/2022	0.41	11
	9/12/2022	7.74	28
	3/13/2023	16.23	29
	9/11/2023	5.32	27
SMW-13	9/23/2013	17	30
	3/21/2014	ND<0.01	1
	9/8/2014	3.25	25
	3/18/2015	0.03	2
	9/8/2015	0.96	18
	3/14/2016	0.31	9
	9/26/2016	1.59	20
	3/30/2017	0.24	6
	9/20/2017	0.16	3
	3/30/2018	1.84	22
	9/21/2018	0.23	5
	3/11/2019	0.2	4
	10/3/2019	0.45	14
	3/23/2020	0.28	8
	9/25/2020	0.4	10
	3/23/2021	0.26	7
	9/16/2021	2.06	23
	3/23/2022	1.7	21
	9/16/2022	1.11	19
	3/17/2023	0.6	16
	9/15/2023	0.6	17

The Wilcoxon Statistic is 49
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -2.08179
The Standard Deviation adjusted for ties is 22.0964
The Z Score adjusted for ties is -2.08179
-2.08179 < 2.326 indicating no statistical significance at 1% level
-2.08179 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Turbidity

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	4.94	28
	4/2/2020	3.01	26
	9/30/2020	0.44	4
	3/22/2021	0.45	5
	9/8/2021	0.54	7
	3/14/2022	0.41	2
	9/12/2022	7.74	30
	3/13/2023	16.23	31
	9/11/2023	5.32	29
SMW-32	9/23/2013	0.43	3
	12/5/2013	0.88	9
	3/19/2014	0.5	6
	9/8/2014	1.9	20
	3/18/2015	1.28	14
	9/8/2015	0.81	8
	3/14/2016	2.35	24
	9/20/2016	1.63	18
	3/24/2017	0.39	1
	9/20/2017	1.44	16
	3/27/2018	2.36	25
	9/18/2018	2.21	22
	3/11/2019	1.13	12
	10/3/2019	0.94	10
	3/23/2020	1.35	15
	9/24/2020	1.88	19
	3/23/2021	2.2	21
	9/16/2021	2.32	23
	3/24/2022	0.94	11
	9/16/2022	1.2	13
	3/17/2023	4.54	27
	9/15/2023	1.52	17

The Wilcoxon Statistic is 81
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is -0.805109
The Standard Deviation adjusted for ties is 22.9783
The Z Score adjusted for ties is -0.805109
-0.805109 < 2.326 indicating no statistical significance at 1% level
-0.805109 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Turbidity

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	4.94	19
	4/2/2020	3.01	15
	9/30/2020	0.44	2
	3/22/2021	0.45	3
	9/8/2021	0.54	4
	3/14/2022	0.41	1
	9/12/2022	7.74	21
	3/13/2023	16.23	24
	9/11/2023	5.32	20
GWM-15D	3/21/2016	14.3	22
	9/23/2016	1.6	7
	3/28/2017	0.77	5
	9/21/2017	1.79	10
	3/16/2018	1.68	9
	9/19/2018	3	14
	3/5/2019	3.44	18
	10/3/2019	1.26	6
	3/25/2020	3.35	17
	9/28/2020	2.33	11
	3/19/2021	2.85	13
	9/15/2021	3.13	16
	3/22/2022	1.6	8
	9/14/2022	2.54	12
	3/16/2023	15.85	23
	9/12/2023	218.91	25

The Wilcoxon Statistic is 80
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is 0.424604
The Standard Deviation adjusted for ties is 17.6635
The Z Score adjusted for ties is 0.424604
0.424604 < 2.326 indicating no statistical significance at 1% level
0.424604 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Turbidity

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	4.94	8
	4/2/2020	3.01	5
	9/30/2020	0.44	2
	3/22/2021	0.45	3
	9/8/2021	0.54	4
	3/14/2022	0.41	1
	9/12/2022	7.74	14
	3/13/2023	16.23	17
	9/11/2023	5.32	9
GWM-17D	11/14/2019	10.36	15
	3/26/2020	5.37	10
	9/29/2020	5.44	11
	3/16/2021	3.15	6
	9/14/2021	5.68	13
	3/18/2022	13.48	16
	9/13/2022	21.85	18
	3/14/2023	3.48	7
	9/12/2023	5.56	12

The Wilcoxon Statistic is 63
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 1.94265
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is 1.94265
1.94265 < 2.326 indicating no statistical significance at 1% level
1.94265 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Turbidity

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 1
Non detect rank is 1

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	4.94	14
	4/2/2020	3.01	13
	9/30/2020	0.44	6
	3/22/2021	0.45	7
	9/8/2021	0.54	9
	3/14/2022	0.41	3
	9/12/2022	7.74	16
	3/13/2023	16.23	18
	9/11/2023	5.32	15
GWM-19D	11/14/2019	2.97	12
	3/25/2020	0.65	10
	9/29/2020	0.28	2
	3/22/2021	0.43	5
	9/15/2021	0.46	8
	3/24/2022	0.7	11
	9/15/2022	9.98	17
	3/16/2023	0.41	4
	9/14/2023	ND<0	1

The Wilcoxon Statistic is 25
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -1.41283
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is -1.41283
-1.41283 < 2.326 indicating no statistical significance at 1% level
-1.41283 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

8) Patuxent Aquifer Water Quality Parameters Intra-well Statistics

APPENDIX F

Shapiro-Francia Test of Normality

Parameter: Alkalinity, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	0	-1.82501	12.633	0
4	0	-1.6954	15.5074	0
5	0	-1.58047	18.0052	0
6	0	-1.49085	20.2279	0
7	0	-1.40507	22.2021	0
8	0	-1.33462	23.9833	0
9	0	-1.26464	25.5826	0
10	0	-1.20553	27.0359	0
11	0	-1.1455	28.3481	0
12	0	-1.0939	29.5447	0
13	0	-1.04073	30.6278	0
14	0	-0.994457	31.6168	0
15	0	-0.946291	32.5123	0
16	0	-0.903992	33.3295	0
17	0	-0.859618	34.0684	0
18	0	-0.820379	34.7414	0
19	0	-0.778966	35.3482	0
20	0	-0.742143	35.899	0
21	0	-0.703089	36.3933	0
22	0	-0.668209	36.8398	0
23	0	-0.631062	37.2381	0
24	0	-0.597761	37.5954	0
25	0	-0.56217	37.9114	0
26	0	-0.530162	38.1925	0
27	0	-0.49585	38.4384	0
28	0	-0.464904	38.6545	0
29	5000	-0.431644	38.8408	-2158.22
30	5000	-0.401571	39.0021	-4166.08
31	5000	-0.369171	39.1384	-6011.93
32	6000	-0.33981	39.2538	-8050.79
33	6000	-0.308108	39.3488	-9899.44
34	6000	-0.279319	39.4268	-11575.4
35	6000	-0.248174	39.4884	-13064.4
36	7000	-0.219834	39.5367	-14603.2
37	7000	-0.189118	39.5725	-15927.1
38	7000	-0.161119	39.5984	-17054.9
39	7000	-0.130716	39.6155	-17969.9
40	7790	-0.102953	39.6261	-18771.9
41	8000	-0.0727562	39.6314	-19354
42	10000	-0.0451348	39.6334	-19805.3
43	11000	-0.0150408	39.6337	-19970.8
44	12000	0.0150408	39.6339	-19790.3
45	13000	0.0451348	39.6359	-19203.5
46	13000	0.0727562	39.6412	-18257.7
47	13000	0.102953	39.6518	-16919.3

48	14000	0.130716	39.6689	-15089.3
49	14000	0.161119	39.6949	-12833.6
50	15000	0.189118	39.7306	-9996.84
51	15000	0.219834	39.779	-6699.33
52	16000	0.248174	39.8405	-2728.55
53	18000	0.279319	39.9186	2299.2
54	20000	0.308108	40.0135	8461.37
55	21000	0.33981	40.129	15597.4
56	23000	0.369171	40.2653	24088.3
57	23000	0.401571	40.4265	33324.4
58	24000	0.431644	40.6128	43683.9
59	26000	0.464904	40.829	55771.4
60	27000	0.49585	41.0748	69159.4
61	27000	0.530162	41.3559	83473.7
62	30000	0.56217	41.6719	100339
63	32000	0.597761	42.0293	119467
64	32000	0.631062	42.4275	139661
65	35000	0.668209	42.874	163048
66	36000	0.703089	43.3683	188360
67	37000	0.742143	43.9191	215819
68	39000	0.778966	44.5259	246199
69	39000	0.820379	45.1989	278193
70	42000	0.859618	45.9379	314297
71	42000	0.903992	46.7551	352265
72	42000	0.946291	47.6505	392009
73	46000	0.994457	48.6395	437754
74	50000	1.04073	49.7226	489791
75	51000	1.0939	50.9192	545580
76	72000	1.1455	52.2314	628056
77	72000	1.20553	53.6847	714854
78	150000	1.26464	55.284	904550
79	154000	1.33462	57.0652	1.11008e+006
80	155000	1.40507	59.0395	1.32787e+006
81	157000	1.49085	61.2621	1.56193e+006
82	164000	1.58047	63.76	1.82113e+006
83	169000	1.6954	66.6343	2.10765e+006
84	175000	1.82501	69.965	2.42703e+006
85	191000	2.01409	74.0216	2.81172e+006
86	214000	2.29036	79.2673	3.30186e+006

Data Set Standard Deviation = 50983.2
Numerator = 1.09023e+013
Denominator = 1.75133e+013
W Statistic = 0.622513 = 1.09023e+013 / 1.75133e+013

5% Critical value of 0.972 exceeds 0.622513
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.622513
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Alkalinity, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 70%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 7000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	ND<0
	3/21/2014	ND<0 J
	9/8/2014	ND<0 J
	3/18/2015	ND<0 J
	9/8/2015	6000
	3/14/2016	ND<0 J
	9/26/2016	ND<0 J
	3/30/2017	ND<0 J
	9/20/2017	ND<0 J
	3/30/2018	7000
	9/21/2018	ND<0 J
	3/11/2019	7000
	10/3/2019	6000
	3/23/2020	ND<0 J
	9/25/2020	ND<0 J
	3/23/2021	ND<0 U
	9/16/2021	5000
	3/23/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	5000

Date	Count	Mean	Significant
9/15/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Alkalinity, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 57.1429%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 50000
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	ND<0
	12/5/2013	7790
	3/19/2014	ND<0 J
	9/8/2014	ND<0 J
	3/18/2015	ND<0 J
	9/8/2015	5000
	3/14/2016	ND<0 J
	9/20/2016	6000
	3/24/2017	ND<0 J
	9/20/2017	ND<0 J
	3/27/2018	7000
	9/18/2018	8000
	3/11/2019	ND<0 J
	10/3/2019	6000
	3/23/2020	ND<0 U
	9/24/2020	15000
	3/23/2021	ND<0 U
	9/16/2021	50000
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	10000

Date	Count	Mean	Significant
9/15/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Alkalinity, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 72000
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	30000
	9/23/2016	23000
	3/28/2017	24000
	9/21/2017	23000
	3/16/2018	32000
	9/19/2018	39000
	3/5/2019	27000
	10/3/2019	39000
	3/25/2020	32000
	9/28/2020	27000
	3/19/2021	35000
	9/15/2021	37000
	3/22/2022	72000
	9/14/2022	42000
	3/16/2023	42000

Date	Count	Mean	Significant
9/12/2023	1	51000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Alkalinity, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 214000
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	214000
	3/26/2020	191000
	9/29/2020	169000
	3/16/2021	175000
	9/14/2021	155000
	3/18/2022	154000
	9/13/2022	157000
	3/14/2023	150000

Date	Count	Mean	Significant
9/12/2023	1	164000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Alkalinity, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 72000
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	72000
	3/25/2020	36000
	9/29/2020	20000
	3/22/2021	16000
	9/15/2021	18000
	3/24/2022	13000
	9/15/2022	13000
	3/16/2023	11000

Date	Count	Mean	Significant
9/14/2023	1	12000	FALSE

Shapiro-Francia Test of Normality

Parameter: Ammonia-N

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	0	-1.82501	12.633	0
4	0	-1.6954	15.5074	0
5	0	-1.58047	18.0052	0
6	0	-1.49085	20.2279	0
7	0	-1.40507	22.2021	0
8	0	-1.33462	23.9833	0
9	0	-1.26464	25.5826	0
10	0	-1.20553	27.0359	0
11	0	-1.1455	28.3481	0
12	0	-1.0939	29.5447	0
13	0	-1.04073	30.6278	0
14	0	-0.994457	31.6168	0
15	0	-0.946291	32.5123	0
16	0	-0.903992	33.3295	0
17	0	-0.859618	34.0684	0
18	0	-0.820379	34.7414	0
19	0	-0.778966	35.3482	0
20	0	-0.742143	35.899	0
21	0	-0.703089	36.3933	0
22	0	-0.668209	36.8398	0
23	0	-0.631062	37.2381	0
24	0	-0.597761	37.5954	0
25	0	-0.56217	37.9114	0
26	0	-0.530162	38.1925	0
27	0	-0.49585	38.4384	0
28	0	-0.464904	38.6545	0
29	0	-0.431644	38.8408	0
30	0	-0.401571	39.0021	0
31	0	-0.369171	39.1384	0
32	0	-0.33981	39.2538	0
33	0	-0.308108	39.3488	0
34	0	-0.279319	39.4268	0
35	0	-0.248174	39.4884	0
36	0	-0.219834	39.5367	0
37	0	-0.189118	39.5725	0
38	0	-0.161119	39.5984	0
39	0	-0.130716	39.6155	0
40	0	-0.102953	39.6261	0
41	0	-0.0727562	39.6314	0
42	0	-0.0451348	39.6334	0
43	0	-0.0150408	39.6337	0
44	0	0.0150408	39.6339	0
45	0	0.0451348	39.6359	0
46	0	0.0727562	39.6412	0
47	0	0.102953	39.6518	0

48	0	0.130716	39.6689	0
49	0	0.161119	39.6949	0
50	0	0.189118	39.7306	0
51	0	0.219834	39.779	0
52	0	0.248174	39.8405	0
53	0	0.279319	39.9186	0
54	0	0.308108	40.0135	0
55	0	0.33981	40.129	0
56	0	0.369171	40.2653	0
57	0	0.401571	40.4265	0
58	0	0.431644	40.6128	0
59	0	0.464904	40.829	0
60	0	0.49585	41.0748	0
61	105	0.530162	41.3559	55.667
62	106	0.56217	41.6719	115.257
63	106	0.597761	42.0293	178.62
64	107	0.631062	42.4275	246.143
65	125	0.668209	42.874	329.669
66	128	0.703089	43.3683	419.665
67	128	0.742143	43.9191	514.659
68	130	0.778966	44.5259	615.925
69	132	0.820379	45.1989	724.215
70	135	0.859618	45.9379	840.263
71	136	0.903992	46.7551	963.206
72	154	0.946291	47.6505	1108.93
73	159	0.994457	48.6395	1267.05
74	165	1.04073	49.7226	1438.77
75	186	1.0939	50.9192	1642.24
76	189	1.1455	52.2314	1858.74
77	197	1.20553	53.6847	2096.23
78	207	1.26464	55.284	2358.01
79	208	1.33462	57.0652	2635.61
80	238	1.40507	59.0395	2970.02
81	243	1.49085	61.2621	3332.3
82	253	1.58047	63.76	3732.15
83	263	1.6954	66.6343	4178.04
84	287	1.82501	69.965	4701.82
85	506	2.01409	74.0216	5720.95
86	537	2.29036	79.2673	6950.88

Data Set Standard Deviation = 108.762
Numerator = 4.83147e+007
Denominator = 7.97017e+007
W Statistic = 0.606194 = 4.83147e+007 / 7.97017e+007

5% Critical value of 0.972 exceeds 0.606194
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.606194
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Ammonia-N

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 85.7143%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 154
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	132
	9/8/2014	ND<0 U
	3/18/2015	ND<0 U
	9/8/2015	ND<0 U
	3/14/2016	ND<0 U
	9/20/2016	ND<0 U
	3/24/2017	ND<0 U
	9/20/2017	ND<0 U
	3/27/2018	ND<0 J
	9/18/2018	ND<0 J
	3/11/2019	ND<0 J
	10/3/2019	154
	3/23/2020	ND<0 J
	9/24/2020	ND<0 U
	3/23/2021	128
	9/16/2021	ND<0 U
	3/24/2022	ND<0 J
	9/16/2022	ND<0
	3/17/2023	ND<0 J

Date	Count	Mean	Significant
9/15/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Ammonia-N

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 85%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 238
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/18/2015	105
	9/8/2015	ND<0 U
	3/14/2016	ND<0 U
	9/26/2016	ND<0 J
	3/30/2017	ND<0 U
	9/20/2017	ND<0 U
	3/30/2018	ND<0 J
	9/21/2018	ND<0 U
	3/11/2019	ND<0 U
	10/3/2019	238
	3/23/2020	ND<0 J
	9/25/2020	107
	3/23/2021	ND<0 J
	9/16/2021	ND<0 J
	3/23/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0 J

Date	Count	Mean	Significant
9/15/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Ammonia-N

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 80%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 189
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	ND<0 U
	9/23/2016	ND<0 J
	3/28/2017	ND<0 U
	9/21/2017	ND<0 U
	3/16/2018	ND<0 U
	9/19/2018	128
	3/5/2019	ND<0 U
	10/3/2019	189
	3/25/2020	ND<0 J
	9/28/2020	ND<0 J
	3/19/2021	ND<0 U
	9/15/2021	ND<0 J
	3/22/2022	106
	9/14/2022	ND<0
	3/16/2023	ND<0 J

Date	Count	Mean	Significant
9/12/2023	1	506	TRUE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Ammonia-N

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 12.5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 287
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	159
	3/26/2020	106
	9/29/2020	135
	3/16/2021	263
	9/14/2021	186
	3/18/2022	253
	9/13/2022	ND<0
	3/14/2023	287

Date	Count	Mean	Significant
9/12/2023	1	537	TRUE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Ammonia-N

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 75%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 197
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 J
	3/25/2020	197
	9/29/2020	ND<0 U
	3/22/2021	165
	9/15/2021	ND<0 J
	3/24/2022	ND<0 J
	9/15/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/14/2023	1	208	TRUE

Shapiro-Francia Test of Normality

Parameter: Chemical Oxygen Demand (COD)

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	0	-1.82501	12.633	0
4	0	-1.6954	15.5074	0
5	0	-1.58047	18.0052	0
6	0	-1.49085	20.2279	0
7	0	-1.40507	22.2021	0
8	0	-1.33462	23.9833	0
9	0	-1.26464	25.5826	0
10	0	-1.20553	27.0359	0
11	0	-1.1455	28.3481	0
12	0	-1.0939	29.5447	0
13	0	-1.04073	30.6278	0
14	0	-0.994457	31.6168	0
15	0	-0.946291	32.5123	0
16	0	-0.903992	33.3295	0
17	0	-0.859618	34.0684	0
18	0	-0.820379	34.7414	0
19	0	-0.778966	35.3482	0
20	0	-0.742143	35.899	0
21	0	-0.703089	36.3933	0
22	0	-0.668209	36.8398	0
23	0	-0.631062	37.2381	0
24	0	-0.597761	37.5954	0
25	0	-0.56217	37.9114	0
26	0	-0.530162	38.1925	0
27	0	-0.49585	38.4384	0
28	0	-0.464904	38.6545	0
29	0	-0.431644	38.8408	0
30	0	-0.401571	39.0021	0
31	0	-0.369171	39.1384	0
32	0	-0.33981	39.2538	0
33	0	-0.308108	39.3488	0
34	0	-0.279319	39.4268	0
35	0	-0.248174	39.4884	0
36	0	-0.219834	39.5367	0
37	0	-0.189118	39.5725	0
38	0	-0.161119	39.5984	0
39	0	-0.130716	39.6155	0
40	0	-0.102953	39.6261	0
41	0	-0.0727562	39.6314	0
42	0	-0.0451348	39.6334	0
43	0	-0.0150408	39.6337	0
44	0	0.0150408	39.6339	0
45	0	0.0451348	39.6359	0
46	0	0.0727562	39.6412	0
47	0	0.102953	39.6518	0

48	0	0.130716	39.6689	0
49	0	0.161119	39.6949	0
50	0	0.189118	39.7306	0
51	0	0.219834	39.779	0
52	0	0.248174	39.8405	0
53	0	0.279319	39.9186	0
54	0	0.308108	40.0135	0
55	0	0.33981	40.129	0
56	0	0.369171	40.2653	0
57	0	0.401571	40.4265	0
58	0	0.431644	40.6128	0
59	0	0.464904	40.829	0
60	0	0.49585	41.0748	0
61	0	0.530162	41.3559	0
62	0	0.56217	41.6719	0
63	0	0.597761	42.0293	0
64	0	0.631062	42.4275	0
65	0	0.668209	42.874	0
66	0	0.703089	43.3683	0
67	0	0.742143	43.9191	0
68	0	0.778966	44.5259	0
69	0	0.820379	45.1989	0
70	0	0.859618	45.9379	0
71	0	0.903992	46.7551	0
72	0	0.946291	47.6505	0
73	0	0.994457	48.6395	0
74	0	1.04073	49.7226	0
75	0	1.0939	50.9192	0
76	0	1.1455	52.2314	0
77	0	1.20553	53.6847	0
78	0	1.26464	55.284	0
79	0	1.33462	57.0652	0
80	0	1.40507	59.0395	0
81	10000	1.49085	61.2621	14908.5
82	10000	1.58047	63.76	30713.2
83	11000	1.6954	66.6343	49362.6
84	12000	1.82501	69.965	71262.6
85	13000	2.01409	74.0216	97445.9
86	17000	2.29036	79.2673	136382

Data Set Standard Deviation = 3182.74
Numerator = 1.86001e+010
Denominator = 6.82519e+010
W Statistic = 0.272521 = 1.86001e+010 / 6.82519e+010

5% Critical value of 0.972 exceeds 0.272521
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.272521
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Chemical Oxygen Demand (COD)

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 90.4762%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 10000
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/8/2014	10000
	3/18/2015	ND<0 U
	9/8/2015	ND<0 U
	3/14/2016	ND<0 U
	9/20/2016	10000
	3/24/2017	ND<0 U
	9/20/2017	ND<0 J
	3/27/2018	ND<0 U
	9/18/2018	ND<0 U
	3/11/2019	ND<0 J
	10/3/2019	ND<0 U
	3/23/2020	ND<0 U
	9/24/2020	ND<0 U
	3/23/2021	ND<0 J
	9/16/2021	ND<0 J
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0 J

Date	Count	Mean	Significant
9/15/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Chemical Oxygen Demand (COD)

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 95%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 12000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	12000
	3/18/2015	ND<0 U
	9/8/2015	ND<0 U
	3/14/2016	ND<0 U
	9/26/2016	ND<0 U
	3/30/2017	ND<0 U
	9/20/2017	ND<0 J
	3/30/2018	ND<0 U
	9/21/2018	ND<0 U
	3/11/2019	ND<0 U
	10/3/2019	ND<0 J
	3/23/2020	ND<0 U
	9/25/2020	ND<0 J
	3/23/2021	ND<0 J
	9/16/2021	ND<0 U
	3/23/2022	ND<0 J
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/15/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Chemical Oxygen Demand (COD)

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 80%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 17000
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	13000
	9/23/2016	ND<0 U
	3/28/2017	ND<0 U
	9/21/2017	11000
	3/16/2018	ND<0 U
	9/19/2018	ND<0 U
	3/5/2019	17000
	10/3/2019	ND<0 J
	3/25/2020	ND<0 U
	9/28/2020	ND<0 J
	3/19/2021	ND<0 J
	9/15/2021	ND<0 J
	3/22/2022	ND<0
	9/14/2022	ND<0 J
	3/16/2023	ND<0 J

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Chemical Oxygen Demand (COD)

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 J
	3/26/2020	ND<0 U
	9/29/2020	ND<0 J
	3/16/2021	ND<0 J
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0 J
	3/14/2023	ND<0 J

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Chemical Oxygen Demand (COD)

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 J
	3/25/2020	ND<0 U
	9/29/2020	ND<0 U
	3/22/2021	ND<0 U
	9/15/2021	ND<0 U
	3/24/2022	ND<0 J
	9/15/2022	ND<0
	3/16/2023	ND<0 J

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: Chloride

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	32100	-2.29036	5.24576	-73520.6
2	32300	-2.01409	9.30234	-138576
3	34200	-1.82501	12.633	-200991
4	34900	-1.6954	15.5074	-260160
5	35200	-1.58047	18.0052	-315793
6	35500	-1.49085	20.2279	-368718
7	36300	-1.40507	22.2021	-419722
8	36600	-1.33462	23.9833	-468570
9	37000	-1.26464	25.5826	-515361
10	53800	-1.20553	27.0359	-580219
11	57000	-1.1455	28.3481	-645512
12	57600	-1.0939	29.5447	-708521
13	58300	-1.04073	30.6278	-769195
14	58500	-0.994457	31.6168	-827371
15	60230	-0.946291	32.5123	-884366
16	61000	-0.903992	33.3295	-939510
17	61700	-0.859618	34.0684	-992548
18	62400	-0.820379	34.7414	-1.04374e+006
19	63800	-0.778966	35.3482	-1.09344e+006
20	65100	-0.742143	35.899	-1.14175e+006
21	65800	-0.703089	36.3933	-1.18801e+006
22	66000	-0.668209	36.8398	-1.23212e+006
23	66500	-0.631062	37.2381	-1.27408e+006
24	66600	-0.597761	37.5954	-1.31389e+006
25	66800	-0.56217	37.9114	-1.35145e+006
26	66900	-0.530162	38.1925	-1.38691e+006
27	67500	-0.49585	38.4384	-1.42038e+006
28	67600	-0.464904	38.6545	-1.45181e+006
29	67800	-0.431644	38.8408	-1.48108e+006
30	68000	-0.401571	39.0021	-1.50838e+006
31	68100	-0.369171	39.1384	-1.53352e+006
32	68110	-0.33981	39.2538	-1.55667e+006
33	71900	-0.308108	39.3488	-1.57882e+006
34	72600	-0.279319	39.4268	-1.5991e+006
35	72700	-0.248174	39.4884	-1.61714e+006
36	73200	-0.219834	39.5367	-1.63323e+006
37	73300	-0.189118	39.5725	-1.6471e+006
38	73400	-0.161119	39.5984	-1.65892e+006
39	73900	-0.130716	39.6155	-1.66858e+006
40	74100	-0.102953	39.6261	-1.67621e+006
41	74300	-0.0727562	39.6314	-1.68162e+006
42	74700	-0.0451348	39.6334	-1.68499e+006
43	74800	-0.0150408	39.6337	-1.68611e+006
44	74800	0.0150408	39.6339	-1.68499e+006
45	76300	0.0451348	39.6359	-1.68154e+006
46	76700	0.0727562	39.6412	-1.67596e+006
47	77800	0.102953	39.6518	-1.66795e+006

48	78200	0.130716	39.6689	-1.65773e+006
49	79100	0.161119	39.6949	-1.64499e+006
50	79600	0.189118	39.7306	-1.62993e+006
51	80000	0.219834	39.779	-1.61235e+006
52	81500	0.248174	39.8405	-1.59212e+006
53	81600	0.279319	39.9186	-1.56933e+006
54	81700	0.308108	40.0135	-1.54416e+006
55	82300	0.33981	40.129	-1.51619e+006
56	82500	0.369171	40.2653	-1.48573e+006
57	82600	0.401571	40.4265	-1.45256e+006
58	82900	0.431644	40.6128	-1.41678e+006
59	83000	0.464904	40.829	-1.37819e+006
60	87200	0.49585	41.0748	-1.33496e+006
61	87300	0.530162	41.3559	-1.28867e+006
62	87500	0.56217	41.6719	-1.23948e+006
63	88700	0.597761	42.0293	-1.18646e+006
64	91400	0.631062	42.4275	-1.12878e+006
65	92400	0.668209	42.874	-1.06704e+006
66	92500	0.703089	43.3683	-1.002e+006
67	92600	0.742143	43.9191	-933281
68	92700	0.778966	44.5259	-861071
69	93900	0.820379	45.1989	-784038
70	94200	0.859618	45.9379	-703062
71	94500	0.903992	46.7551	-617634
72	97300	0.946291	47.6505	-525560
73	99700	0.994457	48.6395	-426413
74	101000	1.04073	49.7226	-321299
75	101000	1.0939	50.9192	-210815
76	102000	1.1455	52.2314	-93973.8
77	103000	1.20553	53.6847	30195.3
78	103000	1.26464	55.284	160453
79	104000	1.33462	57.0652	299254
80	105000	1.40507	59.0395	446787
81	106000	1.49085	61.2621	604817
82	108000	1.58047	63.76	775508
83	110000	1.6954	66.6343	962002
84	111000	1.82501	69.965	1.16458e+006
85	116000	2.01409	74.0216	1.39821e+006
86	120000	2.29036	79.2673	1.67306e+006

Data Set Standard Deviation = 20664.1
Numerator = 2.79911e+012
Denominator = 2.87705e+012
W Statistic = 0.97291 = 2.79911e+012 / 2.87705e+012

5% Critical value of 0.972 is less than 0.97291
Data is normally distributed at 95% level of significance

1% Critical value of 0.961 is less than 0.97291
Data is normally distributed at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Chloride

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 120000
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	68110
	12/5/2013	66500
	3/19/2014	63800
	9/8/2014	74300
	3/18/2015	71900
	9/8/2015	81700
	3/14/2016	66800
	9/20/2016	82900
	3/24/2017	82600
	9/20/2017	87300
	3/27/2018	92400
	9/18/2018	88700
	3/11/2019	92600
	10/3/2019	94500
	3/23/2020	81500
	9/24/2020	97300
	3/23/2021	120000
	9/16/2021	116000
	3/24/2022	108000
	9/16/2022	103000
	3/17/2023	101000

Date	Count	Mean	Significant
9/15/2023	1	110000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Chloride

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 106000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	60230
	3/21/2014	57600
	9/8/2014	67500
	3/18/2015	61000
	9/8/2015	66000
	3/14/2016	53800
	9/26/2016	68100
	3/30/2017	80000
	9/20/2017	81600
	3/30/2018	87500
	9/21/2018	82300
	3/11/2019	83000
	10/3/2019	91400
	3/23/2020	72700
	9/25/2020	94200
	3/23/2021	106000
	9/16/2021	104000
	3/23/2022	103000
	9/16/2022	105000
	3/17/2023	101000

Date	Count	Mean	Significant
9/15/2023	1	111000	TRUE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Chloride

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 93900
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	65800
	9/23/2016	66900
	3/28/2017	68000
	9/21/2017	58500
	3/16/2018	93900
	9/19/2018	58300
	3/5/2019	57000
	10/3/2019	62400
	3/25/2020	61700
	9/28/2020	67600
	3/19/2021	74800
	9/15/2021	76700
	3/22/2022	82500
	9/14/2022	73200
	3/16/2023	79600

Date	Count	Mean	Significant
9/12/2023	1	77800	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Chloride

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 99700
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	67800
	3/26/2020	65100
	9/29/2020	76300
	3/16/2021	78200
	9/14/2021	87200
	3/18/2022	92500
	9/13/2022	92700
	3/14/2023	99700

Date	Count	Mean	Significant
9/12/2023	1	102000	TRUE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Chloride

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 36600
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	32100
	3/25/2020	32300
	9/29/2020	35500
	3/22/2021	36600
	9/15/2021	36300
	3/24/2022	34900
	9/15/2022	34200
	3/16/2023	35200

Date	Count	Mean	Significant
9/14/2023	1	37000	TRUE

Shapiro-Francia Test of Normality

Parameter: Hardness

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	36500	-2.29036	5.24576	-83598.2
2	36800	-2.01409	9.30234	-157717
3	37700	-1.82501	12.633	-226520
4	38400	-1.6954	15.5074	-291623
5	39300	-1.58047	18.0052	-353735
6	39500	-1.49085	20.2279	-412624
7	40600	-1.40507	22.2021	-469670
8	41400	-1.33462	23.9833	-524923
9	43000	-1.26464	25.5826	-579303
10	45000	-1.20553	27.0359	-633552
11	46400	-1.1455	28.3481	-686703
12	48000	-1.0939	29.5447	-739210
13	51000	-1.04073	30.6278	-792287
14	52000	-0.994457	31.6168	-843999
15	55100	-0.946291	32.5123	-896140
16	57000	-0.903992	33.3295	-947667
17	57900	-0.859618	34.0684	-997439
18	58600	-0.820379	34.7414	-1.04551e+006
19	59000	-0.778966	35.3482	-1.09147e+006
20	59000	-0.742143	35.899	-1.13526e+006
21	59000	-0.703089	36.3933	-1.17674e+006
22	59100	-0.668209	36.8398	-1.21623e+006
23	60000	-0.631062	37.2381	-1.2541e+006
24	60100	-0.597761	37.5954	-1.29002e+006
25	60900	-0.56217	37.9114	-1.32426e+006
26	61400	-0.530162	38.1925	-1.35681e+006
27	61900	-0.49585	38.4384	-1.3875e+006
28	62000	-0.464904	38.6545	-1.41633e+006
29	62000	-0.431644	38.8408	-1.44309e+006
30	62100	-0.401571	39.0021	-1.46803e+006
31	62200	-0.369171	39.1384	-1.49099e+006
32	62200	-0.33981	39.2538	-1.51212e+006
33	63100	-0.308108	39.3488	-1.53157e+006
34	64000	-0.279319	39.4268	-1.54944e+006
35	64200	-0.248174	39.4884	-1.56538e+006
36	64400	-0.219834	39.5367	-1.57953e+006
37	65200	-0.189118	39.5725	-1.59186e+006
38	65400	-0.161119	39.5984	-1.6024e+006
39	66100	-0.130716	39.6155	-1.61104e+006
40	66300	-0.102953	39.6261	-1.61787e+006
41	67000	-0.0727562	39.6314	-1.62274e+006
42	68400	-0.0451348	39.6334	-1.62583e+006
43	68500	-0.0150408	39.6337	-1.62686e+006
44	68700	0.0150408	39.6339	-1.62583e+006
45	68800	0.0451348	39.6359	-1.62272e+006
46	69200	0.0727562	39.6412	-1.61769e+006
47	69300	0.102953	39.6518	-1.61055e+006

48	69400	0.130716	39.6689	-1.60148e+006
49	70000	0.161119	39.6949	-1.5902e+006
50	70000	0.189118	39.7306	-1.57696e+006
51	70400	0.219834	39.779	-1.56149e+006
52	70900	0.248174	39.8405	-1.54389e+006
53	71100	0.279319	39.9186	-1.52403e+006
54	71100	0.308108	40.0135	-1.50212e+006
55	71700	0.33981	40.129	-1.47776e+006
56	72500	0.369171	40.2653	-1.451e+006
57	72900	0.401571	40.4265	-1.42172e+006
58	73100	0.431644	40.6128	-1.39017e+006
59	76200	0.464904	40.829	-1.35474e+006
60	77100	0.49585	41.0748	-1.31651e+006
61	82000	0.530162	41.3559	-1.27304e+006
62	83000	0.56217	41.6719	-1.22638e+006
63	92200	0.597761	42.0293	-1.17127e+006
64	93000	0.631062	42.4275	-1.11258e+006
65	98000	0.668209	42.874	-1.04709e+006
66	110000	0.703089	43.3683	-969752
67	112000	0.742143	43.9191	-886632
68	114000	0.778966	44.5259	-797830
69	115000	0.820379	45.1989	-703486
70	116000	0.859618	45.9379	-603771
71	117000	0.903992	46.7551	-498003
72	122000	0.946291	47.6505	-382556
73	125000	0.994457	48.6395	-258249
74	126000	1.04073	49.7226	-127117
75	127000	1.0939	50.9192	11808.4
76	131000	1.1455	52.2314	161869
77	136000	1.20553	53.6847	325821
78	184000	1.26464	55.284	558515
79	190000	1.33462	57.0652	812094
80	190000	1.40507	59.0395	1.07906e+006
81	196000	1.49085	61.2621	1.37126e+006
82	201000	1.58047	63.76	1.68894e+006
83	201000	1.6954	66.6343	2.02971e+006
84	205000	1.82501	69.965	2.40384e+006
85	208000	2.01409	74.0216	2.82277e+006
86	227000	2.29036	79.2673	3.34268e+006

Data Set Standard Deviation = 46225.2
Numerator = 1.11735e+013
Denominator = 1.4397e+013
W Statistic = 0.776104 = 1.11735e+013 / 1.4397e+013

5% Critical value of 0.972 exceeds 0.776104
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.776104
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Hardness

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 82000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	38400
	3/21/2014	62000
	9/8/2014	48000
	3/18/2015	82000
	9/8/2015	60000
	3/14/2016	51000
	9/26/2016	52000
	3/30/2017	64000
	9/20/2017	55100
	3/30/2018	60900
	9/21/2018	57000
	3/11/2019	59100
	10/3/2019	61900
	3/23/2020	63100
	9/25/2020	66300
	3/23/2021	64400
	9/16/2021	70400
	3/23/2022	68400
	9/16/2022	70900
	3/17/2023	72500

Date	Count	Mean	Significant
9/15/2023	1	69300	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Hardness

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 83000
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	45000
	12/5/2013	58600
	3/19/2014	67000
	9/8/2014	59000
	3/18/2015	83000
	9/8/2015	70000
	3/14/2016	62000
	9/20/2016	59000
	3/24/2017	59000
	9/20/2017	61400
	3/27/2018	60100
	9/18/2018	64200
	3/11/2019	66100
	10/3/2019	68500
	3/23/2020	68800
	9/24/2020	71700
	3/23/2021	73100
	9/16/2021	76200
	3/24/2022	69200
	9/16/2022	71100
	3/17/2023	71100

Date	Count	Mean	Significant
9/15/2023	1	69400	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Hardness

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 136000
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	115000
	9/23/2016	114000
	3/28/2017	93000
	9/21/2017	92200
	3/16/2018	57900
	9/19/2018	98000
	3/5/2019	116000
	10/3/2019	110000
	3/25/2020	112000
	9/28/2020	122000
	3/19/2021	125000
	9/15/2021	117000
	3/22/2022	126000
	9/14/2022	136000
	3/16/2023	127000

Date	Count	Mean	Significant
9/12/2023	1	131000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Hardness

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 227000
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	201000
	3/26/2020	196000
	9/29/2020	201000
	3/16/2021	184000
	9/14/2021	190000
	3/18/2022	190000
	9/13/2022	208000
	3/14/2023	227000

Date	Count	Mean	Significant
9/12/2023	1	205000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Hardness

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 46400
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	46400
	3/25/2020	41400
	9/29/2020	39300
	3/22/2021	36500
	9/15/2021	36800
	3/24/2022	37700
	9/15/2022	39500
	3/16/2023	43000

Date	Count	Mean	Significant
9/14/2023	1	40600	FALSE

Shapiro-Francia Test of Normality

Parameter: Nitrate-N

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	0	-1.82501	12.633	0
4	0	-1.6954	15.5074	0
5	0	-1.58047	18.0052	0
6	0	-1.49085	20.2279	0
7	0	-1.40507	22.2021	0
8	0	-1.33462	23.9833	0
9	0	-1.26464	25.5826	0
10	0	-1.20553	27.0359	0
11	0	-1.1455	28.3481	0
12	0	-1.0939	29.5447	0
13	0	-1.04073	30.6278	0
14	0	-0.994457	31.6168	0
15	0	-0.946291	32.5123	0
16	0	-0.903992	33.3295	0
17	0	-0.859618	34.0684	0
18	0	-0.820379	34.7414	0
19	0	-0.778966	35.3482	0
20	0	-0.742143	35.899	0
21	0	-0.703089	36.3933	0
22	0	-0.668209	36.8398	0
23	0	-0.631062	37.2381	0
24	0	-0.597761	37.5954	0
25	0	-0.56217	37.9114	0
26	0	-0.530162	38.1925	0
27	1200	-0.49585	38.4384	-595.02
28	1300	-0.464904	38.6545	-1199.4
29	1300	-0.431644	38.8408	-1760.53
30	1400	-0.401571	39.0021	-2322.73
31	1500	-0.369171	39.1384	-2876.49
32	1500	-0.33981	39.2538	-3386.2
33	1600	-0.308108	39.3488	-3879.18
34	1700	-0.279319	39.4268	-4354.02
35	1900	-0.248174	39.4884	-4825.55
36	2300	-0.219834	39.5367	-5331.17
37	2500	-0.189118	39.5725	-5803.96
38	2700	-0.161119	39.5984	-6238.99
39	2800	-0.130716	39.6155	-6604.99
40	2800	-0.102953	39.6261	-6893.26
41	2800	-0.0727562	39.6314	-7096.97
42	2800	-0.0451348	39.6334	-7223.35
43	2800	-0.0150408	39.6337	-7265.47
44	2900	0.0150408	39.6339	-7221.85
45	2900	0.0451348	39.6359	-7090.96
46	2900	0.0727562	39.6412	-6879.96
47	3000	0.102953	39.6518	-6571.11

48	3000	0.130716	39.6689	-6178.96
49	3100	0.161119	39.6949	-5679.49
50	3100	0.189118	39.7306	-5093.22
51	3100	0.219834	39.779	-4411.74
52	3200	0.248174	39.8405	-3617.58
53	3200	0.279319	39.9186	-2723.76
54	3200	0.308108	40.0135	-1737.81
55	3200	0.33981	40.129	-650.42
56	3300	0.369171	40.2653	567.843
57	3300	0.401571	40.4265	1893.03
58	3300	0.431644	40.6128	3317.45
59	3400	0.464904	40.829	4898.13
60	3400	0.49585	41.0748	6584.02
61	3400	0.530162	41.3559	8386.57
62	3400	0.56217	41.6719	10297.9
63	3400	0.597761	42.0293	12330.3
64	3410	0.631062	42.4275	14482.3
65	3500	0.668209	42.874	16821
66	3500	0.703089	43.3683	19281.8
67	3500	0.742143	43.9191	21879.3
68	3500	0.778966	44.5259	24605.7
69	3500	0.820379	45.1989	27477
70	3600	0.859618	45.9379	30571.6
71	3600	0.903992	46.7551	33826
72	3600	0.946291	47.6505	37232.7
73	3600	0.994457	48.6395	40812.7
74	3700	1.04073	49.7226	44663.4
75	3700	1.0939	50.9192	48710.8
76	3700	1.1455	52.2314	52949.2
77	3700	1.20553	53.6847	57409.6
78	3700	1.26464	55.284	62088.8
79	3700	1.33462	57.0652	67026.9
80	3700	1.40507	59.0395	72225.7
81	3710	1.49085	61.2621	77756.8
82	3800	1.58047	63.76	83762.5
83	3800	1.6954	66.6343	90205
84	3900	1.82501	69.965	97322.6
85	4220	2.01409	74.0216	105822
86	4300	2.29036	79.2673	115671

Data Set Standard Deviation = 1552.43
Numerator = 1.33797e+010
Denominator = 1.62381e+010
W Statistic = 0.82397 = 1.33797e+010 / 1.62381e+010

5% Critical value of 0.972 exceeds 0.82397
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.82397
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Nitrate-N

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 4220
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	4220
	12/5/2013	3410
	3/19/2014	3800
	9/8/2014	3600
	3/18/2015	3600
	9/8/2015	3600
	3/14/2016	3100
	9/20/2016	3700
	3/24/2017	3500
	9/20/2017	3500
	3/27/2018	3500
	9/18/2018	3300
	3/11/2019	3400
	10/3/2019	3000
	3/23/2020	2300
	9/24/2020	2800
	3/23/2021	3900
	9/16/2021	3500
	3/24/2022	2800
	9/16/2022	2800
	3/17/2023	2700

Date	Count	Mean	Significant
9/15/2023	1	2900	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Nitrate-N

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 4300
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	3710
	3/21/2014	3800
	9/8/2014	3700
	3/18/2015	3700
	9/8/2015	3700
	3/14/2016	3100
	9/26/2016	3500
	3/30/2017	3700
	9/20/2017	3700
	3/30/2018	3700
	9/21/2018	3300
	3/11/2019	3400
	10/3/2019	3300
	3/23/2020	2500
	9/25/2020	3400
	3/23/2021	4300
	9/16/2021	3600
	3/23/2022	ND<0
	9/16/2022	3200
	3/17/2023	3000

Date	Count	Mean	Significant
9/15/2023	1	3200	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Nitrate-N

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 0
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	ND<0 J
	9/23/2016	ND<0 J
	3/28/2017	ND<0 J
	9/21/2017	ND<0 U
	3/16/2018	ND<0 U
	9/19/2018	ND<0 J
	3/5/2019	ND<0 U
	10/3/2019	ND<0 J
	3/25/2020	ND<0 U
	9/28/2020	ND<0 J
	3/19/2021	ND<0 J
	9/15/2021	ND<0 J
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Nitrate-N

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 J
	3/26/2020	ND<0 U
	9/29/2020	ND<0 J
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Nitrate-N

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 1900
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	1600
	3/25/2020	1200
	9/29/2020	1500
	3/22/2021	1900
	9/15/2021	1700
	3/24/2022	1400
	9/15/2022	1500
	3/16/2023	1300

Date	Count	Mean	Significant
9/14/2023	1	1300	FALSE

Shapiro-Francia Test of Normality

Parameter: pH

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	3.72	-2.29036	5.24576	-8.52015
2	4.17	-2.01409	9.30234	-16.9189
3	4.31	-1.82501	12.633	-24.7847
4	4.42	-1.6954	15.5074	-32.2784
5	4.52	-1.58047	18.0052	-39.4221
6	4.54	-1.49085	20.2279	-46.1905
7	4.64	-1.40507	22.2021	-52.7101
8	4.66	-1.33462	23.9833	-58.9294
9	4.7	-1.26464	25.5826	-64.8732
10	4.74	-1.20553	27.0359	-70.5874
11	4.77	-1.1455	28.3481	-76.0515
12	4.8	-1.0939	29.5447	-81.3022
13	4.83	-1.04073	30.6278	-86.3289
14	4.84	-0.994457	31.6168	-91.1421
15	4.87	-0.946291	32.5123	-95.7505
16	4.87	-0.903992	33.3295	-100.153
17	4.89	-0.859618	34.0684	-104.357
18	4.91	-0.820379	34.7414	-108.385
19	4.91	-0.778966	35.3482	-112.209
20	4.93	-0.742143	35.899	-115.868
21	4.94	-0.703089	36.3933	-119.341
22	4.94	-0.668209	36.8398	-122.642
23	4.94	-0.631062	37.2381	-125.76
24	4.94	-0.597761	37.5954	-128.713
25	4.99	-0.56217	37.9114	-131.518
26	5	-0.530162	38.1925	-134.169
27	5.01	-0.49585	38.4384	-136.653
28	5.01	-0.464904	38.6545	-138.982
29	5.02	-0.431644	38.8408	-141.149
30	5.03	-0.401571	39.0021	-143.169
31	5.05	-0.369171	39.1384	-145.033
32	5.05	-0.33981	39.2538	-146.749
33	5.05	-0.308108	39.3488	-148.305
34	5.06	-0.279319	39.4268	-149.718
35	5.11	-0.248174	39.4884	-150.987
36	5.12	-0.219834	39.5367	-152.112
37	5.13	-0.189118	39.5725	-153.082
38	5.14	-0.161119	39.5984	-153.911
39	5.15	-0.130716	39.6155	-154.584
40	5.15	-0.102953	39.6261	-155.114
41	5.16	-0.0727562	39.6314	-155.489
42	5.16	-0.0451348	39.6334	-155.722
43	5.17	-0.0150408	39.6337	-155.8
44	5.18	0.0150408	39.6339	-155.722
45	5.2	0.0451348	39.6359	-155.487
46	5.21	0.0727562	39.6412	-155.108
47	5.22	0.102953	39.6518	-154.571

48	5.25	0.130716	39.6689	-153.885
49	5.27	0.161119	39.6949	-153.036
50	5.29	0.189118	39.7306	-152.035
51	5.29	0.219834	39.779	-150.872
52	5.29	0.248174	39.8405	-149.559
53	5.35	0.279319	39.9186	-148.065
54	5.4	0.308108	40.0135	-146.401
55	5.4	0.33981	40.129	-144.566
56	5.43	0.369171	40.2653	-142.562
57	5.47	0.401571	40.4265	-140.365
58	5.52	0.431644	40.6128	-137.982
59	5.52	0.464904	40.829	-135.416
60	5.55	0.49585	41.0748	-132.664
61	5.58	0.530162	41.3559	-129.706
62	5.6	0.56217	41.6719	-126.558
63	5.61	0.597761	42.0293	-123.204
64	5.62	0.631062	42.4275	-119.658
65	5.62	0.668209	42.874	-115.902
66	5.65	0.703089	43.3683	-111.93
67	5.66	0.742143	43.9191	-107.729
68	5.71	0.778966	44.5259	-103.281
69	5.71	0.820379	45.1989	-98.5971
70	5.74	0.859618	45.9379	-93.6629
71	5.82	0.903992	46.7551	-88.4017
72	5.84	0.946291	47.6505	-82.8753
73	5.85	0.994457	48.6395	-77.0577
74	5.85	1.04073	49.7226	-70.9695
75	5.86	1.0939	50.9192	-64.5592
76	5.87	1.1455	52.2314	-57.8351
77	5.87	1.20553	53.6847	-50.7587
78	5.95	1.26464	55.284	-43.2341
79	5.96	1.33462	57.0652	-35.2797
80	6	1.40507	59.0395	-26.8493
81	6.02	1.49085	61.2621	-17.8743
82	6.11	1.58047	63.76	-8.21768
83	6.14	1.6954	66.6343	2.19206
84	6.27	1.82501	69.965	13.6348
85	6.28	2.01409	74.0216	26.2834
86	6.5	2.29036	79.2673	41.1707

Data Set Standard Deviation = 0.506325
Numerator = 1695.03
Denominator = 1727.32
W Statistic = 0.981307 = 1695.03 / 1727.32

5% Critical value of 0.972 is less than 0.981307
Data is normally distributed at 95% level of significance

1% Critical value of 0.961 is less than 0.981307
Data is normally distributed at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: pH

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 6.5
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	4.17
	3/21/2014	4.83
	9/8/2014	5.96
	3/18/2015	5.22
	9/8/2015	6.02
	3/14/2016	6.5
	9/26/2016	5.21
	3/30/2017	6.27
	9/20/2017	5.12
	3/30/2018	5.25
	9/21/2018	4.91
	3/11/2019	5.71
	10/3/2019	5.13
	3/23/2020	5.01
	9/25/2020	5.15
	3/23/2021	4.94
	9/16/2021	5.35
	3/23/2022	5.62
	9/16/2022	4.94
	3/17/2023	4.74

Date	Count	Mean	Significant
9/15/2023	1	4.93	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: pH

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 6.28
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	3.72
	12/5/2013	5.16
	3/19/2014	5.55
	9/8/2014	5.6
	3/18/2015	4.7
	9/8/2015	5.74
	3/14/2016	6.28
	9/20/2016	5.84
	3/24/2017	6.11
	9/20/2017	5.4
	3/27/2018	5.58
	9/18/2018	5.29
	3/11/2019	5.52
	10/3/2019	5.14
	3/23/2020	5.29
	9/24/2020	5.05
	3/23/2021	5.43
	9/16/2021	5.62
	3/24/2022	4.31
	9/16/2022	4.77
	3/17/2023	4.54

Date	Count	Mean	Significant
9/15/2023	1	4.52	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: pH

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 5.29
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	4.99
	9/23/2016	5.05
	3/28/2017	4.87
	9/21/2017	4.8
	3/16/2018	5.27
	9/19/2018	5.06
	3/5/2019	5.29
	10/3/2019	4.94
	3/25/2020	4.87
	9/28/2020	5.11
	3/19/2021	4.94
	9/15/2021	5.05
	3/22/2022	5.03
	9/14/2022	5
	3/16/2023	5.2

Date	Count	Mean	Significant
9/12/2023	1	5.18	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: pH

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 6
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	6
	3/26/2020	5.87
	9/29/2020	5.86
	3/16/2021	5.71
	9/14/2021	5.65
	3/18/2022	5.87
	9/13/2022	5.47
	3/14/2023	5.85

Date	Count	Mean	Significant
9/12/2023	1	5.82	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: pH

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 5.66
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	5.66
	3/25/2020	5.52
	9/29/2020	4.66
	3/22/2021	5.02
	9/15/2021	4.89
	3/24/2022	4.42
	9/15/2022	4.91
	3/16/2023	4.84

Date	Count	Mean	Significant
9/14/2023	1	4.64	FALSE

Shapiro-Francia Test of Normality

Parameter: Specific Conductance

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	141.8	-2.29036	5.24576	-324.773
2	143.1	-2.01409	9.30234	-612.99
3	145.1	-1.82501	12.633	-877.799
4	150.5	-1.6954	15.5074	-1132.96
5	154.5	-1.58047	18.0052	-1377.14
6	164.5	-1.49085	20.2279	-1622.38
7	166.8	-1.40507	22.2021	-1856.75
8	172.35	-1.33462	23.9833	-2086.77
9	173.3	-1.26464	25.5826	-2305.93
10	193	-1.20553	27.0359	-2538.6
11	203	-1.1455	28.3481	-2771.14
12	204	-1.0939	29.5447	-2994.29
13	208	-1.04073	30.6278	-3210.77
14	210	-0.994457	31.6168	-3419.6
15	212	-0.946291	32.5123	-3620.22
16	214	-0.903992	33.3295	-3813.67
17	221	-0.859618	34.0684	-4003.65
18	221	-0.820379	34.7414	-4184.95
19	238	-0.778966	35.3482	-4370.34
20	239	-0.742143	35.899	-4547.72
21	250	-0.703089	36.3933	-4723.49
22	251	-0.668209	36.8398	-4891.21
23	251	-0.631062	37.2381	-5049.6
24	253	-0.597761	37.5954	-5200.84
25	254	-0.56217	37.9114	-5343.63
26	256	-0.530162	38.1925	-5479.35
27	259	-0.49585	38.4384	-5607.78
28	260	-0.464904	38.6545	-5728.65
29	266	-0.431644	38.8408	-5843.47
30	269	-0.401571	39.0021	-5951.49
31	272	-0.369171	39.1384	-6051.91
32	276	-0.33981	39.2538	-6145.69
33	276	-0.308108	39.3488	-6230.73
34	276	-0.279319	39.4268	-6307.82
35	278	-0.248174	39.4884	-6376.82
36	278	-0.219834	39.5367	-6437.93
37	278	-0.189118	39.5725	-6490.5
38	279	-0.161119	39.5984	-6535.46
39	280	-0.130716	39.6155	-6572.06
40	280	-0.102953	39.6261	-6600.88
41	283	-0.0727562	39.6314	-6621.47
42	283	-0.0451348	39.6334	-6634.25
43	285	-0.0150408	39.6337	-6638.53
44	289	0.0150408	39.6339	-6634.19
45	289	0.0451348	39.6359	-6621.14
46	290	0.0727562	39.6412	-6600.04
47	292	0.102953	39.6518	-6569.98

48	293	0.130716	39.6689	-6531.68
49	295	0.161119	39.6949	-6484.15
50	295	0.189118	39.7306	-6428.36
51	298	0.219834	39.779	-6362.85
52	299.97	0.248174	39.8405	-6288.41
53	302	0.279319	39.9186	-6204.05
54	302	0.308108	40.0135	-6111
55	302.52	0.33981	40.129	-6008.2
56	303	0.369171	40.2653	-5896.34
57	305	0.401571	40.4265	-5773.87
58	308	0.431644	40.6128	-5640.92
59	312	0.464904	40.829	-5495.87
60	315	0.49585	41.0748	-5339.68
61	315	0.530162	41.3559	-5172.68
62	327	0.56217	41.6719	-4988.85
63	329	0.597761	42.0293	-4792.18
64	329.77	0.631062	42.4275	-4584.08
65	331	0.668209	42.874	-4362.9
66	335	0.703089	43.3683	-4127.36
67	338	0.742143	43.9191	-3876.52
68	344	0.778966	44.5259	-3608.56
69	351	0.820379	45.1989	-3320.6
70	355	0.859618	45.9379	-3015.44
71	363	0.903992	46.7551	-2687.29
72	367	0.946291	47.6505	-2340
73	373	0.994457	48.6395	-1969.07
74	378	1.04073	49.7226	-1575.67
75	380	1.0939	50.9192	-1159.99
76	394.71	1.1455	52.2314	-707.849
77	401	1.20553	53.6847	-224.433
78	404.12	1.26464	55.284	286.634
79	429	1.33462	57.0652	859.188
80	444.01	1.40507	59.0395	1483.05
81	448	1.49085	61.2621	2150.96
82	487	1.58047	63.76	2920.64
83	491	1.6954	66.6343	3753.08
84	534	1.82501	69.965	4727.64
85	623.01	2.01409	74.0216	5982.44
86	651.76	2.29036	79.2673	7475.2

Data Set Standard Deviation = 95.5822
Numerator = 5.58787e+007
Denominator = 6.15556e+007
W Statistic = 0.907776 = 5.58787e+007 / 6.15556e+007

5% Critical value of 0.972 exceeds 0.907776
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.907776
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Specific Conductance

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 404.12
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	260
	3/21/2014	203
	9/8/2014	208
	3/18/2015	204
	9/8/2015	214
	3/14/2016	221
	9/26/2016	238
	3/30/2017	251
	9/20/2017	259
	3/30/2018	269
	9/21/2018	278
	3/11/2019	280
	10/3/2019	276
	3/23/2020	285
	9/25/2020	289
	3/23/2021	305
	9/16/2021	312
	3/23/2022	335
	9/16/2022	367
	3/17/2023	404.12

Date	Count	Mean	Significant
9/15/2023	1	338	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Specific Conductance

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 394.71
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	295
	12/5/2013	212
	3/19/2014	210
	9/8/2014	250
	3/18/2015	221
	9/8/2015	278
	3/14/2016	253
	9/20/2016	276
	3/24/2017	266
	9/20/2017	290
	3/27/2018	251
	9/18/2018	293
	3/11/2019	279
	10/3/2019	302
	3/23/2020	380
	9/24/2020	298
	3/23/2021	327
	9/16/2021	344
	3/24/2022	315
	9/16/2022	363
	3/17/2023	394.71

Date	Count	Mean	Significant
9/15/2023	1	351	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Specific Conductance

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 378
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	315
	9/23/2016	308
	3/28/2017	295
	9/21/2017	283
	3/16/2018	280
	9/19/2018	283
	3/5/2019	272
	10/3/2019	302
	3/25/2020	292
	9/28/2020	303
	3/19/2021	329
	9/15/2021	378
	3/22/2022	355
	9/14/2022	331
	3/16/2023	302.52

Date	Count	Mean	Significant
9/12/2023	1	444.01	TRUE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Specific Conductance

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 651.76
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	373
	3/26/2020	401
	9/29/2020	429
	3/16/2021	448
	9/14/2021	491
	3/18/2022	487
	9/13/2022	534
	3/14/2023	651.76

Date	Count	Mean	Significant
9/12/2023	1	623.01	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Specific Conductance

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 193
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	173.3
	3/25/2020	166.8
	9/29/2020	143.1
	3/22/2021	150.5
	9/15/2021	164.5
	3/24/2022	154.5
	9/15/2022	141.8
	3/16/2023	193

Date	Count	Mean	Significant
9/14/2023	1	172.35	FALSE

Shapiro-Francia Test of Normality

Parameter: Sulfate

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	0	-1.82501	12.633	0
4	0	-1.6954	15.5074	0
5	0	-1.58047	18.0052	0
6	0	-1.49085	20.2279	0
7	0	-1.40507	22.2021	0
8	0	-1.33462	23.9833	0
9	0	-1.26464	25.5826	0
10	0	-1.20553	27.0359	0
11	0	-1.1455	28.3481	0
12	0	-1.0939	29.5447	0
13	0	-1.04073	30.6278	0
14	0	-0.994457	31.6168	0
15	0	-0.946291	32.5123	0
16	0	-0.903992	33.3295	0
17	0	-0.859618	34.0684	0
18	0	-0.820379	34.7414	0
19	0	-0.778966	35.3482	0
20	0	-0.742143	35.899	0
21	0	-0.703089	36.3933	0
22	0	-0.668209	36.8398	0
23	0	-0.631062	37.2381	0
24	0	-0.597761	37.5954	0
25	0	-0.56217	37.9114	0
26	0	-0.530162	38.1925	0
27	0	-0.49585	38.4384	0
28	0	-0.464904	38.6545	0
29	0	-0.431644	38.8408	0
30	0	-0.401571	39.0021	0
31	0	-0.369171	39.1384	0
32	0	-0.33981	39.2538	0
33	1480	-0.308108	39.3488	-456
34	1640	-0.279319	39.4268	-914.084
35	2200	-0.248174	39.4884	-1460.07
36	2200	-0.219834	39.5367	-1943.7
37	2300	-0.189118	39.5725	-2378.67
38	2500	-0.161119	39.5984	-2781.47
39	2500	-0.130716	39.6155	-3108.26
40	3000	-0.102953	39.6261	-3417.12
41	3100	-0.0727562	39.6314	-3642.66
42	3500	-0.0451348	39.6334	-3800.63
43	3600	-0.0150408	39.6337	-3854.78
44	4100	0.0150408	39.6339	-3793.11
45	6200	0.0451348	39.6359	-3513.28
46	6600	0.0727562	39.6412	-3033.09
47	7000	0.102953	39.6518	-2312.42

48	7300	0.130716	39.6689	-1358.19
49	7600	0.161119	39.6949	-133.687
50	10100	0.189118	39.7306	1776.41
51	10600	0.219834	39.779	4106.65
52	14200	0.248174	39.8405	7630.71
53	14900	0.279319	39.9186	11792.6
54	15200	0.308108	40.0135	16475.8
55	15800	0.33981	40.129	21844.8
56	15800	0.369171	40.2653	27677.7
57	16000	0.401571	40.4265	34102.9
58	16100	0.431644	40.6128	41052.3
59	16700	0.464904	40.829	48816.2
60	17300	0.49585	41.0748	57394.4
61	17500	0.530162	41.3559	66672.3
62	18900	0.56217	41.6719	77297.3
63	19100	0.597761	42.0293	88714.5
64	19500	0.631062	42.4275	101020
65	20100	0.668209	42.874	114451
66	20300	0.703089	43.3683	128724
67	20400	0.742143	43.9191	143864
68	20400	0.778966	44.5259	159755
69	21300	0.820379	45.1989	177229
70	21800	0.859618	45.9379	195968
71	53300	0.903992	46.7551	244151
72	54100	0.946291	47.6505	295345
73	55000	0.994457	48.6395	350041
74	55200	1.04073	49.7226	407489
75	56400	1.0939	50.9192	469185
76	58000	1.1455	52.2314	535624
77	58900	1.20553	53.6847	606630
78	60300	1.26464	55.284	682887
79	60500	1.33462	57.0652	763632
80	60900	1.40507	59.0395	849201
81	61700	1.49085	61.2621	941187
82	61800	1.58047	63.76	1.03886e+006
83	61900	1.6954	66.6343	1.1438e+006
84	61900	1.82501	69.965	1.25677e+006
85	63000	2.01409	74.0216	1.38366e+006
86	64000	2.29036	79.2673	1.53024e+006

Data Set Standard Deviation = 21959.6
Numerator = 2.34165e+012
Denominator = 3.24909e+012
W Statistic = 0.720708 = 2.34165e+012 / 3.24909e+012

5% Critical value of 0.972 exceeds 0.720708
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.720708
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Sulfate

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 95%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 10600
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	ND<0
	3/21/2014	ND<0 J
	9/8/2014	ND<0 J
	3/18/2015	ND<0 J
	9/8/2015	ND<0 J
	3/14/2016	ND<0 J
	9/26/2016	ND<0 J
	3/30/2017	ND<0 J
	9/20/2017	ND<0 U
	3/30/2018	ND<0 U
	9/21/2018	ND<0 U
	3/11/2019	ND<0 J
	10/3/2019	ND<0 U
	3/23/2020	ND<0 U
	9/25/2020	ND<0 U
	3/23/2021	ND<0 J
	9/16/2021	ND<0 J
	3/23/2022	10600
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/15/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Sulfate

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 57.1429%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 4100
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	1480
	12/5/2013	1640
	3/19/2014	ND<0 J
	9/8/2014	ND<0 J
	3/18/2015	ND<0 J
	9/8/2015	4100
	3/14/2016	2200
	9/20/2016	ND<0 J
	3/24/2017	ND<0 J
	9/20/2017	ND<0 J
	3/27/2018	ND<0 J
	9/18/2018	2300
	3/11/2019	2500
	10/3/2019	ND<0 J
	3/23/2020	ND<0 J
	9/24/2020	ND<0 J
	3/23/2021	3500
	9/16/2021	2500
	3/24/2022	ND<0
	9/16/2022	3000
	3/17/2023	ND<0 J

Date	Count	Mean	Significant
9/15/2023	1	2200	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Sulfate

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 64000
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	61900
	9/23/2016	63000
	3/28/2017	60300
	9/21/2017	55000
	3/16/2018	54100
	9/19/2018	53300
	3/5/2019	55200
	10/3/2019	58000
	3/25/2020	56400
	9/28/2020	60900
	3/19/2021	64000
	9/15/2021	61800
	3/22/2022	61900
	9/14/2022	58900
	3/16/2023	61700

Date	Count	Mean	Significant
9/12/2023	1	60500	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Sulfate

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 21800
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	17500
	3/26/2020	16700
	9/29/2020	21800
	3/16/2021	20100
	9/14/2021	21300
	3/18/2022	19100
	9/13/2022	17300
	3/14/2023	18900

Date	Count	Mean	Significant
9/12/2023	1	19500	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Sulfate

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 10100
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	3600
	3/25/2020	3100
	9/29/2020	7000
	3/22/2021	6200
	9/15/2021	6600
	3/24/2022	7300
	9/15/2022	7600
	3/16/2023	10100

Date	Count	Mean	Significant
9/14/2023	1	14200	TRUE

Shapiro-Francia Test of Normality

Parameter: Total Dissolved Solids

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 85

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	80000	-2.29036	5.24576	-183229
2	94000	-1.99539	9.22736	-370796
3	100000	-1.82501	12.558	-553297
4	104000	-1.68494	15.397	-728530
5	109000	-1.57179	17.8675	-899855
6	120000	-1.48328	20.0677	-1.07785e+006
7	124000	-1.39838	22.0231	-1.25125e+006
8	127000	-1.32251	23.7721	-1.41921e+006
9	127000	-1.25908	25.3574	-1.57911e+006
10	128000	-1.19522	26.786	-1.7321e+006
11	131000	-1.14069	28.0872	-1.88153e+006
12	135000	-1.08482	29.264	-2.02798e+006
13	138000	-1.03215	30.3293	-2.17042e+006
14	142000	-0.986272	31.3021	-2.31047e+006
15	144000	-0.938476	32.1828	-2.44561e+006
16	148000	-0.892733	32.9798	-2.57773e+006
17	153000	-0.852385	33.7063	-2.70815e+006
18	155000	-0.809896	34.3623	-2.83368e+006
19	156000	-0.772193	34.9586	-2.95414e+006
20	158000	-0.732275	35.4948	-3.06984e+006
21	164000	-0.693493	35.9757	-3.18358e+006
22	165000	-0.658838	36.4098	-3.29228e+006
23	166000	-0.621911	36.7966	-3.39552e+006
24	166000	-0.585815	37.1397	-3.49277e+006
25	172000	-0.553384	37.446	-3.58795e+006
26	175000	-0.518658	37.715	-3.67871e+006
27	176000	-0.487364	37.9525	-3.76449e+006
28	180000	-0.453763	38.1584	-3.84617e+006
29	180000	-0.420664	38.3354	-3.92189e+006
30	182000	-0.390726	38.488	-3.993e+006
31	184000	-0.358459	38.6165	-4.05895e+006
32	185000	-0.326561	38.7232	-4.11937e+006
33	186000	-0.297612	38.8117	-4.17472e+006
34	190000	-0.266311	38.8827	-4.22532e+006
35	191000	-0.237847	38.9392	-4.27075e+006
36	191000	-0.207012	38.9821	-4.31029e+006
37	192000	-0.176374	39.0132	-4.34415e+006
38	194000	-0.148434	39.0352	-4.37295e+006
39	196000	-0.118085	39.0492	-4.3961e+006
40	199000	-0.0878447	39.0569	-4.41358e+006
41	202000	-0.0601949	39.0605	-4.42574e+006
42	204000	-0.0300838	39.0614	-4.43187e+006
43	206000	0	39.0614	-4.43187e+006
44	208000	0.0300838	39.0623	-4.42562e+006
45	210000	0.0601949	39.0659	-4.41298e+006
46	210000	0.0878447	39.0737	-4.39453e+006
47	210000	0.118085	39.0876	-4.36973e+006

48	211000	0.148434	39.1096	-4.33841e+006
49	213000	0.176374	39.1407	-4.30084e+006
50	218000	0.207012	39.1836	-4.25571e+006
51	222000	0.237847	39.2402	-4.20291e+006
52	222000	0.266311	39.3111	-4.14379e+006
53	224000	0.297612	39.3997	-4.07713e+006
54	226000	0.326561	39.5063	-4.00332e+006
55	231000	0.358459	39.6348	-3.92052e+006
56	234000	0.390726	39.7875	-3.82909e+006
57	246000	0.420664	39.9644	-3.72561e+006
58	250000	0.453763	40.1703	-3.61217e+006
59	252000	0.487364	40.4078	-3.48935e+006
60	256000	0.518658	40.6768	-3.35657e+006
61	258000	0.553384	40.9831	-3.2138e+006
62	260000	0.585815	41.3263	-3.06149e+006
63	260000	0.621911	41.713	-2.89979e+006
64	262000	0.658838	42.1471	-2.72718e+006
65	266000	0.693493	42.628	-2.54271e+006
66	268000	0.732275	43.1643	-2.34646e+006
67	268000	0.772193	43.7605	-2.13951e+006
68	270000	0.809896	44.4165	-1.92084e+006
69	270000	0.852385	45.143	-1.69069e+006
70	270000	0.892733	45.94	-1.44966e+006
71	280000	0.938476	46.8207	-1.18688e+006
72	286000	0.986272	47.7935	-904808
73	288000	1.03215	48.8588	-607548
74	288000	1.08482	50.0357	-295119
75	302000	1.14069	51.3368	49368.7
76	306000	1.19522	52.7654	415107
77	312000	1.25908	54.3507	807941
78	320000	1.32251	56.0997	1.23114e+006
79	322000	1.39838	58.0551	1.68142e+006
80	344000	1.48328	60.2553	2.19167e+006
81	352000	1.57179	62.7258	2.74494e+006
82	354000	1.68494	65.5648	3.34141e+006
83	358000	1.82501	68.8955	3.99476e+006
84	410000	1.99539	72.8771	4.81287e+006
85	506000	2.29036	78.1228	5.97179e+006

Data Set Standard Deviation = 75630.4
Numerator = 3.56623e+013
Denominator = 3.75362e+013
W Statistic = 0.950079 = 3.56623e+013 / 3.75362e+013

5% Critical value of 0.972 exceeds 0.950079
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.950079
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Total Dissolved Solids

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 266000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	131000
	3/21/2014	127000
	9/8/2014	144000
	3/18/2015	175000
	9/8/2015	185000
	3/14/2016	124000
	9/26/2016	191000
	3/30/2017	153000
	9/20/2017	148000
	3/30/2018	164000
	9/21/2018	155000
	3/11/2019	211000
	10/3/2019	166000
	3/23/2020	222000
	9/25/2020	234000
	3/23/2021	250000
	9/16/2021	266000
	3/23/2022	156000
	9/16/2022	246000
	3/17/2023	262000

Date	Count	Mean	Significant
9/15/2023	1	286000	TRUE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Total Dissolved Solids

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 306000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	138000
	3/19/2014	127000
	9/8/2014	224000
	3/18/2015	202000
	9/8/2015	231000
	3/14/2016	165000
	9/20/2016	192000
	3/24/2017	206000
	9/20/2017	100000
	3/27/2018	180000
	9/18/2018	190000
	3/11/2019	180000
	10/3/2019	186000
	3/23/2020	218000
	9/24/2020	210000
	3/23/2021	306000
	9/16/2021	302000
	3/24/2022	166000
	9/16/2022	210000
	3/17/2023	270000

Date	Count	Mean	Significant
9/15/2023	1	288000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Total Dissolved Solids

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 288000
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	196000
	9/23/2016	260000
	3/28/2017	208000
	9/21/2017	191000
	3/16/2018	199000
	9/19/2018	213000
	3/5/2019	268000
	10/3/2019	260000
	3/25/2020	222000
	9/28/2020	280000
	3/19/2021	252000
	9/15/2021	256000
	3/22/2022	258000
	9/14/2022	182000
	3/16/2023	288000

Date	Count	Mean	Significant
9/12/2023	1	270000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Total Dissolved Solids

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 506000
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	506000
	3/26/2020	268000
	9/29/2020	354000
	3/16/2021	352000
	9/14/2021	410000
	3/18/2022	320000
	9/13/2022	312000
	3/14/2023	344000

Date	Count	Mean	Significant
9/12/2023	1	358000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Total Dissolved Solids

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 270000
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	270000
	3/25/2020	104000
	9/29/2020	120000
	3/22/2021	109000
	9/15/2021	128000
	3/24/2022	80000
	9/15/2022	94000
	3/16/2023	142000

Date	Count	Mean	Significant
9/14/2023	1	135000	FALSE

Shapiro-Francia Test of Normality

Parameter: Turbidity

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	0.03	-1.82501	12.633	-0.0547502
4	0.16	-1.6954	15.5074	-0.326014
5	0.2	-1.58047	18.0052	-0.642107
6	0.23	-1.49085	20.2279	-0.985003
7	0.24	-1.40507	22.2021	-1.32222
8	0.26	-1.33462	23.9833	-1.66922
9	0.28	-1.26464	25.5826	-2.02332
10	0.28	-1.20553	27.0359	-2.36087
11	0.31	-1.1455	28.3481	-2.71598
12	0.39	-1.0939	29.5447	-3.1426
13	0.4	-1.04073	30.6278	-3.55889
14	0.41	-0.994457	31.6168	-3.96662
15	0.41	-0.946291	32.5123	-4.3546
16	0.43	-0.903992	33.3295	-4.74331
17	0.43	-0.859618	34.0684	-5.11295
18	0.44	-0.820379	34.7414	-5.47391
19	0.45	-0.778966	35.3482	-5.82445
20	0.45	-0.742143	35.899	-6.15841
21	0.46	-0.703089	36.3933	-6.48184
22	0.5	-0.668209	36.8398	-6.81594
23	0.54	-0.631062	37.2381	-7.15671
24	0.6	-0.597761	37.5954	-7.51537
25	0.6	-0.56217	37.9114	-7.85267
26	0.65	-0.530162	38.1925	-8.19728
27	0.7	-0.49585	38.4384	-8.54437
28	0.77	-0.464904	38.6545	-8.90235
29	0.81	-0.431644	38.8408	-9.25198
30	0.88	-0.401571	39.0021	-9.60536
31	0.94	-0.369171	39.1384	-9.95238
32	0.94	-0.33981	39.2538	-10.2718
33	0.96	-0.308108	39.3488	-10.5676
34	1.11	-0.279319	39.4268	-10.8776
35	1.13	-0.248174	39.4884	-11.1581
36	1.2	-0.219834	39.5367	-11.4219
37	1.26	-0.189118	39.5725	-11.6602
38	1.28	-0.161119	39.5984	-11.8664
39	1.35	-0.130716	39.6155	-12.0429
40	1.44	-0.102953	39.6261	-12.1911
41	1.52	-0.0727562	39.6314	-12.3017
42	1.59	-0.0451348	39.6334	-12.3735
43	1.6	-0.0150408	39.6337	-12.3975
44	1.6	0.0150408	39.6339	-12.3735
45	1.63	0.0451348	39.6359	-12.2999
46	1.68	0.0727562	39.6412	-12.1777
47	1.7	0.102953	39.6518	-12.0026

48	1.79	0.130716	39.6689	-11.7687
49	1.84	0.161119	39.6949	-11.4722
50	1.88	0.189118	39.7306	-11.1167
51	1.9	0.219834	39.779	-10.699
52	2.06	0.248174	39.8405	-10.1877
53	2.2	0.279319	39.9186	-9.57324
54	2.21	0.308108	40.0135	-8.89232
55	2.32	0.33981	40.129	-8.10396
56	2.33	0.369171	40.2653	-7.24379
57	2.35	0.401571	40.4265	-6.3001
58	2.36	0.431644	40.6128	-5.28142
59	2.54	0.464904	40.829	-4.10056
60	2.85	0.49585	41.0748	-2.68739
61	2.97	0.530162	41.3559	-1.11281
62	3	0.56217	41.6719	0.573701
63	3.01	0.597761	42.0293	2.37296
64	3.13	0.631062	42.4275	4.34819
65	3.15	0.668209	42.874	6.45304
66	3.25	0.703089	43.3683	8.73809
67	3.35	0.742143	43.9191	11.2243
68	3.44	0.778966	44.5259	13.9039
69	3.48	0.820379	45.1989	16.7588
70	4.54	0.859618	45.9379	20.6615
71	4.94	0.903992	46.7551	25.1272
72	5.32	0.946291	47.6505	30.1615
73	5.37	0.994457	48.6395	35.5017
74	5.44	1.04073	49.7226	41.1633
75	5.56	1.0939	50.9192	47.2454
76	5.68	1.1455	52.2314	53.7518
77	7.74	1.20553	53.6847	63.0826
78	9.98	1.26464	55.284	75.7037
79	10.36	1.33462	57.0652	89.5304
80	13.48	1.40507	59.0395	108.471
81	14.3	1.49085	61.2621	129.79
82	15.85	1.58047	63.76	154.84
83	16.23	1.6954	66.6343	182.357
84	17	1.82501	69.965	213.382
85	21.85	2.01409	74.0216	257.39
86	218.91	2.29036	79.2673	758.773

Data Set Standard Deviation = 23.6693
Numerator = 575736
Denominator = 3.77471e+006
W Statistic = 0.152525 = 575736 / 3.77471e+006

5% Critical value of 0.972 exceeds 0.152525
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.152525
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Turbidity

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 17
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	17
	3/21/2014	ND<0
	9/8/2014	3.25
	3/18/2015	0.03
	9/8/2015	0.96
	3/14/2016	0.31
	9/26/2016	1.59
	3/30/2017	0.24
	9/20/2017	0.16
	3/30/2018	1.84
	9/21/2018	0.23
	3/11/2019	0.2
	10/3/2019	0.45
	3/23/2020	0.28
	9/25/2020	0.4
	3/23/2021	0.26
	9/16/2021	2.06
	3/23/2022	1.7
	9/16/2022	1.11
	3/17/2023	0.6

Date	Count	Mean	Significant
9/15/2023	1	0.6	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Turbidity

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 4.54
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	0.43
	12/5/2013	0.88
	3/19/2014	0.5
	9/8/2014	1.9
	3/18/2015	1.28
	9/8/2015	0.81
	3/14/2016	2.35
	9/20/2016	1.63
	3/24/2017	0.39
	9/20/2017	1.44
	3/27/2018	2.36
	9/18/2018	2.21
	3/11/2019	1.13
	10/3/2019	0.94
	3/23/2020	1.35
	9/24/2020	1.88
	3/23/2021	2.2
	9/16/2021	2.32
	3/24/2022	0.94
	9/16/2022	1.2
	3/17/2023	4.54

Date	Count	Mean	Significant
9/15/2023	1	1.52	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Turbidity

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 15.85
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	14.3
	9/23/2016	1.6
	3/28/2017	0.77
	9/21/2017	1.79
	3/16/2018	1.68
	9/19/2018	3
	3/5/2019	3.44
	10/3/2019	1.26
	3/25/2020	3.35
	9/28/2020	2.33
	3/19/2021	2.85
	9/15/2021	3.13
	3/22/2022	1.6
	9/14/2022	2.54
	3/16/2023	15.85

Date	Count	Mean	Significant
9/12/2023	1	218.91	TRUE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Turbidity

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 21.85
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	10.36
	3/26/2020	5.37
	9/29/2020	5.44
	3/16/2021	3.15
	9/14/2021	5.68
	3/18/2022	13.48
	9/13/2022	21.85
	3/14/2023	3.48

Date	Count	Mean	Significant
9/12/2023	1	5.56	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Turbidity

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 9.98
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	2.97
	3/25/2020	0.65
	9/29/2020	0.28
	3/22/2021	0.43
	9/15/2021	0.46
	3/24/2022	0.7
	9/15/2022	9.98
	3/16/2023	0.41

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

9) Patapsco Aquifer Metals Inter-well Statistics

APPENDIX F

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Antimony, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	32
	3/19/2014	ND<5 U	32
	9/8/2014	ND<5 U	32
	3/17/2015	ND<5 U	32
	9/14/2015	ND<5 U	32
	3/17/2016	ND<5 U	32
	9/21/2016	ND<5 U	32
	3/24/2017	ND<1.3 J	32
	9/20/2017	ND<5 U	32
	3/27/2018	ND<5 U	32
	9/19/2018	ND<5 U	32
	3/11/2019	ND<5 U	32
	9/25/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/8/2021	ND<5 U	32
	3/15/2022	ND<2.2	32
	9/12/2022	ND<2.2	32
	3/13/2023	ND<2.2	32
	9/11/2023	ND<2.2	32
GWM-2	9/25/2013	ND<5	32
	3/18/2014	ND<5 U	32
	9/16/2014	ND<5 U	32
	3/18/2015	ND<5 U	32
	9/15/2015	ND<5 U	32
	3/16/2016	ND<5 U	32
	9/22/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/21/2017	ND<5 U	32
	3/28/2018	ND<5 U	32
	9/21/2018	ND<5 U	32
	3/12/2019	ND<5 U	32
	10/1/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/9/2021	ND<5 U	32
	3/15/2022	ND<2.2	32
	9/12/2022	ND<2.2	32
	3/13/2023	ND<2.2	32
	9/11/2023	ND<2.2	32
GWM-4	9/18/2013	ND<5	32

3/20/2014	ND<5 U	32
9/9/2014	ND<5 U	32
3/16/2015	ND<5 U	32
9/9/2015	ND<5 U	32
3/18/2016	ND<5 U	32
9/20/2016	ND<5 U	32
3/23/2017	ND<5 U	32
9/18/2017	ND<5 U	32
3/15/2018	ND<5 U	32
9/17/2018	ND<5 U	32
3/5/2019	ND<1 J	32
9/24/2019	ND<5 U	32
3/16/2020	ND<5 U	32
9/22/2020	ND<5 U	32
3/16/2021	ND<5 U	32
9/14/2021	ND<5 U	32
3/22/2022	ND<2.2	32
9/13/2022	ND<2.2	32
3/14/2023	ND<2.2	32
9/12/2023	ND<2.2	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Antimony, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 64
Non detect rank is 32.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	32.5
	3/19/2014	ND<5 U	32.5
	9/8/2014	ND<5 U	32.5
	3/17/2015	ND<5 U	32.5
	9/14/2015	ND<5 U	32.5
	3/17/2016	ND<5 U	32.5
	9/21/2016	ND<5 U	32.5
	3/24/2017	ND<1.3 J	32.5
	9/20/2017	ND<5 U	32.5
	3/27/2018	ND<5 U	32.5
	9/19/2018	ND<5 U	32.5
	3/11/2019	ND<5 U	32.5
	9/25/2019	ND<5 U	32.5
	3/18/2020	ND<5 U	32.5
	9/23/2020	ND<5 U	32.5
	3/17/2021	ND<5 U	32.5
	9/8/2021	ND<5 U	32.5
	3/15/2022	ND<2.2	32.5
	9/12/2022	ND<2.2	32.5
	3/13/2023	ND<2.2	32.5
	9/11/2023	ND<2.2	32.5
GWM-2	9/25/2013	ND<5	32.5
	3/18/2014	ND<5 U	32.5
	9/16/2014	ND<5 U	32.5
	3/18/2015	ND<5 U	32.5
	9/15/2015	ND<5 U	32.5
	3/16/2016	ND<5 U	32.5
	9/22/2016	ND<5 U	32.5
	3/24/2017	ND<5 U	32.5
	9/21/2017	ND<5 U	32.5
	3/28/2018	ND<5 U	32.5
	9/21/2018	ND<5 U	32.5
	3/12/2019	ND<5 U	32.5
	10/1/2019	ND<5 U	32.5
	3/18/2020	ND<5 U	32.5
	9/23/2020	ND<5 U	32.5
	3/17/2021	ND<5 U	32.5
	9/9/2021	ND<5 U	32.5
	3/15/2022	ND<2.2	32.5
	9/12/2022	ND<2.2	32.5
	3/13/2023	ND<2.2	32.5
	9/11/2023	ND<2.2	32.5
GWM-5A	9/19/2013	ND<5	32.5

12/5/2013	ND<5	32.5
3/19/2014	ND<5 U	32.5
9/4/2014	ND<0.8 J	32.5
3/17/2015	ND<5 U	32.5
9/11/2015	ND<5 U	32.5
3/15/2016	ND<5 U	32.5
9/21/2016	ND<5 U	32.5
3/28/2017	ND<5 U	32.5
9/19/2017	ND<5 U	32.5
3/26/2018	ND<5 U	32.5
9/18/2018	ND<5 U	32.5
3/4/2019	ND<5 U	32.5
9/23/2019	ND<5 U	32.5
3/19/2020	ND<5 U	32.5
9/23/2020	ND<5 U	32.5
3/19/2021	ND<5 U	32.5
9/15/2021	ND<5 U	32.5
3/16/2022	ND<2.2	32.5
9/14/2022	ND<2.2	32.5
3/16/2023	ND<2.2	32.5
9/13/2023	ND<2.2	32.5

The Wilcoxon Statistic is 462
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is -0.00706753
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00706753 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Antimony, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	32
	3/19/2014	ND<5 U	32
	9/8/2014	ND<5 U	32
	3/17/2015	ND<5 U	32
	9/14/2015	ND<5 U	32
	3/17/2016	ND<5 U	32
	9/21/2016	ND<5 U	32
	3/24/2017	ND<1.3 J	32
	9/20/2017	ND<5 U	32
	3/27/2018	ND<5 U	32
	9/19/2018	ND<5 U	32
	3/11/2019	ND<5 U	32
	9/25/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/8/2021	ND<5 U	32
	3/15/2022	ND<2.2	32
	9/12/2022	ND<2.2	32
	3/13/2023	ND<2.2	32
	9/11/2023	ND<2.2	32
GWM-2	9/25/2013	ND<5	32
	3/18/2014	ND<5 U	32
	9/16/2014	ND<5 U	32
	3/18/2015	ND<5 U	32
	9/15/2015	ND<5 U	32
	3/16/2016	ND<5 U	32
	9/22/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/21/2017	ND<5 U	32
	3/28/2018	ND<5 U	32
	9/21/2018	ND<5 U	32
	3/12/2019	ND<5 U	32
	10/1/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/9/2021	ND<5 U	32
	3/15/2022	ND<2.2	32
	9/12/2022	ND<2.2	32
	3/13/2023	ND<2.2	32
	9/11/2023	ND<2.2	32
GWM-14	9/24/2013	ND<5	32

3/21/2014	ND<5 U	32
9/8/2014	ND<5 U	32
3/19/2015	ND<5 U	32
9/14/2015	ND<5 U	32
3/21/2016	ND<5 U	32
9/23/2016	ND<5 U	32
3/27/2017	ND<1.4 J	32
9/20/2017	ND<5 U	32
3/16/2018	ND<5 U	32
9/20/2018	ND<5 U	32
3/5/2019	ND<5 U	32
9/25/2019	ND<5 U	32
3/25/2020	ND<5 U	32
9/28/2020	ND<5 U	32
3/18/2021	ND<5 U	32
9/15/2021	ND<5 U	32
3/22/2022	ND<2.2	32
9/14/2022	ND<2.2	32
3/16/2023	ND<2.2	32
9/13/2023	ND<2.2	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Antimony, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 62
Non detect rank is 31.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	31.5
	3/19/2014	ND<5 U	31.5
	9/8/2014	ND<5 U	31.5
	3/17/2015	ND<5 U	31.5
	9/14/2015	ND<5 U	31.5
	3/17/2016	ND<5 U	31.5
	9/21/2016	ND<5 U	31.5
	3/24/2017	ND<1.3 J	31.5
	9/20/2017	ND<5 U	31.5
	3/27/2018	ND<5 U	31.5
	9/19/2018	ND<5 U	31.5
	3/11/2019	ND<5 U	31.5
	9/25/2019	ND<5 U	31.5
	3/18/2020	ND<5 U	31.5
	9/23/2020	ND<5 U	31.5
	3/17/2021	ND<5 U	31.5
	9/8/2021	ND<5 U	31.5
	3/15/2022	ND<2.2	31.5
	9/12/2022	ND<2.2	31.5
	3/13/2023	ND<2.2	31.5
	9/11/2023	ND<2.2	31.5
GWM-2	9/25/2013	ND<5	31.5
	3/18/2014	ND<5 U	31.5
	9/16/2014	ND<5 U	31.5
	3/18/2015	ND<5 U	31.5
	9/15/2015	ND<5 U	31.5
	3/16/2016	ND<5 U	31.5
	9/22/2016	ND<5 U	31.5
	3/24/2017	ND<5 U	31.5
	9/21/2017	ND<5 U	31.5
	3/28/2018	ND<5 U	31.5
	9/21/2018	ND<5 U	31.5
	3/12/2019	ND<5 U	31.5
	10/1/2019	ND<5 U	31.5
	3/18/2020	ND<5 U	31.5
	9/23/2020	ND<5 U	31.5
	3/17/2021	ND<5 U	31.5
	9/9/2021	ND<5 U	31.5
	3/15/2022	ND<2.2	31.5
	9/12/2022	ND<2.2	31.5
	3/13/2023	ND<2.2	31.5
	9/11/2023	ND<2.2	31.5
GWM-6	9/24/2013	ND<5	31.5

3/21/2014	ND<5 U	31.5
9/17/2014	ND<5 U	31.5
3/19/2015	ND<5 U	31.5
9/15/2015	ND<5 U	31.5
3/21/2016	ND<5 U	31.5
9/26/2016	ND<5 U	31.5
3/31/2017	ND<5 U	31.5
9/21/2017	ND<5 U	31.5
3/30/2018	2.2	63
9/26/2018	ND<5 U	31.5
3/13/2019	ND<5 U	31.5
10/3/2019	ND<5 U	31.5
4/3/2020	ND<5 U	31.5
9/30/2020	ND<5 U	31.5
3/22/2021	ND<5 U	31.5
9/16/2021	ND<5 U	31.5
3/24/2022	ND<2.2	31.5
9/16/2022	ND<2.2	31.5
3/17/2023	ND<2.2	31.5
9/14/2023	ND<2.2	31.5

The Wilcoxon Statistic is 462
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 0.298896
The Standard Deviation adjusted for ties is 14.8492
The Z Score adjusted for ties is 1.38054
0.298896 < 2.326 indicating no statistical significance at 1% level
1.38054 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Antimony, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	32
	3/19/2014	ND<5 U	32
	9/8/2014	ND<5 U	32
	3/17/2015	ND<5 U	32
	9/14/2015	ND<5 U	32
	3/17/2016	ND<5 U	32
	9/21/2016	ND<5 U	32
	3/24/2017	ND<1.3 J	32
	9/20/2017	ND<5 U	32
	3/27/2018	ND<5 U	32
	9/19/2018	ND<5 U	32
	3/11/2019	ND<5 U	32
	9/25/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/8/2021	ND<5 U	32
	3/15/2022	ND<2.2	32
	9/12/2022	ND<2.2	32
	3/13/2023	ND<2.2	32
	9/11/2023	ND<2.2	32
GWM-2	9/25/2013	ND<5	32
	3/18/2014	ND<5 U	32
	9/16/2014	ND<5 U	32
	3/18/2015	ND<5 U	32
	9/15/2015	ND<5 U	32
	3/16/2016	ND<5 U	32
	9/22/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/21/2017	ND<5 U	32
	3/28/2018	ND<5 U	32
	9/21/2018	ND<5 U	32
	3/12/2019	ND<5 U	32
	10/1/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/9/2021	ND<5 U	32
	3/15/2022	ND<2.2	32
	9/12/2022	ND<2.2	32
	3/13/2023	ND<2.2	32
	9/11/2023	ND<2.2	32
GWM-3	9/25/2013	ND<5	32

3/18/2014	ND<5 U	32
9/16/2014	ND<5 U	32
3/18/2015	ND<5 U	32
9/15/2015	ND<5 U	32
3/16/2016	ND<5 U	32
9/22/2016	ND<5 U	32
3/29/2017	ND<5 U	32
9/21/2017	ND<5 U	32
3/28/2018	ND<5 U	32
9/20/2018	ND<5 U	32
3/12/2019	ND<5 U	32
10/1/2019	ND<5 U	32
3/18/2020	ND<5 U	32
9/24/2020	ND<5 U	32
3/17/2021	ND<5 U	32
9/9/2021	ND<5 U	32
3/15/2022	ND<2.2	32
9/16/2022	ND<2.2	32
3/15/2023	ND<2.2	32
9/11/2023	ND<2.2	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Antimony, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 51
Non detect rank is 26

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	26
	3/19/2014	ND<5 U	26
	9/8/2014	ND<5 U	26
	3/17/2015	ND<5 U	26
	9/14/2015	ND<5 U	26
	3/17/2016	ND<5 U	26
	9/21/2016	ND<5 U	26
	3/24/2017	ND<1.3 J	26
	9/20/2017	ND<5 U	26
	3/27/2018	ND<5 U	26
	9/19/2018	ND<5 U	26
	3/11/2019	ND<5 U	26
	9/25/2019	ND<5 U	26
	3/18/2020	ND<5 U	26
	9/23/2020	ND<5 U	26
	3/17/2021	ND<5 U	26
	9/8/2021	ND<5 U	26
	3/15/2022	ND<2.2	26
	9/12/2022	ND<2.2	26
	3/13/2023	ND<2.2	26
	9/11/2023	ND<2.2	26
GWM-2	9/25/2013	ND<5	26
	3/18/2014	ND<5 U	26
	9/16/2014	ND<5 U	26
	3/18/2015	ND<5 U	26
	9/15/2015	ND<5 U	26
	3/16/2016	ND<5 U	26
	9/22/2016	ND<5 U	26
	3/24/2017	ND<5 U	26
	9/21/2017	ND<5 U	26
	3/28/2018	ND<5 U	26
	9/21/2018	ND<5 U	26
	3/12/2019	ND<5 U	26
	10/1/2019	ND<5 U	26
	3/18/2020	ND<5 U	26
	9/23/2020	ND<5 U	26
	3/17/2021	ND<5 U	26
	9/9/2021	ND<5 U	26
	3/15/2022	ND<2.2	26
	9/12/2022	ND<2.2	26
	3/13/2023	ND<2.2	26
	9/11/2023	ND<2.2	26
GWM-17S	11/14/2019	ND<5 U	26

3/26/2020	ND<5 U	26
9/29/2020	ND<5 U	26
3/16/2021	ND<5 U	26
9/14/2021	ND<5 U	26
3/18/2022	ND<2.2	26
9/13/2022	ND<2.2	26
3/14/2023	ND<2.2	26
9/12/2023	ND<2.2	26

The Wilcoxon Statistic is 189
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is -0.0123542
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0123542 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Arsenic, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	32
	3/19/2014	ND<5 U	32
	9/8/2014	ND<5 U	32
	3/17/2015	ND<5 U	32
	9/14/2015	ND<5 U	32
	3/17/2016	ND<5 U	32
	9/21/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/20/2017	ND<5 U	32
	3/27/2018	ND<5 U	32
	9/19/2018	ND<1.6 J	32
	3/11/2019	ND<1.9 J	32
	9/25/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/8/2021	ND<5 U	32
	3/15/2022	ND<3.3	32
	9/12/2022	ND<3.3	32
	3/13/2023	ND<3.3	32
	9/11/2023	ND<3.3	32
GWM-2	9/25/2013	ND<5	32
	3/18/2014	ND<5 U	32
	9/16/2014	ND<5 U	32
	3/18/2015	ND<5 U	32
	9/15/2015	ND<5 U	32
	3/16/2016	ND<5 U	32
	9/22/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/21/2017	ND<3.2 J	32
	3/28/2018	ND<5 U	32
	9/21/2018	ND<5 U	32
	3/12/2019	ND<5 U	32
	10/1/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/9/2021	ND<5 U	32
	3/15/2022	ND<3.3	32
	9/12/2022	ND<3.3	32
	3/13/2023	ND<3.3	32
	9/11/2023	ND<3.3	32
GWM-4	9/18/2013	ND<5	32

3/20/2014	ND<1.3 J	32
9/9/2014	ND<1 J	32
3/16/2015	ND<1.4 J	32
9/9/2015	ND<1.4 J	32
3/18/2016	ND<1.4 J	32
9/20/2016	ND<5 U	32
3/23/2017	ND<1.2 J	32
9/18/2017	ND<1.9 J	32
3/15/2018	ND<5 U	32
9/17/2018	ND<5 U	32
3/5/2019	ND<5 U	32
9/24/2019	ND<1.8 J	32
3/16/2020	ND<1.3 J	32
9/22/2020	ND<5 U	32
3/16/2021	ND<5 U	32
9/14/2021	ND<0.7 J	32
3/22/2022	ND<3.3	32
9/13/2022	ND<3.3	32
3/14/2023	ND<3.3	32
9/12/2023	ND<3.3	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Arsenic, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 64
Non detect rank is 32.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	32.5
	3/19/2014	ND<5 U	32.5
	9/8/2014	ND<5 U	32.5
	3/17/2015	ND<5 U	32.5
	9/14/2015	ND<5 U	32.5
	3/17/2016	ND<5 U	32.5
	9/21/2016	ND<5 U	32.5
	3/24/2017	ND<5 U	32.5
	9/20/2017	ND<5 U	32.5
	3/27/2018	ND<5 U	32.5
	9/19/2018	ND<1.6 J	32.5
	3/11/2019	ND<1.9 J	32.5
	9/25/2019	ND<5 U	32.5
	3/18/2020	ND<5 U	32.5
	9/23/2020	ND<5 U	32.5
	3/17/2021	ND<5 U	32.5
	9/8/2021	ND<5 U	32.5
	3/15/2022	ND<3.3	32.5
	9/12/2022	ND<3.3	32.5
	3/13/2023	ND<3.3	32.5
	9/11/2023	ND<3.3	32.5
GWM-2	9/25/2013	ND<5	32.5
	3/18/2014	ND<5 U	32.5
	9/16/2014	ND<5 U	32.5
	3/18/2015	ND<5 U	32.5
	9/15/2015	ND<5 U	32.5
	3/16/2016	ND<5 U	32.5
	9/22/2016	ND<5 U	32.5
	3/24/2017	ND<5 U	32.5
	9/21/2017	ND<3.2 J	32.5
	3/28/2018	ND<5 U	32.5
	9/21/2018	ND<5 U	32.5
	3/12/2019	ND<5 U	32.5
	10/1/2019	ND<5 U	32.5
	3/18/2020	ND<5 U	32.5
	9/23/2020	ND<5 U	32.5
	3/17/2021	ND<5 U	32.5
	9/9/2021	ND<5 U	32.5
	3/15/2022	ND<3.3	32.5
	9/12/2022	ND<3.3	32.5
	3/13/2023	ND<3.3	32.5
	9/11/2023	ND<3.3	32.5
GWM-5A	9/19/2013	ND<5	32.5

12/5/2013	ND<5	32.5
3/19/2014	ND<5 U	32.5
9/4/2014	ND<5 U	32.5
3/17/2015	ND<5 U	32.5
9/11/2015	ND<5 U	32.5
3/15/2016	ND<5 U	32.5
9/21/2016	ND<5 U	32.5
3/28/2017	ND<5 U	32.5
9/19/2017	ND<5 U	32.5
3/26/2018	ND<5 U	32.5
9/18/2018	ND<5 U	32.5
3/4/2019	ND<5 U	32.5
9/23/2019	ND<5 U	32.5
3/19/2020	ND<5 U	32.5
9/23/2020	ND<5 U	32.5
3/19/2021	ND<5 U	32.5
9/15/2021	ND<0.28 J	32.5
3/16/2022	ND<3.3	32.5
9/14/2022	ND<3.3	32.5
3/16/2023	ND<3.3	32.5
9/13/2023	ND<3.3	32.5

The Wilcoxon Statistic is 462
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is -0.00706753
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00706753 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Arsenic, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 62
Non detect rank is 31.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	31.5
	3/19/2014	ND<5 U	31.5
	9/8/2014	ND<5 U	31.5
	3/17/2015	ND<5 U	31.5
	9/14/2015	ND<5 U	31.5
	3/17/2016	ND<5 U	31.5
	9/21/2016	ND<5 U	31.5
	3/24/2017	ND<5 U	31.5
	9/20/2017	ND<5 U	31.5
	3/27/2018	ND<5 U	31.5
	9/19/2018	ND<1.6 J	31.5
	3/11/2019	ND<1.9 J	31.5
	9/25/2019	ND<5 U	31.5
	3/18/2020	ND<5 U	31.5
	9/23/2020	ND<5 U	31.5
	3/17/2021	ND<5 U	31.5
	9/8/2021	ND<5 U	31.5
	3/15/2022	ND<3.3	31.5
	9/12/2022	ND<3.3	31.5
	3/13/2023	ND<3.3	31.5
	9/11/2023	ND<3.3	31.5
GWM-2	9/25/2013	ND<5	31.5
	3/18/2014	ND<5 U	31.5
	9/16/2014	ND<5 U	31.5
	3/18/2015	ND<5 U	31.5
	9/15/2015	ND<5 U	31.5
	3/16/2016	ND<5 U	31.5
	9/22/2016	ND<5 U	31.5
	3/24/2017	ND<5 U	31.5
	9/21/2017	ND<3.2 J	31.5
	3/28/2018	ND<5 U	31.5
	9/21/2018	ND<5 U	31.5
	3/12/2019	ND<5 U	31.5
	10/1/2019	ND<5 U	31.5
	3/18/2020	ND<5 U	31.5
	9/23/2020	ND<5 U	31.5
	3/17/2021	ND<5 U	31.5
	9/9/2021	ND<5 U	31.5
	3/15/2022	ND<3.3	31.5
	9/12/2022	ND<3.3	31.5
	3/13/2023	ND<3.3	31.5
	9/11/2023	ND<3.3	31.5
GWM-14	9/24/2013	ND<5	31.5

3/21/2014	ND<5 U	31.5
9/8/2014	ND<1.3 J	31.5
3/19/2015	ND<5 U	31.5
9/14/2015	ND<1.1 J	31.5
3/21/2016	ND<5 U	31.5
9/23/2016	ND<1.1 J	31.5
3/27/2017	ND<1.3 J	31.5
9/20/2017	ND<1.2 J	31.5
3/16/2018	ND<5 U	31.5
9/20/2018	ND<1.5 J	31.5
3/5/2019	ND<1.1 J	31.5
9/25/2019	6.3	63
3/25/2020	ND<1.2 J	31.5
9/28/2020	ND<1.6 J	31.5
3/18/2021	ND<5 U	31.5
9/15/2021	ND<1.6 J	31.5
3/22/2022	ND<1.2 J	31.5
9/14/2022	ND<1.4 J	31.5
3/16/2023	ND<3.3	31.5
9/13/2023	ND<1.5 J	31.5

The Wilcoxon Statistic is 462
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 0.298896
The Standard Deviation adjusted for ties is 14.8492
The Z Score adjusted for ties is 1.38054
0.298896 < 2.326 indicating no statistical significance at 1% level
1.38054 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Arsenic, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 62
Non detect rank is 31.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	31.5
	3/19/2014	ND<5 U	31.5
	9/8/2014	ND<5 U	31.5
	3/17/2015	ND<5 U	31.5
	9/14/2015	ND<5 U	31.5
	3/17/2016	ND<5 U	31.5
	9/21/2016	ND<5 U	31.5
	3/24/2017	ND<5 U	31.5
	9/20/2017	ND<5 U	31.5
	3/27/2018	ND<5 U	31.5
	9/19/2018	ND<1.6 J	31.5
	3/11/2019	ND<1.9 J	31.5
	9/25/2019	ND<5 U	31.5
	3/18/2020	ND<5 U	31.5
	9/23/2020	ND<5 U	31.5
	3/17/2021	ND<5 U	31.5
	9/8/2021	ND<5 U	31.5
	3/15/2022	ND<3.3	31.5
	9/12/2022	ND<3.3	31.5
	3/13/2023	ND<3.3	31.5
	9/11/2023	ND<3.3	31.5
GWM-2	9/25/2013	ND<5	31.5
	3/18/2014	ND<5 U	31.5
	9/16/2014	ND<5 U	31.5
	3/18/2015	ND<5 U	31.5
	9/15/2015	ND<5 U	31.5
	3/16/2016	ND<5 U	31.5
	9/22/2016	ND<5 U	31.5
	3/24/2017	ND<5 U	31.5
	9/21/2017	ND<3.2 J	31.5
	3/28/2018	ND<5 U	31.5
	9/21/2018	ND<5 U	31.5
	3/12/2019	ND<5 U	31.5
	10/1/2019	ND<5 U	31.5
	3/18/2020	ND<5 U	31.5
	9/23/2020	ND<5 U	31.5
	3/17/2021	ND<5 U	31.5
	9/9/2021	ND<5 U	31.5
	3/15/2022	ND<3.3	31.5
	9/12/2022	ND<3.3	31.5
	3/13/2023	ND<3.3	31.5
	9/11/2023	ND<3.3	31.5
GWM-6	9/24/2013	ND<5	31.5

3/21/2014	ND<5 U	31.5
9/17/2014	ND<5 U	31.5
3/19/2015	ND<5 U	31.5
9/15/2015	ND<5 U	31.5
3/21/2016	ND<5 U	31.5
9/26/2016	ND<5 U	31.5
3/31/2017	ND<5 U	31.5
9/21/2017	ND<5 U	31.5
3/30/2018	1.2	63
9/26/2018	ND<1.4 J	31.5
3/13/2019	ND<1.1 J	31.5
10/3/2019	ND<1.2 J	31.5
4/3/2020	ND<1.8 J	31.5
9/30/2020	ND<1.3 J	31.5
3/22/2021	ND<1.7 J	31.5
9/16/2021	ND<1.2 J	31.5
3/24/2022	ND<1.3 J	31.5
9/16/2022	ND<1.5 J	31.5
3/17/2023	ND<1.7 J	31.5
9/14/2023	ND<1.5 J	31.5

