

Georgia Power Company
Grumman Road Private Industrial Landfill
Port Wentworth, Georgia
PERMIT #: 025-061D(LI)
Chatham County

**2019 SECOND SEMIANNUAL GROUNDWATER
MONITORING AND CORRECTIVE ACTION REPORT**



ACC

ATLANTIC COAST
CONSULTING, INC.

PROFESSIONAL CERTIFICATION

This *2019 Second Semiannual Groundwater Monitoring and Corrective Action Report*, Georgia Power Company – Grumman Road Private Industrial Landfill has been prepared in compliance with the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10 and 391-3-4-.14 by a qualified groundwater scientist or engineer with Atlantic Coast Consulting, Inc (ACC).

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1.0 Introduction

In accordance with the Georgia Environmental Protection Division (GA EPD) Rules of Solid Waste Management 391-3-4-.10(6)(a)-(c) and 391-3-4-.14, Atlantic Coast Consulting, Inc. (ACC) has prepared this *2019 Second Semiannual Groundwater Monitoring and Corrective Action Report* to document groundwater monitoring activities conducted during the second half of 2019 at Georgia Power Company's (GPC) Grumman Road Private Industrial Landfill (GRL). To specify groundwater monitoring requirements, GA EPD rule 391-3-4-.10(6)(a) incorporates by reference the United States Environmental Protection Agency (US EPA) Coal Combustion Residuals (CCR) Rule 40 Code of Federal Regulations (CFR) § 257 Subpart D.

To comply with GA EPD's 391-3-4-.10, a permit application package for GRL was submitted to GA EPD in November 2018 and is currently under review. To meet the requirements of 391-3-4-.10(6), Appendix III and IV parameters listed in 40 CFR § 257 were incorporated into the routine groundwater monitoring program through a minor modification in August 2017. The facility is continuing an Assessment of Corrective Measures (ACM) established under the existing EPD Permit No. 025-061D(LI). Semiannual reporting is completed pursuant to 391-3-4-.10(6)(c). This report documents the two monitoring events conducted during the second half of 2019: (1) an initial assessment monitoring event for Appendix IV constituents in August 2019 as a result of statistical exceedances of Appendix III parameters during the first detection monitoring event, and (2) the subsequent assessment event conducted in October 2019 for Appendix I and II metals required by the existing state permit, Appendix III, and Appendix IV parameters detected during the August 2019 monitoring event.

1.1 Site Description and Background

GRL is located on Gulfstream Road, in Chatham County, Georgia, approximately 0.8 miles east of Savannah/Hilton Head International Airport and 1.3 miles west of the city of Port Wentworth. GRL occupies approximately 36 acres. The Site ceased accepting CCR prior to October 19, 2015 and is therefore not subject to Federal monitoring requirements. GRL received CCR from GPC – Plant Kraft and operated under EPD solid waste handling permit number 025-061D(LI). GRL is comprised of four cells or parcels: Parcel A [originally operated under permit number 025-034D(LI)], B1, B2, and B3. Closure of parcels B1, B2, and B3 was completed after CCR disposal ceased. Capping of the last remaining uncapped portion of Parcel A has recently been completed and was documented to EPD in a submittal dated November 27, 2019.

Figure 1, Site Location Map, depicts the Site location relative to the surrounding area. Figure 2, Well Location Map, depicts the general configuration of the Site and the location of the monitoring wells.

1.2 Regional Geology and Hydrogeologic Setting

GRL is underlain by Atlantic Coastal Plain Physiographic Province strata consisting of unconsolidated to consolidated layers of sand, silt and clay and semi-consolidated to dense layers of limestone and dolomite. (Clarke et al, 2010). These sediments constitute three major aquifer systems, which are, from shallow to deep, the surficial aquifer system, the Brunswick aquifer system, and the Floridan aquifer system. In the Atlantic Coastal Plain, the surficial aquifer system consists of Miocene and younger interlayered sand, silt, clay and thin limestone beds (Clarke et al, 2010). The surficial aquifer system is unconfined and the fine silty sands and clay partings are found generally less than 80 feet below ground surface (bgs).

The surficial aquifer is underlain by a confining unit that separates it from the Brunswick aquifer. The confining unit consists of silty clay and dense thin, phosphatic Miocene limestone. The Oligocene to Miocene Brunswick aquifer consists of two water-bearing zones. The upper Brunswick and lower Brunswick aquifers are separated by a low permeability, sandy phosphatic clay confining unit. The Brunswick aquifer is separated from the Upper Floridan aquifer with the Upper Confining unit and a non-water bearing limestone (NWBL) layer. The Floridan aquifer is confined by the overlying clay and NWBL layers.

1.3 Site Geology and Hydrogeologic Setting

A subsurface characterization study at the Site identified two distinct units in the shallow subsurface (SCS, 1998). Unit 1 comprises the uppermost aquifer has a thickness ranging from approximately 22 feet to 28 feet across the Site. Hydraulic conductivity is defined as the rate at which water can move through a permeable medium. In situ rising head and falling slug tests were performed at multiple locations on the Site. There is a limited range in hydraulic conductivity at these locations, indicating a fairly uniform medium across the upper aquifer or Unit 1 (typically range from 10^{-3} to 10^{-4} centimeters per second [cm/sec]). The average hydraulic conductivity is estimated at 2.7×10^{-3} cm/sec (7.6 feet/day). The values from the field test fall within the standard range of hydraulic conductivity values associated with a silty sand.

Unit 2 directly underlies Unit 1 and is comprised of fine grain sandy silt and clayey sands. Typically, Unit 2 has a lower permeability on the order of 10 times less (10^{-4} to 10^{-5} cm/sec) than that of Unit 1 and is considered an aquitard. The thickness of Unit 2 in the Site area ranges from 5 feet to over 40 feet.

1.4 Groundwater Monitoring System and CCR Units

A groundwater monitoring plan was submitted and approved January 13, 2000. The initial approved detection groundwater monitoring network included 17 monitoring wells: upgradient wells GWA-7 and GWA-8 and downgradient wells GWC-1 through GWC-6 and GWC-9 through GWC-17. As previously documented to EPD, in late 2018, three monitoring wells (GWC-4, GWC-5, and GWC-6) were replaced by new monitoring wells (GWB-4R, GWB-5R, and GWB-6R) and were also re-designated as side-gradient (i.e. "GWB" prefixes) locations. One well (GWC-3) was not replaced due to redundancy with GWC-20. These changes are detailed in the November 2018 permit application. Well installations have either been previously approved or pending permit application. Pursuant to § 257.91, the monitoring system is designed to monitor groundwater passing the waste boundary of GRL within the uppermost aquifer. Wells were located to serve as upgradient and downgradient monitoring points based on groundwater flow direction (Table 1A, Monitoring Network Well Summary). Existing locations not included in the monitoring network are presented in Table 1B, Non-Network Well Summary.

2.0 GROUNDWATER MONITORING ACTIVITIES

The following describes monitoring-related activities performed at the Site during the second half of 2019. Samples were collected from each well in the monitoring system shown on Figure 2.

Based on results of the *Supplemental 2019 First Semiannual Groundwater Monitoring Report*, assessment monitoring was initiated under 391-3-4-.10(6). Table 2, Groundwater Sampling Event Summary, presents a summary of groundwater sampling events completed at the Site during the second half of 2019. Groundwater events were conducted at the Site during August and October 2019. During the initial Appendix IV assessment monitoring event completed in

August 2019, groundwater samples were collected and analyzed for the full suite of Appendix IV constituents to meet the requirements of § 257.95(b). During the October semiannual (assessment) sampling event, groundwater samples were collected for the state-specific list of Appendix I and II metals specified in the permit, all Appendix III constituents, and the Appendix IV constituents detected during the August event. Results of sampling activities conducted in the second half of 2019 are presented in Appendix A, Laboratory Analytical and Field Sampling Reports.

2.1 Monitoring Well Installation/Maintenance

Monitoring well-related activities were limited to visual inspection of well conditions prior to sampling, recording the Site conditions, and performing exterior maintenance to provide safe access for sampling. Due to construction activities, well GWC-2 required repairs and redevelopment, which occurred in July 2019. A resurvey of the top of casing will be completed in 2020, prior to the annual report.

2.2 Assessment Monitoring Program

Based on results presented in the *Supplemental 2019 First Semiannual Groundwater Monitoring Report*, GPC initiated an assessment monitoring program for CCR Appendix IV constituents. The facility had previously implemented an assessment monitoring program for Appendix I metals included in its state permit. A summary of the analytes required by Appendix III, Appendix IV, and the existing permit is provided in Table 3, Summary of Groundwater Monitoring Parameters.

An assessment of corrective measures (ACM) to address arsenic concentrations in several monitoring locations in the vicinity of Parcel A under the state permit is ongoing and will continue to be documented to EPD.

3.0 SAMPLE METHODOLOGY AND ANALYSIS

The following sections describe the methods used to conduct groundwater monitoring at the Site.

3.1 Groundwater Flow Direction, Gradient, and Velocity

Prior to each sampling event, groundwater elevations are recorded from the certified well network and piezometers at GRL. Groundwater elevations recorded during the monitoring events are summarized in Tables 4A and 4B, Summary of Groundwater Elevations – August 2019 and October 2019, respectively. Groundwater elevation data was used to develop Figure 3, October 2019 Potentiometric Surface Map, a potentiometric high exists near wells GWA-7 in the northern portion of the Site and groundwater flows semi-radially from this high. In the southern portion of the Site groundwater flows to the south and southeast. The groundwater flow patterns observed during the October 2019 monitoring event is consistent with historical patterns.

The groundwater flow velocity at Plant Yates was calculated using a derivation of Darcy's Law.

Specifically:

Equation

$$v = \frac{K (dh/dl)}{P_e} \quad \text{where:} \quad \begin{array}{l} v = \text{ground water velocity} \\ K = \text{hydraulic conductivity} \\ dh/dl = \text{hydraulic gradient} \end{array}$$

P_e = effective porosity

Groundwater flow velocities were calculated for the Site based on hydraulic gradients, average hydraulic conductivity based on previous slug test data, and an estimated effective porosity of 0.20 (based on a review of several sources, including Driscoll, 1986; US EPA, 1989; Freeze and Cherry, 1979). Groundwater flow velocities have been calculated and are tabulated on Table 5, Groundwater Flow Velocity Calculations. The calculated maximum flow velocity is 0.29 feet per day.

3.2 Groundwater Sampling

Groundwater samples were collected using low-flow sampling procedures in accordance with 40 CFR § 257.93(a). Purging and sampling was primarily performed using peristaltic pumps. Tubing was lowered into the well so that the intake was at the midpoint of the well screen (or as appropriate determined by the water level). Peristaltic pump samples were collected using new disposable polyethylene tubing. All non-disposable equipment was decontaminated before use and between well locations.

Monitoring wells were purged and sampled using low-flow sampling procedures. A SmarTroll (In-Situ field instrument) was used to monitor and record field water quality parameters (pH, conductivity, oxidation-reduction potential, dissolved oxygen, and temperature) during well purging prior to sampling. Turbidity was measured using a Hach 2100Q portable turbidimeter. Groundwater samples were collected when the following stabilization criteria were met:

- ± 0.1 standard units for pH
- $\pm 10\%$ for specific conductance
- $\pm 10\%$ for dissolved oxygen (DO) where DO > 0.5 milligrams per liter (mg/L). No criterion applies if DO < 0.5 mg/L.
- Turbidity measurements less than 10 nephelometric turbidity units (NTU)

Once stabilization was achieved, samples were collected directly into appropriately preserved laboratory-supplied sample containers. Sample bottles were placed in ice-packed coolers and submitted to Pace Analytical Services, LLC (Pace) of Peachtree Corners, Georgia and Greensburg, Pennsylvania following chain-of-custody protocol. Stabilization logs for each well during each monitoring event are included in Appendix A.

3.3 Laboratory Analyses

Groundwater samples were collected during two groundwater monitoring events in the second half of 2019. Mercury was not detected in the initial assessment Appendix IV assessment monitoring event completed in August 2019 and therefore not included in the semiannual monitoring event completed in October 2019. Analytical methods used for groundwater monitoring parameters are provided in laboratory reports in Appendix A. Analytical data collected in monitoring events from the second half of 2019 (August 2019 and October 2019) are summarized in Table 6A, Summary of Groundwater Analytical Data – August 2019, and Table 6B, Summary of Groundwater Analytical Data – October 2019, respectively.

Laboratory analyses were performed by Pace. Pace is accredited by the National Environmental Laboratory Accreditation Program (NELAP) and maintains a NELAP certification for all parameters analyzed for this project. In addition, Pace is certified to perform analysis by the State of Georgia. Laboratory reports and chain-of-custody records for the monitoring events are presented in Appendix A.

3.4 Quality Assurance and Quality Control

During each sampling event, quality assurance/quality control (QA/QC) samples are collected at a rate of one QA/QC sample per every 10 groundwater assessment samples. Equipment blanks (where non-dedicated sampling equipment is used) and duplicate samples were collected during each sampling event. QA/QC sample data were evaluated during data validation and are included in Appendix A.

Groundwater quality data in this report was validated in accordance with US EPA guidance (US EPA, 2011) and the analytical methods. Data validation generally consisted of reviewing sample integrity, holding times, laboratory method blanks, laboratory control samples, matrix spikes/matrix spike duplicate recoveries and relative percent differences, post digestions spikes, laboratory and field duplicate relative percent differences (RPDs), field and equipment blanks, and reporting limits. Where appropriate, validation qualifiers and flags are applied to the data using US EPA procedures as guidance (US EPA, 2017).

Values followed by a "J" flag indicate that the value is an estimated analyte concentration detected between the method detection limit (MDL) and the laboratory reporting limit (PQL). The estimated value is positively identified but is below the lowest level that can be reliably achieved within specified limits of precision and accuracy under routine laboratory operating conditions. "J" flagged data are used to establish background statistical limits but are not used when performing statistical analyses.

4.0 STATISTICAL ANALYSIS

Statistical analysis of groundwater monitoring data was performed on samples collected from the GA EPD-approved groundwater monitoring network and following the appropriate method. The statistical method used at the site was developed by Groundwater Stats Consulting, LLC (GSC), using methodology presented in *Statistical Analysis of Groundwater Data at RCRA Facilities, Unified Guidance*, March 2009, US EPA 530/ R-09-007 (US EPA, 2009).

Pursuant to § 257.95(d)(2) GPC will establish groundwater protection standards for the Appendix IV monitoring parameters and complete statistical analysis of the Appendix IV groundwater monitoring data obtained during the October semiannual assessment monitoring event within 90 days of obtaining the results. GPC will complete the assessment monitoring and statistical analysis in accordance with § 257.95 and report the results in the Annual Groundwater Monitoring and Corrective Action Report, due August 1, 2020.

4.1 Statistical Methods

All screened historical background data through July 2018 were used to construct statistical limits for constituents analyzed by intrawell methods, permit required Appendix I and II metals and a subset of Appendix III constituents. In the intrawell method, data for all wells and constituents will be reevaluated when a minimum of 4 new data points are available to determine whether earlier concentrations are representative of present-day groundwater quality. For Appendix III constituents analyzed by interwell methods, newer upgradient background data are included following each event, if data are reviewed for outliers and trending data. Sanitas groundwater statistical software was used to perform the statistical analyses. Sanitas is a decision support software package that incorporates the statistical tests required of Subtitle C and D facilities by US EPA regulations.

4.1.1 Appendix III Constituents

Statistical tests used to evaluate the groundwater monitoring data consist of interwell prediction limits combined with a 1-of-2 verification resample plan for Appendix III parameters calcium, chloride, fluoride, pH, and sulfate. Monitoring results for boron and Total Dissolved Solids (TDS) were evaluated using intrawell prediction limits combined with a 1-of-3 verification resample plan. If the most recent sample exceeds its relevant background statistical limit, an initial statistically significant increase (SSI) is identified. An independent resample or two resamples in the case of a 1-of-3 verification plan may be collected and evaluated within 90 days to determine whether the initial exceedance is verified. If resample results exceed the PL, the initial exceedance is verified, and an SSI is identified. When a resample result does not verify the initial result, and does not exceed the PL, there is no SSI. If resampling is not performed, the initial exceedance is a confirmed exceedance. A summary of the statistical methodology used at the Site for routine groundwater monitoring is provided in Table 7, Statistical Method Summary.

4.1.2 Permit-Required Appendix I and II Metals

A permit minor modification was submitted to EPD following the *2019 First Supplemental Semiannual Groundwater Monitoring Report* to allow for intrawell methods to be used for evaluation of state metals. The statistical methodology was revised to an intrawell method following the June 2019 monitoring event. Statistical tests used to evaluate the groundwater monitoring data consist of intrawell prediction limits combined with a 1-of-2 verification resample plan for all required metals. Intrawell prediction limits are constructed from historical data within a given well through July 2018, and the most recent sample is compared to background. A 90 day 1-of-2 verification resampling plan is used for Appendix I and II metals. If resampling is not performed, the initial exceedance is a confirmed exceedance. Appendix I and II metals that are identified as SSIs are evaluated by trend tests. A summary of the statistical methodology used at the Site for routine groundwater monitoring is provided in Table 7.

4.2 Appendix III Statistical Analyses Results

Analytical data from the October 2019 monitoring event at the Site were statistically analyzed in accordance with the statistical methods. Resampling to confirm SSIs was not performed; therefore, initial SSIs are treated as verified. Wells and analytes with all data below the reporting limit do not require statistical analysis. A summary of wells exhibiting 100% non-detects is included in Appendix B, Statistical Analyses. The statistical analysis and comparison to prediction limits are included as Appendix B.

Based on review of the Appendix III statistical analyses presented in Appendix C, the following summarizes parameters exhibiting SSIs:

- Boron: GWB-6R, GWC-16
- Calcium: GWB-4R, GWC-1, GWC-11, GWC-12, GWC-14, GWC-15, GWC-16, GWC-17, GWC-20, GWC-21
- Chloride: GWC-17
- pH: GWC-15, GWC-20
- Sulfate: GWB-6R, GWC-11, GWC-12, GWC-14, GWC-16, GWC-17
- TDS: GWB-5R, GWB-6R, GWC-16

Appendix III constituents have not returned to background levels and assessment monitoring should continue pursuant to 40 CFR § 257.95(f).

4.3 Appendix IV Statistical Analyses Results

Pursuant to §257.95, Appendix IV groundwater quality data will be statistically analyzed and compared to groundwater protection standards within 90 days of receiving data from the first (October 2019) assessment monitoring event. GPC will complete the assessment monitoring and statistical analysis in accordance with § 257.95 and report the results in the Annual Groundwater Monitoring and Corrective Action Report, due August 1, 2020.

4.4 Appendix I and II EPD Permit-Required Metals

Analytes required by the existing state permit were analyzed during this event. Based on review of the Appendix I and II statistical analyses presented in Appendix B and previously identified results, the following summarizes parameters exhibiting SSIs:

- Arsenic: GWC-15, GWC-16, GWC-20
- Barium: GWC-16
- Selenium: GWC-15
- Zinc: GWC-13

The Appendix I and II SSIs were evaluated using the Sen's Slope/Mann-Kendall trend test, and no significant increasing trends were identified for the exceedances of barium at GWC-16, selenium at GWC-15, and zinc at GWC-13. Statistically significant increasing trends were identified for arsenic in GWC-15 and GWC-20. A statistically significant decreasing trend was identified for arsenic in GWC-16. Consistent with prior monitoring events, the concentrations of arsenic in GWC-15, GWC-16, and GWC-20 exceed the maximum contaminant level (MCL). Arsenic in wells GWC-15, GWC-16, and GWC-20 will continue to be addressed by the ongoing ACM.

5.0 MONITORING PROGRAM STATUS

In accordance with GA EPD rule 391-3-4-.10(6)(a) and 40 CFR §257.94(e), the assessment monitoring program previously established under state permit requirements has been expanded to include Appendix IV constituents. An ongoing ACM to address arsenic concentrations in three wells was established under the state solid waste permit.

6.0 CONCLUSIONS AND FUTURE ACTIONS

Statistical evaluations of the groundwater monitoring data identified SSIs of Appendix I and Appendix III groundwater monitoring constituents. GPC has initiated assessment monitoring pursuant to §257.95. During the first semiannual period of 2020, GPC will establish groundwater protection standards for Appendix IV constituents and complete statistical analysis of the assessment monitoring results according to the regulations. An ongoing assessment of corrective measures for arsenic was established under EPD Rule 391-3-4-.14 and will continue contemporaneously with implementation of the State CCR Rule. Results of the statistical analysis will be presented in the 2020 annual groundwater monitoring report on August 1, 2020.

The next monitoring event is planned for the first half of 2020 and will include sampling for Appendix III analytes and Appendix IV constituents detected during the August 2019 monitoring event as well as Appendix I and II constituents included in the permit.