The Wilcoxon Statistic is 462
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 0.298896
The Standard Deviation adjusted for ties is 14.8492
The Z Score adjusted for ties is 1.38054
0.298896 < 2.326 indicating no statistical significance at 1% level
1.38054 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Arsenic, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	32
	3/19/2014	ND<5 U	32
	9/8/2014	ND<5 U	32
	3/17/2015	ND<5 U	32
	9/14/2015	ND<5 U	32
	3/17/2016	ND<5 U	32
	9/21/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/20/2017	ND<5 U	32
	3/27/2018	ND<5 U	32
	9/19/2018	ND<1.6 J	32
	3/11/2019	ND<1.9 J	32
	9/25/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/8/2021	ND<5 U	32
	3/15/2022	ND<3.3	32
	9/12/2022	ND<3.3	32
	3/13/2023	ND<3.3	32
	9/11/2023	ND<3.3	32
GWM-2	9/25/2013	ND<5	32
	3/18/2014	ND<5 U	32
	9/16/2014	ND<5 U	32
	3/18/2015	ND<5 U	32
	9/15/2015	ND<5 U	32
	3/16/2016	ND<5 U	32
	9/22/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/21/2017	ND<3.2 J	32
	3/28/2018	ND<5 U	32
	9/21/2018	ND<5 U	32
	3/12/2019	ND<5 U	32
	10/1/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/9/2021	ND<5 U	32
	3/15/2022	ND<3.3	32
	9/12/2022	ND<3.3	32
	3/13/2023	ND<3.3	32
	9/11/2023	ND<3.3	32
GWM-3	9/25/2013	ND<5	32

3/18/2014	ND<5 U	32
9/16/2014	ND<5 U	32
3/18/2015	ND<5 U	32
9/15/2015	ND<5 U	32
3/16/2016	ND<5 U	32
9/22/2016	ND<5 U	32
3/29/2017	ND<5 U	32
9/21/2017	ND<5 U	32
3/28/2018	ND<5 U	32
9/20/2018	ND<5 U	32
3/12/2019	ND<5 U	32
10/1/2019	ND<5 U	32
3/18/2020	ND<5 U	32
9/24/2020	ND<5 U	32
3/17/2021	ND<5 U	32
9/9/2021	ND<0.2 J	32
3/15/2022	ND<3.3	32
9/16/2022	ND<3.3	32
3/15/2023	ND<3.3	32
9/11/2023	ND<3.3	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Arsenic, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 51
Non detect rank is 26

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	26
	3/19/2014	ND<5 U	26
	9/8/2014	ND<5 U	26
	3/17/2015	ND<5 U	26
	9/14/2015	ND<5 U	26
	3/17/2016	ND<5 U	26
	9/21/2016	ND<5 U	26
	3/24/2017	ND<5 U	26
	9/20/2017	ND<5 U	26
	3/27/2018	ND<5 U	26
	9/19/2018	ND<1.6 J	26
	3/11/2019	ND<1.9 J	26
	9/25/2019	ND<5 U	26
	3/18/2020	ND<5 U	26
	9/23/2020	ND<5 U	26
	3/17/2021	ND<5 U	26
	9/8/2021	ND<5 U	26
	3/15/2022	ND<3.3	26
	9/12/2022	ND<3.3	26
	3/13/2023	ND<3.3	26
	9/11/2023	ND<3.3	26
GWM-2	9/25/2013	ND<5	26
	3/18/2014	ND<5 U	26
	9/16/2014	ND<5 U	26
	3/18/2015	ND<5 U	26
	9/15/2015	ND<5 U	26
	3/16/2016	ND<5 U	26
	9/22/2016	ND<5 U	26
	3/24/2017	ND<5 U	26
	9/21/2017	ND<3.2 J	26
	3/28/2018	ND<5 U	26
	9/21/2018	ND<5 U	26
	3/12/2019	ND<5 U	26
	10/1/2019	ND<5 U	26
	3/18/2020	ND<5 U	26
	9/23/2020	ND<5 U	26
	3/17/2021	ND<5 U	26
	9/9/2021	ND<5 U	26
	3/15/2022	ND<3.3	26
	9/12/2022	ND<3.3	26
	3/13/2023	ND<3.3	26
	9/11/2023	ND<3.3	26
GWM-17S	11/14/2019	ND<1.2 J	26

3/26/2020	ND<5 U	26
9/29/2020	ND<1.3 J	26
3/16/2021	ND<5 U	26
9/14/2021	ND<1 J	26
3/18/2022	ND<3.3	26
9/13/2022	ND<1.4 J	26
3/14/2023	ND<1.2 J	26
9/12/2023	ND<1.2 J	26

The Wilcoxon Statistic is 189
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is -0.0123542
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0123542 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Barium, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	20	1
	3/19/2014	67	11
	9/8/2014	42	3
	3/17/2015	150	49
	9/14/2015	100	30
	3/17/2016	69	12
	9/21/2016	94	24
	3/24/2017	71	13
	9/20/2017	46	4
	3/27/2018	88	16
	9/19/2018	56	7
	3/11/2019	49	5
	9/25/2019	130	39
	3/18/2020	93	22
	9/23/2020	75	14
	3/17/2021	59	9
	9/8/2021	51	6
	3/15/2022	170	59
	9/12/2022	130	40
	3/13/2023	91	18
	9/11/2023	58	8
GWM-2	9/25/2013	60	10
	3/18/2014	110	34
	9/16/2014	110	35
	3/18/2015	110	36
	9/15/2015	100	31
	3/16/2016	92	19
	9/22/2016	95	25
	3/24/2017	93	23
	9/21/2017	92	20
	3/28/2018	100	32
	9/21/2018	120	37
	3/12/2019	130	41
	10/1/2019	120	38
	3/18/2020	98	28
	9/23/2020	83	15
	3/17/2021	89	17
	9/9/2021	95	26
	3/15/2022	95	27
	9/12/2022	92	21
	3/13/2023	99	29
	9/11/2023	100	33
GWM-4	9/18/2013	30	2

3/20/2014	190	62
9/9/2014	130	42
3/16/2015	140	45
9/9/2015	130	43
3/18/2016	150	50
9/20/2016	150	51
3/23/2017	140	46
9/18/2017	140	47
3/15/2018	150	52
9/17/2018	150	53
3/5/2019	180	60
9/24/2019	150	54
3/16/2020	250	63
9/22/2020	140	48
3/16/2021	180	61
9/14/2021	160	57
3/22/2022	160	58
9/13/2022	150	55
3/14/2023	150	56
9/12/2023	130	44

The Wilcoxon Statistic is 818
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 5.48948
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 5.48948
5.48948 > 2.326 indicating statistical significance at 1% level
5.48948 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Barium, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	20	1
	3/19/2014	67	10
	9/8/2014	42	2
	3/17/2015	150	62
	9/14/2015	100	38
	3/17/2016	69	11
	9/21/2016	94	27
	3/24/2017	71	12
	9/20/2017	46	3
	3/27/2018	88	17
	9/19/2018	56	6
	3/11/2019	49	4
	9/25/2019	130	57
	3/18/2020	93	25
	9/23/2020	75	13
	3/17/2021	59	8
	9/8/2021	51	5
	3/15/2022	170	63
	9/12/2022	130	58
	3/13/2023	91	20
	9/11/2023	58	7
GWM-2	9/25/2013	60	9
	3/18/2014	110	45
	9/16/2014	110	46
	3/18/2015	110	47
	9/15/2015	100	39
	3/16/2016	92	21
	9/22/2016	95	28
	3/24/2017	93	26
	9/21/2017	92	22
	3/28/2018	100	40
	9/21/2018	120	53
	3/12/2019	130	59
	10/1/2019	120	54
	3/18/2020	98	33
	9/23/2020	83	15
	3/17/2021	89	18
	9/9/2021	95	29
	3/15/2022	95	30
	9/12/2022	92	23
	3/13/2023	99	34
	9/11/2023	100	41
GWM-5A	9/19/2013	360	64

12/5/2013	130	60
3/19/2014	110	48
9/4/2014	100	42
3/17/2015	99	35
9/11/2015	99	36
3/15/2016	95	31
9/21/2016	92	24
3/28/2017	90	19
9/19/2017	86	16
3/26/2018	81	14
9/18/2018	120	55
3/4/2019	140	61
9/23/2019	120	56
3/19/2020	100	43
9/23/2020	110	49
3/19/2021	110	50
9/15/2021	110	51
3/16/2022	95	32
9/14/2022	100	44
3/16/2023	99	37
9/13/2023	110	52

The Wilcoxon Statistic is 666
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is 2.87649
The Standard Deviation adjusted for ties is 70.746
The Z Score adjusted for ties is 2.87649
2.87649 > 2.326 indicating statistical significance at 1% level
2.87649 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Barium, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	20	1
	3/19/2014	67	30
	9/8/2014	42	2
	3/17/2015	150	62
	9/14/2015	100	49
	3/17/2016	69	31
	9/21/2016	94	43
	3/24/2017	71	32
	9/20/2017	46	9
	3/27/2018	88	35
	9/19/2018	56	25
	3/11/2019	49	17
	9/25/2019	130	59
	3/18/2020	93	41
	9/23/2020	75	33
	3/17/2021	59	27
	9/8/2021	51	21
	3/15/2022	170	63
	9/12/2022	130	60
	3/13/2023	91	37
	9/11/2023	58	26
GWM-2	9/25/2013	60	28
	3/18/2014	110	53
	9/16/2014	110	54
	3/18/2015	110	55
	9/15/2015	100	50
	3/16/2016	92	38
	9/22/2016	95	44
	3/24/2017	93	42
	9/21/2017	92	39
	3/28/2018	100	51
	9/21/2018	120	57
	3/12/2019	130	61
	10/1/2019	120	58
	3/18/2020	98	47
	9/23/2020	83	34
	3/17/2021	89	36
	9/9/2021	95	45
	3/15/2022	95	46
	9/12/2022	92	40
	3/13/2023	99	48
	9/11/2023	100	52
GWM-14	9/24/2013	60	29

3/21/2014	48	11
9/8/2014	49	18
3/19/2015	47	10
9/14/2015	48	12
3/21/2016	48	13
9/23/2016	48	14
3/27/2017	49	19
9/20/2017	45	7
3/16/2018	42	3
9/20/2018	44	5
3/5/2019	48	15
9/25/2019	45	8
3/25/2020	44	6
9/28/2020	43	4
3/18/2021	110 R	56
9/15/2021	48	16
3/22/2022	50	20
9/14/2022	53	23
3/16/2023	52	22
9/13/2023	54	24

The Wilcoxon Statistic is 104
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -4.92085
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is -4.92085
-4.92085 < 2.326 indicating no statistical significance at 1% level
-4.92085 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Barium, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	20	1
	3/19/2014	67	12
	9/8/2014	42	2
	3/17/2015	150	62
	9/14/2015	100	39
	3/17/2016	69	15
	9/21/2016	94	32
	3/24/2017	71	17
	9/20/2017	46	3
	3/27/2018	88	24
	9/19/2018	56	6
	3/11/2019	49	4
	9/25/2019	130	55
	3/18/2020	93	30
	9/23/2020	75	18
	3/17/2021	59	9
	9/8/2021	51	5
	3/15/2022	170	63
	9/12/2022	130	56
	3/13/2023	91	26
	9/11/2023	58	7
GWM-2	9/25/2013	60	10
	3/18/2014	110	45
	9/16/2014	110	46
	3/18/2015	110	47
	9/15/2015	100	40
	3/16/2016	92	27
	9/22/2016	95	33
	3/24/2017	93	31
	9/21/2017	92	28
	3/28/2018	100	41
	9/21/2018	120	50
	3/12/2019	130	57
	10/1/2019	120	51
	3/18/2020	98	37
	9/23/2020	83	22
	3/17/2021	89	25
	9/9/2021	95	34
	3/15/2022	95	35
	9/12/2022	92	29
	3/13/2023	99	38
	9/11/2023	100	42
GWM-6	9/24/2013	70	16

3/21/2014	58	8
9/17/2014	60	11
3/19/2015	67	13
9/15/2015	68	14
3/21/2016	75	19
9/26/2016	79	20
3/31/2017	81	21
9/21/2017	100	43
3/30/2018	120	52
9/26/2018	140	61
3/13/2019	130	58
10/3/2019	110	48
4/3/2020	87	23
9/30/2020	100	44
3/22/2021	120	53
9/16/2021	110	49
3/24/2022	130	59
9/16/2022	130	60
3/17/2023	120	54
9/14/2023	95	36

The Wilcoxon Statistic is 531
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 1.30494
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 1.30494
1.30494 < 2.326 indicating no statistical significance at 1% level
1.30494 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Barium, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	20	1
	3/19/2014	67	10
	9/8/2014	42	2
	3/17/2015	150	61
	9/14/2015	100	49
	3/17/2016	69	13
	9/21/2016	94	41
	3/24/2017	71	15
	9/20/2017	46	3
	3/27/2018	88	30
	9/19/2018	56	6
	3/11/2019	49	4
	9/25/2019	130	58
	3/18/2020	93	39
	9/23/2020	75	17
	3/17/2021	59	8
	9/8/2021	51	5
	3/15/2022	170	62
	9/12/2022	130	59
	3/13/2023	91	33
	9/11/2023	58	7
GWM-2	9/25/2013	60	9
	3/18/2014	110	53
	9/16/2014	110	54
	3/18/2015	110	55
	9/15/2015	100	50
	3/16/2016	92	35
	9/22/2016	95	43
	3/24/2017	93	40
	9/21/2017	92	36
	3/28/2018	100	51
	9/21/2018	120	56
	3/12/2019	130	60
	10/1/2019	120	57
	3/18/2020	98	47
	9/23/2020	83	24
	3/17/2021	89	31
	9/9/2021	95	44
	3/15/2022	95	45
	9/12/2022	92	37
	3/13/2023	99	48
	9/11/2023	100	52
GWM-3	9/25/2013	90	32

3/18/2014	80	20
9/16/2014	74	16
3/18/2015	84	25
9/15/2015	81	21
3/16/2016	86	29
9/22/2016	94	42
3/29/2017	95	46
9/21/2017	85	26
3/28/2018	85	27
9/20/2018	85	28
3/12/2019	91	34
10/1/2019	92	38
3/18/2020	81	22
9/24/2020	69	14
3/17/2021	200 R	63
9/9/2021	82	23
3/15/2022	78	19
9/16/2022	68	12
3/15/2023	67	11
9/11/2023	76	18

The Wilcoxon Statistic is 335
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -1.5528
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is -1.5528
-1.5528 < 2.326 indicating no statistical significance at 1% level
-1.5528 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Barium, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	20	1
	3/19/2014	67	10
	9/8/2014	42	2
	3/17/2015	150	41
	9/14/2015	100	29
	3/17/2016	69	11
	9/21/2016	94	23
	3/24/2017	71	12
	9/20/2017	46	3
	3/27/2018	88	15
	9/19/2018	56	6
	3/11/2019	49	4
	9/25/2019	130	38
	3/18/2020	93	21
	9/23/2020	75	13
	3/17/2021	59	8
	9/8/2021	51	5
	3/15/2022	170	42
	9/12/2022	130	39
	3/13/2023	91	17
	9/11/2023	58	7
GWM-2	9/25/2013	60	9
	3/18/2014	110	33
	9/16/2014	110	34
	3/18/2015	110	35
	9/15/2015	100	30
	3/16/2016	92	18
	9/22/2016	95	24
	3/24/2017	93	22
	9/21/2017	92	19
	3/28/2018	100	31
	9/21/2018	120	36
	3/12/2019	130	40
	10/1/2019	120	37
	3/18/2020	98	27
	9/23/2020	83	14
	3/17/2021	89	16
	9/9/2021	95	25
	3/15/2022	95	26
	9/12/2022	92	20
	3/13/2023	99	28
	9/11/2023	100	32
GWM-17S	11/14/2019	230	44

3/26/2020	230	45
9/29/2020	210	43
3/16/2021	250	49
9/14/2021	260	50
3/18/2022	230	46
9/13/2022	240	48
3/14/2023	280	51
9/12/2023	230	47

The Wilcoxon Statistic is 378
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is 4.65752
The Standard Deviation adjusted for ties is 40.4722
The Z Score adjusted for ties is 4.65752
4.65752 > 2.326 indicating statistical significance at 1% level
4.65752 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Beryllium, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<2	32
	3/19/2014	ND<2 U	32
	9/8/2014	ND<2 U	32
	3/17/2015	ND<2 U	32
	9/14/2015	ND<2 U	32
	3/17/2016	ND<2 U	32
	9/21/2016	ND<2 U	32
	3/24/2017	ND<2 U	32
	9/20/2017	ND<2 U	32
	3/27/2018	ND<2 U	32
	9/19/2018	ND<2 U	32
	3/11/2019	ND<2 U	32
	9/25/2019	ND<2 U	32
	3/18/2020	ND<2 U	32
	9/23/2020	ND<2 U	32
	3/17/2021	ND<2 U	32
	9/8/2021	ND<0.14 J	32
	3/15/2022	ND<1.1	32
	9/12/2022	ND<1.1	32
	3/13/2023	ND<1.1	32
	9/11/2023	ND<1.1	32
GWM-2	9/25/2013	ND<2	32
	3/18/2014	ND<0.38 J	32
	9/16/2014	ND<0.4 J	32
	3/18/2015	ND<0.32 J	32
	9/15/2015	ND<2 U	32
	3/16/2016	ND<2 U	32
	9/22/2016	ND<2 U	32
	3/24/2017	ND<2 U	32
	9/21/2017	ND<2 U	32
	3/28/2018	ND<2 U	32
	9/21/2018	ND<2 U	32
	3/12/2019	ND<0.44 J	32
	10/1/2019	ND<2 U	32
	3/18/2020	ND<2 U	32
	9/23/2020	ND<2 U	32
	3/17/2021	ND<2 U	32
	9/9/2021	ND<0.32 J	32
	3/15/2022	ND<1.1	32
	9/12/2022	ND<1.1	32
	3/13/2023	ND<1.1	32
	9/11/2023	ND<1.1	32
GWM-4	9/18/2013	ND<2	32

3/20/2014	ND<2 U	32
9/9/2014	ND<2 U	32
3/16/2015	ND<2 U	32
9/9/2015	ND<2 U	32
3/18/2016	ND<2 U	32
9/20/2016	ND<2 U	32
3/23/2017	ND<2 U	32
9/18/2017	ND<2 U	32
3/15/2018	ND<2 U	32
9/17/2018	ND<2 U	32
3/5/2019	ND<2 U	32
9/24/2019	ND<2 U	32
3/16/2020	ND<2 U	32
9/22/2020	ND<2 U	32
3/16/2021	ND<2 U	32
9/14/2021	ND<2 U	32
3/22/2022	ND<1.1	32
9/13/2022	ND<1.1	32
3/14/2023	ND<1.1	32
9/12/2023	ND<1.1	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Beryllium, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 64
Non detect rank is 32.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<2	32.5
	3/19/2014	ND<2 U	32.5
	9/8/2014	ND<2 U	32.5
	3/17/2015	ND<2 U	32.5
	9/14/2015	ND<2 U	32.5
	3/17/2016	ND<2 U	32.5
	9/21/2016	ND<2 U	32.5
	3/24/2017	ND<2 U	32.5
	9/20/2017	ND<2 U	32.5
	3/27/2018	ND<2 U	32.5
	9/19/2018	ND<2 U	32.5
	3/11/2019	ND<2 U	32.5
	9/25/2019	ND<2 U	32.5
	3/18/2020	ND<2 U	32.5
	9/23/2020	ND<2 U	32.5
	3/17/2021	ND<2 U	32.5
	9/8/2021	ND<0.14 J	32.5
	3/15/2022	ND<1.1	32.5
	9/12/2022	ND<1.1	32.5
	3/13/2023	ND<1.1	32.5
	9/11/2023	ND<1.1	32.5
GWM-2	9/25/2013	ND<2	32.5
	3/18/2014	ND<0.38 J	32.5
	9/16/2014	ND<0.4 J	32.5
	3/18/2015	ND<0.32 J	32.5
	9/15/2015	ND<2 U	32.5
	3/16/2016	ND<2 U	32.5
	9/22/2016	ND<2 U	32.5
	3/24/2017	ND<2 U	32.5
	9/21/2017	ND<2 U	32.5
	3/28/2018	ND<2 U	32.5
	9/21/2018	ND<2 U	32.5
	3/12/2019	ND<0.44 J	32.5
	10/1/2019	ND<2 U	32.5
	3/18/2020	ND<2 U	32.5
	9/23/2020	ND<2 U	32.5
	3/17/2021	ND<2 U	32.5
	9/9/2021	ND<0.32 J	32.5
	3/15/2022	ND<1.1	32.5
	9/12/2022	ND<1.1	32.5
	3/13/2023	ND<1.1	32.5
	9/11/2023	ND<1.1	32.5
GWM-5A	9/19/2013	ND<2	32.5

12/5/2013	ND<2	32.5
3/19/2014	ND<2 U	32.5
9/4/2014	ND<2 U	32.5
3/17/2015	ND<2 U	32.5
9/11/2015	ND<2 U	32.5
3/15/2016	ND<2 U	32.5
9/21/2016	ND<2 U	32.5
3/28/2017	ND<2 U	32.5
9/19/2017	ND<2 U	32.5
3/26/2018	ND<2 U	32.5
9/18/2018	ND<2 U	32.5
3/4/2019	ND<2 U	32.5
9/23/2019	ND<2 U	32.5
3/19/2020	ND<2 U	32.5
9/23/2020	ND<2 U	32.5
3/19/2021	ND<2 U	32.5
9/15/2021	ND<2 U	32.5
3/16/2022	ND<1.1	32.5
9/14/2022	ND<1.1	32.5
3/16/2023	ND<1.1	32.5
9/13/2023	ND<1.1	32.5

The Wilcoxon Statistic is 462
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is -0.00706753
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00706753 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Beryllium, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<2	32
	3/19/2014	ND<2 U	32
	9/8/2014	ND<2 U	32
	3/17/2015	ND<2 U	32
	9/14/2015	ND<2 U	32
	3/17/2016	ND<2 U	32
	9/21/2016	ND<2 U	32
	3/24/2017	ND<2 U	32
	9/20/2017	ND<2 U	32
	3/27/2018	ND<2 U	32
	9/19/2018	ND<2 U	32
	3/11/2019	ND<2 U	32
	9/25/2019	ND<2 U	32
	3/18/2020	ND<2 U	32
	9/23/2020	ND<2 U	32
	3/17/2021	ND<2 U	32
	9/8/2021	ND<0.14 J	32
	3/15/2022	ND<1.1	32
	9/12/2022	ND<1.1	32
	3/13/2023	ND<1.1	32
	9/11/2023	ND<1.1	32
GWM-2	9/25/2013	ND<2	32
	3/18/2014	ND<0.38 J	32
	9/16/2014	ND<0.4 J	32
	3/18/2015	ND<0.32 J	32
	9/15/2015	ND<2 U	32
	3/16/2016	ND<2 U	32
	9/22/2016	ND<2 U	32
	3/24/2017	ND<2 U	32
	9/21/2017	ND<2 U	32
	3/28/2018	ND<2 U	32
	9/21/2018	ND<2 U	32
	3/12/2019	ND<0.44 J	32
	10/1/2019	ND<2 U	32
	3/18/2020	ND<2 U	32
	9/23/2020	ND<2 U	32
	3/17/2021	ND<2 U	32
	9/9/2021	ND<0.32 J	32
	3/15/2022	ND<1.1	32
	9/12/2022	ND<1.1	32
	3/13/2023	ND<1.1	32
	9/11/2023	ND<1.1	32
GWM-14	9/24/2013	ND<2	32

3/21/2014	ND<2 U	32
9/8/2014	ND<2 U	32
3/19/2015	ND<2 U	32
9/14/2015	ND<2 U	32
3/21/2016	ND<2 U	32
9/23/2016	ND<2 U	32
3/27/2017	ND<2 U	32
9/20/2017	ND<2 U	32
3/16/2018	ND<2 U	32
9/20/2018	ND<2 U	32
3/5/2019	ND<2 U	32
9/25/2019	ND<2 U	32
3/25/2020	ND<2 U	32
9/28/2020	ND<2 U	32
3/18/2021	ND<0.77 JR	32
9/15/2021	ND<2 U	32
3/22/2022	ND<1.1	32
9/14/2022	ND<1.1	32
3/16/2023	ND<1.1	32
9/13/2023	ND<1.1	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Beryllium, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 62
Non detect rank is 31.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<2	31.5
	3/19/2014	ND<2 U	31.5
	9/8/2014	ND<2 U	31.5
	3/17/2015	ND<2 U	31.5
	9/14/2015	ND<2 U	31.5
	3/17/2016	ND<2 U	31.5
	9/21/2016	ND<2 U	31.5
	3/24/2017	ND<2 U	31.5
	9/20/2017	ND<2 U	31.5
	3/27/2018	ND<2 U	31.5
	9/19/2018	ND<2 U	31.5
	3/11/2019	ND<2 U	31.5
	9/25/2019	ND<2 U	31.5
	3/18/2020	ND<2 U	31.5
	9/23/2020	ND<2 U	31.5
	3/17/2021	ND<2 U	31.5
	9/8/2021	ND<0.14 J	31.5
	3/15/2022	ND<1.1	31.5
	9/12/2022	ND<1.1	31.5
	3/13/2023	ND<1.1	31.5
	9/11/2023	ND<1.1	31.5
GWM-2	9/25/2013	ND<2	31.5
	3/18/2014	ND<0.38 J	31.5
	9/16/2014	ND<0.4 J	31.5
	3/18/2015	ND<0.32 J	31.5
	9/15/2015	ND<2 U	31.5
	3/16/2016	ND<2 U	31.5
	9/22/2016	ND<2 U	31.5
	3/24/2017	ND<2 U	31.5
	9/21/2017	ND<2 U	31.5
	3/28/2018	ND<2 U	31.5
	9/21/2018	ND<2 U	31.5
	3/12/2019	ND<0.44 J	31.5
	10/1/2019	ND<2 U	31.5
	3/18/2020	ND<2 U	31.5
	9/23/2020	ND<2 U	31.5
	3/17/2021	ND<2 U	31.5
	9/9/2021	ND<0.32 J	31.5
	3/15/2022	ND<1.1	31.5
	9/12/2022	ND<1.1	31.5
	3/13/2023	ND<1.1	31.5
	9/11/2023	ND<1.1	31.5
GWM-6	9/24/2013	ND<2	31.5

3/21/2014	ND<2 U	31.5
9/17/2014	ND<2 U	31.5
3/19/2015	ND<2 U	31.5
9/15/2015	ND<2 U	31.5
3/21/2016	ND<2 U	31.5
9/26/2016	ND<2 U	31.5
3/31/2017	ND<2 U	31.5
9/21/2017	ND<2 U	31.5
3/30/2018	1.1	63
9/26/2018	ND<2 U	31.5
3/13/2019	ND<2 U	31.5
10/3/2019	ND<2 U	31.5
4/3/2020	ND<2 U	31.5
9/30/2020	ND<2 U	31.5
3/22/2021	ND<2 U	31.5
9/16/2021	ND<2 U	31.5
3/24/2022	ND<1.1	31.5
9/16/2022	ND<1.1	31.5
3/17/2023	ND<1.1	31.5
9/14/2023	ND<1.1	31.5

The Wilcoxon Statistic is 462
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 0.298896
The Standard Deviation adjusted for ties is 14.8492
The Z Score adjusted for ties is 1.38054
0.298896 < 2.326 indicating no statistical significance at 1% level
1.38054 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Beryllium, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<2	32
	3/19/2014	ND<2 U	32
	9/8/2014	ND<2 U	32
	3/17/2015	ND<2 U	32
	9/14/2015	ND<2 U	32
	3/17/2016	ND<2 U	32
	9/21/2016	ND<2 U	32
	3/24/2017	ND<2 U	32
	9/20/2017	ND<2 U	32
	3/27/2018	ND<2 U	32
	9/19/2018	ND<2 U	32
	3/11/2019	ND<2 U	32
	9/25/2019	ND<2 U	32
	3/18/2020	ND<2 U	32
	9/23/2020	ND<2 U	32
	3/17/2021	ND<2 U	32
	9/8/2021	ND<0.14 J	32
	3/15/2022	ND<1.1	32
	9/12/2022	ND<1.1	32
	3/13/2023	ND<1.1	32
	9/11/2023	ND<1.1	32
GWM-2	9/25/2013	ND<2	32
	3/18/2014	ND<0.38 J	32
	9/16/2014	ND<0.4 J	32
	3/18/2015	ND<0.32 J	32
	9/15/2015	ND<2 U	32
	3/16/2016	ND<2 U	32
	9/22/2016	ND<2 U	32
	3/24/2017	ND<2 U	32
	9/21/2017	ND<2 U	32
	3/28/2018	ND<2 U	32
	9/21/2018	ND<2 U	32
	3/12/2019	ND<0.44 J	32
	10/1/2019	ND<2 U	32
	3/18/2020	ND<2 U	32
	9/23/2020	ND<2 U	32
	3/17/2021	ND<2 U	32
	9/9/2021	ND<0.32 J	32
	3/15/2022	ND<1.1	32
	9/12/2022	ND<1.1	32
	3/13/2023	ND<1.1	32
	9/11/2023	ND<1.1	32
GWM-3	9/25/2013	ND<2	32

3/18/2014	ND<2 U	32
9/16/2014	ND<2 U	32
3/18/2015	ND<2 U	32
9/15/2015	ND<2 U	32
3/16/2016	ND<2 U	32
9/22/2016	ND<2 U	32
3/29/2017	ND<2 U	32
9/21/2017	ND<2 U	32
3/28/2018	ND<2 U	32
9/20/2018	ND<2 U	32
3/12/2019	ND<2 U	32
10/1/2019	ND<2 U	32
3/18/2020	ND<2 U	32
9/24/2020	ND<2 U	32
3/17/2021	ND<2 U	32
9/9/2021	ND<2 U	32
3/15/2022	ND<1.1	32
9/16/2022	ND<1.1	32
3/15/2023	ND<1.1	32
9/11/2023	ND<1.1	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Beryllium, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 51
Non detect rank is 26

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<2	26
	3/19/2014	ND<2 U	26
	9/8/2014	ND<2 U	26
	3/17/2015	ND<2 U	26
	9/14/2015	ND<2 U	26
	3/17/2016	ND<2 U	26
	9/21/2016	ND<2 U	26
	3/24/2017	ND<2 U	26
	9/20/2017	ND<2 U	26
	3/27/2018	ND<2 U	26
	9/19/2018	ND<2 U	26
	3/11/2019	ND<2 U	26
	9/25/2019	ND<2 U	26
	3/18/2020	ND<2 U	26
	9/23/2020	ND<2 U	26
	3/17/2021	ND<2 U	26
	9/8/2021	ND<0.14 J	26
	3/15/2022	ND<1.1	26
	9/12/2022	ND<1.1	26
	3/13/2023	ND<1.1	26
	9/11/2023	ND<1.1	26
GWM-2	9/25/2013	ND<2	26
	3/18/2014	ND<0.38 J	26
	9/16/2014	ND<0.4 J	26
	3/18/2015	ND<0.32 J	26
	9/15/2015	ND<2 U	26
	3/16/2016	ND<2 U	26
	9/22/2016	ND<2 U	26
	3/24/2017	ND<2 U	26
	9/21/2017	ND<2 U	26
	3/28/2018	ND<2 U	26
	9/21/2018	ND<2 U	26
	3/12/2019	ND<0.44 J	26
	10/1/2019	ND<2 U	26
	3/18/2020	ND<2 U	26
	9/23/2020	ND<2 U	26
	3/17/2021	ND<2 U	26
	9/9/2021	ND<0.32 J	26
	3/15/2022	ND<1.1	26
	9/12/2022	ND<1.1	26
	3/13/2023	ND<1.1	26
	9/11/2023	ND<1.1	26
GWM-17S	11/14/2019	ND<2 U	26

3/26/2020	ND<2 U	26
9/29/2020	ND<2 U	26
3/16/2021	ND<2 U	26
9/14/2021	ND<2 U	26
3/18/2022	ND<1.1	26
9/13/2022	ND<1.1	26
3/14/2023	ND<1.1	26
9/12/2023	ND<1.1	26

The Wilcoxon Statistic is 189
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is -0.0123542
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0123542 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Cadmium, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 61
Non detect rank is 31

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<2	31
	3/19/2014	ND<2 U	31
	9/8/2014	ND<2 U	31
	3/17/2015	ND<2 U	31
	9/14/2015	ND<0.42 J	31
	3/17/2016	ND<2 U	31
	9/21/2016	ND<2 U	31
	3/24/2017	ND<2 U	31
	9/20/2017	ND<2 U	31
	3/27/2018	ND<2 U	31
	9/19/2018	ND<0.41 J	31
	3/11/2019	ND<2 U	31
	9/25/2019	ND<2 U	31
	3/18/2020	ND<2 U	31
	9/23/2020	ND<2 U	31
	3/17/2021	ND<2 U	31
	9/8/2021	ND<2 U	31
	3/15/2022	ND<1.1	31
	9/12/2022	ND<1.1	31
	3/13/2023	ND<1.1	31
	9/11/2023	ND<1.1	31
GWM-2	9/25/2013	ND<2	31
	3/18/2014	ND<2 U	31
	9/16/2014	ND<2 U	31
	3/18/2015	ND<0.8 J	31
	9/15/2015	ND<2 U	31
	3/16/2016	ND<2 U	31
	9/22/2016	ND<0.53 J	31
	3/24/2017	1.8	63
	9/21/2017	ND<0.8 J	31
	3/28/2018	ND<0.58 J	31
	9/21/2018	ND<2 U	31
	3/12/2019	ND<2 U	31
	10/1/2019	ND<2 U	31
	3/18/2020	ND<2 U	31
	9/23/2020	ND<2 U	31
	3/17/2021	ND<2 U	31
	9/9/2021	ND<2 U	31
	3/15/2022	ND<1.1	31
	9/12/2022	ND<1.1	31
	3/13/2023	ND<1.1	31
	9/11/2023	ND<1.1	31
GWM-4	9/18/2013	ND<2	31

3/20/2014	ND<2 U	31
9/9/2014	ND<2 U	31
3/16/2015	ND<2 U	31
9/9/2015	ND<2 U	31
3/18/2016	ND<2 U	31
9/20/2016	ND<2 U	31
3/23/2017	ND<2 U	31
9/18/2017	1.2	62
3/15/2018	ND<2 U	31
9/17/2018	ND<2 U	31
3/5/2019	ND<2 U	31
9/24/2019	ND<2 U	31
3/16/2020	ND<0.44 J	31
9/22/2020	ND<2 U	31
3/16/2021	ND<2 U	31
9/14/2021	ND<2 U	31
3/22/2022	ND<1.1	31
9/13/2022	ND<1.1	31
3/14/2023	ND<1.1	31
9/12/2023	ND<1.1	31

The Wilcoxon Statistic is 451
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 0.138513
The Standard Deviation adjusted for ties is 20.8327
The Z Score adjusted for ties is 0.456015
0.138513 < 2.326 indicating no statistical significance at 1% level
0.456015 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Cadmium, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<2	32
	3/19/2014	ND<2 U	32
	9/8/2014	ND<2 U	32
	3/17/2015	ND<2 U	32
	9/14/2015	ND<0.42 J	32
	3/17/2016	ND<2 U	32
	9/21/2016	ND<2 U	32
	3/24/2017	ND<2 U	32
	9/20/2017	ND<2 U	32
	3/27/2018	ND<2 U	32
	9/19/2018	ND<0.41 J	32
	3/11/2019	ND<2 U	32
	9/25/2019	ND<2 U	32
	3/18/2020	ND<2 U	32
	9/23/2020	ND<2 U	32
	3/17/2021	ND<2 U	32
	9/8/2021	ND<2 U	32
	3/15/2022	ND<1.1	32
	9/12/2022	ND<1.1	32
	3/13/2023	ND<1.1	32
	9/11/2023	ND<1.1	32
GWM-2	9/25/2013	ND<2	32
	3/18/2014	ND<2 U	32
	9/16/2014	ND<2 U	32
	3/18/2015	ND<0.8 J	32
	9/15/2015	ND<2 U	32
	3/16/2016	ND<2 U	32
	9/22/2016	ND<0.53 J	32
	3/24/2017	1.8	64
	9/21/2017	ND<0.8 J	32
	3/28/2018	ND<0.58 J	32
	9/21/2018	ND<2 U	32
	3/12/2019	ND<2 U	32
	10/1/2019	ND<2 U	32
	3/18/2020	ND<2 U	32
	9/23/2020	ND<2 U	32
	3/17/2021	ND<2 U	32
	9/9/2021	ND<2 U	32
	3/15/2022	ND<1.1	32
	9/12/2022	ND<1.1	32
	3/13/2023	ND<1.1	32
	9/11/2023	ND<1.1	32
GWM-5A	9/19/2013	ND<2	32

12/5/2013	ND<2	32
3/19/2014	ND<2 U	32
9/4/2014	ND<2 U	32
3/17/2015	ND<2 U	32
9/11/2015	ND<2 U	32
3/15/2016	ND<2 U	32
9/21/2016	ND<2 U	32
3/28/2017	ND<2 U	32
9/19/2017	ND<2 U	32
3/26/2018	ND<2 U	32
9/18/2018	ND<2 U	32
3/4/2019	ND<2 U	32
9/23/2019	ND<2 U	32
3/19/2020	ND<2 U	32
9/23/2020	ND<2 U	32
3/19/2021	ND<2 U	32
9/15/2021	ND<2 U	32
3/16/2022	ND<1.1	32
9/14/2022	ND<1.1	32
3/16/2023	ND<1.1	32
9/13/2023	ND<1.1	32

The Wilcoxon Statistic is 451
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is -0.162553
The Standard Deviation adjusted for ties is 15.1987
The Z Score adjusted for ties is -0.756644
-0.162553 < 2.326 indicating no statistical significance at 1% level
-0.756644 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Cadmium, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 62
Non detect rank is 31.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<2	31.5
	3/19/2014	ND<2 U	31.5
	9/8/2014	ND<2 U	31.5
	3/17/2015	ND<2 U	31.5
	9/14/2015	ND<0.42 J	31.5
	3/17/2016	ND<2 U	31.5
	9/21/2016	ND<2 U	31.5
	3/24/2017	ND<2 U	31.5
	9/20/2017	ND<2 U	31.5
	3/27/2018	ND<2 U	31.5
	9/19/2018	ND<0.41 J	31.5
	3/11/2019	ND<2 U	31.5
	9/25/2019	ND<2 U	31.5
	3/18/2020	ND<2 U	31.5
	9/23/2020	ND<2 U	31.5
	3/17/2021	ND<2 U	31.5
	9/8/2021	ND<2 U	31.5
	3/15/2022	ND<1.1	31.5
	9/12/2022	ND<1.1	31.5
	3/13/2023	ND<1.1	31.5
	9/11/2023	ND<1.1	31.5
GWM-2	9/25/2013	ND<2	31.5
	3/18/2014	ND<2 U	31.5
	9/16/2014	ND<2 U	31.5
	3/18/2015	ND<0.8 J	31.5
	9/15/2015	ND<2 U	31.5
	3/16/2016	ND<2 U	31.5
	9/22/2016	ND<0.53 J	31.5
	3/24/2017	1.8	63
	9/21/2017	ND<0.8 J	31.5
	3/28/2018	ND<0.58 J	31.5
	9/21/2018	ND<2 U	31.5
	3/12/2019	ND<2 U	31.5
	10/1/2019	ND<2 U	31.5
	3/18/2020	ND<2 U	31.5
	9/23/2020	ND<2 U	31.5
	3/17/2021	ND<2 U	31.5
	9/9/2021	ND<2 U	31.5
	3/15/2022	ND<1.1	31.5
	9/12/2022	ND<1.1	31.5
	3/13/2023	ND<1.1	31.5
	9/11/2023	ND<1.1	31.5
GWM-14	9/24/2013	ND<2	31.5

3/21/2014	ND<2 U	31.5
9/8/2014	ND<2 U	31.5
3/19/2015	ND<2 U	31.5
9/14/2015	ND<2 U	31.5
3/21/2016	ND<2 U	31.5
9/23/2016	ND<2 U	31.5
3/27/2017	ND<2 U	31.5
9/20/2017	ND<2 U	31.5
3/16/2018	ND<2 U	31.5
9/20/2018	ND<2 U	31.5
3/5/2019	ND<2 U	31.5
9/25/2019	ND<2 U	31.5
3/25/2020	ND<2 U	31.5
9/28/2020	ND<2 U	31.5
3/18/2021	ND<2 U	31.5
9/15/2021	ND<2 U	31.5
3/22/2022	ND<1.1	31.5
9/14/2022	ND<1.1	31.5
3/16/2023	ND<1.1	31.5
9/13/2023	ND<1.1	31.5

The Wilcoxon Statistic is 430.5
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.160383
The Standard Deviation adjusted for ties is 14.8492
The Z Score adjusted for ties is -0.740779
-0.160383 < 2.326 indicating no statistical significance at 1% level
-0.740779 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Cadmium, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 61
Non detect rank is 31

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<2	31
	3/19/2014	ND<2 U	31
	9/8/2014	ND<2 U	31
	3/17/2015	ND<2 U	31
	9/14/2015	ND<0.42 J	31
	3/17/2016	ND<2 U	31
	9/21/2016	ND<2 U	31
	3/24/2017	ND<2 U	31
	9/20/2017	ND<2 U	31
	3/27/2018	ND<2 U	31
	9/19/2018	ND<0.41 J	31
	3/11/2019	ND<2 U	31
	9/25/2019	ND<2 U	31
	3/18/2020	ND<2 U	31
	9/23/2020	ND<2 U	31
	3/17/2021	ND<2 U	31
	9/8/2021	ND<2 U	31
	3/15/2022	ND<1.1	31
	9/12/2022	ND<1.1	31
	3/13/2023	ND<1.1	31
	9/11/2023	ND<1.1	31
GWM-2	9/25/2013	ND<2	31
	3/18/2014	ND<2 U	31
	9/16/2014	ND<2 U	31
	3/18/2015	ND<0.8 J	31
	9/15/2015	ND<2 U	31
	3/16/2016	ND<2 U	31
	9/22/2016	ND<0.53 J	31
	3/24/2017	1.8	63
	9/21/2017	ND<0.8 J	31
	3/28/2018	ND<0.58 J	31
	9/21/2018	ND<2 U	31
	3/12/2019	ND<2 U	31
	10/1/2019	ND<2 U	31
	3/18/2020	ND<2 U	31
	9/23/2020	ND<2 U	31
	3/17/2021	ND<2 U	31
	9/9/2021	ND<2 U	31
	3/15/2022	ND<1.1	31
	9/12/2022	ND<1.1	31
	3/13/2023	ND<1.1	31
	9/11/2023	ND<1.1	31
GWM-6	9/24/2013	ND<2	31

3/21/2014	ND<2 U	31
9/17/2014	ND<2 U	31
3/19/2015	ND<2 U	31
9/15/2015	ND<2 U	31
3/21/2016	ND<2 U	31
9/26/2016	ND<2 U	31
3/31/2017	ND<2 U	31
9/21/2017	ND<2 U	31
3/30/2018	1.1	62
9/26/2018	ND<2 U	31
3/13/2019	ND<2 U	31
10/3/2019	ND<2 U	31
4/3/2020	ND<2 U	31
9/30/2020	ND<2 U	31
3/22/2021	ND<2 U	31
9/16/2021	ND<2 U	31
3/24/2022	ND<1.1	31
9/16/2022	ND<1.1	31
3/17/2023	ND<1.1	31
9/14/2023	ND<1.1	31

The Wilcoxon Statistic is 451
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 0.138513
The Standard Deviation adjusted for ties is 20.8327
The Z Score adjusted for ties is 0.456015
0.138513 < 2.326 indicating no statistical significance at 1% level
0.456015 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Cadmium, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 61
Non detect rank is 31

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<2	31
	3/19/2014	ND<2 U	31
	9/8/2014	ND<2 U	31
	3/17/2015	ND<2 U	31
	9/14/2015	ND<0.42 J	31
	3/17/2016	ND<2 U	31
	9/21/2016	ND<2 U	31
	3/24/2017	ND<2 U	31
	9/20/2017	ND<2 U	31
	3/27/2018	ND<2 U	31
	9/19/2018	ND<0.41 J	31
	3/11/2019	ND<2 U	31
	9/25/2019	ND<2 U	31
	3/18/2020	ND<2 U	31
	9/23/2020	ND<2 U	31
	3/17/2021	ND<2 U	31
	9/8/2021	ND<2 U	31
	3/15/2022	ND<1.1	31
	9/12/2022	ND<1.1	31
	3/13/2023	ND<1.1	31
	9/11/2023	ND<1.1	31
GWM-2	9/25/2013	ND<2	31
	3/18/2014	ND<2 U	31
	9/16/2014	ND<2 U	31
	3/18/2015	ND<0.8 J	31
	9/15/2015	ND<2 U	31
	3/16/2016	ND<2 U	31
	9/22/2016	ND<0.53 J	31
	3/24/2017	1.8	63
	9/21/2017	ND<0.8 J	31
	3/28/2018	ND<0.58 J	31
	9/21/2018	ND<2 U	31
	3/12/2019	ND<2 U	31
	10/1/2019	ND<2 U	31
	3/18/2020	ND<2 U	31
	9/23/2020	ND<2 U	31
	3/17/2021	ND<2 U	31
	9/9/2021	ND<2 U	31
	3/15/2022	ND<1.1	31
	9/12/2022	ND<1.1	31
	3/13/2023	ND<1.1	31
	9/11/2023	ND<1.1	31
GWM-3	9/25/2013	ND<2	31

3/18/2014	ND<2 U	31
9/16/2014	ND<2 U	31
3/18/2015	ND<0.49 J	31
9/15/2015	ND<2 U	31
3/16/2016	ND<0.68 J	31
9/22/2016	ND<0.76 J	31
3/29/2017	ND<2 U	31
9/21/2017	ND<2 U	31
3/28/2018	ND<0.54 J	31
9/20/2018	ND<0.53 J	31
3/12/2019	ND<2 U	31
10/1/2019	ND<2 U	31
3/18/2020	ND<2 U	31
9/24/2020	ND<2 U	31
3/17/2021	ND<0.38 J	31
9/9/2021	ND<2 U	31
3/15/2022	1.2	62
9/16/2022	ND<0.5 J	31
3/15/2023	ND<1.1	31
9/11/2023	ND<1.1	31

The Wilcoxon Statistic is 451
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 0.138513
The Standard Deviation adjusted for ties is 20.8327
The Z Score adjusted for ties is 0.456015
0.138513 < 2.326 indicating no statistical significance at 1% level
0.456015 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Cadmium, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 50
Non detect rank is 25.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<2	25.5
	3/19/2014	ND<2 U	25.5
	9/8/2014	ND<2 U	25.5
	3/17/2015	ND<2 U	25.5
	9/14/2015	ND<0.42 J	25.5
	3/17/2016	ND<2 U	25.5
	9/21/2016	ND<2 U	25.5
	3/24/2017	ND<2 U	25.5
	9/20/2017	ND<2 U	25.5
	3/27/2018	ND<2 U	25.5
	9/19/2018	ND<0.41 J	25.5
	3/11/2019	ND<2 U	25.5
	9/25/2019	ND<2 U	25.5
	3/18/2020	ND<2 U	25.5
	9/23/2020	ND<2 U	25.5
	3/17/2021	ND<2 U	25.5
	9/8/2021	ND<2 U	25.5
	3/15/2022	ND<1.1	25.5
	9/12/2022	ND<1.1	25.5
	3/13/2023	ND<1.1	25.5
	9/11/2023	ND<1.1	25.5
GWM-2	9/25/2013	ND<2	25.5
	3/18/2014	ND<2 U	25.5
	9/16/2014	ND<2 U	25.5
	3/18/2015	ND<0.8 J	25.5
	9/15/2015	ND<2 U	25.5
	3/16/2016	ND<2 U	25.5
	9/22/2016	ND<0.53 J	25.5
	3/24/2017	1.8	51
	9/21/2017	ND<0.8 J	25.5
	3/28/2018	ND<0.58 J	25.5
	9/21/2018	ND<2 U	25.5
	3/12/2019	ND<2 U	25.5
	10/1/2019	ND<2 U	25.5
	3/18/2020	ND<2 U	25.5
	9/23/2020	ND<2 U	25.5
	3/17/2021	ND<2 U	25.5
	9/9/2021	ND<2 U	25.5
	3/15/2022	ND<1.1	25.5
	9/12/2022	ND<1.1	25.5
	3/13/2023	ND<1.1	25.5
	9/11/2023	ND<1.1	25.5
GWM-17S	11/14/2019	ND<2 U	25.5

3/26/2020	ND<2 U	25.5
9/29/2020	ND<2 U	25.5
3/16/2021	ND<2 U	25.5
9/14/2021	ND<2 U	25.5
3/18/2022	ND<1.1	25.5
9/13/2022	ND<1.1	25.5
3/14/2023	ND<1.1	25.5
9/12/2023	ND<1.1	25.5

The Wilcoxon Statistic is 184.5
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is -0.123542
The Standard Deviation adjusted for ties is 9.72111
The Z Score adjusted for ties is -0.514344
-0.123542 < 2.326 indicating no statistical significance at 1% level
-0.514344 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Calcium, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	1950	1
	3/19/2014	16800	40
	9/8/2014	5900	3
	3/17/2015	37100	44
	9/14/2015	14200	39
	3/17/2016	11700	34
	9/21/2016	8500	18
	3/24/2017	9200	26
	9/20/2017	11300	31
	3/27/2018	28100	42
	9/19/2018	12200	36
	3/11/2019	7100	4
	9/25/2019	11300	32
	3/18/2020	11400	33
	9/23/2020	8600	21
	3/17/2021	7600	9
	9/8/2021	7400	7
	3/15/2022	21500	41
	9/12/2022	14000	38
	3/13/2023	11900	35
	9/11/2023	8200	14
GWM-2	9/25/2013	12880	37
	3/18/2014	9500	28
	9/16/2014	7200	6
	3/18/2015	9200	27
	9/15/2015	8800	22
	3/16/2016	8300	16
	9/22/2016	8200	15
	3/24/2017	7600	10
	9/21/2017	8000	11
	3/28/2018	9100	25
	9/21/2018	8800	23
	3/12/2019	10400	30
	10/1/2019	10000	29
	3/18/2020	8500	19
	9/23/2020	7100	5
	3/17/2021	8100	12
	9/9/2021	8300	17
	3/15/2022	8100	13
	9/12/2022	7500	8
	3/13/2023	8500	20
	9/11/2023	8800	24
GWM-4	9/18/2013	5110	2

3/20/2014	31900	43
9/9/2014	52200	53
3/16/2015	41500	45
9/9/2015	46400	46
3/18/2016	49500	50
9/20/2016	59300	54
3/23/2017	46700	47
9/18/2017	47200	48
3/15/2018	48500	49
9/17/2018	59600	55
3/5/2019	60000	56
9/24/2019	51200	51
3/16/2020	52000	52
9/22/2020	69100	62
3/16/2021	64600	59
9/14/2021	73000	63
3/22/2022	66600	60
9/13/2022	67000	61
3/14/2023	61300	57
9/12/2023	63500	58

The Wilcoxon Statistic is 840
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 5.81025
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 5.81025
5.81025 > 2.326 indicating statistical significance at 1% level
5.81025 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Calcium, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	1950	1
	3/19/2014	16800	39
	9/8/2014	5900	2
	3/17/2015	37100	51
	9/14/2015	14200	38
	3/17/2016	11700	33
	9/21/2016	8500	17
	3/24/2017	9200	25
	9/20/2017	11300	30
	3/27/2018	28100	43
	9/19/2018	12200	35
	3/11/2019	7100	3
	9/25/2019	11300	31
	3/18/2020	11400	32
	9/23/2020	8600	20
	3/17/2021	7600	8
	9/8/2021	7400	6
	3/15/2022	21500	40
	9/12/2022	14000	37
	3/13/2023	11900	34
	9/11/2023	8200	13
GWM-2	9/25/2013	12880	36
	3/18/2014	9500	27
	9/16/2014	7200	5
	3/18/2015	9200	26
	9/15/2015	8800	21
	3/16/2016	8300	15
	9/22/2016	8200	14
	3/24/2017	7600	9
	9/21/2017	8000	10
	3/28/2018	9100	24
	9/21/2018	8800	22
	3/12/2019	10400	29
	10/1/2019	10000	28
	3/18/2020	8500	18
	9/23/2020	7100	4
	3/17/2021	8100	11
	9/9/2021	8300	16
	3/15/2022	8100	12
	9/12/2022	7500	7
	3/13/2023	8500	19
	9/11/2023	8800	23
GWM-5A	9/19/2013	37130	52

12/5/2013	43620	59
3/19/2014	57300	64
9/4/2014	44800	60
3/17/2015	43600	58
9/11/2015	39900	56
3/15/2016	38000	54
9/21/2016	38400	55
3/28/2017	31500	47
9/19/2017	30000	45
3/26/2018	34500	50
9/18/2018	47500	62
3/4/2019	56000	63
9/23/2019	37400	53
3/19/2020	43200	57
9/23/2020	31400	46
3/19/2021	45300	61
9/15/2021	29000	44
3/16/2022	23200	41
9/14/2022	33300	49
3/16/2023	23900	42
9/13/2023	32400	48

The Wilcoxon Statistic is 913
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is 6.36785
The Standard Deviation adjusted for ties is 70.746
The Z Score adjusted for ties is 6.36785
6.36785 > 2.326 indicating statistical significance at 1% level
6.36785 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Calcium, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	1950	1
	3/19/2014	16800	60
	9/8/2014	5900	3
	3/17/2015	37100	63
	9/14/2015	14200	58
	3/17/2016	11700	44
	9/21/2016	8500	18
	3/24/2017	9200	26
	9/20/2017	11300	39
	3/27/2018	28100	62
	9/19/2018	12200	49
	3/11/2019	7100	4
	9/25/2019	11300	40
	3/18/2020	11400	41
	9/23/2020	8600	21
	3/17/2021	7600	9
	9/8/2021	7400	7
	3/15/2022	21500	61
	9/12/2022	14000	57
	3/13/2023	11900	46
	9/11/2023	8200	14
GWM-2	9/25/2013	12880	54
	3/18/2014	9500	28
	9/16/2014	7200	6
	3/18/2015	9200	27
	9/15/2015	8800	22
	3/16/2016	8300	16
	9/22/2016	8200	15
	3/24/2017	7600	10
	9/21/2017	8000	11
	3/28/2018	9100	25
	9/21/2018	8800	23
	3/12/2019	10400	31
	10/1/2019	10000	30
	3/18/2020	8500	19
	9/23/2020	7100	5
	3/17/2021	8100	12
	9/9/2021	8300	17
	3/15/2022	8100	13
	9/12/2022	7500	8
	3/13/2023	8500	20
	9/11/2023	8800	24
GWM-14	9/24/2013	9500	29

3/21/2014	11600	43
9/8/2014	13500	56
3/19/2015	12400	51
9/14/2015	13000	55
3/21/2016	14600	59
9/23/2016	12700	53
3/27/2017	12400	52
9/20/2017	11500	42
3/16/2018	11100	35
9/20/2018	10900	34
3/5/2019	12300	50
9/25/2019	10400	32
3/25/2020	12100	48
9/28/2020	11200	37
3/18/2021	4400 R	2
9/15/2021	12000	47
3/22/2022	11800	45
9/14/2022	11100	36
3/16/2023	11200	38
9/13/2023	10800	33

The Wilcoxon Statistic is 646
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 2.98167
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 2.98167
2.98167 > 2.326 indicating statistical significance at 1% level
2.98167 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Calcium, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	1950	1
	3/19/2014	16800	49
	9/8/2014	5900	2
	3/17/2015	37100	63
	9/14/2015	14200	46
	3/17/2016	11700	37
	9/21/2016	8500	17
	3/24/2017	9200	25
	9/20/2017	11300	33
	3/27/2018	28100	62
	9/19/2018	12200	40
	3/11/2019	7100	3
	9/25/2019	11300	34
	3/18/2020	11400	35
	9/23/2020	8600	20
	3/17/2021	7600	8
	9/8/2021	7400	6
	3/15/2022	21500	57
	9/12/2022	14000	45
	3/13/2023	11900	38
	9/11/2023	8200	13
GWM-2	9/25/2013	12880	42
	3/18/2014	9500	27
	9/16/2014	7200	5
	3/18/2015	9200	26
	9/15/2015	8800	21
	3/16/2016	8300	15
	9/22/2016	8200	14
	3/24/2017	7600	9
	9/21/2017	8000	10
	3/28/2018	9100	24
	9/21/2018	8800	22
	3/12/2019	10400	31
	10/1/2019	10000	29
	3/18/2020	8500	18
	9/23/2020	7100	4
	3/17/2021	8100	11
	9/9/2021	8300	16
	3/15/2022	8100	12
	9/12/2022	7500	7
	3/13/2023	8500	19
	9/11/2023	8800	23
GWM-6	9/24/2013	9640	28

3/21/2014	10000	30
9/17/2014	10800	32
3/19/2015	11600	36
9/15/2015	13200	43
3/21/2016	13900	44
9/26/2016	12800	41
3/31/2017	14400	47
9/21/2017	21300	56
3/30/2018	23500	60
9/26/2018	22000	59
3/13/2019	23800	61
10/3/2019	21100	55
4/3/2020	19200	54
9/30/2020	17900	51
3/22/2021	21600	58
9/16/2021	19000	53
3/24/2022	18600	52
9/16/2022	17000	50
3/17/2023	15600	48
9/14/2023	12100	39

The Wilcoxon Statistic is 766
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 4.73131
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 4.73131
4.73131 > 2.326 indicating statistical significance at 1% level
4.73131 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Calcium, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	1950	1
	3/19/2014	16800	59
	9/8/2014	5900	3
	3/17/2015	37100	62
	9/14/2015	14200	58
	3/17/2016	11700	53
	9/21/2016	8500	23
	3/24/2017	9200	37
	9/20/2017	11300	50
	3/27/2018	28100	61
	9/19/2018	12200	55
	3/11/2019	7100	4
	9/25/2019	11300	51
	3/18/2020	11400	52
	9/23/2020	8600	28
	3/17/2021	7600	9
	9/8/2021	7400	7
	3/15/2022	21500	60
	9/12/2022	14000	57
	3/13/2023	11900	54
	9/11/2023	8200	17
GWM-2	9/25/2013	12880	56
	3/18/2014	9500	42
	9/16/2014	7200	6
	3/18/2015	9200	38
	9/15/2015	8800	29
	3/16/2016	8300	20
	9/22/2016	8200	18
	3/24/2017	7600	10
	9/21/2017	8000	13
	3/28/2018	9100	34
	9/21/2018	8800	30
	3/12/2019	10400	48
	10/1/2019	10000	45
	3/18/2020	8500	24
	9/23/2020	7100	5
	3/17/2021	8100	15
	9/9/2021	8300	21
	3/15/2022	8100	16
	9/12/2022	7500	8
	3/13/2023	8500	25
	9/11/2023	8800	31
GWM-3	9/25/2013	5060	2

3/18/2014	7900	12
9/16/2014	7700	11
3/18/2015	8200	19
9/15/2015	9000	33
3/16/2016	9500	43
9/22/2016	9300	40
3/29/2017	9300	41
9/21/2017	8500	26
3/28/2018	9100	35
9/20/2018	9100	36
3/12/2019	10400	49
10/1/2019	10200	47
3/18/2020	10100	46
9/24/2020	8500	27
3/17/2021	318000 R	63
9/9/2021	9500	44
3/15/2022	8800	32
9/16/2022	8000	14
3/15/2023	8300	22
9/11/2023	9200	39

The Wilcoxon Statistic is 450
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 0.123933
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 0.123933
0.123933 < 2.326 indicating no statistical significance at 1% level
0.123933 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Calcium, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	1950	1
	3/19/2014	16800	39
	9/8/2014	5900	2
	3/17/2015	37100	46
	9/14/2015	14200	38
	3/17/2016	11700	33
	9/21/2016	8500	17
	3/24/2017	9200	25
	9/20/2017	11300	30
	3/27/2018	28100	41
	9/19/2018	12200	35
	3/11/2019	7100	3
	9/25/2019	11300	31
	3/18/2020	11400	32
	9/23/2020	8600	20
	3/17/2021	7600	8
	9/8/2021	7400	6
	3/15/2022	21500	40
	9/12/2022	14000	37
	3/13/2023	11900	34
	9/11/2023	8200	13
GWM-2	9/25/2013	12880	36
	3/18/2014	9500	27
	9/16/2014	7200	5
	3/18/2015	9200	26
	9/15/2015	8800	21
	3/16/2016	8300	15
	9/22/2016	8200	14
	3/24/2017	7600	9
	9/21/2017	8000	10
	3/28/2018	9100	24
	9/21/2018	8800	22
	3/12/2019	10400	29
	10/1/2019	10000	28
	3/18/2020	8500	18
	9/23/2020	7100	4
	3/17/2021	8100	11
	9/9/2021	8300	16
	3/15/2022	8100	12
	9/12/2022	7500	7
	3/13/2023	8500	19
	9/11/2023	8800	23
GWM-17S	11/14/2019	38600	48

3/26/2020	39000	50
9/29/2020	35400	43
3/16/2021	34900	42
9/14/2021	38000	47
3/18/2022	35700	44
9/13/2022	36100	45
3/14/2023	39100	51
9/12/2023	38800	49

The Wilcoxon Statistic is 374
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is 4.55868
The Standard Deviation adjusted for ties is 40.4722
The Z Score adjusted for ties is 4.55868
4.55868 > 2.326 indicating statistical significance at 1% level
4.55868 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chromium, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 25
Non detect rank is 13

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	13
	3/19/2014	ND<1.8 J	13
	9/8/2014	16	57
	3/17/2015	5.5	52
	9/14/2015	3.7	41
	3/17/2016	3.2	35
	9/21/2016	4.5	46
	3/24/2017	ND<1.7 J	13
	9/20/2017	ND<1.8 J	13
	3/27/2018	ND<1.5 J	13
	9/19/2018	2.5	30
	3/11/2019	3.5	39
	9/25/2019	3.1	33
	3/18/2020	ND<1.6 J	13
	9/23/2020	3.2	36
	3/17/2021	2.6	31
	9/8/2021	ND<1.2 J	13
	3/15/2022	4.3	45
	9/12/2022	ND<1.6 J	13
	3/13/2023	ND<2.1 J	13
	9/11/2023	ND<1.2 J	13
GWM-2	9/25/2013	ND<5	13
	3/18/2014	5.6	53
	9/16/2014	19	61
	3/18/2015	12	56
	9/15/2015	24	62
	3/16/2016	3.1	34
	9/22/2016	17	58
	3/24/2017	52	63
	9/21/2017	8.8	55
	3/28/2018	17	59
	9/21/2018	2.3	26
	3/12/2019	4.8	48
	10/1/2019	ND<1.9 J	13
	3/18/2020	3.7	42
	9/23/2020	18	60
	3/17/2021	4.8	49
	9/9/2021	ND<2.8 J	13
	3/15/2022	3.8	43
	9/12/2022	7.7	54
	3/13/2023	3.9	44
	9/11/2023	ND<1.7 J	13
GWM-4	9/18/2013	ND<5	13

3/20/2014	ND<1.6 J	13
9/9/2014	2.4	28
3/16/2015	2.4	29
9/9/2015	2.3	27
3/18/2016	4.8	50
9/20/2016	3.2	37
3/23/2017	4.7	47
9/18/2017	3	32
3/15/2018	3.3	38
9/17/2018	ND<1.9 J	13
3/5/2019	ND<1.9 J	13
9/24/2019	ND<0.86 J	13
3/16/2020	3.5	40
9/22/2020	ND<0.89 J	13
3/16/2021	ND<0.98 J	13
9/14/2021	5.1	51
3/22/2022	ND<0.87 J	13
9/13/2022	ND<1.4 J	13
3/14/2023	ND<1.4 J	13
9/12/2023	ND<1.7 J	13

The Wilcoxon Statistic is 291
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -2.19433
The Standard Deviation adjusted for ties is 66.4112
The Z Score adjusted for ties is -2.26618
-2.19433 < 2.326 indicating no statistical significance at 1% level
-2.26618 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chromium, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 27
Non detect rank is 14

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	14
	3/19/2014	ND<1.8 J	14
	9/8/2014	16	57
	3/17/2015	5.5	51
	9/14/2015	3.7	40
	3/17/2016	3.2	36
	9/21/2016	4.5	46
	3/24/2017	ND<1.7 J	14
	9/20/2017	ND<1.8 J	14
	3/27/2018	ND<1.5 J	14
	9/19/2018	2.5	30
	3/11/2019	3.5	38
	9/25/2019	3.1	34
	3/18/2020	ND<1.6 J	14
	9/23/2020	3.2	37
	3/17/2021	2.6	32
	9/8/2021	ND<1.2 J	14
	3/15/2022	4.3	45
	9/12/2022	ND<1.6 J	14
	3/13/2023	ND<2.1 J	14
	9/11/2023	ND<1.2 J	14
GWM-2	9/25/2013	ND<5	14
	3/18/2014	5.6	52
	9/16/2014	19	62
	3/18/2015	12	55
	9/15/2015	24	63
	3/16/2016	3.1	35
	9/22/2016	17	58
	3/24/2017	52	64
	9/21/2017	8.8	54
	3/28/2018	17	59
	9/21/2018	2.3	28
	3/12/2019	4.8	48
	10/1/2019	ND<1.9 J	14
	3/18/2020	3.7	41
	9/23/2020	18	61
	3/17/2021	4.8	49
	9/9/2021	ND<2.8 J	14
	3/15/2022	3.8	42
	9/12/2022	7.7	53
	3/13/2023	3.9	43
	9/11/2023	ND<1.7 J	14
GWM-5A	9/19/2013	ND<5	14

12/5/2013	ND<5	14
3/19/2014	5	50
9/4/2014	2.5	31
3/17/2015	ND<1.7 J	14
9/11/2015	ND<1.9 J	14
3/15/2016	ND<1.6 J	14
9/21/2016	2.9	33
3/28/2017	ND<1.6 J	14
9/19/2017	ND<2.1 J	14
3/26/2018	ND<1.7 J	14
9/18/2018	ND<5 U	14
3/4/2019	ND<1.1 J	14
9/23/2019	ND<0.95 J	14
3/19/2020	4.1	44
9/23/2020	2.4	29
3/19/2021	ND<0.98 J	14
9/15/2021	12	56
3/16/2022	ND<1.6 J	14
9/14/2022	3.5	39
3/16/2023	4.5	47
9/13/2023	17	60

The Wilcoxon Statistic is 318
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is -2.04252
The Standard Deviation adjusted for ties is 68.0413
The Z Score adjusted for ties is -2.12371
-2.04252 < 2.326 indicating no statistical significance at 1% level
-2.12371 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chromium, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 35
Non detect rank is 18

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	18
	3/19/2014	ND<1.8 J	18
	9/8/2014	16	57
	3/17/2015	5.5	52
	9/14/2015	3.7	44
	3/17/2016	3.2	41
	9/21/2016	4.5	49
	3/24/2017	ND<1.7 J	18
	9/20/2017	ND<1.8 J	18
	3/27/2018	ND<1.5 J	18
	9/19/2018	2.5	37
	3/11/2019	3.5	43
	9/25/2019	3.1	39
	3/18/2020	ND<1.6 J	18
	9/23/2020	3.2	42
	3/17/2021	2.6	38
	9/8/2021	ND<1.2 J	18
	3/15/2022	4.3	48
	9/12/2022	ND<1.6 J	18
	3/13/2023	ND<2.1 J	18
	9/11/2023	ND<1.2 J	18
GWM-2	9/25/2013	ND<5	18
	3/18/2014	5.6	53
	9/16/2014	19	61
	3/18/2015	12	56
	9/15/2015	24	62
	3/16/2016	3.1	40
	9/22/2016	17	58
	3/24/2017	52	63
	9/21/2017	8.8	55
	3/28/2018	17	59
	9/21/2018	2.3	36
	3/12/2019	4.8	50
	10/1/2019	ND<1.9 J	18
	3/18/2020	3.7	45
	9/23/2020	18	60
	3/17/2021	4.8	51
	9/9/2021	ND<2.8 J	18
	3/15/2022	3.8	46
	9/12/2022	7.7	54
	3/13/2023	3.9	47
	9/11/2023	ND<1.7 J	18
GWM-14	9/24/2013	ND<5	18

3/21/2014	ND<0.95 J	18
9/8/2014	ND<1.2 J	18
3/19/2015	ND<1.6 J	18
9/14/2015	ND<2.1 J	18
3/21/2016	ND<1.2 J	18
9/23/2016	ND<1.4 J	18
3/27/2017	ND<1.3 J	18
9/20/2017	ND<1.9 J	18
3/16/2018	ND<5 U	18
9/20/2018	ND<0.94 J	18
3/5/2019	ND<5 U	18
9/25/2019	ND<5 U	18
3/25/2020	ND<0.85 J	18
9/28/2020	ND<5 U	18
3/18/2021	ND<5 U	18
9/15/2021	ND<5 U	18
3/22/2022	ND<2.2	18
9/14/2022	ND<2.2	18
3/16/2023	ND<2.2	18
9/13/2023	ND<0.92 J	18

The Wilcoxon Statistic is 147
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -4.2939
The Standard Deviation adjusted for ties is 62.4329
The Z Score adjusted for ties is -4.71706
-4.2939 < 2.326 indicating no statistical significance at 1% level
-4.71706 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chromium, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 33
Non detect rank is 17

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	17
	3/19/2014	ND<1.8 J	17
	9/8/2014	16	57
	3/17/2015	5.5	52
	9/14/2015	3.7	43
	3/17/2016	3.2	40
	9/21/2016	4.5	49
	3/24/2017	ND<1.7 J	17
	9/20/2017	ND<1.8 J	17
	3/27/2018	ND<1.5 J	17
	9/19/2018	2.5	36
	3/11/2019	3.5	42
	9/25/2019	3.1	38
	3/18/2020	ND<1.6 J	17
	9/23/2020	3.2	41
	3/17/2021	2.6	37
	9/8/2021	ND<1.2 J	17
	3/15/2022	4.3	48
	9/12/2022	ND<1.6 J	17
	3/13/2023	ND<2.1 J	17
	9/11/2023	ND<1.2 J	17
GWM-2	9/25/2013	ND<5	17
	3/18/2014	5.6	53
	9/16/2014	19	61
	3/18/2015	12	56
	9/15/2015	24	62
	3/16/2016	3.1	39
	9/22/2016	17	58
	3/24/2017	52	63
	9/21/2017	8.8	55
	3/28/2018	17	59
	9/21/2018	2.3	35
	3/12/2019	4.8	50
	10/1/2019	ND<1.9 J	17
	3/18/2020	3.7	44
	9/23/2020	18	60
	3/17/2021	4.8	51
	9/9/2021	ND<2.8 J	17
	3/15/2022	3.8	45
	9/12/2022	7.7	54
	3/13/2023	3.9	47
	9/11/2023	ND<1.7 J	17
GWM-6	9/24/2013	ND<5	17

3/21/2014	ND<1.1 J	17
9/17/2014	ND<1.3 J	17
3/19/2015	ND<1.1 J	17
9/15/2015	ND<1.2 J	17
3/21/2016	ND<0.94 J	17
9/26/2016	3.8	46
3/31/2017	ND<1.3 J	17
9/21/2017	ND<1.8 J	17
3/30/2018	0.85	34
9/26/2018	ND<5 U	17
3/13/2019	ND<1.8 J	17
10/3/2019	ND<5 U	17
4/3/2020	ND<5 U	17
9/30/2020	ND<5 U	17
3/22/2021	ND<5 U	17
9/16/2021	ND<1.2 J	17
3/24/2022	ND<2.2	17
9/16/2022	ND<1 J	17
3/17/2023	ND<0.8 J	17
9/14/2023	ND<0.84 J	17

The Wilcoxon Statistic is 172
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -3.92939
The Standard Deviation adjusted for ties is 63.4696
The Z Score adjusted for ties is -4.24613
-3.92939 < 2.326 indicating no statistical significance at 1% level
-4.24613 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chromium, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 15
Non detect rank is 8

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	8
	3/19/2014	ND<1.8 J	8
	9/8/2014	16	57
	3/17/2015	5.5	43
	9/14/2015	3.7	29
	3/17/2016	3.2	23
	9/21/2016	4.5	38
	3/24/2017	ND<1.7 J	8
	9/20/2017	ND<1.8 J	8
	3/27/2018	ND<1.5 J	8
	9/19/2018	2.5	17
	3/11/2019	3.5	28
	9/25/2019	3.1	21
	3/18/2020	ND<1.6 J	8
	9/23/2020	3.2	24
	3/17/2021	2.6	18
	9/8/2021	ND<1.2 J	8
	3/15/2022	4.3	37
	9/12/2022	ND<1.6 J	8
	3/13/2023	ND<2.1 J	8
	9/11/2023	ND<1.2 J	8
GWM-2	9/25/2013	ND<5	8
	3/18/2014	5.6	45
	9/16/2014	19	61
	3/18/2015	12	55
	9/15/2015	24	62
	3/16/2016	3.1	22
	9/22/2016	17	58
	3/24/2017	52	63
	9/21/2017	8.8	53
	3/28/2018	17	59
	9/21/2018	2.3	16
	3/12/2019	4.8	40
	10/1/2019	ND<1.9 J	8
	3/18/2020	3.7	30
	9/23/2020	18	60
	3/17/2021	4.8	41
	9/9/2021	ND<2.8 J	8
	3/15/2022	3.8	32
	9/12/2022	7.7	51
	3/13/2023	3.9	34
	9/11/2023	ND<1.7 J	8
GWM-3	9/25/2013	ND<5	8

3/18/2014	4.9	42
9/16/2014	3.3	25
3/18/2015	3.7	31
9/15/2015	4	35
3/16/2016	8.2	52
9/22/2016	14	56
3/29/2017	5.9	48
9/21/2017	4	36
3/28/2018	3.8	33
9/20/2018	3.3	26
3/12/2019	4.7	39
10/1/2019	3	19
3/18/2020	3	20
9/24/2020	3.4	27
3/17/2021	5.6 R	46
9/9/2021	9.4	54
3/15/2022	7	50
9/16/2022	5.5	44
3/15/2023	6.7	49
9/11/2023	5.7	47

The Wilcoxon Statistic is 556
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 1.66944
The Standard Deviation adjusted for ties is 68.1232
The Z Score adjusted for ties is 1.68078
1.66944 < 2.326 indicating no statistical significance at 1% level
1.68078 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chromium, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 23
Non detect rank is 12

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	12
	3/19/2014	ND<1.8 J	12
	9/8/2014	16	45
	3/17/2015	5.5	40
	9/14/2015	3.7	32
	3/17/2016	3.2	29
	9/21/2016	4.5	37
	3/24/2017	ND<1.7 J	12
	9/20/2017	ND<1.8 J	12
	3/27/2018	ND<1.5 J	12
	9/19/2018	2.5	25
	3/11/2019	3.5	31
	9/25/2019	3.1	27
	3/18/2020	ND<1.6 J	12
	9/23/2020	3.2	30
	3/17/2021	2.6	26
	9/8/2021	ND<1.2 J	12
	3/15/2022	4.3	36
	9/12/2022	ND<1.6 J	12
	3/13/2023	ND<2.1 J	12
	9/11/2023	ND<1.2 J	12
GWM-2	9/25/2013	ND<5	12
	3/18/2014	5.6	41
	9/16/2014	19	49
	3/18/2015	12	44
	9/15/2015	24	50
	3/16/2016	3.1	28
	9/22/2016	17	46
	3/24/2017	52	51
	9/21/2017	8.8	43
	3/28/2018	17	47
	9/21/2018	2.3	24
	3/12/2019	4.8	38
	10/1/2019	ND<1.9 J	12
	3/18/2020	3.7	33
	9/23/2020	18	48
	3/17/2021	4.8	39
	9/9/2021	ND<2.8 J	12
	3/15/2022	3.8	34
	9/12/2022	7.7	42
	3/13/2023	3.9	35
	9/11/2023	ND<1.7 J	12
GWM-17S	11/14/2019	ND<5 U	12

3/26/2020	ND<1.6 J	12
9/29/2020	ND<0.81 J	12
3/16/2021	ND<5 U	12
9/14/2021	ND<5 U	12
3/18/2022	ND<1.5 J	12
9/13/2022	ND<2.2	12
3/14/2023	ND<1.8 J	12
9/12/2023	ND<2.2 J	12

The Wilcoxon Statistic is 63
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is -3.1256
The Standard Deviation adjusted for ties is 38.5744
The Z Score adjusted for ties is -3.27938
-3.1256 < 2.326 indicating no statistical significance at 1% level
-3.27938 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Cobalt, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 19
Non detect rank is 10

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	10
	3/19/2014	ND<5 U	10
	9/8/2014	ND<5 U	10
	3/17/2015	ND<5 U	10
	9/14/2015	ND<4 J	10
	3/17/2016	ND<2.3 J	10
	9/21/2016	ND<4.3 J	10
	3/24/2017	ND<3.2 J	10
	9/20/2017	ND<5 U	10
	3/27/2018	ND<1.9 J	10
	9/19/2018	130	59
	3/11/2019	200	60
	9/25/2019	21	22
	3/18/2020	50	42
	9/23/2020	ND<2.6 J	10
	3/17/2021	ND<5 U	10
	9/8/2021	ND<0.62 J	10
	3/15/2022	ND<3 J	10
	9/12/2022	ND<3.8 J	10
	3/13/2023	ND<2.9 J	10
	9/11/2023	ND<5.6	10
GWM-2	9/25/2013	ND<5	10
	3/18/2014	46	41
	9/16/2014	44	40
	3/18/2015	110	58
	9/15/2015	58	49
	3/16/2016	37	28
	9/22/2016	60	50
	3/24/2017	71	53
	9/21/2017	380	63
	3/28/2018	56	48
	9/21/2018	43	38
	3/12/2019	52	45
	10/1/2019	50	43
	3/18/2020	40	33
	9/23/2020	40	34
	3/17/2021	38	29
	9/9/2021	43	39
	3/15/2022	38	30
	9/12/2022	38	31
	3/13/2023	42	36
	9/11/2023	42	37
GWM-4	9/18/2013	ND<5	10

3/20/2014	330	62
9/9/2014	79	55
3/16/2015	95	57
9/9/2015	83	56
3/18/2016	53	46
9/20/2016	75	54
3/23/2017	34	26
9/18/2017	70	52
3/15/2018	39	32
9/17/2018	40	35
3/5/2019	54	47
9/24/2019	60	51
3/16/2020	250	61
9/22/2020	31	25
3/16/2021	20	21
9/14/2021	36	27
3/22/2022	29	24
9/13/2022	22	23
3/14/2023	50	44
9/12/2023	9.6	20

The Wilcoxon Statistic is 597
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 2.26724
The Standard Deviation adjusted for ties is 67.6409
The Z Score adjusted for ties is 2.29891
2.26724 < 2.326 indicating no statistical significance at 1% level
2.29891 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Cobalt, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 19
Non detect rank is 10

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	10
	3/19/2014	ND<5 U	10
	9/8/2014	ND<5 U	10
	3/17/2015	ND<5 U	10
	9/14/2015	ND<4 J	10
	3/17/2016	ND<2.3 J	10
	9/21/2016	ND<4.3 J	10
	3/24/2017	ND<3.2 J	10
	9/20/2017	ND<5 U	10
	3/27/2018	ND<1.9 J	10
	9/19/2018	130	62
	3/11/2019	200	63
	9/25/2019	21	28
	3/18/2020	50	46
	9/23/2020	ND<2.6 J	10
	3/17/2021	ND<5 U	10
	9/8/2021	ND<0.62 J	10
	3/15/2022	ND<3 J	10
	9/12/2022	ND<3.8 J	10
	3/13/2023	ND<2.9 J	10
	9/11/2023	ND<5.6	10
GWM-2	9/25/2013	ND<5	10
	3/18/2014	46	43
	9/16/2014	44	42
	3/18/2015	110	61
	9/15/2015	58	52
	3/16/2016	37	32
	9/22/2016	60	54
	3/24/2017	71	56
	9/21/2017	380	64
	3/28/2018	56	50
	9/21/2018	43	40
	3/12/2019	52	48
	10/1/2019	50	47
	3/18/2020	40	36
	9/23/2020	40	37
	3/17/2021	38	33
	9/9/2021	43	41
	3/15/2022	38	34
	9/12/2022	38	35
	3/13/2023	42	38
	9/11/2023	42	39
GWM-5A	9/19/2013	20	27

12/5/2013	ND<5	10
3/19/2014	14	23
9/4/2014	27	30
3/17/2015	8.6	20
9/11/2015	12	21
3/15/2016	15	24
9/21/2016	15	25
3/28/2017	12	22
9/19/2017	23	29
3/26/2018	18	26
9/18/2018	58	53
3/4/2019	80	59
9/23/2019	87	60
3/19/2020	57	51
9/23/2020	54	49
3/19/2021	33	31
9/15/2021	47	45
3/16/2022	75	58
9/14/2022	46	44
3/16/2023	73	57
9/13/2023	69	55

The Wilcoxon Statistic is 566
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is 1.46298
The Standard Deviation adjusted for ties is 69.8167
The Z Score adjusted for ties is 1.48245
1.46298 < 2.326 indicating no statistical significance at 1% level
1.48245 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Cobalt, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 19
Non detect rank is 10

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	10
	3/19/2014	ND<5 U	10
	9/8/2014	ND<5 U	10
	3/17/2015	ND<5 U	10
	9/14/2015	ND<4 J	10
	3/17/2016	ND<2.3 J	10
	9/21/2016	ND<4.3 J	10
	3/24/2017	ND<3.2 J	10
	9/20/2017	ND<5 U	10
	3/27/2018	ND<1.9 J	10
	9/19/2018	130	41
	3/11/2019	200	42
	9/25/2019	21	20
	3/18/2020	50	33
	9/23/2020	ND<2.6 J	10
	3/17/2021	ND<5 U	10
	9/8/2021	ND<0.62 J	10
	3/15/2022	ND<3 J	10
	9/12/2022	ND<3.8 J	10
	3/13/2023	ND<2.9 J	10
	9/11/2023	ND<5.6	10
GWM-2	9/25/2013	ND<5	10
	3/18/2014	46	32
	9/16/2014	44	31
	3/18/2015	110	40
	9/15/2015	58	37
	3/16/2016	37	21
	9/22/2016	60	38
	3/24/2017	71	39
	9/21/2017	380	56
	3/28/2018	56	36
	9/21/2018	43	29
	3/12/2019	52	35
	10/1/2019	50	34
	3/18/2020	40	25
	9/23/2020	40	26
	3/17/2021	38	22
	9/9/2021	43	30
	3/15/2022	38	23
	9/12/2022	38	24
	3/13/2023	42	27
	9/11/2023	42	28
GWM-14	9/24/2013	420	62

3/21/2014	450	63
9/8/2014	410	60
3/19/2015	390	58
9/14/2015	410	61
3/21/2016	390	59
9/23/2016	380	57
3/27/2017	330	54
9/20/2017	350	55
3/16/2018	290	53
9/20/2018	280	51
3/5/2019	280	52
9/25/2019	240	45
3/25/2020	250	46
9/28/2020	270	50
3/18/2021	ND<2.4 JR	10
9/15/2021	250	47
3/22/2022	260	49
9/14/2022	250	48
3/16/2023	230	44
9/13/2023	220	43

The Wilcoxon Statistic is 836
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 5.75193
The Standard Deviation adjusted for ties is 67.6409
The Z Score adjusted for ties is 5.83227
5.75193 > 2.326 indicating statistical significance at 1% level
5.83227 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Cobalt, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	9.5
	3/19/2014	ND<5 U	9.5
	9/8/2014	ND<5 U	9.5
	3/17/2015	ND<5 U	9.5
	9/14/2015	ND<4 J	9.5
	3/17/2016	ND<2.3 J	9.5
	9/21/2016	ND<4.3 J	9.5
	3/24/2017	ND<3.2 J	9.5
	9/20/2017	ND<5 U	9.5
	3/27/2018	ND<1.9 J	9.5
	9/19/2018	130	61
	3/11/2019	200	62
	9/25/2019	21	22
	3/18/2020	50	41
	9/23/2020	ND<2.6 J	9.5
	3/17/2021	ND<5 U	9.5
	9/8/2021	ND<0.62 J	9.5
	3/15/2022	ND<3 J	9.5
	9/12/2022	ND<3.8 J	9.5
	3/13/2023	ND<2.9 J	9.5
	9/11/2023	ND<5.6	9.5
GWM-2	9/25/2013	ND<5	9.5
	3/18/2014	46	39
	9/16/2014	44	38
	3/18/2015	110	58
	9/15/2015	58	45
	3/16/2016	37	26
	9/22/2016	60	47
	3/24/2017	71	50
	9/21/2017	380	63
	3/28/2018	56	44
	9/21/2018	43	36
	3/12/2019	52	43
	10/1/2019	50	42
	3/18/2020	40	31
	9/23/2020	40	32
	3/17/2021	38	27
	9/9/2021	43	37
	3/15/2022	38	28
	9/12/2022	38	29
	3/13/2023	42	33
	9/11/2023	42	34
GWM-6	9/24/2013	60	48

3/21/2014	60	49
9/17/2014	58	46
3/19/2015	83	56
9/15/2015	85	57
3/21/2016	74	52
9/26/2016	73	51
3/31/2017	78	53
9/21/2017	110	59
3/30/2018	110	60
9/26/2018	82	55
3/13/2019	78	54
10/3/2019	48	40
4/3/2020	42	35
9/30/2020	38	30
3/22/2021	35	25
9/16/2021	31	24
3/24/2022	25	23
9/16/2022	20	21
3/17/2023	17	20
9/14/2023	12	19

The Wilcoxon Statistic is 646
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 2.98167
The Standard Deviation adjusted for ties is 67.7835
The Z Score adjusted for ties is 3.01696
2.98167 > 2.326 indicating statistical significance at 1% level
3.01696 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Cobalt, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 31
Non detect rank is 16

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	16
	3/19/2014	ND<5 U	16
	9/8/2014	ND<5 U	16
	3/17/2015	ND<5 U	16
	9/14/2015	ND<4 J	16
	3/17/2016	ND<2.3 J	16
	9/21/2016	ND<4.3 J	16
	3/24/2017	ND<3.2 J	16
	9/20/2017	ND<5 U	16
	3/27/2018	ND<1.9 J	16
	9/19/2018	130	61
	3/11/2019	200	62
	9/25/2019	21	40
	3/18/2020	50	53
	9/23/2020	ND<2.6 J	16
	3/17/2021	ND<5 U	16
	9/8/2021	ND<0.62 J	16
	3/15/2022	ND<3 J	16
	9/12/2022	ND<3.8 J	16
	3/13/2023	ND<2.9 J	16
	9/11/2023	ND<5.6	16
GWM-2	9/25/2013	ND<5	16
	3/18/2014	46	52
	9/16/2014	44	51
	3/18/2015	110	60
	9/15/2015	58	57
	3/16/2016	37	41
	9/22/2016	60	58
	3/24/2017	71	59
	9/21/2017	380	63
	3/28/2018	56	56
	9/21/2018	43	49
	3/12/2019	52	55
	10/1/2019	50	54
	3/18/2020	40	45
	9/23/2020	40	46
	3/17/2021	38	42
	9/9/2021	43	50
	3/15/2022	38	43
	9/12/2022	38	44
	3/13/2023	42	47
	9/11/2023	42	48
GWM-3	9/25/2013	ND<5	16

3/18/2014	ND<5 J	16
9/16/2014	ND<4.2 J	16
3/18/2015	5.9	32
9/15/2015	ND<4.5 J	16
3/16/2016	6.2	33
9/22/2016	13	39
3/29/2017	8.4	36
9/21/2017	9	38
3/28/2018	6.9	34
9/20/2018	ND<4.2 J	16
3/12/2019	ND<5 J	16
10/1/2019	ND<4.4 J	16
3/18/2020	7.9	35
9/24/2020	ND<4 J	16
3/17/2021	ND<5.4 J	16
9/9/2021	ND<3.6 J	16
3/15/2022	8.4	37
9/16/2022	ND<2.9 J	16
3/15/2023	ND<3.7 J	16
9/11/2023	ND<2.1 J	16

The Wilcoxon Statistic is 261
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -2.63174
The Standard Deviation adjusted for ties is 64.3739
The Z Score adjusted for ties is -2.80393
-2.63174 < 2.326 indicating no statistical significance at 1% level
-2.80393 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Cobalt, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	9.5
	3/19/2014	ND<5 U	9.5
	9/8/2014	ND<5 U	9.5
	3/17/2015	ND<5 U	9.5
	9/14/2015	ND<4 J	9.5
	3/17/2016	ND<2.3 J	9.5
	9/21/2016	ND<4.3 J	9.5
	3/24/2017	ND<3.2 J	9.5
	9/20/2017	ND<5 U	9.5
	3/27/2018	ND<1.9 J	9.5
	9/19/2018	130	40
	3/11/2019	200	41
	9/25/2019	21	19
	3/18/2020	50	32
	9/23/2020	ND<2.6 J	9.5
	3/17/2021	ND<5 U	9.5
	9/8/2021	ND<0.62 J	9.5
	3/15/2022	ND<3 J	9.5
	9/12/2022	ND<3.8 J	9.5
	3/13/2023	ND<2.9 J	9.5
	9/11/2023	ND<5.6	9.5
GWM-2	9/25/2013	ND<5	9.5
	3/18/2014	46	31
	9/16/2014	44	30
	3/18/2015	110	39
	9/15/2015	58	36
	3/16/2016	37	20
	9/22/2016	60	37
	3/24/2017	71	38
	9/21/2017	380	42
	3/28/2018	56	35
	9/21/2018	43	28
	3/12/2019	52	34
	10/1/2019	50	33
	3/18/2020	40	24
	9/23/2020	40	25
	3/17/2021	38	21
	9/9/2021	43	29
	3/15/2022	38	22
	9/12/2022	38	23
	3/13/2023	42	26
	9/11/2023	42	27
GWM-17S	11/14/2019	460	47

3/26/2020	570	49
9/29/2020	420	44
3/16/2021	430	45
9/14/2021	410	43
3/18/2022	430	46
9/13/2022	470	48
3/14/2023	640	50
9/12/2023	690	51

The Wilcoxon Statistic is 378
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is 4.65752
The Standard Deviation adjusted for ties is 39.575
The Z Score adjusted for ties is 4.76311
4.65752 > 2.326 indicating statistical significance at 1% level
4.76311 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Copper, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 17
Non detect rank is 9

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	9
	3/19/2014	10	29
	9/8/2014	19	47
	3/17/2015	14	34
	9/14/2015	18	45
	3/17/2016	18	46
	9/21/2016	14	35
	3/24/2017	16	40
	9/20/2017	7.5	23
	3/27/2018	7.6	24
	9/19/2018	11	30
	3/11/2019	25	52
	9/25/2019	16	41
	3/18/2020	19	48
	9/23/2020	17	43
	3/17/2021	15	37
	9/8/2021	15	38
	3/15/2022	25	53
	9/12/2022	29	55
	3/13/2023	19	49
	9/11/2023	13	33
GWM-2	9/25/2013	ND<5	9
	3/18/2014	ND<2.7 J	9
	9/16/2014	9.4	28
	3/18/2015	63	61
	9/15/2015	44	59
	3/16/2016	6	19
	9/22/2016	26	54
	3/24/2017	150	62
	9/21/2017	180	63
	3/28/2018	21	51
	9/21/2018	ND<4.2 J	9
	3/12/2019	ND<4.6 J	9
	10/1/2019	6.7	21
	3/18/2020	5.7	18
	9/23/2020	ND<4.7 J	9
	3/17/2021	ND<4.6 J	9
	9/9/2021	ND<4.3 J	9
	3/15/2022	29	56
	9/12/2022	ND<3.4 J	9
	3/13/2023	ND<2.3 J	9
	9/11/2023	ND<2.7 J	9
GWM-4	9/18/2013	ND<5	9

3/20/2014	ND<3.3 J	9
9/9/2014	8.8	26
3/16/2015	ND<3.6 J	9
9/9/2015	9	27
3/18/2016	6.6	20
9/20/2016	43	58
3/23/2017	14	36
9/18/2017	15	39
3/15/2018	ND<3.8 J	9
9/17/2018	20	50
3/5/2019	11	31
9/24/2019	45	60
3/16/2020	33	57
9/22/2020	ND<2 J	9
3/16/2021	17	44
9/14/2021	16	42
3/22/2022	12	32
9/13/2022	ND<4.2 J	9
3/14/2023	7.9	25
9/12/2023	7	22

The Wilcoxon Statistic is 392
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.721725
The Standard Deviation adjusted for ties is 67.9108
The Z Score adjusted for ties is -0.728898
-0.721725 < 2.326 indicating no statistical significance at 1% level
-0.728898 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Copper, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 21
Non detect rank is 11

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	11
	3/19/2014	10	37
	9/8/2014	19	52
	3/17/2015	14	42
	9/14/2015	18	50
	3/17/2016	18	51
	9/21/2016	14	43
	3/24/2017	16	47
	9/20/2017	7.5	28
	3/27/2018	7.6	30
	9/19/2018	11	39
	3/11/2019	25	56
	9/25/2019	16	48
	3/18/2020	19	53
	9/23/2020	17	49
	3/17/2021	15	44
	9/8/2021	15	45
	3/15/2022	25	57
	9/12/2022	29	59
	3/13/2023	19	54
	9/11/2023	13	41
GWM-2	9/25/2013	ND<5	11
	3/18/2014	ND<2.7 J	11
	9/16/2014	9.4	36
	3/18/2015	63	62
	9/15/2015	44	61
	3/16/2016	6	23
	9/22/2016	26	58
	3/24/2017	150	63
	9/21/2017	180	64
	3/28/2018	21	55
	9/21/2018	ND<4.2 J	11
	3/12/2019	ND<4.6 J	11
	10/1/2019	6.7	26
	3/18/2020	5.7	22
	9/23/2020	ND<4.7 J	11
	3/17/2021	ND<4.6 J	11
	9/9/2021	ND<4.3 J	11
	3/15/2022	29	60
	9/12/2022	ND<3.4 J	11
	3/13/2023	ND<2.3 J	11
	9/11/2023	ND<2.7 J	11
GWM-5A	9/19/2013	ND<5	11

12/5/2013	ND<5	11
3/19/2014	6.2	24
9/4/2014	7.7	31
3/17/2015	7.5	29
9/11/2015	10	38
3/15/2016	15	46
9/21/2016	8.9	33
3/28/2017	6.3	25
9/19/2017	11	40
3/26/2018	ND<5.5 J	11
9/18/2018	7.2	27
3/4/2019	9	34
9/23/2019	9.3	35
3/19/2020	7.8	32
9/23/2020	ND<4.4 J	11
3/19/2021	ND<5 U	11
9/15/2021	ND<5 U	11
3/16/2022	ND<5.6	11
9/14/2022	ND<5.6	11
3/16/2023	ND<5.6	11
9/13/2023	ND<2 J	11

The Wilcoxon Statistic is 251
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is -2.98957
The Standard Deviation adjusted for ties is 69.4877
The Z Score adjusted for ties is -3.0437
-2.98957 < 2.326 indicating no statistical significance at 1% level
-3.0437 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Copper, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 30
Non detect rank is 15.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	15.5
	3/19/2014	10	39
	9/8/2014	19	51
	3/17/2015	14	42
	9/14/2015	18	49
	3/17/2016	18	50
	9/21/2016	14	43
	3/24/2017	16	46
	9/20/2017	7.5	36
	3/27/2018	7.6	37
	9/19/2018	11	40
	3/11/2019	25	55
	9/25/2019	16	47
	3/18/2020	19	52
	9/23/2020	17	48
	3/17/2021	15	44
	9/8/2021	15	45
	3/15/2022	25	56
	9/12/2022	29	58
	3/13/2023	19	53
	9/11/2023	13	41
GWM-2	9/25/2013	ND<5	15.5
	3/18/2014	ND<2.7 J	15.5
	9/16/2014	9.4	38
	3/18/2015	63	61
	9/15/2015	44	60
	3/16/2016	6	32
	9/22/2016	26	57
	3/24/2017	150	62
	9/21/2017	180	63
	3/28/2018	21	54
	9/21/2018	ND<4.2 J	15.5
	3/12/2019	ND<4.6 J	15.5
	10/1/2019	6.7	34
	3/18/2020	5.7	31
	9/23/2020	ND<4.7 J	15.5
	3/17/2021	ND<4.6 J	15.5
	9/9/2021	ND<4.3 J	15.5
	3/15/2022	29	59
	9/12/2022	ND<3.4 J	15.5
	3/13/2023	ND<2.3 J	15.5
	9/11/2023	ND<2.7 J	15.5
GWM-14	9/24/2013	ND<5	15.5

3/21/2014	ND<5 U	15.5
9/8/2014	ND<5 U	15.5
3/19/2015	7.4	35
9/14/2015	ND<2.2 J	15.5
3/21/2016	ND<3.5 J	15.5
9/23/2016	ND<5 U	15.5
3/27/2017	ND<2.4 J	15.5
9/20/2017	ND<3.1 J	15.5
3/16/2018	ND<2.5 J	15.5
9/20/2018	ND<2.2 J	15.5
3/5/2019	ND<5 U	15.5
9/25/2019	ND<5 U	15.5
3/25/2020	ND<5 U	15.5
9/28/2020	ND<5 U	15.5
3/18/2021	6.6 R	33
9/15/2021	ND<5 U	15.5
3/22/2022	ND<5.6	15.5
9/14/2022	ND<5.6	15.5
3/16/2023	ND<5.6	15.5
9/13/2023	ND<5.6	15.5

The Wilcoxon Statistic is 131.5
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -4.51989
The Standard Deviation adjusted for ties is 64.7804
The Z Score adjusted for ties is -4.7854
-4.51989 < 2.326 indicating no statistical significance at 1% level
-4.7854 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Copper, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 29
Non detect rank is 15

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	15
	3/19/2014	10	39
	9/8/2014	19	51
	3/17/2015	14	42
	9/14/2015	18	49
	3/17/2016	18	50
	9/21/2016	14	43
	3/24/2017	16	46
	9/20/2017	7.5	36
	3/27/2018	7.6	37
	9/19/2018	11	40
	3/11/2019	25	55
	9/25/2019	16	47
	3/18/2020	19	52
	9/23/2020	17	48
	3/17/2021	15	44
	9/8/2021	15	45
	3/15/2022	25	56
	9/12/2022	29	58
	3/13/2023	19	53
	9/11/2023	13	41
GWM-2	9/25/2013	ND<5	15
	3/18/2014	ND<2.7 J	15
	9/16/2014	9.4	38
	3/18/2015	63	61
	9/15/2015	44	60
	3/16/2016	6	32
	9/22/2016	26	57
	3/24/2017	150	62
	9/21/2017	180	63
	3/28/2018	21	54
	9/21/2018	ND<4.2 J	15
	3/12/2019	ND<4.6 J	15
	10/1/2019	6.7	35
	3/18/2020	5.7	31
	9/23/2020	ND<4.7 J	15
	3/17/2021	ND<4.6 J	15
	9/9/2021	ND<4.3 J	15
	3/15/2022	29	59
	9/12/2022	ND<3.4 J	15
	3/13/2023	ND<2.3 J	15
	9/11/2023	ND<2.7 J	15
GWM-6	9/24/2013	ND<5	15

3/21/2014	ND<2.5 J	15
9/17/2014	ND<5 U	15
3/19/2015	ND<5 U	15
9/15/2015	ND<5 U	15
3/21/2016	ND<5 U	15
9/26/2016	ND<2.9 J	15
3/31/2017	ND<2.4 J	15
9/21/2017	6.1	33
3/30/2018	4.1	30
9/26/2018	ND<3.9 J	15
3/13/2019	ND<2.5 J	15
10/3/2019	6.4	34
4/3/2020	ND<2.7 J	15
9/30/2020	ND<5 U	15
3/22/2021	ND<5 U	15
9/16/2021	ND<3.6 J	15
3/24/2022	ND<2 J	15
9/16/2022	ND<5.6	15
3/17/2023	ND<5.6	15
9/14/2023	ND<4 J	15

The Wilcoxon Statistic is 136
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -4.45428
The Standard Deviation adjusted for ties is 65.1584
The Z Score adjusted for ties is -4.68858
-4.45428 < 2.326 indicating no statistical significance at 1% level
-4.68858 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Copper, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 21
Non detect rank is 11

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	11
	3/19/2014	10	33
	9/8/2014	19	51
	3/17/2015	14	39
	9/14/2015	18	48
	3/17/2016	18	49
	9/21/2016	14	40
	3/24/2017	16	43
	9/20/2017	7.5	30
	3/27/2018	7.6	31
	9/19/2018	11	35
	3/11/2019	25	55
	9/25/2019	16	44
	3/18/2020	19	52
	9/23/2020	17	46
	3/17/2021	15	41
	9/8/2021	15	42
	3/15/2022	25	56
	9/12/2022	29	58
	3/13/2023	19	53
	9/11/2023	13	37
GWM-2	9/25/2013	ND<5	11
	3/18/2014	ND<2.7 J	11
	9/16/2014	9.4	32
	3/18/2015	63	61
	9/15/2015	44	60
	3/16/2016	6	26
	9/22/2016	26	57
	3/24/2017	150	62
	9/21/2017	180	63
	3/28/2018	21	54
	9/21/2018	ND<4.2 J	11
	3/12/2019	ND<4.6 J	11
	10/1/2019	6.7	28
	3/18/2020	5.7	22
	9/23/2020	ND<4.7 J	11
	3/17/2021	ND<4.6 J	11
	9/9/2021	ND<4.3 J	11
	3/15/2022	29	59
	9/12/2022	ND<3.4 J	11
	3/13/2023	ND<2.3 J	11
	9/11/2023	ND<2.7 J	11
GWM-3	9/25/2013	ND<5	11

3/18/2014	11	36
9/16/2014	13	38
3/18/2015	ND<3.4 J	11
9/15/2015	ND<4.6 J	11
3/16/2016	ND<3.8 J	11
9/22/2016	10	34
3/29/2017	ND<5.1 J	11
9/21/2017	16	45
3/28/2018	5.7	23
9/20/2018	6.9	29
3/12/2019	6.6	27
10/1/2019	ND<5.1 J	11
3/18/2020	5.8	24
9/24/2020	5.8	25
3/17/2021	18 R	50
9/9/2021	ND<4.8 J	11
3/15/2022	ND<4.7 J	11
9/16/2022	17	47
3/15/2023	ND<5.6	11
9/11/2023	ND<5.6	11

The Wilcoxon Statistic is 257
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -2.69006
The Standard Deviation adjusted for ties is 67.3062
The Z Score adjusted for ties is -2.7412
-2.69006 < 2.326 indicating no statistical significance at 1% level
-2.7412 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Copper, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 20
Non detect rank is 10.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	10.5
	3/19/2014	10	27
	9/8/2014	19	39
	3/17/2015	14	30
	9/14/2015	18	37
	3/17/2016	18	38
	9/21/2016	14	31
	3/24/2017	16	34
	9/20/2017	7.5	24
	3/27/2018	7.6	25
	9/19/2018	11	28
	3/11/2019	25	43
	9/25/2019	16	35
	3/18/2020	19	40
	9/23/2020	17	36
	3/17/2021	15	32
	9/8/2021	15	33
	3/15/2022	25	44
	9/12/2022	29	46
	3/13/2023	19	41
	9/11/2023	13	29
GWM-2	9/25/2013	ND<5	10.5
	3/18/2014	ND<2.7 J	10.5
	9/16/2014	9.4	26
	3/18/2015	63	49
	9/15/2015	44	48
	3/16/2016	6	22
	9/22/2016	26	45
	3/24/2017	150	50
	9/21/2017	180	51
	3/28/2018	21	42
	9/21/2018	ND<4.2 J	10.5
	3/12/2019	ND<4.6 J	10.5
	10/1/2019	6.7	23
	3/18/2020	5.7	21
	9/23/2020	ND<4.7 J	10.5
	3/17/2021	ND<4.6 J	10.5
	9/9/2021	ND<4.3 J	10.5
	3/15/2022	29	47
	9/12/2022	ND<3.4 J	10.5
	3/13/2023	ND<2.3 J	10.5
	9/11/2023	ND<2.7 J	10.5
GWM-17S	11/14/2019	ND<5 U	10.5

3/26/2020	ND<5 U	10.5
9/29/2020	ND<5 U	10.5
3/16/2021	ND<5 U	10.5
9/14/2021	ND<5 U	10.5
3/18/2022	ND<5.6	10.5
9/13/2022	ND<5.6	10.5
3/14/2023	ND<5.6	10.5
9/12/2023	ND<5.6	10.5

The Wilcoxon Statistic is 49.5
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is -3.45916
The Standard Deviation adjusted for ties is 39.2355
The Z Score adjusted for ties is -3.5682
-3.45916 < 2.326 indicating no statistical significance at 1% level
-3.5682 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Iron, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 19
Non detect rank is 10

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	22	20
	3/19/2014	ND<80 U	10
	9/8/2014	64	21
	3/17/2015	ND<42 J	10
	9/14/2015	ND<20 J	10
	3/17/2016	ND<44 J	10
	9/21/2016	ND<20 J	10
	3/24/2017	ND<21 J	10
	9/20/2017	ND<27 J	10
	3/27/2018	ND<25 J	10
	9/19/2018	500	40
	3/11/2019	530	43
	9/25/2019	320	35
	3/18/2020	96	28
	9/23/2020	110	30
	3/17/2021	ND<31 J	10
	9/8/2021	ND<80 U	10
	3/15/2022	ND<30 J	10
	9/12/2022	ND<37 J	10
	3/13/2023	ND<23 J	10
	9/11/2023	65	22
GWM-2	9/25/2013	1137	46
	3/18/2014	ND<40 J	10
	9/16/2014	74	24
	3/18/2015	360	37
	9/15/2015	280	34
	3/16/2016	ND<24 J	10
	9/22/2016	250	33
	3/24/2017	1000	45
	9/21/2017	680	44
	3/28/2018	240	32
	9/21/2018	97	29
	3/12/2019	72	23
	10/1/2019	ND<34 J	10
	3/18/2020	ND<45 J	10
	9/23/2020	320	36
	3/17/2021	81	25
	9/9/2021	86	26
	3/15/2022	91	27
	9/12/2022	420	38
	3/13/2023	110	31
	9/11/2023	ND<47 J	10
GWM-4	9/18/2013	439	39

3/20/2014	63600	62
9/9/2014	4100	54
3/16/2015	4800	56
9/9/2015	6200	59
3/18/2016	5500	58
9/20/2016	7700	61
3/23/2017	3800	53
9/18/2017	7600	60
3/15/2018	4800	57
9/17/2018	2700	51
3/5/2019	3100	52
9/24/2019	4700	55
3/16/2020	89000	63
9/22/2020	ND<28 J	10
3/16/2021	2300	50
9/14/2021	2000	49
3/22/2022	1400	47
9/13/2022	510	41
3/14/2023	1800	48
9/12/2023	520	42