7.0 REFERENCES

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TABLES

Table 1A
Monitoring Network Well Summary

Well ID	Installation Date (mm/dd/yyyy)	Bottom Depth (ft BTOC)	Bottom Elevation (ft MSL)	Depth to Top of Screen (ft BTOC)	Top of Screen Elevation (ft MSL)	Hydraulic Location
GWA-7	07/29/1998	21.2	26.08	16.2	31.08	Upgradient
GWA-8	07/29/1998	20.8	26.91	15.8	31.91	Upgradient
GWB-4R	10/09/2018	23.3	22.43	14.0	32.43	Sidegradient
GWB-5R	10/09/2018	26.5	21.31	14.0	31.31	Sidegradient
GWB-6R	10/09/2018	22.7	24.71	10.0	34.71	Sidegradient
GWC-1	03/10/1997	28.2	22.46	23.2	27.46	Downgradient
GWC-2	03/11/1997	33.8	*	28.8	*	Downgradient
GWC-9	07/24/1998	27.4	19.78	22.4	24.78	Downgradient
GWC-11	07/23/1998	22.6	26.78	17.6	31.78	Downgradient
GWC-12	07/22/1998	26.7	20.74	21.7	25.74	Downgradient
GWC-13	07/22/1998	23.8	23.98	18.8	28.98	Downgradient
GWC-14	07/22/1998	27.0	23.67	22.0	28.67	Downgradient
GWC-15	07/22/1998	26.8	21.28	21.8	26.28	Downgradient
GWC-16	07/21/1998	28.2	19.58	23.2	24.58	Downgradient
GWC-17	1998	23.2	20.94	18.2	25.94	Downgradient
GWC-20	2010	25.0	24.31	20.0	29.31	Downgradient
GWC-21	2010	23.8	23.29	18.8	28.29	Downgradient
GWC-22	2010	18.9	27.79	13.9	32.79	Downgradient

Notes:

1. ft BTOC indicates feet below top of casing.
2. ft MSL indicates feet mean sea level.
3. * - Resurvey Pending.

Table 1B
Non-Network Well Summary

Well ID	Installation Date (mm/dd/yyyy)	Bottom Depth (ft BTOC)	Bottom Elevation (ft MSL)	Depth to Top of Screen (ft BTOC)	Top of Screen Elevation (ft MSL)	Purpose
GWC-3	07/21/1998	22.9	26.87	17.9	31.87	Piezometer
GWC-4	07/20/1998	26.4	22.64	21.4	27.64	Piezometer
GWC-5	07/20/1998	26.7	21.81	21.7	26.81	Piezometer
GWC-6	07/28/1998	22.7	25.58	17.7	30.58	Piezometer
GWC-10	07/24/1998	20.6	26.79	15.6	31.79	Piezometer

Notes:

1. ft BTOC indicates feet below top of casing.
2. ft MSL indicates feet mean sea level.

Table 2
Groundwater Sampling Event Summary

Well	Hydraulic Location	Aug. 26-28, 2019	Oct. 7-9, 2019
Purpose of Sampling Event		Initial App. IV Assessment Monitoring Event	Semiannual Monitoring Event
GWA-7	Upgradient	Scan	A-01
GWA-8	Upgradient	Scan	A-01
GWB-4R	Sidegradient	Scan	A-01
GWB-5R	Sidegradient	Scan	A-01
GWB-6R	Sidegradient	Scan	A-01
GWC-1	Downgradient	Scan	A-01
GWC-2	Downgradient	Scan	A-01
GWC-9	Downgradient	Scan	A-01
GWC-11	Downgradient	Scan	A-01
GWC-12	Downgradient	Scan	A-01
GWC-13	Downgradient	Scan	A-01
GWC-14	Downgradient	Scan	A-01
GWC-15	Downgradient	Scan	A-01
GWC-16	Downgradient	Scan	A-01
GWC-17	Downgradient	Scan	A-01
GWC-20	Downgradient	Scan	A-01
GWC-21	Downgradient	Scan	A-01
GWC-22	Downgradient	Scan	A-01

Notes:

1. Scan = Initial Assessment All Appendix IV.
2. A-XX = Assessment Event Number (Appendix III and Detected Appendix IV).

Table 3
Summary of Groundwater Monitoring Parameters

Appendix III (40 CFR 257)	Appendix IV (40 CFR 257)	Appendix I and II Metals (State Permit)
Boron	Antimony	Antimony
Calcium	Arsenic	Arsenic
Chloride	Barium	Barium
Fluoride	Beryllium	Chromium
pH	Cadmium	Lead
Sulfate	Chromium	Selenium
Total Dissolved Solids	Cobalt	Vanadium
	Fluoride	Zinc
	Lead	
	Lithium	
	Mercury	
	Molybdenum	
	Radium 226 and 228 combined	
	Selenium	
	Thallium	

Table 4A
Summary of Groundwater Elevations
August 2019

Well ID	TOC Elevation (ft MSL)	Depth to Water (ft BTOC)	Groundwater Elevation (ft MSL)
GWA-7	47.10	7.01	40.09
GWA-8	46.84	9.03	37.81
GWB-4R	45.86	11.54	34.32
GWB-5R	47.82	10.58	37.24
GWB-6R	47.40	8.46	38.94
GWC-1	50.30	19.31	30.99
GWC-2	*	19.53	*
GWC-9	47.11	10.11	37.00
GWC-11	49.38	13.83	35.55
GWC-12	47.48	13.79	33.69
GWC-13	47.82	14.34	33.48
GWC-14	50.67	19.65	31.02
GWC-15	48.12	19.31	28.81
GWC-16	47.79	20.70	27.09
GWC-17	44.09	6.52	37.57
GWC-20	50.03	21.06	28.97
GWC-21	47.94	20.55	27.39
GWC-22	46.72	9.49	37.23

Notes:

1. ft BTOC indicates feet below top of casing.
2. ft MSL indicates feet mean sea level.
3. * - Resurvey Pending.

Table 4B
Summary of Groundwater Elevations
October 2019

Well ID	TOC Elevation (ft MSL)	Depth to Water (ft BTOC)	Groundwater Elevation (ft MSL)
GWA-7	47.10	7.37	39.73
GWA-8	46.84	8.81	38.03
GWB-4R	45.86	11.85	34.01
GWB-5R	47.82	10.88	36.94
GWB-6R	47.40	8.50	38.90
GWC-1	50.30	19.55	30.75
GWC-2	*	19.94	*
GWC-9	47.11	10.33	36.78
GWC-11	49.38	14.15	35.23
GWC-12	47.48	13.60	33.88
GWC-13	47.82	14.76	33.06
GWC-14	50.67	19.92	30.75
GWC-15	48.12	19.54	28.58
GWC-16	47.79	20.92	26.87
GWC-17	44.09	7.35	36.74
GWC-20	50.03	21.39	28.64
GWC-21	47.94	20.85	27.09
GWC-22	46.72	9.64	37.08

Notes:

1. ft BTOC indicates feet below top of casing.
2. ft MSL indicates feet mean sea level.
3. * - Resurvey Pending.

Table 5
Groundwater Flow Velocity Calculations
October 2019

Equation

$$v = \frac{K (i)}{P_e} \quad \text{where: } v = \text{ground water velocity}$$

K = hydraulic conductivity
dh/dl = hydraulic gradient
P_e = effective porosity

Values Used in Calculation

	Value	Source
K =	2.7E-03 cm/sec 7.60 ft/day	See note 1.
i ₁ =	12.03/1576 ft/ft 0.008	hydraulic gradient from GWB-6R to GWC-16
i ₂ =	2.99/737 ft/ft 0.004	hydraulic gradient from GWA-7 to GWC-17
P _e =	0.20	See note 2.

$$v_{\max} = \frac{(7.60)(0.008)}{0.20} \quad v_{\max} = 0.29 \text{ ft/day}$$

$$v_{\min} = \frac{(7.60)(0.004)}{0.20} \quad v_{\min} = 0.15 \text{ ft/day}$$

Notes

- (1) Grumman Road Monofill Groundwater Monitoring Plan (SCS, 1999)
- (2) Default value for silty sands from Interim Final RCRA Investigation (EPA, 1989)

Table 6A
Grumman Road Landfill
Summary of Groundwater Analytical Data - August 2019

Substance		Well ID							
		GWA-7	GWA-8	GWB-4R	GWB-5R	GWB-6R	GWC-1	GWC-2	GWC-9
		8/26/2019	8/26/2019	8/27/2019	8/28/2019	8/27/2019	8/27/2019	8/27/2019	8/28/2019
Appendix IV	Antimony	ND	ND	ND	ND (0.00054 J)	ND	ND	ND	ND
	Arsenic	ND (0.0041 J)	ND	ND (0.0023 J)	ND (0.0023 J)	ND (0.0035 J)	ND (0.0022 J)	ND	ND
	Barium	0.11	0.065	0.076	0.10	0.013	0.054	0.053	0.17
	Beryllium	ND	ND (0.00021 J)	ND	ND (0.000076 J)	ND	ND	ND	ND (0.00022 J)
	Cadmium	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	ND (0.024 J)	ND (0.0010 J)	ND (0.0027 J)	ND (0.0071 J)	ND (0.0097 J)	ND (0.0062 J)	ND	ND (0.00089 J)
	Cobalt	ND (0.0037 J)	ND (0.00042 J)	ND (0.0011 J)	ND (0.0024 J)	ND (0.00038 J)	ND	ND	ND (0.00099 J)
	Fluoride	ND	0.13	ND (0.031 J)	ND (0.097 J)	ND (0.13 J)	ND	ND	ND (0.088 J)
	Lead	ND (0.013 J)	ND	ND (0.0010 J)	ND (0.0011 J)	ND (0.0011 J)	ND	ND	ND (0.000061 J)
	Lithium	ND	ND (0.0012 J)	0.013	ND	ND	ND	ND	ND (0.0018 J)
	Mercury	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	ND	ND	0.10	ND (0.0012 J)	ND (0.0026 J)	0.060	ND	ND
	Radium	6.03	3.03	2.97	3.74	4.63	2.41	0.787 U	1.91
	Selenium	ND	ND	ND	ND (0.0033 J)	ND (0.0033 J)	ND (0.0016 J)	ND	ND
Thallium	ND	ND	ND	ND (0.000057 J)	ND	ND	ND	ND	

Notes:

1. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
2. Radium data are for Radium 226 & Radium 228 (combined).
3. ND (Not Detected) indicates the substance was not detected above the laboratory method detection limit (MDL).
4. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instrument could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated value.
5. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
6. Appendix IV = parameters evaluated during Assessment Monitoring.

Table 6A
Grumman Road Landfill
Summary of Groundwater Analytical Data - August 2019

Substance		Well ID							
		GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16	GWC-17	GWC-20
		8/27/2019	8/27/2019	8/27/2019	8/27/2019	8/27/2019	8/28/2019	8/28/2019	8/28/2019
Appendix IV	Antimony	ND (0.00033 J)	ND	ND	ND	ND	ND	ND	ND
	Arsenic	ND	ND	ND	ND (0.0017 J)	0.17	0.091	ND (0.0011 J)	0.43
	Barium	0.12	0.017	0.024	0.067	0.049	0.090	0.026	0.078
	Beryllium	ND	ND (0.00047 J)	ND	ND	ND	ND (0.000080 J)	ND (0.0017 J)	ND
	Cadmium	ND (0.00044 J)	ND	ND	ND	ND	ND	ND	ND
	Chromium	ND (0.00092 J)	ND (0.00085 J)	ND	ND (0.0010 J)	ND (0.0016 J)	ND (0.0011 J)	ND (0.0013 J)	ND (0.00089 J)
	Cobalt	ND	ND (0.00090 J)	ND	ND	ND	ND	ND (0.0023 J)	ND
	Fluoride	ND	0.30	ND	ND	ND	ND	0.61	ND
	Lead	ND (0.00021 J)	ND	ND (0.00010 J)	ND (0.00051 J)	ND (0.00033 J)	ND (0.00010 J)	ND	ND (0.000065 J)
	Lithium	ND	ND (0.00094 J)	ND	ND	ND	ND	ND (0.0041 J)	ND
	Mercury	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	ND	ND	ND	0.028	0.095	0.22	ND (0.0040 J)	0.11
	Radium	5.09	2.09	1.27	1.32	1.75	2.04	2.01	1.13 U
	Selenium	ND	ND	ND	ND (0.0035 J)	ND (0.0092 J)	ND (0.0040 J)	ND	ND (0.0014 J)
Thallium	ND	ND (0.00011 J)	ND	ND	ND	ND	ND (0.000066 J)	ND	

Notes:

1. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
2. Radium data are for Radium 226 & Radium 228 (combined).
3. ND (Not Detected) indicates the substance was not detected above the laboratory method detection limit (MDL).
4. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instrument could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated value.
5. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
6. Appendix IV = parameters evaluated during Assessment Monitoring.

Table 6A
Grumman Road Landfill
Summary of Groundwater Analytical Data - August 2019

Substance	Well ID		
	GWC-21	GWC-22	
	8/28/2019	8/27/2019	
Appendix IV	Antimony	ND	ND (0.00045 J)
	Arsenic	ND (0.0020 J)	ND (0.00044 J)
	Barium	0.063	0.097
	Beryllium	ND	ND (0.000090 J)
	Cadmium	ND	ND
	Chromium	ND (0.00087 J)	ND (0.00057 J)
	Cobalt	ND	ND (0.00077 J)
	Fluoride	ND	0.10
	Lead	ND (0.00018 J)	ND (0.0030 J)
	Lithium	ND	ND
	Mercury	ND	ND
	Molybdenum	0.070	ND
	Radium	1.40 U	7.04
	Selenium	0.019	ND
Thallium	ND	ND (0.000086 J)	

Notes:

1. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
2. Radium data are for Radium 226 & Radium 228 (combined).
3. ND (Not Detected) indicates the substance was not detected above the laboratory method detection limit (MDL).
4. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instrument could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated value.
5. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
6. Appendix IV = parameters evaluated during Assessment Monitoring.

Table 6B
Grumman Road Landfill
Summary of Groundwater Analytical Data - October 2019

Substance		Well ID							
		GWA-7	GWA-8	GWB-4R	GWB-5R	GWB-6R	GWC-1	GWC-2	GWC-9
		10/8/2019	10/7/2019	10/9/2019	10/9/2019	10/9/2019	10/9/2019	10/9/2019	10/9/2019
APPENDIX III	Boron	6.4	0.12	5.7	6.8	6.3	0.93	ND (0.024 J)	ND (0.019 J)
	Calcium	3.5	31.6	46.7	17.7	10.1	51.2	0.18	6.0
	Chloride	125	18.0	32.1	239	49.7	7.2	7.0	19.0
	Fluoride	ND	ND	ND	ND	ND	ND	ND	ND (0.068 J)
	Sulfate	32.8	156	38.5	90.8	255	76.3	10.1	41.1
	TDS	1840	275	502	2010	903	338	46.0	128
APPENDIX IV	Antimony	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	ND (0.0030 J)	ND	ND (0.0024 J)	ND (0.0053 J)	ND (0.0018 J)	ND (0.0042 J)	ND	ND
	Barium	0.10	0.069	0.076	0.13	ND (0.014 J)	0.058	0.050	0.18
	Beryllium	ND	ND (0.00024 J)	ND	ND	ND	ND	ND	ND (0.00023 J)
	Cadmium	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	ND (0.021 J)	ND (0.00052 J)	ND (0.0020 J)	ND (0.012 J)	ND (0.011 J)	ND (0.0019 J)	ND (0.00049 J)	ND (0.00090 J)
	Cobalt	ND (0.0028 J)	ND (0.00046 J)	ND (0.0015 J)	ND (0.0037 J)	ND	ND	ND	ND (0.00099 J)
	Lead	ND (0.0098 J)	ND	ND (0.00041 J)	ND (0.0025 J)	ND (0.00033 J)	ND	ND (0.000064 J)	ND
	Lithium	ND	ND (0.0012 J)	0.013	ND	ND	ND	ND	ND (0.0018 J)
	Molybdenum	ND	ND	0.10	ND	ND	0.060	ND	ND
	Radium	33.8	2.83	2.17	7.23	5.45	3.13	0.220 U	3.09
	Selenium	ND (0.0072 J)	ND	ND	ND (0.0073 J)	ND	ND (0.0024 J)	ND	ND
Thallium	ND	ND (0.000062 J)	ND	ND (0.00031 J)	ND	ND (0.000054 J)	ND	ND	
See Note 8	Vanadium	0.11	ND	ND	ND (0.033 J)	ND (0.018 J)	ND	ND	ND
	Zinc	0.095	ND (0.0077 J)	ND (0.0064 J)	ND (0.0081 J)	ND (0.016 J)	ND (0.0057 J)	ND (0.0050 J)	ND (0.0054 J)

Notes:

- Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
- Radium data are for Radium 226 & Radium 228 (combined).
- ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
- ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
- TDS indicates total dissolved solids.
- U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
- Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
- Appendix II parameter included to meet EPD Rule 391-3-4-.14 requirements that is not included in the Appendix IV parameter list .

Table 6B
Grumman Road Landfill
Summary of Groundwater Analytical Data - October 2019

Substance		Well ID							
		GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16	GWC-17	GWC-20
		10/8/2019	10/9/2019	10/8/2019	10/8/2019	10/8/2019	10/8/2019	10/9/2019	10/9/2019
APPENDIX III	Boron	0.22	8.2	0.18	0.048	1.1	8.4	1.3	0.79
	Calcium	69.2	54.2	2.3	146	129	205	56.6	80.1
	Chloride	89.0	44.1	4.0	40.2	2.9	46.4	330	5.4
	Fluoride	ND	ND	ND	ND	ND	ND	ND	ND
	Sulfate	310	392	22.0	428	45.8	872	346	58.5
	TDS	613	647	51.0	841	526	1500	1100	434
APPENDIX IV	Antimony	ND (0.00046 J)	ND	ND	ND	ND	ND	ND	ND
	Arsenic	ND	ND	ND	ND (0.0017 J)	0.13	0.088	ND (0.0011 J)	0.35
	Barium	0.13	0.019	0.024	0.085	0.057	0.13	0.032	0.078
	Beryllium	ND	ND (0.00046 J)	ND	ND	ND	ND (0.000098 J)	ND (0.0018 J)	ND
	Cadmium	ND (0.00043 J)	ND	ND	ND	ND	ND	ND	ND
	Chromium	ND (0.00091 J)	ND (0.00081 J)	ND	ND (0.00053 J)	ND (0.0017 J)	ND (0.00099 J)	ND (0.00081 J)	ND (0.0011 J)
	Cobalt	ND	ND (0.00094 J)	ND	ND	ND	ND	ND (0.0024 J)	ND
	Lead	ND (0.00028 J)	ND (0.000066 J)	ND (0.00013 J)	ND	ND (0.00012 J)	ND (0.00010 J)	ND (0.00015 J)	ND (0.00018 J)
	Lithium	ND	ND (0.0011 J)	ND	ND	ND	ND	ND (0.0046 J)	ND
	Molybdenum	ND	ND	ND	0.034	0.091	0.20	ND (0.0036 J)	0.071
	Radium	6.39	3.11	1.62	1.41	1.52	1.89	2.91	2.28
	Selenium	ND	ND	ND	ND (0.0026 J)	0.014	ND (0.0023 J)	ND	ND
See Note 8	Thallium	ND (0.000098 J)	ND (0.00014 J)	ND	ND	ND	ND	ND (0.000076 J)	ND
	Vanadium	ND	ND (0.0021 J)	ND	ND	ND	ND	ND	ND
	Zinc	ND (0.0061 J)	ND (0.0057 J)	0.053	ND (0.0052 J)	ND (0.0051 J)	0.010	0.011	ND (0.0049 J)

Notes:

1. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
2. Radium data are for Radium 226 & Radium 228 (combined).
3. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
4. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
5. TDS indicates total dissolved solids.
6. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
7. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
8. Appendix II parameter included to meet EPD Rule 391-3-4-.14 requirements that is not included in the Appendix IV parameter list .

Table 6B
Grumman Road Landfill
Summary of Groundwater Analytical Data - October 2019

Substance		Well ID	
		GWC-21	GWC-22
		10/8/2019	10/9/2019
APPENDIX III	Boron	1.0	0.39
	Calcium	49.5	30.1
	Chloride	7.8	25.3
	Fluoride	ND	ND
	Sulfate	85.6	80.2
	TDS	278	211
APPENDIX IV	Antimony	ND	ND
	Arsenic	ND (0.0028 J)	ND
	Barium	0.079	0.065
	Beryllium	ND	ND
	Cadmium	ND	ND (0.00012 J)
	Chromium	ND (0.00065 J)	ND (0.00072 J)
	Cobalt	ND	ND
	Lead	ND (0.00016 J)	ND (0.00032 J)
	Lithium	ND	ND
	Molybdenum	0.078	ND
	Radium	1.88	3.68
	Selenium	0.019	ND
	Thallium	ND	ND
See Note 8	Vanadium	ND	ND
	Zinc	ND (0.0071 J)	ND (0.0079 J)

Notes:

1. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
2. Radium data are for Radium 226 & Radium 228 (combined).
3. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
4. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
5. TDS indicates total dissolved solids.
6. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
7. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
8. Appendix II parameter included to meet EPD Rule 391-3-4-.14 requirements that is not included in the Appendix IV parameter list .