The Wilcoxon Statistic is 836
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 5.75193
The Standard Deviation adjusted for ties is 67.6409
The Z Score adjusted for ties is 5.83227
5.75193 > 2.326 indicating statistical significance at 1% level
5.83227 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Iron, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	22	19
	3/19/2014	ND<80 U	9.5
	9/8/2014	64	20
	3/17/2015	ND<42 J	9.5
	9/14/2015	ND<20 J	9.5
	3/17/2016	ND<44 J	9.5
	9/21/2016	ND<20 J	9.5
	3/24/2017	ND<21 J	9.5
	9/20/2017	ND<27 J	9.5
	3/27/2018	ND<25 J	9.5
	9/19/2018	500	39
	3/11/2019	530	41
	9/25/2019	320	35
	3/18/2020	96	27
	9/23/2020	110	29
	3/17/2021	ND<31 J	9.5
	9/8/2021	ND<80 U	9.5
	3/15/2022	ND<30 J	9.5
	9/12/2022	ND<37 J	9.5
	3/13/2023	ND<23 J	9.5
	9/11/2023	65	21
GWM-2	9/25/2013	1137	50
	3/18/2014	ND<40 J	9.5
	9/16/2014	74	23
	3/18/2015	360	37
	9/15/2015	280	34
	3/16/2016	ND<24 J	9.5
	9/22/2016	250	33
	3/24/2017	1000	47
	9/21/2017	680	44
	3/28/2018	240	32
	9/21/2018	97	28
	3/12/2019	72	22
	10/1/2019	ND<34 J	9.5
	3/18/2020	ND<45 J	9.5
	9/23/2020	320	36
	3/17/2021	81	24
	9/9/2021	86	25
	3/15/2022	91	26
	9/12/2022	420	38
	3/13/2023	110	30
	9/11/2023	ND<47 J	9.5
GWM-5A	9/19/2013	4576	64

12/5/2013	239	31
3/19/2014	660	43
9/4/2014	1900	56
3/17/2015	870	46
9/11/2015	1100	48
3/15/2016	1100	49
9/21/2016	1300	52
3/28/2017	510	40
9/19/2017	2000	57
3/26/2018	690	45
9/18/2018	3100	61
3/4/2019	2700	60
9/23/2019	3300	62
3/19/2020	1200	51
9/23/2020	2400	59
3/19/2021	650	42
9/15/2021	1300	53
3/16/2022	1800	55
9/14/2022	1500	54
3/16/2023	2000	58
9/13/2023	3600	63

The Wilcoxon Statistic is 896
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is 6.12755
The Standard Deviation adjusted for ties is 69.9569
The Z Score adjusted for ties is 6.19667
6.12755 > 2.326 indicating statistical significance at 1% level
6.19667 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Iron, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	22	19
	3/19/2014	ND<80 U	9.5
	9/8/2014	64	20
	3/17/2015	ND<42 J	9.5
	9/14/2015	ND<20 J	9.5
	3/17/2016	ND<44 J	9.5
	9/21/2016	ND<20 J	9.5
	3/24/2017	ND<21 J	9.5
	9/20/2017	ND<27 J	9.5
	3/27/2018	ND<25 J	9.5
	9/19/2018	500	39
	3/11/2019	530	40
	9/25/2019	320	35
	3/18/2020	96	27
	9/23/2020	110	29
	3/17/2021	ND<31 J	9.5
	9/8/2021	ND<80 U	9.5
	3/15/2022	ND<30 J	9.5
	9/12/2022	ND<37 J	9.5
	3/13/2023	ND<23 J	9.5
	9/11/2023	65	21
GWM-2	9/25/2013	1137	43
	3/18/2014	ND<40 J	9.5
	9/16/2014	74	23
	3/18/2015	360	37
	9/15/2015	280	34
	3/16/2016	ND<24 J	9.5
	9/22/2016	250	33
	3/24/2017	1000	42
	9/21/2017	680	41
	3/28/2018	240	32
	9/21/2018	97	28
	3/12/2019	72	22
	10/1/2019	ND<34 J	9.5
	3/18/2020	ND<45 J	9.5
	9/23/2020	320	36
	3/17/2021	81	24
	9/9/2021	86	25
	3/15/2022	91	26
	9/12/2022	420	38
	3/13/2023	110	30
	9/11/2023	ND<47 J	9.5
GWM-14	9/24/2013	91070	63

3/21/2014	82100	62
9/8/2014	77200	61
3/19/2015	68700	55
9/14/2015	71800	59
3/21/2016	69600	58
9/23/2016	66400	51
3/27/2017	72700	60
9/20/2017	67000	52
3/16/2018	67100	53
9/20/2018	54800	45
3/5/2019	67400	54
9/25/2019	62300	49
3/25/2020	69400	57
9/28/2020	69300	56
3/18/2021	110 R	31
9/15/2021	62000	48
3/22/2022	62900	50
9/14/2022	54700	44
3/16/2023	55600	47
9/13/2023	55500	46

The Wilcoxon Statistic is 870
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 6.24766
The Standard Deviation adjusted for ties is 67.7835
The Z Score adjusted for ties is 6.3216
6.24766 > 2.326 indicating statistical significance at 1% level
6.3216 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Iron, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	22	19
	3/19/2014	ND<80 U	9.5
	9/8/2014	64	20
	3/17/2015	ND<42 J	9.5
	9/14/2015	ND<20 J	9.5
	3/17/2016	ND<44 J	9.5
	9/21/2016	ND<20 J	9.5
	3/24/2017	ND<21 J	9.5
	9/20/2017	ND<27 J	9.5
	3/27/2018	ND<25 J	9.5
	9/19/2018	500	38
	3/11/2019	530	39
	9/25/2019	320	34
	3/18/2020	96	27
	9/23/2020	110	29
	3/17/2021	ND<31 J	9.5
	9/8/2021	ND<80 U	9.5
	3/15/2022	ND<30 J	9.5
	9/12/2022	ND<37 J	9.5
	3/13/2023	ND<23 J	9.5
	9/11/2023	65	21
GWM-2	9/25/2013	1137	42
	3/18/2014	ND<40 J	9.5
	9/16/2014	74	23
	3/18/2015	360	36
	9/15/2015	280	33
	3/16/2016	ND<24 J	9.5
	9/22/2016	250	32
	3/24/2017	1000	41
	9/21/2017	680	40
	3/28/2018	240	31
	9/21/2018	97	28
	3/12/2019	72	22
	10/1/2019	ND<34 J	9.5
	3/18/2020	ND<45 J	9.5
	9/23/2020	320	35
	3/17/2021	81	24
	9/9/2021	86	25
	3/15/2022	91	26
	9/12/2022	420	37
	3/13/2023	110	30
	9/11/2023	ND<47 J	9.5
GWM-6	9/24/2013	9312	45

3/21/2014	6600	43
9/17/2014	6700	44
3/19/2015	12300	46
9/15/2015	16400	49
3/21/2016	16400	50
9/26/2016	13700	47
3/31/2017	16300	48
9/21/2017	23300	51
3/30/2018	35600	52
9/26/2018	51400	55
3/13/2019	63300	59
10/3/2019	49300	54
4/3/2020	43900	53
9/30/2020	61200	56
3/22/2021	84200	62
9/16/2021	63000	58
3/24/2022	79200	60
9/16/2022	86200	63
3/17/2023	82100	61
9/14/2023	61700	57

The Wilcoxon Statistic is 882
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 6.42262
The Standard Deviation adjusted for ties is 67.7835
The Z Score adjusted for ties is 6.49864
6.42262 > 2.326 indicating statistical significance at 1% level
6.49864 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Iron, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 35
Non detect rank is 18

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	22	37
	3/19/2014	ND<80 U	18
	9/8/2014	64	38
	3/17/2015	ND<42 J	18
	9/14/2015	ND<20 J	18
	3/17/2016	ND<44 J	18
	9/21/2016	ND<20 J	18
	3/24/2017	ND<21 J	18
	9/20/2017	ND<27 J	18
	3/27/2018	ND<25 J	18
	9/19/2018	500	58
	3/11/2019	530	59
	9/25/2019	320	54
	3/18/2020	96	47
	9/23/2020	110	49
	3/17/2021	ND<31 J	18
	9/8/2021	ND<80 U	18
	3/15/2022	ND<30 J	18
	9/12/2022	ND<37 J	18
	3/13/2023	ND<23 J	18
	9/11/2023	65	39
GWM-2	9/25/2013	1137	62
	3/18/2014	ND<40 J	18
	9/16/2014	74	41
	3/18/2015	360	56
	9/15/2015	280	53
	3/16/2016	ND<24 J	18
	9/22/2016	250	52
	3/24/2017	1000	61
	9/21/2017	680	60
	3/28/2018	240	51
	9/21/2018	97	48
	3/12/2019	72	40
	10/1/2019	ND<34 J	18
	3/18/2020	ND<45 J	18
	9/23/2020	320	55
	3/17/2021	81	42
	9/9/2021	86	45
	3/15/2022	91	46
	9/12/2022	420	57
	3/13/2023	110	50
	9/11/2023	ND<47 J	18
GWM-3	9/25/2013	10	36

3/18/2014	ND<20 J	18
9/16/2014	ND<80 U	18
3/18/2015	ND<80 U	18
9/15/2015	ND<19 J	18
3/16/2016	ND<33 J	18
9/22/2016	83	43
3/29/2017	ND<39 J	18
9/21/2017	ND<37 J	18
3/28/2018	ND<20 J	18
9/20/2018	ND<80 U	18
3/12/2019	ND<80 U	18
10/1/2019	ND<80 U	18
3/18/2020	ND<80 U	18
9/24/2020	ND<80 U	18
3/17/2021	4900 R	63
9/9/2021	ND<80 U	18
3/15/2022	85	44
9/16/2022	ND<41 J	18
3/15/2023	ND<43 J	18
9/11/2023	ND<28 J	18

The Wilcoxon Statistic is 261
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -2.63174
The Standard Deviation adjusted for ties is 62.4329
The Z Score adjusted for ties is -2.8911
-2.63174 < 2.326 indicating no statistical significance at 1% level
-2.8911 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Iron, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	22	19
	3/19/2014	ND<80 U	9.5
	9/8/2014	64	20
	3/17/2015	ND<42 J	9.5
	9/14/2015	ND<20 J	9.5
	3/17/2016	ND<44 J	9.5
	9/21/2016	ND<20 J	9.5
	3/24/2017	ND<21 J	9.5
	9/20/2017	ND<27 J	9.5
	3/27/2018	ND<25 J	9.5
	9/19/2018	500	38
	3/11/2019	530	39
	9/25/2019	320	34
	3/18/2020	96	27
	9/23/2020	110	29
	3/17/2021	ND<31 J	9.5
	9/8/2021	ND<80 U	9.5
	3/15/2022	ND<30 J	9.5
	9/12/2022	ND<37 J	9.5
	3/13/2023	ND<23 J	9.5
	9/11/2023	65	21
GWM-2	9/25/2013	1137	42
	3/18/2014	ND<40 J	9.5
	9/16/2014	74	23
	3/18/2015	360	36
	9/15/2015	280	33
	3/16/2016	ND<24 J	9.5
	9/22/2016	250	32
	3/24/2017	1000	41
	9/21/2017	680	40
	3/28/2018	240	31
	9/21/2018	97	28
	3/12/2019	72	22
	10/1/2019	ND<34 J	9.5
	3/18/2020	ND<45 J	9.5
	9/23/2020	320	35
	3/17/2021	81	24
	9/9/2021	86	25
	3/15/2022	91	26
	9/12/2022	420	37
	3/13/2023	110	30
	9/11/2023	ND<47 J	9.5
GWM-17S	11/14/2019	84100	45

3/26/2020	85200	47
9/29/2020	101000	49
3/16/2021	107000	51
9/14/2021	100000	48
3/18/2022	85100	46
9/13/2022	83200	44
3/14/2023	102000	50
9/12/2023	66300	43

The Wilcoxon Statistic is 378
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is 4.65752
The Standard Deviation adjusted for ties is 39.575
The Z Score adjusted for ties is 4.76311
4.65752 > 2.326 indicating statistical significance at 1% level
4.76311 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Lead, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 57
Non detect rank is 29

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	29
	3/19/2014	ND<5 U	29
	9/8/2014	ND<5 U	29
	3/17/2015	ND<5 U	29
	9/14/2015	ND<5 U	29
	3/17/2016	ND<5 U	29
	9/21/2016	ND<5 U	29
	3/24/2017	ND<5 U	29
	9/20/2017	ND<5 U	29
	3/27/2018	ND<5 U	29
	9/19/2018	ND<1.9 J	29
	3/11/2019	2.4	59
	9/25/2019	ND<5 U	29
	3/18/2020	ND<5 U	29
	9/23/2020	ND<0.79 J	29
	3/17/2021	ND<5 U	29
	9/8/2021	ND<5 U	29
	3/15/2022	ND<2.2	29
	9/12/2022	ND<0.81 J	29
	3/13/2023	ND<2.2	29
	9/11/2023	ND<2.2	29
GWM-2	9/25/2013	ND<5	29
	3/18/2014	ND<1.4 J	29
	9/16/2014	ND<0.78 J	29
	3/18/2015	16	62
	9/15/2015	6.2	60
	3/16/2016	ND<5 U	29
	9/22/2016	ND<1.2 J	29
	3/24/2017	18	63
	9/21/2017	13	61
	3/28/2018	ND<1.7 J	29
	9/21/2018	ND<5 U	29
	3/12/2019	ND<5 U	29
	10/1/2019	ND<5 U	29
	3/18/2020	ND<5 U	29
	9/23/2020	ND<5 U	29
	3/17/2021	ND<5 U	29
	9/9/2021	ND<5 U	29
	3/15/2022	ND<2.2	29
	9/12/2022	ND<2.2	29
	3/13/2023	ND<2.2	29
	9/11/2023	ND<2.2	29
GWM-4	9/18/2013	ND<5	29

3/20/2014	ND<5 U	29
9/9/2014	ND<5 U	29
3/16/2015	ND<5 U	29
9/9/2015	ND<5 U	29
3/18/2016	ND<5 U	29
9/20/2016	ND<5 U	29
3/23/2017	ND<5 U	29
9/18/2017	ND<5 U	29
3/15/2018	ND<5 U	29
9/17/2018	ND<5 U	29
3/5/2019	ND<5 U	29
9/24/2019	ND<5 U	29
3/16/2020	2.3	58
9/22/2020	ND<5 U	29
3/16/2021	ND<5 U	29
9/14/2021	ND<5 U	29
3/22/2022	ND<2.2	29
9/13/2022	ND<1.6 J	29
3/14/2023	ND<2.2	29
9/12/2023	ND<2.2	29

The Wilcoxon Statistic is 407
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.50302
The Standard Deviation adjusted for ties is 34.9322
The Z Score adjusted for ties is -0.987628
-0.50302 < 2.326 indicating no statistical significance at 1% level
-0.987628 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Lead, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 59
Non detect rank is 30

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	30
	3/19/2014	ND<5 U	30
	9/8/2014	ND<5 U	30
	3/17/2015	ND<5 U	30
	9/14/2015	ND<5 U	30
	3/17/2016	ND<5 U	30
	9/21/2016	ND<5 U	30
	3/24/2017	ND<5 U	30
	9/20/2017	ND<5 U	30
	3/27/2018	ND<5 U	30
	9/19/2018	ND<1.9 J	30
	3/11/2019	2.4	60
	9/25/2019	ND<5 U	30
	3/18/2020	ND<5 U	30
	9/23/2020	ND<0.79 J	30
	3/17/2021	ND<5 U	30
	9/8/2021	ND<5 U	30
	3/15/2022	ND<2.2	30
	9/12/2022	ND<0.81 J	30
	3/13/2023	ND<2.2	30
	9/11/2023	ND<2.2	30
GWM-2	9/25/2013	ND<5	30
	3/18/2014	ND<1.4 J	30
	9/16/2014	ND<0.78 J	30
	3/18/2015	16	63
	9/15/2015	6.2	61
	3/16/2016	ND<5 U	30
	9/22/2016	ND<1.2 J	30
	3/24/2017	18	64
	9/21/2017	13	62
	3/28/2018	ND<1.7 J	30
	9/21/2018	ND<5 U	30
	3/12/2019	ND<5 U	30
	10/1/2019	ND<5 U	30
	3/18/2020	ND<5 U	30
	9/23/2020	ND<5 U	30
	3/17/2021	ND<5 U	30
	9/9/2021	ND<5 U	30
	3/15/2022	ND<2.2	30
	9/12/2022	ND<2.2	30
	3/13/2023	ND<2.2	30
	9/11/2023	ND<2.2	30
GWM-5A	9/19/2013	ND<5	30

12/5/2013	ND<5	30
3/19/2014	ND<1.2 J	30
9/4/2014	ND<5 U	30
3/17/2015	ND<5 U	30
9/11/2015	ND<5 U	30
3/15/2016	ND<5 U	30
9/21/2016	ND<5 U	30
3/28/2017	ND<5 U	30
9/19/2017	ND<5 U	30
3/26/2018	ND<5 U	30
9/18/2018	ND<5 U	30
3/4/2019	ND<5 U	30
9/23/2019	ND<5 U	30
3/19/2020	ND<5 U	30
9/23/2020	ND<5 U	30
3/19/2021	ND<5 U	30
9/15/2021	ND<5 U	30
3/16/2022	ND<2.2	30
9/14/2022	ND<2.2	30
3/16/2023	ND<2.2	30
9/13/2023	ND<2.2	30

The Wilcoxon Statistic is 407
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is -0.784496
The Standard Deviation adjusted for ties is 32.9235
The Z Score adjusted for ties is -1.68572
-0.784496 < 2.326 indicating no statistical significance at 1% level
-1.68572 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Lead, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 58
Non detect rank is 29.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	29.5
	3/19/2014	ND<5 U	29.5
	9/8/2014	ND<5 U	29.5
	3/17/2015	ND<5 U	29.5
	9/14/2015	ND<5 U	29.5
	3/17/2016	ND<5 U	29.5
	9/21/2016	ND<5 U	29.5
	3/24/2017	ND<5 U	29.5
	9/20/2017	ND<5 U	29.5
	3/27/2018	ND<5 U	29.5
	9/19/2018	ND<1.9 J	29.5
	3/11/2019	2.4	59
	9/25/2019	ND<5 U	29.5
	3/18/2020	ND<5 U	29.5
	9/23/2020	ND<0.79 J	29.5
	3/17/2021	ND<5 U	29.5
	9/8/2021	ND<5 U	29.5
	3/15/2022	ND<2.2	29.5
	9/12/2022	ND<0.81 J	29.5
	3/13/2023	ND<2.2	29.5
	9/11/2023	ND<2.2	29.5
GWM-2	9/25/2013	ND<5	29.5
	3/18/2014	ND<1.4 J	29.5
	9/16/2014	ND<0.78 J	29.5
	3/18/2015	16	62
	9/15/2015	6.2	60
	3/16/2016	ND<5 U	29.5
	9/22/2016	ND<1.2 J	29.5
	3/24/2017	18	63
	9/21/2017	13	61
	3/28/2018	ND<1.7 J	29.5
	9/21/2018	ND<5 U	29.5
	3/12/2019	ND<5 U	29.5
	10/1/2019	ND<5 U	29.5
	3/18/2020	ND<5 U	29.5
	9/23/2020	ND<5 U	29.5
	3/17/2021	ND<5 U	29.5
	9/9/2021	ND<5 U	29.5
	3/15/2022	ND<2.2	29.5
	9/12/2022	ND<2.2	29.5
	3/13/2023	ND<2.2	29.5
	9/11/2023	ND<2.2	29.5
GWM-14	9/24/2013	ND<5	29.5

3/21/2014	ND<5 U	29.5
9/8/2014	ND<5 U	29.5
3/19/2015	ND<5 U	29.5
9/14/2015	ND<5 U	29.5
3/21/2016	ND<5 U	29.5
9/23/2016	ND<5 U	29.5
3/27/2017	ND<5 U	29.5
9/20/2017	ND<5 U	29.5
3/16/2018	ND<5 U	29.5
9/20/2018	ND<5 U	29.5
3/5/2019	ND<5 U	29.5
9/25/2019	ND<5 U	29.5
3/25/2020	ND<5 U	29.5
9/28/2020	ND<5 U	29.5
3/18/2021	ND<1.1 JR	29.5
9/15/2021	ND<5 U	29.5
3/22/2022	ND<2.2	29.5
9/14/2022	ND<2.2	29.5
3/16/2023	ND<2.2	29.5
9/13/2023	ND<2.2	29.5

The Wilcoxon Statistic is 388.5
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.772756
The Standard Deviation adjusted for ties is 32.1501
The Z Score adjusted for ties is -1.64852
-0.772756 < 2.326 indicating no statistical significance at 1% level
-1.64852 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Lead, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 57
Non detect rank is 29

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	29
	3/19/2014	ND<5 U	29
	9/8/2014	ND<5 U	29
	3/17/2015	ND<5 U	29
	9/14/2015	ND<5 U	29
	3/17/2016	ND<5 U	29
	9/21/2016	ND<5 U	29
	3/24/2017	ND<5 U	29
	9/20/2017	ND<5 U	29
	3/27/2018	ND<5 U	29
	9/19/2018	ND<1.9 J	29
	3/11/2019	2.4	59
	9/25/2019	ND<5 U	29
	3/18/2020	ND<5 U	29
	9/23/2020	ND<0.79 J	29
	3/17/2021	ND<5 U	29
	9/8/2021	ND<5 U	29
	3/15/2022	ND<2.2	29
	9/12/2022	ND<0.81 J	29
	3/13/2023	ND<2.2	29
	9/11/2023	ND<2.2	29
GWM-2	9/25/2013	ND<5	29
	3/18/2014	ND<1.4 J	29
	9/16/2014	ND<0.78 J	29
	3/18/2015	16	62
	9/15/2015	6.2	60
	3/16/2016	ND<5 U	29
	9/22/2016	ND<1.2 J	29
	3/24/2017	18	63
	9/21/2017	13	61
	3/28/2018	ND<1.7 J	29
	9/21/2018	ND<5 U	29
	3/12/2019	ND<5 U	29
	10/1/2019	ND<5 U	29
	3/18/2020	ND<5 U	29
	9/23/2020	ND<5 U	29
	3/17/2021	ND<5 U	29
	9/9/2021	ND<5 U	29
	3/15/2022	ND<2.2	29
	9/12/2022	ND<2.2	29
	3/13/2023	ND<2.2	29
	9/11/2023	ND<2.2	29
GWM-6	9/24/2013	ND<5	29

3/21/2014	ND<5 U	29
9/17/2014	ND<5 U	29
3/19/2015	ND<5 U	29
9/15/2015	ND<5 U	29
3/21/2016	ND<5 U	29
9/26/2016	ND<5 U	29
3/31/2017	ND<5 U	29
9/21/2017	ND<5 U	29
3/30/2018	2.2	58
9/26/2018	ND<5 U	29
3/13/2019	ND<5 U	29
10/3/2019	ND<5 U	29
4/3/2020	ND<5 U	29
9/30/2020	ND<5 U	29
3/22/2021	ND<5 U	29
9/16/2021	ND<5 U	29
3/24/2022	ND<2.2	29
9/16/2022	ND<2.2	29
3/17/2023	ND<2.2	29
9/14/2023	ND<2.2	29

The Wilcoxon Statistic is 407
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.50302
The Standard Deviation adjusted for ties is 34.9322
The Z Score adjusted for ties is -0.987628
-0.50302 < 2.326 indicating no statistical significance at 1% level
-0.987628 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Lead, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 58
Non detect rank is 29.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	29.5
	3/19/2014	ND<5 U	29.5
	9/8/2014	ND<5 U	29.5
	3/17/2015	ND<5 U	29.5
	9/14/2015	ND<5 U	29.5
	3/17/2016	ND<5 U	29.5
	9/21/2016	ND<5 U	29.5
	3/24/2017	ND<5 U	29.5
	9/20/2017	ND<5 U	29.5
	3/27/2018	ND<5 U	29.5
	9/19/2018	ND<1.9 J	29.5
	3/11/2019	2.4	59
	9/25/2019	ND<5 U	29.5
	3/18/2020	ND<5 U	29.5
	9/23/2020	ND<0.79 J	29.5
	3/17/2021	ND<5 U	29.5
	9/8/2021	ND<5 U	29.5
	3/15/2022	ND<2.2	29.5
	9/12/2022	ND<0.81 J	29.5
	3/13/2023	ND<2.2	29.5
	9/11/2023	ND<2.2	29.5
GWM-2	9/25/2013	ND<5	29.5
	3/18/2014	ND<1.4 J	29.5
	9/16/2014	ND<0.78 J	29.5
	3/18/2015	16	62
	9/15/2015	6.2	60
	3/16/2016	ND<5 U	29.5
	9/22/2016	ND<1.2 J	29.5
	3/24/2017	18	63
	9/21/2017	13	61
	3/28/2018	ND<1.7 J	29.5
	9/21/2018	ND<5 U	29.5
	3/12/2019	ND<5 U	29.5
	10/1/2019	ND<5 U	29.5
	3/18/2020	ND<5 U	29.5
	9/23/2020	ND<5 U	29.5
	3/17/2021	ND<5 U	29.5
	9/9/2021	ND<5 U	29.5
	3/15/2022	ND<2.2	29.5
	9/12/2022	ND<2.2	29.5
	3/13/2023	ND<2.2	29.5
	9/11/2023	ND<2.2	29.5
GWM-3	9/25/2013	ND<5	29.5

3/18/2014	ND<1.9 J	29.5
9/16/2014	ND<5 U	29.5
3/18/2015	ND<5 U	29.5
9/15/2015	ND<5 U	29.5
3/16/2016	ND<5 U	29.5
9/22/2016	ND<5 U	29.5
3/29/2017	ND<5 U	29.5
9/21/2017	ND<5 U	29.5
3/28/2018	ND<5 U	29.5
9/20/2018	ND<5 U	29.5
3/12/2019	ND<5 U	29.5
10/1/2019	ND<5 U	29.5
3/18/2020	ND<0.76 J	29.5
9/24/2020	ND<5 U	29.5
3/17/2021	ND<1.2 J	29.5
9/9/2021	ND<5 U	29.5
3/15/2022	ND<2.2	29.5
9/16/2022	ND<2.2	29.5
3/15/2023	ND<2.2	29.5
9/11/2023	ND<0.75 J	29.5

The Wilcoxon Statistic is 388.5
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.772756
The Standard Deviation adjusted for ties is 32.1501
The Z Score adjusted for ties is -1.64852
-0.772756 < 2.326 indicating no statistical significance at 1% level
-1.64852 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Lead, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 46
Non detect rank is 23.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	23.5
	3/19/2014	ND<5 U	23.5
	9/8/2014	ND<5 U	23.5
	3/17/2015	ND<5 U	23.5
	9/14/2015	ND<5 U	23.5
	3/17/2016	ND<5 U	23.5
	9/21/2016	ND<5 U	23.5
	3/24/2017	ND<5 U	23.5
	9/20/2017	ND<5 U	23.5
	3/27/2018	ND<5 U	23.5
	9/19/2018	ND<1.9 J	23.5
	3/11/2019	2.4	47
	9/25/2019	ND<5 U	23.5
	3/18/2020	ND<5 U	23.5
	9/23/2020	ND<0.79 J	23.5
	3/17/2021	ND<5 U	23.5
	9/8/2021	ND<5 U	23.5
	3/15/2022	ND<2.2	23.5
	9/12/2022	ND<0.81 J	23.5
	3/13/2023	ND<2.2	23.5
	9/11/2023	ND<2.2	23.5
GWM-2	9/25/2013	ND<5	23.5
	3/18/2014	ND<1.4 J	23.5
	9/16/2014	ND<0.78 J	23.5
	3/18/2015	16	50
	9/15/2015	6.2	48
	3/16/2016	ND<5 U	23.5
	9/22/2016	ND<1.2 J	23.5
	3/24/2017	18	51
	9/21/2017	13	49
	3/28/2018	ND<1.7 J	23.5
	9/21/2018	ND<5 U	23.5
	3/12/2019	ND<5 U	23.5
	10/1/2019	ND<5 U	23.5
	3/18/2020	ND<5 U	23.5
	9/23/2020	ND<5 U	23.5
	3/17/2021	ND<5 U	23.5
	9/9/2021	ND<5 U	23.5
	3/15/2022	ND<2.2	23.5
	9/12/2022	ND<2.2	23.5
	3/13/2023	ND<2.2	23.5
	9/11/2023	ND<2.2	23.5
GWM-17S	11/14/2019	ND<5 U	23.5

3/26/2020	ND<5 U	23.5
9/29/2020	ND<5 U	23.5
3/16/2021	ND<5 U	23.5
9/14/2021	ND<5 U	23.5
3/18/2022	ND<2.2	23.5
9/13/2022	ND<2.2	23.5
3/14/2023	ND<2.2	23.5
9/12/2023	ND<2.2	23.5

The Wilcoxon Statistic is 166.5
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is -0.568291
The Standard Deviation adjusted for ties is 20.885
The Z Score adjusted for ties is -1.10127
-0.568291 < 2.326 indicating no statistical significance at 1% level
-1.10127 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Magnesium, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	1495	2
	3/19/2014	4000	8
	9/8/2014	2700	3
	3/17/2015	7900	39
	9/14/2015	7000	31
	3/17/2016	4800	11
	9/21/2016	6000	16
	3/24/2017	4100	10
	9/20/2017	3200	7
	3/27/2018	6600	25
	9/19/2018	3100	6
	3/11/2019	3000	5
	9/25/2019	8900	42
	3/18/2020	7000	32
	9/23/2020	5400	13
	3/17/2021	4000	9
	9/8/2021	2900	4
	3/15/2022	11400	44
	9/12/2022	8500	41
	3/13/2023	6500	24
	9/11/2023	4900	12
GWM-2	9/25/2013	6078	17
	3/18/2014	7900	40
	9/16/2014	7600	36
	3/18/2015	7000	33
	9/15/2015	6900	29
	3/16/2016	6600	26
	9/22/2016	6100	18
	3/24/2017	5700	15
	9/21/2017	6100	19
	3/28/2018	7200	35
	9/21/2018	7800	38
	3/12/2019	6900	30
	10/1/2019	7700	37
	3/18/2020	7000	34
	9/23/2020	5500	14
	3/17/2021	6400	22
	9/9/2021	6300	21
	3/15/2022	6400	23
	9/12/2022	6200	20
	3/13/2023	6700	27
	9/11/2023	6800	28
GWM-4	9/18/2013	486	1

3/20/2014	18700	62
9/9/2014	11400	45
3/16/2015	12700	48
9/9/2015	10700	43
3/18/2016	13300	51
9/20/2016	14600	54
3/23/2017	14900	57
9/18/2017	14900	58
3/15/2018	14800	56
9/17/2018	12500	46
3/5/2019	15300	60
9/24/2019	12800	49
3/16/2020	26300	63
9/22/2020	14700	55
3/16/2021	16200	61
9/14/2021	15000	59
3/22/2022	14100	53
9/13/2022	13300	52
3/14/2023	13000	50
9/12/2023	12500	47

The Wilcoxon Statistic is 839
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 5.79567
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 5.79567
5.79567 > 2.326 indicating statistical significance at 1% level
5.79567 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Magnesium, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	1495	1
	3/19/2014	4000	7
	9/8/2014	2700	2
	3/17/2015	7900	39
	9/14/2015	7000	30
	3/17/2016	4800	10
	9/21/2016	6000	15
	3/24/2017	4100	9
	9/20/2017	3200	6
	3/27/2018	6600	24
	9/19/2018	3100	5
	3/11/2019	3000	4
	9/25/2019	8900	48
	3/18/2020	7000	31
	9/23/2020	5400	12
	3/17/2021	4000	8
	9/8/2021	2900	3
	3/15/2022	11400	59
	9/12/2022	8500	43
	3/13/2023	6500	23
	9/11/2023	4900	11
GWM-2	9/25/2013	6078	16
	3/18/2014	7900	40
	9/16/2014	7600	35
	3/18/2015	7000	32
	9/15/2015	6900	28
	3/16/2016	6600	25
	9/22/2016	6100	17
	3/24/2017	5700	14
	9/21/2017	6100	18
	3/28/2018	7200	34
	9/21/2018	7800	38
	3/12/2019	6900	29
	10/1/2019	7700	37
	3/18/2020	7000	33
	9/23/2020	5500	13
	3/17/2021	6400	21
	9/9/2021	6300	20
	3/15/2022	6400	22
	9/12/2022	6200	19
	3/13/2023	6700	26
	9/11/2023	6800	27
GWM-5A	9/19/2013	20020	64

12/5/2013	8260	41
3/19/2014	9800	53
9/4/2014	10900	57
3/17/2015	8700	45
9/11/2015	10000	54
3/15/2016	9000	49
9/21/2016	8800	47
3/28/2017	7600	36
9/19/2017	8300	42
3/26/2018	8700	46
9/18/2018	12100	61
3/4/2019	13600	63
9/23/2019	12500	62
3/19/2020	9700	52
9/23/2020	10600	56
3/19/2021	10100	55
9/15/2021	11000	58
3/16/2022	9000	50
9/14/2022	9200	51
3/16/2023	8500	44
9/13/2023	11800	60

The Wilcoxon Statistic is 893
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is 6.08515
The Standard Deviation adjusted for ties is 70.746
The Z Score adjusted for ties is 6.08515
6.08515 > 2.326 indicating statistical significance at 1% level
6.08515 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Magnesium, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	1495	1
	3/19/2014	4000	8
	9/8/2014	2700	2
	3/17/2015	7900	39
	9/14/2015	7000	31
	3/17/2016	4800	11
	9/21/2016	6000	16
	3/24/2017	4100	10
	9/20/2017	3200	7
	3/27/2018	6600	25
	9/19/2018	3100	6
	3/11/2019	3000	5
	9/25/2019	8900	42
	3/18/2020	7000	32
	9/23/2020	5400	13
	3/17/2021	4000	9
	9/8/2021	2900	3
	3/15/2022	11400	43
	9/12/2022	8500	41
	3/13/2023	6500	24
	9/11/2023	4900	12
GWM-2	9/25/2013	6078	17
	3/18/2014	7900	40
	9/16/2014	7600	36
	3/18/2015	7000	33
	9/15/2015	6900	29
	3/16/2016	6600	26
	9/22/2016	6100	18
	3/24/2017	5700	15
	9/21/2017	6100	19
	3/28/2018	7200	35
	9/21/2018	7800	38
	3/12/2019	6900	30
	10/1/2019	7700	37
	3/18/2020	7000	34
	9/23/2020	5500	14
	3/17/2021	6400	22
	9/9/2021	6300	21
	3/15/2022	6400	23
	9/12/2022	6200	20
	3/13/2023	6700	27
	9/11/2023	6800	28
GWM-14	9/24/2013	16450	58

3/21/2014	16200	56
9/8/2014	17000	61
3/19/2015	16900	60
9/14/2015	16800	59
3/21/2016	18500	63
9/23/2016	16400	57
3/27/2017	15800	54
9/20/2017	15500	53
3/16/2018	15000	47
9/20/2018	14800	46
3/5/2019	17100	62
9/25/2019	14700	45
3/25/2020	15400	51
9/28/2020	15200	49
3/18/2021	2900 R	4
9/15/2021	16000	55
3/22/2022	15100	48
9/14/2022	15200	50
3/16/2023	15400	52
9/13/2023	14000	44

The Wilcoxon Statistic is 843
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 5.85399
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 5.85399
5.85399 > 2.326 indicating statistical significance at 1% level
5.85399 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Magnesium, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	1495	1
	3/19/2014	4000	7
	9/8/2014	2700	2
	3/17/2015	7900	42
	9/14/2015	7000	30
	3/17/2016	4800	10
	9/21/2016	6000	15
	3/24/2017	4100	9
	9/20/2017	3200	6
	3/27/2018	6600	24
	9/19/2018	3100	5
	3/11/2019	3000	4
	9/25/2019	8900	48
	3/18/2020	7000	31
	9/23/2020	5400	12
	3/17/2021	4000	8
	9/8/2021	2900	3
	3/15/2022	11400	54
	9/12/2022	8500	45
	3/13/2023	6500	23
	9/11/2023	4900	11
GWM-2	9/25/2013	6078	16
	3/18/2014	7900	43
	9/16/2014	7600	37
	3/18/2015	7000	32
	9/15/2015	6900	28
	3/16/2016	6600	25
	9/22/2016	6100	17
	3/24/2017	5700	14
	9/21/2017	6100	18
	3/28/2018	7200	34
	9/21/2018	7800	40
	3/12/2019	6900	29
	10/1/2019	7700	39
	3/18/2020	7000	33
	9/23/2020	5500	13
	3/17/2021	6400	21
	9/9/2021	6300	20
	3/15/2022	6400	22
	9/12/2022	6200	19
	3/13/2023	6700	26
	9/11/2023	6800	27
GWM-6	9/24/2013	9172	49

3/21/2014	7200	35
9/17/2014	7600	38
3/19/2015	7400	36
9/15/2015	8500	46
3/21/2016	8500	47
9/26/2016	7900	44
3/31/2017	9400	50
9/21/2017	12400	58
3/30/2018	15000	62
9/26/2018	15000	63
3/13/2019	14300	60
10/3/2019	14700	61
4/3/2020	12200	57
9/30/2020	11500	55
3/22/2021	14200	59
9/16/2021	10000	51
3/24/2022	11600	56
9/16/2022	11200	53
3/17/2023	10200	52
9/14/2023	7800	41

The Wilcoxon Statistic is 842
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 5.83941
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 5.83941
5.83941 > 2.326 indicating statistical significance at 1% level
5.83941 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Magnesium, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	1495	1
	3/19/2014	4000	7
	9/8/2014	2700	2
	3/17/2015	7900	47
	9/14/2015	7000	33
	3/17/2016	4800	10
	9/21/2016	6000	15
	3/24/2017	4100	9
	9/20/2017	3200	6
	3/27/2018	6600	25
	9/19/2018	3100	5
	3/11/2019	3000	4
	9/25/2019	8900	59
	3/18/2020	7000	34
	9/23/2020	5400	12
	3/17/2021	4000	8
	9/8/2021	2900	3
	3/15/2022	11400	62
	9/12/2022	8500	55
	3/13/2023	6500	24
	9/11/2023	4900	11
GWM-2	9/25/2013	6078	16
	3/18/2014	7900	48
	9/16/2014	7600	42
	3/18/2015	7000	35
	9/15/2015	6900	31
	3/16/2016	6600	26
	9/22/2016	6100	17
	3/24/2017	5700	14
	9/21/2017	6100	18
	3/28/2018	7200	38
	9/21/2018	7800	45
	3/12/2019	6900	32
	10/1/2019	7700	44
	3/18/2020	7000	36
	9/23/2020	5500	13
	3/17/2021	6400	22
	9/9/2021	6300	21
	3/15/2022	6400	23
	9/12/2022	6200	20
	3/13/2023	6700	27
	9/11/2023	6800	30
GWM-3	9/25/2013	7429	40

3/18/2014	7600	43
9/16/2014	7100	37
3/18/2015	6100	19
9/15/2015	8100	51
3/16/2016	8800	57
9/22/2016	8600	56
3/29/2017	8800	58
9/21/2017	7500	41
3/28/2018	8200	53
9/20/2018	8200	54
3/12/2019	7900	49
10/1/2019	10200	61
3/18/2020	9200	60
9/24/2020	7300	39
3/17/2021	86400 R	63
9/9/2021	8100	52
3/15/2022	7900	50
9/16/2022	6700	28
3/15/2023	6700	29
9/11/2023	7800	46

The Wilcoxon Statistic is 755
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 4.57092
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 4.57092
4.57092 > 2.326 indicating statistical significance at 1% level
4.57092 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Magnesium, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	1495	1
	3/19/2014	4000	7
	9/8/2014	2700	2
	3/17/2015	7900	38
	9/14/2015	7000	30
	3/17/2016	4800	10
	9/21/2016	6000	15
	3/24/2017	4100	9
	9/20/2017	3200	6
	3/27/2018	6600	24
	9/19/2018	3100	5
	3/11/2019	3000	4
	9/25/2019	8900	41
	3/18/2020	7000	31
	9/23/2020	5400	12
	3/17/2021	4000	8
	9/8/2021	2900	3
	3/15/2022	11400	42
	9/12/2022	8500	40
	3/13/2023	6500	23
	9/11/2023	4900	11
GWM-2	9/25/2013	6078	16
	3/18/2014	7900	39
	9/16/2014	7600	35
	3/18/2015	7000	32
	9/15/2015	6900	28
	3/16/2016	6600	25
	9/22/2016	6100	17
	3/24/2017	5700	14
	9/21/2017	6100	18
	3/28/2018	7200	34
	9/21/2018	7800	37
	3/12/2019	6900	29
	10/1/2019	7700	36
	3/18/2020	7000	33
	9/23/2020	5500	13
	3/17/2021	6400	21
	9/9/2021	6300	20
	3/15/2022	6400	22
	9/12/2022	6200	19
	3/13/2023	6700	26
	9/11/2023	6800	27
GWM-17S	11/14/2019	22400	50

3/26/2020	21600	45
9/29/2020	22000	49
3/16/2021	21700	47
9/14/2021	21000	44
3/18/2022	20400	43
9/13/2022	21600	46
3/14/2023	24000	51
9/12/2023	21900	48

The Wilcoxon Statistic is 378
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is 4.65752
The Standard Deviation adjusted for ties is 40.4722
The Z Score adjusted for ties is 4.65752
4.65752 > 2.326 indicating statistical significance at 1% level
4.65752 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Manganese, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	20	3
	3/19/2014	18	2
	9/8/2014	39	9
	3/17/2015	43	10
	9/14/2015	140	32
	3/17/2016	77	15
	9/21/2016	110	21
	3/24/2017	82	16
	9/20/2017	32	5
	3/27/2018	36	8
	9/19/2018	32	6
	3/11/2019	45	11
	9/25/2019	140	33
	3/18/2020	86	17
	9/23/2020	65	13
	3/17/2021	32	7
	9/8/2021	16	1
	3/15/2022	100	19
	9/12/2022	95	18
	3/13/2023	68	14
	9/11/2023	49	12
GWM-2	9/25/2013	410	44
	3/18/2014	120	24
	9/16/2014	120	25
	3/18/2015	120	26
	9/15/2015	120	27
	3/16/2016	100	20
	9/22/2016	110	22
	3/24/2017	120	28
	9/21/2017	110	23
	3/28/2018	130	30
	9/21/2018	150	37
	3/12/2019	170	42
	10/1/2019	160	39
	3/18/2020	130	31
	9/23/2020	120	29
	3/17/2021	160	40
	9/9/2021	140	34
	3/15/2022	140	35
	9/12/2022	140	36
	3/13/2023	150	38
	9/11/2023	170	43
GWM-4	9/18/2013	20	4

3/20/2014	3000	62
9/9/2014	920	61
3/16/2015	910	60
9/9/2015	840	59
3/18/2016	670	53
9/20/2016	780	56
3/23/2017	420	45
9/18/2017	790	57
3/15/2018	490	47
9/17/2018	620	49
3/5/2019	820	58
9/24/2019	720	54
3/16/2020	3200	63
9/22/2020	620	50
3/16/2021	460	46
9/14/2021	620	51
3/22/2022	640	52
9/13/2022	530	48
3/14/2023	760	55
9/12/2023	160	41

The Wilcoxon Statistic is 840
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 5.81025
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 5.81025
5.81025 > 2.326 indicating statistical significance at 1% level
5.81025 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Manganese, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	20	3
	3/19/2014	18	2
	9/8/2014	39	8
	3/17/2015	43	9
	9/14/2015	140	31
	3/17/2016	77	14
	9/21/2016	110	20
	3/24/2017	82	15
	9/20/2017	32	4
	3/27/2018	36	7
	9/19/2018	32	5
	3/11/2019	45	10
	9/25/2019	140	32
	3/18/2020	86	16
	9/23/2020	65	12
	3/17/2021	32	6
	9/8/2021	16	1
	3/15/2022	100	18
	9/12/2022	95	17
	3/13/2023	68	13
	9/11/2023	49	11
GWM-2	9/25/2013	410	46
	3/18/2014	120	23
	9/16/2014	120	24
	3/18/2015	120	25
	9/15/2015	120	26
	3/16/2016	100	19
	9/22/2016	110	21
	3/24/2017	120	27
	9/21/2017	110	22
	3/28/2018	130	29
	9/21/2018	150	36
	3/12/2019	170	40
	10/1/2019	160	38
	3/18/2020	130	30
	9/23/2020	120	28
	3/17/2021	160	39
	9/9/2021	140	33
	3/15/2022	140	34
	9/12/2022	140	35
	3/13/2023	150	37
	9/11/2023	170	41
GWM-5A	9/19/2013	4890	64

12/5/2013	230	42
3/19/2014	300	43
9/4/2014	710	51
3/17/2015	300	44
9/11/2015	670	50
3/15/2016	570	49
9/21/2016	560	48
3/28/2017	400	45
9/19/2017	710	52
3/26/2018	550	47
9/18/2018	2000	63
3/4/2019	1900	62
9/23/2019	1800	61
3/19/2020	1100	57
9/23/2020	1200	59
3/19/2021	760	53
9/15/2021	1000	55
3/16/2022	1100	58
9/14/2022	820	54
3/16/2023	1000	56
9/13/2023	1300	60

The Wilcoxon Statistic is 920
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is 6.46679
The Standard Deviation adjusted for ties is 70.746
The Z Score adjusted for ties is 6.46679
6.46679 > 2.326 indicating statistical significance at 1% level
6.46679 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Manganese, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	20	3
	3/19/2014	18	2
	9/8/2014	39	9
	3/17/2015	43	10
	9/14/2015	140	32
	3/17/2016	77	15
	9/21/2016	110	21
	3/24/2017	82	16
	9/20/2017	32	4
	3/27/2018	36	8
	9/19/2018	32	5
	3/11/2019	45	11
	9/25/2019	140	33
	3/18/2020	86	17
	9/23/2020	65	13
	3/17/2021	32	6
	9/8/2021	16	1
	3/15/2022	100	19
	9/12/2022	95	18
	3/13/2023	68	14
	9/11/2023	49	12
GWM-2	9/25/2013	410	43
	3/18/2014	120	24
	9/16/2014	120	25
	3/18/2015	120	26
	9/15/2015	120	27
	3/16/2016	100	20
	9/22/2016	110	22
	3/24/2017	120	28
	9/21/2017	110	23
	3/28/2018	130	30
	9/21/2018	150	37
	3/12/2019	170	41
	10/1/2019	160	39
	3/18/2020	130	31
	9/23/2020	120	29
	3/17/2021	160	40
	9/9/2021	140	34
	3/15/2022	140	35
	9/12/2022	140	36
	3/13/2023	150	38
	9/11/2023	170	42
GWM-14	9/24/2013	4770	63

3/21/2014	4300	61
9/8/2014	4000	57
3/19/2015	4100	59
9/14/2015	4400	62
3/21/2016	4100	60
9/23/2016	4000	58
3/27/2017	3800	56
9/20/2017	3700	55
3/16/2018	3300	51
9/20/2018	3200	49
3/5/2019	3300	52
9/25/2019	3000	46
3/25/2020	3300	53
9/28/2020	3300	54
3/18/2021	33 R	7
9/15/2021	3200	50
3/22/2022	3100	48
9/14/2022	3000	47
3/16/2023	2900	44
9/13/2023	2900	45

The Wilcoxon Statistic is 846
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 5.89773
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 5.89773
5.89773 > 2.326 indicating statistical significance at 1% level
5.89773 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Manganese, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	20	3
	3/19/2014	18	2
	9/8/2014	39	8
	3/17/2015	43	9
	9/14/2015	140	31
	3/17/2016	77	14
	9/21/2016	110	20
	3/24/2017	82	15
	9/20/2017	32	4
	3/27/2018	36	7
	9/19/2018	32	5
	3/11/2019	45	10
	9/25/2019	140	32
	3/18/2020	86	16
	9/23/2020	65	12
	3/17/2021	32	6
	9/8/2021	16	1
	3/15/2022	100	18
	9/12/2022	95	17
	3/13/2023	68	13
	9/11/2023	49	11
GWM-2	9/25/2013	410	43
	3/18/2014	120	23
	9/16/2014	120	24
	3/18/2015	120	25
	9/15/2015	120	26
	3/16/2016	100	19
	9/22/2016	110	21
	3/24/2017	120	27
	9/21/2017	110	22
	3/28/2018	130	29
	9/21/2018	150	36
	3/12/2019	170	40
	10/1/2019	160	38
	3/18/2020	130	30
	9/23/2020	120	28
	3/17/2021	160	39
	9/9/2021	140	33
	3/15/2022	140	34
	9/12/2022	140	35
	3/13/2023	150	37
	9/11/2023	170	41
GWM-6	9/24/2013	620	51

3/21/2014	520	46
9/17/2014	550	49
3/19/2015	670	54
9/15/2015	730	57
3/21/2016	680	56
9/26/2016	670	55
3/31/2017	740	58
9/21/2017	1100	61
3/30/2018	1200	63
9/26/2018	1000	60
3/13/2019	1100	62
10/3/2019	780	59
4/3/2020	640	52
9/30/2020	600	50
3/22/2021	650	53
9/16/2021	510	45
3/24/2022	540	48
9/16/2022	530	47
3/17/2023	480	44
9/14/2023	350	42

The Wilcoxon Statistic is 881
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 6.40804
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 6.40804
6.40804 > 2.326 indicating statistical significance at 1% level
6.40804 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Manganese, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	20	10
	3/19/2014	18	7
	9/8/2014	39	26
	3/17/2015	43	28
	9/14/2015	140	51
	3/17/2016	77	34
	9/21/2016	110	40
	3/24/2017	82	35
	9/20/2017	32	20
	3/27/2018	36	24
	9/19/2018	32	21
	3/11/2019	45	30
	9/25/2019	140	52
	3/18/2020	86	36
	9/23/2020	65	32
	3/17/2021	32	22
	9/8/2021	16	6
	3/15/2022	100	38
	9/12/2022	95	37
	3/13/2023	68	33
	9/11/2023	49	31
GWM-2	9/25/2013	410	62
	3/18/2014	120	43
	9/16/2014	120	44
	3/18/2015	120	45
	9/15/2015	120	46
	3/16/2016	100	39
	9/22/2016	110	41
	3/24/2017	120	47
	9/21/2017	110	42
	3/28/2018	130	49
	9/21/2018	150	56
	3/12/2019	170	60
	10/1/2019	160	58
	3/18/2020	130	50
	9/23/2020	120	48
	3/17/2021	160	59
	9/9/2021	140	53
	3/15/2022	140	54
	9/12/2022	140	55
	3/13/2023	150	57
	9/11/2023	170	61
GWM-3	9/25/2013	20	11

3/18/2014	25	16
9/16/2014	22	13
3/18/2015	30	18
9/15/2015	24	15
3/16/2016	33	23
9/22/2016	42	27
3/29/2017	44	29
9/21/2017	37	25
3/28/2018	30	19
9/20/2018	15	4
3/12/2019	21	12
10/1/2019	22	14
3/18/2020	18	8
9/24/2020	15	5
3/17/2021	2300 R	63
9/9/2021	25	17
3/15/2022	18	9
9/16/2022	12	2
3/15/2023	12	3
9/11/2023	10	1

The Wilcoxon Statistic is 103
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -4.93543
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is -4.93543
-4.93543 < 2.326 indicating no statistical significance at 1% level
-4.93543 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Manganese, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	20	3
	3/19/2014	18	2
	9/8/2014	39	8
	3/17/2015	43	9
	9/14/2015	140	31
	3/17/2016	77	14
	9/21/2016	110	20
	3/24/2017	82	15
	9/20/2017	32	4
	3/27/2018	36	7
	9/19/2018	32	5
	3/11/2019	45	10
	9/25/2019	140	32
	3/18/2020	86	16
	9/23/2020	65	12
	3/17/2021	32	6
	9/8/2021	16	1
	3/15/2022	100	18
	9/12/2022	95	17
	3/13/2023	68	13
	9/11/2023	49	11
GWM-2	9/25/2013	410	42
	3/18/2014	120	23
	9/16/2014	120	24
	3/18/2015	120	25
	9/15/2015	120	26
	3/16/2016	100	19
	9/22/2016	110	21
	3/24/2017	120	27
	9/21/2017	110	22
	3/28/2018	130	29
	9/21/2018	150	36
	3/12/2019	170	40
	10/1/2019	160	38
	3/18/2020	130	30
	9/23/2020	120	28
	3/17/2021	160	39
	9/9/2021	140	33
	3/15/2022	140	34
	9/12/2022	140	35
	3/13/2023	150	37
	9/11/2023	170	41
GWM-17S	11/14/2019	4100	46

3/26/2020	6800	49
9/29/2020	3600	43
3/16/2021	3900	44
9/14/2021	4000	45
3/18/2022	4600	48
9/13/2022	4300	47
3/14/2023	7600	51
9/12/2023	7100	50

The Wilcoxon Statistic is 378
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is 4.65752
The Standard Deviation adjusted for ties is 40.4722
The Z Score adjusted for ties is 4.65752
4.65752 > 2.326 indicating statistical significance at 1% level
4.65752 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Mercury, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 61
Non detect rank is 31

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<0.2	31
	3/19/2014	ND<0.26 J	31
	9/8/2014	ND<0.2 U	31
	3/17/2015	ND<0.2 U	31
	9/14/2015	ND<0.2 U	31
	3/17/2016	ND<0.2 U	31
	9/21/2016	ND<0.2 U	31
	3/24/2017	0.99	62
	9/20/2017	ND<0.35 J	31
	3/27/2018	ND<0.24 J	31
	9/19/2018	ND<0.2 U	31
	3/11/2019	ND<0.25 J	31
	9/25/2019	1.6	63
	3/18/2020	ND<0.2 U	31
	9/23/2020	ND<0.24 J	31
	3/17/2021	ND<0.27 J	31
	9/8/2021	ND<0.2 U	31
	3/15/2022	ND<0.24 J	31
	9/12/2022	ND<0.31 J	31
	3/13/2023	ND<0.39 J	31
	9/11/2023	ND<0.5	31
GWM-2	9/25/2013	ND<0.2	31
	3/18/2014	ND<0.2 U	31
	9/16/2014	ND<0.2 U	31
	3/18/2015	ND<0.2 U	31
	9/15/2015	ND<0.2 U	31
	3/16/2016	ND<0.2 U	31
	9/22/2016	ND<0.2 U	31
	3/24/2017	ND<0.2 U	31
	9/21/2017	ND<0.2 U	31
	3/28/2018	ND<0.2 U	31
	9/21/2018	ND<0.2 U	31
	3/12/2019	ND<0.2 U	31
	10/1/2019	ND<0.2 U	31
	3/18/2020	ND<0.2 U	31
	9/23/2020	ND<0.2 U	31
	3/17/2021	ND<0.2 U	31
	9/9/2021	ND<0.2 U	31
	3/15/2022	ND<0.5	31
	9/12/2022	ND<0.5	31
	3/13/2023	ND<0.5	31
	9/11/2023	ND<0.5	31
GWM-4	9/18/2013	ND<0.2	31

3/20/2014	ND<0.2 U	31
9/9/2014	ND<0.2 U	31
3/16/2015	ND<0.2 U	31
9/9/2015	ND<0.2 U	31
3/18/2016	ND<0.2 U	31
9/20/2016	ND<0.2 U	31
3/23/2017	ND<0.2 U	31
9/18/2017	ND<0.2 U	31
3/15/2018	ND<0.2 U	31
9/17/2018	ND<0.2 U	31
3/5/2019	ND<0.2 U	31
9/24/2019	ND<0.2 U	31
3/16/2020	ND<0.2 U	31
9/22/2020	ND<0.2 U	31
3/16/2021	ND<0.2 U	31
9/14/2021	ND<0.2 U	31
3/22/2022	ND<0.5	31
9/13/2022	ND<0.5	31
3/14/2023	ND<0.5	31
9/12/2023	ND<0.5	31

The Wilcoxon Statistic is 420
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.313476
The Standard Deviation adjusted for ties is 20.8327
The Z Score adjusted for ties is -1.03203
-0.313476 < 2.326 indicating no statistical significance at 1% level
-1.03203 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Mercury, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 47
Non detect rank is 24

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<0.2	24
	3/19/2014	ND<0.26 J	24
	9/8/2014	ND<0.2 U	24
	3/17/2015	ND<0.2 U	24
	9/14/2015	ND<0.2 U	24
	3/17/2016	ND<0.2 U	24
	9/21/2016	ND<0.2 U	24
	3/24/2017	0.99	62
	9/20/2017	ND<0.35 J	24
	3/27/2018	ND<0.24 J	24
	9/19/2018	ND<0.2 U	24
	3/11/2019	ND<0.25 J	24
	9/25/2019	1.6	64
	3/18/2020	ND<0.2 U	24
	9/23/2020	ND<0.24 J	24
	3/17/2021	ND<0.27 J	24
	9/8/2021	ND<0.2 U	24
	3/15/2022	ND<0.24 J	24
	9/12/2022	ND<0.31 J	24
	3/13/2023	ND<0.39 J	24
	9/11/2023	ND<0.5	24
GWM-2	9/25/2013	ND<0.2	24
	3/18/2014	ND<0.2 U	24
	9/16/2014	ND<0.2 U	24
	3/18/2015	ND<0.2 U	24
	9/15/2015	ND<0.2 U	24
	3/16/2016	ND<0.2 U	24
	9/22/2016	ND<0.2 U	24
	3/24/2017	ND<0.2 U	24
	9/21/2017	ND<0.2 U	24
	3/28/2018	ND<0.2 U	24
	9/21/2018	ND<0.2 U	24
	3/12/2019	ND<0.2 U	24
	10/1/2019	ND<0.2 U	24
	3/18/2020	ND<0.2 U	24
	9/23/2020	ND<0.2 U	24
	3/17/2021	ND<0.2 U	24
	9/9/2021	ND<0.2 U	24
	3/15/2022	ND<0.5	24
	9/12/2022	ND<0.5	24
	3/13/2023	ND<0.5	24
	9/11/2023	ND<0.5	24
GWM-5A	9/19/2013	ND<0.2	24

12/5/2013	ND<0.2	24
3/19/2014	0.8	53
9/4/2014	0.61	48
3/17/2015	0.64	49
9/11/2015	0.66	50
3/15/2016	0.83	55
9/21/2016	0.88	57
3/28/2017	0.91	59
9/19/2017	1.2	63
3/26/2018	0.95	61
9/18/2018	0.87	56
3/4/2019	ND<0.2 U	24
9/23/2019	0.76	51
3/19/2020	ND<0.33 J	24
9/23/2020	0.82	54
3/19/2021	0.77	52
9/15/2021	0.94	60
3/16/2022	0.88	58
9/14/2022	ND<0.48 J	24
3/16/2023	ND<0.45 J	24
9/13/2023	ND<0.38 J	24

The Wilcoxon Statistic is 741
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is 3.93662
The Standard Deviation adjusted for ties is 54.9833
The Z Score adjusted for ties is 5.06517
3.93662 > 2.326 indicating statistical significance at 1% level
5.06517 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Mercury, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 61
Non detect rank is 31

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<0.2	31
	3/19/2014	ND<0.26 J	31
	9/8/2014	ND<0.2 U	31
	3/17/2015	ND<0.2 U	31
	9/14/2015	ND<0.2 U	31
	3/17/2016	ND<0.2 U	31
	9/21/2016	ND<0.2 U	31
	3/24/2017	0.99	62
	9/20/2017	ND<0.35 J	31
	3/27/2018	ND<0.24 J	31
	9/19/2018	ND<0.2 U	31
	3/11/2019	ND<0.25 J	31
	9/25/2019	1.6	63
	3/18/2020	ND<0.2 U	31
	9/23/2020	ND<0.24 J	31
	3/17/2021	ND<0.27 J	31
	9/8/2021	ND<0.2 U	31
	3/15/2022	ND<0.24 J	31
	9/12/2022	ND<0.31 J	31
	3/13/2023	ND<0.39 J	31
	9/11/2023	ND<0.5	31
GWM-2	9/25/2013	ND<0.2	31
	3/18/2014	ND<0.2 U	31
	9/16/2014	ND<0.2 U	31
	3/18/2015	ND<0.2 U	31
	9/15/2015	ND<0.2 U	31
	3/16/2016	ND<0.2 U	31
	9/22/2016	ND<0.2 U	31
	3/24/2017	ND<0.2 U	31
	9/21/2017	ND<0.2 U	31
	3/28/2018	ND<0.2 U	31
	9/21/2018	ND<0.2 U	31
	3/12/2019	ND<0.2 U	31
	10/1/2019	ND<0.2 U	31
	3/18/2020	ND<0.2 U	31
	9/23/2020	ND<0.2 U	31
	3/17/2021	ND<0.2 U	31
	9/9/2021	ND<0.2 U	31
	3/15/2022	ND<0.5	31
	9/12/2022	ND<0.5	31
	3/13/2023	ND<0.5	31
	9/11/2023	ND<0.5	31
GWM-14	9/24/2013	ND<0.2	31

3/21/2014	ND<0.2 U	31
9/8/2014	ND<0.2 U	31
3/19/2015	ND<0.2 U	31
9/14/2015	ND<0.2 U	31
3/21/2016	ND<0.2 U	31
9/23/2016	ND<0.2 U	31
3/27/2017	ND<0.2 U	31
9/20/2017	ND<0.2 U	31
3/16/2018	ND<0.2 U	31
9/20/2018	ND<0.2 U	31
3/5/2019	ND<0.2 U	31
9/25/2019	ND<0.2 U	31
3/25/2020	ND<0.2 U	31
9/28/2020	ND<0.2 U	31
3/18/2021	ND<0.2 U	31
9/15/2021	ND<0.2 U	31
3/22/2022	ND<0.5	31
9/14/2022	ND<0.5	31
3/16/2023	ND<0.5	31
9/13/2023	ND<0.5	31

The Wilcoxon Statistic is 420
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.313476
The Standard Deviation adjusted for ties is 20.8327
The Z Score adjusted for ties is -1.03203
-0.313476 < 2.326 indicating no statistical significance at 1% level
-1.03203 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Mercury, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 60
Non detect rank is 30.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<0.2	30.5
	3/19/2014	ND<0.26 J	30.5
	9/8/2014	ND<0.2 U	30.5
	3/17/2015	ND<0.2 U	30.5
	9/14/2015	ND<0.2 U	30.5
	3/17/2016	ND<0.2 U	30.5
	9/21/2016	ND<0.2 U	30.5
	3/24/2017	0.99	62
	9/20/2017	ND<0.35 J	30.5
	3/27/2018	ND<0.24 J	30.5
	9/19/2018	ND<0.2 U	30.5
	3/11/2019	ND<0.25 J	30.5
	9/25/2019	1.6	63
	3/18/2020	ND<0.2 U	30.5
	9/23/2020	ND<0.24 J	30.5
	3/17/2021	ND<0.27 J	30.5
	9/8/2021	ND<0.2 U	30.5
	3/15/2022	ND<0.24 J	30.5
	9/12/2022	ND<0.31 J	30.5
	3/13/2023	ND<0.39 J	30.5
	9/11/2023	ND<0.5	30.5
GWM-2	9/25/2013	ND<0.2	30.5
	3/18/2014	ND<0.2 U	30.5
	9/16/2014	ND<0.2 U	30.5
	3/18/2015	ND<0.2 U	30.5
	9/15/2015	ND<0.2 U	30.5
	3/16/2016	ND<0.2 U	30.5
	9/22/2016	ND<0.2 U	30.5
	3/24/2017	ND<0.2 U	30.5
	9/21/2017	ND<0.2 U	30.5
	3/28/2018	ND<0.2 U	30.5
	9/21/2018	ND<0.2 U	30.5
	3/12/2019	ND<0.2 U	30.5
	10/1/2019	ND<0.2 U	30.5
	3/18/2020	ND<0.2 U	30.5
	9/23/2020	ND<0.2 U	30.5
	3/17/2021	ND<0.2 U	30.5
	9/9/2021	ND<0.2 U	30.5
	3/15/2022	ND<0.5	30.5
	9/12/2022	ND<0.5	30.5
	3/13/2023	ND<0.5	30.5
	9/11/2023	ND<0.5	30.5
GWM-6	9/24/2013	ND<0.2	30.5

3/21/2014	ND<0.2 U	30.5
9/17/2014	ND<0.2 U	30.5
3/19/2015	ND<0.2 U	30.5
9/15/2015	ND<0.2 U	30.5
3/21/2016	ND<0.2 U	30.5
9/26/2016	ND<0.2 U	30.5
3/31/2017	ND<0.2 U	30.5
9/21/2017	ND<0.2 U	30.5
3/30/2018	0.5	61
9/26/2018	ND<0.2 U	30.5
3/13/2019	ND<0.2 U	30.5
10/3/2019	ND<0.2 U	30.5
4/3/2020	ND<0.29 J	30.5
9/30/2020	ND<0.2 U	30.5
3/22/2021	ND<0.2 U	30.5
9/16/2021	ND<0.2 U	30.5
3/24/2022	ND<0.5	30.5
9/16/2022	ND<0.5	30.5
3/17/2023	ND<0.5	30.5
9/14/2023	ND<0.5	30.5

The Wilcoxon Statistic is 440
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.0218704
The Standard Deviation adjusted for ties is 25.3103
The Z Score adjusted for ties is -0.0592643
-0.0218704 < 2.326 indicating no statistical significance at 1% level
-0.0592643 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Mercury, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 58
Non detect rank is 29.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<0.2	29.5
	3/19/2014	ND<0.26 J	29.5
	9/8/2014	ND<0.2 U	29.5
	3/17/2015	ND<0.2 U	29.5
	9/14/2015	ND<0.2 U	29.5
	3/17/2016	ND<0.2 U	29.5
	9/21/2016	ND<0.2 U	29.5
	3/24/2017	0.99	59
	9/20/2017	ND<0.35 J	29.5
	3/27/2018	ND<0.24 J	29.5
	9/19/2018	ND<0.2 U	29.5
	3/11/2019	ND<0.25 J	29.5
	9/25/2019	1.6	61
	3/18/2020	ND<0.2 U	29.5
	9/23/2020	ND<0.24 J	29.5
	3/17/2021	ND<0.27 J	29.5
	9/8/2021	ND<0.2 U	29.5
	3/15/2022	ND<0.24 J	29.5
	9/12/2022	ND<0.31 J	29.5
	3/13/2023	ND<0.39 J	29.5
	9/11/2023	ND<0.5	29.5
GWM-2	9/25/2013	ND<0.2	29.5
	3/18/2014	ND<0.2 U	29.5
	9/16/2014	ND<0.2 U	29.5
	3/18/2015	ND<0.2 U	29.5
	9/15/2015	ND<0.2 U	29.5
	3/16/2016	ND<0.2 U	29.5
	9/22/2016	ND<0.2 U	29.5
	3/24/2017	ND<0.2 U	29.5
	9/21/2017	ND<0.2 U	29.5
	3/28/2018	ND<0.2 U	29.5
	9/21/2018	ND<0.2 U	29.5
	3/12/2019	ND<0.2 U	29.5
	10/1/2019	ND<0.2 U	29.5
	3/18/2020	ND<0.2 U	29.5
	9/23/2020	ND<0.2 U	29.5
	3/17/2021	ND<0.2 U	29.5
	9/9/2021	ND<0.2 U	29.5
	3/15/2022	ND<0.5	29.5
	9/12/2022	ND<0.5	29.5
	3/13/2023	ND<0.5	29.5
	9/11/2023	ND<0.5	29.5
GWM-3	9/25/2013	ND<0.2	29.5

3/18/2014	ND<0.34 J	29.5
9/16/2014	ND<0.28 J	29.5
3/18/2015	ND<0.33 J	29.5
9/15/2015	ND<0.27 J	29.5
3/16/2016	ND<0.33 J	29.5
9/22/2016	1.7	62
3/29/2017	ND<0.4 J	29.5
9/21/2017	ND<0.24 J	29.5
3/28/2018	ND<0.27 J	29.5
9/20/2018	ND<0.17 J	29.5
3/12/2019	ND<0.19 J	29.5
10/1/2019	ND<0.31 J	29.5
3/18/2020	ND<0.2 U	29.5
9/24/2020	ND<0.25 J	29.5
3/17/2021	1.8	63
9/9/2021	ND<0.2 U	29.5
3/15/2022	ND<0.25 J	29.5
9/16/2022	1.2	60
3/15/2023	ND<0.34 J	29.5
9/11/2023	ND<0.33 J	29.5

The Wilcoxon Statistic is 485
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 0.634243
The Standard Deviation adjusted for ties is 32.1501
The Z Score adjusted for ties is 1.35303
0.634243 < 2.326 indicating no statistical significance at 1% level
1.35303 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Mercury, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 49
Non detect rank is 25

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<0.2	25
	3/19/2014	ND<0.26 J	25
	9/8/2014	ND<0.2 U	25
	3/17/2015	ND<0.2 U	25
	9/14/2015	ND<0.2 U	25
	3/17/2016	ND<0.2 U	25
	9/21/2016	ND<0.2 U	25
	3/24/2017	0.99	50
	9/20/2017	ND<0.35 J	25
	3/27/2018	ND<0.24 J	25
	9/19/2018	ND<0.2 U	25
	3/11/2019	ND<0.25 J	25
	9/25/2019	1.6	51
	3/18/2020	ND<0.2 U	25
	9/23/2020	ND<0.24 J	25
	3/17/2021	ND<0.27 J	25
	9/8/2021	ND<0.2 U	25
	3/15/2022	ND<0.24 J	25
	9/12/2022	ND<0.31 J	25
	3/13/2023	ND<0.39 J	25
	9/11/2023	ND<0.5	25
GWM-2	9/25/2013	ND<0.2	25
	3/18/2014	ND<0.2 U	25
	9/16/2014	ND<0.2 U	25
	3/18/2015	ND<0.2 U	25
	9/15/2015	ND<0.2 U	25
	3/16/2016	ND<0.2 U	25
	9/22/2016	ND<0.2 U	25
	3/24/2017	ND<0.2 U	25
	9/21/2017	ND<0.2 U	25
	3/28/2018	ND<0.2 U	25
	9/21/2018	ND<0.2 U	25
	3/12/2019	ND<0.2 U	25
	10/1/2019	ND<0.2 U	25
	3/18/2020	ND<0.2 U	25
	9/23/2020	ND<0.2 U	25
	3/17/2021	ND<0.2 U	25
	9/9/2021	ND<0.2 U	25
	3/15/2022	ND<0.5	25
	9/12/2022	ND<0.5	25
	3/13/2023	ND<0.5	25
	9/11/2023	ND<0.5	25
GWM-17S	11/14/2019	ND<0.2 U	25

3/26/2020	ND<0.2 U	25
9/29/2020	ND<0.2 U	25
3/16/2021	ND<0.2 U	25
9/14/2021	ND<0.2 U	25
3/18/2022	ND<0.5	25
9/13/2022	ND<0.5	25
3/14/2023	ND<0.5	25
9/12/2023	ND<0.5	25

The Wilcoxon Statistic is 180
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is -0.234729
The Standard Deviation adjusted for ties is 13.6123
The Z Score adjusted for ties is -0.697899
-0.234729 < 2.326 indicating no statistical significance at 1% level
-0.697899 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Nickel, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 9
Non detect rank is 5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	5
	3/19/2014	ND<5 J	5
	9/8/2014	9.2	16
	3/17/2015	18	41
	9/14/2015	11	28
	3/17/2016	12	32
	9/21/2016	9	14
	3/24/2017	6.4	10
	9/20/2017	ND<5 U	5
	3/27/2018	ND<3.3 J	5
	9/19/2018	ND<2.9 J	5
	3/11/2019	9.2	17
	9/25/2019	9.9	24
	3/18/2020	9.4	21
	9/23/2020	7.7	11
	3/17/2021	9.2	18
	9/8/2021	7.7	12
	3/15/2022	16	39
	9/12/2022	13	35
	3/13/2023	10	25
	9/11/2023	ND<3.3 J	5
GWM-2	9/25/2013	ND<5	5
	3/18/2014	91	60
	9/16/2014	100	61
	3/18/2015	88	57
	9/15/2015	90	59
	3/16/2016	78	45
	9/22/2016	80	49
	3/24/2017	82	50
	9/21/2017	77	44
	3/28/2018	85	53
	9/21/2018	87	54
	3/12/2019	110	63
	10/1/2019	100	62
	3/18/2020	83	51
	9/23/2020	79	47
	3/17/2021	78	46
	9/9/2021	88	58
	3/15/2022	84	52
	9/12/2022	79	48
	3/13/2023	87	55
	9/11/2023	87	56
GWM-4	9/18/2013	ND<5	5

3/20/2014	22	42
9/9/2014	10	26
3/16/2015	14	37
9/9/2015	11	29
3/18/2016	13	36
9/20/2016	12	33
3/23/2017	10	27
9/18/2017	15	38
3/15/2018	12	34
9/17/2018	9.8	23
3/5/2019	11	30
9/24/2019	11	31
3/16/2020	17	40
9/22/2020	8.1	13
3/16/2021	9.3	20
9/14/2021	27	43
3/22/2022	9.6	22
9/13/2022	9.2	19
3/14/2023	9	15
9/12/2023	ND<5.1 J	5

The Wilcoxon Statistic is 337
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -1.52364
The Standard Deviation adjusted for ties is 68.4869
The Z Score adjusted for ties is -1.52584
-1.52364 < 2.326 indicating no statistical significance at 1% level
-1.52584 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Nickel, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 8
Non detect rank is 4.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	4.5
	3/19/2014	ND<5 J	4.5
	9/8/2014	9.2	18
	3/17/2015	18	43
	9/14/2015	11	25
	3/17/2016	12	28
	9/21/2016	9	17
	3/24/2017	6.4	9
	9/20/2017	ND<5 U	4.5
	3/27/2018	ND<3.3 J	4.5
	9/19/2018	ND<2.9 J	4.5
	3/11/2019	9.2	19
	9/25/2019	9.9	22
	3/18/2020	9.4	21
	9/23/2020	7.7	10
	3/17/2021	9.2	20
	9/8/2021	7.7	11
	3/15/2022	16	41
	9/12/2022	13	32
	3/13/2023	10	23
	9/11/2023	ND<3.3 J	4.5
GWM-2	9/25/2013	ND<5	4.5
	3/18/2014	91	61
	9/16/2014	100	62
	3/18/2015	88	58
	9/15/2015	90	60
	3/16/2016	78	46
	9/22/2016	80	50
	3/24/2017	82	51
	9/21/2017	77	45
	3/28/2018	85	54
	9/21/2018	87	55
	3/12/2019	110	64
	10/1/2019	100	63
	3/18/2020	83	52
	9/23/2020	79	48
	3/17/2021	78	47
	9/9/2021	88	59
	3/15/2022	84	53
	9/12/2022	79	49
	3/13/2023	87	56
	9/11/2023	87	57
GWM-5A	9/19/2013	ND<5	4.5

12/5/2013	11	26
3/19/2014	31	44
9/4/2014	14	37
3/17/2015	8	13
9/11/2015	12	29
3/15/2016	8.9	15
9/21/2016	8.1	14
3/28/2017	7.7	12
9/19/2017	10	24
3/26/2018	8.9	16
9/18/2018	15	40
3/4/2019	13	33
9/23/2019	12	30
3/19/2020	11	27
9/23/2020	14	38
3/19/2021	13	34
9/15/2021	14	39
3/16/2022	12	31
9/14/2022	13	35
3/16/2023	13	36
9/13/2023	17	42

The Wilcoxon Statistic is 366.5
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is -1.35697
The Standard Deviation adjusted for ties is 70.678
The Z Score adjusted for ties is -1.35827
-1.35697 < 2.326 indicating no statistical significance at 1% level
-1.35827 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Nickel, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 9
Non detect rank is 5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	5
	3/19/2014	ND<5 J	5
	9/8/2014	9.2	31
	3/17/2015	18	43
	9/14/2015	11	39
	3/17/2016	12	40
	9/21/2016	9	29
	3/24/2017	6.4	10
	9/20/2017	ND<5 U	5
	3/27/2018	ND<3.3 J	5
	9/19/2018	ND<2.9 J	5
	3/11/2019	9.2	32
	9/25/2019	9.9	36
	3/18/2020	9.4	35
	9/23/2020	7.7	17
	3/17/2021	9.2	33
	9/8/2021	7.7	18
	3/15/2022	16	42
	9/12/2022	13	41
	3/13/2023	10	37
	9/11/2023	ND<3.3 J	5
GWM-2	9/25/2013	ND<5	5
	3/18/2014	91	60
	9/16/2014	100	61
	3/18/2015	88	57
	9/15/2015	90	59
	3/16/2016	78	45
	9/22/2016	80	49
	3/24/2017	82	50
	9/21/2017	77	44
	3/28/2018	85	53
	9/21/2018	87	54
	3/12/2019	110	63
	10/1/2019	100	62
	3/18/2020	83	51
	9/23/2020	79	47
	3/17/2021	78	46
	9/9/2021	88	58
	3/15/2022	84	52
	9/12/2022	79	48
	3/13/2023	87	55
	9/11/2023	87	56
GWM-14	9/24/2013	ND<5	5

3/21/2014	6.6	11
9/8/2014	6.6	12
3/19/2015	9.1	30
9/14/2015	8.9	28
3/21/2016	8.2	24
9/23/2016	7.6	16
3/27/2017	7.7	19
9/20/2017	7.5	15
3/16/2018	7.8	21
9/20/2018	7.7	20
3/5/2019	7.8	22
9/25/2019	6.7	13
3/25/2020	8.8	26
9/28/2020	6.8	14
3/18/2021	ND<4.7 JR	5
9/15/2021	8.8	27
3/22/2022	10	38
9/14/2022	8.6	25
3/16/2023	9.2	34
9/13/2023	8	23

The Wilcoxon Statistic is 197
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -3.56488
The Standard Deviation adjusted for ties is 68.4869
The Z Score adjusted for ties is -3.57003
-3.56488 < 2.326 indicating no statistical significance at 1% level
-3.57003 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Nickel, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 9
Non detect rank is 5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	5
	3/19/2014	ND<5 J	5
	9/8/2014	9.2	22
	3/17/2015	18	42
	9/14/2015	11	30
	3/17/2016	12	33
	9/21/2016	9	19
	3/24/2017	6.4	11
	9/20/2017	ND<5 U	5
	3/27/2018	ND<3.3 J	5
	9/19/2018	ND<2.9 J	5
	3/11/2019	9.2	23
	9/25/2019	9.9	27
	3/18/2020	9.4	25
	9/23/2020	7.7	13
	3/17/2021	9.2	24
	9/8/2021	7.7	14
	3/15/2022	16	40
	9/12/2022	13	35
	3/13/2023	10	28
	9/11/2023	ND<3.3 J	5
GWM-2	9/25/2013	ND<5	5
	3/18/2014	91	60
	9/16/2014	100	61
	3/18/2015	88	57
	9/15/2015	90	59
	3/16/2016	78	45
	9/22/2016	80	49
	3/24/2017	82	50
	9/21/2017	77	44
	3/28/2018	85	53
	9/21/2018	87	54
	3/12/2019	110	63
	10/1/2019	100	62
	3/18/2020	83	51
	9/23/2020	79	47
	3/17/2021	78	46
	9/9/2021	88	58
	3/15/2022	84	52
	9/12/2022	79	48
	3/13/2023	87	55
	9/11/2023	87	56
GWM-6	9/24/2013	ND<5	5

3/21/2014	9.4	26
9/17/2014	10	29
3/19/2015	11	31
9/15/2015	12	34
3/21/2016	13	36
9/26/2016	14	38
3/31/2017	15	39
9/21/2017	18	43
3/30/2018	17	41
9/26/2018	13	37
3/13/2019	11	32
10/3/2019	9	20
4/3/2020	8.4	18
9/30/2020	7.7	15
3/22/2021	9	21
9/16/2021	8.3	17
3/24/2022	7.7	16
9/16/2022	7	12
3/17/2023	5.9	10
9/14/2023	ND<5.3 J	5

The Wilcoxon Statistic is 294
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -2.15059
The Standard Deviation adjusted for ties is 68.4869
The Z Score adjusted for ties is -2.1537
-2.15059 < 2.326 indicating no statistical significance at 1% level
-2.1537 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Nickel, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 25
Non detect rank is 13

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	13
	3/19/2014	ND<5 J	13
	9/8/2014	9.2	32
	3/17/2015	18	43
	9/14/2015	11	38
	3/17/2016	12	40
	9/21/2016	9	31
	3/24/2017	6.4	26
	9/20/2017	ND<5 U	13
	3/27/2018	ND<3.3 J	13
	9/19/2018	ND<2.9 J	13
	3/11/2019	9.2	33
	9/25/2019	9.9	36
	3/18/2020	9.4	35
	9/23/2020	7.7	28
	3/17/2021	9.2	34
	9/8/2021	7.7	29
	3/15/2022	16	42
	9/12/2022	13	41
	3/13/2023	10	37
	9/11/2023	ND<3.3 J	13
GWM-2	9/25/2013	ND<5	13
	3/18/2014	91	60
	9/16/2014	100	61
	3/18/2015	88	57
	9/15/2015	90	59
	3/16/2016	78	45
	9/22/2016	80	49
	3/24/2017	82	50
	9/21/2017	77	44
	3/28/2018	85	53
	9/21/2018	87	54
	3/12/2019	110	63
	10/1/2019	100	62
	3/18/2020	83	51
	9/23/2020	79	47
	3/17/2021	78	46
	9/9/2021	88	58
	3/15/2022	84	52
	9/12/2022	79	48
	3/13/2023	87	55
	9/11/2023	87	56
GWM-3	9/25/2013	ND<5	13

3/18/2014	ND<4.3 J	13
9/16/2014	ND<2.9 J	13
3/18/2015	ND<3.5 J	13
9/15/2015	ND<3.4 J	13
3/16/2016	7.9	30
9/22/2016	11	39
3/29/2017	6.7	27
9/21/2017	ND<4.2 J	13
3/28/2018	ND<3.5 J	13
9/20/2018	ND<3 J	13
3/12/2019	ND<3.8 J	13
10/1/2019	ND<3.5 J	13
3/18/2020	ND<3.2 J	13
9/24/2020	ND<2.9 J	13
3/17/2021	ND<4.6 J	13
9/9/2021	ND<4.5 J	13
3/15/2022	ND<3.8 J	13
9/16/2022	ND<4 J	13
3/15/2023	ND<4 J	13
9/11/2023	ND<3.7 J	13

The Wilcoxon Statistic is 99
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -4.99375
The Standard Deviation adjusted for ties is 66.4112
The Z Score adjusted for ties is -5.15726
-4.99375 < 2.326 indicating no statistical significance at 1% level
-5.15726 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Nickel, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 7
Non detect rank is 4

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	4
	3/19/2014	ND<5 J	4
	9/8/2014	9.2	12
	3/17/2015	18	22
	9/14/2015	11	18
	3/17/2016	12	19
	9/21/2016	9	11
	3/24/2017	6.4	8
	9/20/2017	ND<5 U	4
	3/27/2018	ND<3.3 J	4
	9/19/2018	ND<2.9 J	4
	3/11/2019	9.2	13
	9/25/2019	9.9	16
	3/18/2020	9.4	15
	9/23/2020	7.7	9
	3/17/2021	9.2	14
	9/8/2021	7.7	10
	3/15/2022	16	21
	9/12/2022	13	20
	3/13/2023	10	17
	9/11/2023	ND<3.3 J	4
GWM-2	9/25/2013	ND<5	4
	3/18/2014	91	48
	9/16/2014	100	49
	3/18/2015	88	45
	9/15/2015	90	47
	3/16/2016	78	33
	9/22/2016	80	37
	3/24/2017	82	38
	9/21/2017	77	32
	3/28/2018	85	41
	9/21/2018	87	42
	3/12/2019	110	51
	10/1/2019	100	50
	3/18/2020	83	39
	9/23/2020	79	35
	3/17/2021	78	34
	9/9/2021	88	46
	3/15/2022	84	40
	9/12/2022	79	36
	3/13/2023	87	43
	9/11/2023	87	44
GWM-17S	11/14/2019	28	29

3/26/2020	26	25
9/29/2020	26	26
3/16/2021	26	27
9/14/2021	25	24
3/18/2022	27	28
9/13/2022	31	30
3/14/2023	24	23
9/12/2023	34	31

The Wilcoxon Statistic is 198
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is 0.210021
The Standard Deviation adjusted for ties is 40.4209
The Z Score adjusted for ties is 0.210287
0.210021 < 2.326 indicating no statistical significance at 1% level
0.210287 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Potassium, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	1390	1
	3/19/2014	4400	39
	9/8/2014	2000	4
	3/17/2015	5400	42
	9/14/2015	3400	37
	3/17/2016	3300	36
	9/21/2016	2100	5
	3/24/2017	3200	34
	9/20/2017	4400	40
	3/27/2018	5200	41
	9/19/2018	3700	38
	3/11/2019	1900	2
	9/25/2019	2300	6
	3/18/2020	2500	9
	9/23/2020	2300	7
	3/17/2021	2400	8
	9/8/2021	2500	10
	3/15/2022	3200	35
	9/12/2022	2500	11
	3/13/2023	2800	20
	9/11/2023	1900	3
GWM-2	9/25/2013	2750	19
	3/18/2014	3100	33
	9/16/2014	2900	25
	3/18/2015	2900	26
	9/15/2015	2900	27
	3/16/2016	2800	21
	9/22/2016	2700	13
	3/24/2017	2700	14
	9/21/2017	2700	15
	3/28/2018	2900	28
	9/21/2018	2900	29
	3/12/2019	2800	22
	10/1/2019	2900	30
	3/18/2020	3000	32
	9/23/2020	2500	12
	3/17/2021	2700	16
	9/9/2021	2700	17
	3/15/2022	2800	23
	9/12/2022	2700	18
	3/13/2023	2800	24
	9/11/2023	2900	31
GWM-4	9/18/2013	8110	51

3/20/2014	6100	43
9/9/2014	7100	47
3/16/2015	6500	44
9/9/2015	8400	52
3/18/2016	11900	59
9/20/2016	13200	61
3/23/2017	8600	53
9/18/2017	6900	46
3/15/2018	7100	48
9/17/2018	6700	45
3/5/2019	8900	55
9/24/2019	9100	56
3/16/2020	7200	49
9/22/2020	13500	62
3/16/2021	13700	63
9/14/2021	13000	60
3/22/2022	10500	58
9/13/2022	9700	57
3/14/2023	8600	54
9/12/2023	7900	50

The Wilcoxon Statistic is 882
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 6.42262
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 6.42262
6.42262 > 2.326 indicating statistical significance at 1% level
6.42262 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Potassium, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	1390	1
	3/19/2014	4400	56
	9/8/2014	2000	4
	3/17/2015	5400	64
	9/14/2015	3400	39
	3/17/2016	3300	37
	9/21/2016	2100	5
	3/24/2017	3200	35
	9/20/2017	4400	57
	3/27/2018	5200	61
	9/19/2018	3700	45
	3/11/2019	1900	2
	9/25/2019	2300	6
	3/18/2020	2500	9
	9/23/2020	2300	7
	3/17/2021	2400	8
	9/8/2021	2500	10
	3/15/2022	3200	36
	9/12/2022	2500	11
	3/13/2023	2800	20
	9/11/2023	1900	3
GWM-2	9/25/2013	2750	19
	3/18/2014	3100	33
	9/16/2014	2900	25
	3/18/2015	2900	26
	9/15/2015	2900	27
	3/16/2016	2800	21
	9/22/2016	2700	13
	3/24/2017	2700	14
	9/21/2017	2700	15
	3/28/2018	2900	28
	9/21/2018	2900	29
	3/12/2019	2800	22
	10/1/2019	2900	30
	3/18/2020	3000	32
	9/23/2020	2500	12
	3/17/2021	2700	16
	9/9/2021	2700	17
	3/15/2022	2800	23
	9/12/2022	2700	18
	3/13/2023	2800	24
	9/11/2023	2900	31
GWM-5A	9/19/2013	4800	59

12/5/2013	3430	40
3/19/2014	4000	52
9/4/2014	4200	54
3/17/2015	4200	55
9/11/2015	4400	58
3/15/2016	3900	50
9/21/2016	3700	46
3/28/2017	3500	41
9/19/2017	3100	34
3/26/2018	3500	42
9/18/2018	3700	47
3/4/2019	5300	63
9/23/2019	4900	60
3/19/2020	4100	53
9/23/2020	3600	43
3/19/2021	3700	48
9/15/2021	3900	51
3/16/2022	3600	44
9/14/2022	3700	49
3/16/2023	3300	38
9/13/2023	5200	62

The Wilcoxon Statistic is 836
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is 5.27945
The Standard Deviation adjusted for ties is 70.746
The Z Score adjusted for ties is 5.27945
5.27945 > 2.326 indicating statistical significance at 1% level
5.27945 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Potassium, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	1390	21
	3/19/2014	4400	60
	9/8/2014	2000	24
	3/17/2015	5400	63
	9/14/2015	3400	58
	3/17/2016	3300	57
	9/21/2016	2100	26
	3/24/2017	3200	55
	9/20/2017	4400	61
	3/27/2018	5200	62
	9/19/2018	3700	59
	3/11/2019	1900	22
	9/25/2019	2300	27
	3/18/2020	2500	30
	9/23/2020	2300	28
	3/17/2021	2400	29
	9/8/2021	2500	31
	3/15/2022	3200	56
	9/12/2022	2500	32
	3/13/2023	2800	41
	9/11/2023	1900	23
GWM-2	9/25/2013	2750	40
	3/18/2014	3100	54
	9/16/2014	2900	46
	3/18/2015	2900	47
	9/15/2015	2900	48
	3/16/2016	2800	42
	9/22/2016	2700	34
	3/24/2017	2700	35
	9/21/2017	2700	36
	3/28/2018	2900	49
	9/21/2018	2900	50
	3/12/2019	2800	43
	10/1/2019	2900	51
	3/18/2020	3000	53
	9/23/2020	2500	33
	3/17/2021	2700	37
	9/9/2021	2700	38
	3/15/2022	2800	44
	9/12/2022	2700	39
	3/13/2023	2800	45
	9/11/2023	2900	52
GWM-14	9/24/2013	520	5

3/21/2014	500	3
9/8/2014	550	9
3/19/2015	520	6
9/14/2015	530	8
3/21/2016	550	10
9/23/2016	550	11
3/27/2017	560	12
9/20/2017	570	13
3/16/2018	480	1
9/20/2018	580	14
3/5/2019	520	7
9/25/2019	500	4
3/25/2020	490	2
9/28/2020	640	19
3/18/2021	2000 R	25
9/15/2021	620	17
3/22/2022	620	18
9/14/2022	850	20
3/16/2023	590	15
9/13/2023	590	16

The Wilcoxon Statistic is 4
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -6.37888
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is -6.37888
-6.37888 < 2.326 indicating no statistical significance at 1% level
-6.37888 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Potassium, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	1390	4
	3/19/2014	4400	60
	9/8/2014	2000	24
	3/17/2015	5400	63
	9/14/2015	3400	58
	3/17/2016	3300	57
	9/21/2016	2100	25
	3/24/2017	3200	55
	9/20/2017	4400	61
	3/27/2018	5200	62
	9/19/2018	3700	59
	3/11/2019	1900	17
	9/25/2019	2300	27
	3/18/2020	2500	30
	9/23/2020	2300	28
	3/17/2021	2400	29
	9/8/2021	2500	31
	3/15/2022	3200	56
	9/12/2022	2500	32
	3/13/2023	2800	41
	9/11/2023	1900	18
GWM-2	9/25/2013	2750	40
	3/18/2014	3100	54
	9/16/2014	2900	46
	3/18/2015	2900	47
	9/15/2015	2900	48
	3/16/2016	2800	42
	9/22/2016	2700	34
	3/24/2017	2700	35
	9/21/2017	2700	36
	3/28/2018	2900	49
	9/21/2018	2900	50
	3/12/2019	2800	43
	10/1/2019	2900	51
	3/18/2020	3000	53
	9/23/2020	2500	33
	3/17/2021	2700	37
	9/9/2021	2700	38
	3/15/2022	2800	44
	9/12/2022	2700	39
	3/13/2023	2800	45
	9/11/2023	2900	52
GWM-6	9/24/2013	1200	1

3/21/2014	1200	2
9/17/2014	1300	3
3/19/2015	1400	5
9/15/2015	1500	6
3/21/2016	1600	8
9/26/2016	1600	9
3/31/2017	1700	10
9/21/2017	1900	19
3/30/2018	2100	26
9/26/2018	1800	12
3/13/2019	1900	20
10/3/2019	1900	21
4/3/2020	1500	7
9/30/2020	1700	11
3/22/2021	1800	13
9/16/2021	1800	14
3/24/2022	1800	15
9/16/2022	1900	22
3/17/2023	1900	23
9/14/2023	1800	16

The Wilcoxon Statistic is 32
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -5.97063
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is -5.97063
-5.97063 < 2.326 indicating no statistical significance at 1% level
-5.97063 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Potassium, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	1390	1
	3/19/2014	4400	60
	9/8/2014	2000	10
	3/17/2015	5400	63
	9/14/2015	3400	57
	3/17/2016	3300	56
	9/21/2016	2100	18
	3/24/2017	3200	54
	9/20/2017	4400	61
	3/27/2018	5200	62
	9/19/2018	3700	58
	3/11/2019	1900	5
	9/25/2019	2300	25
	3/18/2020	2500	29
	9/23/2020	2300	26
	3/17/2021	2400	27
	9/8/2021	2500	30
	3/15/2022	3200	55
	9/12/2022	2500	31
	3/13/2023	2800	40
	9/11/2023	1900	6
GWM-2	9/25/2013	2750	39
	3/18/2014	3100	53
	9/16/2014	2900	45
	3/18/2015	2900	46
	9/15/2015	2900	47
	3/16/2016	2800	41
	9/22/2016	2700	33
	3/24/2017	2700	34
	9/21/2017	2700	35
	3/28/2018	2900	48
	9/21/2018	2900	49
	3/12/2019	2800	42
	10/1/2019	2900	50
	3/18/2020	3000	52
	9/23/2020	2500	32
	3/17/2021	2700	36
	9/9/2021	2700	37
	3/15/2022	2800	43
	9/12/2022	2700	38
	3/13/2023	2800	44
	9/11/2023	2900	51
GWM-3	9/25/2013	1790	3

3/18/2014	2000	11
9/16/2014	1800	4
3/18/2015	1600	2
9/15/2015	2000	12
3/16/2016	2000	13
9/22/2016	2100	19
3/29/2017	2000	14
9/21/2017	1900	7
3/28/2018	2100	20
9/20/2018	2000	15
3/12/2019	2200	23
10/1/2019	2200	24
3/18/2020	2400	28
9/24/2020	2000	16
3/17/2021	3900 R	59
9/9/2021	2100	21
3/15/2022	2100	22
9/16/2022	1900	8
3/15/2023	1900	9
9/11/2023	2000	17

The Wilcoxon Statistic is 116
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -4.74589
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is -4.74589
-4.74589 < 2.326 indicating no statistical significance at 1% level
-4.74589 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Potassium, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	1390	1
	3/19/2014	4400	48
	9/8/2014	2000	4
	3/17/2015	5400	51
	9/14/2015	3400	42
	3/17/2016	3300	40
	9/21/2016	2100	5
	3/24/2017	3200	36
	9/20/2017	4400	49
	3/27/2018	5200	50
	9/19/2018	3700	47
	3/11/2019	1900	2
	9/25/2019	2300	6
	3/18/2020	2500	9
	9/23/2020	2300	7
	3/17/2021	2400	8
	9/8/2021	2500	10
	3/15/2022	3200	37
	9/12/2022	2500	11
	3/13/2023	2800	20
	9/11/2023	1900	3
GWM-2	9/25/2013	2750	19
	3/18/2014	3100	34
	9/16/2014	2900	25
	3/18/2015	2900	26
	9/15/2015	2900	27
	3/16/2016	2800	21
	9/22/2016	2700	13
	3/24/2017	2700	14
	9/21/2017	2700	15
	3/28/2018	2900	28
	9/21/2018	2900	29
	3/12/2019	2800	22
	10/1/2019	2900	30
	3/18/2020	3000	33
	9/23/2020	2500	12
	3/17/2021	2700	16
	9/9/2021	2700	17
	3/15/2022	2800	23
	9/12/2022	2700	18
	3/13/2023	2800	24
	9/11/2023	2900	31
GWM-17S	11/14/2019	3400	43

3/26/2020	3100	35
9/29/2020	3200	38
3/16/2021	3400	44
9/14/2021	3500	45
3/18/2022	3200	39
9/13/2022	3300	41
3/14/2023	3500	46
9/12/2023	2900	32

The Wilcoxon Statistic is 318
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is 3.17502
The Standard Deviation adjusted for ties is 40.4722
The Z Score adjusted for ties is 3.17502
3.17502 > 2.326 indicating statistical significance at 1% level
3.17502 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Selenium, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	32
	3/19/2014	ND<5 U	32
	9/8/2014	ND<5 U	32
	3/17/2015	ND<5 U	32
	9/14/2015	ND<5 U	32
	3/17/2016	ND<5 U	32
	9/21/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/20/2017	ND<5 U	32
	3/27/2018	ND<5 U	32
	9/19/2018	ND<5 U	32
	3/11/2019	ND<5 U	32
	9/25/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/8/2021	ND<5 U	32
	3/15/2022	ND<5.6	32
	9/12/2022	ND<5.6	32
	3/13/2023	ND<5.6	32
	9/11/2023	ND<5.6	32
GWM-2	9/25/2013	ND<5	32
	3/18/2014	ND<5 U	32
	9/16/2014	ND<5 U	32
	3/18/2015	ND<5 U	32
	9/15/2015	ND<5 U	32
	3/16/2016	ND<5 U	32
	9/22/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/21/2017	ND<5 U	32
	3/28/2018	ND<5 U	32
	9/21/2018	ND<5 U	32
	3/12/2019	ND<5 U	32
	10/1/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/9/2021	ND<1.2 J	32
	3/15/2022	ND<5.6	32
	9/12/2022	ND<5.6	32
	3/13/2023	ND<5.6	32
	9/11/2023	ND<5.6	32
GWM-4	9/18/2013	ND<5	32

3/20/2014	ND<5 U	32
9/9/2014	ND<5 U	32
3/16/2015	ND<5 U	32
9/9/2015	ND<5 U	32
3/18/2016	ND<5 U	32
9/20/2016	ND<5 U	32
3/23/2017	ND<5 U	32
9/18/2017	ND<5 U	32
3/15/2018	ND<5 U	32
9/17/2018	ND<5 U	32
3/5/2019	ND<5 U	32
9/24/2019	ND<5 U	32
3/16/2020	ND<5 U	32
9/22/2020	ND<5 U	32
3/16/2021	ND<5 U	32
9/14/2021	ND<5 U	32
3/22/2022	ND<5.6	32
9/13/2022	ND<5.6	32
3/14/2023	ND<5.6	32
9/12/2023	ND<5.6	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Selenium, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 64
Non detect rank is 32.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	32.5
	3/19/2014	ND<5 U	32.5
	9/8/2014	ND<5 U	32.5
	3/17/2015	ND<5 U	32.5
	9/14/2015	ND<5 U	32.5
	3/17/2016	ND<5 U	32.5
	9/21/2016	ND<5 U	32.5
	3/24/2017	ND<5 U	32.5
	9/20/2017	ND<5 U	32.5
	3/27/2018	ND<5 U	32.5
	9/19/2018	ND<5 U	32.5
	3/11/2019	ND<5 U	32.5
	9/25/2019	ND<5 U	32.5
	3/18/2020	ND<5 U	32.5
	9/23/2020	ND<5 U	32.5
	3/17/2021	ND<5 U	32.5
	9/8/2021	ND<5 U	32.5
	3/15/2022	ND<5.6	32.5
	9/12/2022	ND<5.6	32.5
	3/13/2023	ND<5.6	32.5
	9/11/2023	ND<5.6	32.5
GWM-2	9/25/2013	ND<5	32.5
	3/18/2014	ND<5 U	32.5
	9/16/2014	ND<5 U	32.5
	3/18/2015	ND<5 U	32.5
	9/15/2015	ND<5 U	32.5
	3/16/2016	ND<5 U	32.5
	9/22/2016	ND<5 U	32.5
	3/24/2017	ND<5 U	32.5
	9/21/2017	ND<5 U	32.5
	3/28/2018	ND<5 U	32.5
	9/21/2018	ND<5 U	32.5
	3/12/2019	ND<5 U	32.5
	10/1/2019	ND<5 U	32.5
	3/18/2020	ND<5 U	32.5
	9/23/2020	ND<5 U	32.5
	3/17/2021	ND<5 U	32.5
	9/9/2021	ND<1.2 J	32.5
	3/15/2022	ND<5.6	32.5
	9/12/2022	ND<5.6	32.5
	3/13/2023	ND<5.6	32.5
	9/11/2023	ND<5.6	32.5
GWM-5A	9/19/2013	ND<5	32.5

12/5/2013	ND<5	32.5
3/19/2014	ND<5 U	32.5
9/4/2014	ND<5 U	32.5
3/17/2015	ND<5 U	32.5
9/11/2015	ND<5 U	32.5
3/15/2016	ND<5 U	32.5
9/21/2016	ND<5 U	32.5
3/28/2017	ND<5 U	32.5
9/19/2017	ND<5 U	32.5
3/26/2018	ND<5 U	32.5
9/18/2018	ND<5 U	32.5
3/4/2019	ND<5 U	32.5
9/23/2019	ND<5 U	32.5
3/19/2020	ND<5 U	32.5
9/23/2020	ND<5 U	32.5
3/19/2021	ND<5 U	32.5
9/15/2021	ND<5 U	32.5
3/16/2022	ND<5.6	32.5
9/14/2022	ND<5.6	32.5
3/16/2023	ND<5.6	32.5
9/13/2023	ND<5.6	32.5

The Wilcoxon Statistic is 462
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is -0.00706753
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00706753 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Selenium, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	32
	3/19/2014	ND<5 U	32
	9/8/2014	ND<5 U	32
	3/17/2015	ND<5 U	32
	9/14/2015	ND<5 U	32
	3/17/2016	ND<5 U	32
	9/21/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/20/2017	ND<5 U	32
	3/27/2018	ND<5 U	32
	9/19/2018	ND<5 U	32
	3/11/2019	ND<5 U	32
	9/25/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/8/2021	ND<5 U	32
	3/15/2022	ND<5.6	32
	9/12/2022	ND<5.6	32
	3/13/2023	ND<5.6	32
	9/11/2023	ND<5.6	32
GWM-2	9/25/2013	ND<5	32
	3/18/2014	ND<5 U	32
	9/16/2014	ND<5 U	32
	3/18/2015	ND<5 U	32
	9/15/2015	ND<5 U	32
	3/16/2016	ND<5 U	32
	9/22/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/21/2017	ND<5 U	32
	3/28/2018	ND<5 U	32
	9/21/2018	ND<5 U	32
	3/12/2019	ND<5 U	32
	10/1/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/9/2021	ND<1.2 J	32
	3/15/2022	ND<5.6	32
	9/12/2022	ND<5.6	32
	3/13/2023	ND<5.6	32
	9/11/2023	ND<5.6	32
GWM-14	9/24/2013	ND<5	32

3/21/2014	ND<5 U	32
9/8/2014	ND<5 U	32
3/19/2015	ND<5 U	32
9/14/2015	ND<5 U	32
3/21/2016	ND<5 U	32
9/23/2016	ND<5 U	32
3/27/2017	ND<5 U	32
9/20/2017	ND<5 U	32
3/16/2018	ND<5 U	32
9/20/2018	ND<5 U	32
3/5/2019	ND<5 U	32
9/25/2019	ND<5 U	32
3/25/2020	ND<5 U	32
9/28/2020	ND<5 U	32
3/18/2021	ND<5 U	32
9/15/2021	ND<5 U	32
3/22/2022	ND<5.6	32
9/14/2022	ND<5.6	32
3/16/2023	ND<5.6	32
9/13/2023	ND<5.6	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Selenium, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 62
Non detect rank is 31.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	31.5
	3/19/2014	ND<5 U	31.5
	9/8/2014	ND<5 U	31.5
	3/17/2015	ND<5 U	31.5
	9/14/2015	ND<5 U	31.5
	3/17/2016	ND<5 U	31.5
	9/21/2016	ND<5 U	31.5
	3/24/2017	ND<5 U	31.5
	9/20/2017	ND<5 U	31.5
	3/27/2018	ND<5 U	31.5
	9/19/2018	ND<5 U	31.5
	3/11/2019	ND<5 U	31.5
	9/25/2019	ND<5 U	31.5
	3/18/2020	ND<5 U	31.5
	9/23/2020	ND<5 U	31.5
	3/17/2021	ND<5 U	31.5
	9/8/2021	ND<5 U	31.5
	3/15/2022	ND<5.6	31.5
	9/12/2022	ND<5.6	31.5
	3/13/2023	ND<5.6	31.5
	9/11/2023	ND<5.6	31.5
GWM-2	9/25/2013	ND<5	31.5
	3/18/2014	ND<5 U	31.5
	9/16/2014	ND<5 U	31.5
	3/18/2015	ND<5 U	31.5
	9/15/2015	ND<5 U	31.5
	3/16/2016	ND<5 U	31.5
	9/22/2016	ND<5 U	31.5
	3/24/2017	ND<5 U	31.5
	9/21/2017	ND<5 U	31.5
	3/28/2018	ND<5 U	31.5
	9/21/2018	ND<5 U	31.5
	3/12/2019	ND<5 U	31.5
	10/1/2019	ND<5 U	31.5
	3/18/2020	ND<5 U	31.5
	9/23/2020	ND<5 U	31.5
	3/17/2021	ND<5 U	31.5
	9/9/2021	ND<1.2 J	31.5
	3/15/2022	ND<5.6	31.5
	9/12/2022	ND<5.6	31.5
	3/13/2023	ND<5.6	31.5
	9/11/2023	ND<5.6	31.5
GWM-6	9/24/2013	ND<5	31.5

3/21/2014	ND<5 U	31.5
9/17/2014	ND<5 U	31.5
3/19/2015	ND<5 U	31.5
9/15/2015	ND<5 U	31.5
3/21/2016	ND<5 U	31.5
9/26/2016	ND<5 U	31.5
3/31/2017	ND<5 U	31.5
9/21/2017	ND<5 U	31.5
3/30/2018	5.6	63
9/26/2018	ND<5 U	31.5
3/13/2019	ND<5 U	31.5
10/3/2019	ND<5 U	31.5
4/3/2020	ND<2 J	31.5
9/30/2020	ND<5 U	31.5
3/22/2021	ND<5 U	31.5
9/16/2021	ND<1.4 J	31.5
3/24/2022	ND<5.6	31.5
9/16/2022	ND<5.6	31.5
3/17/2023	ND<5.6	31.5
9/14/2023	ND<5.6	31.5

The Wilcoxon Statistic is 462
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 0.298896
The Standard Deviation adjusted for ties is 14.8492
The Z Score adjusted for ties is 1.38054
0.298896 < 2.326 indicating no statistical significance at 1% level
1.38054 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Selenium, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	32
	3/19/2014	ND<5 U	32
	9/8/2014	ND<5 U	32
	3/17/2015	ND<5 U	32
	9/14/2015	ND<5 U	32
	3/17/2016	ND<5 U	32
	9/21/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/20/2017	ND<5 U	32
	3/27/2018	ND<5 U	32
	9/19/2018	ND<5 U	32
	3/11/2019	ND<5 U	32
	9/25/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/8/2021	ND<5 U	32
	3/15/2022	ND<5.6	32
	9/12/2022	ND<5.6	32
	3/13/2023	ND<5.6	32
	9/11/2023	ND<5.6	32
GWM-2	9/25/2013	ND<5	32
	3/18/2014	ND<5 U	32
	9/16/2014	ND<5 U	32
	3/18/2015	ND<5 U	32
	9/15/2015	ND<5 U	32
	3/16/2016	ND<5 U	32
	9/22/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/21/2017	ND<5 U	32
	3/28/2018	ND<5 U	32
	9/21/2018	ND<5 U	32
	3/12/2019	ND<5 U	32
	10/1/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/9/2021	ND<1.2 J	32
	3/15/2022	ND<5.6	32
	9/12/2022	ND<5.6	32
	3/13/2023	ND<5.6	32
	9/11/2023	ND<5.6	32
GWM-3	9/25/2013	ND<5	32

3/18/2014	ND<5 U	32
9/16/2014	ND<5 U	32
3/18/2015	ND<5 U	32
9/15/2015	ND<5 U	32
3/16/2016	ND<5 U	32
9/22/2016	ND<5 U	32
3/29/2017	ND<5 U	32
9/21/2017	ND<5 U	32
3/28/2018	ND<5 U	32
9/20/2018	ND<5 U	32
3/12/2019	ND<5 U	32
10/1/2019	ND<5 U	32
3/18/2020	ND<2.1 J	32
9/24/2020	ND<1.9 J	32
3/17/2021	ND<5 U	32
9/9/2021	ND<1.2 J	32
3/15/2022	ND<5.6	32
9/16/2022	ND<5.6	32
3/15/2023	ND<5.6	32
9/11/2023	ND<5.6	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Selenium, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 51
Non detect rank is 26

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	26
	3/19/2014	ND<5 U	26
	9/8/2014	ND<5 U	26
	3/17/2015	ND<5 U	26
	9/14/2015	ND<5 U	26
	3/17/2016	ND<5 U	26
	9/21/2016	ND<5 U	26
	3/24/2017	ND<5 U	26
	9/20/2017	ND<5 U	26
	3/27/2018	ND<5 U	26
	9/19/2018	ND<5 U	26
	3/11/2019	ND<5 U	26
	9/25/2019	ND<5 U	26
	3/18/2020	ND<5 U	26
	9/23/2020	ND<5 U	26
	3/17/2021	ND<5 U	26
	9/8/2021	ND<5 U	26
	3/15/2022	ND<5.6	26
	9/12/2022	ND<5.6	26
	3/13/2023	ND<5.6	26
	9/11/2023	ND<5.6	26
GWM-2	9/25/2013	ND<5	26
	3/18/2014	ND<5 U	26
	9/16/2014	ND<5 U	26
	3/18/2015	ND<5 U	26
	9/15/2015	ND<5 U	26
	3/16/2016	ND<5 U	26
	9/22/2016	ND<5 U	26
	3/24/2017	ND<5 U	26
	9/21/2017	ND<5 U	26
	3/28/2018	ND<5 U	26
	9/21/2018	ND<5 U	26
	3/12/2019	ND<5 U	26
	10/1/2019	ND<5 U	26
	3/18/2020	ND<5 U	26
	9/23/2020	ND<5 U	26
	3/17/2021	ND<5 U	26
	9/9/2021	ND<1.2 J	26
	3/15/2022	ND<5.6	26
	9/12/2022	ND<5.6	26
	3/13/2023	ND<5.6	26
	9/11/2023	ND<5.6	26
GWM-17S	11/14/2019	ND<5 U	26

3/26/2020	ND<5 U	26
9/29/2020	ND<5 U	26
3/16/2021	ND<5 U	26
9/14/2021	ND<0.64 J	26
3/18/2022	ND<5.6	26
9/13/2022	ND<5.6	26
3/14/2023	ND<5.6	26
9/12/2023	ND<5.6	26

The Wilcoxon Statistic is 189
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is -0.0123542
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0123542 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Silver, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	32
	3/19/2014	ND<5 U	32
	9/8/2014	ND<5 U	32
	3/17/2015	ND<5 U	32
	9/14/2015	ND<5 U	32
	3/17/2016	ND<5 U	32
	9/21/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/20/2017	ND<5 U	32
	3/27/2018	ND<5 U	32
	9/19/2018	ND<5 U	32
	3/11/2019	ND<5 U	32
	9/25/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/8/2021	ND<5 U	32
	3/15/2022	ND<2.2	32
	9/12/2022	ND<2.2	32
	3/13/2023	ND<2.2	32
	9/11/2023	ND<2.2	32
GWM-2	9/25/2013	ND<5	32
	3/18/2014	ND<5 U	32
	9/16/2014	ND<5 U	32
	3/18/2015	ND<5 U	32
	9/15/2015	ND<5 U	32
	3/16/2016	ND<5 U	32
	9/22/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/21/2017	ND<5 U	32
	3/28/2018	ND<5 U	32
	9/21/2018	ND<5 U	32
	3/12/2019	ND<5 U	32
	10/1/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/9/2021	ND<5 U	32
	3/15/2022	ND<2.2	32
	9/12/2022	ND<2.2	32
	3/13/2023	ND<2.2	32
	9/11/2023	ND<2.2	32
GWM-4	9/18/2013	ND<5	32

3/20/2014	ND<5 U	32
9/9/2014	ND<5 U	32
3/16/2015	ND<5 U	32
9/9/2015	ND<5 U	32
3/18/2016	ND<5 U	32
9/20/2016	ND<5 U	32
3/23/2017	ND<5 U	32
9/18/2017	ND<5 U	32
3/15/2018	ND<5 U	32
9/17/2018	ND<5 U	32
3/5/2019	ND<5 U	32
9/24/2019	ND<5 U	32
3/16/2020	ND<5 U	32
9/22/2020	ND<5 U	32
3/16/2021	ND<5 U	32
9/14/2021	ND<5 U	32
3/22/2022	ND<2.2	32
9/13/2022	ND<2.2	32
3/14/2023	ND<2.2	32
9/12/2023	ND<2.2	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Silver, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 62
Non detect rank is 31.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	31.5
	3/19/2014	ND<5 U	31.5
	9/8/2014	ND<5 U	31.5
	3/17/2015	ND<5 U	31.5
	9/14/2015	ND<5 U	31.5
	3/17/2016	ND<5 U	31.5
	9/21/2016	ND<5 U	31.5
	3/24/2017	ND<5 U	31.5
	9/20/2017	ND<5 U	31.5
	3/27/2018	ND<5 U	31.5
	9/19/2018	ND<5 U	31.5
	3/11/2019	ND<5 U	31.5
	9/25/2019	ND<5 U	31.5
	3/18/2020	ND<5 U	31.5
	9/23/2020	ND<5 U	31.5
	3/17/2021	ND<5 U	31.5
	9/8/2021	ND<5 U	31.5
	3/15/2022	ND<2.2	31.5
	9/12/2022	ND<2.2	31.5
	3/13/2023	ND<2.2	31.5
	9/11/2023	ND<2.2	31.5
GWM-2	9/25/2013	ND<5	31.5
	3/18/2014	ND<5 U	31.5
	9/16/2014	ND<5 U	31.5
	3/18/2015	ND<5 U	31.5
	9/15/2015	ND<5 U	31.5
	3/16/2016	ND<5 U	31.5
	9/22/2016	ND<5 U	31.5
	3/24/2017	ND<5 U	31.5
	9/21/2017	ND<5 U	31.5
	3/28/2018	ND<5 U	31.5
	9/21/2018	ND<5 U	31.5
	3/12/2019	ND<5 U	31.5
	10/1/2019	ND<5 U	31.5
	3/18/2020	ND<5 U	31.5
	9/23/2020	ND<5 U	31.5
	3/17/2021	ND<5 U	31.5
	9/9/2021	ND<5 U	31.5
	3/15/2022	ND<2.2	31.5
	9/12/2022	ND<2.2	31.5
	3/13/2023	ND<2.2	31.5
	9/11/2023	ND<2.2	31.5
GWM-5A	9/19/2013	ND<5	31.5

3/19/2014	ND<5 U	31.5
9/4/2014	ND<5 U	31.5
3/17/2015	ND<5 U	31.5
9/11/2015	ND<5 U	31.5
3/15/2016	6.9	63
9/21/2016	ND<5 U	31.5
3/28/2017	ND<5 U	31.5
9/19/2017	ND<5 U	31.5
3/26/2018	ND<5 U	31.5
9/18/2018	ND<5 U	31.5
3/4/2019	ND<5 U	31.5
9/23/2019	ND<5 U	31.5
3/19/2020	ND<5 U	31.5
9/23/2020	ND<5 U	31.5
3/19/2021	ND<5 U	31.5
9/15/2021	ND<5 U	31.5
3/16/2022	ND<2.2	31.5
9/14/2022	ND<2.2	31.5
3/16/2023	ND<2.2	31.5
9/13/2023	ND<2.2	31.5

The Wilcoxon Statistic is 462
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 0.298896
The Standard Deviation adjusted for ties is 14.8492
The Z Score adjusted for ties is 1.38054
0.298896 < 2.326 indicating no statistical significance at 1% level
1.38054 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Silver, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	32
	3/19/2014	ND<5 U	32
	9/8/2014	ND<5 U	32
	3/17/2015	ND<5 U	32
	9/14/2015	ND<5 U	32
	3/17/2016	ND<5 U	32
	9/21/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/20/2017	ND<5 U	32
	3/27/2018	ND<5 U	32
	9/19/2018	ND<5 U	32
	3/11/2019	ND<5 U	32
	9/25/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/8/2021	ND<5 U	32
	3/15/2022	ND<2.2	32
	9/12/2022	ND<2.2	32
	3/13/2023	ND<2.2	32
	9/11/2023	ND<2.2	32
GWM-2	9/25/2013	ND<5	32
	3/18/2014	ND<5 U	32
	9/16/2014	ND<5 U	32
	3/18/2015	ND<5 U	32
	9/15/2015	ND<5 U	32
	3/16/2016	ND<5 U	32
	9/22/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/21/2017	ND<5 U	32
	3/28/2018	ND<5 U	32
	9/21/2018	ND<5 U	32
	3/12/2019	ND<5 U	32
	10/1/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/9/2021	ND<5 U	32
	3/15/2022	ND<2.2	32
	9/12/2022	ND<2.2	32
	3/13/2023	ND<2.2	32
	9/11/2023	ND<2.2	32
GWM-14	9/24/2013	ND<5	32

3/21/2014	ND<5 U	32
9/8/2014	ND<5 U	32
3/19/2015	ND<5 U	32
9/14/2015	ND<5 U	32
3/21/2016	ND<5 U	32
9/23/2016	ND<5 U	32
3/27/2017	ND<5 U	32
9/20/2017	ND<5 U	32
3/16/2018	ND<5 U	32
9/20/2018	ND<5 U	32
3/5/2019	ND<5 U	32
9/25/2019	ND<5 U	32
3/25/2020	ND<5 U	32
9/28/2020	ND<5 U	32
3/18/2021	ND<5 U	32
9/15/2021	ND<5 U	32
3/22/2022	ND<2.2	32
9/14/2022	ND<2.2	32
3/16/2023	ND<2.2	32
9/13/2023	ND<2.2	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Silver, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 62
Non detect rank is 31.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	31.5
	3/19/2014	ND<5 U	31.5
	9/8/2014	ND<5 U	31.5
	3/17/2015	ND<5 U	31.5
	9/14/2015	ND<5 U	31.5
	3/17/2016	ND<5 U	31.5
	9/21/2016	ND<5 U	31.5
	3/24/2017	ND<5 U	31.5
	9/20/2017	ND<5 U	31.5
	3/27/2018	ND<5 U	31.5
	9/19/2018	ND<5 U	31.5
	3/11/2019	ND<5 U	31.5
	9/25/2019	ND<5 U	31.5
	3/18/2020	ND<5 U	31.5
	9/23/2020	ND<5 U	31.5
	3/17/2021	ND<5 U	31.5
	9/8/2021	ND<5 U	31.5
	3/15/2022	ND<2.2	31.5
	9/12/2022	ND<2.2	31.5
	3/13/2023	ND<2.2	31.5
	9/11/2023	ND<2.2	31.5
GWM-2	9/25/2013	ND<5	31.5
	3/18/2014	ND<5 U	31.5
	9/16/2014	ND<5 U	31.5
	3/18/2015	ND<5 U	31.5
	9/15/2015	ND<5 U	31.5
	3/16/2016	ND<5 U	31.5
	9/22/2016	ND<5 U	31.5
	3/24/2017	ND<5 U	31.5
	9/21/2017	ND<5 U	31.5
	3/28/2018	ND<5 U	31.5
	9/21/2018	ND<5 U	31.5
	3/12/2019	ND<5 U	31.5
	10/1/2019	ND<5 U	31.5
	3/18/2020	ND<5 U	31.5
	9/23/2020	ND<5 U	31.5
	3/17/2021	ND<5 U	31.5
	9/9/2021	ND<5 U	31.5
	3/15/2022	ND<2.2	31.5
	9/12/2022	ND<2.2	31.5
	3/13/2023	ND<2.2	31.5
	9/11/2023	ND<2.2	31.5
GWM-6	9/24/2013	ND<5	31.5

3/21/2014	ND<5 U	31.5
9/17/2014	ND<5 U	31.5
3/19/2015	ND<5 U	31.5
9/15/2015	ND<5 U	31.5
3/21/2016	ND<5 U	31.5
9/26/2016	ND<5 U	31.5
3/31/2017	ND<5 U	31.5
9/21/2017	ND<5 U	31.5
3/30/2018	2.2	63
9/26/2018	ND<5 U	31.5
3/13/2019	ND<5 U	31.5
10/3/2019	ND<5 U	31.5
4/3/2020	ND<5 U	31.5
9/30/2020	ND<5 U	31.5
3/22/2021	ND<5 U	31.5
9/16/2021	ND<5 U	31.5
3/24/2022	ND<2.2	31.5
9/16/2022	ND<2.2	31.5
3/17/2023	ND<2.2	31.5
9/14/2023	ND<2.2	31.5

The Wilcoxon Statistic is 462
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 0.298896
The Standard Deviation adjusted for ties is 14.8492
The Z Score adjusted for ties is 1.38054
0.298896 < 2.326 indicating no statistical significance at 1% level
1.38054 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Silver, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	32
	3/19/2014	ND<5 U	32
	9/8/2014	ND<5 U	32
	3/17/2015	ND<5 U	32
	9/14/2015	ND<5 U	32
	3/17/2016	ND<5 U	32
	9/21/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/20/2017	ND<5 U	32
	3/27/2018	ND<5 U	32
	9/19/2018	ND<5 U	32
	3/11/2019	ND<5 U	32
	9/25/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/8/2021	ND<5 U	32
	3/15/2022	ND<2.2	32
	9/12/2022	ND<2.2	32
	3/13/2023	ND<2.2	32
	9/11/2023	ND<2.2	32
GWM-2	9/25/2013	ND<5	32
	3/18/2014	ND<5 U	32
	9/16/2014	ND<5 U	32
	3/18/2015	ND<5 U	32
	9/15/2015	ND<5 U	32
	3/16/2016	ND<5 U	32
	9/22/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/21/2017	ND<5 U	32
	3/28/2018	ND<5 U	32
	9/21/2018	ND<5 U	32
	3/12/2019	ND<5 U	32
	10/1/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/9/2021	ND<5 U	32
	3/15/2022	ND<2.2	32
	9/12/2022	ND<2.2	32
	3/13/2023	ND<2.2	32
	9/11/2023	ND<2.2	32
GWM-3	9/25/2013	ND<5	32

3/18/2014	ND<5 U	32
9/16/2014	ND<5 U	32
3/18/2015	ND<5 U	32
9/15/2015	ND<5 U	32
3/16/2016	ND<5 U	32
9/22/2016	ND<5 U	32
3/29/2017	ND<5 U	32
9/21/2017	ND<5 U	32
3/28/2018	ND<5 U	32
9/20/2018	ND<5 U	32
3/12/2019	ND<5 U	32
10/1/2019	ND<5 U	32
3/18/2020	ND<5 U	32
9/24/2020	ND<5 U	32
3/17/2021	ND<5 U	32
9/9/2021	ND<5 U	32
3/15/2022	ND<2.2	32
9/16/2022	ND<2.2	32
3/15/2023	ND<2.2	32
9/11/2023	ND<2.2	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Silver, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 51
Non detect rank is 26

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	26
	3/19/2014	ND<5 U	26
	9/8/2014	ND<5 U	26
	3/17/2015	ND<5 U	26
	9/14/2015	ND<5 U	26
	3/17/2016	ND<5 U	26
	9/21/2016	ND<5 U	26
	3/24/2017	ND<5 U	26
	9/20/2017	ND<5 U	26
	3/27/2018	ND<5 U	26
	9/19/2018	ND<5 U	26
	3/11/2019	ND<5 U	26
	9/25/2019	ND<5 U	26
	3/18/2020	ND<5 U	26
	9/23/2020	ND<5 U	26
	3/17/2021	ND<5 U	26
	9/8/2021	ND<5 U	26
	3/15/2022	ND<2.2	26
	9/12/2022	ND<2.2	26
	3/13/2023	ND<2.2	26
	9/11/2023	ND<2.2	26
GWM-2	9/25/2013	ND<5	26
	3/18/2014	ND<5 U	26
	9/16/2014	ND<5 U	26
	3/18/2015	ND<5 U	26
	9/15/2015	ND<5 U	26
	3/16/2016	ND<5 U	26
	9/22/2016	ND<5 U	26
	3/24/2017	ND<5 U	26
	9/21/2017	ND<5 U	26
	3/28/2018	ND<5 U	26
	9/21/2018	ND<5 U	26
	3/12/2019	ND<5 U	26
	10/1/2019	ND<5 U	26
	3/18/2020	ND<5 U	26
	9/23/2020	ND<5 U	26
	3/17/2021	ND<5 U	26
	9/9/2021	ND<5 U	26
	3/15/2022	ND<2.2	26
	9/12/2022	ND<2.2	26
	3/13/2023	ND<2.2	26
	9/11/2023	ND<2.2	26
GWM-17S	11/14/2019	ND<5 U	26

3/26/2020	ND<5 U	26
9/29/2020	ND<5 U	26
3/16/2021	ND<0.94 J	26
9/14/2021	ND<5 U	26
3/18/2022	ND<2.2	26
9/13/2022	ND<2.2	26
3/14/2023	ND<2.2	26
9/12/2023	ND<2.2	26

The Wilcoxon Statistic is 189
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is -0.0123542
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0123542 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Sodium, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	23410	3
	3/19/2014	60800	44
	9/8/2014	33800	5
	3/17/2015	154000	62
	9/14/2015	76500	54
	3/17/2016	59600	41
	9/21/2016	53300	32
	3/24/2017	45700	26
	9/20/2017	51800	30
	3/27/2018	80100	55
	9/19/2018	59400	40
	3/11/2019	47500	28
	9/25/2019	99000	59
	3/18/2020	88400	57
	9/23/2020	62800	46
	3/17/2021	58800	39
	9/8/2021	45000	25
	3/15/2022	171000	63
	9/12/2022	139000	61
	3/13/2023	120000	60
	9/11/2023	98900	58
GWM-2	9/25/2013	15710	1
	3/18/2014	38600	18
	9/16/2014	37300	15
	3/18/2015	36800	13
	9/15/2015	36700	12
	3/16/2016	36500	11
	9/22/2016	34900	6
	3/24/2017	32800	4
	9/21/2017	35400	8
	3/28/2018	40400	23
	9/21/2018	40200	21
	3/12/2019	37300	16
	10/1/2019	38600	19
	3/18/2020	40900	24
	9/23/2020	34900	7
	3/17/2021	37200	14
	9/9/2021	36000	10
	3/15/2022	39000	20
	9/12/2022	35700	9
	3/13/2023	38300	17
	9/11/2023	40200	22
GWM-4	9/18/2013	20440	2

3/20/2014	47100	27
9/9/2014	52700	31
3/16/2015	56200	35
9/9/2015	49600	29
3/18/2016	54800	33
9/20/2016	58100	38
3/23/2017	60300	42
9/18/2017	63500	48
3/15/2018	65600	50
9/17/2018	58000	37
3/5/2019	69000	52
9/24/2019	60500	43
3/16/2020	83000	56
9/22/2020	62900	47
3/16/2021	71400	53
9/14/2021	64000	49
3/22/2022	66600	51
9/13/2022	60800	45
3/14/2023	56900	36
9/12/2023	56000	34

The Wilcoxon Statistic is 607
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 2.41304
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is 2.41304
2.41304 > 2.326 indicating statistical significance at 1% level
2.41304 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Sodium, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	23410	2
	3/19/2014	60800	53
	9/8/2014	33800	19
	3/17/2015	154000	62
	9/14/2015	76500	55
	3/17/2016	59600	52
	9/21/2016	53300	49
	3/24/2017	45700	46
	9/20/2017	51800	48
	3/27/2018	80100	56
	9/19/2018	59400	51
	3/11/2019	47500	47
	9/25/2019	99000	59
	3/18/2020	88400	57
	9/23/2020	62800	54
	3/17/2021	58800	50
	9/8/2021	45000	45
	3/15/2022	171000	63
	9/12/2022	139000	61
	3/13/2023	120000	60
	9/11/2023	98900	58
GWM-2	9/25/2013	15710	1
	3/18/2014	38600	35
	9/16/2014	37300	32
	3/18/2015	36800	29
	9/15/2015	36700	28
	3/16/2016	36500	27
	9/22/2016	34900	22
	3/24/2017	32800	17
	9/21/2017	35400	24
	3/28/2018	40400	42
	9/21/2018	40200	40
	3/12/2019	37300	33
	10/1/2019	38600	36
	3/18/2020	40900	43
	9/23/2020	34900	23
	3/17/2021	37200	31
	9/9/2021	36000	26
	3/15/2022	39000	37
	9/12/2022	35700	25
	3/13/2023	38300	34
	9/11/2023	40200	41
GWM-5A	9/19/2013	244200	64

12/5/2013	24110	3
3/19/2014	25300	5
9/4/2014	27300	9
3/17/2015	28100	10
9/11/2015	34300	21
3/15/2016	30100	15
9/21/2016	28300	11
3/28/2017	26000	7
9/19/2017	25200	4
3/26/2018	28900	12
9/18/2018	37000	30
3/4/2019	41700	44
9/23/2019	39700	38
3/19/2020	32000	16
9/23/2020	34100	20
3/19/2021	33500	18
9/15/2021	29000	13
3/16/2022	25300	6
9/14/2022	29100	14
3/16/2023	27100	8
9/13/2023	39700	39

The Wilcoxon Statistic is 154
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is -4.36067
The Standard Deviation adjusted for ties is 70.746
The Z Score adjusted for ties is -4.36067
-4.36067 < 2.326 indicating no statistical significance at 1% level
-4.36067 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Sodium, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	23410	18
	3/19/2014	60800	53
	9/8/2014	33800	25
	3/17/2015	154000	62
	9/14/2015	76500	55
	3/17/2016	59600	52
	9/21/2016	53300	49
	3/24/2017	45700	46
	9/20/2017	51800	48
	3/27/2018	80100	56
	9/19/2018	59400	51
	3/11/2019	47500	47
	9/25/2019	99000	59
	3/18/2020	88400	57
	9/23/2020	62800	54
	3/17/2021	58800	50
	9/8/2021	45000	45
	3/15/2022	171000	63
	9/12/2022	139000	61
	3/13/2023	120000	60
	9/11/2023	98900	58
GWM-2	9/25/2013	15710	3
	3/18/2014	38600	38
	9/16/2014	37300	35
	3/18/2015	36800	33
	9/15/2015	36700	32
	3/16/2016	36500	31
	9/22/2016	34900	26
	3/24/2017	32800	24
	9/21/2017	35400	28
	3/28/2018	40400	43
	9/21/2018	40200	41
	3/12/2019	37300	36
	10/1/2019	38600	39
	3/18/2020	40900	44
	9/23/2020	34900	27
	3/17/2021	37200	34
	9/9/2021	36000	30
	3/15/2022	39000	40
	9/12/2022	35700	29
	3/13/2023	38300	37
	9/11/2023	40200	42
GWM-14	9/24/2013	16100	4

3/21/2014	14300	1
9/8/2014	17300	9
3/19/2015	16700	6
9/14/2015	18900	11
3/21/2016	15500	2
9/23/2016	17300	10
3/27/2017	17200	7
9/20/2017	22200	15
3/16/2018	22500	16
9/20/2018	20800	14
3/5/2019	20200	13
9/25/2019	16600	5
3/25/2020	19200	12
9/28/2020	22600	17
3/18/2021	17200 R	8
9/15/2021	25000	19
3/22/2022	28200	21
9/14/2022	28700	22
3/16/2023	29900	23
9/13/2023	27400	20

The Wilcoxon Statistic is 24
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -6.08727
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is -6.08727
-6.08727 < 2.326 indicating no statistical significance at 1% level
-6.08727 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Sodium, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	23410	10
	3/19/2014	60800	53
	9/8/2014	33800	17
	3/17/2015	154000	62
	9/14/2015	76500	55
	3/17/2016	59600	52
	9/21/2016	53300	49
	3/24/2017	45700	46
	9/20/2017	51800	48
	3/27/2018	80100	56
	9/19/2018	59400	51
	3/11/2019	47500	47
	9/25/2019	99000	59
	3/18/2020	88400	57
	9/23/2020	62800	54
	3/17/2021	58800	50
	9/8/2021	45000	45
	3/15/2022	171000	63
	9/12/2022	139000	61
	3/13/2023	120000	60
	9/11/2023	98900	58
GWM-2	9/25/2013	15710	1
	3/18/2014	38600	35
	9/16/2014	37300	30
	3/18/2015	36800	28
	9/15/2015	36700	27
	3/16/2016	36500	26
	9/22/2016	34900	20
	3/24/2017	32800	15
	9/21/2017	35400	23
	3/28/2018	40400	41
	9/21/2018	40200	39
	3/12/2019	37300	31
	10/1/2019	38600	36
	3/18/2020	40900	43
	9/23/2020	34900	21
	3/17/2021	37200	29
	9/9/2021	36000	25
	3/15/2022	39000	37
	9/12/2022	35700	24
	3/13/2023	38300	33
	9/11/2023	40200	40
GWM-6	9/24/2013	17740	6

3/21/2014	16800	3
9/17/2014	16700	2
3/19/2015	17500	5
9/15/2015	18300	7
3/21/2016	19100	9
9/26/2016	16800	4
3/31/2017	18300	8
9/21/2017	24000	11
3/30/2018	30700	14
9/26/2018	34000	18
3/13/2019	34300	19
10/3/2019	33400	16
4/3/2020	28100	12
9/30/2020	29000	13
3/22/2021	37900	32
9/16/2021	35000	22
3/24/2022	41900	44
9/16/2022	40000	38
3/17/2023	40600	42
9/14/2023	38300	34

The Wilcoxon Statistic is 128
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -4.57092
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is -4.57092
-4.57092 < 2.326 indicating no statistical significance at 1% level
-4.57092 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Sodium, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	23410	7
	3/19/2014	60800	52
	9/8/2014	33800	22
	3/17/2015	154000	61
	9/14/2015	76500	54
	3/17/2016	59600	51
	9/21/2016	53300	48
	3/24/2017	45700	45
	9/20/2017	51800	47
	3/27/2018	80100	55
	9/19/2018	59400	50
	3/11/2019	47500	46
	9/25/2019	99000	58
	3/18/2020	88400	56
	9/23/2020	62800	53
	3/17/2021	58800	49
	9/8/2021	45000	44
	3/15/2022	171000	62
	9/12/2022	139000	60
	3/13/2023	120000	59
	9/11/2023	98900	57
GWM-2	9/25/2013	15710	1
	3/18/2014	38600	37
	9/16/2014	37300	34
	3/18/2015	36800	32
	9/15/2015	36700	31
	3/16/2016	36500	30
	9/22/2016	34900	24
	3/24/2017	32800	19
	9/21/2017	35400	27
	3/28/2018	40400	42
	9/21/2018	40200	40
	3/12/2019	37300	35
	10/1/2019	38600	38
	3/18/2020	40900	43
	9/23/2020	34900	25
	3/17/2021	37200	33
	9/9/2021	36000	29
	3/15/2022	39000	39
	9/12/2022	35700	28
	3/13/2023	38300	36
	9/11/2023	40200	41
GWM-3	9/25/2013	22520	6

3/18/2014	25200	9
9/16/2014	24200	8
3/18/2015	21200	4
9/15/2015	27100	10
3/16/2016	31100	16
9/22/2016	33400	21
3/29/2017	31100	17
9/21/2017	27500	11
3/28/2018	30800	15
9/20/2018	29100	13
3/12/2019	29700	14
10/1/2019	34600	23
3/18/2020	35000	26
9/24/2020	28400	12
3/17/2021	706000 R	63
9/9/2021	33000	20
3/15/2022	31100	18
9/16/2022	20800	3
3/15/2023	19100	2
9/11/2023	22500	5

The Wilcoxon Statistic is 85
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -5.19788
The Standard Deviation adjusted for ties is 68.5857
The Z Score adjusted for ties is -5.19788
-5.19788 < 2.326 indicating no statistical significance at 1% level
-5.19788 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Sodium, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	23410	2
	3/19/2014	60800	41
	9/8/2014	33800	4
	3/17/2015	154000	50
	9/14/2015	76500	43
	3/17/2016	59600	40
	9/21/2016	53300	37
	3/24/2017	45700	31
	9/20/2017	51800	36
	3/27/2018	80100	44
	9/19/2018	59400	39
	3/11/2019	47500	34
	9/25/2019	99000	47
	3/18/2020	88400	45
	9/23/2020	62800	42
	3/17/2021	58800	38
	9/8/2021	45000	28
	3/15/2022	171000	51
	9/12/2022	139000	49
	3/13/2023	120000	48
	9/11/2023	98900	46
GWM-2	9/25/2013	15710	1
	3/18/2014	38600	17
	9/16/2014	37300	14
	3/18/2015	36800	12
	9/15/2015	36700	11
	3/16/2016	36500	10
	9/22/2016	34900	5
	3/24/2017	32800	3
	9/21/2017	35400	7
	3/28/2018	40400	23
	9/21/2018	40200	21
	3/12/2019	37300	15
	10/1/2019	38600	18
	3/18/2020	40900	25
	9/23/2020	34900	6
	3/17/2021	37200	13
	9/9/2021	36000	9
	3/15/2022	39000	19
	9/12/2022	35700	8
	3/13/2023	38300	16
	9/11/2023	40200	22
GWM-17S	11/14/2019	40500	24

3/26/2020	39500	20
9/29/2020	44000	27
3/16/2021	45400	30
9/14/2021	47000	33
3/18/2022	45100	29
9/13/2022	45900	32
3/14/2023	49100	35
9/12/2023	41000	26

The Wilcoxon Statistic is 211
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is 0.531229
The Standard Deviation adjusted for ties is 40.4722
The Z Score adjusted for ties is 0.531229
0.531229 < 2.326 indicating no statistical significance at 1% level
0.531229 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Thallium, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	32
	3/19/2014	ND<5 U	32
	9/8/2014	ND<5 U	32
	3/17/2015	ND<5 U	32
	9/14/2015	ND<5 U	32
	3/17/2016	ND<5 U	32
	9/21/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/20/2017	ND<5 U	32
	3/27/2018	ND<5 U	32
	9/19/2018	ND<5 U	32
	3/11/2019	ND<5 U	32
	9/25/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/8/2021	ND<5 U	32
	3/15/2022	ND<1.1	32
	9/12/2022	ND<1.1	32
	3/13/2023	ND<1.1	32
	9/11/2023	ND<1.1	32
GWM-2	9/25/2013	ND<5	32
	3/18/2014	ND<5 U	32
	9/16/2014	ND<5 U	32
	3/18/2015	ND<5 U	32
	9/15/2015	ND<5 U	32
	3/16/2016	ND<5 U	32
	9/22/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/21/2017	ND<5 U	32
	3/28/2018	ND<5 U	32
	9/21/2018	ND<5 U	32
	3/12/2019	ND<5 U	32
	10/1/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/9/2021	ND<0.2 J	32
	3/15/2022	ND<1.1	32
	9/12/2022	ND<1.1	32
	3/13/2023	ND<1.1	32
	9/11/2023	ND<1.1	32
GWM-4	9/18/2013	ND<5	32

3/20/2014	ND<5 U	32
9/9/2014	ND<5 U	32
3/16/2015	ND<5 U	32
9/9/2015	ND<5 U	32
3/18/2016	ND<5 U	32
9/20/2016	ND<5 U	32
3/23/2017	ND<5 U	32
9/18/2017	ND<5 U	32
3/15/2018	ND<5 U	32
9/17/2018	ND<5 U	32
3/5/2019	ND<5 U	32
9/24/2019	ND<5 U	32
3/16/2020	ND<5 U	32
9/22/2020	ND<5 U	32
3/16/2021	ND<5 U	32
9/14/2021	ND<5 U	32
3/22/2022	ND<1.1	32
9/13/2022	ND<1.1	32
3/14/2023	ND<1.1	32
9/12/2023	ND<1.1	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Thallium, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 64
Non detect rank is 32.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	32.5
	3/19/2014	ND<5 U	32.5
	9/8/2014	ND<5 U	32.5
	3/17/2015	ND<5 U	32.5
	9/14/2015	ND<5 U	32.5
	3/17/2016	ND<5 U	32.5
	9/21/2016	ND<5 U	32.5
	3/24/2017	ND<5 U	32.5
	9/20/2017	ND<5 U	32.5
	3/27/2018	ND<5 U	32.5
	9/19/2018	ND<5 U	32.5
	3/11/2019	ND<5 U	32.5
	9/25/2019	ND<5 U	32.5
	3/18/2020	ND<5 U	32.5
	9/23/2020	ND<5 U	32.5
	3/17/2021	ND<5 U	32.5
	9/8/2021	ND<5 U	32.5
	3/15/2022	ND<1.1	32.5
	9/12/2022	ND<1.1	32.5
	3/13/2023	ND<1.1	32.5
	9/11/2023	ND<1.1	32.5
GWM-2	9/25/2013	ND<5	32.5
	3/18/2014	ND<5 U	32.5
	9/16/2014	ND<5 U	32.5
	3/18/2015	ND<5 U	32.5
	9/15/2015	ND<5 U	32.5
	3/16/2016	ND<5 U	32.5
	9/22/2016	ND<5 U	32.5
	3/24/2017	ND<5 U	32.5
	9/21/2017	ND<5 U	32.5
	3/28/2018	ND<5 U	32.5
	9/21/2018	ND<5 U	32.5
	3/12/2019	ND<5 U	32.5
	10/1/2019	ND<5 U	32.5
	3/18/2020	ND<5 U	32.5
	9/23/2020	ND<5 U	32.5
	3/17/2021	ND<5 U	32.5
	9/9/2021	ND<0.2 J	32.5
	3/15/2022	ND<1.1	32.5
	9/12/2022	ND<1.1	32.5
	3/13/2023	ND<1.1	32.5
	9/11/2023	ND<1.1	32.5
GWM-5A	9/19/2013	ND<5	32.5

12/5/2013	ND<5	32.5
3/19/2014	ND<5 U	32.5
9/4/2014	ND<5 U	32.5
3/17/2015	ND<5 U	32.5
9/11/2015	ND<5 U	32.5
3/15/2016	ND<5 U	32.5
9/21/2016	ND<5 U	32.5
3/28/2017	ND<5 U	32.5
9/19/2017	ND<5 U	32.5
3/26/2018	ND<5 U	32.5
9/18/2018	ND<5 U	32.5
3/4/2019	ND<5 U	32.5
9/23/2019	ND<5 U	32.5
3/19/2020	ND<5 U	32.5
9/23/2020	ND<5 U	32.5
3/19/2021	ND<5 U	32.5
9/15/2021	ND<5 U	32.5
3/16/2022	ND<1.1	32.5
9/14/2022	ND<1.1	32.5
3/16/2023	ND<1.1	32.5
9/13/2023	ND<1.1	32.5

The Wilcoxon Statistic is 462
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is -0.00706753
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00706753 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Thallium, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	32
	3/19/2014	ND<5 U	32
	9/8/2014	ND<5 U	32
	3/17/2015	ND<5 U	32
	9/14/2015	ND<5 U	32
	3/17/2016	ND<5 U	32
	9/21/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/20/2017	ND<5 U	32
	3/27/2018	ND<5 U	32
	9/19/2018	ND<5 U	32
	3/11/2019	ND<5 U	32
	9/25/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/8/2021	ND<5 U	32
	3/15/2022	ND<1.1	32
	9/12/2022	ND<1.1	32
	3/13/2023	ND<1.1	32
	9/11/2023	ND<1.1	32
GWM-2	9/25/2013	ND<5	32
	3/18/2014	ND<5 U	32
	9/16/2014	ND<5 U	32
	3/18/2015	ND<5 U	32
	9/15/2015	ND<5 U	32
	3/16/2016	ND<5 U	32
	9/22/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/21/2017	ND<5 U	32
	3/28/2018	ND<5 U	32
	9/21/2018	ND<5 U	32
	3/12/2019	ND<5 U	32
	10/1/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/9/2021	ND<0.2 J	32
	3/15/2022	ND<1.1	32
	9/12/2022	ND<1.1	32
	3/13/2023	ND<1.1	32
	9/11/2023	ND<1.1	32
GWM-14	9/24/2013	ND<5	32

3/21/2014	ND<5 U	32
9/8/2014	ND<5 U	32
3/19/2015	ND<5 U	32
9/14/2015	ND<5 U	32
3/21/2016	ND<5 U	32
9/23/2016	ND<5 U	32
3/27/2017	ND<5 U	32
9/20/2017	ND<5 U	32
3/16/2018	ND<5 U	32
9/20/2018	ND<5 U	32
3/5/2019	ND<5 U	32
9/25/2019	ND<5 U	32
3/25/2020	ND<5 U	32
9/28/2020	ND<5 U	32
3/18/2021	ND<5 U	32
9/15/2021	ND<5 U	32
3/22/2022	ND<1.1	32
9/14/2022	ND<1.1	32
3/16/2023	ND<1.1	32
9/13/2023	ND<1.1	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Thallium, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 62
Non detect rank is 31.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	31.5
	3/19/2014	ND<5 U	31.5
	9/8/2014	ND<5 U	31.5
	3/17/2015	ND<5 U	31.5
	9/14/2015	ND<5 U	31.5
	3/17/2016	ND<5 U	31.5
	9/21/2016	ND<5 U	31.5
	3/24/2017	ND<5 U	31.5
	9/20/2017	ND<5 U	31.5
	3/27/2018	ND<5 U	31.5
	9/19/2018	ND<5 U	31.5
	3/11/2019	ND<5 U	31.5
	9/25/2019	ND<5 U	31.5
	3/18/2020	ND<5 U	31.5
	9/23/2020	ND<5 U	31.5
	3/17/2021	ND<5 U	31.5
	9/8/2021	ND<5 U	31.5
	3/15/2022	ND<1.1	31.5
	9/12/2022	ND<1.1	31.5
	3/13/2023	ND<1.1	31.5
	9/11/2023	ND<1.1	31.5
GWM-2	9/25/2013	ND<5	31.5
	3/18/2014	ND<5 U	31.5
	9/16/2014	ND<5 U	31.5
	3/18/2015	ND<5 U	31.5
	9/15/2015	ND<5 U	31.5
	3/16/2016	ND<5 U	31.5
	9/22/2016	ND<5 U	31.5
	3/24/2017	ND<5 U	31.5
	9/21/2017	ND<5 U	31.5
	3/28/2018	ND<5 U	31.5
	9/21/2018	ND<5 U	31.5
	3/12/2019	ND<5 U	31.5
	10/1/2019	ND<5 U	31.5
	3/18/2020	ND<5 U	31.5
	9/23/2020	ND<5 U	31.5
	3/17/2021	ND<5 U	31.5
	9/9/2021	ND<0.2 J	31.5
	3/15/2022	ND<1.1	31.5
	9/12/2022	ND<1.1	31.5
	3/13/2023	ND<1.1	31.5
	9/11/2023	ND<1.1	31.5
GWM-6	9/24/2013	ND<5	31.5

3/21/2014	ND<5 U	31.5
9/17/2014	ND<5 U	31.5
3/19/2015	ND<5 U	31.5
9/15/2015	ND<5 U	31.5
3/21/2016	ND<5 U	31.5
9/26/2016	ND<5 U	31.5
3/31/2017	ND<5 U	31.5
9/21/2017	ND<5 U	31.5
3/30/2018	1.1	63
9/26/2018	ND<5 U	31.5
3/13/2019	ND<5 U	31.5
10/3/2019	ND<5 U	31.5
4/3/2020	ND<5 U	31.5
9/30/2020	ND<5 U	31.5
3/22/2021	ND<5 U	31.5
9/16/2021	ND<5 U	31.5
3/24/2022	ND<1.1	31.5
9/16/2022	ND<1.1	31.5
3/17/2023	ND<1.1	31.5
9/14/2023	ND<1.1	31.5

The Wilcoxon Statistic is 462
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 0.298896
The Standard Deviation adjusted for ties is 14.8492
The Z Score adjusted for ties is 1.38054
0.298896 < 2.326 indicating no statistical significance at 1% level
1.38054 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Thallium, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	32
	3/19/2014	ND<5 U	32
	9/8/2014	ND<5 U	32
	3/17/2015	ND<5 U	32
	9/14/2015	ND<5 U	32
	3/17/2016	ND<5 U	32
	9/21/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/20/2017	ND<5 U	32
	3/27/2018	ND<5 U	32
	9/19/2018	ND<5 U	32
	3/11/2019	ND<5 U	32
	9/25/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/8/2021	ND<5 U	32
	3/15/2022	ND<1.1	32
	9/12/2022	ND<1.1	32
	3/13/2023	ND<1.1	32
	9/11/2023	ND<1.1	32
GWM-2	9/25/2013	ND<5	32
	3/18/2014	ND<5 U	32
	9/16/2014	ND<5 U	32
	3/18/2015	ND<5 U	32
	9/15/2015	ND<5 U	32
	3/16/2016	ND<5 U	32
	9/22/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/21/2017	ND<5 U	32
	3/28/2018	ND<5 U	32
	9/21/2018	ND<5 U	32
	3/12/2019	ND<5 U	32
	10/1/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/9/2021	ND<0.2 J	32
	3/15/2022	ND<1.1	32
	9/12/2022	ND<1.1	32
	3/13/2023	ND<1.1	32
	9/11/2023	ND<1.1	32
GWM-3	9/25/2013	ND<5	32

3/18/2014	ND<5 U	32
9/16/2014	ND<5 U	32
3/18/2015	ND<5 U	32
9/15/2015	ND<5 U	32
3/16/2016	ND<5 U	32
9/22/2016	ND<5 U	32
3/29/2017	ND<5 U	32
9/21/2017	ND<5 U	32
3/28/2018	ND<5 U	32
9/20/2018	ND<5 U	32
3/12/2019	ND<5 U	32
10/1/2019	ND<5 U	32
3/18/2020	ND<5 U	32
9/24/2020	ND<5 U	32
3/17/2021	ND<5 U	32
9/9/2021	ND<5 U	32
3/15/2022	ND<1.1	32
9/16/2022	ND<1.1	32
3/15/2023	ND<1.1	32
9/11/2023	ND<1.1	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Thallium, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 51
Non detect rank is 26

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	26
	3/19/2014	ND<5 U	26
	9/8/2014	ND<5 U	26
	3/17/2015	ND<5 U	26
	9/14/2015	ND<5 U	26
	3/17/2016	ND<5 U	26
	9/21/2016	ND<5 U	26
	3/24/2017	ND<5 U	26
	9/20/2017	ND<5 U	26
	3/27/2018	ND<5 U	26
	9/19/2018	ND<5 U	26
	3/11/2019	ND<5 U	26
	9/25/2019	ND<5 U	26
	3/18/2020	ND<5 U	26
	9/23/2020	ND<5 U	26
	3/17/2021	ND<5 U	26
	9/8/2021	ND<5 U	26
	3/15/2022	ND<1.1	26
	9/12/2022	ND<1.1	26
	3/13/2023	ND<1.1	26
	9/11/2023	ND<1.1	26
GWM-2	9/25/2013	ND<5	26
	3/18/2014	ND<5 U	26
	9/16/2014	ND<5 U	26
	3/18/2015	ND<5 U	26
	9/15/2015	ND<5 U	26
	3/16/2016	ND<5 U	26
	9/22/2016	ND<5 U	26
	3/24/2017	ND<5 U	26
	9/21/2017	ND<5 U	26
	3/28/2018	ND<5 U	26
	9/21/2018	ND<5 U	26
	3/12/2019	ND<5 U	26
	10/1/2019	ND<5 U	26
	3/18/2020	ND<5 U	26
	9/23/2020	ND<5 U	26
	3/17/2021	ND<5 U	26
	9/9/2021	ND<0.2 J	26
	3/15/2022	ND<1.1	26
	9/12/2022	ND<1.1	26
	3/13/2023	ND<1.1	26
	9/11/2023	ND<1.1	26
GWM-17S	11/14/2019	ND<5 U	26

3/26/2020	ND<5 U	26
9/29/2020	ND<5 U	26
3/16/2021	ND<5 U	26
9/14/2021	ND<0.24 J	26
3/18/2022	ND<1.1	26
9/13/2022	ND<1.1	26
3/14/2023	ND<0.46 J	26
9/12/2023	ND<1.1	26

The Wilcoxon Statistic is 189
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is -0.0123542
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0123542 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Vanadium, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 62
Non detect rank is 31.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	31.5
	3/19/2014	ND<5 U	31.5
	9/8/2014	ND<5 U	31.5
	3/17/2015	ND<5 U	31.5
	9/14/2015	ND<5 U	31.5
	3/17/2016	ND<5 U	31.5
	9/21/2016	ND<5 U	31.5
	3/24/2017	ND<5 U	31.5
	9/20/2017	ND<5 U	31.5
	3/27/2018	ND<5 U	31.5
	9/19/2018	ND<5 U	31.5
	3/11/2019	ND<5 U	31.5
	9/25/2019	ND<5 U	31.5
	3/18/2020	ND<5 U	31.5
	9/23/2020	ND<5 U	31.5
	3/17/2021	ND<5 U	31.5
	9/8/2021	ND<5 U	31.5
	3/15/2022	ND<2.2	31.5
	9/12/2022	ND<2.2	31.5
	3/13/2023	ND<2.2	31.5
	9/11/2023	ND<2.2	31.5
GWM-2	9/25/2013	ND<5	31.5
	3/18/2014	ND<5 U	31.5
	9/16/2014	ND<5 U	31.5
	3/18/2015	ND<5 U	31.5
	9/15/2015	ND<5 U	31.5
	3/16/2016	ND<5 U	31.5
	9/22/2016	ND<5 U	31.5
	3/24/2017	ND<5 U	31.5
	9/21/2017	ND<5 U	31.5
	3/28/2018	ND<5 U	31.5
	9/21/2018	ND<5 U	31.5
	3/12/2019	ND<5 U	31.5
	10/1/2019	ND<5 U	31.5
	3/18/2020	ND<5 U	31.5
	9/23/2020	ND<5 U	31.5
	3/17/2021	ND<5 U	31.5
	9/9/2021	ND<5 U	31.5
	3/15/2022	ND<2.2	31.5
	9/12/2022	ND<2.2	31.5
	3/13/2023	ND<2.2	31.5
	9/11/2023	ND<2.2	31.5
GWM-4	9/18/2013	ND<5	31.5

3/20/2014	ND<5 U	31.5
9/9/2014	ND<5 U	31.5
3/16/2015	ND<5 U	31.5
9/9/2015	ND<5 U	31.5
3/18/2016	ND<5 U	31.5
9/20/2016	ND<5 U	31.5
3/23/2017	ND<5 U	31.5
9/18/2017	ND<5 U	31.5
3/15/2018	2.2	63
9/17/2018	ND<5 U	31.5
3/5/2019	ND<5 U	31.5
9/24/2019	ND<5 U	31.5
3/16/2020	ND<5 U	31.5
9/22/2020	ND<5 U	31.5
3/16/2021	ND<5 U	31.5
9/14/2021	ND<5 U	31.5
3/22/2022	ND<2.2	31.5
9/13/2022	ND<2.2	31.5
3/14/2023	ND<2.2	31.5
9/12/2023	ND<2.2	31.5

The Wilcoxon Statistic is 462
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 0.298896
The Standard Deviation adjusted for ties is 14.8492
The Z Score adjusted for ties is 1.38054
0.298896 < 2.326 indicating no statistical significance at 1% level
1.38054 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Vanadium, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 64
Non detect rank is 32.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	32.5
	3/19/2014	ND<5 U	32.5
	9/8/2014	ND<5 U	32.5
	3/17/2015	ND<5 U	32.5
	9/14/2015	ND<5 U	32.5
	3/17/2016	ND<5 U	32.5
	9/21/2016	ND<5 U	32.5
	3/24/2017	ND<5 U	32.5
	9/20/2017	ND<5 U	32.5
	3/27/2018	ND<5 U	32.5
	9/19/2018	ND<5 U	32.5
	3/11/2019	ND<5 U	32.5
	9/25/2019	ND<5 U	32.5
	3/18/2020	ND<5 U	32.5
	9/23/2020	ND<5 U	32.5
	3/17/2021	ND<5 U	32.5
	9/8/2021	ND<5 U	32.5
	3/15/2022	ND<2.2	32.5
	9/12/2022	ND<2.2	32.5
	3/13/2023	ND<2.2	32.5
	9/11/2023	ND<2.2	32.5
GWM-2	9/25/2013	ND<5	32.5
	3/18/2014	ND<5 U	32.5
	9/16/2014	ND<5 U	32.5
	3/18/2015	ND<5 U	32.5
	9/15/2015	ND<5 U	32.5
	3/16/2016	ND<5 U	32.5
	9/22/2016	ND<5 U	32.5
	3/24/2017	ND<5 U	32.5
	9/21/2017	ND<5 U	32.5
	3/28/2018	ND<5 U	32.5
	9/21/2018	ND<5 U	32.5
	3/12/2019	ND<5 U	32.5
	10/1/2019	ND<5 U	32.5
	3/18/2020	ND<5 U	32.5
	9/23/2020	ND<5 U	32.5
	3/17/2021	ND<5 U	32.5
	9/9/2021	ND<5 U	32.5
	3/15/2022	ND<2.2	32.5
	9/12/2022	ND<2.2	32.5
	3/13/2023	ND<2.2	32.5
	9/11/2023	ND<2.2	32.5
GWM-5A	9/19/2013	ND<5	32.5

12/5/2013	ND<5	32.5
3/19/2014	ND<5 U	32.5
9/4/2014	ND<5 U	32.5
3/17/2015	ND<5 U	32.5
9/11/2015	ND<5 U	32.5
3/15/2016	ND<5 U	32.5
9/21/2016	ND<5 U	32.5
3/28/2017	ND<5 U	32.5
9/19/2017	ND<5 U	32.5
3/26/2018	ND<5 U	32.5
9/18/2018	ND<5 U	32.5
3/4/2019	ND<5 U	32.5
9/23/2019	ND<5 U	32.5
3/19/2020	ND<5 U	32.5
9/23/2020	ND<5 U	32.5
3/19/2021	ND<5 U	32.5
9/15/2021	ND<5 U	32.5
3/16/2022	ND<2.2	32.5
9/14/2022	ND<2.2	32.5
3/16/2023	ND<2.2	32.5
9/13/2023	ND<2.2	32.5

The Wilcoxon Statistic is 462
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is -0.00706753
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00706753 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Vanadium, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 62
Non detect rank is 31.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	31.5
	3/19/2014	ND<5 U	31.5
	9/8/2014	ND<5 U	31.5
	3/17/2015	ND<5 U	31.5
	9/14/2015	ND<5 U	31.5
	3/17/2016	ND<5 U	31.5
	9/21/2016	ND<5 U	31.5
	3/24/2017	ND<5 U	31.5
	9/20/2017	ND<5 U	31.5
	3/27/2018	ND<5 U	31.5
	9/19/2018	ND<5 U	31.5
	3/11/2019	ND<5 U	31.5
	9/25/2019	ND<5 U	31.5
	3/18/2020	ND<5 U	31.5
	9/23/2020	ND<5 U	31.5
	3/17/2021	ND<5 U	31.5
	9/8/2021	ND<5 U	31.5
	3/15/2022	ND<2.2	31.5
	9/12/2022	ND<2.2	31.5
	3/13/2023	ND<2.2	31.5
	9/11/2023	ND<2.2	31.5
GWM-2	9/25/2013	ND<5	31.5
	3/18/2014	ND<5 U	31.5
	9/16/2014	ND<5 U	31.5
	3/18/2015	ND<5 U	31.5
	9/15/2015	ND<5 U	31.5
	3/16/2016	ND<5 U	31.5
	9/22/2016	ND<5 U	31.5
	3/24/2017	ND<5 U	31.5
	9/21/2017	ND<5 U	31.5
	3/28/2018	ND<5 U	31.5
	9/21/2018	ND<5 U	31.5
	3/12/2019	ND<5 U	31.5
	10/1/2019	ND<5 U	31.5
	3/18/2020	ND<5 U	31.5
	9/23/2020	ND<5 U	31.5
	3/17/2021	ND<5 U	31.5
	9/9/2021	ND<5 U	31.5
	3/15/2022	ND<2.2	31.5
	9/12/2022	ND<2.2	31.5
	3/13/2023	ND<2.2	31.5
	9/11/2023	ND<2.2	31.5
GWM-14	9/24/2013	ND<5	31.5

3/21/2014	ND<5 U	31.5
9/8/2014	ND<5 U	31.5
3/19/2015	ND<5 U	31.5
9/14/2015	ND<5 U	31.5
3/21/2016	ND<5 U	31.5
9/23/2016	ND<5 U	31.5
3/27/2017	ND<5 U	31.5
9/20/2017	ND<5 U	31.5
3/16/2018	ND<5 U	31.5
9/20/2018	ND<5 U	31.5
3/5/2019	ND<5 U	31.5
9/25/2019	3.9	63
3/25/2020	ND<5 U	31.5
9/28/2020	ND<5 U	31.5
3/18/2021	ND<5 U	31.5
9/15/2021	ND<5 U	31.5
3/22/2022	ND<2.2	31.5
9/14/2022	ND<2.2	31.5
3/16/2023	ND<2.2	31.5
9/13/2023	ND<2.2	31.5

The Wilcoxon Statistic is 462
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 0.298896
The Standard Deviation adjusted for ties is 14.8492
The Z Score adjusted for ties is 1.38054
0.298896 < 2.326 indicating no statistical significance at 1% level
1.38054 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Vanadium, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 62
Non detect rank is 31.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	31.5
	3/19/2014	ND<5 U	31.5
	9/8/2014	ND<5 U	31.5
	3/17/2015	ND<5 U	31.5
	9/14/2015	ND<5 U	31.5
	3/17/2016	ND<5 U	31.5
	9/21/2016	ND<5 U	31.5
	3/24/2017	ND<5 U	31.5
	9/20/2017	ND<5 U	31.5
	3/27/2018	ND<5 U	31.5
	9/19/2018	ND<5 U	31.5
	3/11/2019	ND<5 U	31.5
	9/25/2019	ND<5 U	31.5
	3/18/2020	ND<5 U	31.5
	9/23/2020	ND<5 U	31.5
	3/17/2021	ND<5 U	31.5
	9/8/2021	ND<5 U	31.5
	3/15/2022	ND<2.2	31.5
	9/12/2022	ND<2.2	31.5
	3/13/2023	ND<2.2	31.5
	9/11/2023	ND<2.2	31.5
GWM-2	9/25/2013	ND<5	31.5
	3/18/2014	ND<5 U	31.5
	9/16/2014	ND<5 U	31.5
	3/18/2015	ND<5 U	31.5
	9/15/2015	ND<5 U	31.5
	3/16/2016	ND<5 U	31.5
	9/22/2016	ND<5 U	31.5
	3/24/2017	ND<5 U	31.5
	9/21/2017	ND<5 U	31.5
	3/28/2018	ND<5 U	31.5
	9/21/2018	ND<5 U	31.5
	3/12/2019	ND<5 U	31.5
	10/1/2019	ND<5 U	31.5
	3/18/2020	ND<5 U	31.5
	9/23/2020	ND<5 U	31.5
	3/17/2021	ND<5 U	31.5
	9/9/2021	ND<5 U	31.5
	3/15/2022	ND<2.2	31.5
	9/12/2022	ND<2.2	31.5
	3/13/2023	ND<2.2	31.5
	9/11/2023	ND<2.2	31.5
GWM-6	9/24/2013	ND<5	31.5

3/21/2014	ND<5 U	31.5
9/17/2014	ND<5 U	31.5
3/19/2015	ND<5 U	31.5
9/15/2015	ND<5 U	31.5
3/21/2016	ND<5 U	31.5
9/26/2016	ND<5 U	31.5
3/31/2017	ND<5 U	31.5
9/21/2017	ND<5 U	31.5
3/30/2018	2.2	63
9/26/2018	ND<5 U	31.5
3/13/2019	ND<5 U	31.5
10/3/2019	ND<5 U	31.5
4/3/2020	ND<5 U	31.5
9/30/2020	ND<5 U	31.5
3/22/2021	ND<5 U	31.5
9/16/2021	ND<5 U	31.5
3/24/2022	ND<2.2	31.5
9/16/2022	ND<2.2	31.5
3/17/2023	ND<2.2	31.5
9/14/2023	ND<2.2	31.5

The Wilcoxon Statistic is 462
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is 0.298896
The Standard Deviation adjusted for ties is 14.8492
The Z Score adjusted for ties is 1.38054
0.298896 < 2.326 indicating no statistical significance at 1% level
1.38054 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Vanadium, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 63
Non detect rank is 32

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	32
	3/19/2014	ND<5 U	32
	9/8/2014	ND<5 U	32
	3/17/2015	ND<5 U	32
	9/14/2015	ND<5 U	32
	3/17/2016	ND<5 U	32
	9/21/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/20/2017	ND<5 U	32
	3/27/2018	ND<5 U	32
	9/19/2018	ND<5 U	32
	3/11/2019	ND<5 U	32
	9/25/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/8/2021	ND<5 U	32
	3/15/2022	ND<2.2	32
	9/12/2022	ND<2.2	32
	3/13/2023	ND<2.2	32
	9/11/2023	ND<2.2	32
GWM-2	9/25/2013	ND<5	32
	3/18/2014	ND<5 U	32
	9/16/2014	ND<5 U	32
	3/18/2015	ND<5 U	32
	9/15/2015	ND<5 U	32
	3/16/2016	ND<5 U	32
	9/22/2016	ND<5 U	32
	3/24/2017	ND<5 U	32
	9/21/2017	ND<5 U	32
	3/28/2018	ND<5 U	32
	9/21/2018	ND<5 U	32
	3/12/2019	ND<5 U	32
	10/1/2019	ND<5 U	32
	3/18/2020	ND<5 U	32
	9/23/2020	ND<5 U	32
	3/17/2021	ND<5 U	32
	9/9/2021	ND<5 U	32
	3/15/2022	ND<2.2	32
	9/12/2022	ND<2.2	32
	3/13/2023	ND<2.2	32
	9/11/2023	ND<2.2	32
GWM-3	9/25/2013	ND<5	32

3/18/2014	ND<5 U	32
9/16/2014	ND<5 U	32
3/18/2015	ND<5 U	32
9/15/2015	ND<5 U	32
3/16/2016	ND<5 U	32
9/22/2016	ND<5 U	32
3/29/2017	ND<5 U	32
9/21/2017	ND<5 U	32
3/28/2018	ND<5 U	32
9/20/2018	ND<5 U	32
3/12/2019	ND<5 U	32
10/1/2019	ND<5 U	32
3/18/2020	ND<5 U	32
9/24/2020	ND<5 U	32
3/17/2021	ND<5 U	32
9/9/2021	ND<5 U	32
3/15/2022	ND<2.2	32
9/16/2022	ND<2.2	32
3/15/2023	ND<2.2	32
9/11/2023	ND<2.2	32

The Wilcoxon Statistic is 441
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -0.00729015
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.00729015 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Vanadium, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 51
Non detect rank is 26

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<5	26
	3/19/2014	ND<5 U	26
	9/8/2014	ND<5 U	26
	3/17/2015	ND<5 U	26
	9/14/2015	ND<5 U	26
	3/17/2016	ND<5 U	26
	9/21/2016	ND<5 U	26
	3/24/2017	ND<5 U	26
	9/20/2017	ND<5 U	26
	3/27/2018	ND<5 U	26
	9/19/2018	ND<5 U	26
	3/11/2019	ND<5 U	26
	9/25/2019	ND<5 U	26
	3/18/2020	ND<5 U	26
	9/23/2020	ND<5 U	26
	3/17/2021	ND<5 U	26
	9/8/2021	ND<5 U	26
	3/15/2022	ND<2.2	26
	9/12/2022	ND<2.2	26
	3/13/2023	ND<2.2	26
	9/11/2023	ND<2.2	26
GWM-2	9/25/2013	ND<5	26
	3/18/2014	ND<5 U	26
	9/16/2014	ND<5 U	26
	3/18/2015	ND<5 U	26
	9/15/2015	ND<5 U	26
	3/16/2016	ND<5 U	26
	9/22/2016	ND<5 U	26
	3/24/2017	ND<5 U	26
	9/21/2017	ND<5 U	26
	3/28/2018	ND<5 U	26
	9/21/2018	ND<5 U	26
	3/12/2019	ND<5 U	26
	10/1/2019	ND<5 U	26
	3/18/2020	ND<5 U	26
	9/23/2020	ND<5 U	26
	3/17/2021	ND<5 U	26
	9/9/2021	ND<5 U	26
	3/15/2022	ND<2.2	26
	9/12/2022	ND<2.2	26
	3/13/2023	ND<2.2	26
	9/11/2023	ND<2.2	26
GWM-17S	11/14/2019	ND<0.86 J	26

3/26/2020	ND<5 U	26
9/29/2020	ND<5 U	26
3/16/2021	ND<5 U	26
9/14/2021	ND<5 U	26
3/18/2022	ND<2.2	26
9/13/2022	ND<2.2	26
3/14/2023	ND<0.78 J	26
9/12/2023	ND<2.2	26

The Wilcoxon Statistic is 189
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is -0.0123542
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0123542 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Zinc, Total

Location: GWM-4

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 9
Non detect rank is 5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<10	5
	3/19/2014	7.8	16
	9/8/2014	12	20
	3/17/2015	12	21
	9/14/2015	23	37
	3/17/2016	16	26
	9/21/2016	19	34
	3/24/2017	16	27
	9/20/2017	6.8	11
	3/27/2018	6	10
	9/19/2018	15	23
	3/11/2019	28	41
	9/25/2019	25	40
	3/18/2020	21	36
	9/23/2020	23	38
	3/17/2021	17	32
	9/8/2021	18	33
	3/15/2022	39	42
	9/12/2022	44	43
	3/13/2023	19	35
	9/11/2023	16	28
GWM-2	9/25/2013	ND<10	5
	3/18/2014	69	56
	9/16/2014	78	62
	3/18/2015	72	58
	9/15/2015	67	50
	3/16/2016	68	53
	9/22/2016	63	46
	3/24/2017	72	59
	9/21/2017	76	61
	3/28/2018	63	47
	9/21/2018	62	45
	3/12/2019	80	63
	10/1/2019	72	60
	3/18/2020	65	49
	9/23/2020	63	48
	3/17/2021	60	44
	9/9/2021	68	54
	3/15/2022	68	55
	9/12/2022	67	51
	3/13/2023	69	57
	9/11/2023	67	52
GWM-4	9/18/2013	ND<10	5

3/20/2014	7.2	14
9/9/2014	15	24
3/16/2015	8.6	18
9/9/2015	15	25
3/18/2016	7.6	15
9/20/2016	16	29
3/23/2017	16	30
9/18/2017	24	39
3/15/2018	ND<4.6 J	5
9/17/2018	14	22
3/5/2019	11	19
9/24/2019	16	31
3/16/2020	7	13
9/22/2020	6.9	12
3/16/2021	ND<5.5 J	5
9/14/2021	ND<8.1 J	5
3/22/2022	ND<5.4 J	5
9/13/2022	ND<3.5 J	5
3/14/2023	8.4	17
9/12/2023	ND<2.1 J	5

The Wilcoxon Statistic is 112
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -4.80421
The Standard Deviation adjusted for ties is 68.4869
The Z Score adjusted for ties is -4.81114
-4.80421 < 2.326 indicating no statistical significance at 1% level
-4.81114 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Zinc, Total

Location: GWM-5A

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 5
Non detect rank is 3

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<10	3
	3/19/2014	7.8	16
	9/8/2014	12	26
	3/17/2015	12	27
	9/14/2015	23	38
	3/17/2016	16	30
	9/21/2016	19	35
	3/24/2017	16	31
	9/20/2017	6.8	10
	3/27/2018	6	7
	9/19/2018	15	29
	3/11/2019	28	41
	9/25/2019	25	40
	3/18/2020	21	37
	9/23/2020	23	39
	3/17/2021	17	33
	9/8/2021	18	34
	3/15/2022	39	42
	9/12/2022	44	44
	3/13/2023	19	36
	9/11/2023	16	32
GWM-2	9/25/2013	ND<10	3
	3/18/2014	69	57
	9/16/2014	78	63
	3/18/2015	72	59
	9/15/2015	67	51
	3/16/2016	68	54
	9/22/2016	63	47
	3/24/2017	72	60
	9/21/2017	76	62
	3/28/2018	63	48
	9/21/2018	62	46
	3/12/2019	80	64
	10/1/2019	72	61
	3/18/2020	65	50
	9/23/2020	63	49
	3/17/2021	60	45
	9/9/2021	68	55
	3/15/2022	68	56
	9/12/2022	67	52
	3/13/2023	69	58
	9/11/2023	67	53
GWM-5A	9/19/2013	40	43

12/5/2013	10	23
3/19/2014	7.3	12
9/4/2014	12	28
3/17/2015	6.3	9
9/11/2015	7.5	14
3/15/2016	9.3	21
9/21/2016	ND<5.5 J	3
3/28/2017	ND<4.2 J	3
9/19/2017	7.1	11
3/26/2018	ND<4.9 J	3
9/18/2018	8	17
3/4/2019	7.6	15
9/23/2019	10	24
3/19/2020	8.5	19
9/23/2020	8.4	18
3/19/2021	5.7	6
9/15/2021	10	25
3/16/2022	9.9	22
9/14/2022	6	8
3/16/2023	8.5	20
9/13/2023	7.3	13

The Wilcoxon Statistic is 104
The Expected value is is 462
The Standard Deviation is 70.746
The Z Score is -5.06742
The Standard Deviation adjusted for ties is 70.7298
The Z Score adjusted for ties is -5.06858
-5.06742 < 2.326 indicating no statistical significance at 1% level
-5.06858 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Zinc, Total

Location: GWM-14

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 2
Non detect rank is 1.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<10	1.5
	3/19/2014	7.8	5
	9/8/2014	12	13
	3/17/2015	12	14
	9/14/2015	23	38
	3/17/2016	16	29
	9/21/2016	19	34
	3/24/2017	16	30
	9/20/2017	6.8	4
	3/27/2018	6	3
	9/19/2018	15	27
	3/11/2019	28	41
	9/25/2019	25	40
	3/18/2020	21	37
	9/23/2020	23	39
	3/17/2021	17	32
	9/8/2021	18	33
	3/15/2022	39	42
	9/12/2022	44	43
	3/13/2023	19	35
	9/11/2023	16	31
GWM-2	9/25/2013	ND<10	1.5
	3/18/2014	69	56
	9/16/2014	78	62
	3/18/2015	72	58
	9/15/2015	67	50
	3/16/2016	68	53
	9/22/2016	63	46
	3/24/2017	72	59
	9/21/2017	76	61
	3/28/2018	63	47
	9/21/2018	62	45
	3/12/2019	80	63
	10/1/2019	72	60
	3/18/2020	65	49
	9/23/2020	63	48
	3/17/2021	60	44
	9/9/2021	68	54
	3/15/2022	68	55
	9/12/2022	67	51
	3/13/2023	69	57
	9/11/2023	67	52
GWM-14	9/24/2013	10	7

3/21/2014	11	10
9/8/2014	10	8
3/19/2015	20	36
9/14/2015	11	11
3/21/2016	12	15
9/23/2016	10	9
3/27/2017	9.7	6
9/20/2017	11	12
3/16/2018	12	16
9/20/2018	13	20
3/5/2019	12	17
9/25/2019	14	25
3/25/2020	13	21
9/28/2020	12	18
3/18/2021	13 R	22
9/15/2021	15	28
3/22/2022	14	26
9/14/2022	13	23
3/16/2023	12	19
9/13/2023	13	24

The Wilcoxon Statistic is 142
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -4.3668
The Standard Deviation adjusted for ties is 68.5849
The Z Score adjusted for ties is -4.36685
-4.3668 < 2.326 indicating no statistical significance at 1% level
-4.36685 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Zinc, Total

Location: GWM-6

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<10	9.5
	3/19/2014	7.8	24
	9/8/2014	12	26
	3/17/2015	12	27
	9/14/2015	23	38
	3/17/2016	16	30
	9/21/2016	19	35
	3/24/2017	16	31
	9/20/2017	6.8	22
	3/27/2018	6	21
	9/19/2018	15	29
	3/11/2019	28	41
	9/25/2019	25	40
	3/18/2020	21	37
	9/23/2020	23	39
	3/17/2021	17	33
	9/8/2021	18	34
	3/15/2022	39	42
	9/12/2022	44	43
	3/13/2023	19	36
	9/11/2023	16	32
GWM-2	9/25/2013	ND<10	9.5
	3/18/2014	69	56
	9/16/2014	78	62
	3/18/2015	72	58
	9/15/2015	67	50
	3/16/2016	68	53
	9/22/2016	63	46
	3/24/2017	72	59
	9/21/2017	76	61
	3/28/2018	63	47
	9/21/2018	62	45
	3/12/2019	80	63
	10/1/2019	72	60
	3/18/2020	65	49
	9/23/2020	63	48
	3/17/2021	60	44
	9/9/2021	68	54
	3/15/2022	68	55
	9/12/2022	67	51
	3/13/2023	69	57
	9/11/2023	67	52
GWM-6	9/24/2013	ND<10	9.5

3/21/2014	5.8	20
9/17/2014	8.5	25
3/19/2015	ND<4.2 J	9.5
9/15/2015	ND<3.3 J	9.5
3/21/2016	ND<3.7 J	9.5
9/26/2016	12	28
3/31/2017	ND<3.5 J	9.5
9/21/2017	7.7	23
3/30/2018	5.6	19
9/26/2018	ND<10 U	9.5
3/13/2019	ND<2.6 J	9.5
10/3/2019	ND<4.6 J	9.5
4/3/2020	ND<5.5 J	9.5
9/30/2020	ND<2 J	9.5
3/22/2021	ND<2.1 J	9.5
9/16/2021	ND<10 U	9.5
3/24/2022	ND<5.6	9.5
9/16/2022	ND<2.2 J	9.5
3/17/2023	ND<5.6	9.5
9/14/2023	ND<1.9 J	9.5

The Wilcoxon Statistic is 36
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -5.91231
The Standard Deviation adjusted for ties is 67.7835
The Z Score adjusted for ties is -5.98229
-5.91231 < 2.326 indicating no statistical significance at 1% level
-5.98229 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Zinc, Total

Location: GWM-3

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 14
Non detect rank is 7.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<10	7.5
	3/19/2014	7.8	23
	9/8/2014	12	27
	3/17/2015	12	28
	9/14/2015	23	38
	3/17/2016	16	30
	9/21/2016	19	35
	3/24/2017	16	31
	9/20/2017	6.8	19
	3/27/2018	6	16
	9/19/2018	15	29
	3/11/2019	28	41
	9/25/2019	25	40
	3/18/2020	21	37
	9/23/2020	23	39
	3/17/2021	17	33
	9/8/2021	18	34
	3/15/2022	39	42
	9/12/2022	44	43
	3/13/2023	19	36
	9/11/2023	16	32
GWM-2	9/25/2013	ND<10	7.5
	3/18/2014	69	56
	9/16/2014	78	62
	3/18/2015	72	58
	9/15/2015	67	50
	3/16/2016	68	53
	9/22/2016	63	46
	3/24/2017	72	59
	9/21/2017	76	61
	3/28/2018	63	47
	9/21/2018	62	45
	3/12/2019	80	63
	10/1/2019	72	60
	3/18/2020	65	49
	9/23/2020	63	48
	3/17/2021	60	44
	9/9/2021	68	54
	3/15/2022	68	55
	9/12/2022	67	51
	3/13/2023	69	57
	9/11/2023	67	52
GWM-3	9/25/2013	ND<10	7.5

3/18/2014	9.6	24
9/16/2014	ND<4.1 J	7.5
3/18/2015	ND<3.4 J	7.5
9/15/2015	ND<3.2 J	7.5
3/16/2016	7.2	22
9/22/2016	ND<5.1 J	7.5
3/29/2017	5.7	15
9/21/2017	ND<4.7 J	7.5
3/28/2018	ND<4 J	7.5
9/20/2018	ND<4.4 J	7.5
3/12/2019	ND<5.1 J	7.5
10/1/2019	6.9	20
3/18/2020	6	17
9/24/2020	6.9	21
3/17/2021	9.6 R	25
9/9/2021	ND<9.7 J	7.5
3/15/2022	6	18
9/16/2022	11	26
3/15/2023	ND<4.2 J	7.5
9/11/2023	ND<2.6 J	7.5

The Wilcoxon Statistic is 47
The Expected value is is 441
The Standard Deviation is 68.5857
The Z Score is -5.75193
The Standard Deviation adjusted for ties is 68.2102
The Z Score adjusted for ties is -5.78359
-5.75193 < 2.326 indicating no statistical significance at 1% level
-5.78359 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Zinc, Total

Location: GWM-17S

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 2
Non detect rank is 1.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-9	9/24/2013	ND<10	1.5
	3/19/2014	7.8	5
	9/8/2014	12	14
	3/17/2015	12	15
	9/14/2015	23	26
	3/17/2016	16	18
	9/21/2016	19	23
	3/24/2017	16	19
	9/20/2017	6.8	4
	3/27/2018	6	3
	9/19/2018	15	16
	3/11/2019	28	29
	9/25/2019	25	28
	3/18/2020	21	25
	9/23/2020	23	27
	3/17/2021	17	21
	9/8/2021	18	22
	3/15/2022	39	30
	9/12/2022	44	31
	3/13/2023	19	24
	9/11/2023	16	20
GWM-2	9/25/2013	ND<10	1.5
	3/18/2014	69	44
	9/16/2014	78	50
	3/18/2015	72	46
	9/15/2015	67	38
	3/16/2016	68	41
	9/22/2016	63	34
	3/24/2017	72	47
	9/21/2017	76	49
	3/28/2018	63	35
	9/21/2018	62	33
	3/12/2019	80	51
	10/1/2019	72	48
	3/18/2020	65	37
	9/23/2020	63	36
	3/17/2021	60	32
	9/9/2021	68	42
	3/15/2022	68	43
	9/12/2022	67	39
	3/13/2023	69	45
	9/11/2023	67	40
GWM-17S	11/14/2019	11	12

3/26/2020	8	6
9/29/2020	8.3	7
3/16/2021	10	10
9/14/2021	15	17
3/18/2022	10	11
9/13/2022	9	8
3/14/2023	9	9
9/12/2023	11	13

The Wilcoxon Statistic is 48
The Expected value is is 189
The Standard Deviation is 40.4722
The Z Score is -3.49623
The Standard Deviation adjusted for ties is 40.4713
The Z Score adjusted for ties is -3.49631
-3.49623 < 2.326 indicating no statistical significance at 1% level
-3.49631 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

10) Patapsco Aquifer Metals Intra-well Statistics

APPENDIX F

Shapiro-Francia Test of Normality

Parameter: Antimony, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	0	-0.725736	68.2338	0
38	0	-0.706302	68.7327	0
39	0	-0.687131	69.2049	0
40	0	-0.665079	69.6472	0
41	0	-0.646431	70.0651	0
42	0	-0.628006	70.4595	0
43	0	-0.606775	70.8276	0
44	0	-0.588793	71.1743	0
45	0	-0.570999	71.5003	0
46	0	-0.550465	71.8034	0
47	0	-0.533048	72.0875	0

48	0	-0.515791	72.3535	0
49	0	-0.49585	72.5994	0
50	0	-0.478914	72.8288	0
51	0	-0.462114	73.0423	0
52	0	-0.442676	73.2383	0
53	0	-0.426148	73.4199	0
54	0	-0.409735	73.5878	0
55	0	-0.390726	73.7404	0
56	0	-0.374544	73.8807	0
57	0	-0.358459	74.0092	0
58	0	-0.33981	74.1247	0
59	0	-0.323919	74.2296	0
60	0	-0.308108	74.3245	0
61	0	-0.28976	74.4085	0
62	0	-0.27411	74.4836	0
63	0	-0.258527	74.5505	0
64	0	-0.240426	74.6083	0
65	0	-0.224974	74.6589	0
66	0	-0.209575	74.7028	0
67	0	-0.191671	74.7395	0
68	0	-0.176374	74.7706	0
69	0	-0.161119	74.7966	0
70	0	-0.143367	74.8172	0
71	0	-0.128189	74.8336	0
72	0	-0.113039	74.8464	0
73	0	-0.0953969	74.8555	0
74	0	-0.0802981	74.8619	0
75	0	-0.0652187	74.8662	0
76	0	-0.0476439	74.8684	0
77	0	-0.0325917	74.8695	0
78	0	-0.0175476	74.8698	0
79	0	0	74.8698	0
80	0	0.0175476	74.8701	0
81	0	0.0325917	74.8712	0
82	0	0.0476439	74.8735	0
83	0	0.0652187	74.8777	0
84	0	0.0802981	74.8842	0
85	0	0.0953969	74.8933	0
86	0	0.113039	74.906	0
87	0	0.128189	74.9225	0
88	0	0.143367	74.943	0
89	0	0.161119	74.969	0
90	0	0.176374	75.0001	0
91	0	0.191671	75.0368	0
92	0	0.209575	75.0807	0
93	0	0.224974	75.1314	0
94	0	0.240426	75.1892	0
95	0	0.258527	75.256	0
96	0	0.27411	75.3311	0
97	0	0.28976	75.4151	0
98	0	0.308108	75.51	0
99	0	0.323919	75.615	0
100	0	0.33981	75.7304	0
101	0	0.358459	75.8589	0
102	0	0.374544	75.9992	0
103	0	0.390726	76.1519	0
104	0	0.409735	76.3198	0

105	0	0.426148	76.5014	0
106	0	0.442676	76.6973	0
107	0	0.462114	76.9109	0
108	0	0.478914	77.1402	0
109	0	0.49585	77.3861	0
110	0	0.515791	77.6521	0
111	0	0.533048	77.9363	0
112	0	0.550465	78.2393	0
113	0	0.570999	78.5653	0
114	0	0.588793	78.912	0
115	0	0.606775	79.2802	0
116	0	0.628006	79.6746	0
117	0	0.646431	80.0924	0
118	0	0.665079	80.5348	0
119	0	0.687131	81.0069	0
120	0	0.706302	81.5058	0
121	0	0.725736	82.0325	0
122	0	0.748762	82.5931	0
123	0	0.768821	83.1842	0
124	0	0.789191	83.807	0
125	0	0.813379	84.4686	0
126	0	0.834498	85.165	0
127	0	0.855996	85.8977	0
128	0	0.881587	86.6749	0
129	0	0.903992	87.4921	0
130	0	0.926859	88.3512	0
131	0	0.954165	89.2616	0
132	0	0.97815	90.2184	0
133	0	1.00271	91.2238	0
134	0	1.03215	92.2892	0
135	0	1.05812	93.4088	0
136	0	1.08482	94.5856	0
137	0	1.11699	95.8333	0
138	0	1.1455	97.1455	0
139	0	1.17499	98.5261	0
140	0	1.21073	99.9919	0
141	0	1.24264	101.536	0
142	0	1.27588	103.164	0
143	0	1.31652	104.897	0
144	0	1.35317	106.728	0
145	0	1.39175	108.665	0
146	0	1.43953	110.737	0
147	0	1.48328	112.938	0
148	0	1.53007	115.279	0
149	0	1.58927	117.804	0
150	0	1.64485	120.51	0
151	0	1.70604	123.421	0
152	0	1.78661	126.613	0
153	0	1.86629	130.096	0
154	0	1.95996	133.937	0
155	0	2.09693	138.334	0
156	0	2.25713	143.429	0
157	2.2	2.51213	149.74	5.52669

Data Set Standard Deviation = 0.175579
Numerator = 30.5443

Denominator = 720.124
W Statistic = 0.0424154 = 30.5443 / 720.124

5% Critical value of 0.976 exceeds 0.0424154
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.0424154
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Antimony, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	ND<0 U
	9/9/2014	ND<0 U
	3/16/2015	ND<0 U
	9/9/2015	ND<0 U
	3/18/2016	ND<0 U
	9/20/2016	ND<0 U
	3/23/2017	ND<0 U
	9/18/2017	ND<0 U
	3/15/2018	ND<0 U
	9/17/2018	ND<0 U
	3/5/2019	ND<0 J
	9/24/2019	ND<0 U
	3/16/2020	ND<0 U
	9/22/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/22/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Antimony, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 0
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/4/2014	ND<0 J
	3/17/2015	ND<0 U
	9/11/2015	ND<0 U
	3/15/2016	ND<0 U
	9/21/2016	ND<0 U
	3/28/2017	ND<0 U
	9/19/2017	ND<0 U
	3/26/2018	ND<0 U
	9/18/2018	ND<0 U
	3/4/2019	ND<0 U
	9/23/2019	ND<0 U
	3/19/2020	ND<0 U
	9/23/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/16/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Antimony, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/19/2015	ND<0 U
	9/14/2015	ND<0 U
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/27/2017	ND<0 J
	9/20/2017	ND<0 U
	3/16/2018	ND<0 U
	9/20/2018	ND<0 U
	3/5/2019	ND<0 U
	9/25/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/18/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Antimony, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 95%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 2.2
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/17/2014	ND<0 U
	3/19/2015	ND<0 U
	9/15/2015	ND<0 U
	3/21/2016	ND<0 U
	9/26/2016	ND<0 U
	3/31/2017	ND<0 U
	9/21/2017	ND<0 U
	3/30/2018	2.2
	9/26/2018	ND<0 U
	3/13/2019	ND<0 U
	10/3/2019	ND<0 U
	4/3/2020	ND<0 U
	9/30/2020	ND<0 U
	3/22/2021	ND<0 U
	9/16/2021	ND<0 U
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Antimony, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	ND<0 U
	9/16/2014	ND<0 U
	3/18/2015	ND<0 U
	9/15/2015	ND<0 U
	3/16/2016	ND<0 U
	9/22/2016	ND<0 U
	3/29/2017	ND<0 U
	9/21/2017	ND<0 U
	3/28/2018	ND<0 U
	9/20/2018	ND<0 U
	3/12/2019	ND<0 U
	10/1/2019	ND<0 U
	3/18/2020	ND<0 U
	9/24/2020	ND<0 U
	3/17/2021	ND<0 U
	9/9/2021	ND<0 U
	3/15/2022	ND<0
	9/16/2022	ND<0
	3/15/2023	ND<0

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Antimony, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: Arsenic, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	0	-0.725736	68.2338	0
38	0	-0.706302	68.7327	0
39	0	-0.687131	69.2049	0
40	0	-0.665079	69.6472	0
41	0	-0.646431	70.0651	0
42	0	-0.628006	70.4595	0
43	0	-0.606775	70.8276	0
44	0	-0.588793	71.1743	0
45	0	-0.570999	71.5003	0
46	0	-0.550465	71.8034	0
47	0	-0.533048	72.0875	0

48	0	-0.515791	72.3535	0
49	0	-0.49585	72.5994	0
50	0	-0.478914	72.8288	0
51	0	-0.462114	73.0423	0
52	0	-0.442676	73.2383	0
53	0	-0.426148	73.4199	0
54	0	-0.409735	73.5878	0
55	0	-0.390726	73.7404	0
56	0	-0.374544	73.8807	0
57	0	-0.358459	74.0092	0
58	0	-0.33981	74.1247	0
59	0	-0.323919	74.2296	0
60	0	-0.308108	74.3245	0
61	0	-0.28976	74.4085	0
62	0	-0.27411	74.4836	0
63	0	-0.258527	74.5505	0
64	0	-0.240426	74.6083	0
65	0	-0.224974	74.6589	0
66	0	-0.209575	74.7028	0
67	0	-0.191671	74.7395	0
68	0	-0.176374	74.7706	0
69	0	-0.161119	74.7966	0
70	0	-0.143367	74.8172	0
71	0	-0.128189	74.8336	0
72	0	-0.113039	74.8464	0
73	0	-0.0953969	74.8555	0
74	0	-0.0802981	74.8619	0
75	0	-0.0652187	74.8662	0
76	0	-0.0476439	74.8684	0
77	0	-0.0325917	74.8695	0
78	0	-0.0175476	74.8698	0
79	0	0	74.8698	0
80	0	0.0175476	74.8701	0
81	0	0.0325917	74.8712	0
82	0	0.0476439	74.8735	0
83	0	0.0652187	74.8777	0
84	0	0.0802981	74.8842	0
85	0	0.0953969	74.8933	0
86	0	0.113039	74.906	0
87	0	0.128189	74.9225	0
88	0	0.143367	74.943	0
89	0	0.161119	74.969	0
90	0	0.176374	75.0001	0
91	0	0.191671	75.0368	0
92	0	0.209575	75.0807	0
93	0	0.224974	75.1314	0
94	0	0.240426	75.1892	0
95	0	0.258527	75.256	0
96	0	0.27411	75.3311	0
97	0	0.28976	75.4151	0
98	0	0.308108	75.51	0
99	0	0.323919	75.615	0
100	0	0.33981	75.7304	0
101	0	0.358459	75.8589	0
102	0	0.374544	75.9992	0
103	0	0.390726	76.1519	0
104	0	0.409735	76.3198	0

105	0	0.426148	76.5014	0
106	0	0.442676	76.6973	0
107	0	0.462114	76.9109	0
108	0	0.478914	77.1402	0
109	0	0.49585	77.3861	0
110	0	0.515791	77.6521	0
111	0	0.533048	77.9363	0
112	0	0.550465	78.2393	0
113	0	0.570999	78.5653	0
114	0	0.588793	78.912	0
115	0	0.606775	79.2802	0
116	0	0.628006	79.6746	0
117	0	0.646431	80.0924	0
118	0	0.665079	80.5348	0
119	0	0.687131	81.0069	0
120	0	0.706302	81.5058	0
121	0	0.725736	82.0325	0
122	0	0.748762	82.5931	0
123	0	0.768821	83.1842	0
124	0	0.789191	83.807	0
125	0	0.813379	84.4686	0
126	0	0.834498	85.165	0
127	0	0.855996	85.8977	0
128	0	0.881587	86.6749	0
129	0	0.903992	87.4921	0
130	0	0.926859	88.3512	0
131	0	0.954165	89.2616	0
132	0	0.97815	90.2184	0
133	0	1.00271	91.2238	0
134	0	1.03215	92.2892	0
135	0	1.05812	93.4088	0
136	0	1.08482	94.5856	0
137	0	1.11699	95.8333	0
138	0	1.1455	97.1455	0
139	0	1.17499	98.5261	0
140	0	1.21073	99.9919	0
141	0	1.24264	101.536	0
142	0	1.27588	103.164	0
143	0	1.31652	104.897	0
144	0	1.35317	106.728	0
145	0	1.39175	108.665	0
146	0	1.43953	110.737	0
147	0	1.48328	112.938	0
148	0	1.53007	115.279	0
149	0	1.58927	117.804	0
150	0	1.64485	120.51	0
151	0	1.70604	123.421	0
152	0	1.78661	126.613	0
153	0	1.86629	130.096	0
154	0	1.95996	133.937	0
155	0	2.09693	138.334	0
156	1.2	2.25713	143.429	2.70856
157	6.3	2.51213	149.74	18.535

Data Set Standard Deviation = 0.511231
Numerator = 343.546

Denominator = 6105.14
W Statistic = 0.0562716 = 343.546 / 6105.14

5% Critical value of 0.976 exceeds 0.0562716
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.0562716
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Arsenic, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	ND<0 J
	9/9/2014	ND<0 J
	3/16/2015	ND<0 J
	9/9/2015	ND<0 J
	3/18/2016	ND<0 J
	9/20/2016	ND<0 U
	3/23/2017	ND<0 J
	9/18/2017	ND<0 J
	3/15/2018	ND<0 U
	9/17/2018	ND<0 U
	3/5/2019	ND<0 U
	9/24/2019	ND<0 J
	3/16/2020	ND<0 J
	9/22/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 J
	3/22/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Arsenic, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 0
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/4/2014	ND<0 U
	3/17/2015	ND<0 U
	9/11/2015	ND<0 U
	3/15/2016	ND<0 U
	9/21/2016	ND<0 U
	3/28/2017	ND<0 U
	9/19/2017	ND<0 U
	3/26/2018	ND<0 U
	9/18/2018	ND<0 U
	3/4/2019	ND<0 U
	9/23/2019	ND<0 U
	3/19/2020	ND<0 U
	9/23/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 J
	3/16/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Arsenic, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 95%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 6.3
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 J
	3/19/2015	ND<0 U
	9/14/2015	ND<0 J
	3/21/2016	ND<0 U
	9/23/2016	ND<0 J
	3/27/2017	ND<0 J
	9/20/2017	ND<0 J
	3/16/2018	ND<0 U
	9/20/2018	ND<0 J
	3/5/2019	ND<0 J
	9/25/2019	6.3
	3/25/2020	ND<0 J
	9/28/2020	ND<0 J
	3/18/2021	ND<0 U
	9/15/2021	ND<0 J
	3/22/2022	ND<0 J
	9/14/2022	ND<0 J
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Arsenic, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 95%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 1.2
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/17/2014	ND<0 U
	3/19/2015	ND<0 U
	9/15/2015	ND<0 U
	3/21/2016	ND<0 U
	9/26/2016	ND<0 U
	3/31/2017	ND<0 U
	9/21/2017	ND<0 U
	3/30/2018	1.2
	9/26/2018	ND<0 J
	3/13/2019	ND<0 J
	10/3/2019	ND<0 J
	4/3/2020	ND<0 J
	9/30/2020	ND<0 J
	3/22/2021	ND<0 J
	9/16/2021	ND<0 J
	3/24/2022	ND<0 J
	9/16/2022	ND<0 J
	3/17/2023	ND<0 J

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Arsenic, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	ND<0 U
	9/16/2014	ND<0 U
	3/18/2015	ND<0 U
	9/15/2015	ND<0 U
	3/16/2016	ND<0 U
	9/22/2016	ND<0 U
	3/29/2017	ND<0 U
	9/21/2017	ND<0 U
	3/28/2018	ND<0 U
	9/20/2018	ND<0 U
	3/12/2019	ND<0 U
	10/1/2019	ND<0 U
	3/18/2020	ND<0 U
	9/24/2020	ND<0 U
	3/17/2021	ND<0 U
	9/9/2021	ND<0 J
	3/15/2022	ND<0
	9/16/2022	ND<0
	3/15/2023	ND<0

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Arsenic, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 J
	3/26/2020	ND<0 U
	9/29/2020	ND<0 J
	3/16/2021	ND<0 U
	9/14/2021	ND<0 J
	3/18/2022	ND<0
	9/13/2022	ND<0 J
	3/14/2023	ND<0 J

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: Barium, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	20	-2.51213	6.31081	-50.2427
2	30	-2.25713	11.4054	-117.957
3	42	-2.09693	15.8026	-206.028
4	42	-1.95996	19.644	-288.346
5	43	-1.86629	23.1271	-368.597
6	44	-1.78661	26.319	-447.207
7	44	-1.70604	29.2296	-522.273
8	45	-1.64485	31.9352	-596.292
9	45	-1.58927	34.4609	-667.809
10	46	-1.53007	36.802	-738.192
11	47	-1.48328	39.0022	-807.906
12	48	-1.43953	41.0744	-877.004
13	48	-1.39175	43.0114	-943.807
14	48	-1.35317	44.8424	-1008.76
15	48	-1.31652	46.5757	-1071.95
16	48	-1.27588	48.2035	-1133.19
17	48	-1.24264	49.7477	-1192.84
18	49	-1.21073	51.2136	-1252.17
19	49	-1.17499	52.5942	-1309.74
20	49	-1.1455	53.9063	-1365.87
21	50	-1.11699	55.154	-1421.72
22	51	-1.08482	56.3308	-1477.05
23	52	-1.05812	57.4505	-1532.07
24	53	-1.03215	58.5158	-1586.77
25	54	-1.00271	59.5212	-1640.92
26	56	-0.97815	60.478	-1695.7
27	58	-0.954165	61.3884	-1751.04
28	58	-0.926859	62.2475	-1804.8
29	59	-0.903992	63.0647	-1858.13
30	60	-0.881587	63.8419	-1911.03
31	60	-0.855996	64.5746	-1962.39
32	60	-0.834498	65.271	-2012.46
33	67	-0.813379	65.9326	-2066.95
34	67	-0.789191	66.5554	-2119.83
35	67	-0.768821	67.1465	-2171.34
36	68	-0.748762	67.7072	-2222.25
37	68	-0.725736	68.2338	-2271.6
38	69	-0.706302	68.7327	-2320.34
39	69	-0.687131	69.2049	-2367.75
40	70	-0.665079	69.6472	-2414.31
41	71	-0.646431	70.0651	-2460.2
42	74	-0.628006	70.4595	-2506.68
43	75	-0.606775	70.8276	-2552.18
44	75	-0.588793	71.1743	-2596.34
45	76	-0.570999	71.5003	-2639.74
46	78	-0.550465	71.8034	-2682.68
47	79	-0.533048	72.0875	-2724.79

48	80	-0.515791	72.3535	-2766.05
49	81	-0.49585	72.5994	-2806.21
50	81	-0.478914	72.8288	-2845.01
51	81	-0.462114	73.0423	-2882.44
52	81	-0.442676	73.2383	-2918.29
53	82	-0.426148	73.4199	-2953.24
54	83	-0.409735	73.5878	-2987.25
55	84	-0.390726	73.7404	-3020.07
56	85	-0.374544	73.8807	-3051.9
57	85	-0.358459	74.0092	-3082.37
58	85	-0.33981	74.1247	-3111.26
59	86	-0.323919	74.2296	-3139.11
60	86	-0.308108	74.3245	-3165.61
61	87	-0.28976	74.4085	-3190.82
62	88	-0.27411	74.4836	-3214.94
63	89	-0.258527	74.5505	-3237.95
64	90	-0.240426	74.6083	-3259.59
65	90	-0.224974	74.6589	-3279.84
66	91	-0.209575	74.7028	-3298.91
67	91	-0.191671	74.7395	-3316.35
68	92	-0.176374	74.7706	-3332.58
69	92	-0.161119	74.7966	-3347.4
70	92	-0.143367	74.8172	-3360.59
71	92	-0.128189	74.8336	-3372.38
72	92	-0.113039	74.8464	-3382.78
73	93	-0.0953969	74.8555	-3391.65
74	93	-0.0802981	74.8619	-3399.12
75	94	-0.0652187	74.8662	-3405.25
76	94	-0.0476439	74.8684	-3409.73
77	95	-0.0325917	74.8695	-3412.83
78	95	-0.0175476	74.8698	-3414.49
79	95	0	74.8698	-3414.49
80	95	0.0175476	74.8701	-3412.83
81	95	0.0325917	74.8712	-3409.73
82	95	0.0476439	74.8735	-3405.2
83	95	0.0652187	74.8777	-3399.01
84	98	0.0802981	74.8842	-3391.14
85	99	0.0953969	74.8933	-3381.7
86	99	0.113039	74.906	-3370.5
87	99	0.128189	74.9225	-3357.81
88	99	0.143367	74.943	-3343.62
89	100	0.161119	74.969	-3327.51
90	100	0.176374	75.0001	-3309.87
91	100	0.191671	75.0368	-3290.7
92	100	0.209575	75.0807	-3269.75
93	100	0.224974	75.1314	-3247.25
94	100	0.240426	75.1892	-3223.21
95	100	0.258527	75.256	-3197.35
96	100	0.27411	75.3311	-3169.94
97	100	0.28976	75.4151	-3140.97
98	110	0.308108	75.51	-3107.07
99	110	0.323919	75.615	-3071.44
100	110	0.33981	75.7304	-3034.06
101	110	0.358459	75.8589	-2994.63
102	110	0.374544	75.9992	-2953.43
103	110	0.390726	76.1519	-2910.45
104	110	0.409735	76.3198	-2865.38

105	110	0.426148	76.5014	-2818.51
106	110	0.442676	76.6973	-2769.81
107	110	0.462114	76.9109	-2718.98
108	110	0.478914	77.1402	-2666.3
109	120	0.49585	77.3861	-2606.8
110	120	0.515791	77.6521	-2544.9
111	120	0.533048	77.9363	-2480.94
112	120	0.550465	78.2393	-2414.88
113	120	0.570999	78.5653	-2346.36
114	120	0.588793	78.912	-2275.71
115	120	0.606775	79.2802	-2202.89
116	130	0.628006	79.6746	-2121.25
117	130	0.646431	80.0924	-2037.22
118	130	0.665079	80.5348	-1950.76
119	130	0.687131	81.0069	-1861.43
120	130	0.706302	81.5058	-1769.61
121	130	0.725736	82.0325	-1675.26
122	130	0.748762	82.5931	-1577.92
123	130	0.768821	83.1842	-1477.98
124	130	0.789191	83.807	-1375.38
125	130	0.813379	84.4686	-1269.64
126	140	0.834498	85.165	-1152.81
127	140	0.855996	85.8977	-1032.97
128	140	0.881587	86.6749	-909.553
129	140	0.903992	87.4921	-782.994
130	140	0.926859	88.3512	-653.234
131	140	0.954165	89.2616	-519.651
132	150	0.97815	90.2184	-372.928
133	150	1.00271	91.2238	-222.521
134	150	1.03215	92.2892	-67.6983
135	150	1.05812	93.4088	91.02
136	150	1.08482	94.5856	253.743
137	150	1.11699	95.8333	421.291
138	150	1.1455	97.1455	593.117
139	150	1.17499	98.5261	769.365
140	160	1.21073	99.9919	963.082
141	160	1.24264	101.536	1161.9
142	170	1.27588	103.164	1378.8
143	180	1.31652	104.897	1615.78
144	180	1.35317	106.728	1859.35
145	190	1.39175	108.665	2123.78
146	200	1.43953	110.737	2411.69
147	210	1.48328	112.938	2723.18
148	230	1.53007	115.279	3075.09
149	230	1.58927	117.804	3440.62
150	230	1.64485	120.51	3818.94
151	230	1.70604	123.421	4211.33
152	240	1.78661	126.613	4640.12
153	250	1.86629	130.096	5106.69
154	250	1.95996	133.937	5596.68
155	260	2.09693	138.334	6141.88
156	280	2.25713	143.429	6773.88
157	360	2.51213	149.74	7678.24

Data Set Standard Deviation = 53.9716
Numerator = 5.89554e+007

Denominator = 6.80444e+007
W Statistic = 0.866426 = 5.89554e+007 / 6.80444e+007

5% Critical value of 0.976 exceeds 0.866426
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.866426
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Barium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 250
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	30
	3/20/2014	190
	9/9/2014	130
	3/16/2015	140
	9/9/2015	130
	3/18/2016	150
	9/20/2016	150
	3/23/2017	140
	9/18/2017	140
	3/15/2018	150
	9/17/2018	150
	3/5/2019	180
	9/24/2019	150
	3/16/2020	250
	9/22/2020	140
	3/16/2021	180
	9/14/2021	160
	3/22/2022	160
	9/13/2022	150
	3/14/2023	150

Date	Count	Mean	Significant
9/12/2023	1	130	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Barium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 360
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	360
	12/5/2013	130
	3/19/2014	110
	9/4/2014	100
	3/17/2015	99
	9/11/2015	99
	3/15/2016	95
	9/21/2016	92
	3/28/2017	90
	9/19/2017	86
	3/26/2018	81
	9/18/2018	120
	3/4/2019	140
	9/23/2019	120
	3/19/2020	100
	9/23/2020	110
	3/19/2021	110
	9/15/2021	110
	3/16/2022	95
	9/14/2022	100
	3/16/2023	99

Date	Count	Mean	Significant
9/13/2023	1	110	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Barium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 110
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	60
	3/21/2014	48
	9/8/2014	49
	3/19/2015	47
	9/14/2015	48
	3/21/2016	48
	9/23/2016	48
	3/27/2017	49
	9/20/2017	45
	3/16/2018	42
	9/20/2018	44
	3/5/2019	48
	9/25/2019	45
	3/25/2020	44
	9/28/2020	43
	3/18/2021	110 R
	9/15/2021	48
	3/22/2022	50
	9/14/2022	53
	3/16/2023	52

Date	Count	Mean	Significant
9/13/2023	1	54	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Barium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 140
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	70
	3/21/2014	58
	9/17/2014	60
	3/19/2015	67
	9/15/2015	68
	3/21/2016	75
	9/26/2016	79
	3/31/2017	81
	9/21/2017	100
	3/30/2018	120
	9/26/2018	140
	3/13/2019	130
	10/3/2019	110
	4/3/2020	87
	9/30/2020	100
	3/22/2021	120
	9/16/2021	110
	3/24/2022	130
	9/16/2022	130
	3/17/2023	120

Date	Count	Mean	Significant
9/14/2023	1	95	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Barium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 200
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	90
	3/18/2014	80
	9/16/2014	74
	3/18/2015	84
	9/15/2015	81
	3/16/2016	86
	9/22/2016	94
	3/29/2017	95
	9/21/2017	85
	3/28/2018	85
	9/20/2018	85
	3/12/2019	91
	10/1/2019	92
	3/18/2020	81
	9/24/2020	69
	3/17/2021	200 R
	9/9/2021	82
	3/15/2022	78
	9/16/2022	68
	3/15/2023	67

Date	Count	Mean	Significant
9/11/2023	1	76	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Barium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 280
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	230
	3/26/2020	230
	9/29/2020	210
	3/16/2021	250
	9/14/2021	260
	3/18/2022	230
	9/13/2022	240
	3/14/2023	280

Date	Count	Mean	Significant
9/12/2023	1	230	FALSE

Shapiro-Francia Test of Normality

Parameter: Beryllium, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	0	-0.725736	68.2338	0
38	0	-0.706302	68.7327	0
39	0	-0.687131	69.2049	0
40	0	-0.665079	69.6472	0
41	0	-0.646431	70.0651	0
42	0	-0.628006	70.4595	0
43	0	-0.606775	70.8276	0
44	0	-0.588793	71.1743	0
45	0	-0.570999	71.5003	0
46	0	-0.550465	71.8034	0
47	0	-0.533048	72.0875	0

48	0	-0.515791	72.3535	0
49	0	-0.49585	72.5994	0
50	0	-0.478914	72.8288	0
51	0	-0.462114	73.0423	0
52	0	-0.442676	73.2383	0
53	0	-0.426148	73.4199	0
54	0	-0.409735	73.5878	0
55	0	-0.390726	73.7404	0
56	0	-0.374544	73.8807	0
57	0	-0.358459	74.0092	0
58	0	-0.33981	74.1247	0
59	0	-0.323919	74.2296	0
60	0	-0.308108	74.3245	0
61	0	-0.28976	74.4085	0
62	0	-0.27411	74.4836	0
63	0	-0.258527	74.5505	0
64	0	-0.240426	74.6083	0
65	0	-0.224974	74.6589	0
66	0	-0.209575	74.7028	0
67	0	-0.191671	74.7395	0
68	0	-0.176374	74.7706	0
69	0	-0.161119	74.7966	0
70	0	-0.143367	74.8172	0
71	0	-0.128189	74.8336	0
72	0	-0.113039	74.8464	0
73	0	-0.0953969	74.8555	0
74	0	-0.0802981	74.8619	0
75	0	-0.0652187	74.8662	0
76	0	-0.0476439	74.8684	0
77	0	-0.0325917	74.8695	0
78	0	-0.0175476	74.8698	0
79	0	0	74.8698	0
80	0	0.0175476	74.8701	0
81	0	0.0325917	74.8712	0
82	0	0.0476439	74.8735	0
83	0	0.0652187	74.8777	0
84	0	0.0802981	74.8842	0
85	0	0.0953969	74.8933	0
86	0	0.113039	74.906	0
87	0	0.128189	74.9225	0
88	0	0.143367	74.943	0
89	0	0.161119	74.969	0
90	0	0.176374	75.0001	0
91	0	0.191671	75.0368	0
92	0	0.209575	75.0807	0
93	0	0.224974	75.1314	0
94	0	0.240426	75.1892	0
95	0	0.258527	75.256	0
96	0	0.27411	75.3311	0
97	0	0.28976	75.4151	0
98	0	0.308108	75.51	0
99	0	0.323919	75.615	0
100	0	0.33981	75.7304	0
101	0	0.358459	75.8589	0
102	0	0.374544	75.9992	0
103	0	0.390726	76.1519	0
104	0	0.409735	76.3198	0

105	0	0.426148	76.5014	0
106	0	0.442676	76.6973	0
107	0	0.462114	76.9109	0
108	0	0.478914	77.1402	0
109	0	0.49585	77.3861	0
110	0	0.515791	77.6521	0
111	0	0.533048	77.9363	0
112	0	0.550465	78.2393	0
113	0	0.570999	78.5653	0
114	0	0.588793	78.912	0
115	0	0.606775	79.2802	0
116	0	0.628006	79.6746	0
117	0	0.646431	80.0924	0
118	0	0.665079	80.5348	0
119	0	0.687131	81.0069	0
120	0	0.706302	81.5058	0
121	0	0.725736	82.0325	0
122	0	0.748762	82.5931	0
123	0	0.768821	83.1842	0
124	0	0.789191	83.807	0
125	0	0.813379	84.4686	0
126	0	0.834498	85.165	0
127	0	0.855996	85.8977	0
128	0	0.881587	86.6749	0
129	0	0.903992	87.4921	0
130	0	0.926859	88.3512	0
131	0	0.954165	89.2616	0
132	0	0.97815	90.2184	0
133	0	1.00271	91.2238	0
134	0	1.03215	92.2892	0
135	0	1.05812	93.4088	0
136	0	1.08482	94.5856	0
137	0	1.11699	95.8333	0
138	0	1.1455	97.1455	0
139	0	1.17499	98.5261	0
140	0	1.21073	99.9919	0
141	0	1.24264	101.536	0
142	0	1.27588	103.164	0
143	0	1.31652	104.897	0
144	0	1.35317	106.728	0
145	0	1.39175	108.665	0
146	0	1.43953	110.737	0
147	0	1.48328	112.938	0
148	0	1.53007	115.279	0
149	0	1.58927	117.804	0
150	0	1.64485	120.51	0
151	0	1.70604	123.421	0
152	0	1.78661	126.613	0
153	0	1.86629	130.096	0
154	0	1.95996	133.937	0
155	0	2.09693	138.334	0
156	0	2.25713	143.429	0
157	1.1	2.51213	149.74	2.76335