**Table 7
Statistical Method Summary**

Statistical Method Summary		
Monitoring Well Network	Upgradient Wells	GWA-7 and GWA-8
	Downgradient Wells	GWC-1, GWC-2, GWB-4R, GWB-5R, GWB-6R, GWC-9, GWC-11, GWC-12, GWC-13, GWC-14, GWC-15, GWC-16, GWC-17, GWC-20, GWC-21, and GWC-22
CCR Monitoring Parameters	Appendix III (Detection Monitoring)	Boron, Calcium, Chloride, Fluoride, pH, Sulfate, and TDS
	Appendix IV (Assessment Monitoring)	Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, combined Radium 226 + 228, Fluoride, Lead, Lithium, Mercury, Molybdenum, Selenium, and Thallium
EPD Permit Metals	Appendix I (Detection Monitoring)	Antimony, Arsenic, Barium, Chromium, Lead, Selenium, Vanadium, and Zinc
	Appendix II (Assessment Monitoring)	Antimony, Arsenic, Barium, Chromium, Lead, Selenium, Vanadium, and Zinc
Statistical Methodology	Data Screening Proposed Background	Evaluate outliers, trends, and seasonality when sufficient data are available
	Statistical Limits	Interwell (calcium, chloride, fluoride, pH, and sulfate) or intrawell (boron, TDS, Appendix I and II) statistical limits are on constituent specific basis, depending on the appropriateness of the method as determined by the Analysis of Variance

FIGURES

P:\Industrial\054 - Southern Company\110 - Groundwater Consulting Services 2018 - 2021\Grumman Road\2 - GMM Reports\2019\DWG\Plant Kraft\Grumman Road LF - March 2019 Map Rev2.dwg 2019-07-25 MATT MALONE



LOCATION IN THE STATE OF GEORGIA - NOT TO SCALE

ACC
ATLANTIC COAST CONSULTING, INC.
 1150 Northmeadow Pkwy.
 Suite 100
 Roswell, GA 30076
 770.594.5998
 www.atlcc.net

PROJECT:
GRUMMAN ROAD PRIVATE INDUSTRIAL LANDFILL

120 GULFSTREAM ROAD
 FORT WENTWORTH, GEORGIA

REVISIONS

Drawn by: **MM** Checked by: **EP**

PROJECT NUMBER:
IO54-110
 February 2020

SITE LOCATION MAP

FIGURE **1**

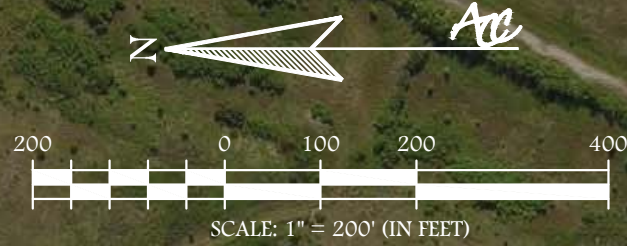
P:\Industrial\I054 - Southern Company\110 - Groundwater Consulting Services 2018 - 2021\Grumman Road\2 - GWM Reports\2019\DWG\Plant Kraft Grumman Road LF - March 2019 Map Rev1.dwg 2019-07-23 MATT MALONE

NOTES:

- 1. PROPERTY BOUNDARY SURVEYED BY GUNNIN LAND SURVEYING ON AUGUST 30, 2018.

LEGEND

EXISTING	DESCRIPTION
	PROPERTY BOUNDARY
	GROUNDWATER MONITORING NETWORK WELL
	NON-NETWORK WELL (NOT MONITORED)



ATLANTIC COAST CONSULTING, INC.
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PROJECT:
GRUMMAN ROAD PRIVATE INDUSTRIAL LANDFILL

120 GULFSTREAM ROAD
FORT WENTWORTH, GEORGIA

REVISIONS

NO.	DESCRIPTION	DATE

Drawn by: MM Checked by: EP

PROJECT NUMBER:
I054-110
February 2020

WELL LOCATION MAP

\\ATLANTA1\Projects\Industrial\054-Southern Company\110-Groundwater Consulting Services\Grumman Road\2-Groundwater Sampling And Reporting\2019\DWG\Plant Kraft Grumman Road LF - October 2019 Map.dwg 2020-02-12 EVAN PERRY

Monitoring Well ID	Well Depth (ft btoc)	Top of Casing (MSL)	Depth to Water (feet)	Groundwater Elevation (MSL)
GWA-7	21.2	47.10	7.37	39.73
GWA-8	20.8	46.84	8.81	38.03
GWB-4R	23.3	45.86	11.85	34.01
GWB-5R	26.5	47.82	10.88	36.94
GWB-6R	22.7	47.40	8.50	38.90
GWC-1	28.2	50.30	19.55	30.75
GWC-2	31.4	*	19.94	*
GWC-9	27.4	47.11	10.33	36.78
GWC-11	22.6	49.38	14.15	35.23
GWC-12	26.7	47.48	13.60	33.88
GWC-13	23.8	47.82	14.76	33.06
GWC-14	27.0	50.67	19.92	30.75
GWC-15	26.8	48.12	19.54	28.58
GWC-16	28.2	47.79	20.92	26.87
GWC-17	23.2	44.09	7.35	36.74
GWC-20	25.0	50.03	21.39	28.64
GWC-21	23.8	47.94	20.85	27.09
GWC-22	18.6	46.72	9.64	37.08

Notes:

1. ft btoc - feet below top of casing.
2. MSL = Mean Sea Level (NGVD 1929).
3. Depths to water measured on October 7, 2019.

* Resurvey Pending.

LEGEND

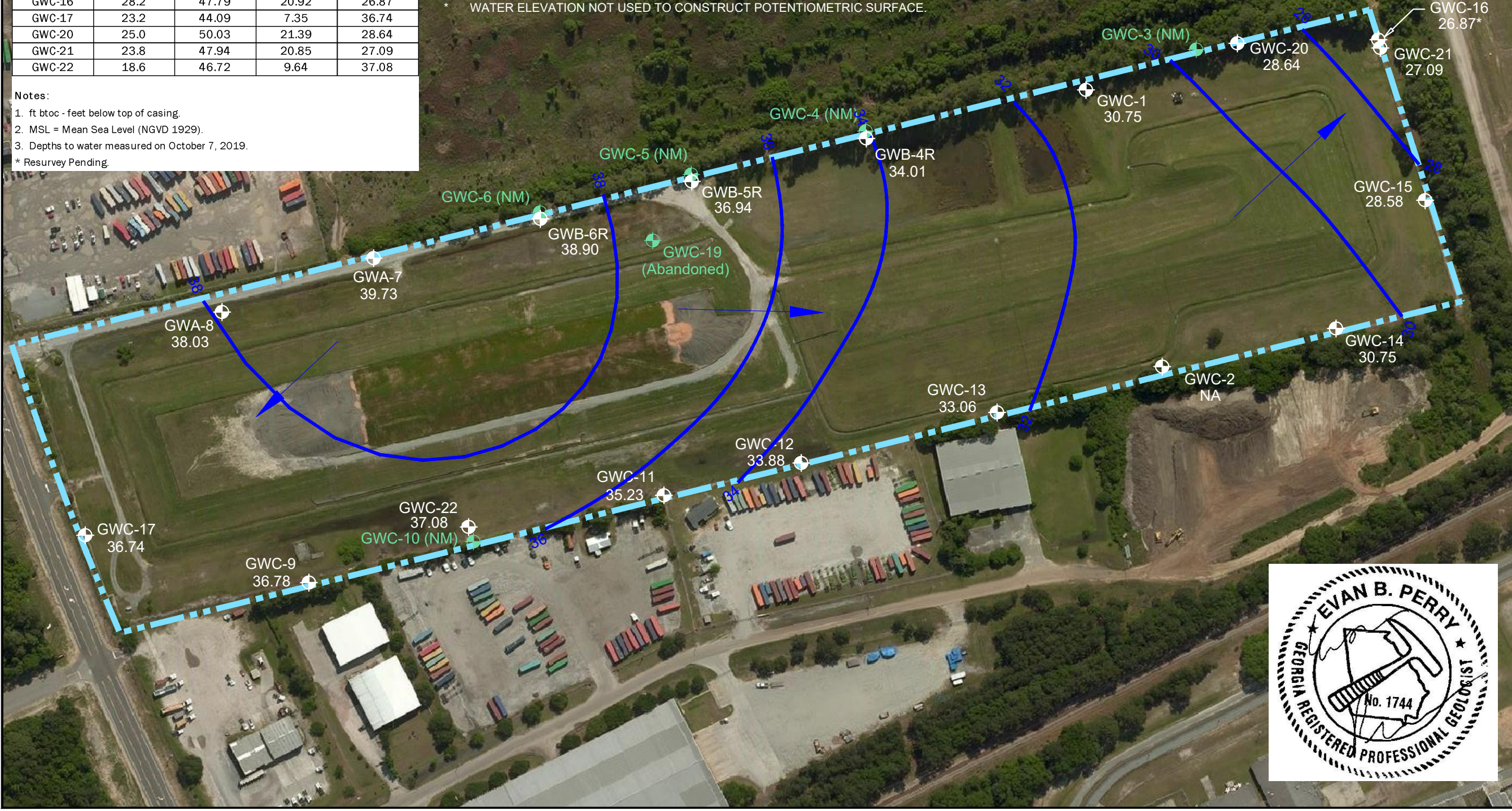
EXISTING	DESCRIPTION
	PROPERTY BOUNDARY
	GROUNDWATER MONITORING NETWORK WELL (GROUNDWATER ELEVATION)
	NON-NETWORK WELL (NOT MONITORED)
	GROUNDWATER ELEVATION CONTOUR
	GROUNDWATER FLOW DIRECTION

NOTES:

1. PROPERTY BOUNDARY WERE SURVEYED BY GUNNIN LAND SURVEYING ON AUGUST 30, 2018.
2. NA = NOT AVAILABLE.

* WATER ELEVATION NOT USED TO CONSTRUCT POTENTIOMETRIC SURFACE.