Data Set Standard Deviation = 0.0877896
Numerator = 7.63609

Denominator = 180.031
W Statistic = 0.0424154 = 7.63609 / 180.031

5% Critical value of 0.976 exceeds 0.0424154
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.0424154
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Beryllium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	ND<0 U
	9/9/2014	ND<0 U
	3/16/2015	ND<0 U
	9/9/2015	ND<0 U
	3/18/2016	ND<0 U
	9/20/2016	ND<0 U
	3/23/2017	ND<0 U
	9/18/2017	ND<0 U
	3/15/2018	ND<0 U
	9/17/2018	ND<0 U
	3/5/2019	ND<0 U
	9/24/2019	ND<0 U
	3/16/2020	ND<0 U
	9/22/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/22/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Beryllium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 0
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/4/2014	ND<0 U
	3/17/2015	ND<0 U
	9/11/2015	ND<0 U
	3/15/2016	ND<0 U
	9/21/2016	ND<0 U
	3/28/2017	ND<0 U
	9/19/2017	ND<0 U
	3/26/2018	ND<0 U
	9/18/2018	ND<0 U
	3/4/2019	ND<0 U
	9/23/2019	ND<0 U
	3/19/2020	ND<0 U
	9/23/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/16/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Beryllium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/19/2015	ND<0 U
	9/14/2015	ND<0 U
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/27/2017	ND<0 U
	9/20/2017	ND<0 U
	3/16/2018	ND<0 U
	9/20/2018	ND<0 U
	3/5/2019	ND<0 U
	9/25/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/18/2021	ND<0 JR
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Beryllium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 95%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 1.1
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/17/2014	ND<0 U
	3/19/2015	ND<0 U
	9/15/2015	ND<0 U
	3/21/2016	ND<0 U
	9/26/2016	ND<0 U
	3/31/2017	ND<0 U
	9/21/2017	ND<0 U
	3/30/2018	1.1
	9/26/2018	ND<0 U
	3/13/2019	ND<0 U
	10/3/2019	ND<0 U
	4/3/2020	ND<0 U
	9/30/2020	ND<0 U
	3/22/2021	ND<0 U
	9/16/2021	ND<0 U
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Beryllium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	ND<0 U
	9/16/2014	ND<0 U
	3/18/2015	ND<0 U
	9/15/2015	ND<0 U
	3/16/2016	ND<0 U
	9/22/2016	ND<0 U
	3/29/2017	ND<0 U
	9/21/2017	ND<0 U
	3/28/2018	ND<0 U
	9/20/2018	ND<0 U
	3/12/2019	ND<0 U
	10/1/2019	ND<0 U
	3/18/2020	ND<0 U
	9/24/2020	ND<0 U
	3/17/2021	ND<0 U
	9/9/2021	ND<0 U
	3/15/2022	ND<0
	9/16/2022	ND<0
	3/15/2023	ND<0

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Beryllium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: Cadmium, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	0	-0.725736	68.2338	0
38	0	-0.706302	68.7327	0
39	0	-0.687131	69.2049	0
40	0	-0.665079	69.6472	0
41	0	-0.646431	70.0651	0
42	0	-0.628006	70.4595	0
43	0	-0.606775	70.8276	0
44	0	-0.588793	71.1743	0
45	0	-0.570999	71.5003	0
46	0	-0.550465	71.8034	0
47	0	-0.533048	72.0875	0

48	0	-0.515791	72.3535	0
49	0	-0.49585	72.5994	0
50	0	-0.478914	72.8288	0
51	0	-0.462114	73.0423	0
52	0	-0.442676	73.2383	0
53	0	-0.426148	73.4199	0
54	0	-0.409735	73.5878	0
55	0	-0.390726	73.7404	0
56	0	-0.374544	73.8807	0
57	0	-0.358459	74.0092	0
58	0	-0.33981	74.1247	0
59	0	-0.323919	74.2296	0
60	0	-0.308108	74.3245	0
61	0	-0.28976	74.4085	0
62	0	-0.27411	74.4836	0
63	0	-0.258527	74.5505	0
64	0	-0.240426	74.6083	0
65	0	-0.224974	74.6589	0
66	0	-0.209575	74.7028	0
67	0	-0.191671	74.7395	0
68	0	-0.176374	74.7706	0
69	0	-0.161119	74.7966	0
70	0	-0.143367	74.8172	0
71	0	-0.128189	74.8336	0
72	0	-0.113039	74.8464	0
73	0	-0.0953969	74.8555	0
74	0	-0.0802981	74.8619	0
75	0	-0.0652187	74.8662	0
76	0	-0.0476439	74.8684	0
77	0	-0.0325917	74.8695	0
78	0	-0.0175476	74.8698	0
79	0	0	74.8698	0
80	0	0.0175476	74.8701	0
81	0	0.0325917	74.8712	0
82	0	0.0476439	74.8735	0
83	0	0.0652187	74.8777	0
84	0	0.0802981	74.8842	0
85	0	0.0953969	74.8933	0
86	0	0.113039	74.906	0
87	0	0.128189	74.9225	0
88	0	0.143367	74.943	0
89	0	0.161119	74.969	0
90	0	0.176374	75.0001	0
91	0	0.191671	75.0368	0
92	0	0.209575	75.0807	0
93	0	0.224974	75.1314	0
94	0	0.240426	75.1892	0
95	0	0.258527	75.256	0
96	0	0.27411	75.3311	0
97	0	0.28976	75.4151	0
98	0	0.308108	75.51	0
99	0	0.323919	75.615	0
100	0	0.33981	75.7304	0
101	0	0.358459	75.8589	0
102	0	0.374544	75.9992	0
103	0	0.390726	76.1519	0
104	0	0.409735	76.3198	0

105	0	0.426148	76.5014	0
106	0	0.442676	76.6973	0
107	0	0.462114	76.9109	0
108	0	0.478914	77.1402	0
109	0	0.49585	77.3861	0
110	0	0.515791	77.6521	0
111	0	0.533048	77.9363	0
112	0	0.550465	78.2393	0
113	0	0.570999	78.5653	0
114	0	0.588793	78.912	0
115	0	0.606775	79.2802	0
116	0	0.628006	79.6746	0
117	0	0.646431	80.0924	0
118	0	0.665079	80.5348	0
119	0	0.687131	81.0069	0
120	0	0.706302	81.5058	0
121	0	0.725736	82.0325	0
122	0	0.748762	82.5931	0
123	0	0.768821	83.1842	0
124	0	0.789191	83.807	0
125	0	0.813379	84.4686	0
126	0	0.834498	85.165	0
127	0	0.855996	85.8977	0
128	0	0.881587	86.6749	0
129	0	0.903992	87.4921	0
130	0	0.926859	88.3512	0
131	0	0.954165	89.2616	0
132	0	0.97815	90.2184	0
133	0	1.00271	91.2238	0
134	0	1.03215	92.2892	0
135	0	1.05812	93.4088	0
136	0	1.08482	94.5856	0
137	0	1.11699	95.8333	0
138	0	1.1455	97.1455	0
139	0	1.17499	98.5261	0
140	0	1.21073	99.9919	0
141	0	1.24264	101.536	0
142	0	1.27588	103.164	0
143	0	1.31652	104.897	0
144	0	1.35317	106.728	0
145	0	1.39175	108.665	0
146	0	1.43953	110.737	0
147	0	1.48328	112.938	0
148	0	1.53007	115.279	0
149	0	1.58927	117.804	0
150	0	1.64485	120.51	0
151	0	1.70604	123.421	0
152	0	1.78661	126.613	0
153	0	1.86629	130.096	0
154	1.1	1.95996	133.937	2.15596
155	1.2	2.09693	138.334	4.67227
156	1.2	2.25713	143.429	7.38083
157	1.8	2.51213	149.74	11.9027

Data Set Standard Deviation = 0.214103
Numerator = 141.674

Denominator = 1070.8
W Statistic = 0.132306 = 141.674 / 1070.8

5% Critical value of 0.976 exceeds 0.132306
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.132306
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Cadmium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 95%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 1.2
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	ND<0 U
	9/9/2014	ND<0 U
	3/16/2015	ND<0 U
	9/9/2015	ND<0 U
	3/18/2016	ND<0 U
	9/20/2016	ND<0 U
	3/23/2017	ND<0 U
	9/18/2017	1.2
	3/15/2018	ND<0 U
	9/17/2018	ND<0 U
	3/5/2019	ND<0 U
	9/24/2019	ND<0 U
	3/16/2020	ND<0 J
	9/22/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/22/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Cadmium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 0
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/4/2014	ND<0 U
	3/17/2015	ND<0 U
	9/11/2015	ND<0 U
	3/15/2016	ND<0 U
	9/21/2016	ND<0 U
	3/28/2017	ND<0 U
	9/19/2017	ND<0 U
	3/26/2018	ND<0 U
	9/18/2018	ND<0 U
	3/4/2019	ND<0 U
	9/23/2019	ND<0 U
	3/19/2020	ND<0 U
	9/23/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/16/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Cadmium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/19/2015	ND<0 U
	9/14/2015	ND<0 U
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/27/2017	ND<0 U
	9/20/2017	ND<0 U
	3/16/2018	ND<0 U
	9/20/2018	ND<0 U
	3/5/2019	ND<0 U
	9/25/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/18/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Cadmium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 95%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 1.1
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/17/2014	ND<0 U
	3/19/2015	ND<0 U
	9/15/2015	ND<0 U
	3/21/2016	ND<0 U
	9/26/2016	ND<0 U
	3/31/2017	ND<0 U
	9/21/2017	ND<0 U
	3/30/2018	1.1
	9/26/2018	ND<0 U
	3/13/2019	ND<0 U
	10/3/2019	ND<0 U
	4/3/2020	ND<0 U
	9/30/2020	ND<0 U
	3/22/2021	ND<0 U
	9/16/2021	ND<0 U
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Cadmium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 95%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 1.2
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	ND<0 U
	9/16/2014	ND<0 U
	3/18/2015	ND<0 J
	9/15/2015	ND<0 U
	3/16/2016	ND<0 J
	9/22/2016	ND<0 J
	3/29/2017	ND<0 U
	9/21/2017	ND<0 U
	3/28/2018	ND<0 J
	9/20/2018	ND<0 J
	3/12/2019	ND<0 U
	10/1/2019	ND<0 U
	3/18/2020	ND<0 U
	9/24/2020	ND<0 U
	3/17/2021	ND<0 J
	9/9/2021	ND<0 U
	3/15/2022	1.2
	9/16/2022	ND<0 J
	3/15/2023	ND<0

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Cadmium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: Calcium, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	1950	-2.51213	6.31081	-4898.66
2	4400	-2.25713	11.4054	-14830
3	5060	-2.09693	15.8026	-25440.5
4	5110	-1.95996	19.644	-35455.9
5	5900	-1.86629	23.1271	-46467
6	7100	-1.78661	26.319	-59152
7	7100	-1.70604	29.2296	-71264.9
8	7200	-1.64485	31.9352	-83107.8
9	7400	-1.58927	34.4609	-94868.4
10	7500	-1.53007	36.802	-106344
11	7600	-1.48328	39.0022	-117617
12	7600	-1.43953	41.0744	-128557
13	7700	-1.39175	43.0114	-139274
14	7900	-1.35317	44.8424	-149964
15	8000	-1.31652	46.5757	-160496
16	8000	-1.27588	48.2035	-170703
17	8100	-1.24264	49.7477	-180768
18	8100	-1.21073	51.2136	-190575
19	8200	-1.17499	52.5942	-200210
20	8200	-1.1455	53.9063	-209603
21	8200	-1.11699	55.154	-218763
22	8300	-1.08482	56.3308	-227767
23	8300	-1.05812	57.4505	-236549
24	8300	-1.03215	58.5158	-245116
25	8500	-1.00271	59.5212	-253639
26	8500	-0.97815	60.478	-261953
27	8500	-0.954165	61.3884	-270064
28	8500	-0.926859	62.2475	-277942
29	8500	-0.903992	63.0647	-285626
30	8600	-0.881587	63.8419	-293207
31	8800	-0.855996	64.5746	-300740
32	8800	-0.834498	65.271	-308084
33	8800	-0.813379	65.9326	-315242
34	8800	-0.789191	66.5554	-322186
35	9000	-0.768821	67.1465	-329106
36	9100	-0.748762	67.7072	-335920
37	9100	-0.725736	68.2338	-342524
38	9100	-0.706302	68.7327	-348951
39	9200	-0.687131	69.2049	-355273
40	9200	-0.665079	69.6472	-361391
41	9200	-0.646431	70.0651	-367339
42	9300	-0.628006	70.4595	-373179
43	9300	-0.606775	70.8276	-378822
44	9500	-0.588793	71.1743	-384416
45	9500	-0.570999	71.5003	-389840
46	9500	-0.550465	71.8034	-395070
47	9500	-0.533048	72.0875	-400134

48	9640	-0.515791	72.3535	-405106
49	10000	-0.49585	72.5994	-410064
50	10000	-0.478914	72.8288	-414853
51	10100	-0.462114	73.0423	-419521
52	10200	-0.442676	73.2383	-424036
53	10400	-0.426148	73.4199	-428468
54	10400	-0.409735	73.5878	-432729
55	10400	-0.390726	73.7404	-436793
56	10800	-0.374544	73.8807	-440838
57	10800	-0.358459	74.0092	-444709
58	10900	-0.33981	74.1247	-448413
59	11100	-0.323919	74.2296	-452009
60	11100	-0.308108	74.3245	-455429
61	11200	-0.28976	74.4085	-458674
62	11200	-0.27411	74.4836	-461744
63	11300	-0.258527	74.5505	-464665
64	11300	-0.240426	74.6083	-467382
65	11400	-0.224974	74.6589	-469947
66	11500	-0.209575	74.7028	-472357
67	11600	-0.191671	74.7395	-474580
68	11600	-0.176374	74.7706	-476626
69	11700	-0.161119	74.7966	-478511
70	11800	-0.143367	74.8172	-480203
71	11900	-0.128189	74.8336	-481729
72	12000	-0.113039	74.8464	-483085
73	12100	-0.0953969	74.8555	-484239
74	12100	-0.0802981	74.8619	-485211
75	12200	-0.0652187	74.8662	-486007
76	12300	-0.0476439	74.8684	-486593
77	12400	-0.0325917	74.8695	-486997
78	12400	-0.0175476	74.8698	-487214
79	12700	0	74.8698	-487214
80	12800	0.0175476	74.8701	-486990
81	12880	0.0325917	74.8712	-486570
82	13000	0.0476439	74.8735	-485951
83	13200	0.0652187	74.8777	-485090
84	13500	0.0802981	74.8842	-484006
85	13900	0.0953969	74.8933	-482680
86	14000	0.113039	74.906	-481097
87	14200	0.128189	74.9225	-479277
88	14400	0.143367	74.943	-477212
89	14600	0.161119	74.969	-474860
90	15600	0.176374	75.0001	-472109
91	16800	0.191671	75.0368	-468888
92	17000	0.209575	75.0807	-465326
93	17900	0.224974	75.1314	-461299
94	18600	0.240426	75.1892	-456827
95	19000	0.258527	75.256	-451915
96	19200	0.27411	75.3311	-446652
97	21100	0.28976	75.4151	-440538
98	21300	0.308108	75.51	-433975
99	21500	0.323919	75.615	-427011
100	21600	0.33981	75.7304	-419671
101	22000	0.358459	75.8589	-411785
102	23200	0.374544	75.9992	-403096
103	23500	0.390726	76.1519	-393913
104	23800	0.409735	76.3198	-384162

105	23900	0.426148	76.5014	-373977
106	28100	0.442676	76.6973	-361538
107	29000	0.462114	76.9109	-348136
108	30000	0.478914	77.1402	-333769
109	31400	0.49585	77.3861	-318199
110	31500	0.515791	77.6521	-301952
111	31900	0.533048	77.9363	-284948
112	32400	0.550465	78.2393	-267112
113	33300	0.570999	78.5653	-248098
114	34500	0.588793	78.912	-227785
115	34900	0.606775	79.2802	-206608
116	35400	0.628006	79.6746	-184377
117	35700	0.646431	80.0924	-161299
118	36100	0.665079	80.5348	-137290
119	37100	0.687131	81.0069	-111797
120	37130	0.706302	81.5058	-85572.4
121	37400	0.725736	82.0325	-58429.9
122	38000	0.748762	82.5931	-29977
123	38000	0.768821	83.1842	-761.778
124	38400	0.789191	83.807	29543.2
125	38600	0.813379	84.4686	60939.6
126	38800	0.834498	85.165	93318.1
127	39000	0.855996	85.8977	126702
128	39100	0.881587	86.6749	161172
129	39900	0.903992	87.4921	197241
130	41500	0.926859	88.3512	235706
131	43200	0.954165	89.2616	276926
132	43600	0.97815	90.2184	319573
133	43620	1.00271	91.2238	363311
134	44800	1.03215	92.2892	409552
135	45300	1.05812	93.4088	457485
136	46400	1.08482	94.5856	507821
137	46700	1.11699	95.8333	559984
138	47200	1.1455	97.1455	614052
139	47500	1.17499	98.5261	669864
140	48500	1.21073	99.9919	728584
141	49500	1.24264	101.536	790095
142	51200	1.27588	103.164	855420
143	52000	1.31652	104.897	923879
144	52200	1.35317	106.728	994514
145	56000	1.39175	108.665	1.07245e+006
146	57300	1.43953	110.737	1.15494e+006
147	59300	1.48328	112.938	1.2429e+006
148	59600	1.53007	115.279	1.33409e+006
149	60000	1.58927	117.804	1.42944e+006
150	61300	1.64485	120.51	1.53027e+006
151	63500	1.70604	123.421	1.63861e+006
152	64600	1.78661	126.613	1.75402e+006
153	66600	1.86629	130.096	1.87832e+006
154	67000	1.95996	133.937	2.00963e+006
155	69100	2.09693	138.334	2.15453e+006
156	73000	2.25713	143.429	2.3193e+006
157	318000	2.51213	149.74	3.11816e+006

Data Set Standard Deviation = 29422.4
Numerator = 9.72293e+012

Denominator = 2.02217e+013
W Statistic = 0.480816 = 9.72293e+012 / 2.02217e+013

5% Critical value of 0.976 exceeds 0.480816
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.480816
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Calcium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 73000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	5110
	3/20/2014	31900
	9/9/2014	52200
	3/16/2015	41500
	9/9/2015	46400
	3/18/2016	49500
	9/20/2016	59300
	3/23/2017	46700
	9/18/2017	47200
	3/15/2018	48500
	9/17/2018	59600
	3/5/2019	60000
	9/24/2019	51200
	3/16/2020	52000
	9/22/2020	69100
	3/16/2021	64600
	9/14/2021	73000
	3/22/2022	66600
	9/13/2022	67000
	3/14/2023	61300

Date	Count	Mean	Significant
9/12/2023	1	63500	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Calcium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 57300
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	37130
	12/5/2013	43620
	3/19/2014	57300
	9/4/2014	44800
	3/17/2015	43600
	9/11/2015	39900
	3/15/2016	38000
	9/21/2016	38400
	3/28/2017	31500
	9/19/2017	30000
	3/26/2018	34500
	9/18/2018	47500
	3/4/2019	56000
	9/23/2019	37400
	3/19/2020	43200
	9/23/2020	31400
	3/19/2021	45300
	9/15/2021	29000
	3/16/2022	23200
	9/14/2022	33300
	3/16/2023	23900

Date	Count	Mean	Significant
9/13/2023	1	32400	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Calcium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 14600
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	9500
	3/21/2014	11600
	9/8/2014	13500
	3/19/2015	12400
	9/14/2015	13000
	3/21/2016	14600
	9/23/2016	12700
	3/27/2017	12400
	9/20/2017	11500
	3/16/2018	11100
	9/20/2018	10900
	3/5/2019	12300
	9/25/2019	10400
	3/25/2020	12100
	9/28/2020	11200
	3/18/2021	4400 R
	9/15/2021	12000
	3/22/2022	11800
	9/14/2022	11100
	3/16/2023	11200

Date	Count	Mean	Significant
9/13/2023	1	10800	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Calcium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 23800
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	9640
	3/21/2014	10000
	9/17/2014	10800
	3/19/2015	11600
	9/15/2015	13200
	3/21/2016	13900
	9/26/2016	12800
	3/31/2017	14400
	9/21/2017	21300
	3/30/2018	23500
	9/26/2018	22000
	3/13/2019	23800
	10/3/2019	21100
	4/3/2020	19200
	9/30/2020	17900
	3/22/2021	21600
	9/16/2021	19000
	3/24/2022	18600
	9/16/2022	17000
	3/17/2023	15600

Date	Count	Mean	Significant
9/14/2023	1	12100	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Calcium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 318000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	5060
	3/18/2014	7900
	9/16/2014	7700
	3/18/2015	8200
	9/15/2015	9000
	3/16/2016	9500
	9/22/2016	9300
	3/29/2017	9300
	9/21/2017	8500
	3/28/2018	9100
	9/20/2018	9100
	3/12/2019	10400
	10/1/2019	10200
	3/18/2020	10100
	9/24/2020	8500
	3/17/2021	318000 R
	9/9/2021	9500
	3/15/2022	8800
	9/16/2022	8000
	3/15/2023	8300

Date	Count	Mean	Significant
9/11/2023	1	9200	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Calcium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 39100
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	38600
	3/26/2020	39000
	9/29/2020	35400
	3/16/2021	34900
	9/14/2021	38000
	3/18/2022	35700
	9/13/2022	36100
	3/14/2023	39100

Date	Count	Mean	Significant
9/12/2023	1	38800	FALSE

Shapiro-Francia Test of Normality

Parameter: Chromium, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	0	-0.725736	68.2338	0
38	0	-0.706302	68.7327	0
39	0	-0.687131	69.2049	0
40	0	-0.665079	69.6472	0
41	0	-0.646431	70.0651	0
42	0	-0.628006	70.4595	0
43	0	-0.606775	70.8276	0
44	0	-0.588793	71.1743	0
45	0	-0.570999	71.5003	0
46	0	-0.550465	71.8034	0
47	0	-0.533048	72.0875	0

48	0	-0.515791	72.3535	0
49	0	-0.49585	72.5994	0
50	0	-0.478914	72.8288	0
51	0	-0.462114	73.0423	0
52	0	-0.442676	73.2383	0
53	0	-0.426148	73.4199	0
54	0	-0.409735	73.5878	0
55	0	-0.390726	73.7404	0
56	0	-0.374544	73.8807	0
57	0	-0.358459	74.0092	0
58	0	-0.33981	74.1247	0
59	0	-0.323919	74.2296	0
60	0	-0.308108	74.3245	0
61	0	-0.28976	74.4085	0
62	0	-0.27411	74.4836	0
63	0	-0.258527	74.5505	0
64	0	-0.240426	74.6083	0
65	0	-0.224974	74.6589	0
66	0	-0.209575	74.7028	0
67	0	-0.191671	74.7395	0
68	0	-0.176374	74.7706	0
69	0	-0.161119	74.7966	0
70	0	-0.143367	74.8172	0
71	0	-0.128189	74.8336	0
72	0	-0.113039	74.8464	0
73	0	-0.0953969	74.8555	0
74	0	-0.0802981	74.8619	0
75	0	-0.0652187	74.8662	0
76	0	-0.0476439	74.8684	0
77	0	-0.0325917	74.8695	0
78	0	-0.0175476	74.8698	0
79	0	0	74.8698	0
80	0	0.0175476	74.8701	0
81	0	0.0325917	74.8712	0
82	0	0.0476439	74.8735	0
83	0	0.0652187	74.8777	0
84	0	0.0802981	74.8842	0
85	0	0.0953969	74.8933	0
86	0	0.113039	74.906	0
87	0	0.128189	74.9225	0
88	0	0.143367	74.943	0
89	0.85	0.161119	74.969	0.136951
90	2.3	0.176374	75.0001	0.542611
91	2.3	0.191671	75.0368	0.983455
92	2.4	0.209575	75.0807	1.48644
93	2.4	0.224974	75.1314	2.02637
94	2.4	0.240426	75.1892	2.60339
95	2.5	0.258527	75.256	3.24971
96	2.5	0.27411	75.3311	3.93499
97	2.6	0.28976	75.4151	4.68837
98	2.9	0.308108	75.51	5.58188
99	3	0.323919	75.615	6.55364
100	3	0.33981	75.7304	7.57307
101	3	0.358459	75.8589	8.64844
102	3.1	0.374544	75.9992	9.80953
103	3.1	0.390726	76.1519	11.0208
104	3.2	0.409735	76.3198	12.3319

105	3.2	0.426148	76.5014	13.6956
106	3.2	0.442676	76.6973	15.1122
107	3.3	0.462114	76.9109	16.6371
108	3.3	0.478914	77.1402	18.2176
109	3.3	0.49585	77.3861	19.8539
110	3.4	0.515791	77.6521	21.6076
111	3.5	0.533048	77.9363	23.4732
112	3.5	0.550465	78.2393	25.3999
113	3.5	0.570999	78.5653	27.3983
114	3.7	0.588793	78.912	29.5769
115	3.7	0.606775	79.2802	31.822
116	3.7	0.628006	79.6746	34.1456
117	3.8	0.646431	80.0924	36.602
118	3.8	0.665079	80.5348	39.1293
119	3.8	0.687131	81.0069	41.7404
120	3.9	0.706302	81.5058	44.495
121	4	0.725736	82.0325	47.3979
122	4	0.748762	82.5931	50.393
123	4.1	0.768821	83.1842	53.5451
124	4.3	0.789191	83.807	56.9387
125	4.5	0.813379	84.4686	60.5989
126	4.5	0.834498	85.165	64.3541
127	4.7	0.855996	85.8977	68.3773
128	4.7	0.881587	86.6749	72.5208
129	4.8	0.903992	87.4921	76.8599
130	4.8	0.926859	88.3512	81.3088
131	4.8	0.954165	89.2616	85.8888
132	4.9	0.97815	90.2184	90.6818
133	5	1.00271	91.2238	95.6953
134	5.1	1.03215	92.2892	100.959
135	5.5	1.05812	93.4088	106.779
136	5.5	1.08482	94.5856	112.746
137	5.6	1.11699	95.8333	119.001
138	5.6	1.1455	97.1455	125.415
139	5.7	1.17499	98.5261	132.113
140	5.9	1.21073	99.9919	139.256
141	6.7	1.24264	101.536	147.582
142	7	1.27588	103.164	156.513
143	7.7	1.31652	104.897	166.65
144	8.2	1.35317	106.728	177.746
145	8.8	1.39175	108.665	189.994
146	9.4	1.43953	110.737	203.525
147	12	1.48328	112.938	221.325
148	12	1.53007	115.279	239.685
149	14	1.58927	117.804	261.935
150	16	1.64485	120.51	288.253
151	17	1.70604	123.421	317.256
152	17	1.78661	126.613	347.628
153	17	1.86629	130.096	379.355
154	18	1.95996	133.937	414.634
155	19	2.09693	138.334	454.476
156	24	2.25713	143.429	508.647
157	52	2.51213	149.74	639.278

Data Set Standard Deviation = 5.88316
Numerator = 408676

Denominator = 808506
W Statistic = 0.505471 = 408676 / 808506

5% Critical value of 0.976 exceeds 0.505471
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.505471
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Chromium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 50%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 5.1
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	ND<0 J
	9/9/2014	2.4
	3/16/2015	2.4
	9/9/2015	2.3
	3/18/2016	4.8
	9/20/2016	3.2
	3/23/2017	4.7
	9/18/2017	3
	3/15/2018	3.3
	9/17/2018	ND<0 J
	3/5/2019	ND<0 J
	9/24/2019	ND<0 J
	3/16/2020	3.5
	9/22/2020	ND<0 J
	3/16/2021	ND<0 J
	9/14/2021	5.1
	3/22/2022	ND<0 J
	9/13/2022	ND<0 J
	3/14/2023	ND<0 J

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Chromium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 61.9048%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 12
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	5
	9/4/2014	2.5
	3/17/2015	ND<0 J
	9/11/2015	ND<0 J
	3/15/2016	ND<0 J
	9/21/2016	2.9
	3/28/2017	ND<0 J
	9/19/2017	ND<0 J
	3/26/2018	ND<0 J
	9/18/2018	ND<0 U
	3/4/2019	ND<0 J
	9/23/2019	ND<0 J
	3/19/2020	4.1
	9/23/2020	2.4
	3/19/2021	ND<0 J
	9/15/2021	12
	3/16/2022	ND<0 J
	9/14/2022	3.5
	3/16/2023	4.5

Date	Count	Mean	Significant
9/13/2023	1	17	TRUE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Chromium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 J
	9/8/2014	ND<0 J
	3/19/2015	ND<0 J
	9/14/2015	ND<0 J
	3/21/2016	ND<0 J
	9/23/2016	ND<0 J
	3/27/2017	ND<0 J
	9/20/2017	ND<0 J
	3/16/2018	ND<0 U
	9/20/2018	ND<0 J
	3/5/2019	ND<0 U
	9/25/2019	ND<0 U
	3/25/2020	ND<0 J
	9/28/2020	ND<0 U
	3/18/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Chromium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 90%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 3.8
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 J
	9/17/2014	ND<0 J
	3/19/2015	ND<0 J
	9/15/2015	ND<0 J
	3/21/2016	ND<0 J
	9/26/2016	3.8
	3/31/2017	ND<0 J
	9/21/2017	ND<0 J
	3/30/2018	0.85
	9/26/2018	ND<0 U
	3/13/2019	ND<0 J
	10/3/2019	ND<0 U
	4/3/2020	ND<0 U
	9/30/2020	ND<0 U
	3/22/2021	ND<0 U
	9/16/2021	ND<0 J
	3/24/2022	ND<0
	9/16/2022	ND<0 J
	3/17/2023	ND<0 J

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Chromium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 14
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	4.9
	9/16/2014	3.3
	3/18/2015	3.7
	9/15/2015	4
	3/16/2016	8.2
	9/22/2016	14
	3/29/2017	5.9
	9/21/2017	4
	3/28/2018	3.8
	9/20/2018	3.3
	3/12/2019	4.7
	10/1/2019	3
	3/18/2020	3
	9/24/2020	3.4
	3/17/2021	5.6 R
	9/9/2021	9.4
	3/15/2022	7
	9/16/2022	5.5
	3/15/2023	6.7

Date	Count	Mean	Significant
9/11/2023	1	5.7	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Chromium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/26/2020	ND<0 J
	9/29/2020	ND<0 J
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0 J
	9/13/2022	ND<0
	3/14/2023	ND<0 J

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: Cobalt, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	5.9	-0.768821	67.1465	-4.53604
36	6.2	-0.748762	67.7072	-9.17837
37	6.9	-0.725736	68.2338	-14.1859
38	7.9	-0.706302	68.7327	-19.7657
39	8.4	-0.687131	69.2049	-25.5376
40	8.4	-0.665079	69.6472	-31.1243
41	8.6	-0.646431	70.0651	-36.6836
42	9	-0.628006	70.4595	-42.3357
43	9.6	-0.606775	70.8276	-48.1607
44	12	-0.588793	71.1743	-55.2262
45	12	-0.570999	71.5003	-62.0782
46	12	-0.550465	71.8034	-68.6838
47	13	-0.533048	72.0875	-75.6134

48	14	-0.515791	72.3535	-82.8345
49	15	-0.49585	72.5994	-90.2722
50	15	-0.478914	72.8288	-97.4559
51	17	-0.462114	73.0423	-105.312
52	18	-0.442676	73.2383	-113.28
53	20	-0.426148	73.4199	-121.803
54	20	-0.409735	73.5878	-129.998
55	20	-0.390726	73.7404	-137.812
56	21	-0.374544	73.8807	-145.678
57	22	-0.358459	74.0092	-153.564
58	23	-0.33981	74.1247	-161.379
59	25	-0.323919	74.2296	-169.477
60	27	-0.308108	74.3245	-177.796
61	29	-0.28976	74.4085	-186.199
62	31	-0.27411	74.4836	-194.697
63	31	-0.258527	74.5505	-202.711
64	33	-0.240426	74.6083	-210.645
65	34	-0.224974	74.6589	-218.294
66	35	-0.209575	74.7028	-225.629
67	36	-0.191671	74.7395	-232.53
68	37	-0.176374	74.7706	-239.055
69	38	-0.161119	74.7966	-245.178
70	38	-0.143367	74.8172	-250.626
71	38	-0.128189	74.8336	-255.497
72	38	-0.113039	74.8464	-259.793
73	39	-0.0953969	74.8555	-263.513
74	40	-0.0802981	74.8619	-266.725
75	40	-0.0652187	74.8662	-269.334
76	40	-0.0476439	74.8684	-271.239
77	42	-0.0325917	74.8695	-272.608
78	42	-0.0175476	74.8698	-273.345
79	42	0	74.8698	-273.345
80	43	0.0175476	74.8701	-272.591
81	43	0.0325917	74.8712	-271.189
82	44	0.0476439	74.8735	-269.093
83	46	0.0652187	74.8777	-266.093
84	46	0.0802981	74.8842	-262.399
85	47	0.0953969	74.8933	-257.916
86	48	0.113039	74.906	-252.49
87	50	0.128189	74.9225	-246.08
88	50	0.143367	74.943	-238.912
89	50	0.161119	74.969	-230.856
90	52	0.176374	75.0001	-221.684
91	53	0.191671	75.0368	-211.526
92	54	0.209575	75.0807	-200.209
93	54	0.224974	75.1314	-188.06
94	56	0.240426	75.1892	-174.596
95	57	0.258527	75.256	-159.86
96	58	0.27411	75.3311	-143.962
97	58	0.28976	75.4151	-127.156
98	58	0.308108	75.51	-109.286
99	60	0.323919	75.615	-89.8504
100	60	0.33981	75.7304	-69.4618
101	60	0.358459	75.8589	-47.9543
102	60	0.374544	75.9992	-25.4817
103	69	0.390726	76.1519	1.4784
104	70	0.409735	76.3198	30.1599

105	71	0.426148	76.5014	60.4164
106	73	0.442676	76.6973	92.7318
107	73	0.462114	76.9109	126.466
108	74	0.478914	77.1402	161.906
109	75	0.49585	77.3861	199.094
110	75	0.515791	77.6521	237.779
111	78	0.533048	77.9363	279.357
112	78	0.550465	78.2393	322.293
113	79	0.570999	78.5653	367.402
114	80	0.588793	78.912	414.505
115	82	0.606775	79.2802	464.261
116	83	0.628006	79.6746	516.385
117	83	0.646431	80.0924	570.039
118	85	0.665079	80.5348	626.571
119	87	0.687131	81.0069	686.351
120	95	0.706302	81.5058	753.45
121	110	0.725736	82.0325	833.281
122	110	0.748762	82.5931	915.645
123	110	0.768821	83.1842	1000.21
124	130	0.789191	83.807	1102.81
125	200	0.813379	84.4686	1265.49
126	220	0.834498	85.165	1449.08
127	230	0.855996	85.8977	1645.95
128	240	0.881587	86.6749	1857.54
129	250	0.903992	87.4921	2083.53
130	250	0.926859	88.3512	2315.25
131	250	0.954165	89.2616	2553.79
132	250	0.97815	90.2184	2798.33
133	260	1.00271	91.2238	3059.03
134	270	1.03215	92.2892	3337.71
135	280	1.05812	93.4088	3633.99
136	280	1.08482	94.5856	3937.74
137	290	1.11699	95.8333	4261.66
138	330	1.1455	97.1455	4639.68
139	330	1.17499	98.5261	5027.43
140	350	1.21073	99.9919	5451.18
141	380	1.24264	101.536	5923.39
142	380	1.27588	103.164	6408.22
143	390	1.31652	104.897	6921.66
144	390	1.35317	106.728	7449.4
145	410	1.39175	108.665	8020.01
146	410	1.43953	110.737	8610.22
147	410	1.48328	112.938	9218.37
148	420	1.53007	115.279	9860.99
149	420	1.58927	117.804	10528.5
150	430	1.64485	120.51	11235.8
151	430	1.70604	123.421	11969.4
152	450	1.78661	126.613	12773.3
153	460	1.86629	130.096	13631.8
154	470	1.95996	133.937	14553
155	570	2.09693	138.334	15748.3
156	640	2.25713	143.429	17192.8
157	690	2.51213	149.74	18926.2

Data Set Standard Deviation = 148.247
Numerator = 3.58201e+008

Denominator = 5.13375e+008
W Statistic = 0.697738 = 3.58201e+008 / 5.13375e+008

5% Critical value of 0.976 exceeds 0.697738
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.697738
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Cobalt, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 330
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	330
	9/9/2014	79
	3/16/2015	95
	9/9/2015	83
	3/18/2016	53
	9/20/2016	75
	3/23/2017	34
	9/18/2017	70
	3/15/2018	39
	9/17/2018	40
	3/5/2019	54
	9/24/2019	60
	3/16/2020	250
	9/22/2020	31
	3/16/2021	20
	9/14/2021	36
	3/22/2022	29
	9/13/2022	22
	3/14/2023	50

Date	Count	Mean	Significant
9/12/2023	1	9.6	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Cobalt, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 4.7619%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 87
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	20
	12/5/2013	ND<0
	3/19/2014	14
	9/4/2014	27
	3/17/2015	8.6
	9/11/2015	12
	3/15/2016	15
	9/21/2016	15
	3/28/2017	12
	9/19/2017	23
	3/26/2018	18
	9/18/2018	58
	3/4/2019	80
	9/23/2019	87
	3/19/2020	57
	9/23/2020	54
	3/19/2021	33
	9/15/2021	47
	3/16/2022	75
	9/14/2022	46
	3/16/2023	73

Date	Count	Mean	Significant
9/13/2023	1	69	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Cobalt, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 450
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	420
	3/21/2014	450
	9/8/2014	410
	3/19/2015	390
	9/14/2015	410
	3/21/2016	390
	9/23/2016	380
	3/27/2017	330
	9/20/2017	350
	3/16/2018	290
	9/20/2018	280
	3/5/2019	280
	9/25/2019	240
	3/25/2020	250
	9/28/2020	270
	3/18/2021	ND<0 JR
	9/15/2021	250
	3/22/2022	260
	9/14/2022	250
	3/16/2023	230

Date	Count	Mean	Significant
9/13/2023	1	220	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Cobalt, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 110
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	60
	3/21/2014	60
	9/17/2014	58
	3/19/2015	83
	9/15/2015	85
	3/21/2016	74
	9/26/2016	73
	3/31/2017	78
	9/21/2017	110
	3/30/2018	110
	9/26/2018	82
	3/13/2019	78
	10/3/2019	48
	4/3/2020	42
	9/30/2020	38
	3/22/2021	35
	9/16/2021	31
	3/24/2022	25
	9/16/2022	20
	3/17/2023	17

Date	Count	Mean	Significant
9/14/2023	1	12	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Cobalt, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 60%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 13
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	ND<0 J
	9/16/2014	ND<0 J
	3/18/2015	5.9
	9/15/2015	ND<0 J
	3/16/2016	6.2
	9/22/2016	13
	3/29/2017	8.4
	9/21/2017	9
	3/28/2018	6.9
	9/20/2018	ND<0 J
	3/12/2019	ND<0 J
	10/1/2019	ND<0 J
	3/18/2020	7.9
	9/24/2020	ND<0 J
	3/17/2021	ND<0 J
	9/9/2021	ND<0 J
	3/15/2022	8.4
	9/16/2022	ND<0 J
	3/15/2023	ND<0 J

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Cobalt, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 640
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	460
	3/26/2020	570
	9/29/2020	420
	3/16/2021	430
	9/14/2021	410
	3/18/2022	430
	9/13/2022	470
	3/14/2023	640

Date	Count	Mean	Significant
9/12/2023	1	690	TRUE

Shapiro-Francia Test of Normality

Parameter: Copper, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	0	-0.725736	68.2338	0
38	0	-0.706302	68.7327	0
39	0	-0.687131	69.2049	0
40	0	-0.665079	69.6472	0
41	0	-0.646431	70.0651	0
42	0	-0.628006	70.4595	0
43	0	-0.606775	70.8276	0
44	0	-0.588793	71.1743	0
45	0	-0.570999	71.5003	0
46	0	-0.550465	71.8034	0
47	0	-0.533048	72.0875	0

48	0	-0.515791	72.3535	0
49	0	-0.49585	72.5994	0
50	0	-0.478914	72.8288	0
51	0	-0.462114	73.0423	0
52	0	-0.442676	73.2383	0
53	0	-0.426148	73.4199	0
54	0	-0.409735	73.5878	0
55	0	-0.390726	73.7404	0
56	0	-0.374544	73.8807	0
57	0	-0.358459	74.0092	0
58	0	-0.33981	74.1247	0
59	0	-0.323919	74.2296	0
60	0	-0.308108	74.3245	0
61	0	-0.28976	74.4085	0
62	0	-0.27411	74.4836	0
63	0	-0.258527	74.5505	0
64	0	-0.240426	74.6083	0
65	0	-0.224974	74.6589	0
66	0	-0.209575	74.7028	0
67	0	-0.191671	74.7395	0
68	0	-0.176374	74.7706	0
69	0	-0.161119	74.7966	0
70	0	-0.143367	74.8172	0
71	0	-0.128189	74.8336	0
72	0	-0.113039	74.8464	0
73	0	-0.0953969	74.8555	0
74	0	-0.0802981	74.8619	0
75	0	-0.0652187	74.8662	0
76	0	-0.0476439	74.8684	0
77	0	-0.0325917	74.8695	0
78	0	-0.0175476	74.8698	0
79	0	0	74.8698	0
80	0	0.0175476	74.8701	0
81	0	0.0325917	74.8712	0
82	0	0.0476439	74.8735	0
83	0	0.0652187	74.8777	0
84	4.1	0.0802981	74.8842	0.329222
85	5.7	0.0953969	74.8933	0.872985
86	5.7	0.113039	74.906	1.51731
87	5.8	0.128189	74.9225	2.2608
88	5.8	0.143367	74.943	3.09233
89	6	0.161119	74.969	4.05905
90	6.1	0.176374	75.0001	5.13493
91	6.2	0.191671	75.0368	6.32329
92	6.3	0.209575	75.0807	7.64361
93	6.4	0.224974	75.1314	9.08344
94	6.6	0.240426	75.1892	10.6703
95	6.6	0.258527	75.256	12.3765
96	6.6	0.27411	75.3311	14.1857
97	6.7	0.28976	75.4151	16.1271
98	6.9	0.308108	75.51	18.253
99	7	0.323919	75.615	20.5204
100	7.2	0.33981	75.7304	22.9671
101	7.4	0.358459	75.8589	25.6197
102	7.5	0.374544	75.9992	28.4287
103	7.5	0.390726	76.1519	31.3592
104	7.6	0.409735	76.3198	34.4732

105	7.7	0.426148	76.5014	37.7545
106	7.8	0.442676	76.6973	41.2074
107	7.9	0.462114	76.9109	44.8581
108	8.8	0.478914	77.1402	49.0725
109	8.9	0.49585	77.3861	53.4856
110	9	0.515791	77.6521	58.1277
111	9	0.533048	77.9363	62.9252
112	9.3	0.550465	78.2393	68.0445
113	9.4	0.570999	78.5653	73.4119
114	10	0.588793	78.912	79.2998
115	10	0.606775	79.2802	85.3675
116	10	0.628006	79.6746	91.6476
117	11	0.646431	80.0924	98.7584
118	11	0.665079	80.5348	106.074
119	11	0.687131	81.0069	113.633
120	11	0.706302	81.5058	121.402
121	12	0.725736	82.0325	130.111
122	13	0.748762	82.5931	139.845
123	13	0.768821	83.1842	149.839
124	14	0.789191	83.807	160.888
125	14	0.813379	84.4686	172.275
126	14	0.834498	85.165	183.958
127	15	0.855996	85.8977	196.798
128	15	0.881587	86.6749	210.022
129	15	0.903992	87.4921	223.582
130	15	0.926859	88.3512	237.485
131	16	0.954165	89.2616	252.752
132	16	0.97815	90.2184	268.402
133	16	1.00271	91.2238	284.445
134	16	1.03215	92.2892	300.96
135	17	1.05812	93.4088	318.948
136	17	1.08482	94.5856	337.39
137	17	1.11699	95.8333	356.379
138	18	1.1455	97.1455	376.998
139	18	1.17499	98.5261	398.147
140	18	1.21073	99.9919	419.941
141	19	1.24264	101.536	443.551
142	19	1.27588	103.164	467.792
143	19	1.31652	104.897	492.806
144	20	1.35317	106.728	519.87
145	21	1.39175	108.665	549.096
146	25	1.43953	110.737	585.085
147	25	1.48328	112.938	622.167
148	26	1.53007	115.279	661.948
149	29	1.58927	117.804	708.037
150	29	1.64485	120.51	755.738
151	33	1.70604	123.421	812.037
152	43	1.78661	126.613	888.862
153	44	1.86629	130.096	970.979
154	45	1.95996	133.937	1059.18
155	63	2.09693	138.334	1191.28
156	150	2.25713	143.429	1529.85
157	180	2.51213	149.74	1982.04

Data Set Standard Deviation = 20.606
Numerator = 3.92847e+006

Denominator = 9.9186e+006
W Statistic = 0.396071 = 3.92847e+006 / 9.9186e+006

5% Critical value of 0.976 exceeds 0.396071
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.396071
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Copper, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 30%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 45
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	ND<0 J
	9/9/2014	8.8
	3/16/2015	ND<0 J
	9/9/2015	9
	3/18/2016	6.6
	9/20/2016	43
	3/23/2017	14
	9/18/2017	15
	3/15/2018	ND<0 J
	9/17/2018	20
	3/5/2019	11
	9/24/2019	45
	3/16/2020	33
	9/22/2020	ND<0 J
	3/16/2021	17
	9/14/2021	16
	3/22/2022	12
	9/13/2022	ND<0 J
	3/14/2023	7.9

Date	Count	Mean	Significant
9/12/2023	1	7	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Copper, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 42.8571%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 15
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	6.2
	9/4/2014	7.7
	3/17/2015	7.5
	9/11/2015	10
	3/15/2016	15
	9/21/2016	8.9
	3/28/2017	6.3
	9/19/2017	11
	3/26/2018	ND<0 J
	9/18/2018	7.2
	3/4/2019	9
	9/23/2019	9.3
	3/19/2020	7.8
	9/23/2020	ND<0 J
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/16/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Copper, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 90%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 7.4
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/19/2015	7.4
	9/14/2015	ND<0 J
	3/21/2016	ND<0 J
	9/23/2016	ND<0 U
	3/27/2017	ND<0 J
	9/20/2017	ND<0 J
	3/16/2018	ND<0 J
	9/20/2018	ND<0 J
	3/5/2019	ND<0 U
	9/25/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/18/2021	6.6 R
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Copper, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 85%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 6.4
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 J
	9/17/2014	ND<0 U
	3/19/2015	ND<0 U
	9/15/2015	ND<0 U
	3/21/2016	ND<0 U
	9/26/2016	ND<0 J
	3/31/2017	ND<0 J
	9/21/2017	6.1
	3/30/2018	4.1
	9/26/2018	ND<0 J
	3/13/2019	ND<0 J
	10/3/2019	6.4
	4/3/2020	ND<0 J
	9/30/2020	ND<0 U
	3/22/2021	ND<0 U
	9/16/2021	ND<0 J
	3/24/2022	ND<0 J
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Copper, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 45%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 18
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	11
	9/16/2014	13
	3/18/2015	ND<0 J
	9/15/2015	ND<0 J
	3/16/2016	ND<0 J
	9/22/2016	10
	3/29/2017	ND<0 J
	9/21/2017	16
	3/28/2018	5.7
	9/20/2018	6.9
	3/12/2019	6.6
	10/1/2019	ND<0 J
	3/18/2020	5.8
	9/24/2020	5.8
	3/17/2021	18 R
	9/9/2021	ND<0 J
	3/15/2022	ND<0 J
	9/16/2022	17
	3/15/2023	ND<0

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Copper, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: Iron, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	10	-0.725736	68.2338	-7.25736
38	22	-0.706302	68.7327	-22.796
39	64	-0.687131	69.2049	-66.7724
40	65	-0.665079	69.6472	-110.003
41	72	-0.646431	70.0651	-156.546
42	74	-0.628006	70.4595	-203.018
43	81	-0.606775	70.8276	-252.167
44	83	-0.588793	71.1743	-301.037
45	85	-0.570999	71.5003	-349.572
46	86	-0.550465	71.8034	-396.912
47	91	-0.533048	72.0875	-445.419

48	96	-0.515791	72.3535	-494.935
49	97	-0.49585	72.5994	-543.032
50	110	-0.478914	72.8288	-595.713
51	110	-0.462114	73.0423	-646.545
52	110	-0.442676	73.2383	-695.24
53	239	-0.426148	73.4199	-797.089
54	240	-0.409735	73.5878	-895.426
55	250	-0.390726	73.7404	-993.107
56	280	-0.374544	73.8807	-1097.98
57	320	-0.358459	74.0092	-1212.69
58	320	-0.33981	74.1247	-1321.43
59	360	-0.323919	74.2296	-1438.04
60	420	-0.308108	74.3245	-1567.44
61	439	-0.28976	74.4085	-1694.65
62	500	-0.27411	74.4836	-1831.7
63	510	-0.258527	74.5505	-1963.55
64	510	-0.240426	74.6083	-2086.17
65	520	-0.224974	74.6589	-2203.15
66	530	-0.209575	74.7028	-2314.23
67	650	-0.191671	74.7395	-2438.82
68	660	-0.176374	74.7706	-2555.22
69	680	-0.161119	74.7966	-2664.78
70	690	-0.143367	74.8172	-2763.71
71	870	-0.128189	74.8336	-2875.23
72	1000	-0.113039	74.8464	-2988.27
73	1100	-0.0953969	74.8555	-3093.21
74	1100	-0.0802981	74.8619	-3181.53
75	1137	-0.0652187	74.8662	-3255.69
76	1200	-0.0476439	74.8684	-3312.86
77	1300	-0.0325917	74.8695	-3355.23
78	1300	-0.0175476	74.8698	-3378.04
79	1400	0	74.8698	-3378.04
80	1500	0.0175476	74.8701	-3351.72
81	1800	0.0325917	74.8712	-3293.06
82	1800	0.0476439	74.8735	-3207.3
83	1900	0.0652187	74.8777	-3083.38
84	2000	0.0802981	74.8842	-2922.78
85	2000	0.0953969	74.8933	-2731.99
86	2000	0.113039	74.906	-2505.91
87	2300	0.128189	74.9225	-2211.08
88	2400	0.143367	74.943	-1867
89	2700	0.161119	74.969	-1431.98
90	2700	0.176374	75.0001	-955.767
91	3100	0.191671	75.0368	-361.585
92	3100	0.209575	75.0807	288.097
93	3300	0.224974	75.1314	1030.51
94	3600	0.240426	75.1892	1896.04
95	3800	0.258527	75.256	2878.45
96	4100	0.27411	75.3311	4002.3
97	4576	0.28976	75.4151	5328.24
98	4700	0.308108	75.51	6776.35
99	4800	0.323919	75.615	8331.16
100	4800	0.33981	75.7304	9962.25
101	4900	0.358459	75.8589	11718.7
102	5500	0.374544	75.9992	13778.7
103	6200	0.390726	76.1519	16201.2
104	6600	0.409735	76.3198	18905.4

105	6700	0.426148	76.5014	21760.6
106	7600	0.442676	76.6973	25125
107	7700	0.462114	76.9109	28683.3
108	9312	0.478914	77.1402	33142.9
109	12300	0.49585	77.3861	39241.9
110	13700	0.515791	77.6521	46308.2
111	16300	0.533048	77.9363	54996.9
112	16400	0.550465	78.2393	64024.5
113	16400	0.570999	78.5653	73388.9
114	23300	0.588793	78.912	87107.8
115	35600	0.606775	79.2802	108709
116	43900	0.628006	79.6746	136278
117	49300	0.646431	80.0924	168147
118	51400	0.665079	80.5348	202333
119	54700	0.687131	81.0069	239919
120	54800	0.706302	81.5058	278624
121	55500	0.725736	82.0325	318902
122	55600	0.748762	82.5931	360534
123	61200	0.768821	83.1842	407585
124	61700	0.789191	83.807	456278
125	62000	0.813379	84.4686	506708
126	62300	0.834498	85.165	558697
127	62900	0.855996	85.8977	612539
128	63000	0.881587	86.6749	668079
129	63300	0.903992	87.4921	725302
130	63600	0.926859	88.3512	784250
131	66300	0.954165	89.2616	847511
132	66400	0.97815	90.2184	912461
133	67000	1.00271	91.2238	979642
134	67100	1.03215	92.2892	1.0489e+006
135	67400	1.05812	93.4088	1.12022e+006
136	68700	1.08482	94.5856	1.19474e+006
137	69300	1.11699	95.8333	1.27215e+006
138	69400	1.1455	97.1455	1.35165e+006
139	69600	1.17499	98.5261	1.43343e+006
140	71800	1.21073	99.9919	1.52036e+006
141	72700	1.24264	101.536	1.6107e+006
142	77200	1.27588	103.164	1.7092e+006
143	79200	1.31652	104.897	1.81347e+006
144	82100	1.35317	106.728	1.92456e+006
145	82100	1.39175	108.665	2.03882e+006
146	83200	1.43953	110.737	2.15859e+006
147	84100	1.48328	112.938	2.28334e+006
148	84200	1.53007	115.279	2.41217e+006
149	85100	1.58927	117.804	2.54741e+006
150	85200	1.64485	120.51	2.68756e+006
151	86200	1.70604	123.421	2.83462e+006
152	89000	1.78661	126.613	2.99363e+006
153	91070	1.86629	130.096	3.16359e+006
154	100000	1.95996	133.937	3.35958e+006
155	101000	2.09693	138.334	3.57137e+006
156	102000	2.25713	143.429	3.8016e+006
157	107000	2.51213	149.74	4.0704e+006

Data Set Standard Deviation = 32337.3
Numerator = 1.65682e+013

Denominator = 2.4427e+013
W Statistic = 0.678273 = 1.65682e+013 / 2.4427e+013

5% Critical value of 0.976 exceeds 0.678273
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.678273
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Iron, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 89000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	439
	3/20/2014	63600
	9/9/2014	4100
	3/16/2015	4800
	9/9/2015	6200
	3/18/2016	5500
	9/20/2016	7700
	3/23/2017	3800
	9/18/2017	7600
	3/15/2018	4800
	9/17/2018	2700
	3/5/2019	3100
	9/24/2019	4700
	3/16/2020	89000
	9/22/2020	ND<0 J
	3/16/2021	2300
	9/14/2021	2000
	3/22/2022	1400
	9/13/2022	510
	3/14/2023	1800

Date	Count	Mean	Significant
9/12/2023	1	520	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Iron, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 4576
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	4576
	12/5/2013	239
	3/19/2014	660
	9/4/2014	1900
	3/17/2015	870
	9/11/2015	1100
	3/15/2016	1100
	9/21/2016	1300
	3/28/2017	510
	9/19/2017	2000
	3/26/2018	690
	9/18/2018	3100
	3/4/2019	2700
	9/23/2019	3300
	3/19/2020	1200
	9/23/2020	2400
	3/19/2021	650
	9/15/2021	1300
	3/16/2022	1800
	9/14/2022	1500
	3/16/2023	2000

Date	Count	Mean	Significant
9/13/2023	1	3600	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Iron, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 91070
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	91070
	3/21/2014	82100
	9/8/2014	77200
	3/19/2015	68700
	9/14/2015	71800
	3/21/2016	69600
	9/23/2016	66400
	3/27/2017	72700
	9/20/2017	67000
	3/16/2018	67100
	9/20/2018	54800
	3/5/2019	67400
	9/25/2019	62300
	3/25/2020	69400
	9/28/2020	69300
	3/18/2021	110 R
	9/15/2021	62000
	3/22/2022	62900
	9/14/2022	54700
	3/16/2023	55600

Date	Count	Mean	Significant
9/13/2023	1	55500	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Iron, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 86200
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	9312
	3/21/2014	6600
	9/17/2014	6700
	3/19/2015	12300
	9/15/2015	16400
	3/21/2016	16400
	9/26/2016	13700
	3/31/2017	16300
	9/21/2017	23300
	3/30/2018	35600
	9/26/2018	51400
	3/13/2019	63300
	10/3/2019	49300
	4/3/2020	43900
	9/30/2020	61200
	3/22/2021	84200
	9/16/2021	63000
	3/24/2022	79200
	9/16/2022	86200
	3/17/2023	82100

Date	Count	Mean	Significant
9/14/2023	1	61700	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Iron, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 80%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 4900
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	10
	3/18/2014	ND<0 J
	9/16/2014	ND<0 U
	3/18/2015	ND<0 U
	9/15/2015	ND<0 J
	3/16/2016	ND<0 J
	9/22/2016	83
	3/29/2017	ND<0 J
	9/21/2017	ND<0 J
	3/28/2018	ND<0 J
	9/20/2018	ND<0 U
	3/12/2019	ND<0 U
	10/1/2019	ND<0 U
	3/18/2020	ND<0 U
	9/24/2020	ND<0 U
	3/17/2021	4900 R
	9/9/2021	ND<0 U
	3/15/2022	85
	9/16/2022	ND<0 J
	3/15/2023	ND<0 J

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Iron, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 107000
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	84100
	3/26/2020	85200
	9/29/2020	101000
	3/16/2021	107000
	9/14/2021	100000
	3/18/2022	85100
	9/13/2022	83200
	3/14/2023	102000

Date	Count	Mean	Significant
9/12/2023	1	66300	FALSE

Shapiro-Francia Test of Normality

Parameter: Lead, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	0	-0.725736	68.2338	0
38	0	-0.706302	68.7327	0
39	0	-0.687131	69.2049	0
40	0	-0.665079	69.6472	0
41	0	-0.646431	70.0651	0
42	0	-0.628006	70.4595	0
43	0	-0.606775	70.8276	0
44	0	-0.588793	71.1743	0
45	0	-0.570999	71.5003	0
46	0	-0.550465	71.8034	0
47	0	-0.533048	72.0875	0

48	0	-0.515791	72.3535	0
49	0	-0.49585	72.5994	0
50	0	-0.478914	72.8288	0
51	0	-0.462114	73.0423	0
52	0	-0.442676	73.2383	0
53	0	-0.426148	73.4199	0
54	0	-0.409735	73.5878	0
55	0	-0.390726	73.7404	0
56	0	-0.374544	73.8807	0
57	0	-0.358459	74.0092	0
58	0	-0.33981	74.1247	0
59	0	-0.323919	74.2296	0
60	0	-0.308108	74.3245	0
61	0	-0.28976	74.4085	0
62	0	-0.27411	74.4836	0
63	0	-0.258527	74.5505	0
64	0	-0.240426	74.6083	0
65	0	-0.224974	74.6589	0
66	0	-0.209575	74.7028	0
67	0	-0.191671	74.7395	0
68	0	-0.176374	74.7706	0
69	0	-0.161119	74.7966	0
70	0	-0.143367	74.8172	0
71	0	-0.128189	74.8336	0
72	0	-0.113039	74.8464	0
73	0	-0.0953969	74.8555	0
74	0	-0.0802981	74.8619	0
75	0	-0.0652187	74.8662	0
76	0	-0.0476439	74.8684	0
77	0	-0.0325917	74.8695	0
78	0	-0.0175476	74.8698	0
79	0	0	74.8698	0
80	0	0.0175476	74.8701	0
81	0	0.0325917	74.8712	0
82	0	0.0476439	74.8735	0
83	0	0.0652187	74.8777	0
84	0	0.0802981	74.8842	0
85	0	0.0953969	74.8933	0
86	0	0.113039	74.906	0
87	0	0.128189	74.9225	0
88	0	0.143367	74.943	0
89	0	0.161119	74.969	0
90	0	0.176374	75.0001	0
91	0	0.191671	75.0368	0
92	0	0.209575	75.0807	0
93	0	0.224974	75.1314	0
94	0	0.240426	75.1892	0
95	0	0.258527	75.256	0
96	0	0.27411	75.3311	0
97	0	0.28976	75.4151	0
98	0	0.308108	75.51	0
99	0	0.323919	75.615	0
100	0	0.33981	75.7304	0
101	0	0.358459	75.8589	0
102	0	0.374544	75.9992	0
103	0	0.390726	76.1519	0
104	0	0.409735	76.3198	0

105	0	0.426148	76.5014	0
106	0	0.442676	76.6973	0
107	0	0.462114	76.9109	0
108	0	0.478914	77.1402	0
109	0	0.49585	77.3861	0
110	0	0.515791	77.6521	0
111	0	0.533048	77.9363	0
112	0	0.550465	78.2393	0
113	0	0.570999	78.5653	0
114	0	0.588793	78.912	0
115	0	0.606775	79.2802	0
116	0	0.628006	79.6746	0
117	0	0.646431	80.0924	0
118	0	0.665079	80.5348	0
119	0	0.687131	81.0069	0
120	0	0.706302	81.5058	0
121	0	0.725736	82.0325	0
122	0	0.748762	82.5931	0
123	0	0.768821	83.1842	0
124	0	0.789191	83.807	0
125	0	0.813379	84.4686	0
126	0	0.834498	85.165	0
127	0	0.855996	85.8977	0
128	0	0.881587	86.6749	0
129	0	0.903992	87.4921	0
130	0	0.926859	88.3512	0
131	0	0.954165	89.2616	0
132	0	0.97815	90.2184	0
133	0	1.00271	91.2238	0
134	0	1.03215	92.2892	0
135	0	1.05812	93.4088	0
136	0	1.08482	94.5856	0
137	0	1.11699	95.8333	0
138	0	1.1455	97.1455	0
139	0	1.17499	98.5261	0
140	0	1.21073	99.9919	0
141	0	1.24264	101.536	0
142	0	1.27588	103.164	0
143	0	1.31652	104.897	0
144	0	1.35317	106.728	0
145	0	1.39175	108.665	0
146	0	1.43953	110.737	0
147	0	1.48328	112.938	0
148	0	1.53007	115.279	0
149	0	1.58927	117.804	0
150	0	1.64485	120.51	0
151	2.2	1.70604	123.421	3.7533
152	2.3	1.78661	126.613	7.8625
153	2.4	1.86629	130.096	12.3416
154	6.2	1.95996	133.937	24.4934
155	13	2.09693	138.334	51.7535
156	16	2.25713	143.429	87.8675
157	18	2.51213	149.74	133.086

Data Set Standard Deviation = 2.23653
Numerator = 17711.9

Denominator = 116845
W Statistic = 0.151584 = 17711.9 / 116845

5% Critical value of 0.976 exceeds 0.151584
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.151584
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Lead, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 95%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 2.3
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	ND<0 U
	9/9/2014	ND<0 U
	3/16/2015	ND<0 U
	9/9/2015	ND<0 U
	3/18/2016	ND<0 U
	9/20/2016	ND<0 U
	3/23/2017	ND<0 U
	9/18/2017	ND<0 U
	3/15/2018	ND<0 U
	9/17/2018	ND<0 U
	3/5/2019	ND<0 U
	9/24/2019	ND<0 U
	3/16/2020	2.3
	9/22/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/22/2022	ND<0
	9/13/2022	ND<0 J
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Lead, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 0
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 J
	9/4/2014	ND<0 U
	3/17/2015	ND<0 U
	9/11/2015	ND<0 U
	3/15/2016	ND<0 U
	9/21/2016	ND<0 U
	3/28/2017	ND<0 U
	9/19/2017	ND<0 U
	3/26/2018	ND<0 U
	9/18/2018	ND<0 U
	3/4/2019	ND<0 U
	9/23/2019	ND<0 U
	3/19/2020	ND<0 U
	9/23/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/16/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Lead, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/19/2015	ND<0 U
	9/14/2015	ND<0 U
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/27/2017	ND<0 U
	9/20/2017	ND<0 U
	3/16/2018	ND<0 U
	9/20/2018	ND<0 U
	3/5/2019	ND<0 U
	9/25/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/18/2021	ND<0 JR
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Lead, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 95%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 2.2
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/17/2014	ND<0 U
	3/19/2015	ND<0 U
	9/15/2015	ND<0 U
	3/21/2016	ND<0 U
	9/26/2016	ND<0 U
	3/31/2017	ND<0 U
	9/21/2017	ND<0 U
	3/30/2018	2.2
	9/26/2018	ND<0 U
	3/13/2019	ND<0 U
	10/3/2019	ND<0 U
	4/3/2020	ND<0 U
	9/30/2020	ND<0 U
	3/22/2021	ND<0 U
	9/16/2021	ND<0 U
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Lead, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	ND<0 J
	9/16/2014	ND<0 U
	3/18/2015	ND<0 U
	9/15/2015	ND<0 U
	3/16/2016	ND<0 U
	9/22/2016	ND<0 U
	3/29/2017	ND<0 U
	9/21/2017	ND<0 U
	3/28/2018	ND<0 U
	9/20/2018	ND<0 U
	3/12/2019	ND<0 U
	10/1/2019	ND<0 U
	3/18/2020	ND<0 J
	9/24/2020	ND<0 U
	3/17/2021	ND<0 J
	9/9/2021	ND<0 U
	3/15/2022	ND<0
	9/16/2022	ND<0
	3/15/2023	ND<0

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Lead, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: Magnesium, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	486	-2.51213	6.31081	-1220.9
2	1495	-2.25713	11.4054	-4595.31
3	2700	-2.09693	15.8026	-10257
4	2900	-1.95996	19.644	-15940.9
5	2900	-1.86629	23.1271	-21353.2
6	3000	-1.78661	26.319	-26713
7	3100	-1.70604	29.2296	-32001.7
8	3200	-1.64485	31.9352	-37265.3
9	4000	-1.58927	34.4609	-43622.3
10	4000	-1.53007	36.802	-49742.6
11	4100	-1.48328	39.0022	-55824
12	4800	-1.43953	41.0744	-62733.8
13	4900	-1.39175	43.0114	-69553.3
14	5400	-1.35317	44.8424	-76860.5
15	5500	-1.31652	46.5757	-84101.3
16	5700	-1.27588	48.2035	-91373.8
17	6000	-1.24264	49.7477	-98829.7
18	6078	-1.21073	51.2136	-106188
19	6100	-1.17499	52.5942	-113356
20	6100	-1.1455	53.9063	-120343
21	6100	-1.11699	55.154	-127157
22	6200	-1.08482	56.3308	-133883
23	6300	-1.05812	57.4505	-140549
24	6400	-1.03215	58.5158	-147155
25	6400	-1.00271	59.5212	-153572
26	6500	-0.97815	60.478	-159930
27	6600	-0.954165	61.3884	-166228
28	6600	-0.926859	62.2475	-172345
29	6700	-0.903992	63.0647	-178402
30	6700	-0.881587	63.8419	-184308
31	6700	-0.855996	64.5746	-190044
32	6800	-0.834498	65.271	-195718
33	6900	-0.813379	65.9326	-201331
34	6900	-0.789191	66.5554	-206776
35	7000	-0.768821	67.1465	-212158
36	7000	-0.748762	67.7072	-217399
37	7000	-0.725736	68.2338	-222479
38	7000	-0.706302	68.7327	-227423
39	7100	-0.687131	69.2049	-232302
40	7200	-0.665079	69.6472	-237090
41	7200	-0.646431	70.0651	-241745
42	7300	-0.628006	70.4595	-246329
43	7400	-0.606775	70.8276	-250819
44	7429	-0.588793	71.1743	-255194
45	7500	-0.570999	71.5003	-259476
46	7600	-0.550465	71.8034	-263660
47	7600	-0.533048	72.0875	-267711

48	7600	-0.515791	72.3535	-271631
49	7600	-0.49585	72.5994	-275399
50	7700	-0.478914	72.8288	-279087
51	7800	-0.462114	73.0423	-282691
52	7800	-0.442676	73.2383	-286144
53	7800	-0.426148	73.4199	-289468
54	7900	-0.409735	73.5878	-292705
55	7900	-0.390726	73.7404	-295792
56	7900	-0.374544	73.8807	-298751
57	7900	-0.358459	74.0092	-301582
58	7900	-0.33981	74.1247	-304267
59	8100	-0.323919	74.2296	-306891
60	8100	-0.308108	74.3245	-309386
61	8200	-0.28976	74.4085	-311762
62	8200	-0.27411	74.4836	-314010
63	8260	-0.258527	74.5505	-316146
64	8300	-0.240426	74.6083	-318141
65	8500	-0.224974	74.6589	-320053
66	8500	-0.209575	74.7028	-321835
67	8500	-0.191671	74.7395	-323464
68	8500	-0.176374	74.7706	-324963
69	8600	-0.161119	74.7966	-326349
70	8700	-0.143367	74.8172	-327596
71	8700	-0.128189	74.8336	-328711
72	8800	-0.113039	74.8464	-329706
73	8800	-0.0953969	74.8555	-330546
74	8800	-0.0802981	74.8619	-331252
75	8900	-0.0652187	74.8662	-331833
76	9000	-0.0476439	74.8684	-332261
77	9000	-0.0325917	74.8695	-332555
78	9172	-0.0175476	74.8698	-332716
79	9200	0	74.8698	-332716
80	9200	0.0175476	74.8701	-332554
81	9400	0.0325917	74.8712	-332248
82	9700	0.0476439	74.8735	-331786
83	9800	0.0652187	74.8777	-331147
84	10000	0.0802981	74.8842	-330344
85	10000	0.0953969	74.8933	-329390
86	10100	0.113039	74.906	-328248
87	10200	0.128189	74.9225	-326940
88	10200	0.143367	74.943	-325478
89	10600	0.161119	74.969	-323770
90	10700	0.176374	75.0001	-321883
91	10900	0.191671	75.0368	-319794
92	11000	0.209575	75.0807	-317488
93	11200	0.224974	75.1314	-314969
94	11400	0.240426	75.1892	-312228
95	11400	0.258527	75.256	-309281
96	11500	0.27411	75.3311	-306128
97	11600	0.28976	75.4151	-302767
98	11800	0.308108	75.51	-299132
99	12100	0.323919	75.615	-295212
100	12200	0.33981	75.7304	-291066
101	12400	0.358459	75.8589	-286622
102	12500	0.374544	75.9992	-281940
103	12500	0.390726	76.1519	-277056
104	12500	0.409735	76.3198	-271934

105	12700	0.426148	76.5014	-266522
106	12800	0.442676	76.6973	-260856
107	13000	0.462114	76.9109	-254848
108	13300	0.478914	77.1402	-248479
109	13300	0.49585	77.3861	-241884
110	13600	0.515791	77.6521	-234869
111	14000	0.533048	77.9363	-227406
112	14100	0.550465	78.2393	-219645
113	14200	0.570999	78.5653	-211537
114	14300	0.588793	78.912	-203117
115	14600	0.606775	79.2802	-194258
116	14700	0.628006	79.6746	-185026
117	14700	0.646431	80.0924	-175524
118	14700	0.665079	80.5348	-165747
119	14800	0.687131	81.0069	-155578
120	14800	0.706302	81.5058	-145124
121	14900	0.725736	82.0325	-134311
122	14900	0.748762	82.5931	-123154
123	15000	0.768821	83.1842	-111622
124	15000	0.789191	83.807	-99784.1
125	15000	0.813379	84.4686	-87583.4
126	15000	0.834498	85.165	-75065.9
127	15100	0.855996	85.8977	-62140.4
128	15200	0.881587	86.6749	-48740.3
129	15200	0.903992	87.4921	-34999.6
130	15300	0.926859	88.3512	-20818.6
131	15400	0.954165	89.2616	-6124.5
132	15400	0.97815	90.2184	8939.01
133	15500	1.00271	91.2238	24481
134	15800	1.03215	92.2892	40789.1
135	16000	1.05812	93.4088	57719
136	16200	1.08482	94.5856	75293.1
137	16200	1.11699	95.8333	93388.3
138	16400	1.1455	97.1455	112175
139	16450	1.17499	98.5261	131503
140	16800	1.21073	99.9919	151843
141	16900	1.24264	101.536	172844
142	17000	1.27588	103.164	194534
143	17100	1.31652	104.897	217046
144	18500	1.35317	106.728	242080
145	18700	1.39175	108.665	268106
146	20020	1.43953	110.737	296925
147	20400	1.48328	112.938	327184
148	21000	1.53007	115.279	359315
149	21600	1.58927	117.804	393644
150	21600	1.64485	120.51	429173
151	21700	1.70604	123.421	466194
152	21900	1.78661	126.613	505320
153	22000	1.86629	130.096	546379
154	22400	1.95996	133.937	590282
155	24000	2.09693	138.334	640608
156	26300	2.25713	143.429	699971
157	86400	2.51213	149.74	917019

Data Set Standard Deviation = 7832
Numerator = 8.40924e+011

Denominator = 1.43287e+012
W Statistic = 0.586881 = 8.40924e+011 / 1.43287e+012

5% Critical value of 0.976 exceeds 0.586881
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.586881
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Magnesium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 26300
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	486
	3/20/2014	18700
	9/9/2014	11400
	3/16/2015	12700
	9/9/2015	10700
	3/18/2016	13300
	9/20/2016	14600
	3/23/2017	14900
	9/18/2017	14900
	3/15/2018	14800
	9/17/2018	12500
	3/5/2019	15300
	9/24/2019	12800
	3/16/2020	26300
	9/22/2020	14700
	3/16/2021	16200
	9/14/2021	15000
	3/22/2022	14100
	9/13/2022	13300
	3/14/2023	13000

Date	Count	Mean	Significant
9/12/2023	1	12500	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Magnesium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 20020
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	20020
	12/5/2013	8260
	3/19/2014	9800
	9/4/2014	10900
	3/17/2015	8700
	9/11/2015	10000
	3/15/2016	9000
	9/21/2016	8800
	3/28/2017	7600
	9/19/2017	8300
	3/26/2018	8700
	9/18/2018	12100
	3/4/2019	13600
	9/23/2019	12500
	3/19/2020	9700
	9/23/2020	10600
	3/19/2021	10100
	9/15/2021	11000
	3/16/2022	9000
	9/14/2022	9200
	3/16/2023	8500

Date	Count	Mean	Significant
9/13/2023	1	11800	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Magnesium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 18500
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	16450
	3/21/2014	16200
	9/8/2014	17000
	3/19/2015	16900
	9/14/2015	16800
	3/21/2016	18500
	9/23/2016	16400
	3/27/2017	15800
	9/20/2017	15500
	3/16/2018	15000
	9/20/2018	14800
	3/5/2019	17100
	9/25/2019	14700
	3/25/2020	15400
	9/28/2020	15200
	3/18/2021	2900 R
	9/15/2021	16000
	3/22/2022	15100
	9/14/2022	15200
	3/16/2023	15400

Date	Count	Mean	Significant
9/13/2023	1	14000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Magnesium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 15000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	9172
	3/21/2014	7200
	9/17/2014	7600
	3/19/2015	7400
	9/15/2015	8500
	3/21/2016	8500
	9/26/2016	7900
	3/31/2017	9400
	9/21/2017	12400
	3/30/2018	15000
	9/26/2018	15000
	3/13/2019	14300
	10/3/2019	14700
	4/3/2020	12200
	9/30/2020	11500
	3/22/2021	14200
	9/16/2021	10000
	3/24/2022	11600
	9/16/2022	11200
	3/17/2023	10200

Date	Count	Mean	Significant
9/14/2023	1	7800	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Magnesium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 86400
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	7429
	3/18/2014	7600
	9/16/2014	7100
	3/18/2015	6100
	9/15/2015	8100
	3/16/2016	8800
	9/22/2016	8600
	3/29/2017	8800
	9/21/2017	7500
	3/28/2018	8200
	9/20/2018	8200
	3/12/2019	7900
	10/1/2019	10200
	3/18/2020	9200
	9/24/2020	7300
	3/17/2021	86400 R
	9/9/2021	8100
	3/15/2022	7900
	9/16/2022	6700
	3/15/2023	6700

Date	Count	Mean	Significant
9/11/2023	1	7800	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Magnesium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 24000
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	22400
	3/26/2020	21600
	9/29/2020	22000
	3/16/2021	21700
	9/14/2021	21000
	3/18/2022	20400
	9/13/2022	21600
	3/14/2023	24000

Date	Count	Mean	Significant
9/12/2023	1	21900	FALSE

Shapiro-Francia Test of Normality

Parameter: Manganese, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	10	-2.51213	6.31081	-25.1213
2	12	-2.25713	11.4054	-52.2069
3	12	-2.09693	15.8026	-77.3701
4	15	-1.95996	19.644	-106.769
5	15	-1.86629	23.1271	-134.764
6	16	-1.78661	26.319	-163.35
7	18	-1.70604	29.2296	-194.058
8	18	-1.64485	31.9352	-223.666
9	18	-1.58927	34.4609	-252.273
10	20	-1.53007	36.802	-282.874
11	20	-1.48328	39.0022	-312.54
12	20	-1.43953	41.0744	-341.33
13	21	-1.39175	43.0114	-370.557
14	22	-1.35317	44.8424	-400.327
15	22	-1.31652	46.5757	-429.29
16	24	-1.27588	48.2035	-459.911
17	25	-1.24264	49.7477	-490.977
18	25	-1.21073	51.2136	-521.245
19	30	-1.17499	52.5942	-556.495
20	30	-1.1455	53.9063	-590.86
21	32	-1.11699	55.154	-626.604
22	32	-1.08482	56.3308	-661.318
23	32	-1.05812	57.4505	-695.178
24	33	-1.03215	58.5158	-729.239
25	33	-1.00271	59.5212	-762.328
26	36	-0.97815	60.478	-797.542
27	37	-0.954165	61.3884	-832.846
28	39	-0.926859	62.2475	-868.993
29	42	-0.903992	63.0647	-906.961
30	43	-0.881587	63.8419	-944.869
31	44	-0.855996	64.5746	-982.533
32	45	-0.834498	65.271	-1020.09
33	49	-0.813379	65.9326	-1059.94
34	65	-0.789191	66.5554	-1111.24
35	68	-0.768821	67.1465	-1163.52
36	77	-0.748762	67.7072	-1221.17
37	82	-0.725736	68.2338	-1280.68
38	86	-0.706302	68.7327	-1341.43
39	95	-0.687131	69.2049	-1406.7
40	100	-0.665079	69.6472	-1473.21
41	100	-0.646431	70.0651	-1537.85
42	110	-0.628006	70.4595	-1606.93
43	110	-0.606775	70.8276	-1673.68
44	110	-0.588793	71.1743	-1738.45
45	120	-0.570999	71.5003	-1806.97
46	120	-0.550465	71.8034	-1873.02
47	120	-0.533048	72.0875	-1936.99

48	120	-0.515791	72.3535	-1998.88
49	120	-0.49585	72.5994	-2058.39
50	120	-0.478914	72.8288	-2115.86
51	130	-0.462114	73.0423	-2175.93
52	130	-0.442676	73.2383	-2233.48
53	140	-0.426148	73.4199	-2293.14
54	140	-0.409735	73.5878	-2350.5
55	140	-0.390726	73.7404	-2405.2
56	140	-0.374544	73.8807	-2457.64
57	140	-0.358459	74.0092	-2507.82
58	150	-0.33981	74.1247	-2558.8
59	150	-0.323919	74.2296	-2607.38
60	160	-0.308108	74.3245	-2656.68
61	160	-0.28976	74.4085	-2703.04
62	160	-0.27411	74.4836	-2746.9
63	170	-0.258527	74.5505	-2790.85
64	170	-0.240426	74.6083	-2831.72
65	230	-0.224974	74.6589	-2883.47
66	300	-0.209575	74.7028	-2946.34
67	300	-0.191671	74.7395	-3003.84
68	350	-0.176374	74.7706	-3065.57
69	400	-0.161119	74.7966	-3130.02
70	410	-0.143367	74.8172	-3188.8
71	420	-0.128189	74.8336	-3242.64
72	460	-0.113039	74.8464	-3294.64
73	480	-0.0953969	74.8555	-3340.43
74	490	-0.0802981	74.8619	-3379.77
75	510	-0.0652187	74.8662	-3413.03
76	520	-0.0476439	74.8684	-3437.81
77	530	-0.0325917	74.8695	-3455.08
78	530	-0.0175476	74.8698	-3464.38
79	540	0	74.8698	-3464.38
80	550	0.0175476	74.8701	-3454.73
81	550	0.0325917	74.8712	-3436.81
82	560	0.0476439	74.8735	-3410.13
83	570	0.0652187	74.8777	-3372.95
84	600	0.0802981	74.8842	-3324.77
85	620	0.0953969	74.8933	-3265.63
86	620	0.113039	74.906	-3195.54
87	620	0.128189	74.9225	-3116.06
88	620	0.143367	74.943	-3027.18
89	640	0.161119	74.969	-2924.06
90	640	0.176374	75.0001	-2811.18
91	650	0.191671	75.0368	-2686.59
92	670	0.209575	75.0807	-2546.18
93	670	0.224974	75.1314	-2395.45
94	670	0.240426	75.1892	-2234.36
95	670	0.258527	75.256	-2061.15
96	680	0.27411	75.3311	-1874.75
97	710	0.28976	75.4151	-1669.02
98	710	0.308108	75.51	-1450.27
99	720	0.323919	75.615	-1217.05
100	730	0.33981	75.7304	-968.984
101	740	0.358459	75.8589	-703.724
102	760	0.374544	75.9992	-419.071
103	760	0.390726	76.1519	-122.12
104	780	0.409735	76.3198	197.474

105	780	0.426148	76.5014	529.87
106	790	0.442676	76.6973	879.584
107	820	0.462114	76.9109	1258.52
108	820	0.478914	77.1402	1651.23
109	840	0.49585	77.3861	2067.74
110	910	0.515791	77.6521	2537.11
111	920	0.533048	77.9363	3027.51
112	1000	0.550465	78.2393	3577.98
113	1000	0.570999	78.5653	4148.98
114	1000	0.588793	78.912	4737.77
115	1100	0.606775	79.2802	5405.22
116	1100	0.628006	79.6746	6096.03
117	1100	0.646431	80.0924	6807.11
118	1100	0.665079	80.5348	7538.69
119	1200	0.687131	81.0069	8363.25
120	1200	0.706302	81.5058	9210.81
121	1300	0.725736	82.0325	10154.3
122	1800	0.748762	82.5931	11502
123	1900	0.768821	83.1842	12962.8
124	2000	0.789191	83.807	14541.2
125	2300	0.813379	84.4686	16412
126	2900	0.834498	85.165	18832
127	2900	0.855996	85.8977	21314.4
128	3000	0.881587	86.6749	23959.1
129	3000	0.903992	87.4921	26671.1
130	3000	0.926859	88.3512	29451.7
131	3100	0.954165	89.2616	32409.6
132	3200	0.97815	90.2184	35539.7
133	3200	1.00271	91.2238	38748.4
134	3200	1.03215	92.2892	42051.3
135	3300	1.05812	93.4088	45543.1
136	3300	1.08482	94.5856	49123
137	3300	1.11699	95.8333	52809
138	3300	1.1455	97.1455	56589.2
139	3600	1.17499	98.5261	60819.2
140	3700	1.21073	99.9919	65298.8
141	3800	1.24264	101.536	70020.9
142	3900	1.27588	103.164	74996.8
143	4000	1.31652	104.897	80262.9
144	4000	1.35317	106.728	85675.6
145	4000	1.39175	108.665	91242.6
146	4100	1.43953	110.737	97144.6
147	4100	1.48328	112.938	103226
148	4100	1.53007	115.279	109499
149	4300	1.58927	117.804	116333
150	4300	1.64485	120.51	123406
151	4400	1.70604	123.421	130913
152	4600	1.78661	126.613	139131
153	4770	1.86629	130.096	148033
154	4890	1.95996	133.937	157618
155	6800	2.09693	138.334	171877
156	7100	2.25713	143.429	187902
157	7600	2.51213	149.74	206994

Data Set Standard Deviation = 1599.99
Numerator = 4.28467e+010

Denominator = 5.97996e+010
W Statistic = 0.716505 = 4.28467e+010 / 5.97996e+010

5% Critical value of 0.976 exceeds 0.716505
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.716505
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Manganese, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 3200
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	20
	3/20/2014	3000
	9/9/2014	920
	3/16/2015	910
	9/9/2015	840
	3/18/2016	670
	9/20/2016	780
	3/23/2017	420
	9/18/2017	790
	3/15/2018	490
	9/17/2018	620
	3/5/2019	820
	9/24/2019	720
	3/16/2020	3200
	9/22/2020	620
	3/16/2021	460
	9/14/2021	620
	3/22/2022	640
	9/13/2022	530
	3/14/2023	760

Date	Count	Mean	Significant
9/12/2023	1	160	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Manganese, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 4890
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	4890
	12/5/2013	230
	3/19/2014	300
	9/4/2014	710
	3/17/2015	300
	9/11/2015	670
	3/15/2016	570
	9/21/2016	560
	3/28/2017	400
	9/19/2017	710
	3/26/2018	550
	9/18/2018	2000
	3/4/2019	1900
	9/23/2019	1800
	3/19/2020	1100
	9/23/2020	1200
	3/19/2021	760
	9/15/2021	1000
	3/16/2022	1100
	9/14/2022	820
	3/16/2023	1000

Date	Count	Mean	Significant
9/13/2023	1	1300	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Manganese, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 4770
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	4770
	3/21/2014	4300
	9/8/2014	4000
	3/19/2015	4100
	9/14/2015	4400
	3/21/2016	4100
	9/23/2016	4000
	3/27/2017	3800
	9/20/2017	3700
	3/16/2018	3300
	9/20/2018	3200
	3/5/2019	3300
	9/25/2019	3000
	3/25/2020	3300
	9/28/2020	3300
	3/18/2021	33 R
	9/15/2021	3200
	3/22/2022	3100
	9/14/2022	3000
	3/16/2023	2900

Date	Count	Mean	Significant
9/13/2023	1	2900	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Manganese, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 1200
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	620
	3/21/2014	520
	9/17/2014	550
	3/19/2015	670
	9/15/2015	730
	3/21/2016	680
	9/26/2016	670
	3/31/2017	740
	9/21/2017	1100
	3/30/2018	1200
	9/26/2018	1000
	3/13/2019	1100
	10/3/2019	780
	4/3/2020	640
	9/30/2020	600
	3/22/2021	650
	9/16/2021	510
	3/24/2022	540
	9/16/2022	530
	3/17/2023	480

Date	Count	Mean	Significant
9/14/2023	1	350	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Manganese, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 2300
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	20
	3/18/2014	25
	9/16/2014	22
	3/18/2015	30
	9/15/2015	24
	3/16/2016	33
	9/22/2016	42
	3/29/2017	44
	9/21/2017	37
	3/28/2018	30
	9/20/2018	15
	3/12/2019	21
	10/1/2019	22
	3/18/2020	18
	9/24/2020	15
	3/17/2021	2300 R
	9/9/2021	25
	3/15/2022	18
	9/16/2022	12
	3/15/2023	12

Date	Count	Mean	Significant
9/11/2023	1	10	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Manganese, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 7600
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	4100
	3/26/2020	6800
	9/29/2020	3600
	3/16/2021	3900
	9/14/2021	4000
	3/18/2022	4600
	9/13/2022	4300
	3/14/2023	7600

Date	Count	Mean	Significant
9/12/2023	1	7100	FALSE

Shapiro-Francia Test of Normality

Parameter: Mercury, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	0	-0.725736	68.2338	0
38	0	-0.706302	68.7327	0
39	0	-0.687131	69.2049	0
40	0	-0.665079	69.6472	0
41	0	-0.646431	70.0651	0
42	0	-0.628006	70.4595	0
43	0	-0.606775	70.8276	0
44	0	-0.588793	71.1743	0
45	0	-0.570999	71.5003	0
46	0	-0.550465	71.8034	0
47	0	-0.533048	72.0875	0

48	0	-0.515791	72.3535	0
49	0	-0.49585	72.5994	0
50	0	-0.478914	72.8288	0
51	0	-0.462114	73.0423	0
52	0	-0.442676	73.2383	0
53	0	-0.426148	73.4199	0
54	0	-0.409735	73.5878	0
55	0	-0.390726	73.7404	0
56	0	-0.374544	73.8807	0
57	0	-0.358459	74.0092	0
58	0	-0.33981	74.1247	0
59	0	-0.323919	74.2296	0
60	0	-0.308108	74.3245	0
61	0	-0.28976	74.4085	0
62	0	-0.27411	74.4836	0
63	0	-0.258527	74.5505	0
64	0	-0.240426	74.6083	0
65	0	-0.224974	74.6589	0
66	0	-0.209575	74.7028	0
67	0	-0.191671	74.7395	0
68	0	-0.176374	74.7706	0
69	0	-0.161119	74.7966	0
70	0	-0.143367	74.8172	0
71	0	-0.128189	74.8336	0
72	0	-0.113039	74.8464	0
73	0	-0.0953969	74.8555	0
74	0	-0.0802981	74.8619	0
75	0	-0.0652187	74.8662	0
76	0	-0.0476439	74.8684	0
77	0	-0.0325917	74.8695	0
78	0	-0.0175476	74.8698	0
79	0	0	74.8698	0
80	0	0.0175476	74.8701	0
81	0	0.0325917	74.8712	0
82	0	0.0476439	74.8735	0
83	0	0.0652187	74.8777	0
84	0	0.0802981	74.8842	0
85	0	0.0953969	74.8933	0
86	0	0.113039	74.906	0
87	0	0.128189	74.9225	0
88	0	0.143367	74.943	0
89	0	0.161119	74.969	0
90	0	0.176374	75.0001	0
91	0	0.191671	75.0368	0
92	0	0.209575	75.0807	0
93	0	0.224974	75.1314	0
94	0	0.240426	75.1892	0
95	0	0.258527	75.256	0
96	0	0.27411	75.3311	0
97	0	0.28976	75.4151	0
98	0	0.308108	75.51	0
99	0	0.323919	75.615	0
100	0	0.33981	75.7304	0
101	0	0.358459	75.8589	0
102	0	0.374544	75.9992	0
103	0	0.390726	76.1519	0
104	0	0.409735	76.3198	0

105	0	0.426148	76.5014	0
106	0	0.442676	76.6973	0
107	0	0.462114	76.9109	0
108	0	0.478914	77.1402	0
109	0	0.49585	77.3861	0
110	0	0.515791	77.6521	0
111	0	0.533048	77.9363	0
112	0	0.550465	78.2393	0
113	0	0.570999	78.5653	0
114	0	0.588793	78.912	0
115	0	0.606775	79.2802	0
116	0	0.628006	79.6746	0
117	0	0.646431	80.0924	0
118	0	0.665079	80.5348	0
119	0	0.687131	81.0069	0
120	0	0.706302	81.5058	0
121	0	0.725736	82.0325	0
122	0	0.748762	82.5931	0
123	0	0.768821	83.1842	0
124	0	0.789191	83.807	0
125	0	0.813379	84.4686	0
126	0	0.834498	85.165	0
127	0	0.855996	85.8977	0
128	0	0.881587	86.6749	0
129	0	0.903992	87.4921	0
130	0	0.926859	88.3512	0
131	0	0.954165	89.2616	0
132	0	0.97815	90.2184	0
133	0	1.00271	91.2238	0
134	0	1.03215	92.2892	0
135	0	1.05812	93.4088	0
136	0	1.08482	94.5856	0
137	0.5	1.11699	95.8333	0.558493
138	0.61	1.1455	97.1455	1.25725
139	0.64	1.17499	98.5261	2.00924
140	0.66	1.21073	99.9919	2.80832
141	0.76	1.24264	101.536	3.75273
142	0.77	1.27588	103.164	4.73516
143	0.8	1.31652	104.897	5.78837
144	0.82	1.35317	106.728	6.89798
145	0.83	1.39175	108.665	8.05312
146	0.87	1.43953	110.737	9.30551
147	0.88	1.48328	112.938	10.6108
148	0.88	1.53007	115.279	11.9573
149	0.91	1.58927	117.804	13.4035
150	0.94	1.64485	120.51	14.9497
151	0.95	1.70604	123.421	16.5704
152	0.99	1.78661	126.613	18.3391
153	1.2	1.86629	130.096	20.5787
154	1.2	1.95996	133.937	22.9306
155	1.6	2.09693	138.334	26.2857
156	1.7	2.25713	143.429	30.1229
157	1.8	2.51213	149.74	34.6447

Data Set Standard Deviation = 0.353388
Numerator = 1200.26

Denominator = 2917.19
W Statistic = 0.411442 = 1200.26 / 2917.19

5% Critical value of 0.976 exceeds 0.411442
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.411442
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Mercury, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	ND<0 U
	9/9/2014	ND<0 U
	3/16/2015	ND<0 U
	9/9/2015	ND<0 U
	3/18/2016	ND<0 U
	9/20/2016	ND<0 U
	3/23/2017	ND<0 U
	9/18/2017	ND<0 U
	3/15/2018	ND<0 U
	9/17/2018	ND<0 U
	3/5/2019	ND<0 U
	9/24/2019	ND<0 U
	3/16/2020	ND<0 U
	9/22/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/22/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Mercury, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 28.5714%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 1.2
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	0.8
	9/4/2014	0.61
	3/17/2015	0.64
	9/11/2015	0.66
	3/15/2016	0.83
	9/21/2016	0.88
	3/28/2017	0.91
	9/19/2017	1.2
	3/26/2018	0.95
	9/18/2018	0.87
	3/4/2019	ND<0 U
	9/23/2019	0.76
	3/19/2020	ND<0 J
	9/23/2020	0.82
	3/19/2021	0.77
	9/15/2021	0.94
	3/16/2022	0.88
	9/14/2022	ND<0 J
	3/16/2023	ND<0 J

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Mercury, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/19/2015	ND<0 U
	9/14/2015	ND<0 U
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/27/2017	ND<0 U
	9/20/2017	ND<0 U
	3/16/2018	ND<0 U
	9/20/2018	ND<0 U
	3/5/2019	ND<0 U
	9/25/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/18/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Mercury, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 95%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0.5
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/17/2014	ND<0 U
	3/19/2015	ND<0 U
	9/15/2015	ND<0 U
	3/21/2016	ND<0 U
	9/26/2016	ND<0 U
	3/31/2017	ND<0 U
	9/21/2017	ND<0 U
	3/30/2018	0.5
	9/26/2018	ND<0 U
	3/13/2019	ND<0 U
	10/3/2019	ND<0 U
	4/3/2020	ND<0 J
	9/30/2020	ND<0 U
	3/22/2021	ND<0 U
	9/16/2021	ND<0 U
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Mercury, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 85%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 1.8
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	ND<0 J
	9/16/2014	ND<0 J
	3/18/2015	ND<0 J
	9/15/2015	ND<0 J
	3/16/2016	ND<0 J
	9/22/2016	1.7
	3/29/2017	ND<0 J
	9/21/2017	ND<0 J
	3/28/2018	ND<0 J
	9/20/2018	ND<0 J
	3/12/2019	ND<0 J
	10/1/2019	ND<0 J
	3/18/2020	ND<0 U
	9/24/2020	ND<0 J
	3/17/2021	1.8
	9/9/2021	ND<0 U
	3/15/2022	ND<0 J
	9/16/2022	1.2
	3/15/2023	ND<0 J

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Mercury, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: Nickel, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	5.9	-0.813379	65.9326	-4.79894
34	6.4	-0.789191	66.5554	-9.84976
35	6.6	-0.768821	67.1465	-14.924
36	6.6	-0.748762	67.7072	-19.8658
37	6.7	-0.725736	68.2338	-24.7282
38	6.7	-0.706302	68.7327	-29.4605
39	6.8	-0.687131	69.2049	-34.133
40	7	-0.665079	69.6472	-38.7885
41	7.5	-0.646431	70.0651	-43.6367
42	7.6	-0.628006	70.4595	-48.4096
43	7.7	-0.606775	70.8276	-53.0818
44	7.7	-0.588793	71.1743	-57.6155
45	7.7	-0.570999	71.5003	-62.0122
46	7.7	-0.550465	71.8034	-66.2507
47	7.7	-0.533048	72.0875	-70.3552

48	7.7	-0.515791	72.3535	-74.3268
49	7.7	-0.49585	72.5994	-78.1448
50	7.8	-0.478914	72.8288	-81.8804
51	7.8	-0.462114	73.0423	-85.4849
52	7.9	-0.442676	73.2383	-88.982
53	8	-0.426148	73.4199	-92.3912
54	8	-0.409735	73.5878	-95.6691
55	8.1	-0.390726	73.7404	-98.834
56	8.1	-0.374544	73.8807	-101.868
57	8.2	-0.358459	74.0092	-104.807
58	8.3	-0.33981	74.1247	-107.628
59	8.4	-0.323919	74.2296	-110.348
60	8.6	-0.308108	74.3245	-112.998
61	8.8	-0.28976	74.4085	-115.548
62	8.8	-0.27411	74.4836	-117.96
63	8.9	-0.258527	74.5505	-120.261
64	8.9	-0.240426	74.6083	-122.401
65	8.9	-0.224974	74.6589	-124.403
66	9	-0.209575	74.7028	-126.289
67	9	-0.191671	74.7395	-128.014
68	9	-0.176374	74.7706	-129.602
69	9	-0.161119	74.7966	-131.052
70	9.1	-0.143367	74.8172	-132.357
71	9.2	-0.128189	74.8336	-133.536
72	9.2	-0.113039	74.8464	-134.576
73	9.2	-0.0953969	74.8555	-135.453
74	9.2	-0.0802981	74.8619	-136.192
75	9.2	-0.0652187	74.8662	-136.792
76	9.3	-0.0476439	74.8684	-137.235
77	9.4	-0.0325917	74.8695	-137.542
78	9.4	-0.0175476	74.8698	-137.707
79	9.6	0	74.8698	-137.707
80	9.8	0.0175476	74.8701	-137.535
81	9.9	0.0325917	74.8712	-137.212
82	10	0.0476439	74.8735	-136.736
83	10	0.0652187	74.8777	-136.083
84	10	0.0802981	74.8842	-135.28
85	10	0.0953969	74.8933	-134.326
86	10	0.113039	74.906	-133.196
87	10	0.128189	74.9225	-131.914
88	11	0.143367	74.943	-130.337
89	11	0.161119	74.969	-128.565
90	11	0.176374	75.0001	-126.625
91	11	0.191671	75.0368	-124.516
92	11	0.209575	75.0807	-122.211
93	11	0.224974	75.1314	-119.736
94	11	0.240426	75.1892	-117.092
95	11	0.258527	75.256	-114.248
96	11	0.27411	75.3311	-111.233
97	12	0.28976	75.4151	-107.755
98	12	0.308108	75.51	-104.058
99	12	0.323919	75.615	-100.171
100	12	0.33981	75.7304	-96.0934
101	12	0.358459	75.8589	-91.7919
102	12	0.374544	75.9992	-87.2973
103	12	0.390726	76.1519	-82.6086
104	13	0.409735	76.3198	-77.2821

105	13	0.426148	76.5014	-71.7421
106	13	0.442676	76.6973	-65.9874
107	13	0.462114	76.9109	-59.9799
108	13	0.478914	77.1402	-53.754
109	13	0.49585	77.3861	-47.3079
110	13	0.515791	77.6521	-40.6027
111	13	0.533048	77.9363	-33.673
112	14	0.550465	78.2393	-25.9665
113	14	0.570999	78.5653	-17.9725
114	14	0.588793	78.912	-9.72943
115	14	0.606775	79.2802	-1.23458
116	14	0.628006	79.6746	7.55751
117	15	0.646431	80.0924	17.254
118	15	0.665079	80.5348	27.2302
119	15	0.687131	81.0069	37.5371
120	16	0.706302	81.5058	48.838
121	17	0.725736	82.0325	61.1755
122	17	0.748762	82.5931	73.9044
123	17	0.768821	83.1842	86.9744
124	18	0.789191	83.807	101.18
125	18	0.813379	84.4686	115.821
126	22	0.834498	85.165	134.18
127	24	0.855996	85.8977	154.724
128	25	0.881587	86.6749	176.763
129	26	0.903992	87.4921	200.267
130	26	0.926859	88.3512	224.365
131	26	0.954165	89.2616	249.174
132	27	0.97815	90.2184	275.584
133	27	1.00271	91.2238	302.657
134	28	1.03215	92.2892	331.557
135	31	1.05812	93.4088	364.359
136	31	1.08482	94.5856	397.988
137	34	1.11699	95.8333	435.966
138	77	1.1455	97.1455	524.17
139	78	1.17499	98.5261	615.819
140	78	1.21073	99.9919	710.256
141	79	1.24264	101.536	808.424
142	79	1.27588	103.164	909.219
143	80	1.31652	104.897	1014.54
144	82	1.35317	106.728	1125.5
145	83	1.39175	108.665	1241.02
146	84	1.43953	110.737	1361.94
147	85	1.48328	112.938	1488.01
148	87	1.53007	115.279	1621.13
149	87	1.58927	117.804	1759.4
150	87	1.64485	120.51	1902.5
151	88	1.70604	123.421	2052.63
152	88	1.78661	126.613	2209.85
153	90	1.86629	130.096	2377.82
154	91	1.95996	133.937	2556.18
155	100	2.09693	138.334	2765.87
156	100	2.25713	143.429	2991.58
157	110	2.51213	149.74	3267.92

Data Set Standard Deviation = 26.9143
Numerator = 1.06793e+007

Denominator = 1.6921e+007
W Statistic = 0.631125 = 1.06793e+007 / 1.6921e+007

5% Critical value of 0.976 exceeds 0.631125
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.631125
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Nickel, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 27
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	22
	9/9/2014	10
	3/16/2015	14
	9/9/2015	11
	3/18/2016	13
	9/20/2016	12
	3/23/2017	10
	9/18/2017	15
	3/15/2018	12
	9/17/2018	9.8
	3/5/2019	11
	9/24/2019	11
	3/16/2020	17
	9/22/2020	8.1
	3/16/2021	9.3
	9/14/2021	27
	3/22/2022	9.6
	9/13/2022	9.2
	3/14/2023	9

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Nickel, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 4.7619%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 31
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	12/5/2013	11
	3/19/2014	31
	9/4/2014	14
	3/17/2015	8
	9/11/2015	12
	3/15/2016	8.9
	9/21/2016	8.1
	3/28/2017	7.7
	9/19/2017	10
	3/26/2018	8.9
	9/18/2018	15
	3/4/2019	13
	9/23/2019	12
	3/19/2020	11
	9/23/2020	14
	3/19/2021	13
	9/15/2021	14
	3/16/2022	12
	9/14/2022	13
	3/16/2023	13

Date	Count	Mean	Significant
9/13/2023	1	17	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Nickel, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 10%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 10
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	6.6
	9/8/2014	6.6
	3/19/2015	9.1
	9/14/2015	8.9
	3/21/2016	8.2
	9/23/2016	7.6
	3/27/2017	7.7
	9/20/2017	7.5
	3/16/2018	7.8
	9/20/2018	7.7
	3/5/2019	7.8
	9/25/2019	6.7
	3/25/2020	8.8
	9/28/2020	6.8
	3/18/2021	ND<0 JR
	9/15/2021	8.8
	3/22/2022	10
	9/14/2022	8.6
	3/16/2023	9.2

Date	Count	Mean	Significant
9/13/2023	1	8	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Nickel, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 18
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	9.4
	9/17/2014	10
	3/19/2015	11
	9/15/2015	12
	3/21/2016	13
	9/26/2016	14
	3/31/2017	15
	9/21/2017	18
	3/30/2018	17
	9/26/2018	13
	3/13/2019	11
	10/3/2019	9
	4/3/2020	8.4
	9/30/2020	7.7
	3/22/2021	9
	9/16/2021	8.3
	3/24/2022	7.7
	9/16/2022	7
	3/17/2023	5.9

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Nickel, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 85%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 11
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	ND<0 J
	9/16/2014	ND<0 J
	3/18/2015	ND<0 J
	9/15/2015	ND<0 J
	3/16/2016	7.9
	9/22/2016	11
	3/29/2017	6.7
	9/21/2017	ND<0 J
	3/28/2018	ND<0 J
	9/20/2018	ND<0 J
	3/12/2019	ND<0 J
	10/1/2019	ND<0 J
	3/18/2020	ND<0 J
	9/24/2020	ND<0 J
	3/17/2021	ND<0 J
	9/9/2021	ND<0 J
	3/15/2022	ND<0 J
	9/16/2022	ND<0 J
	3/15/2023	ND<0 J

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Nickel, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 31
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	28
	3/26/2020	26
	9/29/2020	26
	3/16/2021	26
	9/14/2021	25
	3/18/2022	27
	9/13/2022	31
	3/14/2023	24

Date	Count	Mean	Significant
9/12/2023	1	34	TRUE

Shapiro-Francia Test of Normality

Parameter: Potassium, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	480	-2.51213	6.31081	-1205.82
2	490	-2.25713	11.4054	-2311.82
3	500	-2.09693	15.8026	-3360.28
4	500	-1.95996	19.644	-4340.26
5	520	-1.86629	23.1271	-5310.74
6	520	-1.78661	26.319	-6239.77
7	520	-1.70604	29.2296	-7126.92
8	530	-1.64485	31.9352	-7998.69
9	550	-1.58927	34.4609	-8872.79
10	550	-1.53007	36.802	-9714.32
11	550	-1.48328	39.0022	-10530.1
12	560	-1.43953	41.0744	-11336.3
13	570	-1.39175	43.0114	-12129.6
14	580	-1.35317	44.8424	-12914.4
15	590	-1.31652	46.5757	-13691.1
16	590	-1.27588	48.2035	-14443.9
17	620	-1.24264	49.7477	-15214.4
18	620	-1.21073	51.2136	-15965
19	640	-1.17499	52.5942	-16717
20	850	-1.1455	53.9063	-17690.7
21	1200	-1.11699	55.154	-19031.1
22	1200	-1.08482	56.3308	-20332.8
23	1300	-1.05812	57.4505	-21708.4
24	1390	-1.03215	58.5158	-23143.1
25	1400	-1.00271	59.5212	-24546.9
26	1500	-0.97815	60.478	-26014.1
27	1500	-0.954165	61.3884	-27445.4
28	1600	-0.926859	62.2475	-28928.3
29	1600	-0.903992	63.0647	-30374.7
30	1600	-0.881587	63.8419	-31785.3
31	1700	-0.855996	64.5746	-33240.5
32	1700	-0.834498	65.271	-34659.1
33	1790	-0.813379	65.9326	-36115.1
34	1800	-0.789191	66.5554	-37535.6
35	1800	-0.768821	67.1465	-38919.5
36	1800	-0.748762	67.7072	-40267.2
37	1800	-0.725736	68.2338	-41573.6
38	1800	-0.706302	68.7327	-42844.9
39	1800	-0.687131	69.2049	-44081.8
40	1900	-0.665079	69.6472	-45345.4
41	1900	-0.646431	70.0651	-46573.6
42	1900	-0.628006	70.4595	-47766.8
43	1900	-0.606775	70.8276	-48919.7
44	1900	-0.588793	71.1743	-50038.4
45	1900	-0.570999	71.5003	-51123.3
46	1900	-0.550465	71.8034	-52169.2
47	1900	-0.533048	72.0875	-53182