SCALE: 1" = 200' (IN FEET)



ATLANTIC COAST CONSULTING, INC.
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PROJECT:
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120 GULFSTREAM ROAD
 FORT WENTWORTH, GEORGIA

REVISIONS

Drawn by: MM Checked by: EP

PROJECT NUMBER:
 I054-110
 February 2020



OCTOBER 2019
 POTENTIOMETRIC
 SURFACE MAP

APPENDICES

APPENDIX A

Laboratory Analytical and Field Sampling Reports

December 11, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Kraft - Grumman Road
Pace Project No.: 2622501

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on August 28, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Kevin Herring for
Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Betsy McDaniel, Atlantic Coast Consulting
Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622501

Pace Analytical Services Atlanta

110 Technology Parkway Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

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SAMPLE SUMMARY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622501

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2622501001	GWA-7	Water	08/26/19 16:15	08/28/19 13:45
2622501002	GWB-6R	Water	08/27/19 14:15	08/28/19 13:45

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622501

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2622501001	GWA-7	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
2622501002	GWB-6R	EPA 6020B	CSW	12
		EPA 7470A	DRB	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622501

Sample: GWA-7		Lab ID: 2622501001		Collected: 08/26/19 16:15		Received: 08/28/19 13:45		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony, Dissolved	0.00029J	mg/L	0.0030	0.00027	1	08/29/19 15:59	08/30/19 16:05	7440-36-0	
Arsenic, Dissolved	0.0028J	mg/L	0.0050	0.00035	1	08/29/19 15:59	08/30/19 16:05	7440-38-2	
Barium, Dissolved	0.087	mg/L	0.010	0.00049	1	08/29/19 15:59	08/30/19 16:05	7440-39-3	
Beryllium, Dissolved	0.00012J	mg/L	0.0030	0.000074	1	08/29/19 15:59	08/30/19 16:05	7440-41-7	
Cadmium, Dissolved	ND	mg/L	0.0025	0.00011	1	08/29/19 15:59	08/30/19 16:05	7440-43-9	
Chromium, Dissolved	0.10	mg/L	0.010	0.00039	1	08/29/19 15:59	08/30/19 16:05	7440-47-3	
Cobalt, Dissolved	0.0045J	mg/L	0.0050	0.00030	1	08/29/19 15:59	08/30/19 16:05	7440-48-4	
Lead, Dissolved	0.00028J	mg/L	0.0050	0.000046	1	08/29/19 15:59	08/30/19 16:05	7439-92-1	
Lithium, Dissolved	ND	mg/L	0.030	0.00078	1	08/29/19 15:59	08/30/19 16:05	7439-93-2	
Molybdenum, Dissolved	0.0018J	mg/L	0.010	0.00095	1	08/29/19 15:59	08/30/19 16:05	7439-98-7	
Selenium, Dissolved	0.0075J	mg/L	0.010	0.0013	1	08/29/19 15:59	08/30/19 16:05	7782-49-2	
Thallium, Dissolved	ND	mg/L	0.0010	0.000052	1	08/29/19 15:59	08/30/19 16:05	7440-28-0	
7470 Mercury, Dissolved		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury, Dissolved	ND	mg/L	0.00020	0.00014	1	09/04/19 08:28	09/04/19 12:45	7439-97-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622501

Sample: GWB-6R		Lab ID: 2622501002		Collected: 08/27/19 14:15		Received: 08/28/19 13:45		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony, Dissolved	ND	mg/L	0.0030	0.00027	1	08/29/19 15:59	08/30/19 16:10	7440-36-0		
Arsenic, Dissolved	0.0034J	mg/L	0.0050	0.00035	1	08/29/19 15:59	08/30/19 16:10	7440-38-2		
Barium, Dissolved	0.012	mg/L	0.010	0.00049	1	08/29/19 15:59	08/30/19 16:10	7440-39-3		
Beryllium, Dissolved	ND	mg/L	0.0030	0.000074	1	08/29/19 15:59	08/30/19 16:10	7440-41-7		
Cadmium, Dissolved	ND	mg/L	0.0025	0.00011	1	08/29/19 15:59	08/30/19 16:10	7440-43-9		
Chromium, Dissolved	0.011	mg/L	0.010	0.00039	1	08/29/19 15:59	08/30/19 16:10	7440-47-3		
Cobalt, Dissolved	ND	mg/L	0.0050	0.00030	1	08/29/19 15:59	08/30/19 16:10	7440-48-4		
Lead, Dissolved	0.000052J	mg/L	0.0050	0.000046	1	08/29/19 15:59	08/30/19 16:10	7439-92-1		
Lithium, Dissolved	ND	mg/L	0.030	0.00078	1	08/29/19 15:59	08/30/19 16:10	7439-93-2		
Molybdenum, Dissolved	0.0020J	mg/L	0.010	0.00095	1	08/29/19 15:59	08/30/19 16:10	7439-98-7		
Selenium, Dissolved	0.0036J	mg/L	0.010	0.0013	1	08/29/19 15:59	08/30/19 16:10	7782-49-2		
Thallium, Dissolved	ND	mg/L	0.0010	0.000052	1	08/29/19 15:59	08/30/19 16:10	7440-28-0		
7470 Mercury, Dissolved		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	ND	mg/L	0.00020	0.00014	1	09/04/19 08:28	09/04/19 12:55	7439-97-6		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622501

QC Batch: 34689 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury Dissolved
Associated Lab Samples: 2622501001, 2622501002

METHOD BLANK: 156132 Matrix: Water

Associated Lab Samples: 2622501001, 2622501002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	mg/L	ND	0.00020	0.00014	09/04/19 12:41	

LABORATORY CONTROL SAMPLE: 156133

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	mg/L	0.0025	0.0026	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 156134 156135

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2622501001 Result	Spike Conc.	Spike Conc.	Result						
Mercury, Dissolved	mg/L	ND	0.0025	0.0025	0.0019	0.0019	77	78	75-125	0	20

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622501

QC Batch: 34497 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET Dissolved
Associated Lab Samples: 2622501001, 2622501002

METHOD BLANK: 155181 Matrix: Water
Associated Lab Samples: 2622501001, 2622501002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	mg/L	ND	0.0030	0.00027	08/30/19 14:48	
Arsenic, Dissolved	mg/L	ND	0.0050	0.00035	08/30/19 14:48	
Barium, Dissolved	mg/L	ND	0.010	0.00049	08/30/19 14:48	
Beryllium, Dissolved	mg/L	ND	0.0030	0.000074	08/30/19 14:48	
Cadmium, Dissolved	mg/L	ND	0.0025	0.00011	08/30/19 14:48	
Chromium, Dissolved	mg/L	ND	0.010	0.00039	08/30/19 14:48	
Cobalt, Dissolved	mg/L	ND	0.0050	0.00030	08/30/19 14:48	
Lead, Dissolved	mg/L	ND	0.0050	0.000046	08/30/19 14:48	
Lithium, Dissolved	mg/L	ND	0.030	0.00078	08/30/19 14:48	
Molybdenum, Dissolved	mg/L	ND	0.010	0.00095	08/30/19 14:48	
Selenium, Dissolved	mg/L	ND	0.010	0.0013	08/30/19 14:48	
Thallium, Dissolved	mg/L	ND	0.0010	0.000052	08/30/19 14:48	

METHOD BLANK: 155216 Matrix: Water
Associated Lab Samples: 2622501001, 2622501002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	mg/L	ND	0.0030	0.00027	08/30/19 14:59	
Arsenic, Dissolved	mg/L	ND	0.0050	0.00035	08/30/19 14:59	
Barium, Dissolved	mg/L	ND	0.010	0.00049	08/30/19 14:59	
Beryllium, Dissolved	mg/L	ND	0.0030	0.000074	08/30/19 14:59	
Cadmium, Dissolved	mg/L	ND	0.0025	0.00011	08/30/19 14:59	
Chromium, Dissolved	mg/L	ND	0.010	0.00039	08/30/19 14:59	
Cobalt, Dissolved	mg/L	ND	0.0050	0.00030	08/30/19 14:59	
Lead, Dissolved	mg/L	ND	0.0050	0.000046	08/30/19 14:59	
Lithium, Dissolved	mg/L	ND	0.030	0.00078	08/30/19 14:59	
Molybdenum, Dissolved	mg/L	ND	0.010	0.00095	08/30/19 14:59	
Selenium, Dissolved	mg/L	ND	0.010	0.0013	08/30/19 14:59	
Thallium, Dissolved	mg/L	ND	0.0010	0.000052	08/30/19 14:59	

LABORATORY CONTROL SAMPLE: 155182

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	mg/L	0.1	0.10	101	80-120	
Arsenic, Dissolved	mg/L	0.1	0.098	98	80-120	
Barium, Dissolved	mg/L	0.1	0.10	101	80-120	
Beryllium, Dissolved	mg/L	0.1	0.098	98	80-120	
Cadmium, Dissolved	mg/L	0.1	0.10	101	80-120	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622501

LABORATORY CONTROL SAMPLE: 155182

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Dissolved	mg/L	0.1	0.10	100	80-120	
Cobalt, Dissolved	mg/L	0.1	0.096	96	80-120	
Lead, Dissolved	mg/L	0.1	0.098	98	80-120	
Lithium, Dissolved	mg/L	0.1	0.10	101	80-120	
Molybdenum, Dissolved	mg/L	0.1	0.10	102	80-120	
Selenium, Dissolved	mg/L	0.1	0.099	99	80-120	
Thallium, Dissolved	mg/L	0.1	0.099	99	80-120	

LABORATORY CONTROL SAMPLE: 155217

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	mg/L	0.1	0.10	102	80-120	
Arsenic, Dissolved	mg/L	0.1	0.10	100	80-120	
Barium, Dissolved	mg/L	0.1	0.10	101	80-120	
Beryllium, Dissolved	mg/L	0.1	0.10	101	80-120	
Cadmium, Dissolved	mg/L	0.1	0.10	100	80-120	
Chromium, Dissolved	mg/L	0.1	0.10	103	80-120	
Cobalt, Dissolved	mg/L	0.1	0.10	101	80-120	
Lead, Dissolved	mg/L	0.1	0.098	98	80-120	
Lithium, Dissolved	mg/L	0.1	0.10	102	80-120	
Molybdenum, Dissolved	mg/L	0.1	0.10	102	80-120	
Selenium, Dissolved	mg/L	0.1	0.10	100	80-120	
Thallium, Dissolved	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 155252 155253

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2622396001 Result	Spike Conc.	Spike Conc.	MS Result						
Antimony, Dissolved	mg/L	ND	0.1	0.1	0.11	0.11	101	104	75-125	2	20
Arsenic, Dissolved	mg/L	ND	0.1	0.1	0.098	0.097	98	96	75-125	1	20
Barium, Dissolved	mg/L	35.0 ug/L	0.1	0.1	0.13	0.14	100	103	75-125	2	20
Beryllium, Dissolved	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125	0	20
Cadmium, Dissolved	mg/L	ND	0.1	0.1	0.099	0.10	98	99	75-125	1	20
Chromium, Dissolved	mg/L	ND	0.1	0.1	0.10	0.10	99	102	75-125	3	20
Cobalt, Dissolved	mg/L	ND	0.1	0.1	0.10	0.10	97	99	75-125	2	20
Lead, Dissolved	mg/L	ND	0.1	0.1	0.096	0.10	96	100	75-125	4	20
Lithium, Dissolved	mg/L	ND	0.1	0.1	0.10	0.10	99	101	75-125	2	20
Molybdenum, Dissolved	mg/L	ND	0.1	0.1	0.11	0.11	101	104	75-125	3	20
Selenium, Dissolved	mg/L	ND	0.1	0.1	0.10	0.096	101	96	75-125	5	20
Thallium, Dissolved	mg/L	ND	0.1	0.1	0.098	0.10	98	100	75-125	2	20

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QUALIFIERS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622501

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622501

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2622501001	GWA-7	EPA 3005A	34497	EPA 6020B	34520
2622501002	GWB-6R	EPA 3005A	34497	EPA 6020B	34520
2622501001	GWA-7	EPA 7470A	34689	EPA 7470A	34709
2622501002	GWB-6R	EPA 7470A	34689	EPA 7470A	34709

REPORT OF LABORATORY ANALYSIS

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CHAIN OF CUSTODY RECORD

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

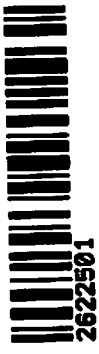
PAGE: 21 OF 21

CLIENT NAME: Georgia Power
 CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
 241 Ralph McGill Blvd SE B10185
 Atlanta, GA 30308
 404-506-7239
 REPORT TO: E.PERRY@ATL.GE.POWER
 CC:
 REQUESTED COMPLETION DATE:
 PROJECT NAME/STATE: Plant Kraft Grumman Road
 PROJECT #: 2019 AIV Scan Event

CONTAINER TYPE:		ANALYSIS REQUESTED		CONTAINER TYPE:	
P	P	P	P	P	P
3	7	3	7		
PRESERVATION:		PRESERVATION:		PRESERVATION:	
# of		# of		# of	
CONTAINERS		CONTAINERS		CONTAINERS	
↓	↓	↓	↓	↓	↓
Metals App. IV (EPA 60207470)	Flouride	Radium 226 & 228 (SW-846 9315/9320)			
✓		✓			
✓					

CONTAINER TYPE: P - PLASTIC, A - AMBER GLASS, G - CLEAR GLASS, V - VOA VIAL, S - STERILE, O - OTHER
 PRESERVATION: 1 - HCl, 56°C, 2 - H2SO4, 56°C, 3 - HNO3, 4 - NaOH, 56°C, 5 - NaOH/NaAc, 56°C, 6 - Na2S2O8, 56°C, 7 - 56°C not frozen
 *MATRIX CODES:
 DW - DRINKING WATER, S - SOIL, WW - WASTEWATER, SL - SLUDGE, GW - GROUNDWATER, SD - SOLID, SW - SURFACE WATER, A - AIR, ST - STORM WATER, L - LIQUID, W - WATER, P - PRODUCT
 REMARKS/ADDITIONAL INFORMATION
 App IV only

WO#: 2622501



RELINQUISHED BY: [Signature]
 DATE/TIME: 8-28-19 0830
 RELINQUISHED BY: [Signature]
 DATE/TIME: 8-27-19 1715
 SAMPLE SHIPPED VIA:
 UPS, USPS, COURIER, OTHER FS
 Broken, Not Present
 Temperature: 4.0
 No, NA, No, NA
 RECEIVED BY: [Signature]
 DATE/TIME: 8-28-19 1045

FOR LAB USE ONLY
 LAB #:
 Entered Into LIMS:
 Tracking #:
 Copy of Plant Kraft - Grumman Rd COC - 2019 AIV SCAN EVENT.xlsx



Sample Condition Upon Receipt

Client Name: GIA Power Project # _____

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____
Tracking #: _____

WO#: **2622501**

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

PM: **BM** Due Date: **09/05/19**
CLIENT: **GAPower-CCR**

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used 83 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 4.0 Biological Tissue is Frozen: Yes No
Temp should be above freezing to 6°C

Comments: _____
Date and Initials of person examining contents: 8/28/19 MB

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: _____ Field Data Required? Y / N
Person Contacted: _____ Date/Time: _____
Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

December 11, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Kraft - Grumman Road
Pace Project No.: 2622502

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on August 28, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

This revised report replaces the report issued on 9/9/2019. The report has been revised to correct the project-required RLs per consultant request. No other changes have been made to this report.

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

Sincerely,



Kevin Herring for
Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Betsy McDaniel, Atlantic Coast Consulting
Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622502

Pace Analytical Services Atlanta

110 Technology Parkway Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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SAMPLE SUMMARY

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622502

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2622502001	GWA-7	Water	08/26/19 16:15	08/28/19 13:45
2622502002	GWC-15	Water	08/27/19 09:25	08/28/19 13:45
2622502003	GWC-14	Water	08/27/19 10:20	08/28/19 13:45
2622502004	GWC-2	Water	08/27/19 11:15	08/28/19 13:45
2622502005	GWC-13	Water	08/27/19 12:30	08/28/19 13:45
2622502006	GWB-6R	Water	08/27/19 14:15	08/28/19 13:45
2622502007	GWB-4R	Water	08/27/19 17:15	08/28/19 13:45
2622502008	GWA-8	Water	08/26/19 15:40	08/28/19 13:45
2622502009	FB-1-8-27-19	Water	08/27/19 09:10	08/28/19 13:45
2622502010	GWC-12	Water	08/27/19 09:30	08/28/19 13:45
2622502011	GWC-11	Water	08/27/19 11:55	08/28/19 13:45
2622502012	GWC-22	Water	08/27/19 14:30	08/28/19 13:45
2622502013	EB-1-8-27-19	Water	08/27/19 15:30	08/28/19 13:45
2622502014	GWC-1	Water	08/27/19 17:00	08/28/19 13:45
2622502015	Dup-1	Water	08/27/19 00:00	08/28/19 13:45

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622502

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2622502001	GWA-7	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0	MWB	1	PASI-GA
2622502002	GWC-15	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0	MWB	1	PASI-GA
2622502003	GWC-14	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0	MWB	1	PASI-GA
2622502004	GWC-2	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0	MWB	1	PASI-GA
2622502005	GWC-13	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0	MWB	1	PASI-GA
2622502006	GWB-6R	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0	MWB	1	PASI-GA
2622502007	GWB-4R	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0	MWB	1	PASI-GA
2622502008	GWA-8	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2622502009	FB-1-8-27-19	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2622502010	GWC-12	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2622502011	GWC-11	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2622502012	GWC-22	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2622502013	EB-1-8-27-19	EPA 6020B	CSW	12	PASI-GA

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622502

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2622502014	GWC-1	EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
2622502015	Dup-1	EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622502

Sample: GWA-7		Lab ID: 2622502001		Collected: 08/26/19 16:15		Received: 08/28/19 13:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.015	0.0014	5	08/29/19 18:05	09/03/19 22:40	7440-36-0	D3
Arsenic	0.0041J	mg/L	0.025	0.0018	5	08/29/19 18:05	09/03/19 22:40	7440-38-2	D3
Barium	0.11	mg/L	0.050	0.0024	5	08/29/19 18:05	09/03/19 22:40	7440-39-3	
Beryllium	ND	mg/L	0.015	0.00037	5	08/29/19 18:05	09/03/19 22:40	7440-41-7	D3
Cadmium	ND	mg/L	0.012	0.00057	5	08/29/19 18:05	09/03/19 22:40	7440-43-9	D3
Chromium	0.024J	mg/L	0.050	0.0020	5	08/29/19 18:05	09/03/19 22:40	7440-47-3	D3
Cobalt	0.0037J	mg/L	0.025	0.0015	5	08/29/19 18:05	09/03/19 22:40	7440-48-4	D3
Lead	0.013J	mg/L	0.025	0.00023	5	08/29/19 18:05	09/03/19 22:40	7439-92-1	D3
Lithium	ND	mg/L	0.15	0.0039	5	08/29/19 18:05	09/03/19 22:40	7439-93-2	D3
Molybdenum	ND	mg/L	0.050	0.0047	5	08/29/19 18:05	09/03/19 22:40	7439-98-7	D3
Selenium	ND	mg/L	0.050	0.0063	5	08/29/19 18:05	09/03/19 22:40	7782-49-2	D3
Thallium	ND	mg/L	0.0050	0.00026	5	08/29/19 18:05	09/03/19 22:40	7440-28-0	D3
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.00014	1	08/30/19 11:45	08/30/19 14:52	7439-97-6	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Fluoride	ND	mg/L	0.30	0.029	1		09/04/19 04:53	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622502

Sample: GWC-15		Lab ID: 2622502002		Collected: 08/27/19 09:25		Received: 08/28/19 13:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00027	1	08/29/19 18:05	09/03/19 22:46	7440-36-0	
Arsenic	0.17	mg/L	0.0050	0.00035	1	08/29/19 18:05	09/03/19 22:46	7440-38-2	
Barium	0.049	mg/L	0.010	0.00049	1	08/29/19 18:05	09/03/19 22:46	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	08/29/19 18:05	09/03/19 22:46	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	08/29/19 18:05	09/03/19 22:46	7440-43-9	
Chromium	0.0016J	mg/L	0.010	0.00039	1	08/29/19 18:05	09/03/19 22:46	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	08/29/19 18:05	09/03/19 22:46	7440-48-4	
Lead	0.00033J	mg/L	0.0050	0.000046	1	08/29/19 18:05	09/03/19 22:46	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	08/29/19 18:05	09/03/19 22:46	7439-93-2	
Molybdenum	0.095	mg/L	0.010	0.00095	1	08/29/19 18:05	09/03/19 22:46	7439-98-7	
Selenium	0.0092J	mg/L	0.010	0.0013	1	08/29/19 18:05	09/03/19 22:46	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	08/29/19 18:05	09/03/19 22:46	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.00014	1	08/30/19 11:45	08/30/19 15:13	7439-97-6	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Fluoride	ND	mg/L	0.30	0.029	1		09/04/19 05:16	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622502