48	1900	-0.515791	72.3535	-54162
49	1900	-0.49585	72.5994	-55104.1
50	2000	-0.478914	72.8288	-56061.9
51	2000	-0.462114	73.0423	-56986.2
52	2000	-0.442676	73.2383	-57871.5
53	2000	-0.426148	73.4199	-58723.8
54	2000	-0.409735	73.5878	-59543.3
55	2000	-0.390726	73.7404	-60324.7
56	2000	-0.374544	73.8807	-61073.8
57	2000	-0.358459	74.0092	-61790.7
58	2000	-0.33981	74.1247	-62470.4
59	2100	-0.323919	74.2296	-63150.6
60	2100	-0.308108	74.3245	-63797.6
61	2100	-0.28976	74.4085	-64406.1
62	2100	-0.27411	74.4836	-64981.7
63	2100	-0.258527	74.5505	-65524.7
64	2100	-0.240426	74.6083	-66029.5
65	2200	-0.224974	74.6589	-66524.5
66	2200	-0.209575	74.7028	-66985.6
67	2300	-0.191671	74.7395	-67426.4
68	2300	-0.176374	74.7706	-67832.1
69	2400	-0.161119	74.7966	-68218.7
70	2400	-0.143367	74.8172	-68562.8
71	2500	-0.128189	74.8336	-68883.3
72	2500	-0.113039	74.8464	-69165.9
73	2500	-0.0953969	74.8555	-69404.4
74	2500	-0.0802981	74.8619	-69605.1
75	2700	-0.0652187	74.8662	-69781.2
76	2700	-0.0476439	74.8684	-69909.9
77	2700	-0.0325917	74.8695	-69997.9
78	2700	-0.0175476	74.8698	-70045.2
79	2700	0	74.8698	-70045.2
80	2700	0.0175476	74.8701	-69997.9
81	2750	0.0325917	74.8712	-69908.2
82	2800	0.0476439	74.8735	-69774.8
83	2800	0.0652187	74.8777	-69592.2
84	2800	0.0802981	74.8842	-69367.4
85	2800	0.0953969	74.8933	-69100.3
86	2800	0.113039	74.906	-68783.8
87	2900	0.128189	74.9225	-68412
88	2900	0.143367	74.943	-67996.2
89	2900	0.161119	74.969	-67529
90	2900	0.176374	75.0001	-67017.5
91	2900	0.191671	75.0368	-66461.7
92	2900	0.209575	75.0807	-65853.9
93	2900	0.224974	75.1314	-65201.5
94	2900	0.240426	75.1892	-64504.2
95	3000	0.258527	75.256	-63728.7
96	3100	0.27411	75.3311	-62878.9
97	3100	0.28976	75.4151	-61980.7
98	3100	0.308108	75.51	-61025.5
99	3200	0.323919	75.615	-59989
100	3200	0.33981	75.7304	-58901.6
101	3200	0.358459	75.8589	-57754.5
102	3200	0.374544	75.9992	-56556
103	3300	0.390726	76.1519	-55266.6
104	3300	0.409735	76.3198	-53914.5

105	3300	0.426148	76.5014	-52508.2
106	3400	0.442676	76.6973	-51003.1
107	3400	0.462114	76.9109	-49431.9
108	3400	0.478914	77.1402	-47803.6
109	3430	0.49585	77.3861	-46102.8
110	3500	0.515791	77.6521	-44297.5
111	3500	0.533048	77.9363	-42431.9
112	3500	0.550465	78.2393	-40505.3
113	3500	0.570999	78.5653	-38506.8
114	3600	0.588793	78.912	-36387.1
115	3600	0.606775	79.2802	-34202.7
116	3700	0.628006	79.6746	-31879.1
117	3700	0.646431	80.0924	-29487.3
118	3700	0.665079	80.5348	-27026.5
119	3700	0.687131	81.0069	-24484.1
120	3700	0.706302	81.5058	-21870.8
121	3900	0.725736	82.0325	-19040.4
122	3900	0.748762	82.5931	-16120.3
123	3900	0.768821	83.1842	-13121.9
124	4000	0.789191	83.807	-9965.09
125	4100	0.813379	84.4686	-6630.23
126	4200	0.834498	85.165	-3125.34
127	4200	0.855996	85.8977	469.844
128	4400	0.881587	86.6749	4348.83
129	4400	0.903992	87.4921	8326.39
130	4400	0.926859	88.3512	12404.6
131	4800	0.954165	89.2616	16984.6
132	4900	0.97815	90.2184	21777.5
133	5200	1.00271	91.2238	26991.6
134	5200	1.03215	92.2892	32358.8
135	5300	1.05812	93.4088	37966.8
136	5400	1.08482	94.5856	43824.9
137	6100	1.11699	95.8333	50638.5
138	6500	1.1455	97.1455	58084.3
139	6700	1.17499	98.5261	65956.7
140	6900	1.21073	99.9919	74310.7
141	7100	1.24264	101.536	83133.5
142	7100	1.27588	103.164	92192.2
143	7200	1.31652	104.897	101671
144	7900	1.35317	106.728	112361
145	8110	1.39175	108.665	123648
146	8400	1.43953	110.737	135740
147	8600	1.48328	112.938	148497
148	8600	1.53007	115.279	161655
149	8900	1.58927	117.804	175800
150	9100	1.64485	120.51	190768
151	9700	1.70604	123.421	207316
152	10500	1.78661	126.613	226076
153	11900	1.86629	130.096	248285
154	13000	1.95996	133.937	273764
155	13200	2.09693	138.334	301444
156	13500	2.25713	143.429	331915
157	13700	2.51213	149.74	366331

Data Set Standard Deviation = 2704.52
Numerator = 1.34199e+011

Denominator = 1.70861e+011
W Statistic = 0.785424 = 1.34199e+011 / 1.70861e+011

5% Critical value of 0.976 exceeds 0.785424
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.785424
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Potassium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 13700
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	8110
	3/20/2014	6100
	9/9/2014	7100
	3/16/2015	6500
	9/9/2015	8400
	3/18/2016	11900
	9/20/2016	13200
	3/23/2017	8600
	9/18/2017	6900
	3/15/2018	7100
	9/17/2018	6700
	3/5/2019	8900
	9/24/2019	9100
	3/16/2020	7200
	9/22/2020	13500
	3/16/2021	13700
	9/14/2021	13000
	3/22/2022	10500
	9/13/2022	9700
	3/14/2023	8600

Date	Count	Mean	Significant
9/12/2023	1	7900	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Potassium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 5300
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	4800
	12/5/2013	3430
	3/19/2014	4000
	9/4/2014	4200
	3/17/2015	4200
	9/11/2015	4400
	3/15/2016	3900
	9/21/2016	3700
	3/28/2017	3500
	9/19/2017	3100
	3/26/2018	3500
	9/18/2018	3700
	3/4/2019	5300
	9/23/2019	4900
	3/19/2020	4100
	9/23/2020	3600
	3/19/2021	3700
	9/15/2021	3900
	3/16/2022	3600
	9/14/2022	3700
	3/16/2023	3300

Date	Count	Mean	Significant
9/13/2023	1	5200	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Potassium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 2000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	520
	3/21/2014	500
	9/8/2014	550
	3/19/2015	520
	9/14/2015	530
	3/21/2016	550
	9/23/2016	550
	3/27/2017	560
	9/20/2017	570
	3/16/2018	480
	9/20/2018	580
	3/5/2019	520
	9/25/2019	500
	3/25/2020	490
	9/28/2020	640
	3/18/2021	2000 R
	9/15/2021	620
	3/22/2022	620
	9/14/2022	850
	3/16/2023	590

Date	Count	Mean	Significant
9/13/2023	1	590	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Potassium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 2100
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	1200
	3/21/2014	1200
	9/17/2014	1300
	3/19/2015	1400
	9/15/2015	1500
	3/21/2016	1600
	9/26/2016	1600
	3/31/2017	1700
	9/21/2017	1900
	3/30/2018	2100
	9/26/2018	1800
	3/13/2019	1900
	10/3/2019	1900
	4/3/2020	1500
	9/30/2020	1700
	3/22/2021	1800
	9/16/2021	1800
	3/24/2022	1800
	9/16/2022	1900
	3/17/2023	1900

Date	Count	Mean	Significant
9/14/2023	1	1800	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Potassium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 3900
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	1790
	3/18/2014	2000
	9/16/2014	1800
	3/18/2015	1600
	9/15/2015	2000
	3/16/2016	2000
	9/22/2016	2100
	3/29/2017	2000
	9/21/2017	1900
	3/28/2018	2100
	9/20/2018	2000
	3/12/2019	2200
	10/1/2019	2200
	3/18/2020	2400
	9/24/2020	2000
	3/17/2021	3900 R
	9/9/2021	2100
	3/15/2022	2100
	9/16/2022	1900
	3/15/2023	1900

Date	Count	Mean	Significant
9/11/2023	1	2000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Potassium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 3500
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	3400
	3/26/2020	3100
	9/29/2020	3200
	3/16/2021	3400
	9/14/2021	3500
	3/18/2022	3200
	9/13/2022	3300
	3/14/2023	3500

Date	Count	Mean	Significant
9/12/2023	1	2900	FALSE

Shapiro-Francia Test of Normality

Parameter: Selenium, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	0	-0.725736	68.2338	0
38	0	-0.706302	68.7327	0
39	0	-0.687131	69.2049	0
40	0	-0.665079	69.6472	0
41	0	-0.646431	70.0651	0
42	0	-0.628006	70.4595	0
43	0	-0.606775	70.8276	0
44	0	-0.588793	71.1743	0
45	0	-0.570999	71.5003	0
46	0	-0.550465	71.8034	0
47	0	-0.533048	72.0875	0

48	0	-0.515791	72.3535	0
49	0	-0.49585	72.5994	0
50	0	-0.478914	72.8288	0
51	0	-0.462114	73.0423	0
52	0	-0.442676	73.2383	0
53	0	-0.426148	73.4199	0
54	0	-0.409735	73.5878	0
55	0	-0.390726	73.7404	0
56	0	-0.374544	73.8807	0
57	0	-0.358459	74.0092	0
58	0	-0.33981	74.1247	0
59	0	-0.323919	74.2296	0
60	0	-0.308108	74.3245	0
61	0	-0.28976	74.4085	0
62	0	-0.27411	74.4836	0
63	0	-0.258527	74.5505	0
64	0	-0.240426	74.6083	0
65	0	-0.224974	74.6589	0
66	0	-0.209575	74.7028	0
67	0	-0.191671	74.7395	0
68	0	-0.176374	74.7706	0
69	0	-0.161119	74.7966	0
70	0	-0.143367	74.8172	0
71	0	-0.128189	74.8336	0
72	0	-0.113039	74.8464	0
73	0	-0.0953969	74.8555	0
74	0	-0.0802981	74.8619	0
75	0	-0.0652187	74.8662	0
76	0	-0.0476439	74.8684	0
77	0	-0.0325917	74.8695	0
78	0	-0.0175476	74.8698	0
79	0	0	74.8698	0
80	0	0.0175476	74.8701	0
81	0	0.0325917	74.8712	0
82	0	0.0476439	74.8735	0
83	0	0.0652187	74.8777	0
84	0	0.0802981	74.8842	0
85	0	0.0953969	74.8933	0
86	0	0.113039	74.906	0
87	0	0.128189	74.9225	0
88	0	0.143367	74.943	0
89	0	0.161119	74.969	0
90	0	0.176374	75.0001	0
91	0	0.191671	75.0368	0
92	0	0.209575	75.0807	0
93	0	0.224974	75.1314	0
94	0	0.240426	75.1892	0
95	0	0.258527	75.256	0
96	0	0.27411	75.3311	0
97	0	0.28976	75.4151	0
98	0	0.308108	75.51	0
99	0	0.323919	75.615	0
100	0	0.33981	75.7304	0
101	0	0.358459	75.8589	0
102	0	0.374544	75.9992	0
103	0	0.390726	76.1519	0
104	0	0.409735	76.3198	0

105	0	0.426148	76.5014	0
106	0	0.442676	76.6973	0
107	0	0.462114	76.9109	0
108	0	0.478914	77.1402	0
109	0	0.49585	77.3861	0
110	0	0.515791	77.6521	0
111	0	0.533048	77.9363	0
112	0	0.550465	78.2393	0
113	0	0.570999	78.5653	0
114	0	0.588793	78.912	0
115	0	0.606775	79.2802	0
116	0	0.628006	79.6746	0
117	0	0.646431	80.0924	0
118	0	0.665079	80.5348	0
119	0	0.687131	81.0069	0
120	0	0.706302	81.5058	0
121	0	0.725736	82.0325	0
122	0	0.748762	82.5931	0
123	0	0.768821	83.1842	0
124	0	0.789191	83.807	0
125	0	0.813379	84.4686	0
126	0	0.834498	85.165	0
127	0	0.855996	85.8977	0
128	0	0.881587	86.6749	0
129	0	0.903992	87.4921	0
130	0	0.926859	88.3512	0
131	0	0.954165	89.2616	0
132	0	0.97815	90.2184	0
133	0	1.00271	91.2238	0
134	0	1.03215	92.2892	0
135	0	1.05812	93.4088	0
136	0	1.08482	94.5856	0
137	0	1.11699	95.8333	0
138	0	1.1455	97.1455	0
139	0	1.17499	98.5261	0
140	0	1.21073	99.9919	0
141	0	1.24264	101.536	0
142	0	1.27588	103.164	0
143	0	1.31652	104.897	0
144	0	1.35317	106.728	0
145	0	1.39175	108.665	0
146	0	1.43953	110.737	0
147	0	1.48328	112.938	0
148	0	1.53007	115.279	0
149	0	1.58927	117.804	0
150	0	1.64485	120.51	0
151	0	1.70604	123.421	0
152	0	1.78661	126.613	0
153	0	1.86629	130.096	0
154	0	1.95996	133.937	0
155	0	2.09693	138.334	0
156	0	2.25713	143.429	0
157	5.6	2.51213	149.74	14.0679

Data Set Standard Deviation = 0.446929
Numerator = 197.907

Denominator = 4665.93
W Statistic = 0.0424154 = 197.907 / 4665.93

5% Critical value of 0.976 exceeds 0.0424154
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.0424154
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Selenium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	ND<0 U
	9/9/2014	ND<0 U
	3/16/2015	ND<0 U
	9/9/2015	ND<0 U
	3/18/2016	ND<0 U
	9/20/2016	ND<0 U
	3/23/2017	ND<0 U
	9/18/2017	ND<0 U
	3/15/2018	ND<0 U
	9/17/2018	ND<0 U
	3/5/2019	ND<0 U
	9/24/2019	ND<0 U
	3/16/2020	ND<0 U
	9/22/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/22/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Selenium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 0
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/4/2014	ND<0 U
	3/17/2015	ND<0 U
	9/11/2015	ND<0 U
	3/15/2016	ND<0 U
	9/21/2016	ND<0 U
	3/28/2017	ND<0 U
	9/19/2017	ND<0 U
	3/26/2018	ND<0 U
	9/18/2018	ND<0 U
	3/4/2019	ND<0 U
	9/23/2019	ND<0 U
	3/19/2020	ND<0 U
	9/23/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/16/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Selenium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/19/2015	ND<0 U
	9/14/2015	ND<0 U
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/27/2017	ND<0 U
	9/20/2017	ND<0 U
	3/16/2018	ND<0 U
	9/20/2018	ND<0 U
	3/5/2019	ND<0 U
	9/25/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/18/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Selenium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 95%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 5.6
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/17/2014	ND<0 U
	3/19/2015	ND<0 U
	9/15/2015	ND<0 U
	3/21/2016	ND<0 U
	9/26/2016	ND<0 U
	3/31/2017	ND<0 U
	9/21/2017	ND<0 U
	3/30/2018	5.6
	9/26/2018	ND<0 U
	3/13/2019	ND<0 U
	10/3/2019	ND<0 U
	4/3/2020	ND<0 J
	9/30/2020	ND<0 U
	3/22/2021	ND<0 U
	9/16/2021	ND<0 J
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Selenium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	ND<0 U
	9/16/2014	ND<0 U
	3/18/2015	ND<0 U
	9/15/2015	ND<0 U
	3/16/2016	ND<0 U
	9/22/2016	ND<0 U
	3/29/2017	ND<0 U
	9/21/2017	ND<0 U
	3/28/2018	ND<0 U
	9/20/2018	ND<0 U
	3/12/2019	ND<0 U
	10/1/2019	ND<0 U
	3/18/2020	ND<0 J
	9/24/2020	ND<0 J
	3/17/2021	ND<0 U
	9/9/2021	ND<0 J
	3/15/2022	ND<0
	9/16/2022	ND<0
	3/15/2023	ND<0

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Selenium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 J
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: Silver, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 156

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.07485	15.7104	0
4	0	-1.95996	19.5519	0
5	0	-1.86629	23.0349	0
6	0	-1.77438	26.1834	0
7	0	-1.70604	29.0939	0
8	0	-1.64485	31.7995	0
9	0	-1.58047	34.2974	0
10	0	-1.53007	36.6385	0
11	0	-1.47579	38.8164	0
12	0	-1.4325	40.8685	0
13	0	-1.39175	42.8054	0
14	0	-1.34694	44.6197	0
15	0	-1.31058	46.3373	0
16	0	-1.27588	47.9652	0
17	0	-1.23724	49.4959	0
18	0	-1.20553	50.9492	0
19	0	-1.17	52.3181	0
20	0	-1.14069	53.6193	0
21	0	-1.11232	54.8565	0
22	0	-1.08032	56.0236	0
23	0	-1.05375	57.134	0
24	0	-1.02789	58.1906	0
25	0	-0.998575	59.1877	0
26	0	-0.974114	60.1366	0
27	0	-0.950222	61.0395	0
28	0	-0.923014	61.8915	0
29	0	-0.900227	62.7019	0
30	0	-0.874218	63.4662	0
31	0	-0.852385	64.1927	0
32	0	-0.830953	64.8832	0
33	0	-0.806422	65.5335	0
34	0	-0.785774	66.151	0
35	0	-0.765456	66.7369	0
36	0	-0.742143	67.2877	0
37	0	-0.722479	67.8096	0
38	0	-0.699883	68.2995	0
39	0	-0.680797	68.763	0
40	0	-0.661955	69.2011	0
41	0	-0.640266	69.6111	0
42	0	-0.621911	69.9979	0
43	0	-0.603765	70.3624	0
44	0	-0.582841	70.7021	0
45	0	-0.565108	71.0214	0
46	0	-0.547551	71.3213	0
47	0	-0.52728	71.5993	0

48	0	-0.510074	71.8595	0
49	0	-0.490189	72.0997	0
50	0	-0.473299	72.3238	0
51	0	-0.456542	72.5322	0
52	0	-0.437153	72.7233	0
53	0	-0.420664	72.9002	0
54	0	-0.40429	73.0637	0
55	0	-0.385321	73.2122	0
56	0	-0.369171	73.3485	0
57	0	-0.350451	73.4713	0
58	0	-0.334503	73.5832	0
59	0	-0.318639	73.6847	0
60	0	-0.300232	73.7748	0
61	0	-0.284535	73.8558	0
62	0	-0.268908	73.9281	0
63	0	-0.250759	73.991	0
64	0	-0.235269	74.0463	0
65	0	-0.217267	74.0935	0
66	0	-0.201894	74.1343	0
67	0	-0.186567	74.1691	0
68	0	-0.168741	74.1976	0
69	0	-0.153505	74.2211	0
70	0	-0.138305	74.2403	0
71	0	-0.12061	74.2548	0
72	0	-0.105474	74.2659	0
73	0	-0.0903606	74.2741	0
74	0	-0.0727562	74.2794	0
75	0	-0.0576847	74.2827	0
76	0	-0.0401167	74.2843	0
77	0	-0.0250691	74.285	0
78	0	-0.0100272	74.2851	0
79	0	0.0100272	74.2852	0
80	0	0.0250691	74.2858	0
81	0	0.0401167	74.2874	0
82	0	0.0576847	74.2907	0
83	0	0.0727562	74.296	0
84	0	0.0903606	74.3042	0
85	0	0.105474	74.3153	0
86	0	0.12061	74.3299	0
87	0	0.138305	74.349	0
88	0	0.153505	74.3726	0
89	0	0.168741	74.401	0
90	0	0.186567	74.4358	0
91	0	0.201894	74.4766	0
92	0	0.217267	74.5238	0
93	0	0.235269	74.5792	0
94	0	0.250759	74.642	0
95	0	0.268908	74.7143	0
96	0	0.284535	74.7953	0
97	0	0.300232	74.8854	0
98	0	0.318639	74.987	0
99	0	0.334503	75.0989	0
100	0	0.350451	75.2217	0
101	0	0.369171	75.358	0
102	0	0.385321	75.5064	0
103	0	0.40429	75.6699	0
104	0	0.420664	75.8469	0

105	0	0.437153	76.038	0
106	0	0.456542	76.2464	0
107	0	0.473299	76.4704	0
108	0	0.490189	76.7107	0
109	0	0.510074	76.9709	0
110	0	0.52728	77.2489	0
111	0	0.547551	77.5487	0
112	0	0.565108	77.868	0
113	0	0.582841	78.2077	0
114	0	0.603765	78.5723	0
115	0	0.621911	78.9591	0
116	0	0.640266	79.369	0
117	0	0.661955	79.8072	0
118	0	0.680797	80.2707	0
119	0	0.699883	80.7605	0
120	0	0.722479	81.2825	0
121	0	0.742143	81.8332	0
122	0	0.765456	82.4192	0
123	0	0.785774	83.0366	0
124	0	0.806422	83.6869	0
125	0	0.830953	84.3774	0
126	0	0.852385	85.104	0
127	0	0.874218	85.8682	0
128	0	0.900227	86.6786	0
129	0	0.923014	87.5306	0
130	0	0.950222	88.4335	0
131	0	0.974114	89.3824	0
132	0	0.998575	90.3796	0
133	0	1.02789	91.4361	0
134	0	1.05375	92.5465	0
135	0	1.08032	93.7136	0
136	0	1.11232	94.9509	0
137	0	1.14069	96.252	0
138	0	1.17	97.6209	0
139	0	1.20553	99.0742	0
140	0	1.23724	100.605	0
141	0	1.27588	102.233	0
142	0	1.31058	103.95	0
143	0	1.34694	105.765	0
144	0	1.39175	107.702	0
145	0	1.4325	109.754	0
146	0	1.47579	111.932	0
147	0	1.53007	114.273	0
148	0	1.58047	116.771	0
149	0	1.64485	119.476	0
150	0	1.70604	122.387	0
151	0	1.77438	125.535	0
152	0	1.86629	129.018	0
153	0	1.95996	132.86	0
154	0	2.07485	137.165	0
155	2.2	2.25713	142.259	4.96568
156	6.9	2.51213	148.57	22.2994

Data Set Standard Deviation = 0.578759
Numerator = 497.264
Denominator = 7713.64

W Statistic = 0.0644655 = 497.264 / 7713.64

5% Critical value of 0.976 exceeds 0.0644655
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.0644655
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Silver, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	ND<0 U
	9/9/2014	ND<0 U
	3/16/2015	ND<0 U
	9/9/2015	ND<0 U
	3/18/2016	ND<0 U
	9/20/2016	ND<0 U
	3/23/2017	ND<0 U
	9/18/2017	ND<0 U
	3/15/2018	ND<0 U
	9/17/2018	ND<0 U
	3/5/2019	ND<0 U
	9/24/2019	ND<0 U
	3/16/2020	ND<0 U
	9/22/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/22/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Silver, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 95%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 6.9
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	3/19/2014	ND<0 U
	9/4/2014	ND<0 U
	3/17/2015	ND<0 U
	9/11/2015	ND<0 U
	3/15/2016	6.9
	9/21/2016	ND<0 U
	3/28/2017	ND<0 U
	9/19/2017	ND<0 U
	3/26/2018	ND<0 U
	9/18/2018	ND<0 U
	3/4/2019	ND<0 U
	9/23/2019	ND<0 U
	3/19/2020	ND<0 U
	9/23/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/16/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Silver, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/19/2015	ND<0 U
	9/14/2015	ND<0 U
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/27/2017	ND<0 U
	9/20/2017	ND<0 U
	3/16/2018	ND<0 U
	9/20/2018	ND<0 U
	3/5/2019	ND<0 U
	9/25/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/18/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Silver, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 95%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 2.2
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/17/2014	ND<0 U
	3/19/2015	ND<0 U
	9/15/2015	ND<0 U
	3/21/2016	ND<0 U
	9/26/2016	ND<0 U
	3/31/2017	ND<0 U
	9/21/2017	ND<0 U
	3/30/2018	2.2
	9/26/2018	ND<0 U
	3/13/2019	ND<0 U
	10/3/2019	ND<0 U
	4/3/2020	ND<0 U
	9/30/2020	ND<0 U
	3/22/2021	ND<0 U
	9/16/2021	ND<0 U
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Silver, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	ND<0 U
	9/16/2014	ND<0 U
	3/18/2015	ND<0 U
	9/15/2015	ND<0 U
	3/16/2016	ND<0 U
	9/22/2016	ND<0 U
	3/29/2017	ND<0 U
	9/21/2017	ND<0 U
	3/28/2018	ND<0 U
	9/20/2018	ND<0 U
	3/12/2019	ND<0 U
	10/1/2019	ND<0 U
	3/18/2020	ND<0 U
	9/24/2020	ND<0 U
	3/17/2021	ND<0 U
	9/9/2021	ND<0 U
	3/15/2022	ND<0
	9/16/2022	ND<0
	3/15/2023	ND<0

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Silver, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 J
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: Sodium, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	14300	-2.51213	6.31081	-35923.5
2	15500	-2.25713	11.4054	-70909
3	15710	-2.09693	15.8026	-103852
4	16100	-1.95996	19.644	-135407
5	16600	-1.86629	23.1271	-166388
6	16700	-1.78661	26.319	-196224
7	16700	-1.70604	29.2296	-224715
8	16800	-1.64485	31.9352	-252348
9	16800	-1.58927	34.4609	-279048
10	17200	-1.53007	36.802	-305365
11	17200	-1.48328	39.0022	-330878
12	17300	-1.43953	41.0744	-355782
13	17300	-1.39175	43.0114	-379859
14	17500	-1.35317	44.8424	-403539
15	17740	-1.31652	46.5757	-426894
16	18300	-1.27588	48.2035	-450243
17	18300	-1.24264	49.7477	-472983
18	18900	-1.21073	51.2136	-495866
19	19100	-1.17499	52.5942	-518308
20	19100	-1.1455	53.9063	-540188
21	19200	-1.11699	55.154	-561634
22	20200	-1.08482	56.3308	-583547
23	20440	-1.05812	57.4505	-605175
24	20800	-1.03215	58.5158	-626644
25	20800	-1.00271	59.5212	-647500
26	21200	-0.97815	60.478	-668237
27	22200	-0.954165	61.3884	-689420
28	22500	-0.926859	62.2475	-710274
29	22500	-0.903992	63.0647	-730614
30	22520	-0.881587	63.8419	-750467
31	22600	-0.855996	64.5746	-769813
32	23410	-0.834498	65.271	-789348
33	24000	-0.813379	65.9326	-808869
34	24110	-0.789191	66.5554	-827897
35	24200	-0.768821	67.1465	-846502
36	25000	-0.748762	67.7072	-865221
37	25200	-0.725736	68.2338	-883510
38	25200	-0.706302	68.7327	-901308
39	25300	-0.687131	69.2049	-918693
40	25300	-0.665079	69.6472	-935519
41	26000	-0.646431	70.0651	-952327
42	27100	-0.628006	70.4595	-969346
43	27100	-0.606775	70.8276	-985789
44	27300	-0.588793	71.1743	-1.00186e+006
45	27400	-0.570999	71.5003	-1.01751e+006
46	27500	-0.550465	71.8034	-1.03265e+006
47	28100	-0.533048	72.0875	-1.04763e+006

48	28100	-0.515791	72.3535	-1.06212e+006
49	28200	-0.49585	72.5994	-1.0761e+006
50	28300	-0.478914	72.8288	-1.08966e+006
51	28400	-0.462114	73.0423	-1.10278e+006
52	28700	-0.442676	73.2383	-1.11548e+006
53	28900	-0.426148	73.4199	-1.1278e+006
54	29000	-0.409735	73.5878	-1.13968e+006
55	29000	-0.390726	73.7404	-1.15101e+006
56	29100	-0.374544	73.8807	-1.16191e+006
57	29100	-0.358459	74.0092	-1.17234e+006
58	29700	-0.33981	74.1247	-1.18244e+006
59	29900	-0.323919	74.2296	-1.19212e+006
60	30100	-0.308108	74.3245	-1.20139e+006
61	30700	-0.28976	74.4085	-1.21029e+006
62	30800	-0.27411	74.4836	-1.21873e+006
63	31100	-0.258527	74.5505	-1.22677e+006
64	31100	-0.240426	74.6083	-1.23425e+006
65	31100	-0.224974	74.6589	-1.24125e+006
66	32000	-0.209575	74.7028	-1.24795e+006
67	32800	-0.191671	74.7395	-1.25424e+006
68	33000	-0.176374	74.7706	-1.26006e+006
69	33400	-0.161119	74.7966	-1.26544e+006
70	33400	-0.143367	74.8172	-1.27023e+006
71	33500	-0.128189	74.8336	-1.27452e+006
72	33800	-0.113039	74.8464	-1.27835e+006
73	34000	-0.0953969	74.8555	-1.28159e+006
74	34100	-0.0802981	74.8619	-1.28433e+006
75	34300	-0.0652187	74.8662	-1.28656e+006
76	34300	-0.0476439	74.8684	-1.2882e+006
77	34600	-0.0325917	74.8695	-1.28933e+006
78	34900	-0.0175476	74.8698	-1.28994e+006
79	34900	0	74.8698	-1.28994e+006
80	35000	0.0175476	74.8701	-1.28932e+006
81	35000	0.0325917	74.8712	-1.28818e+006
82	35400	0.0476439	74.8735	-1.2865e+006
83	35700	0.0652187	74.8777	-1.28417e+006
84	36000	0.0802981	74.8842	-1.28128e+006
85	36500	0.0953969	74.8933	-1.2778e+006
86	36700	0.113039	74.906	-1.27365e+006
87	36800	0.128189	74.9225	-1.26893e+006
88	37000	0.143367	74.943	-1.26363e+006
89	37200	0.161119	74.969	-1.25763e+006
90	37300	0.176374	75.0001	-1.25105e+006
91	37300	0.191671	75.0368	-1.2439e+006
92	37900	0.209575	75.0807	-1.23596e+006
93	38300	0.224974	75.1314	-1.22734e+006
94	38300	0.240426	75.1892	-1.21814e+006
95	38600	0.258527	75.256	-1.20816e+006
96	38600	0.27411	75.3311	-1.19758e+006
97	39000	0.28976	75.4151	-1.18628e+006
98	39500	0.308108	75.51	-1.17411e+006
99	39700	0.323919	75.615	-1.16125e+006
100	39700	0.33981	75.7304	-1.14776e+006
101	40000	0.358459	75.8589	-1.13342e+006
102	40200	0.374544	75.9992	-1.11836e+006
103	40200	0.390726	76.1519	-1.10265e+006
104	40400	0.409735	76.3198	-1.0861e+006

105	40500	0.426148	76.5014	-1.06884e+006
106	40600	0.442676	76.6973	-1.05087e+006
107	40900	0.462114	76.9109	-1.03197e+006
108	41000	0.478914	77.1402	-1.01233e+006
109	41700	0.49585	77.3861	-991655
110	41900	0.515791	77.6521	-970044
111	44000	0.533048	77.9363	-946590
112	45000	0.550465	78.2393	-921819
113	45100	0.570999	78.5653	-896067
114	45400	0.588793	78.912	-869335
115	45700	0.606775	79.2802	-841606
116	45900	0.628006	79.6746	-812780
117	47000	0.646431	80.0924	-782398
118	47100	0.665079	80.5348	-751073
119	47500	0.687131	81.0069	-718434
120	49100	0.706302	81.5058	-683755
121	49600	0.725736	82.0325	-647758
122	51800	0.748762	82.5931	-608972
123	52700	0.768821	83.1842	-568455
124	53300	0.789191	83.807	-526392
125	54800	0.813379	84.4686	-481818
126	56000	0.834498	85.165	-435087
127	56200	0.855996	85.8977	-386980
128	56900	0.881587	86.6749	-336817
129	58000	0.903992	87.4921	-284386
130	58100	0.926859	88.3512	-230535
131	58800	0.954165	89.2616	-174430
132	59400	0.97815	90.2184	-116328
133	59600	1.00271	91.2238	-56566.6
134	60300	1.03215	92.2892	5672.26
135	60500	1.05812	93.4088	69688.6
136	60800	1.08482	94.5856	135646
137	60800	1.11699	95.8333	203559
138	62800	1.1455	97.1455	275496
139	62900	1.17499	98.5261	349403
140	63500	1.21073	99.9919	426284
141	64000	1.24264	101.536	505813
142	65600	1.27588	103.164	589511
143	66600	1.31652	104.897	677191
144	69000	1.35317	106.728	770560
145	71400	1.39175	108.665	869931
146	76500	1.43953	110.737	980055
147	80100	1.48328	112.938	1.09887e+006
148	83000	1.53007	115.279	1.22586e+006
149	88400	1.58927	117.804	1.36635e+006
150	98900	1.64485	120.51	1.52903e+006
151	99000	1.70604	123.421	1.69793e+006
152	120000	1.78661	126.613	1.91232e+006
153	139000	1.86629	130.096	2.17173e+006
154	154000	1.95996	133.937	2.47357e+006
155	171000	2.09693	138.334	2.83214e+006
156	244200	2.25713	143.429	3.38333e+006
157	706000	2.51213	149.74	5.1569e+006

Data Set Standard Deviation = 60521.6
Numerator = 2.65936e+013

Denominator = 8.55623e+013
W Statistic = 0.31081 = 2.65936e+013 / 8.55623e+013

5% Critical value of 0.976 exceeds 0.31081
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.31081
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Sodium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 83000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	20440
	3/20/2014	47100
	9/9/2014	52700
	3/16/2015	56200
	9/9/2015	49600
	3/18/2016	54800
	9/20/2016	58100
	3/23/2017	60300
	9/18/2017	63500
	3/15/2018	65600
	9/17/2018	58000
	3/5/2019	69000
	9/24/2019	60500
	3/16/2020	83000
	9/22/2020	62900
	3/16/2021	71400
	9/14/2021	64000
	3/22/2022	66600
	9/13/2022	60800
	3/14/2023	56900

Date	Count	Mean	Significant
9/12/2023	1	56000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Sodium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 244200
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	244200
	12/5/2013	24110
	3/19/2014	25300
	9/4/2014	27300
	3/17/2015	28100
	9/11/2015	34300
	3/15/2016	30100
	9/21/2016	28300
	3/28/2017	26000
	9/19/2017	25200
	3/26/2018	28900
	9/18/2018	37000
	3/4/2019	41700
	9/23/2019	39700
	3/19/2020	32000
	9/23/2020	34100
	3/19/2021	33500
	9/15/2021	29000
	3/16/2022	25300
	9/14/2022	29100
	3/16/2023	27100

Date	Count	Mean	Significant
9/13/2023	1	39700	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Sodium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 29900
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	16100
	3/21/2014	14300
	9/8/2014	17300
	3/19/2015	16700
	9/14/2015	18900
	3/21/2016	15500
	9/23/2016	17300
	3/27/2017	17200
	9/20/2017	22200
	3/16/2018	22500
	9/20/2018	20800
	3/5/2019	20200
	9/25/2019	16600
	3/25/2020	19200
	9/28/2020	22600
	3/18/2021	17200 R
	9/15/2021	25000
	3/22/2022	28200
	9/14/2022	28700
	3/16/2023	29900

Date	Count	Mean	Significant
9/13/2023	1	27400	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Sodium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 41900
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	17740
	3/21/2014	16800
	9/17/2014	16700
	3/19/2015	17500
	9/15/2015	18300
	3/21/2016	19100
	9/26/2016	16800
	3/31/2017	18300
	9/21/2017	24000
	3/30/2018	30700
	9/26/2018	34000
	3/13/2019	34300
	10/3/2019	33400
	4/3/2020	28100
	9/30/2020	29000
	3/22/2021	37900
	9/16/2021	35000
	3/24/2022	41900
	9/16/2022	40000
	3/17/2023	40600

Date	Count	Mean	Significant
9/14/2023	1	38300	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Sodium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 706000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	22520
	3/18/2014	25200
	9/16/2014	24200
	3/18/2015	21200
	9/15/2015	27100
	3/16/2016	31100
	9/22/2016	33400
	3/29/2017	31100
	9/21/2017	27500
	3/28/2018	30800
	9/20/2018	29100
	3/12/2019	29700
	10/1/2019	34600
	3/18/2020	35000
	9/24/2020	28400
	3/17/2021	706000 R
	9/9/2021	33000
	3/15/2022	31100
	9/16/2022	20800
	3/15/2023	19100

Date	Count	Mean	Significant
9/11/2023	1	22500	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Sodium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 49100
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	40500
	3/26/2020	39500
	9/29/2020	44000
	3/16/2021	45400
	9/14/2021	47000
	3/18/2022	45100
	9/13/2022	45900
	3/14/2023	49100

Date	Count	Mean	Significant
9/12/2023	1	41000	FALSE

Shapiro-Francia Test of Normality

Parameter: Thallium, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	0	-0.725736	68.2338	0
38	0	-0.706302	68.7327	0
39	0	-0.687131	69.2049	0
40	0	-0.665079	69.6472	0
41	0	-0.646431	70.0651	0
42	0	-0.628006	70.4595	0
43	0	-0.606775	70.8276	0
44	0	-0.588793	71.1743	0
45	0	-0.570999	71.5003	0
46	0	-0.550465	71.8034	0
47	0	-0.533048	72.0875	0

48	0	-0.515791	72.3535	0
49	0	-0.49585	72.5994	0
50	0	-0.478914	72.8288	0
51	0	-0.462114	73.0423	0
52	0	-0.442676	73.2383	0
53	0	-0.426148	73.4199	0
54	0	-0.409735	73.5878	0
55	0	-0.390726	73.7404	0
56	0	-0.374544	73.8807	0
57	0	-0.358459	74.0092	0
58	0	-0.33981	74.1247	0
59	0	-0.323919	74.2296	0
60	0	-0.308108	74.3245	0
61	0	-0.28976	74.4085	0
62	0	-0.27411	74.4836	0
63	0	-0.258527	74.5505	0
64	0	-0.240426	74.6083	0
65	0	-0.224974	74.6589	0
66	0	-0.209575	74.7028	0
67	0	-0.191671	74.7395	0
68	0	-0.176374	74.7706	0
69	0	-0.161119	74.7966	0
70	0	-0.143367	74.8172	0
71	0	-0.128189	74.8336	0
72	0	-0.113039	74.8464	0
73	0	-0.0953969	74.8555	0
74	0	-0.0802981	74.8619	0
75	0	-0.0652187	74.8662	0
76	0	-0.0476439	74.8684	0
77	0	-0.0325917	74.8695	0
78	0	-0.0175476	74.8698	0
79	0	0	74.8698	0
80	0	0.0175476	74.8701	0
81	0	0.0325917	74.8712	0
82	0	0.0476439	74.8735	0
83	0	0.0652187	74.8777	0
84	0	0.0802981	74.8842	0
85	0	0.0953969	74.8933	0
86	0	0.113039	74.906	0
87	0	0.128189	74.9225	0
88	0	0.143367	74.943	0
89	0	0.161119	74.969	0
90	0	0.176374	75.0001	0
91	0	0.191671	75.0368	0
92	0	0.209575	75.0807	0
93	0	0.224974	75.1314	0
94	0	0.240426	75.1892	0
95	0	0.258527	75.256	0
96	0	0.27411	75.3311	0
97	0	0.28976	75.4151	0
98	0	0.308108	75.51	0
99	0	0.323919	75.615	0
100	0	0.33981	75.7304	0
101	0	0.358459	75.8589	0
102	0	0.374544	75.9992	0
103	0	0.390726	76.1519	0
104	0	0.409735	76.3198	0

105	0	0.426148	76.5014	0
106	0	0.442676	76.6973	0
107	0	0.462114	76.9109	0
108	0	0.478914	77.1402	0
109	0	0.49585	77.3861	0
110	0	0.515791	77.6521	0
111	0	0.533048	77.9363	0
112	0	0.550465	78.2393	0
113	0	0.570999	78.5653	0
114	0	0.588793	78.912	0
115	0	0.606775	79.2802	0
116	0	0.628006	79.6746	0
117	0	0.646431	80.0924	0
118	0	0.665079	80.5348	0
119	0	0.687131	81.0069	0
120	0	0.706302	81.5058	0
121	0	0.725736	82.0325	0
122	0	0.748762	82.5931	0
123	0	0.768821	83.1842	0
124	0	0.789191	83.807	0
125	0	0.813379	84.4686	0
126	0	0.834498	85.165	0
127	0	0.855996	85.8977	0
128	0	0.881587	86.6749	0
129	0	0.903992	87.4921	0
130	0	0.926859	88.3512	0
131	0	0.954165	89.2616	0
132	0	0.97815	90.2184	0
133	0	1.00271	91.2238	0
134	0	1.03215	92.2892	0
135	0	1.05812	93.4088	0
136	0	1.08482	94.5856	0
137	0	1.11699	95.8333	0
138	0	1.1455	97.1455	0
139	0	1.17499	98.5261	0
140	0	1.21073	99.9919	0
141	0	1.24264	101.536	0
142	0	1.27588	103.164	0
143	0	1.31652	104.897	0
144	0	1.35317	106.728	0
145	0	1.39175	108.665	0
146	0	1.43953	110.737	0
147	0	1.48328	112.938	0
148	0	1.53007	115.279	0
149	0	1.58927	117.804	0
150	0	1.64485	120.51	0
151	0	1.70604	123.421	0
152	0	1.78661	126.613	0
153	0	1.86629	130.096	0
154	0	1.95996	133.937	0
155	0	2.09693	138.334	0
156	0	2.25713	143.429	0
157	1.1	2.51213	149.74	2.76335

Data Set Standard Deviation = 0.0877896
Numerator = 7.63609

Denominator = 180.031
W Statistic = 0.0424154 = 7.63609 / 180.031

5% Critical value of 0.976 exceeds 0.0424154
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.0424154
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Thallium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	ND<0 U
	9/9/2014	ND<0 U
	3/16/2015	ND<0 U
	9/9/2015	ND<0 U
	3/18/2016	ND<0 U
	9/20/2016	ND<0 U
	3/23/2017	ND<0 U
	9/18/2017	ND<0 U
	3/15/2018	ND<0 U
	9/17/2018	ND<0 U
	3/5/2019	ND<0 U
	9/24/2019	ND<0 U
	3/16/2020	ND<0 U
	9/22/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/22/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Thallium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 0
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/4/2014	ND<0 U
	3/17/2015	ND<0 U
	9/11/2015	ND<0 U
	3/15/2016	ND<0 U
	9/21/2016	ND<0 U
	3/28/2017	ND<0 U
	9/19/2017	ND<0 U
	3/26/2018	ND<0 U
	9/18/2018	ND<0 U
	3/4/2019	ND<0 U
	9/23/2019	ND<0 U
	3/19/2020	ND<0 U
	9/23/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/16/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Thallium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/19/2015	ND<0 U
	9/14/2015	ND<0 U
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/27/2017	ND<0 U
	9/20/2017	ND<0 U
	3/16/2018	ND<0 U
	9/20/2018	ND<0 U
	3/5/2019	ND<0 U
	9/25/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/18/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Thallium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 95%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 1.1
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/17/2014	ND<0 U
	3/19/2015	ND<0 U
	9/15/2015	ND<0 U
	3/21/2016	ND<0 U
	9/26/2016	ND<0 U
	3/31/2017	ND<0 U
	9/21/2017	ND<0 U
	3/30/2018	1.1
	9/26/2018	ND<0 U
	3/13/2019	ND<0 U
	10/3/2019	ND<0 U
	4/3/2020	ND<0 U
	9/30/2020	ND<0 U
	3/22/2021	ND<0 U
	9/16/2021	ND<0 U
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Thallium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	ND<0 U
	9/16/2014	ND<0 U
	3/18/2015	ND<0 U
	9/15/2015	ND<0 U
	3/16/2016	ND<0 U
	9/22/2016	ND<0 U
	3/29/2017	ND<0 U
	9/21/2017	ND<0 U
	3/28/2018	ND<0 U
	9/20/2018	ND<0 U
	3/12/2019	ND<0 U
	10/1/2019	ND<0 U
	3/18/2020	ND<0 U
	9/24/2020	ND<0 U
	3/17/2021	ND<0 U
	9/9/2021	ND<0 U
	3/15/2022	ND<0
	9/16/2022	ND<0
	3/15/2023	ND<0

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Thallium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 J
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0 J

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: Vanadium, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	0	-0.725736	68.2338	0
38	0	-0.706302	68.7327	0
39	0	-0.687131	69.2049	0
40	0	-0.665079	69.6472	0
41	0	-0.646431	70.0651	0
42	0	-0.628006	70.4595	0
43	0	-0.606775	70.8276	0
44	0	-0.588793	71.1743	0
45	0	-0.570999	71.5003	0
46	0	-0.550465	71.8034	0
47	0	-0.533048	72.0875	0

48	0	-0.515791	72.3535	0
49	0	-0.49585	72.5994	0
50	0	-0.478914	72.8288	0
51	0	-0.462114	73.0423	0
52	0	-0.442676	73.2383	0
53	0	-0.426148	73.4199	0
54	0	-0.409735	73.5878	0
55	0	-0.390726	73.7404	0
56	0	-0.374544	73.8807	0
57	0	-0.358459	74.0092	0
58	0	-0.33981	74.1247	0
59	0	-0.323919	74.2296	0
60	0	-0.308108	74.3245	0
61	0	-0.28976	74.4085	0
62	0	-0.27411	74.4836	0
63	0	-0.258527	74.5505	0
64	0	-0.240426	74.6083	0
65	0	-0.224974	74.6589	0
66	0	-0.209575	74.7028	0
67	0	-0.191671	74.7395	0
68	0	-0.176374	74.7706	0
69	0	-0.161119	74.7966	0
70	0	-0.143367	74.8172	0
71	0	-0.128189	74.8336	0
72	0	-0.113039	74.8464	0
73	0	-0.0953969	74.8555	0
74	0	-0.0802981	74.8619	0
75	0	-0.0652187	74.8662	0
76	0	-0.0476439	74.8684	0
77	0	-0.0325917	74.8695	0
78	0	-0.0175476	74.8698	0
79	0	0	74.8698	0
80	0	0.0175476	74.8701	0
81	0	0.0325917	74.8712	0
82	0	0.0476439	74.8735	0
83	0	0.0652187	74.8777	0
84	0	0.0802981	74.8842	0
85	0	0.0953969	74.8933	0
86	0	0.113039	74.906	0
87	0	0.128189	74.9225	0
88	0	0.143367	74.943	0
89	0	0.161119	74.969	0
90	0	0.176374	75.0001	0
91	0	0.191671	75.0368	0
92	0	0.209575	75.0807	0
93	0	0.224974	75.1314	0
94	0	0.240426	75.1892	0
95	0	0.258527	75.256	0
96	0	0.27411	75.3311	0
97	0	0.28976	75.4151	0
98	0	0.308108	75.51	0
99	0	0.323919	75.615	0
100	0	0.33981	75.7304	0
101	0	0.358459	75.8589	0
102	0	0.374544	75.9992	0
103	0	0.390726	76.1519	0
104	0	0.409735	76.3198	0

105	0	0.426148	76.5014	0
106	0	0.442676	76.6973	0
107	0	0.462114	76.9109	0
108	0	0.478914	77.1402	0
109	0	0.49585	77.3861	0
110	0	0.515791	77.6521	0
111	0	0.533048	77.9363	0
112	0	0.550465	78.2393	0
113	0	0.570999	78.5653	0
114	0	0.588793	78.912	0
115	0	0.606775	79.2802	0
116	0	0.628006	79.6746	0
117	0	0.646431	80.0924	0
118	0	0.665079	80.5348	0
119	0	0.687131	81.0069	0
120	0	0.706302	81.5058	0
121	0	0.725736	82.0325	0
122	0	0.748762	82.5931	0
123	0	0.768821	83.1842	0
124	0	0.789191	83.807	0
125	0	0.813379	84.4686	0
126	0	0.834498	85.165	0
127	0	0.855996	85.8977	0
128	0	0.881587	86.6749	0
129	0	0.903992	87.4921	0
130	0	0.926859	88.3512	0
131	0	0.954165	89.2616	0
132	0	0.97815	90.2184	0
133	0	1.00271	91.2238	0
134	0	1.03215	92.2892	0
135	0	1.05812	93.4088	0
136	0	1.08482	94.5856	0
137	0	1.11699	95.8333	0
138	0	1.1455	97.1455	0
139	0	1.17499	98.5261	0
140	0	1.21073	99.9919	0
141	0	1.24264	101.536	0
142	0	1.27588	103.164	0
143	0	1.31652	104.897	0
144	0	1.35317	106.728	0
145	0	1.39175	108.665	0
146	0	1.43953	110.737	0
147	0	1.48328	112.938	0
148	0	1.53007	115.279	0
149	0	1.58927	117.804	0
150	0	1.64485	120.51	0
151	0	1.70604	123.421	0
152	0	1.78661	126.613	0
153	0	1.86629	130.096	0
154	0	1.95996	133.937	0
155	2.2	2.09693	138.334	4.61325
156	2.2	2.25713	143.429	9.57893
157	3.9	2.51213	149.74	19.3763

Data Set Standard Deviation = 0.395902
Numerator = 375.439

Denominator = 3661.32
W Statistic = 0.102542 = 375.439 / 3661.32

5% Critical value of 0.976 exceeds 0.102542
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.102542
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Vanadium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 95%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 2.2
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	ND<0 U
	9/9/2014	ND<0 U
	3/16/2015	ND<0 U
	9/9/2015	ND<0 U
	3/18/2016	ND<0 U
	9/20/2016	ND<0 U
	3/23/2017	ND<0 U
	9/18/2017	ND<0 U
	3/15/2018	2.2
	9/17/2018	ND<0 U
	3/5/2019	ND<0 U
	9/24/2019	ND<0 U
	3/16/2020	ND<0 U
	9/22/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/22/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Vanadium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 0
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/4/2014	ND<0 U
	3/17/2015	ND<0 U
	9/11/2015	ND<0 U
	3/15/2016	ND<0 U
	9/21/2016	ND<0 U
	3/28/2017	ND<0 U
	9/19/2017	ND<0 U
	3/26/2018	ND<0 U
	9/18/2018	ND<0 U
	3/4/2019	ND<0 U
	9/23/2019	ND<0 U
	3/19/2020	ND<0 U
	9/23/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/16/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Vanadium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 95%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 3.9
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/19/2015	ND<0 U
	9/14/2015	ND<0 U
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/27/2017	ND<0 U
	9/20/2017	ND<0 U
	3/16/2018	ND<0 U
	9/20/2018	ND<0 U
	3/5/2019	ND<0 U
	9/25/2019	3.9
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/18/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/13/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Vanadium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 95%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 2.2
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	ND<0 U
	9/17/2014	ND<0 U
	3/19/2015	ND<0 U
	9/15/2015	ND<0 U
	3/21/2016	ND<0 U
	9/26/2016	ND<0 U
	3/31/2017	ND<0 U
	9/21/2017	ND<0 U
	3/30/2018	2.2
	9/26/2018	ND<0 U
	3/13/2019	ND<0 U
	10/3/2019	ND<0 U
	4/3/2020	ND<0 U
	9/30/2020	ND<0 U
	3/22/2021	ND<0 U
	9/16/2021	ND<0 U
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Vanadium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	ND<0 U
	9/16/2014	ND<0 U
	3/18/2015	ND<0 U
	9/15/2015	ND<0 U
	3/16/2016	ND<0 U
	9/22/2016	ND<0 U
	3/29/2017	ND<0 U
	9/21/2017	ND<0 U
	3/28/2018	ND<0 U
	9/20/2018	ND<0 U
	3/12/2019	ND<0 U
	10/1/2019	ND<0 U
	3/18/2020	ND<0 U
	9/24/2020	ND<0 U
	3/17/2021	ND<0 U
	9/9/2021	ND<0 U
	3/15/2022	ND<0
	9/16/2022	ND<0
	3/15/2023	ND<0

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Vanadium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 J
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0 J

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: Zinc, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 157

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.51213	6.31081	0
2	0	-2.25713	11.4054	0
3	0	-2.09693	15.8026	0
4	0	-1.95996	19.644	0
5	0	-1.86629	23.1271	0
6	0	-1.78661	26.319	0
7	0	-1.70604	29.2296	0
8	0	-1.64485	31.9352	0
9	0	-1.58927	34.4609	0
10	0	-1.53007	36.802	0
11	0	-1.48328	39.0022	0
12	0	-1.43953	41.0744	0
13	0	-1.39175	43.0114	0
14	0	-1.35317	44.8424	0
15	0	-1.31652	46.5757	0
16	0	-1.27588	48.2035	0
17	0	-1.24264	49.7477	0
18	0	-1.21073	51.2136	0
19	0	-1.17499	52.5942	0
20	0	-1.1455	53.9063	0
21	0	-1.11699	55.154	0
22	0	-1.08482	56.3308	0
23	0	-1.05812	57.4505	0
24	0	-1.03215	58.5158	0
25	0	-1.00271	59.5212	0
26	0	-0.97815	60.478	0
27	0	-0.954165	61.3884	0
28	0	-0.926859	62.2475	0
29	0	-0.903992	63.0647	0
30	0	-0.881587	63.8419	0
31	0	-0.855996	64.5746	0
32	0	-0.834498	65.271	0
33	0	-0.813379	65.9326	0
34	0	-0.789191	66.5554	0
35	0	-0.768821	67.1465	0
36	0	-0.748762	67.7072	0
37	0	-0.725736	68.2338	0
38	0	-0.706302	68.7327	0
39	0	-0.687131	69.2049	0
40	0	-0.665079	69.6472	0
41	5.6	-0.646431	70.0651	-3.62002
42	5.7	-0.628006	70.4595	-7.19965
43	5.7	-0.606775	70.8276	-10.6583
44	5.8	-0.588793	71.1743	-14.0733
45	6	-0.570999	71.5003	-17.4993
46	6	-0.550465	71.8034	-20.8021
47	6	-0.533048	72.0875	-24.0003

48	6	-0.515791	72.3535	-27.0951
49	6.3	-0.49585	72.5994	-30.2189
50	6.8	-0.478914	72.8288	-33.4756
51	6.9	-0.462114	73.0423	-36.6641
52	6.9	-0.442676	73.2383	-39.7186
53	6.9	-0.426148	73.4199	-42.659
54	7	-0.409735	73.5878	-45.5272
55	7.1	-0.390726	73.7404	-48.3013
56	7.2	-0.374544	73.8807	-50.998
57	7.2	-0.358459	74.0092	-53.579
58	7.3	-0.33981	74.1247	-56.0596
59	7.3	-0.323919	74.2296	-58.4242
60	7.5	-0.308108	74.3245	-60.735
61	7.6	-0.28976	74.4085	-62.9372
62	7.6	-0.27411	74.4836	-65.0204
63	7.7	-0.258527	74.5505	-67.0111
64	7.8	-0.240426	74.6083	-68.8864
65	8	-0.224974	74.6589	-70.6862
66	8	-0.209575	74.7028	-72.3628
67	8.3	-0.191671	74.7395	-73.9536
68	8.4	-0.176374	74.7706	-75.4352
69	8.4	-0.161119	74.7966	-76.7886
70	8.5	-0.143367	74.8172	-78.0072
71	8.5	-0.128189	74.8336	-79.0968
72	8.5	-0.113039	74.8464	-80.0576
73	8.6	-0.0953969	74.8555	-80.8781
74	9	-0.0802981	74.8619	-81.6007
75	9	-0.0652187	74.8662	-82.1877
76	9.3	-0.0476439	74.8684	-82.6308
77	9.6	-0.0325917	74.8695	-82.9437
78	9.6	-0.0175476	74.8698	-83.1121
79	9.7	0	74.8698	-83.1121
80	9.9	0.0175476	74.8701	-82.9384
81	10	0.0325917	74.8712	-82.6125
82	10	0.0476439	74.8735	-82.1361
83	10	0.0652187	74.8777	-81.4839
84	10	0.0802981	74.8842	-80.6809
85	10	0.0953969	74.8933	-79.7269
86	10	0.113039	74.906	-78.5965
87	10	0.128189	74.9225	-77.3146
88	10	0.143367	74.943	-75.881
89	11	0.161119	74.969	-74.1087
90	11	0.176374	75.0001	-72.1685
91	11	0.191671	75.0368	-70.0602
92	11	0.209575	75.0807	-67.7548
93	11	0.224974	75.1314	-65.2801
94	11	0.240426	75.1892	-62.6354
95	11	0.258527	75.256	-59.7916
96	12	0.27411	75.3311	-56.5023
97	12	0.28976	75.4151	-53.0252
98	12	0.308108	75.51	-49.3279
99	12	0.323919	75.615	-45.4409
100	12	0.33981	75.7304	-41.3631
101	12	0.358459	75.8589	-37.0616
102	12	0.374544	75.9992	-32.5671
103	12	0.390726	76.1519	-27.8784
104	12	0.409735	76.3198	-22.9616

105	13	0.426148	76.5014	-17.4217
106	13	0.442676	76.6973	-11.6669
107	13	0.462114	76.9109	-5.65938
108	13	0.478914	77.1402	0.5665
109	13	0.49585	77.3861	7.01255
110	14	0.515791	77.6521	14.2336
111	14	0.533048	77.9363	21.6963
112	14	0.550465	78.2393	29.4028
113	15	0.570999	78.5653	37.9678
114	15	0.588793	78.912	46.7997
115	15	0.606775	79.2802	55.9013
116	15	0.628006	79.6746	65.3214
117	15	0.646431	80.0924	75.0179
118	16	0.665079	80.5348	85.6591
119	16	0.687131	81.0069	96.6532
120	16	0.706302	81.5058	107.954
121	16	0.725736	82.0325	119.566
122	16	0.748762	82.5931	131.546
123	16	0.768821	83.1842	143.847
124	17	0.789191	83.807	157.263
125	18	0.813379	84.4686	171.904
126	19	0.834498	85.165	187.76
127	19	0.855996	85.8977	204.024
128	20	0.881587	86.6749	221.655
129	21	0.903992	87.4921	240.639
130	23	0.926859	88.3512	261.957
131	23	0.954165	89.2616	283.903
132	24	0.97815	90.2184	307.378
133	25	1.00271	91.2238	332.446
134	28	1.03215	92.2892	361.346
135	39	1.05812	93.4088	402.613
136	40	1.08482	94.5856	446.006
137	44	1.11699	95.8333	495.154
138	60	1.1455	97.1455	563.884
139	62	1.17499	98.5261	636.733
140	63	1.21073	99.9919	713.009
141	63	1.24264	101.536	791.295
142	63	1.27588	103.164	871.676
143	65	1.31652	104.897	957.249
144	67	1.35317	106.728	1047.91
145	67	1.39175	108.665	1141.16
146	67	1.43953	110.737	1237.61
147	68	1.48328	112.938	1338.47
148	68	1.53007	115.279	1442.52
149	68	1.58927	117.804	1550.59
150	69	1.64485	120.51	1664.08
151	69	1.70604	123.421	1781.8
152	72	1.78661	126.613	1910.43
153	72	1.86629	130.096	2044.81
154	72	1.95996	133.937	2185.92
155	76	2.09693	138.334	2345.29
156	78	2.25713	143.429	2521.35
157	80	2.51213	149.74	2722.32

Data Set Standard Deviation = 21.4357
Numerator = 7.41101e+006

Denominator = 1.07334e+007
W Statistic = 0.690466 = 7.41101e+006 / 1.07334e+007

5% Critical value of 0.976 exceeds 0.690466
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.690466
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-4

Parameter: Zinc, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 30%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 24
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/18/2013	ND<0
	3/20/2014	7.2
	9/9/2014	15
	3/16/2015	8.6
	9/9/2015	15
	3/18/2016	7.6
	9/20/2016	16
	3/23/2017	16
	9/18/2017	24
	3/15/2018	ND<0 J
	9/17/2018	14
	3/5/2019	11
	9/24/2019	16
	3/16/2020	7
	9/22/2020	6.9
	3/16/2021	ND<0 J
	9/14/2021	ND<0 J
	3/22/2022	ND<0 J
	9/13/2022	ND<0 J
	3/14/2023	8.4

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-5A

Parameter: Zinc, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 14.2857%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 40
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/19/2013	40
	12/5/2013	10
	3/19/2014	7.3
	9/4/2014	12
	3/17/2015	6.3
	9/11/2015	7.5
	3/15/2016	9.3
	9/21/2016	ND<0 J
	3/28/2017	ND<0 J
	9/19/2017	7.1
	3/26/2018	ND<0 J
	9/18/2018	8
	3/4/2019	7.6
	9/23/2019	10
	3/19/2020	8.5
	9/23/2020	8.4
	3/19/2021	5.7
	9/15/2021	10
	3/16/2022	9.9
	9/14/2022	6
	3/16/2023	8.5

Date	Count	Mean	Significant
9/13/2023	1	7.3	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-14

Parameter: Zinc, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 20
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	10
	3/21/2014	11
	9/8/2014	10
	3/19/2015	20
	9/14/2015	11
	3/21/2016	12
	9/23/2016	10
	3/27/2017	9.7
	9/20/2017	11
	3/16/2018	12
	9/20/2018	13
	3/5/2019	12
	9/25/2019	14
	3/25/2020	13
	9/28/2020	12
	3/18/2021	13 R
	9/15/2021	15
	3/22/2022	14
	9/14/2022	13
	3/16/2023	12

Date	Count	Mean	Significant
9/13/2023	1	13	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-6

Parameter: Zinc, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 75%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 12
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/24/2013	ND<0
	3/21/2014	5.8
	9/17/2014	8.5
	3/19/2015	ND<0 J
	9/15/2015	ND<0 J
	3/21/2016	ND<0 J
	9/26/2016	12
	3/31/2017	ND<0 J
	9/21/2017	7.7
	3/30/2018	5.6
	9/26/2018	ND<0 U
	3/13/2019	ND<0 J
	10/3/2019	ND<0 J
	4/3/2020	ND<0 J
	9/30/2020	ND<0 J
	3/22/2021	ND<0 J
	9/16/2021	ND<0 U
	3/24/2022	ND<0
	9/16/2022	ND<0 J
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-3

Parameter: Zinc, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 55%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 11
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/25/2013	ND<0
	3/18/2014	9.6
	9/16/2014	ND<0 J
	3/18/2015	ND<0 J
	9/15/2015	ND<0 J
	3/16/2016	7.2
	9/22/2016	ND<0 J
	3/29/2017	5.7
	9/21/2017	ND<0 J
	3/28/2018	ND<0 J
	9/20/2018	ND<0 J
	3/12/2019	ND<0 J
	10/1/2019	6.9
	3/18/2020	6
	9/24/2020	6.9
	3/17/2021	9.6 R
	9/9/2021	ND<0 J
	3/15/2022	6
	9/16/2022	11
	3/15/2023	ND<0 J

Date	Count	Mean	Significant
9/11/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17S

Parameter: Zinc, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 15
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	11
	3/26/2020	8
	9/29/2020	8.3
	3/16/2021	10
	9/14/2021	15
	3/18/2022	10
	9/13/2022	9
	3/14/2023	9

Date	Count	Mean	Significant
9/12/2023	1	11	FALSE

11) Patuxent Aquifer Metals Inter-well Statistics

APPENDIX F

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Antimony, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 30
Non detect rank is 15.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	15.5
	4/2/2020	ND<5 U	15.5
	9/30/2020	ND<5 U	15.5
	3/22/2021	ND<5 U	15.5
	9/8/2021	ND<5 U	15.5
	3/14/2022	ND<2.2	15.5
	9/12/2022	ND<2.2	15.5
	3/13/2023	ND<2.2	15.5
	9/11/2023	ND<2.2	15.5
SMW-13	9/23/2013	ND<5	15.5
	3/21/2014	ND<5 U	15.5
	9/8/2014	ND<5 U	15.5
	3/18/2015	ND<5 U	15.5
	9/8/2015	ND<1.3 J	15.5
	3/14/2016	ND<5 U	15.5
	9/26/2016	ND<5 U	15.5
	3/30/2017	ND<5 U	15.5
	9/20/2017	ND<5 U	15.5
	3/30/2018	ND<5 U	15.5
	9/21/2018	ND<5 U	15.5
	3/11/2019	ND<5 U	15.5
	10/3/2019	ND<5 U	15.5
	3/23/2020	ND<5 U	15.5
	9/25/2020	ND<5 U	15.5
	3/23/2021	ND<5 U	15.5
	9/16/2021	ND<5 U	15.5
	3/23/2022	ND<2.2	15.5
	9/16/2022	ND<2.2	15.5
	3/17/2023	ND<2.2	15.5
	9/15/2023	ND<2.2	15.5

The Wilcoxon Statistic is 94.5
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -0.0226281
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0226281 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Antimony, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 31
Non detect rank is 16

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	16
	4/2/2020	ND<5 U	16
	9/30/2020	ND<5 U	16
	3/22/2021	ND<5 U	16
	9/8/2021	ND<5 U	16
	3/14/2022	ND<2.2	16
	9/12/2022	ND<2.2	16
	3/13/2023	ND<2.2	16
	9/11/2023	ND<2.2	16
SMW-32	9/23/2013	ND<5	16
	12/5/2013	ND<5	16
	3/19/2014	ND<5 U	16
	9/8/2014	ND<5 U	16
	3/18/2015	ND<5 U	16
	9/8/2015	ND<5 U	16
	3/14/2016	ND<1.2 J	16
	9/20/2016	ND<5 U	16
	3/24/2017	ND<5 U	16
	9/20/2017	ND<5 U	16
	3/27/2018	ND<5 U	16
	9/18/2018	ND<5 U	16
	3/11/2019	ND<5 U	16
	10/3/2019	ND<5 U	16
	3/23/2020	ND<5 U	16
	9/24/2020	ND<5 U	16
	3/23/2021	ND<5 U	16
	9/16/2021	ND<5 U	16
	3/24/2022	ND<2.2	16
	9/16/2022	ND<2.2	16
	3/17/2023	ND<2.2	16
	9/15/2023	ND<2.2	16

The Wilcoxon Statistic is 99
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is -0.0217597
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0217597 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Antimony, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 25
Non detect rank is 13

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	13
	4/2/2020	ND<5 U	13
	9/30/2020	ND<5 U	13
	3/22/2021	ND<5 U	13
	9/8/2021	ND<5 U	13
	3/14/2022	ND<2.2	13
	9/12/2022	ND<2.2	13
	3/13/2023	ND<2.2	13
	9/11/2023	ND<2.2	13
GWM-15D	3/21/2016	ND<5 U	13
	9/23/2016	ND<5 U	13
	3/28/2017	ND<5 U	13
	9/21/2017	ND<5 U	13
	3/16/2018	ND<5 U	13
	9/19/2018	ND<5 U	13
	3/5/2019	ND<5 U	13
	10/3/2019	ND<5 U	13
	3/25/2020	ND<5 U	13
	9/28/2020	ND<5 U	13
	3/19/2021	ND<5 U	13
	9/15/2021	ND<5 U	13
	3/22/2022	ND<2.2	13
	9/14/2022	ND<2.2	13
	3/16/2023	ND<2.2	13
	9/12/2023	ND<2.2	13

The Wilcoxon Statistic is 72
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -0.0283069
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0283069 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Antimony, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	9.5
	4/2/2020	ND<5 U	9.5
	9/30/2020	ND<5 U	9.5
	3/22/2021	ND<5 U	9.5
	9/8/2021	ND<5 U	9.5
	3/14/2022	ND<2.2	9.5
	9/12/2022	ND<2.2	9.5
	3/13/2023	ND<2.2	9.5
	9/11/2023	ND<2.2	9.5
GWM-17D	11/14/2019	ND<5 U	9.5
	3/26/2020	ND<5 U	9.5
	9/29/2020	ND<5 U	9.5
	3/16/2021	ND<5 U	9.5
	9/14/2021	ND<5 U	9.5
	3/18/2022	ND<2.2	9.5
	9/13/2022	ND<2.2	9.5
	3/14/2023	ND<2.2	9.5
	9/12/2023	ND<2.2	9.5

The Wilcoxon Statistic is 40.5
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.0441511
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0441511 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Antimony, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	9.5
	4/2/2020	ND<5 U	9.5
	9/30/2020	ND<5 U	9.5
	3/22/2021	ND<5 U	9.5
	9/8/2021	ND<5 U	9.5
	3/14/2022	ND<2.2	9.5
	9/12/2022	ND<2.2	9.5
	3/13/2023	ND<2.2	9.5
	9/11/2023	ND<2.2	9.5
GWM-19D	11/14/2019	ND<5 U	9.5
	3/25/2020	ND<5 U	9.5
	9/29/2020	ND<5 U	9.5
	3/22/2021	ND<1.2 J	9.5
	9/15/2021	ND<5 U	9.5
	3/24/2022	ND<2.2	9.5
	9/15/2022	ND<2.2	9.5
	3/16/2023	ND<2.2	9.5
	9/14/2023	ND<2.2	9.5

The Wilcoxon Statistic is 40.5
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.0441511
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0441511 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Arsenic, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 30
Non detect rank is 15.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	15.5
	4/2/2020	ND<5 U	15.5
	9/30/2020	ND<5 U	15.5
	3/22/2021	ND<5 U	15.5
	9/8/2021	ND<5 U	15.5
	3/14/2022	ND<3.3	15.5
	9/12/2022	ND<3.3	15.5
	3/13/2023	ND<3.3	15.5
	9/11/2023	ND<3.3	15.5
SMW-13	9/23/2013	ND<5	15.5
	3/21/2014	ND<5 U	15.5
	9/8/2014	ND<5 U	15.5
	3/18/2015	ND<5 U	15.5
	9/8/2015	ND<5 U	15.5
	3/14/2016	ND<5 U	15.5
	9/26/2016	ND<5 U	15.5
	3/30/2017	ND<5 U	15.5
	9/20/2017	ND<5 U	15.5
	3/30/2018	ND<5 U	15.5
	9/21/2018	ND<5 U	15.5
	3/11/2019	ND<5 U	15.5
	10/3/2019	ND<5 U	15.5
	3/23/2020	ND<5 U	15.5
	9/25/2020	ND<5 U	15.5
	3/23/2021	ND<5 U	15.5
	9/16/2021	ND<0.22 J	15.5
	3/23/2022	ND<3.3	15.5
	9/16/2022	ND<3.3	15.5
	3/17/2023	ND<3.3	15.5
	9/15/2023	ND<3.3	15.5

The Wilcoxon Statistic is 94.5
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -0.0226281
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0226281 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Arsenic, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 31
Non detect rank is 16

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	16
	4/2/2020	ND<5 U	16
	9/30/2020	ND<5 U	16
	3/22/2021	ND<5 U	16
	9/8/2021	ND<5 U	16
	3/14/2022	ND<3.3	16
	9/12/2022	ND<3.3	16
	3/13/2023	ND<3.3	16
	9/11/2023	ND<3.3	16
SMW-32	9/23/2013	ND<5	16
	12/5/2013	ND<5	16
	3/19/2014	ND<5 U	16
	9/8/2014	ND<5 U	16
	3/18/2015	ND<5 U	16
	9/8/2015	ND<5 U	16
	3/14/2016	ND<5 U	16
	9/20/2016	ND<5 U	16
	3/24/2017	ND<5 U	16
	9/20/2017	ND<5 U	16
	3/27/2018	ND<5 U	16
	9/18/2018	ND<5 U	16
	3/11/2019	ND<5 U	16
	10/3/2019	ND<5 U	16
	3/23/2020	ND<5 U	16
	9/24/2020	ND<5 U	16
	3/23/2021	ND<5 U	16
	9/16/2021	ND<0.33 J	16
	3/24/2022	ND<3.3	16
	9/16/2022	ND<3.3	16
	3/17/2023	ND<3.3	16
	9/15/2023	ND<3.3	16

The Wilcoxon Statistic is 99
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is -0.0217597
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0217597 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Arsenic, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 25
Non detect rank is 13

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	13
	4/2/2020	ND<5 U	13
	9/30/2020	ND<5 U	13
	3/22/2021	ND<5 U	13
	9/8/2021	ND<5 U	13
	3/14/2022	ND<3.3	13
	9/12/2022	ND<3.3	13
	3/13/2023	ND<3.3	13
	9/11/2023	ND<3.3	13
GWM-15D	3/21/2016	ND<5 U	13
	9/23/2016	ND<5 U	13
	3/28/2017	ND<5 U	13
	9/21/2017	ND<5 U	13
	3/16/2018	ND<5 U	13
	9/19/2018	ND<5 U	13
	3/5/2019	ND<5 U	13
	10/3/2019	ND<5 U	13
	3/25/2020	ND<5 U	13
	9/28/2020	ND<5 U	13
	3/19/2021	ND<5 U	13
	9/15/2021	ND<0.31 J	13
	3/22/2022	ND<3.3	13
	9/14/2022	ND<3.3	13
	3/16/2023	ND<3.3	13
	9/12/2023	ND<3.3	13

The Wilcoxon Statistic is 72
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -0.0283069
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0283069 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Arsenic, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	9.5
	4/2/2020	ND<5 U	9.5
	9/30/2020	ND<5 U	9.5
	3/22/2021	ND<5 U	9.5
	9/8/2021	ND<5 U	9.5
	3/14/2022	ND<3.3	9.5
	9/12/2022	ND<3.3	9.5
	3/13/2023	ND<3.3	9.5
	9/11/2023	ND<3.3	9.5
GWM-17D	11/14/2019	ND<5 U	9.5
	3/26/2020	ND<5 U	9.5
	9/29/2020	ND<5 U	9.5
	3/16/2021	ND<5 U	9.5
	9/14/2021	ND<0.34 J	9.5
	3/18/2022	ND<3.3	9.5
	9/13/2022	ND<3.3	9.5
	3/14/2023	ND<3.3	9.5
	9/12/2023	ND<3.3	9.5

The Wilcoxon Statistic is 40.5
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.0441511
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0441511 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Arsenic, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	9.5
	4/2/2020	ND<5 U	9.5
	9/30/2020	ND<5 U	9.5
	3/22/2021	ND<5 U	9.5
	9/8/2021	ND<5 U	9.5
	3/14/2022	ND<3.3	9.5
	9/12/2022	ND<3.3	9.5
	3/13/2023	ND<3.3	9.5
	9/11/2023	ND<3.3	9.5
GWM-19D	11/14/2019	ND<5 U	9.5
	3/25/2020	ND<5 U	9.5
	9/29/2020	ND<5 U	9.5
	3/22/2021	ND<5 U	9.5
	9/15/2021	ND<0.25 J	9.5
	3/24/2022	ND<3.3	9.5
	9/15/2022	ND<3.3	9.5
	3/16/2023	ND<3.3	9.5
	9/14/2023	ND<3.3	9.5

The Wilcoxon Statistic is 40.5
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.0441511
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0441511 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Barium, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	140	25
	4/2/2020	140	26
	9/30/2020	140	27
	3/22/2021	54 R	1
	9/8/2021	140	28
	3/14/2022	130	23
	9/12/2022	140	29
	3/13/2023	140	30
	9/11/2023	140	31
SMW-32	9/23/2013	100	5
	12/5/2013	120	14
	3/19/2014	91	2
	9/8/2014	97	3
	3/18/2015	100	6
	9/8/2015	110	9
	3/14/2016	100	7
	9/20/2016	110	10
	3/24/2017	110	11
	9/20/2017	99	4
	3/27/2018	100	8
	9/18/2018	120	15
	3/11/2019	110	12
	10/3/2019	120	16
	3/23/2020	120	17
	9/24/2020	110	13
	3/23/2021	120	18
	9/16/2021	120	19
	3/24/2022	130	24
	9/16/2022	120	20
	3/17/2023	120	21
	9/15/2023	120	22

The Wilcoxon Statistic is 23
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is -3.32924
The Standard Deviation adjusted for ties is 22.9783
The Z Score adjusted for ties is -3.32924
-3.32924 < 2.326 indicating no statistical significance at 1% level
-3.32924 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Barium, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 1
Non detect rank is 1

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	140	24
	4/2/2020	140	25
	9/30/2020	140	26
	3/22/2021	54 R	3
	9/8/2021	140	27
	3/14/2022	130	22
	9/12/2022	140	28
	3/13/2023	140	29
	9/11/2023	140	30
SMW-13	9/23/2013	90	9
	3/21/2014	76	4
	9/8/2014	80	5
	3/18/2015	80	6
	9/8/2015	86	8
	3/14/2016	84	7
	9/26/2016	99	12
	3/30/2017	96	11
	9/20/2017	91	10
	3/30/2018	110	13
	9/21/2018	110	14
	3/11/2019	110	15
	10/3/2019	110	16
	3/23/2020	14	2
	9/25/2020	110	17
	3/23/2021	ND<5 U	1
	9/16/2021	120	18
	3/23/2022	120	19
	9/16/2022	120	20
	3/17/2023	130	23
	9/15/2023	120	21

The Wilcoxon Statistic is 20
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -3.39422
The Standard Deviation adjusted for ties is 22.0964
The Z Score adjusted for ties is -3.39422
-3.39422 < 2.326 indicating no statistical significance at 1% level
-3.39422 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Barium, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	140	17
	4/2/2020	140	18
	9/30/2020	140	19
	3/22/2021	54 R	1
	9/8/2021	140	20
	3/14/2022	130	15
	9/12/2022	140	21
	3/13/2023	140	22
	9/11/2023	140	23
GWM-15D	3/21/2016	190	25
	9/23/2016	140	24
	3/28/2017	130	16
	9/21/2017	110	12
	3/16/2018	110	13
	9/19/2018	100	11
	3/5/2019	110	14
	10/3/2019	96	10
	3/25/2020	91	9
	9/28/2020	88	7
	3/19/2021	90	8
	9/15/2021	86	5
	3/22/2022	87	6
	9/14/2022	82	4
	3/16/2023	81	3
	9/12/2023	78	2

The Wilcoxon Statistic is 33
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -2.23625
The Standard Deviation adjusted for ties is 17.6635
The Z Score adjusted for ties is -2.23625
-2.23625 < 2.326 indicating no statistical significance at 1% level
-2.23625 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Barium, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	140	3
	4/2/2020	140	4
	9/30/2020	140	5
	3/22/2021	54 R	1
	9/8/2021	140	6
	3/14/2022	130	2
	9/12/2022	140	7
	3/13/2023	140	8
	9/11/2023	140	9
GWM-17D	11/14/2019	270	12
	3/26/2020	250	11
	9/29/2020	240	10
	3/16/2021	290	15
	9/14/2021	290	16
	3/18/2022	280	13
	9/13/2022	290	17
	3/14/2023	290	18
	9/12/2023	280	14

The Wilcoxon Statistic is 81
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 3.53209
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is 3.53209
3.53209 > 2.326 indicating statistical significance at 1% level
3.53209 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Barium, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	140	12
	4/2/2020	140	13
	9/30/2020	140	14
	3/22/2021	54 R	2
	9/8/2021	140	15
	3/14/2022	130	11
	9/12/2022	140	16
	3/13/2023	140	17
	9/11/2023	140	18
GWM-19D	11/14/2019	68	10
	3/25/2020	59	5
	9/29/2020	49	1
	3/22/2021	54	3
	9/15/2021	57	4
	3/24/2022	60	6
	9/15/2022	60	7
	3/16/2023	61	8
	9/14/2023	62	9

The Wilcoxon Statistic is 8
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -2.91397
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is -2.91397
-2.91397 < 2.326 indicating no statistical significance at 1% level
-2.91397 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Beryllium, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 30
Non detect rank is 15.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<2 U	15.5
	4/2/2020	ND<0.48 J	15.5
	9/30/2020	ND<0.73 J	15.5
	3/22/2021	ND<0.56 J	15.5
	9/8/2021	ND<0.62 J	15.5
	3/14/2022	ND<0.47 J	15.5
	9/12/2022	ND<0.4 J	15.5
	3/13/2023	ND<1.1	15.5
	9/11/2023	ND<1.1	15.5
SMW-13	9/23/2013	ND<2	15.5
	3/21/2014	ND<0.54 J	15.5
	9/8/2014	ND<0.65 J	15.5
	3/18/2015	ND<0.6 J	15.5
	9/8/2015	ND<0.59 J	15.5
	3/14/2016	ND<0.59 J	15.5
	9/26/2016	ND<0.61 J	15.5
	3/30/2017	ND<0.73 J	15.5
	9/20/2017	ND<0.64 J	15.5
	3/30/2018	ND<0.78 J	15.5
	9/21/2018	ND<0.68 J	15.5
	3/11/2019	ND<0.72 J	15.5
	10/3/2019	ND<0.77 J	15.5
	3/23/2020	ND<2 U	15.5
	9/25/2020	ND<0.74 J	15.5
	3/23/2021	ND<2 U	15.5
	9/16/2021	ND<0.88 J	15.5
	3/23/2022	ND<0.84 J	15.5
	9/16/2022	ND<0.97 J	15.5
	3/17/2023	ND<0.91 J	15.5
	9/15/2023	ND<0.84 J	15.5

The Wilcoxon Statistic is 94.5
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -0.0226281
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0226281 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Beryllium, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 29
Non detect rank is 15

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<2 U	15
	4/2/2020	ND<0.48 J	15
	9/30/2020	ND<0.73 J	15
	3/22/2021	ND<0.56 J	15
	9/8/2021	ND<0.62 J	15
	3/14/2022	ND<0.47 J	15
	9/12/2022	ND<0.4 J	15
	3/13/2023	ND<1.1	15
	9/11/2023	ND<1.1	15
SMW-32	9/23/2013	ND<2	15
	12/5/2013	ND<2	15
	3/19/2014	ND<0.79 J	15
	9/8/2014	ND<0.89 J	15
	3/18/2015	ND<0.78 J	15
	9/8/2015	ND<0.81 J	15
	3/14/2016	ND<0.84 J	15
	9/20/2016	ND<0.77 J	15
	3/24/2017	ND<0.75 J	15
	9/20/2017	ND<0.79 J	15
	3/27/2018	ND<0.86 J	15
	9/18/2018	ND<0.86 J	15
	3/11/2019	ND<0.93 J	15
	10/3/2019	ND<0.89 J	15
	3/23/2020	ND<0.92 J	15
	9/24/2020	ND<1 J	15
	3/23/2021	ND<1.1 J	15
	9/16/2021	ND<1 J	15
	3/24/2022	ND<1.1 J	15
	9/16/2022	1.2	31
	3/17/2023	1.1	30
	9/15/2023	ND<0.99 J	15

The Wilcoxon Statistic is 108
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is 0.369915
The Standard Deviation adjusted for ties is 9.78808
The Z Score adjusted for ties is 0.868403
0.369915 < 2.326 indicating no statistical significance at 1% level
0.868403 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Beryllium, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 25
Non detect rank is 13

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<2 U	13
	4/2/2020	ND<0.48 J	13
	9/30/2020	ND<0.73 J	13
	3/22/2021	ND<0.56 J	13
	9/8/2021	ND<0.62 J	13
	3/14/2022	ND<0.47 J	13
	9/12/2022	ND<0.4 J	13
	3/13/2023	ND<1.1	13
	9/11/2023	ND<1.1	13
GWM-15D	3/21/2016	ND<2 U	13
	9/23/2016	ND<2 U	13
	3/28/2017	ND<2 U	13
	9/21/2017	ND<2 U	13
	3/16/2018	ND<2 U	13
	9/19/2018	ND<2 U	13
	3/5/2019	ND<2 U	13
	10/3/2019	ND<2 U	13
	3/25/2020	ND<2 U	13
	9/28/2020	ND<2 U	13
	3/19/2021	ND<2 U	13
	9/15/2021	ND<2 U	13
	3/22/2022	ND<1.1	13
	9/14/2022	ND<1.1	13
	3/16/2023	ND<1.1	13
	9/12/2023	ND<1.1	13

The Wilcoxon Statistic is 72
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -0.0283069
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0283069 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Beryllium, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<2 U	9.5
	4/2/2020	ND<0.48 J	9.5
	9/30/2020	ND<0.73 J	9.5
	3/22/2021	ND<0.56 J	9.5
	9/8/2021	ND<0.62 J	9.5
	3/14/2022	ND<0.47 J	9.5
	9/12/2022	ND<0.4 J	9.5
	3/13/2023	ND<1.1	9.5
	9/11/2023	ND<1.1	9.5
GWM-17D	11/14/2019	ND<2 U	9.5
	3/26/2020	ND<2 U	9.5
	9/29/2020	ND<2 U	9.5
	3/16/2021	ND<2 U	9.5
	9/14/2021	ND<2 U	9.5
	3/18/2022	ND<1.1	9.5
	9/13/2022	ND<1.1	9.5
	3/14/2023	ND<1.1	9.5
	9/12/2023	ND<1.1	9.5

The Wilcoxon Statistic is 40.5
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.0441511
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0441511 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Beryllium, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<2 U	9.5
	4/2/2020	ND<0.48 J	9.5
	9/30/2020	ND<0.73 J	9.5
	3/22/2021	ND<0.56 J	9.5
	9/8/2021	ND<0.62 J	9.5
	3/14/2022	ND<0.47 J	9.5
	9/12/2022	ND<0.4 J	9.5
	3/13/2023	ND<1.1	9.5
	9/11/2023	ND<1.1	9.5
GWM-19D	11/14/2019	ND<0.59 J	9.5
	3/25/2020	ND<0.42 J	9.5
	9/29/2020	ND<0.39 J	9.5
	3/22/2021	ND<0.6 J	9.5
	9/15/2021	ND<0.45 J	9.5
	3/24/2022	ND<0.45 J	9.5
	9/15/2022	ND<0.41 J	9.5
	3/16/2023	ND<0.38 J	9.5
	9/14/2023	ND<0.4 J	9.5

The Wilcoxon Statistic is 40.5
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.0441511
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0441511 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Cadmium, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 31
Non detect rank is 16

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<2 U	16
	4/2/2020	ND<2 U	16
	9/30/2020	ND<2 U	16
	3/22/2021	ND<2 U	16
	9/8/2021	ND<0.18 J	16
	3/14/2022	ND<1.1	16
	9/12/2022	ND<1.1	16
	3/13/2023	ND<1.1	16
	9/11/2023	ND<1.1	16
SMW-32	9/23/2013	ND<2	16
	12/5/2013	ND<2	16
	3/19/2014	ND<2 U	16
	9/8/2014	ND<2 U	16
	3/18/2015	ND<2 U	16
	9/8/2015	ND<2 U	16
	3/14/2016	ND<2 U	16
	9/20/2016	ND<2 U	16
	3/24/2017	ND<2 U	16
	9/20/2017	ND<2 U	16
	3/27/2018	ND<2 U	16
	9/18/2018	ND<2 U	16
	3/11/2019	ND<2 U	16
	10/3/2019	ND<2 U	16
	3/23/2020	ND<2 U	16
	9/24/2020	ND<2 U	16
	3/23/2021	ND<2 U	16
	9/16/2021	ND<0.26 J	16
	3/24/2022	ND<1.1	16
	9/16/2022	ND<1.1	16
	3/17/2023	ND<1.1	16
	9/15/2023	ND<1.1	16

The Wilcoxon Statistic is 99
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is -0.0217597
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0217597 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Cadmium, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 28
Non detect rank is 14.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<2 U	14.5
	4/2/2020	ND<2 U	14.5
	9/30/2020	ND<2 U	14.5
	3/22/2021	ND<2 U	14.5
	9/8/2021	ND<0.18 J	14.5
	3/14/2022	ND<1.1	14.5
	9/12/2022	ND<1.1	14.5
	3/13/2023	ND<1.1	14.5
	9/11/2023	ND<1.1	14.5
SMW-13	9/23/2013	ND<2	14.5
	3/21/2014	ND<2 U	14.5
	9/8/2014	ND<2 U	14.5
	3/18/2015	ND<2 U	14.5
	9/8/2015	2.2	30
	3/14/2016	ND<2 U	14.5
	9/26/2016	ND<2 U	14.5
	3/30/2017	ND<2 U	14.5
	9/20/2017	ND<2 U	14.5
	3/30/2018	ND<2 U	14.5
	9/21/2018	ND<2 U	14.5
	3/11/2019	ND<2 U	14.5
	10/3/2019	1.1	29
	3/23/2020	ND<2 U	14.5
	9/25/2020	ND<2 U	14.5
	3/23/2021	ND<2 U	14.5
	9/16/2021	ND<0.19 J	14.5
	3/23/2022	ND<1.1	14.5
	9/16/2022	ND<1.1	14.5
	3/17/2023	ND<1.1	14.5
	9/15/2023	ND<1.1	14.5

The Wilcoxon Statistic is 103.5
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is 0.384678
The Standard Deviation adjusted for ties is 9.55772
The Z Score adjusted for ties is 0.889333
0.384678 < 2.326 indicating no statistical significance at 1% level
0.889333 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Cadmium, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 25
Non detect rank is 13

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<2 U	13
	4/2/2020	ND<2 U	13
	9/30/2020	ND<2 U	13
	3/22/2021	ND<2 U	13
	9/8/2021	ND<0.18 J	13
	3/14/2022	ND<1.1	13
	9/12/2022	ND<1.1	13
	3/13/2023	ND<1.1	13
	9/11/2023	ND<1.1	13
GWM-15D	3/21/2016	ND<2 U	13
	9/23/2016	ND<2 U	13
	3/28/2017	ND<2 U	13
	9/21/2017	ND<2 U	13
	3/16/2018	ND<2 U	13
	9/19/2018	ND<2 U	13
	3/5/2019	ND<2 U	13
	10/3/2019	ND<2 U	13
	3/25/2020	ND<2 U	13
	9/28/2020	ND<2 U	13
	3/19/2021	ND<2 U	13
	9/15/2021	ND<0.16 J	13
	3/22/2022	ND<1.1	13
	9/14/2022	ND<1.1	13
	3/16/2023	ND<1.1	13
	9/12/2023	ND<1.1	13

The Wilcoxon Statistic is 72
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -0.0283069
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0283069 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Cadmium, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<2 U	9.5
	4/2/2020	ND<2 U	9.5
	9/30/2020	ND<2 U	9.5
	3/22/2021	ND<2 U	9.5
	9/8/2021	ND<0.18 J	9.5
	3/14/2022	ND<1.1	9.5
	9/12/2022	ND<1.1	9.5
	3/13/2023	ND<1.1	9.5
	9/11/2023	ND<1.1	9.5
GWM-17D	11/14/2019	ND<2 U	9.5
	3/26/2020	ND<2 U	9.5
	9/29/2020	ND<2 U	9.5
	3/16/2021	ND<2 U	9.5
	9/14/2021	ND<2 U	9.5
	3/18/2022	ND<1.1	9.5
	9/13/2022	ND<1.1	9.5
	3/14/2023	ND<1.1	9.5
	9/12/2023	ND<1.1	9.5

The Wilcoxon Statistic is 40.5
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.0441511
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0441511 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Cadmium, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<2 U	9.5
	4/2/2020	ND<2 U	9.5
	9/30/2020	ND<2 U	9.5
	3/22/2021	ND<2 U	9.5
	9/8/2021	ND<0.18 J	9.5
	3/14/2022	ND<1.1	9.5
	9/12/2022	ND<1.1	9.5
	3/13/2023	ND<1.1	9.5
	9/11/2023	ND<1.1	9.5
GWM-19D	11/14/2019	ND<2 U	9.5
	3/25/2020	ND<2 U	9.5
	9/29/2020	ND<2 U	9.5
	3/22/2021	ND<2 U	9.5
	9/15/2021	ND<2 U	9.5
	3/24/2022	ND<1.1	9.5
	9/15/2022	ND<1.1	9.5
	3/16/2023	ND<1.1	9.5
	9/14/2023	ND<1.1	9.5

The Wilcoxon Statistic is 40.5
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.0441511
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0441511 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Calcium, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	14400	25
	4/2/2020	14900	29
	9/30/2020	14700	27
	3/22/2021	7100 R	2
	9/8/2021	13500	21
	3/14/2022	13400	20
	9/12/2022	13200	16
	3/13/2023	13300	17
	9/11/2023	12600	15
SMW-13	9/23/2013	7000	1
	3/21/2014	8900	4
	9/8/2014	10200	7
	3/18/2015	9700	5
	9/8/2015	10100	6
	3/14/2016	10800	8
	9/26/2016	11200	9
	3/30/2017	11900	12
	9/20/2017	11800	11
	3/30/2018	13300	18
	9/21/2018	11600	10
	3/11/2019	12500	13
	10/3/2019	13600	22
	3/23/2020	12500	14
	9/25/2020	13600	23
	3/23/2021	7800	3
	9/16/2021	15000	30
	3/23/2022	14500	26
	9/16/2022	14200	24
	3/17/2023	14700	28
	9/15/2023	13300	19

The Wilcoxon Statistic is 62
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -1.49346
The Standard Deviation adjusted for ties is 22.0964
The Z Score adjusted for ties is -1.49346
-1.49346 < 2.326 indicating no statistical significance at 1% level
-1.49346 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Calcium, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	14400	26
	4/2/2020	14900	29
	9/30/2020	14700	28
	3/22/2021	7100 R	1
	9/8/2021	13500	18
	3/14/2022	13400	17
	9/12/2022	13200	14
	3/13/2023	13300	15
	9/11/2023	12600	9
SMW-32	9/23/2013	8240	2
	12/5/2013	13870	22
	3/19/2014	10900	3
	9/8/2014	11900	6
	3/18/2015	11800	5
	9/8/2015	11700	4
	3/14/2016	12600	10
	9/20/2016	12900	12
	3/24/2017	12300	7
	9/20/2017	12600	11
	3/27/2018	12400	8
	9/18/2018	13000	13
	3/11/2019	13600	20
	10/3/2019	14500	27
	3/23/2020	14200	25
	9/24/2020	14100	24
	3/23/2021	13800	21
	9/16/2021	15000	31
	3/24/2022	14900	30
	9/16/2022	13300	16
	3/17/2023	14000	23
	9/15/2023	13500	19

The Wilcoxon Statistic is 86
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is -0.587512
The Standard Deviation adjusted for ties is 22.9783
The Z Score adjusted for ties is -0.587512
-0.587512 < 2.326 indicating no statistical significance at 1% level
-0.587512 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Calcium, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	14400	10
	4/2/2020	14900	14
	9/30/2020	14700	12
	3/22/2021	7100 R	1
	9/8/2021	13500	6
	3/14/2022	13400	5
	9/12/2022	13200	3
	3/13/2023	13300	4
	9/11/2023	12600	2
GWM-15D	3/21/2016	18200	20
	9/23/2016	14800	13
	3/28/2017	14100	9
	9/21/2017	13500	7
	3/16/2018	13800	8
	9/19/2018	14500	11
	3/5/2019	16200	17
	10/3/2019	15900	15
	3/25/2020	16000	16
	9/28/2020	17300	18
	3/19/2021	18000	19
	9/15/2021	19000	22
	3/22/2022	20200	24
	9/14/2022	18700	21
	3/16/2023	20300	25
	9/12/2023	19000	23

The Wilcoxon Statistic is 132
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is 3.36852
The Standard Deviation adjusted for ties is 17.6635
The Z Score adjusted for ties is 3.36852
3.36852 > 2.326 indicating statistical significance at 1% level
3.36852 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Calcium, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	14400	7
	4/2/2020	14900	9
	9/30/2020	14700	8
	3/22/2021	7100 R	1
	9/8/2021	13500	6
	3/14/2022	13400	5
	9/12/2022	13200	3
	3/13/2023	13300	4
	9/11/2023	12600	2
GWM-17D	11/14/2019	40300	13
	3/26/2020	38700	11
	9/29/2020	38400	10
	3/16/2021	41300	14
	9/14/2021	45000	18
	3/18/2022	41700	15
	9/13/2022	42500	16
	3/14/2023	43200	17
	9/12/2023	40200	12

The Wilcoxon Statistic is 81
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 3.53209
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is 3.53209
3.53209 > 2.326 indicating statistical significance at 1% level
3.53209 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Calcium, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	14400	16
	4/2/2020	14900	18
	9/30/2020	14700	17
	3/22/2021	7100 R	1
	9/8/2021	13500	15
	3/14/2022	13400	14
	9/12/2022	13200	12
	3/13/2023	13300	13
	9/11/2023	12600	11
GWM-19D	11/14/2019	9900	10
	3/25/2020	8400	5
	9/29/2020	7500	2
	3/22/2021	7700	3
	9/15/2021	8500	8
	3/24/2022	8400	6
	9/15/2022	8100	4
	3/16/2023	8500	9
	9/14/2023	8400	7

The Wilcoxon Statistic is 9
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -2.82567
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is -2.82567
-2.82567 < 2.326 indicating no statistical significance at 1% level
-2.82567 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chromium, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 26
Non detect rank is 13.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	12	30
	4/2/2020	6.7	29
	9/30/2020	ND<0.99 J	13.5
	3/22/2021	ND<0.88 J	13.5
	9/8/2021	ND<5 U	13.5
	3/14/2022	3.1	28
	9/12/2022	ND<1.4 J	13.5
	3/13/2023	12	31
	9/11/2023	2.7	27
SMW-32	9/23/2013	ND<5	13.5
	12/5/2013	ND<5	13.5
	3/19/2014	ND<0.92 J	13.5
	9/8/2014	ND<1.3 J	13.5
	3/18/2015	ND<1.3 J	13.5
	9/8/2015	ND<1.4 J	13.5
	3/14/2016	ND<1.2 J	13.5
	9/20/2016	ND<2.1 J	13.5
	3/24/2017	ND<1.1 J	13.5
	9/20/2017	ND<1.5 J	13.5
	3/27/2018	ND<1.4 J	13.5
	9/18/2018	ND<5 U	13.5
	3/11/2019	ND<1.6 J	13.5
	10/3/2019	ND<0.77 J	13.5
	3/23/2020	ND<1.1 J	13.5
	9/24/2020	ND<5 U	13.5
	3/23/2021	ND<5 U	13.5
	9/16/2021	ND<1.4 J	13.5
	3/24/2022	ND<2.2	13.5
	9/16/2022	ND<2.2	13.5
	3/17/2023	ND<1.1 J	13.5
	9/15/2023	ND<2.2	13.5

The Wilcoxon Statistic is 44
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is -2.41533
The Standard Deviation adjusted for ties is 14.7183
The Z Score adjusted for ties is -3.77081
-2.41533 < 2.326 indicating no statistical significance at 1% level
-3.77081 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chromium, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 24
Non detect rank is 12.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	12	29
	4/2/2020	6.7	28
	9/30/2020	ND<0.99 J	12.5
	3/22/2021	ND<0.88 J	12.5
	9/8/2021	ND<5 U	12.5
	3/14/2022	3.1	27
	9/12/2022	ND<1.4 J	12.5
	3/13/2023	12	30
	9/11/2023	2.7	26
SMW-13	9/23/2013	ND<5	12.5
	3/21/2014	ND<0.75 J	12.5
	9/8/2014	ND<1 J	12.5
	3/18/2015	ND<1.5 J	12.5
	9/8/2015	ND<1.2 J	12.5
	3/14/2016	ND<0.94 J	12.5
	9/26/2016	2.5	25
	3/30/2017	ND<1.2 J	12.5
	9/20/2017	ND<1.3 J	12.5
	3/30/2018	ND<1.5 J	12.5
	9/21/2018	ND<1.1 J	12.5
	3/11/2019	ND<1.2 J	12.5
	10/3/2019	ND<5 U	12.5
	3/23/2020	ND<5 U	12.5
	9/25/2020	ND<5 U	12.5
	3/23/2021	ND<5 U	12.5
	9/16/2021	ND<1.4 J	12.5
	3/23/2022	ND<2.2	12.5
	9/16/2022	ND<2.2	12.5
	3/17/2023	ND<0.84 J	12.5
	9/15/2023	ND<2.2	12.5

The Wilcoxon Statistic is 44
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -2.30807
The Standard Deviation adjusted for ties is 15.4409
The Z Score adjusted for ties is -3.30291
-2.30807 < 2.326 indicating no statistical significance at 1% level
-3.30291 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chromium, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 15
Non detect rank is 8

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	12	24
	4/2/2020	6.7	23
	9/30/2020	ND<0.99 J	8
	3/22/2021	ND<0.88 J	8
	9/8/2021	ND<5 U	8
	3/14/2022	3.1	18
	9/12/2022	ND<1.4 J	8
	3/13/2023	12	25
	9/11/2023	2.7	16
GWM-15D	3/21/2016	3.1	19
	9/23/2016	4	21
	3/28/2017	4	22
	9/21/2017	2.9	17
	3/16/2018	ND<1.5 J	8
	9/19/2018	ND<1.7 J	8
	3/5/2019	ND<1.9 J	8
	10/3/2019	ND<0.96 J	8
	3/25/2020	ND<2 J	8
	9/28/2020	ND<5 U	8
	3/19/2021	ND<1 J	8
	9/15/2021	ND<1.9 J	8
	3/22/2022	ND<0.87 J	8
	9/14/2022	ND<2.2	8
	3/16/2023	ND<1.7 J	8
	9/12/2023	3.7	20

The Wilcoxon Statistic is 51
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -1.2172
The Standard Deviation adjusted for ties is 15.6461
The Z Score adjusted for ties is -1.37415
-1.2172 < 2.326 indicating no statistical significance at 1% level
-1.37415 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chromium, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 13
Non detect rank is 7

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	12	17
	4/2/2020	6.7	16
	9/30/2020	ND<0.99 J	7
	3/22/2021	ND<0.88 J	7
	9/8/2021	ND<5 U	7
	3/14/2022	3.1	15
	9/12/2022	ND<1.4 J	7
	3/13/2023	12	18
	9/11/2023	2.7	14
GWM-17D	11/14/2019	ND<5 U	7
	3/26/2020	ND<1.8 J	7
	9/29/2020	ND<0.95 J	7
	3/16/2021	ND<5 U	7
	9/14/2021	ND<5 U	7
	3/18/2022	ND<1.3 J	7
	9/13/2022	ND<1.8 J	7
	3/14/2023	ND<1.9 J	7
	9/12/2023	ND<1.4 J	7

The Wilcoxon Statistic is 18
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -2.03095
The Standard Deviation adjusted for ties is 8.94838
The Z Score adjusted for ties is -2.5703
-2.03095 < 2.326 indicating no statistical significance at 1% level
-2.5703 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Chromium, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 12
Non detect rank is 6.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	12	17
	4/2/2020	6.7	16
	9/30/2020	ND<0.99 J	6.5
	3/22/2021	ND<0.88 J	6.5
	9/8/2021	ND<5 U	6.5
	3/14/2022	3.1	15
	9/12/2022	ND<1.4 J	6.5
	3/13/2023	12	18
	9/11/2023	2.7	14
GWM-19D	11/14/2019	ND<1.3 J	6.5
	3/25/2020	2.4	13
	9/29/2020	ND<1.5 J	6.5
	3/22/2021	ND<1.8 J	6.5
	9/15/2021	ND<1.6 J	6.5
	3/24/2022	ND<1.5 J	6.5
	9/15/2022	ND<2 J	6.5
	3/16/2023	ND<2.1 J	6.5
	9/14/2023	ND<1.5 J	6.5

The Wilcoxon Statistic is 20
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -1.85435
The Standard Deviation adjusted for ties is 9.50774
The Z Score adjusted for ties is -2.20873
-1.85435 < 2.326 indicating no statistical significance at 1% level
-2.20873 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Cobalt, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 6
Non detect rank is 3.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	6.5	10
	4/2/2020	9.3	19
	9/30/2020	6.2	9
	3/22/2021	ND<5.4 J	3.5
	9/8/2021	5.5	7
	3/14/2022	6	8
	9/12/2022	ND<4.6 J	3.5
	3/13/2023	6.9	11
	9/11/2023	ND<4 J	3.5
SMW-13	9/23/2013	ND<5	3.5
	3/21/2014	7.5	12
	9/8/2014	7.6	13
	3/18/2015	7.8	14
	9/8/2015	8.7	16
	3/14/2016	8.1	15
	9/26/2016	8.9	17
	3/30/2017	9.1	18
	9/20/2017	9.8	21
	3/30/2018	11	24
	9/21/2018	9.4	20
	3/11/2019	9.9	22
	10/3/2019	10	23
	3/23/2020	ND<5 U	3.5
	9/25/2020	11	25
	3/23/2021	ND<5 U	3.5
	9/16/2021	11	26
	3/23/2022	11	27
	9/16/2022	12	29
	3/17/2023	12	30
	9/15/2023	11	28

The Wilcoxon Statistic is 159.5
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is 2.91903
The Standard Deviation adjusted for ties is 22.0102
The Z Score adjusted for ties is 2.93046
2.91903 > 2.326 indicating statistical significance at 1% level
2.93046 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Cobalt, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 3
Non detect rank is 2

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	6.5	7
	4/2/2020	9.3	9
	9/30/2020	6.2	6
	3/22/2021	ND<5.4 J	2
	9/8/2021	5.5	4
	3/14/2022	6	5
	9/12/2022	ND<4.6 J	2
	3/13/2023	6.9	8
	9/11/2023	ND<4 J	2
SMW-32	9/23/2013	10	10
	12/5/2013	10	11
	3/19/2014	13	12
	9/8/2014	14	13
	3/18/2015	15	14
	9/8/2015	20	28
	3/14/2016	18	19
	9/20/2016	16	15
	3/24/2017	16	16
	9/20/2017	18	20
	3/27/2018	16	17
	9/18/2018	18	21
	3/11/2019	19	26
	10/3/2019	18	22
	3/23/2020	18	23
	9/24/2020	19	27
	3/23/2021	23	31
	9/16/2021	20	29
	3/24/2022	18	24
	9/16/2022	20	30
	3/17/2023	18	25
	9/15/2023	17	18

The Wilcoxon Statistic is 198
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is 4.28666
The Standard Deviation adjusted for ties is 22.969
The Z Score adjusted for ties is 4.28839

4.28666 > 2.326 indicating statistical significance at 1% level

4.28839 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Cobalt, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 3
Non detect rank is 2

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	6.5	7
	4/2/2020	9.3	9
	9/30/2020	6.2	6
	3/22/2021	ND<5.4 J	2
	9/8/2021	5.5	4
	3/14/2022	6	5
	9/12/2022	ND<4.6 J	2
	3/13/2023	6.9	8
	9/11/2023	ND<4 J	2
GWM-15D	3/21/2016	41	25
	9/23/2016	21	20
	3/28/2017	17	17
	9/21/2017	16	13
	3/16/2018	15	10
	9/19/2018	16	14
	3/5/2019	16	15
	10/3/2019	15	11
	3/25/2020	15	12
	9/28/2020	16	16
	3/19/2021	17	18
	9/15/2021	19	19
	3/22/2022	22	21
	9/14/2022	22	22
	3/16/2023	25	23
	9/12/2023	27	24

The Wilcoxon Statistic is 144
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is 4.04789
The Standard Deviation adjusted for ties is 17.6499
The Z Score adjusted for ties is 4.05101
4.04789 > 2.326 indicating statistical significance at 1% level
4.05101 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Cobalt, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 3
Non detect rank is 2

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	6.5	7
	4/2/2020	9.3	9
	9/30/2020	6.2	6
	3/22/2021	ND<5.4 J	2
	9/8/2021	5.5	4
	3/14/2022	6	5
	9/12/2022	ND<4.6 J	2
	3/13/2023	6.9	8
	9/11/2023	ND<4 J	2
GWM-17D	11/14/2019	140	10
	3/26/2020	160	11
	9/29/2020	190	12
	3/16/2021	230	13
	9/14/2021	240	14
	3/18/2022	250	15
	9/13/2022	300	16
	3/14/2023	330	18
	9/12/2023	320	17

The Wilcoxon Statistic is 81
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 3.53209
The Standard Deviation adjusted for ties is 11.3014
The Z Score adjusted for ties is 3.5394
3.53209 > 2.326 indicating statistical significance at 1% level
3.5394 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Cobalt, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 3
Non detect rank is 2

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	6.5	7
	4/2/2020	9.3	14
	9/30/2020	6.2	6
	3/22/2021	ND<5.4 J	2
	9/8/2021	5.5	4
	3/14/2022	6	5
	9/12/2022	ND<4.6 J	2
	3/13/2023	6.9	8
	9/11/2023	ND<4 J	2
GWM-19D	11/14/2019	9.8	16
	3/25/2020	8.3	11
	9/29/2020	7.4	9
	3/22/2021	8.2	10
	9/15/2021	8.9	12
	3/24/2022	8.9	13
	9/15/2022	9.6	15
	3/16/2023	12	17
	9/14/2023	13	18

The Wilcoxon Statistic is 76
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 3.09058
The Standard Deviation adjusted for ties is 11.3014
The Z Score adjusted for ties is 3.09697
3.09058 > 2.326 indicating statistical significance at 1% level
3.09697 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Copper, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 1
Non detect rank is 1

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	7.4	4
	4/2/2020	10	6
	9/30/2020	12	8
	3/22/2021	5.6 UR	2
	9/8/2021	13	9
	3/14/2022	15	11
	9/12/2022	9.4	5
	3/13/2023	13	10
	9/11/2023	6.5	3
SMW-13	9/23/2013	60	16
	3/21/2014	62	19
	9/8/2014	68	21
	3/18/2015	41	12
	9/8/2015	470	30
	3/14/2016	110	28
	9/26/2016	70	23
	3/30/2017	69	22
	9/20/2017	60	17
	3/30/2018	59	15
	9/21/2018	66	20
	3/11/2019	89	26
	10/3/2019	58	14
	3/23/2020	ND<5 U	1
	9/25/2020	160	29
	3/23/2021	11	7
	9/16/2021	79	25
	3/23/2022	74	24
	9/16/2022	100	27
	3/17/2023	60	18
	9/15/2023	50	13

The Wilcoxon Statistic is 176
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is 3.66576
The Standard Deviation adjusted for ties is 22.0964
The Z Score adjusted for ties is 3.66576
3.66576 > 2.326 indicating statistical significance at 1% level
3.66576 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Copper, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	7.4	3
	4/2/2020	10	5
	9/30/2020	12	6
	3/22/2021	5.6 UR	1
	9/8/2021	13	7
	3/14/2022	15	9
	9/12/2022	9.4	4
	3/13/2023	13	8
	9/11/2023	6.5	2
SMW-32	9/23/2013	40	20
	12/5/2013	40	21
	3/19/2014	40	22
	9/8/2014	35	13
	3/18/2015	43	25
	9/8/2015	50	29
	3/14/2016	39	19
	9/20/2016	44	26
	3/24/2017	33	10
	9/20/2017	52	30
	3/27/2018	45	27
	9/18/2018	37	18
	3/11/2019	55	31
	10/3/2019	35	14
	3/23/2020	34	11
	9/24/2020	41	23
	3/23/2021	42	24
	9/16/2021	35	15
	3/24/2022	36	17
	9/16/2022	48	28
	3/17/2023	35	16
	9/15/2023	34	12

The Wilcoxon Statistic is 198
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is 4.28666
The Standard Deviation adjusted for ties is 22.9783
The Z Score adjusted for ties is 4.28666
4.28666 > 2.326 indicating statistical significance at 1% level
4.28666 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Copper, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 15
Non detect rank is 8

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	7.4	18
	4/2/2020	10	20
	9/30/2020	12	21
	3/22/2021	5.6 UR	16
	9/8/2021	13	22
	3/14/2022	15	24
	9/12/2022	9.4	19
	3/13/2023	13	23
	9/11/2023	6.5	17
GWM-15D	3/21/2016	ND<4.4 J	8
	9/23/2016	ND<4.7 J	8
	3/28/2017	ND<4.9 J	8
	9/21/2017	ND<4.7 J	8
	3/16/2018	ND<4.1 J	8
	9/19/2018	ND<3.8 J	8
	3/5/2019	ND<3.2 J	8
	10/3/2019	ND<3.9 J	8
	3/25/2020	ND<3.1 J	8
	9/28/2020	ND<2.7 J	8
	3/19/2021	ND<3.3 J	8
	9/15/2021	ND<2.3 J	8
	3/22/2022	ND<2.3 J	8
	9/14/2022	ND<5.6	8
	3/16/2023	ND<2.3 J	8
	9/12/2023	16	25

The Wilcoxon Statistic is 9
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -3.59498
The Standard Deviation adjusted for ties is 15.6461
The Z Score adjusted for ties is -4.05852
-3.59498 < 2.326 indicating no statistical significance at 1% level
-4.05852 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Copper, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 9
Non detect rank is 5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	7.4	12
	4/2/2020	10	14
	9/30/2020	12	15
	3/22/2021	5.6 UR	10
	9/8/2021	13	16
	3/14/2022	15	18
	9/12/2022	9.4	13
	3/13/2023	13	17
	9/11/2023	6.5	11
GWM-17D	11/14/2019	ND<5 U	5
	3/26/2020	ND<5 U	5
	9/29/2020	ND<5 U	5
	3/16/2021	ND<5 U	5
	9/14/2021	ND<5 U	5
	3/18/2022	ND<5.6	5
	9/13/2022	ND<5.6	5
	3/14/2023	ND<5.6	5
	9/12/2023	ND<5.6	5

The Wilcoxon Statistic is 0
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -3.62039
The Standard Deviation adjusted for ties is 10.6004
The Z Score adjusted for ties is -3.86779
-3.62039 < 2.326 indicating no statistical significance at 1% level
-3.86779 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Copper, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	7.4	3
	4/2/2020	10	8
	9/30/2020	12	10
	3/22/2021	5.6 UR	1
	9/8/2021	13	11
	3/14/2022	15	16
	9/12/2022	9.4	5
	3/13/2023	13	12
	9/11/2023	6.5	2
GWM-19D	11/14/2019	9.8	7
	3/25/2020	9	4
	9/29/2020	14	14
	3/22/2021	21	18
	9/15/2021	18	17
	3/24/2022	13	13
	9/15/2022	14	15
	3/16/2023	11	9
	9/14/2023	9.4	6

The Wilcoxon Statistic is 58
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 1.50114
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is 1.50114
1.50114 < 2.326 indicating no statistical significance at 1% level
1.50114 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Iron, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 14
Non detect rank is 7.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	76	23
	4/2/2020	71	21
	9/30/2020	ND<80 U	7.5
	3/22/2021	290 R	30
	9/8/2021	ND<80 U	7.5
	3/14/2022	110	27
	9/12/2022	58	17
	3/13/2023	74	22
	9/11/2023	ND<26 J	7.5
SMW-32	9/23/2013	15	15
	12/5/2013	26	16
	3/19/2014	86	26
	9/8/2014	64	19
	3/18/2015	ND<40 J	7.5
	9/8/2015	290	31
	3/14/2016	62	18
	9/20/2016	ND<32 J	7.5
	3/24/2017	ND<22 J	7.5
	9/20/2017	ND<52 J	7.5
	3/27/2018	ND<31 J	7.5
	9/18/2018	ND<45 J	7.5
	3/11/2019	ND<35 J	7.5
	10/3/2019	ND<25 J	7.5
	3/23/2020	ND<47 J	7.5
	9/24/2020	80	25
	3/23/2021	110	28
	9/16/2021	110	29
	3/24/2022	ND<28 J	7.5
	9/16/2022	69	20
	3/17/2023	ND<39 J	7.5
	9/15/2023	79	24

The Wilcoxon Statistic is 80.5
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is -0.826869
The Standard Deviation adjusted for ties is 21.899
The Z Score adjusted for ties is -0.867621
-0.826869 < 2.326 indicating no statistical significance at 1% level
-0.867621 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Iron, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 17
Non detect rank is 9

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	76	24
	4/2/2020	71	22
	9/30/2020	ND<80 U	9
	3/22/2021	290 R	29
	9/8/2021	ND<80 U	9
	3/14/2022	110	26
	9/12/2022	58	19
	3/13/2023	74	23
	9/11/2023	ND<26 J	9
SMW-13	9/23/2013	17	18
	3/21/2014	ND<25 J	9
	9/8/2014	61	21
	3/18/2015	85	25
	9/8/2015	ND<53 J	9
	3/14/2016	ND<29 J	9
	9/26/2016	60	20
	3/30/2017	ND<29 J	9
	9/20/2017	ND<25 J	9
	3/30/2018	ND<43 J	9
	9/21/2018	ND<20 J	9
	3/11/2019	ND<24 J	9
	10/3/2019	ND<80 U	9
	3/23/2020	180	27
	9/25/2020	510	30
	3/23/2021	ND<20 J	9
	9/16/2021	200	28
	3/23/2022	ND<34 J	9
	9/16/2022	ND<32 J	9
	3/17/2023	ND<26 J	9
	9/15/2023	ND<56	9

The Wilcoxon Statistic is 64
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -1.40294
The Standard Deviation adjusted for ties is 19.9904
The Z Score adjusted for ties is -1.55075
-1.40294 < 2.326 indicating no statistical significance at 1% level
-1.55075 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Iron, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 13
Non detect rank is 7

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	76	18
	4/2/2020	71	16
	9/30/2020	ND<80 U	7
	3/22/2021	290 R	23
	9/8/2021	ND<80 U	7
	3/14/2022	110	21
	9/12/2022	58	14
	3/13/2023	74	17
	9/11/2023	ND<26 J	7
GWM-15D	3/21/2016	510	25
	9/23/2016	ND<55 J	7
	3/28/2017	67	15
	9/21/2017	ND<49 J	7
	3/16/2018	ND<46 J	7
	9/19/2018	ND<43 J	7
	3/5/2019	160	22
	10/3/2019	ND<19 J	7
	3/25/2020	85	20
	9/28/2020	78	19
	3/19/2021	ND<47 J	7
	9/15/2021	ND<72 J	7
	3/22/2022	ND<37 J	7
	9/14/2022	ND<39 J	7
	3/16/2023	ND<50 J	7
	9/12/2023	300	24

The Wilcoxon Statistic is 59
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -0.764287
The Standard Deviation adjusted for ties is 16.3805
The Z Score adjusted for ties is -0.824152
-0.764287 < 2.326 indicating no statistical significance at 1% level
-0.824152 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Iron, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 7
Non detect rank is 4

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	76	11
	4/2/2020	71	9
	9/30/2020	ND<80 U	4
	3/22/2021	290 R	17
	9/8/2021	ND<80 U	4
	3/14/2022	110	13
	9/12/2022	58	8
	3/13/2023	74	10
	9/11/2023	ND<26 J	4
GWM-17D	11/14/2019	180	15
	3/26/2020	130	14
	9/29/2020	76	12
	3/16/2021	ND<49 J	4
	9/14/2021	ND<56 J	4
	3/18/2022	ND<31 J	4
	9/13/2022	ND<32 J	4
	3/14/2023	180	16
	9/12/2023	660	18

The Wilcoxon Statistic is 46
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 0.441511
The Standard Deviation adjusted for ties is 10.9926
The Z Score adjusted for ties is 0.45485
0.441511 < 2.326 indicating no statistical significance at 1% level
0.45485 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Iron, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 9
Non detect rank is 5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	76	14
	4/2/2020	71	12
	9/30/2020	ND<80 U	5
	3/22/2021	290 R	18
	9/8/2021	ND<80 U	5
	3/14/2022	110	16
	9/12/2022	58	10
	3/13/2023	74	13
	9/11/2023	ND<26 J	5
GWM-19D	11/14/2019	94	15
	3/25/2020	ND<29 J	5
	9/29/2020	240	17
	3/22/2021	61	11
	9/15/2021	ND<80 U	5
	3/24/2022	ND<56	5
	9/15/2022	ND<56	5
	3/16/2023	ND<56	5
	9/14/2023	ND<56	5

The Wilcoxon Statistic is 28
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -1.14793
The Standard Deviation adjusted for ties is 10.6004
The Z Score adjusted for ties is -1.22637
-1.14793 < 2.326 indicating no statistical significance at 1% level
-1.22637 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Lead, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 27
Non detect rank is 14

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	9	31
	4/2/2020	3	30
	9/30/2020	ND<1.6 J	14
	3/22/2021	2.2 UR	28
	9/8/2021	ND<1.1 J	14
	3/14/2022	ND<0.99 J	14
	9/12/2022	ND<2.2	14
	3/13/2023	ND<0.82 J	14
	9/11/2023	ND<2.2	14
SMW-32	9/23/2013	ND<5	14
	12/5/2013	ND<5	14
	3/19/2014	ND<5 U	14
	9/8/2014	ND<1.1 J	14
	3/18/2015	ND<0.97 J	14
	9/8/2015	2.3	29
	3/14/2016	ND<1 J	14
	9/20/2016	ND<1.2 J	14
	3/24/2017	ND<0.77 J	14
	9/20/2017	ND<1.4 J	14
	3/27/2018	ND<1 J	14
	9/18/2018	ND<0.88 J	14
	3/11/2019	ND<1.6 J	14
	10/3/2019	ND<5 U	14
	3/23/2020	ND<5 U	14
	9/24/2020	ND<0.9 J	14
	3/23/2021	ND<5 U	14
	9/16/2021	ND<5 U	14
	3/24/2022	ND<2.2	14
	9/16/2022	ND<2.2	14
	3/17/2023	ND<2.2	14
	9/15/2023	ND<0.76 J	14

The Wilcoxon Statistic is 70
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is -1.28382
The Standard Deviation adjusted for ties is 13.389
The Z Score adjusted for ties is -2.20331
-1.28382 < 2.326 indicating no statistical significance at 1% level
-2.20331 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Lead, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 8
Non detect rank is 4.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	9	12
	4/2/2020	3	10
	9/30/2020	ND<1.6 J	4.5
	3/22/2021	2.2 UR	9
	9/8/2021	ND<1.1 J	4.5
	3/14/2022	ND<0.99 J	4.5
	9/12/2022	ND<2.2	4.5
	3/13/2023	ND<0.82 J	4.5
	9/11/2023	ND<2.2	4.5
SMW-13	9/23/2013	9	13
	3/21/2014	9.8	14
	9/8/2014	13	16
	3/18/2015	7.1	11
	9/8/2015	80	30
	3/14/2016	25	28
	9/26/2016	17	23
	3/30/2017	20	25
	9/20/2017	16	21
	3/30/2018	12	15
	9/21/2018	15	19
	3/11/2019	21	27
	10/3/2019	14	18
	3/23/2020	ND<5 U	4.5
	9/25/2020	28	29
	3/23/2021	ND<5 U	4.5
	9/16/2021	16	22
	3/23/2022	15	20
	9/16/2022	17	24
	3/17/2023	20	26
	9/15/2023	13	17

The Wilcoxon Statistic is 176
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is 3.66576
The Standard Deviation adjusted for ties is 21.8889
The Z Score adjusted for ties is 3.7005
3.66576 > 2.326 indicating statistical significance at 1% level
3.7005 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Lead, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 22
Non detect rank is 11.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	9	25
	4/2/2020	3	24
	9/30/2020	ND<1.6 J	11.5
	3/22/2021	2.2 UR	23
	9/8/2021	ND<1.1 J	11.5
	3/14/2022	ND<0.99 J	11.5
	9/12/2022	ND<2.2	11.5
	3/13/2023	ND<0.82 J	11.5
	9/11/2023	ND<2.2	11.5
GWM-15D	3/21/2016	ND<5 U	11.5
	9/23/2016	ND<5 U	11.5
	3/28/2017	ND<5 U	11.5
	9/21/2017	ND<5 U	11.5
	3/16/2018	ND<5 U	11.5
	9/19/2018	ND<5 U	11.5
	3/5/2019	ND<5 U	11.5
	10/3/2019	ND<5 U	11.5
	3/25/2020	ND<5 U	11.5
	9/28/2020	ND<5 U	11.5
	3/19/2021	ND<5 U	11.5
	9/15/2021	ND<5 U	11.5
	3/22/2022	ND<2.2	11.5
	9/14/2022	ND<2.2	11.5
	3/16/2023	ND<2.2	11.5
	9/12/2023	ND<2.2	11.5

The Wilcoxon Statistic is 48
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -1.38704
The Standard Deviation adjusted for ties is 9.97397
The Z Score adjusted for ties is -2.45639
-1.38704 < 2.326 indicating no statistical significance at 1% level
-2.45639 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Lead, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 15
Non detect rank is 8

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	9	18
	4/2/2020	3	17
	9/30/2020	ND<1.6 J	8
	3/22/2021	2.2 UR	16
	9/8/2021	ND<1.1 J	8
	3/14/2022	ND<0.99 J	8
	9/12/2022	ND<2.2	8
	3/13/2023	ND<0.82 J	8
	9/11/2023	ND<2.2	8
GWM-17D	11/14/2019	ND<5 U	8
	3/26/2020	ND<5 U	8
	9/29/2020	ND<5 U	8
	3/16/2021	ND<5 U	8
	9/14/2021	ND<5 U	8
	3/18/2022	ND<2.2	8
	9/13/2022	ND<2.2	8
	3/14/2023	ND<2.2	8
	9/12/2023	ND<2.2	8

The Wilcoxon Statistic is 27
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -1.23623
The Standard Deviation adjusted for ties is 7.35747
The Z Score adjusted for ties is -1.90283
-1.23623 < 2.326 indicating no statistical significance at 1% level
-1.90283 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Lead, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 13
Non detect rank is 7

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	9	17
	4/2/2020	3	16
	9/30/2020	ND<1.6 J	7
	3/22/2021	2.2 UR	14
	9/8/2021	ND<1.1 J	7
	3/14/2022	ND<0.99 J	7
	9/12/2022	ND<2.2	7
	3/13/2023	ND<0.82 J	7
	9/11/2023	ND<2.2	7
GWM-19D	11/14/2019	9.1	18
	3/25/2020	ND<5 U	7
	9/29/2020	ND<5 U	7
	3/22/2021	ND<5 U	7
	9/15/2021	ND<5 U	7
	3/24/2022	ND<1.4 J	7
	9/15/2022	ND<1.4 J	7
	3/16/2023	2.4	15
	9/14/2023	ND<2.1 J	7

The Wilcoxon Statistic is 37
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.353209
The Standard Deviation adjusted for ties is 8.94838
The Z Score adjusted for ties is -0.447008
-0.353209 < 2.326 indicating no statistical significance at 1% level
-0.447008 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Magnesium, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	8000	27
	4/2/2020	8200	30
	9/30/2020	7900	26
	3/22/2021	2700 R	1
	9/8/2021	7700	21
	3/14/2022	8000	28
	9/12/2022	7700	22
	3/13/2023	7700	23
	9/11/2023	7200	18
SMW-13	9/23/2013	5079	6
	3/21/2014	4900	3
	9/8/2014	5400	8
	3/18/2015	4900	4
	9/8/2015	5300	7
	3/14/2016	5500	9
	9/26/2016	5800	10
	3/30/2017	6500	12
	9/20/2017	6200	11
	3/30/2018	6700	13
	9/21/2018	6800	14
	3/11/2019	6800	15
	10/3/2019	6800	16
	3/23/2020	5000	5
	9/25/2020	7000	17
	3/23/2021	4500	2
	9/16/2021	7200	19
	3/23/2022	7800	24
	9/16/2022	8100	29
	3/17/2023	7800	25
	9/15/2023	7500	20

The Wilcoxon Statistic is 38
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -2.57961
The Standard Deviation adjusted for ties is 22.0964
The Z Score adjusted for ties is -2.57961
-2.57961 < 2.326 indicating no statistical significance at 1% level
-2.57961 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Magnesium, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	8000	24
	4/2/2020	8200	28
	9/30/2020	7900	21
	3/22/2021	2700 R	1
	9/8/2021	7700	14
	3/14/2022	8000	25
	9/12/2022	7700	15
	3/13/2023	7700	16
	9/11/2023	7200	10
SMW-32	9/23/2013	5924	3
	12/5/2013	5814	2
	3/19/2014	6000	4
	9/8/2014	6400	6
	3/18/2015	6100	5
	9/8/2015	7500	13
	3/14/2016	7200	11
	9/20/2016	6600	8
	3/24/2017	6500	7
	9/20/2017	7300	12
	3/27/2018	7000	9
	9/18/2018	7700	17
	3/11/2019	7800	19
	10/3/2019	7800	20
	3/23/2020	8000	26
	9/24/2020	7900	22
	3/23/2021	9200	31
	9/16/2021	8100	27
	3/24/2022	8500	30
	9/16/2022	8300	29
	3/17/2023	7900	23
	9/15/2023	7700	18

The Wilcoxon Statistic is 89
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is -0.456954
The Standard Deviation adjusted for ties is 22.9783
The Z Score adjusted for ties is -0.456954
-0.456954 < 2.326 indicating no statistical significance at 1% level
-0.456954 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Magnesium, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	8000	7
	4/2/2020	8200	9
	9/30/2020	7900	6
	3/22/2021	2700 R	1
	9/8/2021	7700	3
	3/14/2022	8000	8
	9/12/2022	7700	4
	3/13/2023	7700	5
	9/11/2023	7200	2
GWM-15D	3/21/2016	17100	16
	9/23/2016	15200	14
	3/28/2017	14400	11
	9/21/2017	14200	10
	3/16/2018	14500	12
	9/19/2018	15000	13
	3/5/2019	18300	19
	10/3/2019	17200	17
	3/25/2020	17000	15
	9/28/2020	17400	18
	3/19/2021	20400	24
	9/15/2021	20000	21
	3/22/2022	20300	23
	9/14/2022	20200	22
	3/16/2023	20400	25
	9/12/2023	19000	20

The Wilcoxon Statistic is 144
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is 4.04789
The Standard Deviation adjusted for ties is 17.6635
The Z Score adjusted for ties is 4.04789
4.04789 > 2.326 indicating statistical significance at 1% level
4.04789 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Magnesium, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	8000	7
	4/2/2020	8200	9
	9/30/2020	7900	6
	3/22/2021	2700 R	1
	9/8/2021	7700	3
	3/14/2022	8000	8
	9/12/2022	7700	4
	3/13/2023	7700	5
	9/11/2023	7200	2
GWM-17D	11/14/2019	24300	17
	3/26/2020	21800	11
	9/29/2020	23000	13
	3/16/2021	24800	18
	9/14/2021	24000	16
	3/18/2022	22700	12
	9/13/2022	23800	15
	3/14/2023	23600	14
	9/12/2023	21300	10

The Wilcoxon Statistic is 81
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 3.53209
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is 3.53209
3.53209 > 2.326 indicating statistical significance at 1% level
3.53209 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Magnesium, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	8000	16
	4/2/2020	8200	18
	9/30/2020	7900	15
	3/22/2021	2700 R	1
	9/8/2021	7700	12
	3/14/2022	8000	17
	9/12/2022	7700	13
	3/13/2023	7700	14
	9/11/2023	7200	11
GWM-19D	11/14/2019	5300	10
	3/25/2020	5100	9
	9/29/2020	4400	2
	3/22/2021	4500	3
	9/15/2021	4700	4
	3/24/2022	4800	6
	9/15/2022	4700	5
	3/16/2023	4800	7
	9/14/2023	4800	8

The Wilcoxon Statistic is 9
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -2.82567
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is -2.82567
-2.82567 < 2.326 indicating no statistical significance at 1% level
-2.82567 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Manganese, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	42	9
	4/2/2020	46	13
	9/30/2020	37	4
	3/22/2021	72 R	27
	9/8/2021	35	3
	3/14/2022	41	8
	9/12/2022	34	2
	3/13/2023	38	5
	9/11/2023	28	1
SMW-32	9/23/2013	40	6
	12/5/2013	40	7
	3/19/2014	44	11
	9/8/2014	42	10
	3/18/2015	44	12
	9/8/2015	83	29
	3/14/2016	64	19
	9/20/2016	48	14
	3/24/2017	55	15
	9/20/2017	61	18
	3/27/2018	56	16
	9/18/2018	64	20
	3/11/2019	70	24
	10/3/2019	60	17
	3/23/2020	73	28
	9/24/2020	71	26
	3/23/2021	100	31
	9/16/2021	70	25
	3/24/2022	67	21
	9/16/2022	88	30
	3/17/2023	68	22
	9/15/2023	68	23

The Wilcoxon Statistic is 171
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is 3.11164
The Standard Deviation adjusted for ties is 22.9783
The Z Score adjusted for ties is 3.11164
3.11164 > 2.326 indicating statistical significance at 1% level
3.11164 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Manganese, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 2
Non detect rank is 1.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	42	22
	4/2/2020	46	25
	9/30/2020	37	17
	3/22/2021	72 R	30
	9/8/2021	35	10
	3/14/2022	41	19
	9/12/2022	34	9
	3/13/2023	38	18
	9/11/2023	28	4
SMW-13	9/23/2013	20	3
	3/21/2014	28	5
	9/8/2014	29	6
	3/18/2015	30	7
	9/8/2015	35	11
	3/14/2016	33	8
	9/26/2016	35	12
	3/30/2017	36	13
	9/20/2017	36	14
	3/30/2018	41	20
	9/21/2018	36	15
	3/11/2019	36	16
	10/3/2019	41	21
	3/23/2020	ND<4.7 J	1.5
	9/25/2020	48	28
	3/23/2021	ND<5 U	1.5
	9/16/2021	42	23
	3/23/2022	51	29
	9/16/2022	46	26
	3/17/2023	46	27
	9/15/2023	42	24

The Wilcoxon Statistic is 80
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -0.678844
The Standard Deviation adjusted for ties is 22.0939
The Z Score adjusted for ties is -0.67892
-0.678844 < 2.326 indicating no statistical significance at 1% level
-0.67892 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Manganese, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	42	7
	4/2/2020	46	8
	9/30/2020	37	4
	3/22/2021	72 R	9
	9/8/2021	35	3
	3/14/2022	41	6
	9/12/2022	34	2
	3/13/2023	38	5
	9/11/2023	28	1
GWM-15D	3/21/2016	690	20
	9/23/2016	390	13
	3/28/2017	380	11
	9/21/2017	350	10
	3/16/2018	380	12
	9/19/2018	440	14
	3/5/2019	500	15
	10/3/2019	540	16
	3/25/2020	580	17
	9/28/2020	660	18
	3/19/2021	680	19
	9/15/2021	720	21
	3/22/2022	910	22
	9/14/2022	920	23
	3/16/2023	980	24
	9/12/2023	980	25

The Wilcoxon Statistic is 144
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is 4.04789
The Standard Deviation adjusted for ties is 17.6635
The Z Score adjusted for ties is 4.04789
4.04789 > 2.326 indicating statistical significance at 1% level
4.04789 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Manganese, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	42	7
	4/2/2020	46	8
	9/30/2020	37	4
	3/22/2021	72 R	9
	9/8/2021	35	3
	3/14/2022	41	6
	9/12/2022	34	2
	3/13/2023	38	5
	9/11/2023	28	1
GWM-17D	11/14/2019	2000	10
	3/26/2020	2000	11
	9/29/2020	2300	12
	3/16/2021	2600	13
	9/14/2021	2800	14
	3/18/2022	2900	15
	9/13/2022	3200	16
	3/14/2023	3400	18
	9/12/2023	3200	17

The Wilcoxon Statistic is 81
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 3.53209
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is 3.53209
3.53209 > 2.326 indicating statistical significance at 1% level
3.53209 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Manganese, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	42	10
	4/2/2020	46	12
	9/30/2020	37	4
	3/22/2021	72 R	18
	9/8/2021	35	3
	3/14/2022	41	7
	9/12/2022	34	2
	3/13/2023	38	5
	9/11/2023	28	1
GWM-19D	11/14/2019	48	14
	3/25/2020	43	11
	9/29/2020	41	8
	3/22/2021	39	6
	9/15/2021	41	9
	3/24/2022	47	13
	9/15/2022	50	15
	3/16/2023	58	16
	9/14/2023	70	17

The Wilcoxon Statistic is 64
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 2.03095
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is 2.03095
2.03095 < 2.326 indicating no statistical significance at 1% level
2.03095 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Mercury, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 9
Non detect rank is 5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<0.2 U	5
	4/2/2020	ND<0.2 U	5
	9/30/2020	ND<0.2 U	5
	3/22/2021	ND<0.2 U	5
	9/8/2021	ND<0.2 U	5
	3/14/2022	ND<0.5	5
	9/12/2022	ND<0.5	5
	3/13/2023	ND<0.5	5
	9/11/2023	ND<0.5	5
SMW-32	9/23/2013	2.02	11
	12/5/2013	1.9	10
	3/19/2014	2.6	13
	9/8/2014	3.2	25
	3/18/2015	3.3	28
	9/8/2015	2.7	14
	3/14/2016	3.1	22
	9/20/2016	3	19
	3/24/2017	3.1	23
	9/20/2017	3.1	24
	3/27/2018	3.2	26
	9/18/2018	2.8	17
	3/11/2019	2.8	18
	10/3/2019	3.3	29
	3/23/2020	3	20
	9/24/2020	3.3	30
	3/23/2021	2.7	15
	9/16/2021	3.2	27
	3/24/2022	3	21
	9/16/2022	2.3	12
	3/17/2023	3.4	31
	9/15/2023	2.7	16

The Wilcoxon Statistic is 198
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is 4.28666
The Standard Deviation adjusted for ties is 22.6986
The Z Score adjusted for ties is 4.33948

4.28666 > 2.326 indicating statistical significance at 1% level

4.33948 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Mercury, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 9
Non detect rank is 5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<0.2 U	5
	4/2/2020	ND<0.2 U	5
	9/30/2020	ND<0.2 U	5
	3/22/2021	ND<0.2 U	5
	9/8/2021	ND<0.2 U	5
	3/14/2022	ND<0.5	5
	9/12/2022	ND<0.5	5
	3/13/2023	ND<0.5	5
	9/11/2023	ND<0.5	5
SMW-13	9/23/2013	0.92	10
	3/21/2014	0.94	11
	9/8/2014	1.4	14
	3/18/2015	1.7	17
	9/8/2015	1.1	12
	3/14/2016	2.3	24
	9/26/2016	2.4	27
	3/30/2017	2.8	30
	9/20/2017	2.7	29
	3/30/2018	2.5	28
	9/21/2018	2.3	25
	3/11/2019	2.3	26
	10/3/2019	2.1	23
	3/23/2020	2	22
	9/25/2020	1.5	15
	3/23/2021	1.1	13
	9/16/2021	1.6	16
	3/23/2022	1.7	18
	9/16/2022	1.7	19
	3/17/2023	1.8	21
	9/15/2023	1.7	20

The Wilcoxon Statistic is 189
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is 4.25409
The Standard Deviation adjusted for ties is 21.7994
The Z Score adjusted for ties is 4.31204

4.25409 > 2.326 indicating statistical significance at 1% level

4.31204 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Mercury, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 25
Non detect rank is 13

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<0.2 U	13
	4/2/2020	ND<0.2 U	13
	9/30/2020	ND<0.2 U	13
	3/22/2021	ND<0.2 U	13
	9/8/2021	ND<0.2 U	13
	3/14/2022	ND<0.5	13
	9/12/2022	ND<0.5	13
	3/13/2023	ND<0.5	13
	9/11/2023	ND<0.5	13
GWM-15D	3/21/2016	ND<0.2 U	13
	9/23/2016	ND<0.2 U	13
	3/28/2017	ND<0.2 U	13
	9/21/2017	ND<0.2 U	13
	3/16/2018	ND<0.2 U	13
	9/19/2018	ND<0.2 U	13
	3/5/2019	ND<0.2 U	13
	10/3/2019	ND<0.2 U	13
	3/25/2020	ND<0.2 U	13
	9/28/2020	ND<0.2 U	13
	3/19/2021	ND<0.2 U	13
	9/15/2021	ND<0.2 U	13
	3/22/2022	ND<0.5	13
	9/14/2022	ND<0.5	13
	3/16/2023	ND<0.5	13
	9/12/2023	ND<0.5	13

The Wilcoxon Statistic is 72
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -0.0283069
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0283069 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Mercury, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 14
Non detect rank is 7.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<0.2 U	7.5
	4/2/2020	ND<0.2 U	7.5
	9/30/2020	ND<0.2 U	7.5
	3/22/2021	ND<0.2 U	7.5
	9/8/2021	ND<0.2 U	7.5
	3/14/2022	ND<0.5	7.5
	9/12/2022	ND<0.5	7.5
	3/13/2023	ND<0.5	7.5
	9/11/2023	ND<0.5	7.5
GWM-17D	11/14/2019	ND<0.45 J	7.5
	3/26/2020	ND<0.38 J	7.5
	9/29/2020	ND<0.29 J	7.5
	3/16/2021	ND<0.49 J	7.5
	9/14/2021	0.85	16
	3/18/2022	1	18
	9/13/2022	0.9	17
	3/14/2023	ND<0.39 J	7.5
	9/12/2023	0.54	15

The Wilcoxon Statistic is 58.5
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 1.54529
The Standard Deviation adjusted for ties is 8.24799
The Z Score adjusted for ties is 2.12173
1.54529 < 2.326 indicating no statistical significance at 1% level
2.12173 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Mercury, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 9
Non detect rank is 5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<0.2 U	5
	4/2/2020	ND<0.2 U	5
	9/30/2020	ND<0.2 U	5
	3/22/2021	ND<0.2 U	5
	9/8/2021	ND<0.2 U	5
	3/14/2022	ND<0.5	5
	9/12/2022	ND<0.5	5
	3/13/2023	ND<0.5	5
	9/11/2023	ND<0.5	5
GWM-19D	11/14/2019	1.9	11
	3/25/2020	1.9	12
	9/29/2020	2	13
	3/22/2021	2.3	17
	9/15/2021	2.2	16
	3/24/2022	1.8	10
	9/15/2022	2	14
	3/16/2023	2.3	18
	9/14/2023	2.1	15

The Wilcoxon Statistic is 81
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 3.53209
The Standard Deviation adjusted for ties is 10.6004
The Z Score adjusted for ties is 3.77346
3.53209 > 2.326 indicating statistical significance at 1% level
3.77346 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Nickel, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 2
Non detect rank is 1.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	23	9
	4/2/2020	31	12
	9/30/2020	21	7
	3/22/2021	6.7 R	3
	9/8/2021	20	6
	3/14/2022	22	8
	9/12/2022	19	5
	3/13/2023	25	10
	9/11/2023	18	4
SMW-13	9/23/2013	29	11
	3/21/2014	33	14
	9/8/2014	32	13
	3/18/2015	34	15
	9/8/2015	51	27
	3/14/2016	37	16
	9/26/2016	40	17
	3/30/2017	41	18
	9/20/2017	41	19
	3/30/2018	45	22
	9/21/2018	41	20
	3/11/2019	43	21
	10/3/2019	45	23
	3/23/2020	ND<5 U	1.5
	9/25/2020	49	26
	3/23/2021	ND<5 U	1.5
	9/16/2021	48	25
	3/23/2022	52	30
	9/16/2022	51	28
	3/17/2023	51	29
	9/15/2023	47	24

The Wilcoxon Statistic is 170
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is 3.39422
The Standard Deviation adjusted for ties is 22.0939
The Z Score adjusted for ties is 3.3946
3.39422 > 2.326 indicating statistical significance at 1% level
3.3946 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Nickel, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	23	7
	4/2/2020	31	9
	9/30/2020	21	5
	3/22/2021	6.7 R	1
	9/8/2021	20	4
	3/14/2022	22	6
	9/12/2022	19	3
	3/13/2023	25	8
	9/11/2023	18	2
SMW-32	9/23/2013	46	10
	12/5/2013	50	12
	3/19/2014	49	11
	9/8/2014	52	13
	3/18/2015	54	14
	9/8/2015	57	17
	3/14/2016	56	16
	9/20/2016	59	18
	3/24/2017	59	19
	9/20/2017	60	20
	3/27/2018	55	15
	9/18/2018	60	21
	3/11/2019	61	22
	10/3/2019	64	26
	3/23/2020	64	27
	9/24/2020	62	23
	3/23/2021	63	25
	9/16/2021	62	24
	3/24/2022	68	29
	9/16/2022	69	30
	3/17/2023	70	31
	9/15/2023	67	28

The Wilcoxon Statistic is 198
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is 4.28666
The Standard Deviation adjusted for ties is 22.9783
The Z Score adjusted for ties is 4.28666
4.28666 > 2.326 indicating statistical significance at 1% level
4.28666 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Nickel, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	23	23
	4/2/2020	31	25
	9/30/2020	21	21
	3/22/2021	6.7 R	2
	9/8/2021	20	20
	3/14/2022	22	22
	9/12/2022	19	19
	3/13/2023	25	24
	9/11/2023	18	18
GWM-15D	3/21/2016	16	17
	9/23/2016	14	16
	3/28/2017	13	15
	9/21/2017	11	12
	3/16/2018	10	8
	9/19/2018	11	13
	3/5/2019	1.1	1
	10/3/2019	10	9
	3/25/2020	9.8	6
	9/28/2020	11	14
	3/19/2021	9.9	7
	9/15/2021	10	10
	3/22/2022	10	11
	9/14/2022	9	3
	3/16/2023	9.7	5
	9/12/2023	9.6	4

The Wilcoxon Statistic is 15
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -3.2553
The Standard Deviation adjusted for ties is 17.6635
The Z Score adjusted for ties is -3.2553
-3.2553 < 2.326 indicating no statistical significance at 1% level
-3.2553 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Nickel, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	23	7
	4/2/2020	31	9
	9/30/2020	21	5
	3/22/2021	6.7 R	1
	9/8/2021	20	4
	3/14/2022	22	6
	9/12/2022	19	3
	3/13/2023	25	8
	9/11/2023	18	2
GWM-17D	11/14/2019	56	11
	3/26/2020	56	12
	9/29/2020	55	10
	3/16/2021	64	16
	9/14/2021	63	14
	3/18/2022	63	15
	9/13/2022	67	18
	3/14/2023	65	17
	9/12/2023	62	13

The Wilcoxon Statistic is 81
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 3.53209
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is 3.53209
3.53209 > 2.326 indicating statistical significance at 1% level
3.53209 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Nickel, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	23	8
	4/2/2020	31	18
	9/30/2020	21	5
	3/22/2021	6.7 R	1
	9/8/2021	20	4
	3/14/2022	22	7
	9/12/2022	19	3
	3/13/2023	25	10
	9/11/2023	18	2
GWM-19D	11/14/2019	29	17
	3/25/2020	26	13
	9/29/2020	21	6
	3/22/2021	23	9
	9/15/2021	25	11
	3/24/2022	25	12
	9/15/2022	26	14
	3/16/2023	26	15
	9/14/2023	26	16

The Wilcoxon Statistic is 68
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 2.38416
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is 2.38416
2.38416 > 2.326 indicating statistical significance at 1% level
2.38416 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Potassium, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	3400	24
	4/2/2020	8100	30
	9/30/2020	4400	28
	3/22/2021	1400 R	3
	9/8/2021	6300	29
	3/14/2022	4000	26
	9/12/2022	4100	27
	3/13/2023	3400	25
	9/11/2023	3300	23
SMW-13	9/23/2013	1710	5
	3/21/2014	1700	4
	9/8/2014	1800	6
	3/18/2015	1800	7
	9/8/2015	1800	8
	3/14/2016	1800	9
	9/26/2016	1900	10
	3/30/2017	1900	11
	9/20/2017	1900	12
	3/30/2018	2000	13
	9/21/2018	2000	14
	3/11/2019	2000	15
	10/3/2019	2000	16
	3/23/2020	940	2
	9/25/2020	2100	17
	3/23/2021	190	1
	9/16/2021	2300	21
	3/23/2022	2200	18
	9/16/2022	2200	19
	3/17/2023	2300	22
	9/15/2023	2200	20

The Wilcoxon Statistic is 19
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -3.43948
The Standard Deviation adjusted for ties is 22.0964
The Z Score adjusted for ties is -3.43948
-3.43948 < 2.326 indicating no statistical significance at 1% level
-3.43948 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Potassium, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	3400	25
	4/2/2020	8100	31
	9/30/2020	4400	29
	3/22/2021	1400 R	1
	9/8/2021	6300	30
	3/14/2022	4000	27
	9/12/2022	4100	28
	3/13/2023	3400	26
	9/11/2023	3300	24
SMW-32	9/23/2013	1940	3
	12/5/2013	1780	2
	3/19/2014	2000	4
	9/8/2014	2100	5
	3/18/2015	2100	6
	9/8/2015	2400	13
	3/14/2016	2300	9
	9/20/2016	2200	7
	3/24/2017	2200	8
	9/20/2017	2300	10
	3/27/2018	2300	11
	9/18/2018	2300	12
	3/11/2019	2400	14
	10/3/2019	2400	15
	3/23/2020	2400	16
	9/24/2020	2500	18
	3/23/2021	2900	23
	9/16/2021	2600	20
	3/24/2022	2600	21
	9/16/2022	2700	22
	3/17/2023	2500	19
	9/15/2023	2400	17

The Wilcoxon Statistic is 22
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is -3.37275
The Standard Deviation adjusted for ties is 22.9783
The Z Score adjusted for ties is -3.37275
-3.37275 < 2.326 indicating no statistical significance at 1% level
-3.37275 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Potassium, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	3400	19
	4/2/2020	8100	25
	9/30/2020	4400	23
	3/22/2021	1400 R	1
	9/8/2021	6300	24
	3/14/2022	4000	21
	9/12/2022	4100	22
	3/13/2023	3400	20
	9/11/2023	3300	18
GWM-15D	3/21/2016	2400	10
	9/23/2016	2300	5
	3/28/2017	2300	6
	9/21/2017	2000	2
	3/16/2018	2100	3
	9/19/2018	2100	4
	3/5/2019	2300	7
	10/3/2019	2300	8
	3/25/2020	2300	9
	9/28/2020	2400	11
	3/19/2021	2500	12
	9/15/2021	2600	13
	3/22/2022	2700	15
	9/14/2022	2800	16
	3/16/2023	2800	17
	9/12/2023	2600	14

The Wilcoxon Statistic is 16
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -3.19868
The Standard Deviation adjusted for ties is 17.6635
The Z Score adjusted for ties is -3.19868
-3.19868 < 2.326 indicating no statistical significance at 1% level
-3.19868 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Potassium, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	3400	3
	4/2/2020	8100	18
	9/30/2020	4400	12
	3/22/2021	1400 R	1
	9/8/2021	6300	17
	3/14/2022	4000	6
	9/12/2022	4100	8
	3/13/2023	3400	4
	9/11/2023	3300	2
GWM-17D	11/14/2019	4200	10
	3/26/2020	5300	15
	9/29/2020	5000	14
	3/16/2021	4200	11
	9/14/2021	4000	7
	3/18/2022	4500	13
	9/13/2022	5400	16
	3/14/2023	4100	9
	9/12/2023	3500	5

The Wilcoxon Statistic is 55
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 1.23623
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is 1.23623
1.23623 < 2.326 indicating no statistical significance at 1% level
1.23623 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Potassium, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	3400	10
	4/2/2020	8100	17
	9/30/2020	4400	14
	3/22/2021	1400 R	1
	9/8/2021	6300	16
	3/14/2022	4000	12
	9/12/2022	4100	13
	3/13/2023	3400	11
	9/11/2023	3300	9
GWM-19D	11/14/2019	9100	18
	3/25/2020	5600	15
	9/29/2020	2700	6
	3/22/2021	2700	7
	9/15/2021	2800	8
	3/24/2022	2200	3
	9/15/2022	2300	4
	3/16/2023	2100	2
	9/14/2023	2500	5

The Wilcoxon Statistic is 23
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -1.58944
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is -1.58944
-1.58944 < 2.326 indicating no statistical significance at 1% level
-1.58944 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Selenium, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 30
Non detect rank is 15.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	15.5
	4/2/2020	ND<5 U	15.5
	9/30/2020	ND<5 U	15.5
	3/22/2021	ND<2.2 J	15.5
	9/8/2021	ND<1.9 J	15.5
	3/14/2022	ND<5.6	15.5
	9/12/2022	ND<5.6	15.5
	3/13/2023	ND<5.6	15.5
	9/11/2023	ND<5.6	15.5
SMW-13	9/23/2013	ND<5	15.5
	3/21/2014	ND<5 U	15.5
	9/8/2014	ND<5 U	15.5
	3/18/2015	ND<5 U	15.5
	9/8/2015	ND<5 U	15.5
	3/14/2016	ND<5 U	15.5
	9/26/2016	ND<5 U	15.5
	3/30/2017	ND<5 U	15.5
	9/20/2017	ND<5 U	15.5
	3/30/2018	ND<5 U	15.5
	9/21/2018	ND<5 U	15.5
	3/11/2019	ND<5 U	15.5
	10/3/2019	ND<5 U	15.5
	3/23/2020	ND<5 U	15.5
	9/25/2020	ND<5 U	15.5
	3/23/2021	ND<5 U	15.5
	9/16/2021	ND<1.1 J	15.5
	3/23/2022	ND<5.6	15.5
	9/16/2022	ND<5.6	15.5
	3/17/2023	ND<5.6	15.5
	9/15/2023	ND<5.6	15.5

The Wilcoxon Statistic is 94.5
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -0.0226281
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0226281 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Selenium, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 31
Non detect rank is 16

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	16
	4/2/2020	ND<5 U	16
	9/30/2020	ND<5 U	16
	3/22/2021	ND<2.2 J	16
	9/8/2021	ND<1.9 J	16
	3/14/2022	ND<5.6	16
	9/12/2022	ND<5.6	16
	3/13/2023	ND<5.6	16
	9/11/2023	ND<5.6	16
SMW-32	9/23/2013	ND<5	16
	12/5/2013	ND<5	16
	3/19/2014	ND<5 U	16
	9/8/2014	ND<5 U	16
	3/18/2015	ND<5 U	16
	9/8/2015	ND<5 U	16
	3/14/2016	ND<5 U	16
	9/20/2016	ND<5 U	16
	3/24/2017	ND<5 U	16
	9/20/2017	ND<5 U	16
	3/27/2018	ND<5 U	16
	9/18/2018	ND<5 U	16
	3/11/2019	ND<5 U	16
	10/3/2019	ND<5 U	16
	3/23/2020	ND<5 U	16
	9/24/2020	ND<5 U	16
	3/23/2021	ND<5 U	16
	9/16/2021	ND<1.4 J	16
	3/24/2022	ND<5.6	16
	9/16/2022	ND<5.6	16
	3/17/2023	ND<5.6	16
	9/15/2023	ND<5.6	16

The Wilcoxon Statistic is 99
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is -0.0217597
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0217597 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Selenium, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 25
Non detect rank is 13

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	13
	4/2/2020	ND<5 U	13
	9/30/2020	ND<5 U	13
	3/22/2021	ND<2.2 J	13
	9/8/2021	ND<1.9 J	13
	3/14/2022	ND<5.6	13
	9/12/2022	ND<5.6	13
	3/13/2023	ND<5.6	13
	9/11/2023	ND<5.6	13
GWM-15D	3/21/2016	ND<5 U	13
	9/23/2016	ND<5 U	13
	3/28/2017	ND<5 U	13
	9/21/2017	ND<5 U	13
	3/16/2018	ND<5 U	13
	9/19/2018	ND<5 U	13
	3/5/2019	ND<5 U	13
	10/3/2019	ND<5 U	13
	3/25/2020	ND<5 U	13
	9/28/2020	ND<5 U	13
	3/19/2021	ND<5 U	13
	9/15/2021	ND<5 U	13
	3/22/2022	ND<5.6	13
	9/14/2022	ND<5.6	13
	3/16/2023	ND<5.6	13
	9/12/2023	ND<5.6	13

The Wilcoxon Statistic is 72
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -0.0283069
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0283069 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Selenium, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	9.5
	4/2/2020	ND<5 U	9.5
	9/30/2020	ND<5 U	9.5
	3/22/2021	ND<2.2 J	9.5
	9/8/2021	ND<1.9 J	9.5
	3/14/2022	ND<5.6	9.5
	9/12/2022	ND<5.6	9.5
	3/13/2023	ND<5.6	9.5
	9/11/2023	ND<5.6	9.5
GWM-17D	11/14/2019	ND<5 U	9.5
	3/26/2020	ND<5 U	9.5
	9/29/2020	ND<5 U	9.5
	3/16/2021	ND<5 U	9.5
	9/14/2021	ND<0.85 J	9.5
	3/18/2022	ND<5.6	9.5
	9/13/2022	ND<5.6	9.5
	3/14/2023	ND<5.6	9.5
	9/12/2023	ND<5.6	9.5

The Wilcoxon Statistic is 40.5
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.0441511
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0441511 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Selenium, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	9.5
	4/2/2020	ND<5 U	9.5
	9/30/2020	ND<5 U	9.5
	3/22/2021	ND<2.2 J	9.5
	9/8/2021	ND<1.9 J	9.5
	3/14/2022	ND<5.6	9.5
	9/12/2022	ND<5.6	9.5
	3/13/2023	ND<5.6	9.5
	9/11/2023	ND<5.6	9.5
GWM-19D	11/14/2019	ND<5 U	9.5
	3/25/2020	ND<5 U	9.5
	9/29/2020	ND<5 U	9.5
	3/22/2021	ND<2.1 J	9.5
	9/15/2021	ND<1.5 J	9.5
	3/24/2022	ND<5.6	9.5
	9/15/2022	ND<5.6	9.5
	3/16/2023	ND<5.6	9.5
	9/14/2023	ND<5.6	9.5

The Wilcoxon Statistic is 40.5
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.0441511
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0441511 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Silver, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 30
Non detect rank is 15.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	15.5
	4/2/2020	ND<5 U	15.5
	9/30/2020	ND<5 U	15.5
	3/22/2021	ND<5 U	15.5
	9/8/2021	ND<5 U	15.5
	3/14/2022	ND<2.2	15.5
	9/12/2022	ND<2.2	15.5
	3/13/2023	ND<2.2	15.5
	9/11/2023	ND<2.2	15.5
SMW-13	9/23/2013	ND<5	15.5
	3/21/2014	ND<5 U	15.5
	9/8/2014	ND<5 U	15.5
	3/18/2015	ND<5 U	15.5
	9/8/2015	ND<5 U	15.5
	3/14/2016	ND<5 U	15.5
	9/26/2016	ND<5 U	15.5
	3/30/2017	ND<5 U	15.5
	9/20/2017	ND<5 U	15.5
	3/30/2018	ND<5 U	15.5
	9/21/2018	ND<5 U	15.5
	3/11/2019	ND<5 U	15.5
	10/3/2019	ND<5 U	15.5
	3/23/2020	ND<5 U	15.5
	9/25/2020	ND<5 U	15.5
	3/23/2021	ND<5 U	15.5
	9/16/2021	ND<5 U	15.5
	3/23/2022	ND<2.2	15.5
	9/16/2022	ND<2.2	15.5
	3/17/2023	ND<2.2	15.5
	9/15/2023	ND<2.2	15.5

The Wilcoxon Statistic is 94.5
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -0.0226281
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0226281 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Silver, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 30
Non detect rank is 15.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	15.5
	4/2/2020	ND<5 U	15.5
	9/30/2020	ND<5 U	15.5
	3/22/2021	ND<5 U	15.5
	9/8/2021	ND<5 U	15.5
	3/14/2022	ND<2.2	15.5
	9/12/2022	ND<2.2	15.5
	3/13/2023	ND<2.2	15.5
	9/11/2023	ND<2.2	15.5
SMW-32	9/23/2013	ND<5	15.5
	3/19/2014	ND<5 U	15.5
	9/8/2014	ND<5 U	15.5
	3/18/2015	ND<5 U	15.5
	9/8/2015	ND<5 U	15.5
	3/14/2016	ND<5 U	15.5
	9/20/2016	ND<5 U	15.5
	3/24/2017	ND<5 U	15.5
	9/20/2017	ND<5 U	15.5
	3/27/2018	ND<5 U	15.5
	9/18/2018	ND<5 U	15.5
	3/11/2019	ND<5 U	15.5
	10/3/2019	ND<5 U	15.5
	3/23/2020	ND<5 U	15.5
	9/24/2020	ND<5 U	15.5
	3/23/2021	ND<5 U	15.5
	9/16/2021	ND<5 U	15.5
	3/24/2022	ND<2.2	15.5
	9/16/2022	ND<2.2	15.5
	3/17/2023	ND<2.2	15.5
	9/15/2023	ND<2.2	15.5

The Wilcoxon Statistic is 94.5
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -0.0226281
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0226281 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Silver, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 25
Non detect rank is 13

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	13
	4/2/2020	ND<5 U	13
	9/30/2020	ND<5 U	13
	3/22/2021	ND<5 U	13
	9/8/2021	ND<5 U	13
	3/14/2022	ND<2.2	13
	9/12/2022	ND<2.2	13
	3/13/2023	ND<2.2	13
	9/11/2023	ND<2.2	13
GWM-15D	3/21/2016	ND<5 U	13
	9/23/2016	ND<5 U	13
	3/28/2017	ND<5 U	13
	9/21/2017	ND<5 U	13
	3/16/2018	ND<5 U	13
	9/19/2018	ND<5 U	13
	3/5/2019	ND<5 U	13
	10/3/2019	ND<5 U	13
	3/25/2020	ND<5 U	13
	9/28/2020	ND<5 U	13
	3/19/2021	ND<5 U	13
	9/15/2021	ND<5 U	13
	3/22/2022	ND<2.2	13
	9/14/2022	ND<2.2	13
	3/16/2023	ND<2.2	13
	9/12/2023	ND<2.2	13

The Wilcoxon Statistic is 72
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -0.0283069
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0283069 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Silver, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	9.5
	4/2/2020	ND<5 U	9.5
	9/30/2020	ND<5 U	9.5
	3/22/2021	ND<5 U	9.5
	9/8/2021	ND<5 U	9.5
	3/14/2022	ND<2.2	9.5
	9/12/2022	ND<2.2	9.5
	3/13/2023	ND<2.2	9.5
	9/11/2023	ND<2.2	9.5
GWM-17D	11/14/2019	ND<5 U	9.5
	3/26/2020	ND<5 U	9.5
	9/29/2020	ND<5 U	9.5
	3/16/2021	ND<5 U	9.5
	9/14/2021	ND<5 U	9.5
	3/18/2022	ND<2.2	9.5
	9/13/2022	ND<2.2	9.5
	3/14/2023	ND<2.2	9.5
	9/12/2023	ND<2.2	9.5

The Wilcoxon Statistic is 40.5
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.0441511
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0441511 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Silver, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	9.5
	4/2/2020	ND<5 U	9.5
	9/30/2020	ND<5 U	9.5
	3/22/2021	ND<5 U	9.5
	9/8/2021	ND<5 U	9.5
	3/14/2022	ND<2.2	9.5
	9/12/2022	ND<2.2	9.5
	3/13/2023	ND<2.2	9.5
	9/11/2023	ND<2.2	9.5
GWM-19D	11/14/2019	ND<5 U	9.5
	3/25/2020	ND<5 U	9.5
	9/29/2020	ND<5 U	9.5
	3/22/2021	ND<5 U	9.5
	9/15/2021	ND<5 U	9.5
	3/24/2022	ND<2.2	9.5
	9/15/2022	ND<2.2	9.5
	3/16/2023	ND<2.2	9.5
	9/14/2023	ND<2.2	9.5

The Wilcoxon Statistic is 40.5
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.0441511
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0441511 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Sodium, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	30500	13
	4/2/2020	37200	26
	9/30/2020	32200	16
	3/22/2021	970 R	1
	9/8/2021	35000	23
	3/14/2022	34400	22
	9/12/2022	32600	18
	3/13/2023	32600	19
	9/11/2023	32000	15
SMW-13	9/23/2013	20510	4
	3/21/2014	21000	5
	9/8/2014	22400	7
	3/18/2015	21200	6
	9/8/2015	23200	8
	3/14/2016	23700	9
	9/26/2016	25400	10
	3/30/2017	26000	11
	9/20/2017	28200	12
	3/30/2018	33000	20
	9/21/2018	31600	14
	3/11/2019	33500	21
	10/3/2019	32200	17
	3/23/2020	11800	3
	9/25/2020	35600	24
	3/23/2021	2100	2
	9/16/2021	36000	25
	3/23/2022	42700	29
	9/16/2022	41400	28
	3/17/2023	43200	30
	9/15/2023	40900	27

The Wilcoxon Statistic is 81
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -0.633588
The Standard Deviation adjusted for ties is 22.0964
The Z Score adjusted for ties is -0.633588
-0.633588 < 2.326 indicating no statistical significance at 1% level
-0.633588 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Sodium, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	30500	12
	4/2/2020	37200	23
	9/30/2020	32200	15
	3/22/2021	970 R	1
	9/8/2021	35000	20
	3/14/2022	34400	19
	9/12/2022	32600	16
	3/13/2023	32600	17
	9/11/2023	32000	13
SMW-32	9/23/2013	21240	3
	12/5/2013	20400	2
	3/19/2014	23400	4
	9/8/2014	24000	5
	3/18/2015	24700	6
	9/8/2015	26900	7
	3/14/2016	28000	8
	9/20/2016	28600	10
	3/24/2017	28000	9
	9/20/2017	29700	11
	3/27/2018	32000	14
	9/18/2018	33500	18
	3/11/2019	36400	22
	10/3/2019	35300	21
	3/23/2020	38000	24
	9/24/2020	38100	25
	3/23/2021	43300	30
	9/16/2021	40000	27
	3/24/2022	45400	31
	9/16/2022	39600	26
	3/17/2023	41700	29
	9/15/2023	40400	28

The Wilcoxon Statistic is 107
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is 0.326396
The Standard Deviation adjusted for ties is 22.9783
The Z Score adjusted for ties is 0.326396
0.326396 < 2.326 indicating no statistical significance at 1% level
0.326396 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Sodium, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	30500	9
	4/2/2020	37200	25
	9/30/2020	32200	14
	3/22/2021	970 R	1
	9/8/2021	35000	19
	3/14/2022	34400	18
	9/12/2022	32600	16
	3/13/2023	32600	17
	9/11/2023	32000	13
GWM-15D	3/21/2016	28600	7
	9/23/2016	27400	6
	3/28/2017	26100	3
	9/21/2017	24900	2
	3/16/2018	26400	4
	9/19/2018	26800	5
	3/5/2019	30600	10
	10/3/2019	30400	8
	3/25/2020	30900	12
	9/28/2020	30700	11
	3/19/2021	35200	22
	9/15/2021	35000	20
	3/22/2022	35800	24
	9/14/2022	35600	23
	3/16/2023	35100	21
	9/12/2023	32400	15

The Wilcoxon Statistic is 57
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -0.877515
The Standard Deviation adjusted for ties is 17.6635
The Z Score adjusted for ties is -0.877515
-0.877515 < 2.326 indicating no statistical significance at 1% level
-0.877515 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Sodium, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	30500	2
	4/2/2020	37200	12
	9/30/2020	32200	4
	3/22/2021	970 R	1
	9/8/2021	35000	10
	3/14/2022	34400	8
	9/12/2022	32600	5
	3/13/2023	32600	6
	9/11/2023	32000	3
GWM-17D	11/14/2019	34400	9
	3/26/2020	33900	7
	9/29/2020	35400	11
	3/16/2021	37600	13
	9/14/2021	38000	14
	3/18/2022	39100	15
	9/13/2022	42100	18
	3/14/2023	41400	17
	9/12/2023	39200	16

The Wilcoxon Statistic is 75
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is 3.00227
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is 3.00227
3.00227 > 2.326 indicating statistical significance at 1% level
3.00227 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Sodium, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	30500	11
	4/2/2020	37200	18
	9/30/2020	32200	13
	3/22/2021	970 R	1
	9/8/2021	35000	17
	3/14/2022	34400	16
	9/12/2022	32600	14
	3/13/2023	32600	15
	9/11/2023	32000	12
GWM-19D	11/14/2019	23900	10
	3/25/2020	18500	9
	9/29/2020	14100	3
	3/22/2021	15000	6
	9/15/2021	15000	7
	3/24/2022	15100	8
	9/15/2022	13900	2
	3/16/2023	14400	4
	9/14/2023	14400	5

The Wilcoxon Statistic is 9
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -2.82567
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is -2.82567
-2.82567 < 2.326 indicating no statistical significance at 1% level
-2.82567 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Thallium, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 30
Non detect rank is 15.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	15.5
	4/2/2020	ND<5 U	15.5
	9/30/2020	ND<5 U	15.5
	3/22/2021	ND<5 U	15.5
	9/8/2021	ND<5 U	15.5
	3/14/2022	ND<1.1	15.5
	9/12/2022	ND<1.1	15.5
	3/13/2023	ND<1.1	15.5
	9/11/2023	ND<1.1	15.5
SMW-13	9/23/2013	ND<5	15.5
	3/21/2014	ND<5 U	15.5
	9/8/2014	ND<5 U	15.5
	3/18/2015	ND<5 U	15.5
	9/8/2015	ND<5 U	15.5
	3/14/2016	ND<5 U	15.5
	9/26/2016	ND<5 U	15.5
	3/30/2017	ND<5 U	15.5
	9/20/2017	ND<5 U	15.5
	3/30/2018	ND<5 U	15.5
	9/21/2018	ND<5 U	15.5
	3/11/2019	ND<5 U	15.5
	10/3/2019	ND<5 U	15.5
	3/23/2020	ND<5 U	15.5
	9/25/2020	ND<5 U	15.5
	3/23/2021	ND<5 U	15.5
	9/16/2021	ND<5 U	15.5
	3/23/2022	ND<1.1	15.5
	9/16/2022	ND<1.1	15.5
	3/17/2023	ND<1.1	15.5
	9/15/2023	ND<1.1	15.5

The Wilcoxon Statistic is 94.5
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -0.0226281
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0226281 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Thallium, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 31
Non detect rank is 16

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	16
	4/2/2020	ND<5 U	16
	9/30/2020	ND<5 U	16
	3/22/2021	ND<5 U	16
	9/8/2021	ND<5 U	16
	3/14/2022	ND<1.1	16
	9/12/2022	ND<1.1	16
	3/13/2023	ND<1.1	16
	9/11/2023	ND<1.1	16
SMW-32	9/23/2013	ND<5	16
	12/5/2013	ND<5	16
	3/19/2014	ND<5 U	16
	9/8/2014	ND<5 U	16
	3/18/2015	ND<5 U	16
	9/8/2015	ND<5 U	16
	3/14/2016	ND<5 U	16
	9/20/2016	ND<5 U	16
	3/24/2017	ND<5 U	16
	9/20/2017	ND<5 U	16
	3/27/2018	ND<5 U	16
	9/18/2018	ND<5 U	16
	3/11/2019	ND<5 U	16
	10/3/2019	ND<5 U	16
	3/23/2020	ND<5 U	16
	9/24/2020	ND<5 U	16
	3/23/2021	ND<5 U	16
	9/16/2021	ND<5 U	16
	3/24/2022	ND<1.1	16
	9/16/2022	ND<1.1	16
	3/17/2023	ND<1.1	16
	9/15/2023	ND<1.1	16

The Wilcoxon Statistic is 99
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is -0.0217597
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0217597 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Thallium, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 25
Non detect rank is 13

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	13
	4/2/2020	ND<5 U	13
	9/30/2020	ND<5 U	13
	3/22/2021	ND<5 U	13
	9/8/2021	ND<5 U	13
	3/14/2022	ND<1.1	13
	9/12/2022	ND<1.1	13
	3/13/2023	ND<1.1	13
	9/11/2023	ND<1.1	13
GWM-15D	3/21/2016	ND<5 U	13
	9/23/2016	ND<5 U	13
	3/28/2017	ND<5 U	13
	9/21/2017	ND<5 U	13
	3/16/2018	ND<5 U	13
	9/19/2018	ND<5 U	13
	3/5/2019	ND<5 U	13
	10/3/2019	ND<5 U	13
	3/25/2020	ND<5 U	13
	9/28/2020	ND<5 U	13
	3/19/2021	ND<5 U	13
	9/15/2021	ND<5 U	13
	3/22/2022	ND<1.1	13
	9/14/2022	ND<1.1	13
	3/16/2023	ND<1.1	13
	9/12/2023	ND<1.1	13

The Wilcoxon Statistic is 72
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -0.0283069
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0283069 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Thallium, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	9.5
	4/2/2020	ND<5 U	9.5
	9/30/2020	ND<5 U	9.5
	3/22/2021	ND<5 U	9.5
	9/8/2021	ND<5 U	9.5
	3/14/2022	ND<1.1	9.5
	9/12/2022	ND<1.1	9.5
	3/13/2023	ND<1.1	9.5
	9/11/2023	ND<1.1	9.5
GWM-17D	11/14/2019	ND<5 U	9.5
	3/26/2020	ND<5 U	9.5
	9/29/2020	ND<5 U	9.5
	3/16/2021	ND<5 U	9.5
	9/14/2021	ND<5 U	9.5
	3/18/2022	ND<1.1	9.5
	9/13/2022	ND<1.1	9.5
	3/14/2023	ND<1.1	9.5
	9/12/2023	ND<1.1	9.5

The Wilcoxon Statistic is 40.5
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.0441511
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0441511 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Thallium, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	9.5
	4/2/2020	ND<5 U	9.5
	9/30/2020	ND<5 U	9.5
	3/22/2021	ND<5 U	9.5
	9/8/2021	ND<5 U	9.5
	3/14/2022	ND<1.1	9.5
	9/12/2022	ND<1.1	9.5
	3/13/2023	ND<1.1	9.5
	9/11/2023	ND<1.1	9.5
GWM-19D	11/14/2019	ND<5 U	9.5
	3/25/2020	ND<5 U	9.5
	9/29/2020	ND<5 U	9.5
	3/22/2021	ND<5 U	9.5
	9/15/2021	ND<5 U	9.5
	3/24/2022	ND<1.1	9.5
	9/15/2022	ND<1.1	9.5
	3/16/2023	ND<1.1	9.5
	9/14/2023	ND<1.1	9.5

The Wilcoxon Statistic is 40.5
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.0441511
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0441511 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Vanadium, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 30
Non detect rank is 15.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	15.5
	4/2/2020	ND<5 U	15.5
	9/30/2020	ND<5 U	15.5
	3/22/2021	ND<5 U	15.5
	9/8/2021	ND<5 U	15.5
	3/14/2022	ND<2.2	15.5
	9/12/2022	ND<2.2	15.5
	3/13/2023	ND<2.2	15.5
	9/11/2023	ND<2.2	15.5
SMW-13	9/23/2013	ND<5	15.5
	3/21/2014	ND<5 U	15.5
	9/8/2014	ND<5 U	15.5
	3/18/2015	ND<5 U	15.5
	9/8/2015	ND<5 U	15.5
	3/14/2016	ND<5 U	15.5
	9/26/2016	ND<5 U	15.5
	3/30/2017	ND<5 U	15.5
	9/20/2017	ND<5 U	15.5
	3/30/2018	ND<5 U	15.5
	9/21/2018	ND<5 U	15.5
	3/11/2019	ND<5 U	15.5
	10/3/2019	ND<5 U	15.5
	3/23/2020	ND<0.83 J	15.5
	9/25/2020	ND<5 U	15.5
	3/23/2021	ND<5 U	15.5
	9/16/2021	ND<5 U	15.5
	3/23/2022	ND<2.2	15.5
	9/16/2022	ND<2.2	15.5
	3/17/2023	ND<2.2	15.5
	9/15/2023	ND<2.2	15.5

The Wilcoxon Statistic is 94.5
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is -0.0226281
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0226281 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Vanadium, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 31
Non detect rank is 16

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	16
	4/2/2020	ND<5 U	16
	9/30/2020	ND<5 U	16
	3/22/2021	ND<5 U	16
	9/8/2021	ND<5 U	16
	3/14/2022	ND<2.2	16
	9/12/2022	ND<2.2	16
	3/13/2023	ND<2.2	16
	9/11/2023	ND<2.2	16
SMW-32	9/23/2013	ND<5	16
	12/5/2013	ND<5	16
	3/19/2014	ND<5 U	16
	9/8/2014	ND<5 U	16
	3/18/2015	ND<5 U	16
	9/8/2015	ND<5 U	16
	3/14/2016	ND<5 U	16
	9/20/2016	ND<5 U	16
	3/24/2017	ND<5 U	16
	9/20/2017	ND<5 U	16
	3/27/2018	ND<5 U	16
	9/18/2018	ND<5 U	16
	3/11/2019	ND<5 U	16
	10/3/2019	ND<5 U	16
	3/23/2020	ND<5 U	16
	9/24/2020	ND<5 U	16
	3/23/2021	ND<5 U	16
	9/16/2021	ND<5 U	16
	3/24/2022	ND<2.2	16
	9/16/2022	ND<2.2	16
	3/17/2023	ND<2.2	16
	9/15/2023	ND<2.2	16

The Wilcoxon Statistic is 99
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is -0.0217597
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0217597 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Vanadium, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 25
Non detect rank is 13

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	13
	4/2/2020	ND<5 U	13
	9/30/2020	ND<5 U	13
	3/22/2021	ND<5 U	13
	9/8/2021	ND<5 U	13
	3/14/2022	ND<2.2	13
	9/12/2022	ND<2.2	13
	3/13/2023	ND<2.2	13
	9/11/2023	ND<2.2	13
GWM-15D	3/21/2016	ND<1.5 J	13
	9/23/2016	ND<5 U	13
	3/28/2017	ND<5 U	13
	9/21/2017	ND<5 U	13
	3/16/2018	ND<5 U	13
	9/19/2018	ND<5 U	13
	3/5/2019	ND<5 U	13
	10/3/2019	ND<5 U	13
	3/25/2020	ND<5 U	13
	9/28/2020	ND<5 U	13
	3/19/2021	ND<5 U	13
	9/15/2021	ND<1.1 J	13
	3/22/2022	ND<2.2	13
	9/14/2022	ND<2.2	13
	3/16/2023	ND<2.2	13
	9/12/2023	ND<1.5 J	13

The Wilcoxon Statistic is 72
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -0.0283069
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0283069 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Vanadium, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	9.5
	4/2/2020	ND<5 U	9.5
	9/30/2020	ND<5 U	9.5
	3/22/2021	ND<5 U	9.5
	9/8/2021	ND<5 U	9.5
	3/14/2022	ND<2.2	9.5
	9/12/2022	ND<2.2	9.5
	3/13/2023	ND<2.2	9.5
	9/11/2023	ND<2.2	9.5
GWM-17D	11/14/2019	ND<1.2 J	9.5
	3/26/2020	ND<5 U	9.5
	9/29/2020	ND<1.3 J	9.5
	3/16/2021	ND<1.1 J	9.5
	9/14/2021	ND<1.5 J	9.5
	3/18/2022	ND<1.1 J	9.5
	9/13/2022	ND<1.1 J	9.5
	3/14/2023	ND<1.3 J	9.5
	9/12/2023	ND<2.2	9.5

The Wilcoxon Statistic is 40.5
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.0441511
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0441511 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Vanadium, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 18
Non detect rank is 9.5

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	ND<5 U	9.5
	4/2/2020	ND<5 U	9.5
	9/30/2020	ND<5 U	9.5
	3/22/2021	ND<5 U	9.5
	9/8/2021	ND<5 U	9.5
	3/14/2022	ND<2.2	9.5
	9/12/2022	ND<2.2	9.5
	3/13/2023	ND<2.2	9.5
	9/11/2023	ND<2.2	9.5
GWM-19D	11/14/2019	ND<1.7 J	9.5
	3/25/2020	ND<5 U	9.5
	9/29/2020	ND<5 U	9.5
	3/22/2021	ND<5 U	9.5
	9/15/2021	ND<5 U	9.5
	3/24/2022	ND<2.2	9.5
	9/15/2022	ND<2.2	9.5
	3/16/2023	ND<2.2	9.5
	9/14/2023	ND<2.2	9.5

The Wilcoxon Statistic is 40.5
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.0441511
The Standard Deviation adjusted for ties is 0
The Z Score adjusted for ties is -1.#INF
-0.0441511 < 2.326 indicating no statistical significance at 1% level
-1.#INF < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Zinc, Total

Location: SMW-13

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 1
Non detect rank is 1

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	31	4
	4/2/2020	40	10
	9/30/2020	46	11
	3/22/2021	28 R	3
	9/8/2021	36	8
	3/14/2022	38	9
	9/12/2022	34	6
	3/13/2023	32	5
	9/11/2023	27	2
SMW-13	9/23/2013	90	14
	3/21/2014	110	16
	9/8/2014	140	17
	3/18/2015	87	13
	9/8/2015	2800	30
	3/14/2016	250	26
	9/26/2016	75	12
	3/30/2017	180	22
	9/20/2017	150	20
	3/30/2018	95	15
	9/21/2018	140	18
	3/11/2019	300	27
	10/3/2019	220	23
	3/23/2020	ND<2.5 J	1
	9/25/2020	650	29
	3/23/2021	34	7
	9/16/2021	150	21
	3/23/2022	350	28
	9/16/2022	230	24
	3/17/2023	140	19
	9/15/2023	240	25

The Wilcoxon Statistic is 176
The Expected value is is 94.5
The Standard Deviation is 22.0964
The Z Score is 3.66576
The Standard Deviation adjusted for ties is 22.0964
The Z Score adjusted for ties is 3.66576
3.66576 > 2.326 indicating statistical significance at 1% level
3.66576 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Zinc, Total

Location: SMW-32

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	31	3
	4/2/2020	40	8
	9/30/2020	46	9
	3/22/2021	28 R	2
	9/8/2021	36	6
	3/14/2022	38	7
	9/12/2022	34	5
	3/13/2023	32	4
	9/11/2023	27	1
SMW-32	9/23/2013	630	31
	12/5/2013	620	30
	3/19/2014	390	24
	9/8/2014	270	14
	3/18/2015	320	20
	9/8/2015	550	29
	3/14/2016	450	26
	9/20/2016	480	27
	3/24/2017	380	23
	9/20/2017	310	18
	3/27/2018	420	25
	9/18/2018	310	19
	3/11/2019	500	28
	10/3/2019	300	17
	3/23/2020	230	12
	9/24/2020	360	22
	3/23/2021	290	16
	9/16/2021	280	15
	3/24/2022	260	13
	9/16/2022	320	21
	3/17/2023	140	11
	9/15/2023	77	10

The Wilcoxon Statistic is 198
The Expected value is is 99
The Standard Deviation is 22.9783
The Z Score is 4.28666
The Standard Deviation adjusted for ties is 22.9783
The Z Score adjusted for ties is 4.28666
4.28666 > 2.326 indicating statistical significance at 1% level
4.28666 > 2.326 indicating statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Zinc, Total

Location: GWM-15D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	31	19
	4/2/2020	40	24
	9/30/2020	46	25
	3/22/2021	28 R	18
	9/8/2021	36	22
	3/14/2022	38	23
	9/12/2022	34	21
	3/13/2023	32	20
	9/11/2023	27	17
GWM-15D	3/21/2016	23	16
	9/23/2016	11	13
	3/28/2017	10	11
	9/21/2017	9.2	5
	3/16/2018	9.3	7
	9/19/2018	9.6	8
	3/5/2019	9	4
	10/3/2019	9.6	9
	3/25/2020	8.8	3
	9/28/2020	15	15
	3/19/2021	10	12
	9/15/2021	11	14
	3/22/2022	9.9	10
	9/14/2022	8.3	2
	3/16/2023	9.2	6
	9/12/2023	7.4	1

The Wilcoxon Statistic is 0
The Expected value is is 72
The Standard Deviation is 17.6635
The Z Score is -4.1045
The Standard Deviation adjusted for ties is 17.6635
The Z Score adjusted for ties is -4.1045
-4.1045 < 2.326 indicating no statistical significance at 1% level
-4.1045 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Zinc, Total

Location: GWM-17D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	31	6
	4/2/2020	40	17
	9/30/2020	46	18
	3/22/2021	28 R	2
	9/8/2021	36	12
	3/14/2022	38	16
	9/12/2022	34	10
	3/13/2023	32	8
	9/11/2023	27	1
GWM-17D	11/14/2019	31	7
	3/26/2020	28	3
	9/29/2020	36	13
	3/16/2021	36	14
	9/14/2021	36	15
	3/18/2022	35	11
	9/13/2022	28	4
	3/14/2023	32	9
	9/12/2023	30	5

The Wilcoxon Statistic is 36
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.441511
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is -0.441511
-0.441511 < 2.326 indicating no statistical significance at 1% level
-0.441511 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

Wilcoxon Non-Parametric Analysis (Inter-Well)

Parameter: Zinc, Total

Location: GWM-19D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total non detects is 0
Non detect rank is 0

Wilcoxon Ranks

Location	Date	Conc.	Rank
GWM-16D	11/15/2019	31	5
	4/2/2020	40	16
	9/30/2020	46	18
	3/22/2021	28 R	3
	9/8/2021	36	14
	3/14/2022	38	15
	9/12/2022	34	11
	3/13/2023	32	8
	9/11/2023	27	2
GWM-19D	11/14/2019	44	17
	3/25/2020	28	4
	9/29/2020	26	1
	3/22/2021	32	9
	9/15/2021	34	12
	3/24/2022	34	13
	9/15/2022	31	6
	3/16/2023	32	10
	9/14/2023	31	7

The Wilcoxon Statistic is 34
The Expected value is is 40.5
The Standard Deviation is 11.3248
The Z Score is -0.618115
The Standard Deviation adjusted for ties is 11.3248
The Z Score adjusted for ties is -0.618115
-0.618115 < 2.326 indicating no statistical significance at 1% level
-0.618115 < 2.326 indicating no statistical significance at 1% level when adjusted for ties

12) Patuxent Aquifer Metals Intra-well Statistics

APPENDIX F

Shapiro-Francia Test of Normality

Parameter: Antimony, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	0	-1.82501	12.633	0
4	0	-1.6954	15.5074	0
5	0	-1.58047	18.0052	0
6	0	-1.49085	20.2279	0
7	0	-1.40507	22.2021	0
8	0	-1.33462	23.9833	0
9	0	-1.26464	25.5826	0
10	0	-1.20553	27.0359	0
11	0	-1.1455	28.3481	0
12	0	-1.0939	29.5447	0
13	0	-1.04073	30.6278	0
14	0	-0.994457	31.6168	0
15	0	-0.946291	32.5123	0
16	0	-0.903992	33.3295	0
17	0	-0.859618	34.0684	0
18	0	-0.820379	34.7414	0
19	0	-0.778966	35.3482	0
20	0	-0.742143	35.899	0
21	0	-0.703089	36.3933	0
22	0	-0.668209	36.8398	0
23	0	-0.631062	37.2381	0
24	0	-0.597761	37.5954	0
25	0	-0.56217	37.9114	0
26	0	-0.530162	38.1925	0
27	0	-0.49585	38.4384	0
28	0	-0.464904	38.6545	0
29	0	-0.431644	38.8408	0
30	0	-0.401571	39.0021	0
31	0	-0.369171	39.1384	0
32	0	-0.33981	39.2538	0
33	0	-0.308108	39.3488	0
34	0	-0.279319	39.4268	0
35	0	-0.248174	39.4884	0
36	0	-0.219834	39.5367	0
37	0	-0.189118	39.5725	0
38	0	-0.161119	39.5984	0
39	0	-0.130716	39.6155	0
40	0	-0.102953	39.6261	0
41	0	-0.0727562	39.6314	0
42	0	-0.0451348	39.6334	0
43	0	-0.0150408	39.6337	0
44	0	0.0150408	39.6339	0
45	0	0.0451348	39.6359	0
46	0	0.0727562	39.6412	0
47	0	0.102953	39.6518	0

48	0	0.130716	39.6689	0
49	0	0.161119	39.6949	0
50	0	0.189118	39.7306	0
51	0	0.219834	39.779	0
52	0	0.248174	39.8405	0
53	0	0.279319	39.9186	0
54	0	0.308108	40.0135	0
55	0	0.33981	40.129	0
56	0	0.369171	40.2653	0
57	0	0.401571	40.4265	0
58	0	0.431644	40.6128	0
59	0	0.464904	40.829	0
60	0	0.49585	41.0748	0
61	0	0.530162	41.3559	0
62	0	0.56217	41.6719	0
63	0	0.597761	42.0293	0
64	0	0.631062	42.4275	0
65	0	0.668209	42.874	0
66	0	0.703089	43.3683	0
67	0	0.742143	43.9191	0
68	0	0.778966	44.5259	0
69	0	0.820379	45.1989	0
70	0	0.859618	45.9379	0
71	0	0.903992	46.7551	0
72	0	0.946291	47.6505	0
73	0	0.994457	48.6395	0
74	0	1.04073	49.7226	0
75	0	1.0939	50.9192	0
76	0	1.1455	52.2314	0
77	0	1.20553	53.6847	0
78	0	1.26464	55.284	0
79	0	1.33462	57.0652	0
80	0	1.40507	59.0395	0
81	0	1.49085	61.2621	0
82	0	1.58047	63.76	0
83	0	1.6954	66.6343	0
84	0	1.82501	69.965	0
85	0	2.01409	74.0216	0
86	0	2.29036	79.2673	0

Data Set Standard Deviation = 0

Divide by Zero Error

Parametric Prediction Interval Analysis

Intra-Well Comparison for SMW-13

Parameter: Antimony, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	9/23/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/18/2015	ND<0 U
	9/8/2015	ND<0 J
	3/14/2016	ND<0 U
	9/26/2016	ND<0 U
	3/30/2017	ND<0 U
	9/20/2017	ND<0 U
	3/30/2018	ND<0 U
	9/21/2018	ND<0 U
	3/11/2019	ND<0 U
	10/3/2019	ND<0 U
	3/23/2020	ND<0 U
	9/25/2020	ND<0 U
	3/23/2021	ND<0 U
	9/16/2021	ND<0 U
	3/23/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

From 20 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.72913 at 19 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/15/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for SMW-32

Parameter: Antimony, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	9/23/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/8/2014	ND<0 U
	3/18/2015	ND<0 U
	9/8/2015	ND<0 U
	3/14/2016	ND<0 J
	9/20/2016	ND<0 U
	3/24/2017	ND<0 U
	9/20/2017	ND<0 U
	3/27/2018	ND<0 U
	9/18/2018	ND<0 U
	3/11/2019	ND<0 U
	10/3/2019	ND<0 U
	3/23/2020	ND<0 U
	9/24/2020	ND<0 U
	3/23/2021	ND<0 U
	9/16/2021	ND<0 U
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

From 21 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.72472 at 20 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/15/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for GWM-15D

Parameter: Antimony, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/28/2017	ND<0 U
	9/21/2017	ND<0 U
	3/16/2018	ND<0 U
	9/19/2018	ND<0 U
	3/5/2019	ND<0 U
	10/3/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

From 15 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.76131 at 14 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/12/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for GWM-17D

Parameter: Antimony, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

From 8 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.89458 at 7 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/12/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for GWM-19D

Parameter: Antimony, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	11/14/2019	ND<0 U
	3/25/2020	ND<0 U
	9/29/2020	ND<0 U
	3/22/2021	ND<0 J
	9/15/2021	ND<0 U
	3/24/2022	ND<0
	9/15/2022	ND<0
	3/16/2023	ND<0

From 8 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.89458 at 7 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/14/2023	1	0	[0, 0]	FALSE

Shapiro-Francia Test of Normality

Parameter: Arsenic, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	0	-1.82501	12.633	0
4	0	-1.6954	15.5074	0
5	0	-1.58047	18.0052	0
6	0	-1.49085	20.2279	0
7	0	-1.40507	22.2021	0
8	0	-1.33462	23.9833	0
9	0	-1.26464	25.5826	0
10	0	-1.20553	27.0359	0
11	0	-1.1455	28.3481	0
12	0	-1.0939	29.5447	0
13	0	-1.04073	30.6278	0
14	0	-0.994457	31.6168	0
15	0	-0.946291	32.5123	0
16	0	-0.903992	33.3295	0
17	0	-0.859618	34.0684	0
18	0	-0.820379	34.7414	0
19	0	-0.778966	35.3482	0
20	0	-0.742143	35.899	0
21	0	-0.703089	36.3933	0
22	0	-0.668209	36.8398	0
23	0	-0.631062	37.2381	0
24	0	-0.597761	37.5954	0
25	0	-0.56217	37.9114	0
26	0	-0.530162	38.1925	0
27	0	-0.49585	38.4384	0
28	0	-0.464904	38.6545	0
29	0	-0.431644	38.8408	0
30	0	-0.401571	39.0021	0
31	0	-0.369171	39.1384	0
32	0	-0.33981	39.2538	0
33	0	-0.308108	39.3488	0
34	0	-0.279319	39.4268	0
35	0	-0.248174	39.4884	0
36	0	-0.219834	39.5367	0
37	0	-0.189118	39.5725	0
38	0	-0.161119	39.5984	0
39	0	-0.130716	39.6155	0
40	0	-0.102953	39.6261	0
41	0	-0.0727562	39.6314	0
42	0	-0.0451348	39.6334	0
43	0	-0.0150408	39.6337	0
44	0	0.0150408	39.6339	0
45	0	0.0451348	39.6359	0
46	0	0.0727562	39.6412	0
47	0	0.102953	39.6518	0

48	0	0.130716	39.6689	0
49	0	0.161119	39.6949	0
50	0	0.189118	39.7306	0
51	0	0.219834	39.779	0
52	0	0.248174	39.8405	0
53	0	0.279319	39.9186	0
54	0	0.308108	40.0135	0
55	0	0.33981	40.129	0
56	0	0.369171	40.2653	0
57	0	0.401571	40.4265	0
58	0	0.431644	40.6128	0
59	0	0.464904	40.829	0
60	0	0.49585	41.0748	0
61	0	0.530162	41.3559	0
62	0	0.56217	41.6719	0
63	0	0.597761	42.0293	0
64	0	0.631062	42.4275	0
65	0	0.668209	42.874	0
66	0	0.703089	43.3683	0
67	0	0.742143	43.9191	0
68	0	0.778966	44.5259	0
69	0	0.820379	45.1989	0
70	0	0.859618	45.9379	0
71	0	0.903992	46.7551	0
72	0	0.946291	47.6505	0
73	0	0.994457	48.6395	0
74	0	1.04073	49.7226	0
75	0	1.0939	50.9192	0
76	0	1.1455	52.2314	0
77	0	1.20553	53.6847	0
78	0	1.26464	55.284	0
79	0	1.33462	57.0652	0
80	0	1.40507	59.0395	0
81	0	1.49085	61.2621	0
82	0	1.58047	63.76	0
83	0	1.6954	66.6343	0
84	0	1.82501	69.965	0
85	0	2.01409	74.0216	0
86	0	2.29036	79.2673	0

Data Set Standard Deviation = 0

Divide by Zero Error

Parametric Prediction Interval Analysis

Intra-Well Comparison for SMW-13

Parameter: Arsenic, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	9/23/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/18/2015	ND<0 U
	9/8/2015	ND<0 U
	3/14/2016	ND<0 U
	9/26/2016	ND<0 U
	3/30/2017	ND<0 U
	9/20/2017	ND<0 U
	3/30/2018	ND<0 U
	9/21/2018	ND<0 U
	3/11/2019	ND<0 U
	10/3/2019	ND<0 U
	3/23/2020	ND<0 U
	9/25/2020	ND<0 U
	3/23/2021	ND<0 U
	9/16/2021	ND<0 J
	3/23/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

From 20 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.72913 at 19 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/15/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for SMW-32

Parameter: Arsenic, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	9/23/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/8/2014	ND<0 U
	3/18/2015	ND<0 U
	9/8/2015	ND<0 U
	3/14/2016	ND<0 U
	9/20/2016	ND<0 U
	3/24/2017	ND<0 U
	9/20/2017	ND<0 U
	3/27/2018	ND<0 U
	9/18/2018	ND<0 U
	3/11/2019	ND<0 U
	10/3/2019	ND<0 U
	3/23/2020	ND<0 U
	9/24/2020	ND<0 U
	3/23/2021	ND<0 U
	9/16/2021	ND<0 J
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

From 21 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.72472 at 20 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/15/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for GWM-15D

Parameter: Arsenic, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/28/2017	ND<0 U
	9/21/2017	ND<0 U
	3/16/2018	ND<0 U
	9/19/2018	ND<0 U
	3/5/2019	ND<0 U
	10/3/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 J
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

From 15 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.76131 at 14 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/12/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for GWM-17D

Parameter: Arsenic, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 J
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

From 8 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.89458 at 7 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/12/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for GWM-19D

Parameter: Arsenic, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	11/14/2019	ND<0 U
	3/25/2020	ND<0 U
	9/29/2020	ND<0 U
	3/22/2021	ND<0 U
	9/15/2021	ND<0 J
	3/24/2022	ND<0
	9/15/2022	ND<0
	3/16/2023	ND<0

From 8 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.89458 at 7 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/14/2023	1	0	[0, 0]	FALSE

Shapiro-Francia Test of Normality

Parameter: Barium, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	14	-2.01409	9.30234	-28.1973
3	49	-1.82501	12.633	-117.623
4	54	-1.6954	15.5074	-209.174
5	54	-1.58047	18.0052	-294.519
6	57	-1.49085	20.2279	-379.498
7	59	-1.40507	22.2021	-462.397
8	60	-1.33462	23.9833	-542.475
9	60	-1.26464	25.5826	-618.353
10	61	-1.20553	27.0359	-691.89
11	62	-1.1455	28.3481	-762.911
12	68	-1.0939	29.5447	-837.296
13	76	-1.04073	30.6278	-916.392
14	78	-0.994457	31.6168	-993.96
15	80	-0.946291	32.5123	-1069.66
16	80	-0.903992	33.3295	-1141.98
17	81	-0.859618	34.0684	-1211.61
18	82	-0.820379	34.7414	-1278.88
19	84	-0.778966	35.3482	-1344.32
20	86	-0.742143	35.899	-1408.14
21	86	-0.703089	36.3933	-1468.61
22	87	-0.668209	36.8398	-1526.74
23	88	-0.631062	37.2381	-1582.27
24	90	-0.597761	37.5954	-1636.07
25	90	-0.56217	37.9114	-1686.67
26	91	-0.530162	38.1925	-1734.91
27	91	-0.49585	38.4384	-1780.03
28	91	-0.464904	38.6545	-1822.34
29	96	-0.431644	38.8408	-1863.78
30	96	-0.401571	39.0021	-1902.33
31	97	-0.369171	39.1384	-1938.14
32	99	-0.33981	39.2538	-1971.78
33	99	-0.308108	39.3488	-2002.28
34	100	-0.279319	39.4268	-2030.21
35	100	-0.248174	39.4884	-2055.03
36	100	-0.219834	39.5367	-2077.02
37	100	-0.189118	39.5725	-2095.93
38	100	-0.161119	39.5984	-2112.04
39	110	-0.130716	39.6155	-2126.42
40	110	-0.102953	39.6261	-2137.74
41	110	-0.0727562	39.6314	-2145.75
42	110	-0.0451348	39.6334	-2150.71
43	110	-0.0150408	39.6337	-2152.37
44	110	0.0150408	39.6339	-2150.71
45	110	0.0451348	39.6359	-2145.75
46	110	0.0727562	39.6412	-2137.74
47	110	0.102953	39.6518	-2126.42

48	110	0.130716	39.6689	-2112.04
49	110	0.161119	39.6949	-2094.32
50	110	0.189118	39.7306	-2073.51
51	110	0.219834	39.779	-2049.33
52	120	0.248174	39.8405	-2019.55
53	120	0.279319	39.9186	-1986.03
54	120	0.308108	40.0135	-1949.06
55	120	0.33981	40.129	-1908.28
56	120	0.369171	40.2653	-1863.98
57	120	0.401571	40.4265	-1815.79
58	120	0.431644	40.6128	-1764
59	120	0.464904	40.829	-1708.21
60	120	0.49585	41.0748	-1648.71
61	120	0.530162	41.3559	-1585.09
62	120	0.56217	41.6719	-1517.63
63	120	0.597761	42.0293	-1445.89
64	120	0.631062	42.4275	-1370.17
65	130	0.668209	42.874	-1283.3
66	130	0.703089	43.3683	-1191.9
67	130	0.742143	43.9191	-1095.42
68	130	0.778966	44.5259	-994.153
69	140	0.820379	45.1989	-879.3
70	140	0.859618	45.9379	-758.954
71	140	0.903992	46.7551	-632.395
72	140	0.946291	47.6505	-499.914
73	140	0.994457	48.6395	-360.69
74	140	1.04073	49.7226	-214.988
75	140	1.0939	50.9192	-61.8421
76	140	1.1455	52.2314	98.5284
77	190	1.20553	53.6847	327.578
78	240	1.26464	55.284	631.092
79	250	1.33462	57.0652	964.748
80	270	1.40507	59.0395	1344.12
81	280	1.49085	61.2621	1761.56
82	280	1.58047	63.76	2204.09
83	290	1.6954	66.6343	2695.75
84	290	1.82501	69.965	3225
85	290	2.01409	74.0216	3809.09
86	290	2.29036	79.2673	4473.3

Data Set Standard Deviation = 61.2263
Numerator = 2.00104e+007
Denominator = 2.52575e+007
W Statistic = 0.792257 = 2.00104e+007 / 2.52575e+007

5% Critical value of 0.972 exceeds 0.792257
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.792257
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Barium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 130
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	100
	12/5/2013	120
	3/19/2014	91
	9/8/2014	97
	3/18/2015	100
	9/8/2015	110
	3/14/2016	100
	9/20/2016	110
	3/24/2017	110
	9/20/2017	99
	3/27/2018	100
	9/18/2018	120
	3/11/2019	110
	10/3/2019	120
	3/23/2020	120
	9/24/2020	110
	3/23/2021	120
	9/16/2021	120
	3/24/2022	130
	9/16/2022	120
	3/17/2023	120

Date	Count	Mean	Significant
9/15/2023	1	120	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Barium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 130
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	90
	3/21/2014	76
	9/8/2014	80
	3/18/2015	80
	9/8/2015	86
	3/14/2016	84
	9/26/2016	99
	3/30/2017	96
	9/20/2017	91
	3/30/2018	110
	9/21/2018	110
	3/11/2019	110
	10/3/2019	110
	3/23/2020	14
	9/25/2020	110
	3/23/2021	ND<0 U
	9/16/2021	120
	3/23/2022	120
	9/16/2022	120
	3/17/2023	130

Date	Count	Mean	Significant
9/15/2023	1	120	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Barium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 190
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	190
	9/23/2016	140
	3/28/2017	130
	9/21/2017	110
	3/16/2018	110
	9/19/2018	100
	3/5/2019	110
	10/3/2019	96
	3/25/2020	91
	9/28/2020	88
	3/19/2021	90
	9/15/2021	86
	3/22/2022	87
	9/14/2022	82
	3/16/2023	81

Date	Count	Mean	Significant
9/12/2023	1	78	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Barium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 290
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	270
	3/26/2020	250
	9/29/2020	240
	3/16/2021	290
	9/14/2021	290
	3/18/2022	280
	9/13/2022	290
	3/14/2023	290

Date	Count	Mean	Significant
9/12/2023	1	280	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Barium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 68
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	68
	3/25/2020	59
	9/29/2020	49
	3/22/2021	54
	9/15/2021	57
	3/24/2022	60
	9/15/2022	60
	3/16/2023	61

Date	Count	Mean	Significant
9/14/2023	1	62	FALSE

Shapiro-Francia Test of Normality

Parameter: Beryllium, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	0	-1.82501	12.633	0
4	0	-1.6954	15.5074	0
5	0	-1.58047	18.0052	0
6	0	-1.49085	20.2279	0
7	0	-1.40507	22.2021	0
8	0	-1.33462	23.9833	0
9	0	-1.26464	25.5826	0
10	0	-1.20553	27.0359	0
11	0	-1.1455	28.3481	0
12	0	-1.0939	29.5447	0
13	0	-1.04073	30.6278	0
14	0	-0.994457	31.6168	0
15	0	-0.946291	32.5123	0
16	0	-0.903992	33.3295	0
17	0	-0.859618	34.0684	0
18	0	-0.820379	34.7414	0
19	0	-0.778966	35.3482	0
20	0	-0.742143	35.899	0
21	0	-0.703089	36.3933	0
22	0	-0.668209	36.8398	0
23	0	-0.631062	37.2381	0
24	0	-0.597761	37.5954	0
25	0	-0.56217	37.9114	0
26	0	-0.530162	38.1925	0
27	0	-0.49585	38.4384	0
28	0	-0.464904	38.6545	0
29	0	-0.431644	38.8408	0
30	0	-0.401571	39.0021	0
31	0	-0.369171	39.1384	0
32	0	-0.33981	39.2538	0
33	0	-0.308108	39.3488	0
34	0	-0.279319	39.4268	0
35	0	-0.248174	39.4884	0
36	0	-0.219834	39.5367	0
37	0	-0.189118	39.5725	0
38	0	-0.161119	39.5984	0
39	0	-0.130716	39.6155	0
40	0	-0.102953	39.6261	0
41	0	-0.0727562	39.6314	0
42	0	-0.0451348	39.6334	0
43	0	-0.0150408	39.6337	0
44	0	0.0150408	39.6339	0
45	0	0.0451348	39.6359	0
46	0	0.0727562	39.6412	0
47	0	0.102953	39.6518	0

48	0	0.130716	39.6689	0
49	0	0.161119	39.6949	0
50	0	0.189118	39.7306	0
51	0	0.219834	39.779	0
52	0	0.248174	39.8405	0
53	0	0.279319	39.9186	0
54	0	0.308108	40.0135	0
55	0	0.33981	40.129	0
56	0	0.369171	40.2653	0
57	0	0.401571	40.4265	0
58	0	0.431644	40.6128	0
59	0	0.464904	40.829	0
60	0	0.49585	41.0748	0
61	0	0.530162	41.3559	0
62	0	0.56217	41.6719	0
63	0	0.597761	42.0293	0
64	0	0.631062	42.4275	0
65	0	0.668209	42.874	0
66	0	0.703089	43.3683	0
67	0	0.742143	43.9191	0
68	0	0.778966	44.5259	0
69	0	0.820379	45.1989	0
70	0	0.859618	45.9379	0
71	0	0.903992	46.7551	0
72	0	0.946291	47.6505	0
73	0	0.994457	48.6395	0
74	0	1.04073	49.7226	0
75	0	1.0939	50.9192	0
76	0	1.1455	52.2314	0
77	0	1.20553	53.6847	0
78	0	1.26464	55.284	0
79	0	1.33462	57.0652	0
80	0	1.40507	59.0395	0
81	0	1.49085	61.2621	0
82	0	1.58047	63.76	0
83	0	1.6954	66.6343	0
84	0	1.82501	69.965	0
85	1.1	2.01409	74.0216	2.2155
86	1.2	2.29036	79.2673	4.96394

Data Set Standard Deviation = 0.174507
Numerator = 24.6407
Denominator = 205.183
W Statistic = 0.120092 = 24.6407 / 205.183

5% Critical value of 0.972 exceeds 0.120092
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.120092
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Beryllium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 0
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	ND<0
	3/21/2014	ND<0 J
	9/8/2014	ND<0 J
	3/18/2015	ND<0 J
	9/8/2015	ND<0 J
	3/14/2016	ND<0 J
	9/26/2016	ND<0 J
	3/30/2017	ND<0 J
	9/20/2017	ND<0 J
	3/30/2018	ND<0 J
	9/21/2018	ND<0 J
	3/11/2019	ND<0 J
	10/3/2019	ND<0 J
	3/23/2020	ND<0 U
	9/25/2020	ND<0 J
	3/23/2021	ND<0 U
	9/16/2021	ND<0 J
	3/23/2022	ND<0 J
	9/16/2022	ND<0 J
	3/17/2023	ND<0 J

Date	Count	Mean	Significant
9/15/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Beryllium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 90.4762%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 1.2
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 J
	9/8/2014	ND<0 J
	3/18/2015	ND<0 J
	9/8/2015	ND<0 J
	3/14/2016	ND<0 J
	9/20/2016	ND<0 J
	3/24/2017	ND<0 J
	9/20/2017	ND<0 J
	3/27/2018	ND<0 J
	9/18/2018	ND<0 J
	3/11/2019	ND<0 J
	10/3/2019	ND<0 J
	3/23/2020	ND<0 J
	9/24/2020	ND<0 J
	3/23/2021	ND<0 J
	9/16/2021	ND<0 J
	3/24/2022	ND<0 J
	9/16/2022	1.2
	3/17/2023	1.1

Date	Count	Mean	Significant
9/15/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Beryllium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 0
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/28/2017	ND<0 U
	9/21/2017	ND<0 U
	3/16/2018	ND<0 U
	9/19/2018	ND<0 U
	3/5/2019	ND<0 U
	10/3/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Beryllium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Beryllium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 J
	3/25/2020	ND<0 J
	9/29/2020	ND<0 J
	3/22/2021	ND<0 J
	9/15/2021	ND<0 J
	3/24/2022	ND<0 J
	9/15/2022	ND<0 J
	3/16/2023	ND<0 J

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: Cadmium, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	0	-1.82501	12.633	0
4	0	-1.6954	15.5074	0
5	0	-1.58047	18.0052	0
6	0	-1.49085	20.2279	0
7	0	-1.40507	22.2021	0
8	0	-1.33462	23.9833	0
9	0	-1.26464	25.5826	0
10	0	-1.20553	27.0359	0
11	0	-1.1455	28.3481	0
12	0	-1.0939	29.5447	0
13	0	-1.04073	30.6278	0
14	0	-0.994457	31.6168	0
15	0	-0.946291	32.5123	0
16	0	-0.903992	33.3295	0
17	0	-0.859618	34.0684	0
18	0	-0.820379	34.7414	0
19	0	-0.778966	35.3482	0
20	0	-0.742143	35.899	0
21	0	-0.703089	36.3933	0
22	0	-0.668209	36.8398	0
23	0	-0.631062	37.2381	0
24	0	-0.597761	37.5954	0
25	0	-0.56217	37.9114	0
26	0	-0.530162	38.1925	0
27	0	-0.49585	38.4384	0
28	0	-0.464904	38.6545	0
29	0	-0.431644	38.8408	0
30	0	-0.401571	39.0021	0
31	0	-0.369171	39.1384	0
32	0	-0.33981	39.2538	0
33	0	-0.308108	39.3488	0
34	0	-0.279319	39.4268	0
35	0	-0.248174	39.4884	0
36	0	-0.219834	39.5367	0
37	0	-0.189118	39.5725	0
38	0	-0.161119	39.5984	0
39	0	-0.130716	39.6155	0
40	0	-0.102953	39.6261	0
41	0	-0.0727562	39.6314	0
42	0	-0.0451348	39.6334	0
43	0	-0.0150408	39.6337	0
44	0	0.0150408	39.6339	0
45	0	0.0451348	39.6359	0
46	0	0.0727562	39.6412	0
47	0	0.102953	39.6518	0

48	0	0.130716	39.6689	0
49	0	0.161119	39.6949	0
50	0	0.189118	39.7306	0
51	0	0.219834	39.779	0
52	0	0.248174	39.8405	0
53	0	0.279319	39.9186	0
54	0	0.308108	40.0135	0
55	0	0.33981	40.129	0
56	0	0.369171	40.2653	0
57	0	0.401571	40.4265	0
58	0	0.431644	40.6128	0
59	0	0.464904	40.829	0
60	0	0.49585	41.0748	0
61	0	0.530162	41.3559	0
62	0	0.56217	41.6719	0
63	0	0.597761	42.0293	0
64	0	0.631062	42.4275	0
65	0	0.668209	42.874	0
66	0	0.703089	43.3683	0
67	0	0.742143	43.9191	0
68	0	0.778966	44.5259	0
69	0	0.820379	45.1989	0
70	0	0.859618	45.9379	0
71	0	0.903992	46.7551	0
72	0	0.946291	47.6505	0
73	0	0.994457	48.6395	0
74	0	1.04073	49.7226	0
75	0	1.0939	50.9192	0
76	0	1.1455	52.2314	0
77	0	1.20553	53.6847	0
78	0	1.26464	55.284	0
79	0	1.33462	57.0652	0
80	0	1.40507	59.0395	0
81	0	1.49085	61.2621	0
82	0	1.58047	63.76	0
83	0	1.6954	66.6343	0
84	0	1.82501	69.965	0
85	1.1	2.01409	74.0216	2.2155
86	2.2	2.29036	79.2673	7.2543

Data Set Standard Deviation = 0.263982
Numerator = 52.6249
Denominator = 469.53
W Statistic = 0.11208 = 52.6249 / 469.53

5% Critical value of 0.972 exceeds 0.11208
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.11208
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Cadmium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 0
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/8/2014	ND<0 U
	3/18/2015	ND<0 U
	9/8/2015	ND<0 U
	3/14/2016	ND<0 U
	9/20/2016	ND<0 U
	3/24/2017	ND<0 U
	9/20/2017	ND<0 U
	3/27/2018	ND<0 U
	9/18/2018	ND<0 U
	3/11/2019	ND<0 U
	10/3/2019	ND<0 U
	3/23/2020	ND<0 U
	9/24/2020	ND<0 U
	3/23/2021	ND<0 U
	9/16/2021	ND<0 J
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/15/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Cadmium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 90%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 2.2
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/18/2015	ND<0 U
	9/8/2015	2.2
	3/14/2016	ND<0 U
	9/26/2016	ND<0 U
	3/30/2017	ND<0 U
	9/20/2017	ND<0 U
	3/30/2018	ND<0 U
	9/21/2018	ND<0 U
	3/11/2019	ND<0 U
	10/3/2019	1.1
	3/23/2020	ND<0 U
	9/25/2020	ND<0 U
	3/23/2021	ND<0 U
	9/16/2021	ND<0 J
	3/23/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/15/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Cadmium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 0
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/28/2017	ND<0 U
	9/21/2017	ND<0 U
	3/16/2018	ND<0 U
	9/19/2018	ND<0 U
	3/5/2019	ND<0 U
	10/3/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 J
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Cadmium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Cadmium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/25/2020	ND<0 U
	9/29/2020	ND<0 U
	3/22/2021	ND<0 U
	9/15/2021	ND<0 U
	3/24/2022	ND<0
	9/15/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: Calcium, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	7000	-2.29036	5.24576	-16032.5
2	7100	-2.01409	9.30234	-30332.6
3	7500	-1.82501	12.633	-44020.1
4	7700	-1.6954	15.5074	-57074.7
5	7800	-1.58047	18.0052	-69402.3
6	8100	-1.49085	20.2279	-81478.3
7	8240	-1.40507	22.2021	-93056.1
8	8400	-1.33462	23.9833	-104267
9	8400	-1.26464	25.5826	-114890
10	8400	-1.20553	27.0359	-125016
11	8500	-1.1455	28.3481	-134753
12	8500	-1.0939	29.5447	-144051
13	8900	-1.04073	30.6278	-153314
14	9700	-0.994457	31.6168	-162960
15	9900	-0.946291	32.5123	-172328
16	10100	-0.903992	33.3295	-181459
17	10200	-0.859618	34.0684	-190227
18	10800	-0.820379	34.7414	-199087
19	10900	-0.778966	35.3482	-207578
20	11200	-0.742143	35.899	-215890
21	11600	-0.703089	36.3933	-224045
22	11700	-0.668209	36.8398	-231863
23	11800	-0.631062	37.2381	-239310
24	11800	-0.597761	37.5954	-246363
25	11900	-0.56217	37.9114	-253053
26	11900	-0.530162	38.1925	-259362
27	12300	-0.49585	38.4384	-265461
28	12400	-0.464904	38.6545	-271226
29	12500	-0.431644	38.8408	-276622
30	12500	-0.401571	39.0021	-281641
31	12600	-0.369171	39.1384	-286293
32	12600	-0.33981	39.2538	-290574
33	12600	-0.308108	39.3488	-294457
34	12900	-0.279319	39.4268	-298060
35	13000	-0.248174	39.4884	-301286
36	13200	-0.219834	39.5367	-304188
37	13300	-0.189118	39.5725	-306703
38	13300	-0.161119	39.5984	-308846
39	13300	-0.130716	39.6155	-310584
40	13300	-0.102953	39.6261	-311954
41	13400	-0.0727562	39.6314	-312929
42	13500	-0.0451348	39.6334	-313538
43	13500	-0.0150408	39.6337	-313741
44	13500	0.0150408	39.6339	-313538
45	13600	0.0451348	39.6359	-312924
46	13600	0.0727562	39.6412	-311935
47	13600	0.102953	39.6518	-310535

48	13800	0.130716	39.6689	-308731
49	13800	0.161119	39.6949	-306507
50	13870	0.189118	39.7306	-303884
51	14000	0.219834	39.779	-300806
52	14100	0.248174	39.8405	-297307
53	14100	0.279319	39.9186	-293369
54	14200	0.308108	40.0135	-288994
55	14200	0.33981	40.129	-284168
56	14400	0.369171	40.2653	-278852
57	14500	0.401571	40.4265	-273030
58	14500	0.431644	40.6128	-266771
59	14500	0.464904	40.829	-260030
60	14700	0.49585	41.0748	-252741
61	14700	0.530162	41.3559	-244947
62	14800	0.56217	41.6719	-236627
63	14900	0.597761	42.0293	-227720
64	14900	0.631062	42.4275	-218318
65	15000	0.668209	42.874	-208295
66	15000	0.703089	43.3683	-197748
67	15900	0.742143	43.9191	-185948
68	16000	0.778966	44.5259	-173485
69	16200	0.820379	45.1989	-160194
70	17300	0.859618	45.9379	-145323
71	18000	0.903992	46.7551	-129051
72	18200	0.946291	47.6505	-111829
73	18700	0.994457	48.6395	-93232.4
74	19000	1.04073	49.7226	-73458.5
75	19000	1.0939	50.9192	-52674.4
76	20200	1.1455	52.2314	-29535.2
77	20300	1.20553	53.6847	-5063.07
78	38400	1.26464	55.284	43499.1
79	38700	1.33462	57.0652	95149.1
80	40200	1.40507	59.0395	151633
81	40300	1.49085	61.2621	211714
82	41300	1.58047	63.76	276988
83	41700	1.6954	66.6343	347686
84	42500	1.82501	69.965	425249
85	43200	2.01409	74.0216	512257
86	45000	2.29036	79.2673	615324

Data Set Standard Deviation = 9227.91
Numerator = 3.78623e+011
Denominator = 5.73746e+011
W Statistic = 0.659914 = 3.78623e+011 / 5.73746e+011

5% Critical value of 0.972 exceeds 0.659914
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.659914
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Calcium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 15000
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	7000
	3/21/2014	8900
	9/8/2014	10200
	3/18/2015	9700
	9/8/2015	10100
	3/14/2016	10800
	9/26/2016	11200
	3/30/2017	11900
	9/20/2017	11800
	3/30/2018	13300
	9/21/2018	11600
	3/11/2019	12500
	10/3/2019	13600
	3/23/2020	12500
	9/25/2020	13600
	3/23/2021	7800
	9/16/2021	15000
	3/23/2022	14500
	9/16/2022	14200
	3/17/2023	14700

Date	Count	Mean	Significant
9/15/2023	1	13300	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Calcium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 15000
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	8240
	12/5/2013	13870
	3/19/2014	10900
	9/8/2014	11900
	3/18/2015	11800
	9/8/2015	11700
	3/14/2016	12600
	9/20/2016	12900
	3/24/2017	12300
	9/20/2017	12600
	3/27/2018	12400
	9/18/2018	13000
	3/11/2019	13600
	10/3/2019	14500
	3/23/2020	14200
	9/24/2020	14100
	3/23/2021	13800
	9/16/2021	15000
	3/24/2022	14900
	9/16/2022	13300
	3/17/2023	14000

Date	Count	Mean	Significant
9/15/2023	1	13500	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Calcium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 20300
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	18200
	9/23/2016	14800
	3/28/2017	14100
	9/21/2017	13500
	3/16/2018	13800
	9/19/2018	14500
	3/5/2019	16200
	10/3/2019	15900
	3/25/2020	16000
	9/28/2020	17300
	3/19/2021	18000
	9/15/2021	19000
	3/22/2022	20200
	9/14/2022	18700
	3/16/2023	20300

Date	Count	Mean	Significant
9/12/2023	1	19000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Calcium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 45000
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	40300
	3/26/2020	38700
	9/29/2020	38400
	3/16/2021	41300
	9/14/2021	45000
	3/18/2022	41700
	9/13/2022	42500
	3/14/2023	43200

Date	Count	Mean	Significant
9/12/2023	1	40200	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Calcium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 9900
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	9900
	3/25/2020	8400
	9/29/2020	7500
	3/22/2021	7700
	9/15/2021	8500
	3/24/2022	8400
	9/15/2022	8100
	3/16/2023	8500

Date	Count	Mean	Significant
9/14/2023	1	8400	FALSE

Shapiro-Francia Test of Normality

Parameter: Chromium, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	0	-1.82501	12.633	0
4	0	-1.6954	15.5074	0
5	0	-1.58047	18.0052	0
6	0	-1.49085	20.2279	0
7	0	-1.40507	22.2021	0
8	0	-1.33462	23.9833	0
9	0	-1.26464	25.5826	0
10	0	-1.20553	27.0359	0
11	0	-1.1455	28.3481	0
12	0	-1.0939	29.5447	0
13	0	-1.04073	30.6278	0
14	0	-0.994457	31.6168	0
15	0	-0.946291	32.5123	0
16	0	-0.903992	33.3295	0
17	0	-0.859618	34.0684	0
18	0	-0.820379	34.7414	0
19	0	-0.778966	35.3482	0
20	0	-0.742143	35.899	0
21	0	-0.703089	36.3933	0
22	0	-0.668209	36.8398	0
23	0	-0.631062	37.2381	0
24	0	-0.597761	37.5954	0
25	0	-0.56217	37.9114	0
26	0	-0.530162	38.1925	0
27	0	-0.49585	38.4384	0
28	0	-0.464904	38.6545	0
29	0	-0.431644	38.8408	0
30	0	-0.401571	39.0021	0
31	0	-0.369171	39.1384	0
32	0	-0.33981	39.2538	0
33	0	-0.308108	39.3488	0
34	0	-0.279319	39.4268	0
35	0	-0.248174	39.4884	0
36	0	-0.219834	39.5367	0
37	0	-0.189118	39.5725	0
38	0	-0.161119	39.5984	0
39	0	-0.130716	39.6155	0
40	0	-0.102953	39.6261	0
41	0	-0.0727562	39.6314	0
42	0	-0.0451348	39.6334	0
43	0	-0.0150408	39.6337	0
44	0	0.0150408	39.6339	0
45	0	0.0451348	39.6359	0
46	0	0.0727562	39.6412	0
47	0	0.102953	39.6518	0

48	0	0.130716	39.6689	0
49	0	0.161119	39.6949	0
50	0	0.189118	39.7306	0
51	0	0.219834	39.779	0
52	0	0.248174	39.8405	0
53	0	0.279319	39.9186	0
54	0	0.308108	40.0135	0
55	0	0.33981	40.129	0
56	0	0.369171	40.2653	0
57	0	0.401571	40.4265	0
58	0	0.431644	40.6128	0
59	0	0.464904	40.829	0
60	0	0.49585	41.0748	0
61	0	0.530162	41.3559	0
62	0	0.56217	41.6719	0
63	0	0.597761	42.0293	0
64	0	0.631062	42.4275	0
65	0	0.668209	42.874	0
66	0	0.703089	43.3683	0
67	0	0.742143	43.9191	0
68	0	0.778966	44.5259	0
69	0	0.820379	45.1989	0
70	0	0.859618	45.9379	0
71	0	0.903992	46.7551	0
72	0	0.946291	47.6505	0
73	0	0.994457	48.6395	0
74	0	1.04073	49.7226	0
75	2.4	1.0939	50.9192	2.62535
76	2.5	1.1455	52.2314	5.48911
77	2.7	1.20553	53.6847	8.74403
78	2.9	1.26464	55.284	12.4115
79	3.1	1.33462	57.0652	16.5488
80	3.1	1.40507	59.0395	20.9046
81	3.7	1.49085	61.2621	26.4207
82	4	1.58047	63.76	32.7426
83	4	1.6954	66.6343	39.5242
84	6.7	1.82501	69.965	51.7517
85	12	2.01409	74.0216	75.9208
86	12	2.29036	79.2673	103.405

Data Set Standard Deviation = 2.12795
Numerator = 10692.6
Denominator = 30509.7
W Statistic = 0.350467 = 10692.6 / 30509.7

5% Critical value of 0.972 exceeds 0.350467
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.350467
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Chromium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 0
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 J
	9/8/2014	ND<0 J
	3/18/2015	ND<0 J
	9/8/2015	ND<0 J
	3/14/2016	ND<0 J
	9/20/2016	ND<0 J
	3/24/2017	ND<0 J
	9/20/2017	ND<0 J
	3/27/2018	ND<0 J
	9/18/2018	ND<0 U
	3/11/2019	ND<0 J
	10/3/2019	ND<0 J
	3/23/2020	ND<0 J
	9/24/2020	ND<0 U
	3/23/2021	ND<0 U
	9/16/2021	ND<0 J
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0 J

Date	Count	Mean	Significant
9/15/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Chromium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 95%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 2.5
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	ND<0
	3/21/2014	ND<0 J
	9/8/2014	ND<0 J
	3/18/2015	ND<0 J
	9/8/2015	ND<0 J
	3/14/2016	ND<0 J
	9/26/2016	2.5
	3/30/2017	ND<0 J
	9/20/2017	ND<0 J
	3/30/2018	ND<0 J
	9/21/2018	ND<0 J
	3/11/2019	ND<0 J
	10/3/2019	ND<0 U
	3/23/2020	ND<0 U
	9/25/2020	ND<0 U
	3/23/2021	ND<0 U
	9/16/2021	ND<0 J
	3/23/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0 J

Date	Count	Mean	Significant
9/15/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Chromium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 73.3333%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 4
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	3.1
	9/23/2016	4
	3/28/2017	4
	9/21/2017	2.9
	3/16/2018	ND<0 J
	9/19/2018	ND<0 J
	3/5/2019	ND<0 J
	10/3/2019	ND<0 J
	3/25/2020	ND<0 J
	9/28/2020	ND<0 U
	3/19/2021	ND<0 J
	9/15/2021	ND<0 J
	3/22/2022	ND<0 J
	9/14/2022	ND<0
	3/16/2023	ND<0 J

Date	Count	Mean	Significant
9/12/2023	1	3.7	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Chromium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/26/2020	ND<0 J
	9/29/2020	ND<0 J
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0 J
	9/13/2022	ND<0 J
	3/14/2023	ND<0 J

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Chromium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 87.5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 2.4
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 J
	3/25/2020	2.4
	9/29/2020	ND<0 J
	3/22/2021	ND<0 J
	9/15/2021	ND<0 J
	3/24/2022	ND<0 J
	9/15/2022	ND<0 J
	3/16/2023	ND<0 J

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: Cobalt, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	0	-1.82501	12.633	0
4	0	-1.6954	15.5074	0
5	0	-1.58047	18.0052	0
6	0	-1.49085	20.2279	0
7	5.5	-1.40507	22.2021	-7.72791
8	6	-1.33462	23.9833	-15.7357
9	6.2	-1.26464	25.5826	-23.5764
10	6.5	-1.20553	27.0359	-31.4123
11	6.9	-1.1455	28.3481	-39.3163
12	7.4	-1.0939	29.5447	-47.4112
13	7.5	-1.04073	30.6278	-55.2167
14	7.6	-0.994457	31.6168	-62.7745
15	7.8	-0.946291	32.5123	-70.1556
16	8.1	-0.903992	33.3295	-77.4779
17	8.2	-0.859618	34.0684	-84.5268
18	8.3	-0.820379	34.7414	-91.3359
19	8.7	-0.778966	35.3482	-98.113
20	8.9	-0.742143	35.899	-104.718
21	8.9	-0.703089	36.3933	-110.976
22	8.9	-0.668209	36.8398	-116.923
23	9.1	-0.631062	37.2381	-122.665
24	9.3	-0.597761	37.5954	-128.224
25	9.4	-0.56217	37.9114	-133.509
26	9.6	-0.530162	38.1925	-138.598
27	9.8	-0.49585	38.4384	-143.458
28	9.8	-0.464904	38.6545	-148.014
29	9.9	-0.431644	38.8408	-152.287
30	10	-0.401571	39.0021	-156.303
31	10	-0.369171	39.1384	-159.994
32	10	-0.33981	39.2538	-163.393
33	11	-0.308108	39.3488	-166.782
34	11	-0.279319	39.4268	-169.854
35	11	-0.248174	39.4884	-172.584
36	11	-0.219834	39.5367	-175.002
37	11	-0.189118	39.5725	-177.083
38	12	-0.161119	39.5984	-179.016
39	12	-0.130716	39.6155	-180.585
40	12	-0.102953	39.6261	-181.82
41	13	-0.0727562	39.6314	-182.766
42	13	-0.0451348	39.6334	-183.353
43	14	-0.0150408	39.6337	-183.563
44	15	0.0150408	39.6339	-183.338
45	15	0.0451348	39.6359	-182.661
46	15	0.0727562	39.6412	-181.569
47	15	0.102953	39.6518	-180.025

48	16	0.130716	39.6689	-177.934
49	16	0.161119	39.6949	-175.356
50	16	0.189118	39.7306	-172.33
51	16	0.219834	39.779	-168.812
52	16	0.248174	39.8405	-164.842
53	16	0.279319	39.9186	-160.373
54	16	0.308108	40.0135	-155.443
55	17	0.33981	40.129	-149.666
56	17	0.369171	40.2653	-143.39
57	17	0.401571	40.4265	-136.563
58	18	0.431644	40.6128	-128.794
59	18	0.464904	40.829	-120.426
60	18	0.49585	41.0748	-111.5
61	18	0.530162	41.3559	-101.957
62	18	0.56217	41.6719	-91.8383
63	18	0.597761	42.0293	-81.0786
64	18	0.631062	42.4275	-69.7194
65	19	0.668209	42.874	-57.0235
66	19	0.703089	43.3683	-43.6648
67	19	0.742143	43.9191	-29.5641
68	20	0.778966	44.5259	-13.9847
69	20	0.820379	45.1989	2.42285
70	20	0.859618	45.9379	19.6152
71	21	0.903992	46.7551	38.5991
72	22	0.946291	47.6505	59.4174
73	22	0.994457	48.6395	81.2955
74	23	1.04073	49.7226	105.232
75	25	1.0939	50.9192	132.58
76	27	1.1455	52.2314	163.508
77	41	1.20553	53.6847	212.935
78	140	1.26464	55.284	389.985
79	160	1.33462	57.0652	603.525
80	190	1.40507	59.0395	870.489
81	230	1.49085	61.2621	1213.38
82	240	1.58047	63.76	1592.7
83	250	1.6954	66.6343	2016.55
84	300	1.82501	69.965	2564.05
85	320	2.01409	74.0216	3208.56
86	330	2.29036	79.2673	3964.38

Data Set Standard Deviation = 73.2677
Numerator = 1.57163e+007
Denominator = 3.61691e+007
W Statistic = 0.434522 = 1.57163e+007 / 3.61691e+007

5% Critical value of 0.972 exceeds 0.434522
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.434522
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Cobalt, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 15%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 12
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	ND<0
	3/21/2014	7.5
	9/8/2014	7.6
	3/18/2015	7.8
	9/8/2015	8.7
	3/14/2016	8.1
	9/26/2016	8.9
	3/30/2017	9.1
	9/20/2017	9.8
	3/30/2018	11
	9/21/2018	9.4
	3/11/2019	9.9
	10/3/2019	10
	3/23/2020	ND<0 U
	9/25/2020	11
	3/23/2021	ND<0 U
	9/16/2021	11
	3/23/2022	11
	9/16/2022	12
	3/17/2023	12

Date	Count	Mean	Significant
9/15/2023	1	11	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Cobalt, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 23
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	10
	12/5/2013	10
	3/19/2014	13
	9/8/2014	14
	3/18/2015	15
	9/8/2015	20
	3/14/2016	18
	9/20/2016	16
	3/24/2017	16
	9/20/2017	18
	3/27/2018	16
	9/18/2018	18
	3/11/2019	19
	10/3/2019	18
	3/23/2020	18
	9/24/2020	19
	3/23/2021	23
	9/16/2021	20
	3/24/2022	18
	9/16/2022	20
	3/17/2023	18

Date	Count	Mean	Significant
9/15/2023	1	17	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Cobalt, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 41
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	41
	9/23/2016	21
	3/28/2017	17
	9/21/2017	16
	3/16/2018	15
	9/19/2018	16
	3/5/2019	16
	10/3/2019	15
	3/25/2020	15
	9/28/2020	16
	3/19/2021	17
	9/15/2021	19
	3/22/2022	22
	9/14/2022	22
	3/16/2023	25

Date	Count	Mean	Significant
9/12/2023	1	27	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Cobalt, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 330
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	140
	3/26/2020	160
	9/29/2020	190
	3/16/2021	230
	9/14/2021	240
	3/18/2022	250
	9/13/2022	300
	3/14/2023	330

Date	Count	Mean	Significant
9/12/2023	1	320	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Cobalt, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 12
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	9.8
	3/25/2020	8.3
	9/29/2020	7.4
	3/22/2021	8.2
	9/15/2021	8.9
	3/24/2022	8.9
	9/15/2022	9.6
	3/16/2023	12

Date	Count	Mean	Significant
9/14/2023	1	13	TRUE

Shapiro-Francia Test of Normality

Parameter: Copper, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	0	-1.82501	12.633	0
4	0	-1.6954	15.5074	0
5	0	-1.58047	18.0052	0
6	0	-1.49085	20.2279	0
7	0	-1.40507	22.2021	0
8	0	-1.33462	23.9833	0
9	0	-1.26464	25.5826	0
10	0	-1.20553	27.0359	0
11	0	-1.1455	28.3481	0
12	0	-1.0939	29.5447	0
13	0	-1.04073	30.6278	0
14	0	-0.994457	31.6168	0
15	0	-0.946291	32.5123	0
16	0	-0.903992	33.3295	0
17	0	-0.859618	34.0684	0
18	0	-0.820379	34.7414	0
19	0	-0.778966	35.3482	0
20	0	-0.742143	35.899	0
21	0	-0.703089	36.3933	0
22	0	-0.668209	36.8398	0
23	0	-0.631062	37.2381	0
24	0	-0.597761	37.5954	0
25	0	-0.56217	37.9114	0
26	5.6	-0.530162	38.1925	-2.9689
27	6.5	-0.49585	38.4384	-6.19193
28	7.4	-0.464904	38.6545	-9.63222
29	9	-0.431644	38.8408	-13.517
30	9.4	-0.401571	39.0021	-17.2918
31	9.4	-0.369171	39.1384	-20.762
32	9.8	-0.33981	39.2538	-24.0921
33	10	-0.308108	39.3488	-27.1732
34	11	-0.279319	39.4268	-30.2457
35	11	-0.248174	39.4884	-32.9756
36	12	-0.219834	39.5367	-35.6136
37	13	-0.189118	39.5725	-38.0722
38	13	-0.161119	39.5984	-40.1667
39	13	-0.130716	39.6155	-41.866
40	14	-0.102953	39.6261	-43.3074
41	14	-0.0727562	39.6314	-44.326
42	15	-0.0451348	39.6334	-45.003
43	16	-0.0150408	39.6337	-45.2436
44	18	0.0150408	39.6339	-44.9729
45	21	0.0451348	39.6359	-44.0251
46	33	0.0727562	39.6412	-41.6241
47	34	0.102953	39.6518	-38.1237

48	34	0.130716	39.6689	-33.6794
49	35	0.161119	39.6949	-28.0402
50	35	0.189118	39.7306	-21.4211
51	35	0.219834	39.779	-13.7269
52	35	0.248174	39.8405	-5.04081
53	36	0.279319	39.9186	5.01469
54	37	0.308108	40.0135	16.4147
55	39	0.33981	40.129	29.6673
56	40	0.369171	40.2653	44.4341
57	40	0.401571	40.4265	60.497
58	40	0.431644	40.6128	77.7627
59	41	0.464904	40.829	96.8238
60	41	0.49585	41.0748	117.154
61	42	0.530162	41.3559	139.42
62	43	0.56217	41.6719	163.594
63	44	0.597761	42.0293	189.895
64	45	0.631062	42.4275	218.293
65	48	0.668209	42.874	250.367
66	50	0.703089	43.3683	285.522
67	50	0.742143	43.9191	322.629
68	52	0.778966	44.5259	363.135
69	55	0.820379	45.1989	408.256
70	58	0.859618	45.9379	458.114
71	59	0.903992	46.7551	511.449
72	60	0.946291	47.6505	568.227
73	60	0.994457	48.6395	627.894
74	60	1.04073	49.7226	690.338
75	62	1.0939	50.9192	758.16
76	66	1.1455	52.2314	833.763
77	68	1.20553	53.6847	915.739
78	69	1.26464	55.284	1003
79	70	1.33462	57.0652	1096.42
80	74	1.40507	59.0395	1200.4
81	79	1.49085	61.2621	1318.18
82	89	1.58047	63.76	1458.84
83	100	1.6954	66.6343	1628.38
84	110	1.82501	69.965	1829.13
85	160	2.01409	74.0216	2151.38
86	470	2.29036	79.2673	3227.85

Data Set Standard Deviation = 56.6202
Numerator = 1.0419e+007
Denominator = 2.16001e+007
W Statistic = 0.482361 = 1.0419e+007 / 2.16001e+007

5% Critical value of 0.972 exceeds 0.482361
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.482361
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Copper, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 470
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	60
	3/21/2014	62
	9/8/2014	68
	3/18/2015	41
	9/8/2015	470
	3/14/2016	110
	9/26/2016	70
	3/30/2017	69
	9/20/2017	60
	3/30/2018	59
	9/21/2018	66
	3/11/2019	89
	10/3/2019	58
	3/23/2020	ND<0 U
	9/25/2020	160
	3/23/2021	11
	9/16/2021	79
	3/23/2022	74
	9/16/2022	100
	3/17/2023	60

Date	Count	Mean	Significant
9/15/2023	1	50	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Copper, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 55
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	40
	12/5/2013	40
	3/19/2014	40
	9/8/2014	35
	3/18/2015	43
	9/8/2015	50
	3/14/2016	39
	9/20/2016	44
	3/24/2017	33
	9/20/2017	52
	3/27/2018	45
	9/18/2018	37
	3/11/2019	55
	10/3/2019	35
	3/23/2020	34
	9/24/2020	41
	3/23/2021	42
	9/16/2021	35
	3/24/2022	36
	9/16/2022	48
	3/17/2023	35

Date	Count	Mean	Significant
9/15/2023	1	34	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Copper, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 0
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	ND<0 J
	9/23/2016	ND<0 J
	3/28/2017	ND<0 J
	9/21/2017	ND<0 J
	3/16/2018	ND<0 J
	9/19/2018	ND<0 J
	3/5/2019	ND<0 J
	10/3/2019	ND<0 J
	3/25/2020	ND<0 J
	9/28/2020	ND<0 J
	3/19/2021	ND<0 J
	9/15/2021	ND<0 J
	3/22/2022	ND<0 J
	9/14/2022	ND<0
	3/16/2023	ND<0 J

Date	Count	Mean	Significant
9/12/2023	1	16	TRUE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Copper, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Copper, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 21
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	9.8
	3/25/2020	9
	9/29/2020	14
	3/22/2021	21
	9/15/2021	18
	3/24/2022	13
	9/15/2022	14
	3/16/2023	11

Date	Count	Mean	Significant
9/14/2023	1	9.4	FALSE

Shapiro-Francia Test of Normality

Parameter: Iron, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	0	-1.82501	12.633	0
4	0	-1.6954	15.5074	0
5	0	-1.58047	18.0052	0
6	0	-1.49085	20.2279	0
7	0	-1.40507	22.2021	0
8	0	-1.33462	23.9833	0
9	0	-1.26464	25.5826	0
10	0	-1.20553	27.0359	0
11	0	-1.1455	28.3481	0
12	0	-1.0939	29.5447	0
13	0	-1.04073	30.6278	0
14	0	-0.994457	31.6168	0
15	0	-0.946291	32.5123	0
16	0	-0.903992	33.3295	0
17	0	-0.859618	34.0684	0
18	0	-0.820379	34.7414	0
19	0	-0.778966	35.3482	0
20	0	-0.742143	35.899	0
21	0	-0.703089	36.3933	0
22	0	-0.668209	36.8398	0
23	0	-0.631062	37.2381	0
24	0	-0.597761	37.5954	0
25	0	-0.56217	37.9114	0
26	0	-0.530162	38.1925	0
27	0	-0.49585	38.4384	0
28	0	-0.464904	38.6545	0
29	0	-0.431644	38.8408	0
30	0	-0.401571	39.0021	0
31	0	-0.369171	39.1384	0
32	0	-0.33981	39.2538	0
33	0	-0.308108	39.3488	0
34	0	-0.279319	39.4268	0
35	0	-0.248174	39.4884	0
36	0	-0.219834	39.5367	0
37	0	-0.189118	39.5725	0
38	0	-0.161119	39.5984	0
39	0	-0.130716	39.6155	0
40	0	-0.102953	39.6261	0
41	0	-0.0727562	39.6314	0
42	0	-0.0451348	39.6334	0
43	0	-0.0150408	39.6337	0
44	0	0.0150408	39.6339	0
45	0	0.0451348	39.6359	0
46	0	0.0727562	39.6412	0
47	0	0.102953	39.6518	0

48	0	0.130716	39.6689	0
49	15	0.161119	39.6949	2.41679
50	17	0.189118	39.7306	5.6318
51	26	0.219834	39.779	11.3475
52	58	0.248174	39.8405	25.7416
53	60	0.279319	39.9186	42.5007
54	61	0.308108	40.0135	61.2953
55	61	0.33981	40.129	82.0237
56	62	0.369171	40.2653	104.912
57	64	0.401571	40.4265	130.613
58	67	0.431644	40.6128	159.533
59	69	0.464904	40.829	191.611
60	71	0.49585	41.0748	226.817
61	74	0.530162	41.3559	266.049
62	76	0.56217	41.6719	308.774
63	76	0.597761	42.0293	354.203
64	78	0.631062	42.4275	403.426
65	79	0.668209	42.874	456.215
66	80	0.703089	43.3683	512.462
67	85	0.742143	43.9191	575.544
68	85	0.778966	44.5259	641.756
69	86	0.820379	45.1989	712.309
70	94	0.859618	45.9379	793.113
71	110	0.903992	46.7551	892.552
72	110	0.946291	47.6505	996.644
73	110	0.994457	48.6395	1106.03
74	130	1.04073	49.7226	1241.33
75	160	1.0939	50.9192	1416.35
76	180	1.1455	52.2314	1622.54
77	180	1.20553	53.6847	1839.54
78	180	1.26464	55.284	2067.17
79	200	1.33462	57.0652	2334.1
80	240	1.40507	59.0395	2671.32
81	290	1.49085	61.2621	3103.66
82	290	1.58047	63.76	3562
83	300	1.6954	66.6343	4070.62
84	510	1.82501	69.965	5001.37
85	510	2.01409	74.0216	6028.56
86	660	2.29036	79.2673	7540.2

Data Set Standard Deviation = 120.132
Numerator = 5.68546e+007
Denominator = 9.72364e+007
W Statistic = 0.584705 = 5.68546e+007 / 9.72364e+007

5% Critical value of 0.972 exceeds 0.584705
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.584705
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Iron, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 52.381%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 290
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	15
	12/5/2013	26
	3/19/2014	86
	9/8/2014	64
	3/18/2015	ND<0 J
	9/8/2015	290
	3/14/2016	62
	9/20/2016	ND<0 J
	3/24/2017	ND<0 J
	9/20/2017	ND<0 J
	3/27/2018	ND<0 J
	9/18/2018	ND<0 J
	3/11/2019	ND<0 J
	10/3/2019	ND<0 J
	3/23/2020	ND<0 J
	9/24/2020	80
	3/23/2021	110
	9/16/2021	110
	3/24/2022	ND<0 J
	9/16/2022	69
	3/17/2023	ND<0 J

Date	Count	Mean	Significant
9/15/2023	1	79	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Iron, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 65%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 510
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	17
	3/21/2014	ND<0 J
	9/8/2014	61
	3/18/2015	85
	9/8/2015	ND<0 J
	3/14/2016	ND<0 J
	9/26/2016	60
	3/30/2017	ND<0 J
	9/20/2017	ND<0 J
	3/30/2018	ND<0 J
	9/21/2018	ND<0 J
	3/11/2019	ND<0 J
	10/3/2019	ND<0 U
	3/23/2020	180
	9/25/2020	510
	3/23/2021	ND<0 J
	9/16/2021	200
	3/23/2022	ND<0 J
	9/16/2022	ND<0 J
	3/17/2023	ND<0 J

Date	Count	Mean	Significant
9/15/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Iron, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 66.6667%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 510
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	510
	9/23/2016	ND<0 J
	3/28/2017	67
	9/21/2017	ND<0 J
	3/16/2018	ND<0 J
	9/19/2018	ND<0 J
	3/5/2019	160
	10/3/2019	ND<0 J
	3/25/2020	85
	9/28/2020	78
	3/19/2021	ND<0 J
	9/15/2021	ND<0 J
	3/22/2022	ND<0 J
	9/14/2022	ND<0 J
	3/16/2023	ND<0 J

Date	Count	Mean	Significant
9/12/2023	1	300	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Iron, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 50%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 180
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	180
	3/26/2020	130
	9/29/2020	76
	3/16/2021	ND<0 J
	9/14/2021	ND<0 J
	3/18/2022	ND<0 J
	9/13/2022	ND<0 J
	3/14/2023	180

Date	Count	Mean	Significant
9/12/2023	1	660	TRUE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Iron, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 62.5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 240
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	94
	3/25/2020	ND<0 J
	9/29/2020	240
	3/22/2021	61
	9/15/2021	ND<0 U
	3/24/2022	ND<0
	9/15/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: Lead, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	0	-1.82501	12.633	0
4	0	-1.6954	15.5074	0
5	0	-1.58047	18.0052	0
6	0	-1.49085	20.2279	0
7	0	-1.40507	22.2021	0
8	0	-1.33462	23.9833	0
9	0	-1.26464	25.5826	0
10	0	-1.20553	27.0359	0
11	0	-1.1455	28.3481	0
12	0	-1.0939	29.5447	0
13	0	-1.04073	30.6278	0
14	0	-0.994457	31.6168	0
15	0	-0.946291	32.5123	0
16	0	-0.903992	33.3295	0
17	0	-0.859618	34.0684	0
18	0	-0.820379	34.7414	0
19	0	-0.778966	35.3482	0
20	0	-0.742143	35.899	0
21	0	-0.703089	36.3933	0
22	0	-0.668209	36.8398	0
23	0	-0.631062	37.2381	0
24	0	-0.597761	37.5954	0
25	0	-0.56217	37.9114	0
26	0	-0.530162	38.1925	0
27	0	-0.49585	38.4384	0
28	0	-0.464904	38.6545	0
29	0	-0.431644	38.8408	0
30	0	-0.401571	39.0021	0
31	0	-0.369171	39.1384	0
32	0	-0.33981	39.2538	0
33	0	-0.308108	39.3488	0
34	0	-0.279319	39.4268	0
35	0	-0.248174	39.4884	0
36	0	-0.219834	39.5367	0
37	0	-0.189118	39.5725	0
38	0	-0.161119	39.5984	0
39	0	-0.130716	39.6155	0
40	0	-0.102953	39.6261	0
41	0	-0.0727562	39.6314	0
42	0	-0.0451348	39.6334	0
43	0	-0.0150408	39.6337	0
44	0	0.0150408	39.6339	0
45	0	0.0451348	39.6359	0
46	0	0.0727562	39.6412	0
47	0	0.102953	39.6518	0

48	0	0.130716	39.6689	0
49	0	0.161119	39.6949	0
50	0	0.189118	39.7306	0
51	0	0.219834	39.779	0
52	0	0.248174	39.8405	0
53	0	0.279319	39.9186	0
54	0	0.308108	40.0135	0
55	0	0.33981	40.129	0
56	0	0.369171	40.2653	0
57	0	0.401571	40.4265	0
58	0	0.431644	40.6128	0
59	0	0.464904	40.829	0
60	0	0.49585	41.0748	0
61	0	0.530162	41.3559	0
62	2.2	0.56217	41.6719	1.23677
63	2.3	0.597761	42.0293	2.61162
64	2.4	0.631062	42.4275	4.12617
65	3	0.668209	42.874	6.1308
66	7.1	0.703089	43.3683	11.1227
67	9	0.742143	43.9191	17.802
68	9	0.778966	44.5259	24.8127
69	9.1	0.820379	45.1989	32.2782
70	9.8	0.859618	45.9379	40.7024
71	12	0.903992	46.7551	51.5503
72	13	0.946291	47.6505	63.8521
73	13	0.994457	48.6395	76.7801
74	14	1.04073	49.7226	91.3503
75	15	1.0939	50.9192	107.759
76	15	1.1455	52.2314	124.941
77	16	1.20553	53.6847	144.23
78	16	1.26464	55.284	164.464
79	17	1.33462	57.0652	187.153
80	17	1.40507	59.0395	211.039
81	20	1.49085	61.2621	240.856
82	20	1.58047	63.76	272.465
83	21	1.6954	66.6343	308.069
84	25	1.82501	69.965	353.694
85	28	2.01409	74.0216	410.088
86	80	2.29036	79.2673	593.317

Data Set Standard Deviation = 10.7712
Numerator = 352025
Denominator = 781705
W Statistic = 0.45033 = 352025 / 781705

5% Critical value of 0.972 exceeds 0.45033
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.45033
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Lead, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 95.2381%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 2.3
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/8/2014	ND<0 J
	3/18/2015	ND<0 J
	9/8/2015	2.3
	3/14/2016	ND<0 J
	9/20/2016	ND<0 J
	3/24/2017	ND<0 J
	9/20/2017	ND<0 J
	3/27/2018	ND<0 J
	9/18/2018	ND<0 J
	3/11/2019	ND<0 J
	10/3/2019	ND<0 U
	3/23/2020	ND<0 U
	9/24/2020	ND<0 J
	3/23/2021	ND<0 U
	9/16/2021	ND<0 U
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

Date	Count	Mean	Significant
9/15/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Lead, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 10%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 80
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	9
	3/21/2014	9.8
	9/8/2014	13
	3/18/2015	7.1
	9/8/2015	80
	3/14/2016	25
	9/26/2016	17
	3/30/2017	20
	9/20/2017	16
	3/30/2018	12
	9/21/2018	15
	3/11/2019	21
	10/3/2019	14
	3/23/2020	ND<0 U
	9/25/2020	28
	3/23/2021	ND<0 U
	9/16/2021	16
	3/23/2022	15
	9/16/2022	17
	3/17/2023	20

Date	Count	Mean	Significant
9/15/2023	1	13	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Lead, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 0
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/28/2017	ND<0 U
	9/21/2017	ND<0 U
	3/16/2018	ND<0 U
	9/19/2018	ND<0 U
	3/5/2019	ND<0 U
	10/3/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Lead, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Lead, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 75%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 9.1
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	9.1
	3/25/2020	ND<0 U
	9/29/2020	ND<0 U
	3/22/2021	ND<0 U
	9/15/2021	ND<0 U
	3/24/2022	ND<0 J
	9/15/2022	ND<0 J
	3/16/2023	2.4

Date	Count	Mean	Significant
9/14/2023	1	0	FALSE

Shapiro-Francia Test of Normality

Parameter: Magnesium, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	2700	-2.29036	5.24576	-6183.98
2	4400	-2.01409	9.30234	-15046
3	4500	-1.82501	12.633	-23258.5
4	4500	-1.6954	15.5074	-30887.8
5	4700	-1.58047	18.0052	-38316
6	4700	-1.49085	20.2279	-45323
7	4800	-1.40507	22.2021	-52067.4
8	4800	-1.33462	23.9833	-58473.6
9	4800	-1.26464	25.5826	-64543.8
10	4900	-1.20553	27.0359	-70450.9
11	4900	-1.1455	28.3481	-76063.9
12	5000	-1.0939	29.5447	-81533.4
13	5079	-1.04073	30.6278	-86819.2
14	5100	-0.994457	31.6168	-91891
15	5300	-0.946291	32.5123	-96906.3
16	5300	-0.903992	33.3295	-101697
17	5400	-0.859618	34.0684	-106339
18	5500	-0.820379	34.7414	-110852
19	5800	-0.778966	35.3482	-115370
20	5814	-0.742143	35.899	-119684
21	5924	-0.703089	36.3933	-123849
22	6000	-0.668209	36.8398	-127859
23	6100	-0.631062	37.2381	-131708
24	6200	-0.597761	37.5954	-135414
25	6400	-0.56217	37.9114	-139012
26	6500	-0.530162	38.1925	-142458
27	6500	-0.49585	38.4384	-145681
28	6600	-0.464904	38.6545	-148750
29	6700	-0.431644	38.8408	-151642
30	6800	-0.401571	39.0021	-154372
31	6800	-0.369171	39.1384	-156883
32	6800	-0.33981	39.2538	-159193
33	7000	-0.308108	39.3488	-161350
34	7000	-0.279319	39.4268	-163305
35	7200	-0.248174	39.4884	-165092
36	7200	-0.219834	39.5367	-166675
37	7200	-0.189118	39.5725	-168037
38	7300	-0.161119	39.5984	-169213
39	7500	-0.130716	39.6155	-170193
40	7500	-0.102953	39.6261	-170965
41	7700	-0.0727562	39.6314	-171526
42	7700	-0.0451348	39.6334	-171873
43	7700	-0.0150408	39.6337	-171989
44	7700	0.0150408	39.6339	-171873
45	7700	0.0451348	39.6359	-171526
46	7800	0.0727562	39.6412	-170958
47	7800	0.102953	39.6518	-170155

48	7800	0.130716	39.6689	-169135
49	7800	0.161119	39.6949	-167879
50	7900	0.189118	39.7306	-166385
51	7900	0.219834	39.779	-164648
52	7900	0.248174	39.8405	-162687
53	8000	0.279319	39.9186	-160453
54	8000	0.308108	40.0135	-157988
55	8000	0.33981	40.129	-155270
56	8100	0.369171	40.2653	-152279
57	8100	0.401571	40.4265	-149027
58	8200	0.431644	40.6128	-145487
59	8300	0.464904	40.829	-141628
60	8500	0.49585	41.0748	-137414
61	9200	0.530162	41.3559	-132536
62	14200	0.56217	41.6719	-124553
63	14400	0.597761	42.0293	-115946
64	14500	0.631062	42.4275	-106795
65	15000	0.668209	42.874	-96772
66	15200	0.703089	43.3683	-86085.1
67	17000	0.742143	43.9191	-73468.6
68	17100	0.778966	44.5259	-60148.3
69	17200	0.820379	45.1989	-46037.8
70	17400	0.859618	45.9379	-31080.4
71	18300	0.903992	46.7551	-14537.4
72	19000	0.946291	47.6505	3442.14
73	20000	0.994457	48.6395	23331.3
74	20200	1.04073	49.7226	44354.1
75	20300	1.0939	50.9192	66560.2
76	20400	1.1455	52.2314	89928.5
77	20400	1.20553	53.6847	114521
78	21300	1.26464	55.284	141458
79	21800	1.33462	57.0652	170553
80	22700	1.40507	59.0395	202448
81	23000	1.49085	61.2621	236738
82	23600	1.58047	63.76	274037
83	23800	1.6954	66.6343	314387
84	24000	1.82501	69.965	358187
85	24300	2.01409	74.0216	407130
86	24800	2.29036	79.2673	463931

Data Set Standard Deviation = 6326.98
Numerator = 2.15232e+011
Denominator = 2.69716e+011
W Statistic = 0.797995 = 2.15232e+011 / 2.69716e+011

5% Critical value of 0.972 exceeds 0.797995
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.797995
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Magnesium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 8100
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	5079
	3/21/2014	4900
	9/8/2014	5400
	3/18/2015	4900
	9/8/2015	5300
	3/14/2016	5500
	9/26/2016	5800
	3/30/2017	6500
	9/20/2017	6200
	3/30/2018	6700
	9/21/2018	6800
	3/11/2019	6800
	10/3/2019	6800
	3/23/2020	5000
	9/25/2020	7000
	3/23/2021	4500
	9/16/2021	7200
	3/23/2022	7800
	9/16/2022	8100
	3/17/2023	7800

Date	Count	Mean	Significant
9/15/2023	1	7500	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Magnesium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 9200
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	5924
	12/5/2013	5814
	3/19/2014	6000
	9/8/2014	6400
	3/18/2015	6100
	9/8/2015	7500
	3/14/2016	7200
	9/20/2016	6600
	3/24/2017	6500
	9/20/2017	7300
	3/27/2018	7000
	9/18/2018	7700
	3/11/2019	7800
	10/3/2019	7800
	3/23/2020	8000
	9/24/2020	7900
	3/23/2021	9200
	9/16/2021	8100
	3/24/2022	8500
	9/16/2022	8300
	3/17/2023	7900

Date	Count	Mean	Significant
9/15/2023	1	7700	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Magnesium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 20400
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	17100
	9/23/2016	15200
	3/28/2017	14400
	9/21/2017	14200
	3/16/2018	14500
	9/19/2018	15000
	3/5/2019	18300
	10/3/2019	17200
	3/25/2020	17000
	9/28/2020	17400
	3/19/2021	20400
	9/15/2021	20000
	3/22/2022	20300
	9/14/2022	20200
	3/16/2023	20400

Date	Count	Mean	Significant
9/12/2023	1	19000	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Magnesium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 24800
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	24300
	3/26/2020	21800
	9/29/2020	23000
	3/16/2021	24800
	9/14/2021	24000
	3/18/2022	22700
	9/13/2022	23800
	3/14/2023	23600

Date	Count	Mean	Significant
9/12/2023	1	21300	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Magnesium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 5300
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	5300
	3/25/2020	5100
	9/29/2020	4400
	3/22/2021	4500
	9/15/2021	4700
	3/24/2022	4800
	9/15/2022	4700
	3/16/2023	4800

Date	Count	Mean	Significant
9/14/2023	1	4800	FALSE

Shapiro-Francia Test of Normality

Parameter: Manganese, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	20	-1.82501	12.633	-36.5001
4	28	-1.6954	15.5074	-83.9713
5	28	-1.58047	18.0052	-128.224
6	29	-1.49085	20.2279	-171.459
7	30	-1.40507	22.2021	-213.611
8	33	-1.33462	23.9833	-257.654
9	34	-1.26464	25.5826	-300.652
10	35	-1.20553	27.0359	-342.845
11	35	-1.1455	28.3481	-382.938
12	35	-1.0939	29.5447	-421.224
13	36	-1.04073	30.6278	-458.69
14	36	-0.994457	31.6168	-494.491
15	36	-0.946291	32.5123	-528.557
16	36	-0.903992	33.3295	-561.101
17	37	-0.859618	34.0684	-592.907
18	38	-0.820379	34.7414	-624.081
19	39	-0.778966	35.3482	-654.461
20	40	-0.742143	35.899	-684.147
21	40	-0.703089	36.3933	-712.27
22	41	-0.668209	36.8398	-739.667
23	41	-0.631062	37.2381	-765.54
24	41	-0.597761	37.5954	-790.049
25	41	-0.56217	37.9114	-813.098
26	41	-0.530162	38.1925	-834.834
27	42	-0.49585	38.4384	-855.66
28	42	-0.464904	38.6545	-875.186
29	42	-0.431644	38.8408	-893.315
30	42	-0.401571	39.0021	-910.181
31	43	-0.369171	39.1384	-926.055
32	44	-0.33981	39.2538	-941.007
33	44	-0.308108	39.3488	-954.564
34	46	-0.279319	39.4268	-967.412
35	46	-0.248174	39.4884	-978.828
36	46	-0.219834	39.5367	-988.941
37	47	-0.189118	39.5725	-997.829
38	48	-0.161119	39.5984	-1005.56
39	48	-0.130716	39.6155	-1011.84
40	48	-0.102953	39.6261	-1016.78
41	50	-0.0727562	39.6314	-1020.42
42	51	-0.0451348	39.6334	-1022.72
43	55	-0.0150408	39.6337	-1023.55
44	56	0.0150408	39.6339	-1022.7
45	58	0.0451348	39.6359	-1020.09
46	60	0.0727562	39.6412	-1015.72
47	61	0.102953	39.6518	-1009.44

48	64	0.130716	39.6689	-1001.07
49	64	0.161119	39.6949	-990.763
50	67	0.189118	39.7306	-978.092
51	68	0.219834	39.779	-963.143
52	68	0.248174	39.8405	-946.268
53	70	0.279319	39.9186	-926.715
54	70	0.308108	40.0135	-905.148
55	70	0.33981	40.129	-881.361
56	71	0.369171	40.2653	-855.15
57	72	0.401571	40.4265	-826.237
58	73	0.431644	40.6128	-794.727
59	83	0.464904	40.829	-756.14
60	88	0.49585	41.0748	-712.505
61	100	0.530162	41.3559	-659.489
62	350	0.56217	41.6719	-462.729
63	380	0.597761	42.0293	-235.58
64	380	0.631062	42.4275	4.22349
65	390	0.668209	42.874	264.825
66	440	0.703089	43.3683	574.184
67	500	0.742143	43.9191	945.256
68	540	0.778966	44.5259	1365.9
69	580	0.820379	45.1989	1841.72
70	660	0.859618	45.9379	2409.07
71	680	0.903992	46.7551	3023.78
72	690	0.946291	47.6505	3676.72
73	720	0.994457	48.6395	4392.73
74	910	1.04073	49.7226	5339.8
75	920	1.0939	50.9192	6346.18
76	980	1.1455	52.2314	7468.78
77	980	1.20553	53.6847	8650.19
78	2000	1.26464	55.284	11179.5
79	2000	1.33462	57.0652	13848.7
80	2300	1.40507	59.0395	17080.4
81	2600	1.49085	61.2621	20956.6
82	2800	1.58047	63.76	25381.9
83	2900	1.6954	66.6343	30298.6
84	3200	1.82501	69.965	36138.6
85	3200	2.01409	74.0216	42583.7
86	3400	2.29036	79.2673	50370.9

Data Set Standard Deviation = 835.665
Numerator = 2.53723e+009
Denominator = 4.70519e+009
W Statistic = 0.53924 = 2.53723e+009 / 4.70519e+009

5% Critical value of 0.972 exceeds 0.53924
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.53924
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Manganese, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 100
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	40
	12/5/2013	40
	3/19/2014	44
	9/8/2014	42
	3/18/2015	44
	9/8/2015	83
	3/14/2016	64
	9/20/2016	48
	3/24/2017	55
	9/20/2017	61
	3/27/2018	56
	9/18/2018	64
	3/11/2019	70
	10/3/2019	60
	3/23/2020	73
	9/24/2020	71
	3/23/2021	100
	9/16/2021	70
	3/24/2022	67
	9/16/2022	88
	3/17/2023	68

Date	Count	Mean	Significant
9/15/2023	1	68	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Manganese, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 10%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 51
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	20
	3/21/2014	28
	9/8/2014	29
	3/18/2015	30
	9/8/2015	35
	3/14/2016	33
	9/26/2016	35
	3/30/2017	36
	9/20/2017	36
	3/30/2018	41
	9/21/2018	36
	3/11/2019	36
	10/3/2019	41
	3/23/2020	ND<0 J
	9/25/2020	48
	3/23/2021	ND<0 U
	9/16/2021	42
	3/23/2022	51
	9/16/2022	46
	3/17/2023	46

Date	Count	Mean	Significant
9/15/2023	1	42	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Manganese, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 980
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	690
	9/23/2016	390
	3/28/2017	380
	9/21/2017	350
	3/16/2018	380
	9/19/2018	440
	3/5/2019	500
	10/3/2019	540
	3/25/2020	580
	9/28/2020	660
	3/19/2021	680
	9/15/2021	720
	3/22/2022	910
	9/14/2022	920
	3/16/2023	980

Date	Count	Mean	Significant
9/12/2023	1	980	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Manganese, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 3400
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	2000
	3/26/2020	2000
	9/29/2020	2300
	3/16/2021	2600
	9/14/2021	2800
	3/18/2022	2900
	9/13/2022	3200
	3/14/2023	3400

Date	Count	Mean	Significant
9/12/2023	1	3200	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Manganese, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 58
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	48
	3/25/2020	43
	9/29/2020	41
	3/22/2021	39
	9/15/2021	41
	3/24/2022	47
	9/15/2022	50
	3/16/2023	58

Date	Count	Mean	Significant
9/14/2023	1	70	TRUE

Shapiro-Francia Test of Normality

Parameter: Mercury, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	0	-1.82501	12.633	0
4	0	-1.6954	15.5074	0
5	0	-1.58047	18.0052	0
6	0	-1.49085	20.2279	0
7	0	-1.40507	22.2021	0
8	0	-1.33462	23.9833	0
9	0	-1.26464	25.5826	0
10	0	-1.20553	27.0359	0
11	0	-1.1455	28.3481	0
12	0	-1.0939	29.5447	0
13	0	-1.04073	30.6278	0
14	0	-0.994457	31.6168	0
15	0	-0.946291	32.5123	0
16	0	-0.903992	33.3295	0
17	0	-0.859618	34.0684	0
18	0	-0.820379	34.7414	0
19	0	-0.778966	35.3482	0
20	0	-0.742143	35.899	0
21	0	-0.703089	36.3933	0
22	0	-0.668209	36.8398	0
23	0	-0.631062	37.2381	0
24	0	-0.597761	37.5954	0
25	0	-0.56217	37.9114	0
26	0	-0.530162	38.1925	0
27	0	-0.49585	38.4384	0
28	0	-0.464904	38.6545	0
29	0	-0.431644	38.8408	0
30	0	-0.401571	39.0021	0
31	0.54	-0.369171	39.1384	-0.199352
32	0.85	-0.33981	39.2538	-0.488191
33	0.9	-0.308108	39.3488	-0.765488
34	0.92	-0.279319	39.4268	-1.02246
35	0.94	-0.248174	39.4884	-1.25575
36	1	-0.219834	39.5367	-1.47558
37	1.1	-0.189118	39.5725	-1.68361
38	1.1	-0.161119	39.5984	-1.86084
39	1.4	-0.130716	39.6155	-2.04384
40	1.5	-0.102953	39.6261	-2.19827
41	1.6	-0.0727562	39.6314	-2.31468
42	1.7	-0.0451348	39.6334	-2.39141
43	1.7	-0.0150408	39.6337	-2.41698
44	1.7	0.0150408	39.6339	-2.39141
45	1.7	0.0451348	39.6359	-2.31468
46	1.8	0.0727562	39.6412	-2.18372
47	1.8	0.102953	39.6518	-1.99841

48	1.9	0.130716	39.6689	-1.75005
49	1.9	0.161119	39.6949	-1.44392
50	1.9	0.189118	39.7306	-1.08459
51	2	0.219834	39.779	-0.644927
52	2	0.248174	39.8405	-0.148579
53	2	0.279319	39.9186	0.41006
54	2.02	0.308108	40.0135	1.03244
55	2.1	0.33981	40.129	1.74604
56	2.1	0.369171	40.2653	2.5213
57	2.2	0.401571	40.4265	3.40476
58	2.3	0.431644	40.6128	4.39754
59	2.3	0.464904	40.829	5.46682
60	2.3	0.49585	41.0748	6.60727
61	2.3	0.530162	41.3559	7.82664
62	2.3	0.56217	41.6719	9.11963
63	2.3	0.597761	42.0293	10.4945
64	2.4	0.631062	42.4275	12.009
65	2.5	0.668209	42.874	13.6796
66	2.6	0.703089	43.3683	15.5076
67	2.7	0.742143	43.9191	17.5114
68	2.7	0.778966	44.5259	19.6146
69	2.7	0.820379	45.1989	21.8296
70	2.7	0.859618	45.9379	24.1506
71	2.8	0.903992	46.7551	26.6818
72	2.8	0.946291	47.6505	29.3314
73	2.8	0.994457	48.6395	32.1158
74	3	1.04073	49.7226	35.238
75	3	1.0939	50.9192	38.5197
76	3	1.1455	52.2314	41.9562
77	3.1	1.20553	53.6847	45.6934
78	3.1	1.26464	55.284	49.6138
79	3.1	1.33462	57.0652	53.7511
80	3.2	1.40507	59.0395	58.2473
81	3.2	1.49085	61.2621	63.0181
82	3.2	1.58047	63.76	68.0756
83	3.3	1.6954	66.6343	73.6704
84	3.3	1.82501	69.965	79.6929
85	3.3	2.01409	74.0216	86.3394
86	3.4	2.29036	79.2673	94.1266

Data Set Standard Deviation = 1.22394
Numerator = 8859.82
Denominator = 10093.3
W Statistic = 0.877796 = 8859.82 / 10093.3

5% Critical value of 0.972 exceeds 0.877796
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.877796
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Mercury, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 3.4
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	2.02
	12/5/2013	1.9
	3/19/2014	2.6
	9/8/2014	3.2
	3/18/2015	3.3
	9/8/2015	2.7
	3/14/2016	3.1
	9/20/2016	3
	3/24/2017	3.1
	9/20/2017	3.1
	3/27/2018	3.2
	9/18/2018	2.8
	3/11/2019	2.8
	10/3/2019	3.3
	3/23/2020	3
	9/24/2020	3.3
	3/23/2021	2.7
	9/16/2021	3.2
	3/24/2022	3
	9/16/2022	2.3
	3/17/2023	3.4

Date	Count	Mean	Significant
9/15/2023	1	2.7	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Mercury, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 2.8
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	0.92
	3/21/2014	0.94
	9/8/2014	1.4
	3/18/2015	1.7
	9/8/2015	1.1
	3/14/2016	2.3
	9/26/2016	2.4
	3/30/2017	2.8
	9/20/2017	2.7
	3/30/2018	2.5
	9/21/2018	2.3
	3/11/2019	2.3
	10/3/2019	2.1
	3/23/2020	2
	9/25/2020	1.5
	3/23/2021	1.1
	9/16/2021	1.6
	3/23/2022	1.7
	9/16/2022	1.7
	3/17/2023	1.8

Date	Count	Mean	Significant
9/15/2023	1	1.7	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Mercury, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 0
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/28/2017	ND<0 U
	9/21/2017	ND<0 U
	3/16/2018	ND<0 U
	9/19/2018	ND<0 U
	3/5/2019	ND<0 U
	10/3/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

Date	Count	Mean	Significant
9/12/2023	1	0	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Mercury, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 62.5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 1
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	ND<0 J
	3/26/2020	ND<0 J
	9/29/2020	ND<0 J
	3/16/2021	ND<0 J
	9/14/2021	0.85
	3/18/2022	1
	9/13/2022	0.9
	3/14/2023	ND<0 J

Date	Count	Mean	Significant
9/12/2023	1	0.54	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Mercury, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 2.3
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	1.9
	3/25/2020	1.9
	9/29/2020	2
	3/22/2021	2.3
	9/15/2021	2.2
	3/24/2022	1.8
	9/15/2022	2
	3/16/2023	2.3

Date	Count	Mean	Significant
9/14/2023	1	2.1	FALSE

Shapiro-Francia Test of Normality

Parameter: Nickel, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	1.1	-1.82501	12.633	-2.00751
4	6.7	-1.6954	15.5074	-13.3667
5	9	-1.58047	18.0052	-27.5909
6	9.6	-1.49085	20.2279	-41.903
7	9.7	-1.40507	22.2021	-55.5323
8	9.8	-1.33462	23.9833	-68.6116
9	9.9	-1.26464	25.5826	-81.1315
10	10	-1.20553	27.0359	-93.1868
11	10	-1.1455	28.3481	-104.642
12	10	-1.0939	29.5447	-115.581
13	10	-1.04073	30.6278	-125.988
14	11	-0.994457	31.6168	-136.927
15	11	-0.946291	32.5123	-147.336
16	11	-0.903992	33.3295	-157.28
17	13	-0.859618	34.0684	-168.455
18	14	-0.820379	34.7414	-179.941
19	16	-0.778966	35.3482	-192.404
20	18	-0.742143	35.899	-205.763
21	19	-0.703089	36.3933	-219.121
22	20	-0.668209	36.8398	-232.486
23	21	-0.631062	37.2381	-245.738
24	21	-0.597761	37.5954	-258.291
25	22	-0.56217	37.9114	-270.659
26	23	-0.530162	38.1925	-282.852
27	23	-0.49585	38.4384	-294.257
28	25	-0.464904	38.6545	-305.879
29	25	-0.431644	38.8408	-316.671
30	25	-0.401571	39.0021	-326.71
31	26	-0.369171	39.1384	-336.308
32	26	-0.33981	39.2538	-345.143
33	26	-0.308108	39.3488	-353.154
34	26	-0.279319	39.4268	-360.416
35	29	-0.248174	39.4884	-367.613
36	29	-0.219834	39.5367	-373.989
37	31	-0.189118	39.5725	-379.851
38	32	-0.161119	39.5984	-385.007
39	33	-0.130716	39.6155	-389.321
40	34	-0.102953	39.6261	-392.821
41	37	-0.0727562	39.6314	-395.513
42	40	-0.0451348	39.6334	-397.319
43	41	-0.0150408	39.6337	-397.935
44	41	0.0150408	39.6339	-397.319
45	41	0.0451348	39.6359	-395.468
46	43	0.0727562	39.6412	-392.339
47	45	0.102953	39.6518	-387.707

48	45	0.130716	39.6689	-381.824
49	46	0.161119	39.6949	-374.413
50	47	0.189118	39.7306	-365.524
51	48	0.219834	39.779	-354.972
52	49	0.248174	39.8405	-342.812
53	49	0.279319	39.9186	-329.125
54	50	0.308108	40.0135	-313.72
55	51	0.33981	40.129	-296.389
56	51	0.369171	40.2653	-277.562
57	51	0.401571	40.4265	-257.082
58	52	0.431644	40.6128	-234.636
59	52	0.464904	40.829	-210.461
60	54	0.49585	41.0748	-183.685
61	55	0.530162	41.3559	-154.526
62	55	0.56217	41.6719	-123.607
63	56	0.597761	42.0293	-90.1323
64	56	0.631062	42.4275	-54.7929
65	56	0.668209	42.874	-17.3732
66	57	0.703089	43.3683	22.7029
67	59	0.742143	43.9191	66.4894
68	59	0.778966	44.5259	112.448
69	60	0.820379	45.1989	161.671
70	60	0.859618	45.9379	213.248
71	61	0.903992	46.7551	268.392
72	62	0.946291	47.6505	327.062
73	62	0.994457	48.6395	388.718
74	62	1.04073	49.7226	453.244
75	63	1.0939	50.9192	522.159
76	63	1.1455	52.2314	594.326
77	63	1.20553	53.6847	670.274
78	64	1.26464	55.284	751.211
79	64	1.33462	57.0652	836.627
80	64	1.40507	59.0395	926.552
81	65	1.49085	61.2621	1023.46
82	67	1.58047	63.76	1129.35
83	67	1.6954	66.6343	1242.94
84	68	1.82501	69.965	1367.04
85	69	2.01409	74.0216	1506.01
86	70	2.29036	79.2673	1666.34

Data Set Standard Deviation = 20.9096
Numerator = 2.77668e+006
Denominator = 2.9458e+006
W Statistic = 0.94259 = 2.77668e+006 / 2.9458e+006

5% Critical value of 0.972 exceeds 0.94259
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.94259
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Nickel, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 10%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 52
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	29
	3/21/2014	33
	9/8/2014	32
	3/18/2015	34
	9/8/2015	51
	3/14/2016	37
	9/26/2016	40
	3/30/2017	41
	9/20/2017	41
	3/30/2018	45
	9/21/2018	41
	3/11/2019	43
	10/3/2019	45
	3/23/2020	ND<0 U
	9/25/2020	49
	3/23/2021	ND<0 U
	9/16/2021	48
	3/23/2022	52
	9/16/2022	51
	3/17/2023	51

Date	Count	Mean	Significant
9/15/2023	1	47	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Nickel, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 70
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	46
	12/5/2013	50
	3/19/2014	49
	9/8/2014	52
	3/18/2015	54
	9/8/2015	57
	3/14/2016	56
	9/20/2016	59
	3/24/2017	59
	9/20/2017	60
	3/27/2018	55
	9/18/2018	60
	3/11/2019	61
	10/3/2019	64
	3/23/2020	64
	9/24/2020	62
	3/23/2021	63
	9/16/2021	62
	3/24/2022	68
	9/16/2022	69
	3/17/2023	70

Date	Count	Mean	Significant
9/15/2023	1	67	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Nickel, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 16
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	16
	9/23/2016	14
	3/28/2017	13
	9/21/2017	11
	3/16/2018	10
	9/19/2018	11
	3/5/2019	1.1
	10/3/2019	10
	3/25/2020	9.8
	9/28/2020	11
	3/19/2021	9.9
	9/15/2021	10
	3/22/2022	10
	9/14/2022	9
	3/16/2023	9.7

Date	Count	Mean	Significant
9/12/2023	1	9.6	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Nickel, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 67
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	56
	3/26/2020	56
	9/29/2020	55
	3/16/2021	64
	9/14/2021	63
	3/18/2022	63
	9/13/2022	67
	3/14/2023	65

Date	Count	Mean	Significant
9/12/2023	1	62	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Nickel, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 29
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	29
	3/25/2020	26
	9/29/2020	21
	3/22/2021	23
	9/15/2021	25
	3/24/2022	25
	9/15/2022	26
	3/16/2023	26

Date	Count	Mean	Significant
9/14/2023	1	26	FALSE

Shapiro-Francia Test of Normality

Parameter: Potassium, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	190	-2.29036	5.24576	-435.169
2	940	-2.01409	9.30234	-2328.42
3	1400	-1.82501	12.633	-4883.43
4	1700	-1.6954	15.5074	-7765.6
5	1710	-1.58047	18.0052	-10468.2
6	1780	-1.49085	20.2279	-13121.9
7	1800	-1.40507	22.2021	-15651
8	1800	-1.33462	23.9833	-18053.4
9	1800	-1.26464	25.5826	-20329.7
10	1800	-1.20553	27.0359	-22499.7
11	1900	-1.1455	28.3481	-24676.1
12	1900	-1.0939	29.5447	-26754.5
13	1900	-1.04073	30.6278	-28731.9
14	1940	-0.994457	31.6168	-30661.2
15	2000	-0.946291	32.5123	-32553.8
16	2000	-0.903992	33.3295	-34361.7
17	2000	-0.859618	34.0684	-36081
18	2000	-0.820379	34.7414	-37721.7
19	2000	-0.778966	35.3482	-39279.7
20	2000	-0.742143	35.899	-40764
21	2100	-0.703089	36.3933	-42240.4
22	2100	-0.668209	36.8398	-43643.7
23	2100	-0.631062	37.2381	-44968.9
24	2100	-0.597761	37.5954	-46224.2
25	2100	-0.56217	37.9114	-47404.8
26	2100	-0.530162	38.1925	-48518.1
27	2200	-0.49585	38.4384	-49609
28	2200	-0.464904	38.6545	-50631.8
29	2200	-0.431644	38.8408	-51581.4
30	2200	-0.401571	39.0021	-52464.8
31	2200	-0.369171	39.1384	-53277
32	2200	-0.33981	39.2538	-54024.6
33	2300	-0.308108	39.3488	-54733.2
34	2300	-0.279319	39.4268	-55375.7
35	2300	-0.248174	39.4884	-55946.5
36	2300	-0.219834	39.5367	-56452.1
37	2300	-0.189118	39.5725	-56887.1
38	2300	-0.161119	39.5984	-57257.6
39	2300	-0.130716	39.6155	-57558.3
40	2300	-0.102953	39.6261	-57795.1
41	2300	-0.0727562	39.6314	-57962.4
42	2300	-0.0451348	39.6334	-58066.2
43	2300	-0.0150408	39.6337	-58100.8
44	2300	0.0150408	39.6339	-58066.2
45	2400	0.0451348	39.6359	-57957.9
46	2400	0.0727562	39.6412	-57783.3
47	2400	0.102953	39.6518	-57536.2

48	2400	0.130716	39.6689	-57222.5
49	2400	0.161119	39.6949	-56835.8
50	2400	0.189118	39.7306	-56381.9
51	2400	0.219834	39.779	-55854.3
52	2500	0.248174	39.8405	-55233.9
53	2500	0.279319	39.9186	-54535.6
54	2500	0.308108	40.0135	-53765.3
55	2500	0.33981	40.129	-52915.8
56	2600	0.369171	40.2653	-51955.9
57	2600	0.401571	40.4265	-50911.9
58	2600	0.431644	40.6128	-49789.6
59	2600	0.464904	40.829	-48580.8
60	2700	0.49585	41.0748	-47242
61	2700	0.530162	41.3559	-45810.6
62	2700	0.56217	41.6719	-44292.7
63	2700	0.597761	42.0293	-42678.8
64	2800	0.631062	42.4275	-40911.8
65	2800	0.668209	42.874	-39040.8
66	2800	0.703089	43.3683	-37072.2
67	2900	0.742143	43.9191	-34920
68	3300	0.778966	44.5259	-32349.4
69	3400	0.820379	45.1989	-29560.1
70	3400	0.859618	45.9379	-26637.4
71	3500	0.903992	46.7551	-23473.4
72	4000	0.946291	47.6505	-19688.2
73	4000	0.994457	48.6395	-15710.4
74	4100	1.04073	49.7226	-11443.4
75	4100	1.0939	50.9192	-6958.44
76	4200	1.1455	52.2314	-2147.32
77	4200	1.20553	53.6847	2915.89
78	4400	1.26464	55.284	8480.31
79	4500	1.33462	57.0652	14486.1
80	5000	1.40507	59.0395	21511.5
81	5300	1.49085	61.2621	29413
82	5400	1.58047	63.76	37947.5
83	5600	1.6954	66.6343	47441.7
84	6300	1.82501	69.965	58939.3
85	8100	2.01409	74.0216	75253.4
86	9100	2.29036	79.2673	96095.7

Data Set Standard Deviation = 1368.76
Numerator = 9.23439e+009
Denominator = 1.26232e+010
W Statistic = 0.731541 = 9.23439e+009 / 1.26232e+010

5% Critical value of 0.972 exceeds 0.731541
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.731541
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Potassium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 2300
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	1710
	3/21/2014	1700
	9/8/2014	1800
	3/18/2015	1800
	9/8/2015	1800
	3/14/2016	1800
	9/26/2016	1900
	3/30/2017	1900
	9/20/2017	1900
	3/30/2018	2000
	9/21/2018	2000
	3/11/2019	2000
	10/3/2019	2000
	3/23/2020	940
	9/25/2020	2100
	3/23/2021	190
	9/16/2021	2300
	3/23/2022	2200
	9/16/2022	2200
	3/17/2023	2300

Date	Count	Mean	Significant
9/15/2023	1	2200	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Potassium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 2900
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	1940
	12/5/2013	1780
	3/19/2014	2000
	9/8/2014	2100
	3/18/2015	2100
	9/8/2015	2400
	3/14/2016	2300
	9/20/2016	2200
	3/24/2017	2200
	9/20/2017	2300
	3/27/2018	2300
	9/18/2018	2300
	3/11/2019	2400
	10/3/2019	2400
	3/23/2020	2400
	9/24/2020	2500
	3/23/2021	2900
	9/16/2021	2600
	3/24/2022	2600
	9/16/2022	2700
	3/17/2023	2500

Date	Count	Mean	Significant
9/15/2023	1	2400	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Potassium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 2800
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	2400
	9/23/2016	2300
	3/28/2017	2300
	9/21/2017	2000
	3/16/2018	2100
	9/19/2018	2100
	3/5/2019	2300
	10/3/2019	2300
	3/25/2020	2300
	9/28/2020	2400
	3/19/2021	2500
	9/15/2021	2600
	3/22/2022	2700
	9/14/2022	2800
	3/16/2023	2800

Date	Count	Mean	Significant
9/12/2023	1	2600	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Potassium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 5400
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	4200
	3/26/2020	5300
	9/29/2020	5000
	3/16/2021	4200
	9/14/2021	4000
	3/18/2022	4500
	9/13/2022	5400
	3/14/2023	4100

Date	Count	Mean	Significant
9/12/2023	1	3500	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Potassium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 9100
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	9100
	3/25/2020	5600
	9/29/2020	2700
	3/22/2021	2700
	9/15/2021	2800
	3/24/2022	2200
	9/15/2022	2300
	3/16/2023	2100

Date	Count	Mean	Significant
9/14/2023	1	2500	FALSE

Shapiro-Francia Test of Normality

Parameter: Selenium, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	0	-1.82501	12.633	0
4	0	-1.6954	15.5074	0
5	0	-1.58047	18.0052	0
6	0	-1.49085	20.2279	0
7	0	-1.40507	22.2021	0
8	0	-1.33462	23.9833	0
9	0	-1.26464	25.5826	0
10	0	-1.20553	27.0359	0
11	0	-1.1455	28.3481	0
12	0	-1.0939	29.5447	0
13	0	-1.04073	30.6278	0
14	0	-0.994457	31.6168	0
15	0	-0.946291	32.5123	0
16	0	-0.903992	33.3295	0
17	0	-0.859618	34.0684	0
18	0	-0.820379	34.7414	0
19	0	-0.778966	35.3482	0
20	0	-0.742143	35.899	0
21	0	-0.703089	36.3933	0
22	0	-0.668209	36.8398	0
23	0	-0.631062	37.2381	0
24	0	-0.597761	37.5954	0
25	0	-0.56217	37.9114	0
26	0	-0.530162	38.1925	0
27	0	-0.49585	38.4384	0
28	0	-0.464904	38.6545	0
29	0	-0.431644	38.8408	0
30	0	-0.401571	39.0021	0
31	0	-0.369171	39.1384	0
32	0	-0.33981	39.2538	0
33	0	-0.308108	39.3488	0
34	0	-0.279319	39.4268	0
35	0	-0.248174	39.4884	0
36	0	-0.219834	39.5367	0
37	0	-0.189118	39.5725	0
38	0	-0.161119	39.5984	0
39	0	-0.130716	39.6155	0
40	0	-0.102953	39.6261	0
41	0	-0.0727562	39.6314	0
42	0	-0.0451348	39.6334	0
43	0	-0.0150408	39.6337	0
44	0	0.0150408	39.6339	0
45	0	0.0451348	39.6359	0
46	0	0.0727562	39.6412	0
47	0	0.102953	39.6518	0

48	0	0.130716	39.6689	0
49	0	0.161119	39.6949	0
50	0	0.189118	39.7306	0
51	0	0.219834	39.779	0
52	0	0.248174	39.8405	0
53	0	0.279319	39.9186	0
54	0	0.308108	40.0135	0
55	0	0.33981	40.129	0
56	0	0.369171	40.2653	0
57	0	0.401571	40.4265	0
58	0	0.431644	40.6128	0
59	0	0.464904	40.829	0
60	0	0.49585	41.0748	0
61	0	0.530162	41.3559	0
62	0	0.56217	41.6719	0
63	0	0.597761	42.0293	0
64	0	0.631062	42.4275	0
65	0	0.668209	42.874	0
66	0	0.703089	43.3683	0
67	0	0.742143	43.9191	0
68	0	0.778966	44.5259	0
69	0	0.820379	45.1989	0
70	0	0.859618	45.9379	0
71	0	0.903992	46.7551	0
72	0	0.946291	47.6505	0
73	0	0.994457	48.6395	0
74	0	1.04073	49.7226	0
75	0	1.0939	50.9192	0
76	0	1.1455	52.2314	0
77	0	1.20553	53.6847	0
78	0	1.26464	55.284	0
79	0	1.33462	57.0652	0
80	0	1.40507	59.0395	0
81	0	1.49085	61.2621	0
82	0	1.58047	63.76	0
83	0	1.6954	66.6343	0
84	0	1.82501	69.965	0
85	0	2.01409	74.0216	0
86	0	2.29036	79.2673	0

Data Set Standard Deviation = 0

Divide by Zero Error

Parametric Prediction Interval Analysis

Intra-Well Comparison for SMW-13

Parameter: Selenium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	9/23/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/18/2015	ND<0 U
	9/8/2015	ND<0 U
	3/14/2016	ND<0 U
	9/26/2016	ND<0 U
	3/30/2017	ND<0 U
	9/20/2017	ND<0 U
	3/30/2018	ND<0 U
	9/21/2018	ND<0 U
	3/11/2019	ND<0 U
	10/3/2019	ND<0 U
	3/23/2020	ND<0 U
	9/25/2020	ND<0 U
	3/23/2021	ND<0 U
	9/16/2021	ND<0 J
	3/23/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

From 20 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.72913 at 19 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/15/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for SMW-32

Parameter: Selenium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	9/23/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/8/2014	ND<0 U
	3/18/2015	ND<0 U
	9/8/2015	ND<0 U
	3/14/2016	ND<0 U
	9/20/2016	ND<0 U
	3/24/2017	ND<0 U
	9/20/2017	ND<0 U
	3/27/2018	ND<0 U
	9/18/2018	ND<0 U
	3/11/2019	ND<0 U
	10/3/2019	ND<0 U
	3/23/2020	ND<0 U
	9/24/2020	ND<0 U
	3/23/2021	ND<0 U
	9/16/2021	ND<0 J
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

From 21 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.72472 at 20 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/15/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for GWM-15D

Parameter: Selenium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/28/2017	ND<0 U
	9/21/2017	ND<0 U
	3/16/2018	ND<0 U
	9/19/2018	ND<0 U
	3/5/2019	ND<0 U
	10/3/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

From 15 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.76131 at 14 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/12/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for GWM-17D

Parameter: Selenium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 J
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

From 8 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.89458 at 7 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/12/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for GWM-19D

Parameter: Selenium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	11/14/2019	ND<0 U
	3/25/2020	ND<0 U
	9/29/2020	ND<0 U
	3/22/2021	ND<0 J
	9/15/2021	ND<0 J
	3/24/2022	ND<0
	9/15/2022	ND<0
	3/16/2023	ND<0

From 8 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.89458 at 7 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/14/2023	1	0	[0, 0]	FALSE

Shapiro-Francia Test of Normality

Parameter: Silver, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 85

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-1.99539	9.22736	0
3	0	-1.82501	12.558	0
4	0	-1.68494	15.397	0
5	0	-1.57179	17.8675	0
6	0	-1.48328	20.0677	0
7	0	-1.39838	22.0231	0
8	0	-1.32251	23.7721	0
9	0	-1.25908	25.3574	0
10	0	-1.19522	26.786	0
11	0	-1.14069	28.0872	0
12	0	-1.08482	29.264	0
13	0	-1.03215	30.3293	0
14	0	-0.986272	31.3021	0
15	0	-0.938476	32.1828	0
16	0	-0.892733	32.9798	0
17	0	-0.852385	33.7063	0
18	0	-0.809896	34.3623	0
19	0	-0.772193	34.9586	0
20	0	-0.732275	35.4948	0
21	0	-0.693493	35.9757	0
22	0	-0.658838	36.4098	0
23	0	-0.621911	36.7966	0
24	0	-0.585815	37.1397	0
25	0	-0.553384	37.446	0
26	0	-0.518658	37.715	0
27	0	-0.487364	37.9525	0
28	0	-0.453763	38.1584	0
29	0	-0.420664	38.3354	0
30	0	-0.390726	38.488	0
31	0	-0.358459	38.6165	0
32	0	-0.326561	38.7232	0
33	0	-0.297612	38.8117	0
34	0	-0.266311	38.8827	0
35	0	-0.237847	38.9392	0
36	0	-0.207012	38.9821	0
37	0	-0.176374	39.0132	0
38	0	-0.148434	39.0352	0
39	0	-0.118085	39.0492	0
40	0	-0.0878447	39.0569	0
41	0	-0.0601949	39.0605	0
42	0	-0.0300838	39.0614	0
43	0	0	39.0614	0
44	0	0.0300838	39.0623	0
45	0	0.0601949	39.0659	0
46	0	0.0878447	39.0737	0
47	0	0.118085	39.0876	0

48	0	0.148434	39.1096	0
49	0	0.176374	39.1407	0
50	0	0.207012	39.1836	0
51	0	0.237847	39.2402	0
52	0	0.266311	39.3111	0
53	0	0.297612	39.3997	0
54	0	0.326561	39.5063	0
55	0	0.358459	39.6348	0
56	0	0.390726	39.7875	0
57	0	0.420664	39.9644	0
58	0	0.453763	40.1703	0
59	0	0.487364	40.4078	0
60	0	0.518658	40.6768	0
61	0	0.553384	40.9831	0
62	0	0.585815	41.3263	0
63	0	0.621911	41.713	0
64	0	0.658838	42.1471	0
65	0	0.693493	42.628	0
66	0	0.732275	43.1643	0
67	0	0.772193	43.7605	0
68	0	0.809896	44.4165	0
69	0	0.852385	45.143	0
70	0	0.892733	45.94	0
71	0	0.938476	46.8207	0
72	0	0.986272	47.7935	0
73	0	1.03215	48.8588	0
74	0	1.08482	50.0357	0
75	0	1.14069	51.3368	0
76	0	1.19522	52.7654	0
77	0	1.25908	54.3507	0
78	0	1.32251	56.0997	0
79	0	1.39838	58.0551	0
80	0	1.48328	60.2553	0
81	0	1.57179	62.7258	0
82	0	1.68494	65.5648	0
83	0	1.82501	68.8955	0
84	0	1.99539	72.8771	0
85	0	2.29036	78.1228	0

Data Set Standard Deviation = 0

Divide by Zero Error

Parametric Prediction Interval Analysis

Intra-Well Comparison for SMW-13

Parameter: Silver, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	9/23/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/18/2015	ND<0 U
	9/8/2015	ND<0 U
	3/14/2016	ND<0 U
	9/26/2016	ND<0 U
	3/30/2017	ND<0 U
	9/20/2017	ND<0 U
	3/30/2018	ND<0 U
	9/21/2018	ND<0 U
	3/11/2019	ND<0 U
	10/3/2019	ND<0 U
	3/23/2020	ND<0 U
	9/25/2020	ND<0 U
	3/23/2021	ND<0 U
	9/16/2021	ND<0 U
	3/23/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

From 20 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.72913 at 19 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/15/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis
Intra-Well Comparison for SMW-32
Parameter: Silver, Total
Original Data (Not Transformed)
Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	9/23/2013	ND<0
	3/19/2014	ND<0 U
	9/8/2014	ND<0 U
	3/18/2015	ND<0 U
	9/8/2015	ND<0 U
	3/14/2016	ND<0 U
	9/20/2016	ND<0 U
	3/24/2017	ND<0 U
	9/20/2017	ND<0 U
	3/27/2018	ND<0 U
	9/18/2018	ND<0 U
	3/11/2019	ND<0 U
	10/3/2019	ND<0 U
	3/23/2020	ND<0 U
	9/24/2020	ND<0 U
	3/23/2021	ND<0 U
	9/16/2021	ND<0 U
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

From 20 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.72913 at 19 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/15/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for GWM-15D

Parameter: Silver, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/28/2017	ND<0 U
	9/21/2017	ND<0 U
	3/16/2018	ND<0 U
	9/19/2018	ND<0 U
	3/5/2019	ND<0 U
	10/3/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

From 15 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.76131 at 14 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/12/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for GWM-17D

Parameter: Silver, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

From 8 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.89458 at 7 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/12/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for GWM-19D

Parameter: Silver, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	11/14/2019	ND<0 U
	3/25/2020	ND<0 U
	9/29/2020	ND<0 U
	3/22/2021	ND<0 U
	9/15/2021	ND<0 U
	3/24/2022	ND<0
	9/15/2022	ND<0
	3/16/2023	ND<0

From 8 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.89458 at 7 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/14/2023	1	0	[0, 0]	FALSE

Shapiro-Francia Test of Normality

Parameter: Sodium, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	970	-2.29036	5.24576	-2221.65
2	2100	-2.01409	9.30234	-6451.25
3	11800	-1.82501	12.633	-27986.3
4	13900	-1.6954	15.5074	-51552.4
5	14100	-1.58047	18.0052	-73836.9
6	14400	-1.49085	20.2279	-95305.2
7	14400	-1.40507	22.2021	-115538
8	15000	-1.33462	23.9833	-135558
9	15000	-1.26464	25.5826	-154527
10	15100	-1.20553	27.0359	-172731
11	18500	-1.1455	28.3481	-193923
12	20400	-1.0939	29.5447	-216238
13	20510	-1.04073	30.6278	-237583
14	21000	-0.994457	31.6168	-258467
15	21200	-0.946291	32.5123	-278528
16	21240	-0.903992	33.3295	-297729
17	22400	-0.859618	34.0684	-316985
18	23200	-0.820379	34.7414	-336017
19	23400	-0.778966	35.3482	-354245
20	23700	-0.742143	35.899	-371834
21	23900	-0.703089	36.3933	-388638
22	24000	-0.668209	36.8398	-404675
23	24700	-0.631062	37.2381	-420262
24	24900	-0.597761	37.5954	-435146
25	25400	-0.56217	37.9114	-449425
26	26000	-0.530162	38.1925	-463210
27	26100	-0.49585	38.4384	-476151
28	26400	-0.464904	38.6545	-488425
29	26800	-0.431644	38.8408	-499993
30	26900	-0.401571	39.0021	-510795
31	27400	-0.369171	39.1384	-520910
32	28000	-0.33981	39.2538	-530425
33	28000	-0.308108	39.3488	-539052
34	28200	-0.279319	39.4268	-546929
35	28600	-0.248174	39.4884	-554027
36	28600	-0.219834	39.5367	-560314
37	29700	-0.189118	39.5725	-565931
38	30400	-0.161119	39.5984	-570829
39	30500	-0.130716	39.6155	-574816
40	30600	-0.102953	39.6261	-577966
41	30700	-0.0727562	39.6314	-580200
42	30900	-0.0451348	39.6334	-581594
43	31600	-0.0150408	39.6337	-582070
44	32000	0.0150408	39.6339	-581588
45	32000	0.0451348	39.6359	-580144
46	32200	0.0727562	39.6412	-577801
47	32200	0.102953	39.6518	-574486

48	32400	0.130716	39.6689	-570251
49	32600	0.161119	39.6949	-564998
50	32600	0.189118	39.7306	-558833
51	33000	0.219834	39.779	-551579
52	33500	0.248174	39.8405	-543265
53	33500	0.279319	39.9186	-533908
54	33900	0.308108	40.0135	-523463
55	34400	0.33981	40.129	-511773
56	34400	0.369171	40.2653	-499074
57	35000	0.401571	40.4265	-485019
58	35000	0.431644	40.6128	-469911
59	35100	0.464904	40.829	-453593
60	35200	0.49585	41.0748	-436139
61	35300	0.530162	41.3559	-417425
62	35400	0.56217	41.6719	-397524
63	35600	0.597761	42.0293	-376243
64	35600	0.631062	42.4275	-353778
65	35800	0.668209	42.874	-329856
66	36000	0.703089	43.3683	-304545
67	36400	0.742143	43.9191	-277531
68	37200	0.778966	44.5259	-248553
69	37600	0.820379	45.1989	-217707
70	38000	0.859618	45.9379	-185041
71	38000	0.903992	46.7551	-150690
72	38100	0.946291	47.6505	-114636
73	39100	0.994457	48.6395	-75752.6
74	39200	1.04073	49.7226	-34955.9
75	39600	1.0939	50.9192	8362.46
76	40000	1.1455	52.2314	54182.6
77	40400	1.20553	53.6847	102886
78	40900	1.26464	55.284	154610
79	41400	1.33462	57.0652	209863
80	41400	1.40507	59.0395	268033
81	41700	1.49085	61.2621	330202
82	42100	1.58047	63.76	396739
83	42700	1.6954	66.6343	469133
84	43200	1.82501	69.965	547973
85	43300	2.01409	74.0216	635183
86	45400	2.29036	79.2673	739166

Data Set Standard Deviation = 9225.7
Numerator = 5.46366e+011
Denominator = 5.73471e+011
W Statistic = 0.952735 = 5.46366e+011 / 5.73471e+011

5% Critical value of 0.972 exceeds 0.952735
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.952735
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Sodium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 43200
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	20510
	3/21/2014	21000
	9/8/2014	22400
	3/18/2015	21200
	9/8/2015	23200
	3/14/2016	23700
	9/26/2016	25400
	3/30/2017	26000
	9/20/2017	28200
	3/30/2018	33000
	9/21/2018	31600
	3/11/2019	33500
	10/3/2019	32200
	3/23/2020	11800
	9/25/2020	35600
	3/23/2021	2100
	9/16/2021	36000
	3/23/2022	42700
	9/16/2022	41400
	3/17/2023	43200

Date	Count	Mean	Significant
9/15/2023	1	40900	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Sodium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 45400
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	21240
	12/5/2013	20400
	3/19/2014	23400
	9/8/2014	24000
	3/18/2015	24700
	9/8/2015	26900
	3/14/2016	28000
	9/20/2016	28600
	3/24/2017	28000
	9/20/2017	29700
	3/27/2018	32000
	9/18/2018	33500
	3/11/2019	36400
	10/3/2019	35300
	3/23/2020	38000
	9/24/2020	38100
	3/23/2021	43300
	9/16/2021	40000
	3/24/2022	45400
	9/16/2022	39600
	3/17/2023	41700

Date	Count	Mean	Significant
9/15/2023	1	40400	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Sodium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 35800
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	28600
	9/23/2016	27400
	3/28/2017	26100
	9/21/2017	24900
	3/16/2018	26400
	9/19/2018	26800
	3/5/2019	30600
	10/3/2019	30400
	3/25/2020	30900
	9/28/2020	30700
	3/19/2021	35200
	9/15/2021	35000
	3/22/2022	35800
	9/14/2022	35600
	3/16/2023	35100

Date	Count	Mean	Significant
9/12/2023	1	32400	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Sodium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 42100
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	34400
	3/26/2020	33900
	9/29/2020	35400
	3/16/2021	37600
	9/14/2021	38000
	3/18/2022	39100
	9/13/2022	42100
	3/14/2023	41400

Date	Count	Mean	Significant
9/12/2023	1	39200	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Sodium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 23900
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	23900
	3/25/2020	18500
	9/29/2020	14100
	3/22/2021	15000
	9/15/2021	15000
	3/24/2022	15100
	9/15/2022	13900
	3/16/2023	14400

Date	Count	Mean	Significant
9/14/2023	1	14400	FALSE

Shapiro-Francia Test of Normality

Parameter: Thallium, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	0	-1.82501	12.633	0
4	0	-1.6954	15.5074	0
5	0	-1.58047	18.0052	0
6	0	-1.49085	20.2279	0
7	0	-1.40507	22.2021	0
8	0	-1.33462	23.9833	0
9	0	-1.26464	25.5826	0
10	0	-1.20553	27.0359	0
11	0	-1.1455	28.3481	0
12	0	-1.0939	29.5447	0
13	0	-1.04073	30.6278	0
14	0	-0.994457	31.6168	0
15	0	-0.946291	32.5123	0
16	0	-0.903992	33.3295	0
17	0	-0.859618	34.0684	0
18	0	-0.820379	34.7414	0
19	0	-0.778966	35.3482	0
20	0	-0.742143	35.899	0
21	0	-0.703089	36.3933	0
22	0	-0.668209	36.8398	0
23	0	-0.631062	37.2381	0
24	0	-0.597761	37.5954	0
25	0	-0.56217	37.9114	0
26	0	-0.530162	38.1925	0
27	0	-0.49585	38.4384	0
28	0	-0.464904	38.6545	0
29	0	-0.431644	38.8408	0
30	0	-0.401571	39.0021	0
31	0	-0.369171	39.1384	0
32	0	-0.33981	39.2538	0
33	0	-0.308108	39.3488	0
34	0	-0.279319	39.4268	0
35	0	-0.248174	39.4884	0
36	0	-0.219834	39.5367	0
37	0	-0.189118	39.5725	0
38	0	-0.161119	39.5984	0
39	0	-0.130716	39.6155	0
40	0	-0.102953	39.6261	0
41	0	-0.0727562	39.6314	0
42	0	-0.0451348	39.6334	0
43	0	-0.0150408	39.6337	0
44	0	0.0150408	39.6339	0
45	0	0.0451348	39.6359	0
46	0	0.0727562	39.6412	0
47	0	0.102953	39.6518	0

48	0	0.130716	39.6689	0
49	0	0.161119	39.6949	0
50	0	0.189118	39.7306	0
51	0	0.219834	39.779	0
52	0	0.248174	39.8405	0
53	0	0.279319	39.9186	0
54	0	0.308108	40.0135	0
55	0	0.33981	40.129	0
56	0	0.369171	40.2653	0
57	0	0.401571	40.4265	0
58	0	0.431644	40.6128	0
59	0	0.464904	40.829	0
60	0	0.49585	41.0748	0
61	0	0.530162	41.3559	0
62	0	0.56217	41.6719	0
63	0	0.597761	42.0293	0
64	0	0.631062	42.4275	0
65	0	0.668209	42.874	0
66	0	0.703089	43.3683	0
67	0	0.742143	43.9191	0
68	0	0.778966	44.5259	0
69	0	0.820379	45.1989	0
70	0	0.859618	45.9379	0
71	0	0.903992	46.7551	0
72	0	0.946291	47.6505	0
73	0	0.994457	48.6395	0
74	0	1.04073	49.7226	0
75	0	1.0939	50.9192	0
76	0	1.1455	52.2314	0
77	0	1.20553	53.6847	0
78	0	1.26464	55.284	0
79	0	1.33462	57.0652	0
80	0	1.40507	59.0395	0
81	0	1.49085	61.2621	0
82	0	1.58047	63.76	0
83	0	1.6954	66.6343	0
84	0	1.82501	69.965	0
85	0	2.01409	74.0216	0
86	0	2.29036	79.2673	0

Data Set Standard Deviation = 0

Divide by Zero Error

Parametric Prediction Interval Analysis

Intra-Well Comparison for SMW-13

Parameter: Thallium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	9/23/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/18/2015	ND<0 U
	9/8/2015	ND<0 U
	3/14/2016	ND<0 U
	9/26/2016	ND<0 U
	3/30/2017	ND<0 U
	9/20/2017	ND<0 U
	3/30/2018	ND<0 U
	9/21/2018	ND<0 U
	3/11/2019	ND<0 U
	10/3/2019	ND<0 U
	3/23/2020	ND<0 U
	9/25/2020	ND<0 U
	3/23/2021	ND<0 U
	9/16/2021	ND<0 U
	3/23/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

From 20 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.72913 at 19 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/15/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for SMW-32

Parameter: Thallium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	9/23/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/8/2014	ND<0 U
	3/18/2015	ND<0 U
	9/8/2015	ND<0 U
	3/14/2016	ND<0 U
	9/20/2016	ND<0 U
	3/24/2017	ND<0 U
	9/20/2017	ND<0 U
	3/27/2018	ND<0 U
	9/18/2018	ND<0 U
	3/11/2019	ND<0 U
	10/3/2019	ND<0 U
	3/23/2020	ND<0 U
	9/24/2020	ND<0 U
	3/23/2021	ND<0 U
	9/16/2021	ND<0 U
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

From 21 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.72472 at 20 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/15/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for GWM-15D

Parameter: Thallium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	3/21/2016	ND<0 U
	9/23/2016	ND<0 U
	3/28/2017	ND<0 U
	9/21/2017	ND<0 U
	3/16/2018	ND<0 U
	9/19/2018	ND<0 U
	3/5/2019	ND<0 U
	10/3/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 U
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

From 15 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.76131 at 14 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/12/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for GWM-17D

Parameter: Thallium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	11/14/2019	ND<0 U
	3/26/2020	ND<0 U
	9/29/2020	ND<0 U
	3/16/2021	ND<0 U
	9/14/2021	ND<0 U
	3/18/2022	ND<0
	9/13/2022	ND<0
	3/14/2023	ND<0

From 8 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.89458 at 7 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/12/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for GWM-19D

Parameter: Thallium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	11/14/2019	ND<0 U
	3/25/2020	ND<0 U
	9/29/2020	ND<0 U
	3/22/2021	ND<0 U
	9/15/2021	ND<0 U
	3/24/2022	ND<0
	9/15/2022	ND<0
	3/16/2023	ND<0

From 8 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.89458 at 7 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/14/2023	1	0	[0, 0]	FALSE

Shapiro-Francia Test of Normality

Parameter: Vanadium, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	0	-2.01409	9.30234	0
3	0	-1.82501	12.633	0
4	0	-1.6954	15.5074	0
5	0	-1.58047	18.0052	0
6	0	-1.49085	20.2279	0
7	0	-1.40507	22.2021	0
8	0	-1.33462	23.9833	0
9	0	-1.26464	25.5826	0
10	0	-1.20553	27.0359	0
11	0	-1.1455	28.3481	0
12	0	-1.0939	29.5447	0
13	0	-1.04073	30.6278	0
14	0	-0.994457	31.6168	0
15	0	-0.946291	32.5123	0
16	0	-0.903992	33.3295	0
17	0	-0.859618	34.0684	0
18	0	-0.820379	34.7414	0
19	0	-0.778966	35.3482	0
20	0	-0.742143	35.899	0
21	0	-0.703089	36.3933	0
22	0	-0.668209	36.8398	0
23	0	-0.631062	37.2381	0
24	0	-0.597761	37.5954	0
25	0	-0.56217	37.9114	0
26	0	-0.530162	38.1925	0
27	0	-0.49585	38.4384	0
28	0	-0.464904	38.6545	0
29	0	-0.431644	38.8408	0
30	0	-0.401571	39.0021	0
31	0	-0.369171	39.1384	0
32	0	-0.33981	39.2538	0
33	0	-0.308108	39.3488	0
34	0	-0.279319	39.4268	0
35	0	-0.248174	39.4884	0
36	0	-0.219834	39.5367	0
37	0	-0.189118	39.5725	0
38	0	-0.161119	39.5984	0
39	0	-0.130716	39.6155	0
40	0	-0.102953	39.6261	0
41	0	-0.0727562	39.6314	0
42	0	-0.0451348	39.6334	0
43	0	-0.0150408	39.6337	0
44	0	0.0150408	39.6339	0
45	0	0.0451348	39.6359	0
46	0	0.0727562	39.6412	0
47	0	0.102953	39.6518	0

48	0	0.130716	39.6689	0
49	0	0.161119	39.6949	0
50	0	0.189118	39.7306	0
51	0	0.219834	39.779	0
52	0	0.248174	39.8405	0
53	0	0.279319	39.9186	0
54	0	0.308108	40.0135	0
55	0	0.33981	40.129	0
56	0	0.369171	40.2653	0
57	0	0.401571	40.4265	0
58	0	0.431644	40.6128	0
59	0	0.464904	40.829	0
60	0	0.49585	41.0748	0
61	0	0.530162	41.3559	0
62	0	0.56217	41.6719	0
63	0	0.597761	42.0293	0
64	0	0.631062	42.4275	0
65	0	0.668209	42.874	0
66	0	0.703089	43.3683	0
67	0	0.742143	43.9191	0
68	0	0.778966	44.5259	0
69	0	0.820379	45.1989	0
70	0	0.859618	45.9379	0
71	0	0.903992	46.7551	0
72	0	0.946291	47.6505	0
73	0	0.994457	48.6395	0
74	0	1.04073	49.7226	0
75	0	1.0939	50.9192	0
76	0	1.1455	52.2314	0
77	0	1.20553	53.6847	0
78	0	1.26464	55.284	0
79	0	1.33462	57.0652	0
80	0	1.40507	59.0395	0
81	0	1.49085	61.2621	0
82	0	1.58047	63.76	0
83	0	1.6954	66.6343	0
84	0	1.82501	69.965	0
85	0	2.01409	74.0216	0
86	0	2.29036	79.2673	0

Data Set Standard Deviation = 0

Divide by Zero Error

Parametric Prediction Interval Analysis

Intra-Well Comparison for SMW-32

Parameter: Vanadium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	9/23/2013	ND<0
	12/5/2013	ND<0
	3/19/2014	ND<0 U
	9/8/2014	ND<0 U
	3/18/2015	ND<0 U
	9/8/2015	ND<0 U
	3/14/2016	ND<0 U
	9/20/2016	ND<0 U
	3/24/2017	ND<0 U
	9/20/2017	ND<0 U
	3/27/2018	ND<0 U
	9/18/2018	ND<0 U
	3/11/2019	ND<0 U
	10/3/2019	ND<0 U
	3/23/2020	ND<0 U
	9/24/2020	ND<0 U
	3/23/2021	ND<0 U
	9/16/2021	ND<0 U
	3/24/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

From 21 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.72472 at 20 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/15/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for SMW-13

Parameter: Vanadium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	9/23/2013	ND<0
	3/21/2014	ND<0 U
	9/8/2014	ND<0 U
	3/18/2015	ND<0 U
	9/8/2015	ND<0 U
	3/14/2016	ND<0 U
	9/26/2016	ND<0 U
	3/30/2017	ND<0 U
	9/20/2017	ND<0 U
	3/30/2018	ND<0 U
	9/21/2018	ND<0 U
	3/11/2019	ND<0 U
	10/3/2019	ND<0 U
	3/23/2020	ND<0 J
	9/25/2020	ND<0 U
	3/23/2021	ND<0 U
	9/16/2021	ND<0 U
	3/23/2022	ND<0
	9/16/2022	ND<0
	3/17/2023	ND<0

From 20 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.72913 at 19 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/15/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for GWM-15D

Parameter: Vanadium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	3/21/2016	ND<0 J
	9/23/2016	ND<0 U
	3/28/2017	ND<0 U
	9/21/2017	ND<0 U
	3/16/2018	ND<0 U
	9/19/2018	ND<0 U
	3/5/2019	ND<0 U
	10/3/2019	ND<0 U
	3/25/2020	ND<0 U
	9/28/2020	ND<0 U
	3/19/2021	ND<0 U
	9/15/2021	ND<0 J
	3/22/2022	ND<0
	9/14/2022	ND<0
	3/16/2023	ND<0

From 15 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.76131 at 14 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/12/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for GWM-17D

Parameter: Vanadium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	11/14/2019	ND<0 J
	3/26/2020	ND<0 U
	9/29/2020	ND<0 J
	3/16/2021	ND<0 J
	9/14/2021	ND<0 J
	3/18/2022	ND<0 J
	9/13/2022	ND<0 J
	3/14/2023	ND<0 J

From 8 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.89458 at 7 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/12/2023	1	0	[0, 0]	FALSE

Parametric Prediction Interval Analysis

Intra-Well Comparison for GWM-19D

Parameter: Vanadium, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Intra-Well USEPA (1989/1992) Formula 95% Comparison

Baseline Samples	Date	Result
	11/14/2019	ND<0 J
	3/25/2020	ND<0 U
	9/29/2020	ND<0 U
	3/22/2021	ND<0 U
	9/15/2021	ND<0 U
	3/24/2022	ND<0
	9/15/2022	ND<0
	3/16/2023	ND<0

From 8 baseline samples
Baseline mean = 0
Baseline std Dev = 0

For 1 recent sampling event(s)
95% confidence t = 1.89458 at 7 degrees of freedom

Date	Samples	Mean	Interval	Significant
9/14/2023	1	0	[0, 0]	FALSE

Shapiro-Francia Test of Normality

Parameter: Zinc, Total

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Number of Measurements = 86

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.29036	5.24576	0
2	7.4	-2.01409	9.30234	-14.9043
3	8.3	-1.82501	12.633	-30.0518
4	8.8	-1.6954	15.5074	-44.9713
5	9	-1.58047	18.0052	-59.1955
6	9.2	-1.49085	20.2279	-72.9114
7	9.2	-1.40507	22.2021	-85.8381
8	9.3	-1.33462	23.9833	-98.2501
9	9.6	-1.26464	25.5826	-110.391
10	9.6	-1.20553	27.0359	-121.964
11	9.9	-1.1455	28.3481	-133.304
12	10	-1.0939	29.5447	-144.243
13	10	-1.04073	30.6278	-154.65
14	11	-0.994457	31.6168	-165.589
15	11	-0.946291	32.5123	-175.999
16	15	-0.903992	33.3295	-189.559
17	23	-0.859618	34.0684	-209.33
18	26	-0.820379	34.7414	-230.66
19	27	-0.778966	35.3482	-251.692
20	28	-0.742143	35.899	-272.472
21	28	-0.703089	36.3933	-292.158
22	28	-0.668209	36.8398	-310.868
23	28	-0.631062	37.2381	-328.538
24	30	-0.597761	37.5954	-346.471
25	31	-0.56217	37.9114	-363.898
26	31	-0.530162	38.1925	-380.333
27	31	-0.49585	38.4384	-395.704
28	31	-0.464904	38.6545	-410.116
29	32	-0.431644	38.8408	-423.929
30	32	-0.401571	39.0021	-436.779
31	32	-0.369171	39.1384	-448.593
32	32	-0.33981	39.2538	-459.467
33	34	-0.308108	39.3488	-469.942
34	34	-0.279319	39.4268	-479.439
35	34	-0.248174	39.4884	-487.877
36	34	-0.219834	39.5367	-495.351
37	35	-0.189118	39.5725	-501.971
38	36	-0.161119	39.5984	-507.771
39	36	-0.130716	39.6155	-512.477
40	36	-0.102953	39.6261	-516.183
41	36	-0.0727562	39.6314	-518.802
42	38	-0.0451348	39.6334	-520.517
43	40	-0.0150408	39.6337	-521.119
44	44	0.0150408	39.6339	-520.457
45	46	0.0451348	39.6359	-518.381
46	75	0.0727562	39.6412	-512.924
47	77	0.102953	39.6518	-504.997

48	87	0.130716	39.6689	-493.625
49	90	0.161119	39.6949	-479.124
50	95	0.189118	39.7306	-461.158
51	110	0.219834	39.779	-436.976
52	140	0.248174	39.8405	-402.231
53	140	0.279319	39.9186	-363.127
54	140	0.308108	40.0135	-319.992
55	140	0.33981	40.129	-272.418
56	150	0.369171	40.2653	-217.043
57	150	0.401571	40.4265	-156.807
58	180	0.431644	40.6128	-79.111
59	220	0.464904	40.829	23.1679
60	230	0.49585	41.0748	137.213
61	230	0.530162	41.3559	259.151
62	240	0.56217	41.6719	394.071
63	250	0.597761	42.0293	543.512
64	260	0.631062	42.4275	707.588
65	270	0.668209	42.874	888.004
66	280	0.703089	43.3683	1084.87
67	290	0.742143	43.9191	1300.09
68	300	0.778966	44.5259	1533.78
69	300	0.820379	45.1989	1779.89
70	310	0.859618	45.9379	2046.38
71	310	0.903992	46.7551	2326.61
72	320	0.946291	47.6505	2629.43
73	320	0.994457	48.6395	2947.65
74	350	1.04073	49.7226	3311.91
75	360	1.0939	50.9192	3705.71
76	380	1.1455	52.2314	4141
77	390	1.20553	53.6847	4611.16
78	420	1.26464	55.284	5142.31
79	450	1.33462	57.0652	5742.89
80	480	1.40507	59.0395	6417.32
81	500	1.49085	61.2621	7162.75
82	550	1.58047	63.76	8032.01
83	620	1.6954	66.6343	9083.15
84	630	1.82501	69.965	10232.9
85	650	2.01409	74.0216	11542.1
86	2800	2.29036	79.2673	17955.1

Data Set Standard Deviation = 332.444
Numerator = 3.22385e+008
Denominator = 7.44647e+008
W Statistic = 0.432937 = 3.22385e+008 / 7.44647e+008

5% Critical value of 0.972 exceeds 0.432937
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.432937
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-13

Parameter: Zinc, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 20
Maximum Baseline Concentration = 2800
Confidence Level = 95.2%
False Positive Rate = 4.8%

Baseline Measurements	Date	Value
	9/23/2013	90
	3/21/2014	110
	9/8/2014	140
	3/18/2015	87
	9/8/2015	2800
	3/14/2016	250
	9/26/2016	75
	3/30/2017	180
	9/20/2017	150
	3/30/2018	95
	9/21/2018	140
	3/11/2019	300
	10/3/2019	220
	3/23/2020	ND<0 J
	9/25/2020	650
	3/23/2021	34
	9/16/2021	150
	3/23/2022	350
	9/16/2022	230
	3/17/2023	140

Date	Count	Mean	Significant
9/15/2023	1	240	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for SMW-32

Parameter: Zinc, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 21
Maximum Baseline Concentration = 630
Confidence Level = 95.5%
False Positive Rate = 4.5%

Baseline Measurements	Date	Value
	9/23/2013	630
	12/5/2013	620
	3/19/2014	390
	9/8/2014	270
	3/18/2015	320
	9/8/2015	550
	3/14/2016	450
	9/20/2016	480
	3/24/2017	380
	9/20/2017	310
	3/27/2018	420
	9/18/2018	310
	3/11/2019	500
	10/3/2019	300
	3/23/2020	230
	9/24/2020	360
	3/23/2021	290
	9/16/2021	280
	3/24/2022	260
	9/16/2022	320
	3/17/2023	140

Date	Count	Mean	Significant
9/15/2023	1	77	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-15D

Parameter: Zinc, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 15
Maximum Baseline Concentration = 23
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Measurements	Date	Value
	3/21/2016	23
	9/23/2016	11
	3/28/2017	10
	9/21/2017	9.2
	3/16/2018	9.3
	9/19/2018	9.6
	3/5/2019	9
	10/3/2019	9.6
	3/25/2020	8.8
	9/28/2020	15
	3/19/2021	10
	9/15/2021	11
	3/22/2022	9.9
	9/14/2022	8.3
	3/16/2023	9.2

Date	Count	Mean	Significant
9/12/2023	1	7.4	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-17D

Parameter: Zinc, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 36
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	31
	3/26/2020	28
	9/29/2020	36
	3/16/2021	36
	9/14/2021	36
	3/18/2022	35
	9/13/2022	28
	3/14/2023	32

Date	Count	Mean	Significant
9/12/2023	1	30	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for GWM-19D

Parameter: Zinc, Total

Original Data (Not Transformed)

Non-Detects Replaced with 0

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 44
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/14/2019	44
	3/25/2020	28
	9/29/2020	26
	3/22/2021	32
	9/15/2021	34
	3/24/2022	34
	9/15/2022	31
	3/16/2023	32

Date	Count	Mean	Significant
9/14/2023	1	31	FALSE