Sample: GWC-14		Lab ID: 2622502003		Collected: 08/27/19 10:20		Received: 08/28/19 13:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00027	1	08/29/19 18:05	09/03/19 22:51	7440-36-0	
Arsenic	0.0017J	mg/L	0.0050	0.00035	1	08/29/19 18:05	09/03/19 22:51	7440-38-2	
Barium	0.067	mg/L	0.010	0.00049	1	08/29/19 18:05	09/03/19 22:51	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	08/29/19 18:05	09/03/19 22:51	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	08/29/19 18:05	09/03/19 22:51	7440-43-9	
Chromium	0.0010J	mg/L	0.010	0.00039	1	08/29/19 18:05	09/03/19 22:51	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	08/29/19 18:05	09/03/19 22:51	7440-48-4	
Lead	0.00051J	mg/L	0.0050	0.000046	1	08/29/19 18:05	09/03/19 22:51	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	08/29/19 18:05	09/03/19 22:51	7439-93-2	
Molybdenum	0.028	mg/L	0.010	0.00095	1	08/29/19 18:05	09/03/19 22:51	7439-98-7	
Selenium	0.0035J	mg/L	0.010	0.0013	1	08/29/19 18:05	09/03/19 22:51	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	08/29/19 18:05	09/03/19 22:51	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.00014	1	08/30/19 11:45	08/30/19 15:15	7439-97-6	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Fluoride	ND	mg/L	0.30	0.029	1		09/04/19 05:39	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622502

Sample: GWC-2		Lab ID: 2622502004		Collected: 08/27/19 11:15		Received: 08/28/19 13:45		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/30/19 16:08	09/03/19 23:26	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	08/30/19 16:08	09/03/19 23:26	7440-38-2		
Barium	0.053	mg/L	0.010	0.00049	1	08/30/19 16:08	09/03/19 23:26	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	08/30/19 16:08	09/03/19 23:26	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00011	1	08/30/19 16:08	09/03/19 23:26	7440-43-9		
Chromium	ND	mg/L	0.010	0.00039	1	08/30/19 16:08	09/03/19 23:26	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	08/30/19 16:08	09/03/19 23:26	7440-48-4		
Lead	ND	mg/L	0.0050	0.000046	1	08/30/19 16:08	09/03/19 23:26	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	08/30/19 16:08	09/03/19 23:26	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	08/30/19 16:08	09/03/19 23:26	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	08/30/19 16:08	09/03/19 23:26	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	08/30/19 16:08	09/03/19 23:26	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	08/30/19 11:45	08/30/19 15:18	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		09/04/19 06:01	16984-48-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622502

Sample: GWC-13		Lab ID: 2622502005		Collected: 08/27/19 12:30		Received: 08/28/19 13:45		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/30/19 16:08	09/03/19 23:31	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	08/30/19 16:08	09/03/19 23:31	7440-38-2		
Barium	0.024	mg/L	0.010	0.00049	1	08/30/19 16:08	09/03/19 23:31	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	08/30/19 16:08	09/03/19 23:31	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00011	1	08/30/19 16:08	09/03/19 23:31	7440-43-9		
Chromium	ND	mg/L	0.010	0.00039	1	08/30/19 16:08	09/03/19 23:31	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	08/30/19 16:08	09/03/19 23:31	7440-48-4		
Lead	0.00010J	mg/L	0.0050	0.000046	1	08/30/19 16:08	09/03/19 23:31	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	08/30/19 16:08	09/03/19 23:31	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	08/30/19 16:08	09/03/19 23:31	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	08/30/19 16:08	09/03/19 23:31	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	08/30/19 16:08	09/03/19 23:31	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	08/30/19 11:45	08/30/19 15:20	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		09/04/19 07:32	16984-48-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622502

Sample: GWB-6R		Lab ID: 2622502006		Collected: 08/27/19 14:15		Received: 08/28/19 13:45		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/30/19 16:08	09/03/19 23:37	7440-36-0		
Arsenic	0.0035J	mg/L	0.0050	0.00035	1	08/30/19 16:08	09/03/19 23:37	7440-38-2		
Barium	0.013	mg/L	0.010	0.00049	1	08/30/19 16:08	09/03/19 23:37	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	08/30/19 16:08	09/03/19 23:37	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00011	1	08/30/19 16:08	09/03/19 23:37	7440-43-9		
Chromium	0.0097J	mg/L	0.010	0.00039	1	08/30/19 16:08	09/03/19 23:37	7440-47-3		
Cobalt	0.00038J	mg/L	0.0050	0.00030	1	08/30/19 16:08	09/03/19 23:37	7440-48-4		
Lead	0.0011J	mg/L	0.0050	0.000046	1	08/30/19 16:08	09/03/19 23:37	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	08/30/19 16:08	09/03/19 23:37	7439-93-2		
Molybdenum	0.0026J	mg/L	0.010	0.00095	1	08/30/19 16:08	09/03/19 23:37	7439-98-7		
Selenium	0.0033J	mg/L	0.010	0.0013	1	08/30/19 16:08	09/03/19 23:37	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	08/30/19 16:08	09/03/19 23:37	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	08/30/19 11:45	08/30/19 15:23	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Fluoride	0.13J	mg/L	0.30	0.029	1		09/04/19 07:54	16984-48-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622502

Sample: GWB-4R		Lab ID: 2622502007		Collected: 08/27/19 17:15		Received: 08/28/19 13:45		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/30/19 16:08	09/03/19 23:43	7440-36-0		
Arsenic	0.0023J	mg/L	0.0050	0.00035	1	08/30/19 16:08	09/03/19 23:43	7440-38-2		
Barium	0.076	mg/L	0.010	0.00049	1	08/30/19 16:08	09/03/19 23:43	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	08/30/19 16:08	09/03/19 23:43	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00011	1	08/30/19 16:08	09/03/19 23:43	7440-43-9		
Chromium	0.0027J	mg/L	0.010	0.00039	1	08/30/19 16:08	09/03/19 23:43	7440-47-3		
Cobalt	0.0011J	mg/L	0.0050	0.00030	1	08/30/19 16:08	09/03/19 23:43	7440-48-4		
Lead	0.0010J	mg/L	0.0050	0.000046	1	08/30/19 16:08	09/03/19 23:43	7439-92-1		
Lithium	0.013J	mg/L	0.030	0.00078	1	08/30/19 16:08	09/03/19 23:43	7439-93-2		
Molybdenum	0.10	mg/L	0.010	0.00095	1	08/30/19 16:08	09/03/19 23:43	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	08/30/19 16:08	09/03/19 23:43	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	08/30/19 16:08	09/03/19 23:43	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	08/30/19 11:45	08/30/19 15:25	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Fluoride	0.031J	mg/L	0.30	0.029	1		09/04/19 08:17	16984-48-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622502

Sample: GWA-8		Lab ID: 2622502008		Collected: 08/26/19 15:40		Received: 08/28/19 13:45		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/30/19 16:08	09/03/19 23:49	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	08/30/19 16:08	09/03/19 23:49	7440-38-2		
Barium	0.065	mg/L	0.010	0.00049	1	08/30/19 16:08	09/03/19 23:49	7440-39-3		
Beryllium	0.00021J	mg/L	0.0030	0.000074	1	08/30/19 16:08	09/03/19 23:49	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00011	1	08/30/19 16:08	09/03/19 23:49	7440-43-9		
Chromium	0.0010J	mg/L	0.010	0.00039	1	08/30/19 16:08	09/03/19 23:49	7440-47-3		
Cobalt	0.00042J	mg/L	0.0050	0.00030	1	08/30/19 16:08	09/03/19 23:49	7440-48-4		
Lead	ND	mg/L	0.0050	0.000046	1	08/30/19 16:08	09/03/19 23:49	7439-92-1		
Lithium	0.0012J	mg/L	0.030	0.00078	1	08/30/19 16:08	09/03/19 23:49	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	08/30/19 16:08	09/03/19 23:49	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	08/30/19 16:08	09/03/19 23:49	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	08/30/19 16:08	09/03/19 23:49	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	08/30/19 11:45	08/30/19 15:27	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	0.13	mg/L	0.10	0.050	1		09/06/19 17:32	16984-48-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622502

Sample: FB-1-8-27-19		Lab ID: 2622502009		Collected: 08/27/19 09:10		Received: 08/28/19 13:45		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/30/19 16:08	09/03/19 23:54	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	08/30/19 16:08	09/03/19 23:54	7440-38-2		
Barium	ND	mg/L	0.010	0.00049	1	08/30/19 16:08	09/03/19 23:54	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	08/30/19 16:08	09/03/19 23:54	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00011	1	08/30/19 16:08	09/03/19 23:54	7440-43-9		
Chromium	ND	mg/L	0.010	0.00039	1	08/30/19 16:08	09/03/19 23:54	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	08/30/19 16:08	09/03/19 23:54	7440-48-4		
Lead	ND	mg/L	0.0050	0.000046	1	08/30/19 16:08	09/03/19 23:54	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	08/30/19 16:08	09/03/19 23:54	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	08/30/19 16:08	09/03/19 23:54	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	08/30/19 16:08	09/03/19 23:54	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	08/30/19 16:08	09/03/19 23:54	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	08/30/19 11:45	08/30/19 15:30	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	ND	mg/L	0.10	0.050	1		09/06/19 17:46	16984-48-8	M1,R1	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622502

Sample: GWC-12		Lab ID: 2622502010		Collected: 08/27/19 09:30		Received: 08/28/19 13:45		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/30/19 16:08	09/04/19 00:00	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	08/30/19 16:08	09/04/19 00:00	7440-38-2		
Barium	0.017	mg/L	0.010	0.00049	1	08/30/19 16:08	09/04/19 00:00	7440-39-3		
Beryllium	0.00047J	mg/L	0.0030	0.000074	1	08/30/19 16:08	09/04/19 00:00	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00011	1	08/30/19 16:08	09/04/19 00:00	7440-43-9		
Chromium	0.00085J	mg/L	0.010	0.00039	1	08/30/19 16:08	09/04/19 00:00	7440-47-3		
Cobalt	0.00090J	mg/L	0.0050	0.00030	1	08/30/19 16:08	09/04/19 00:00	7440-48-4		
Lead	ND	mg/L	0.0050	0.000046	1	08/30/19 16:08	09/04/19 00:00	7439-92-1		
Lithium	0.00094J	mg/L	0.030	0.00078	1	08/30/19 16:08	09/04/19 00:00	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	08/30/19 16:08	09/04/19 00:00	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	08/30/19 16:08	09/04/19 00:00	7782-49-2		
Thallium	0.00011J	mg/L	0.0010	0.000052	1	08/30/19 16:08	09/04/19 00:00	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	08/30/19 11:45	08/30/19 15:32	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	0.30	mg/L	0.10	0.050	1		09/06/19 18:28	16984-48-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622502

Sample: GWC-11		Lab ID: 2622502011		Collected: 08/27/19 11:55		Received: 08/28/19 13:45		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	0.00033J	mg/L	0.0030	0.00027	1	08/30/19 16:08	09/04/19 00:06	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	08/30/19 16:08	09/04/19 00:06	7440-38-2		
Barium	0.12	mg/L	0.010	0.00049	1	08/30/19 16:08	09/04/19 00:06	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	08/30/19 16:08	09/04/19 00:06	7440-41-7		
Cadmium	0.00044J	mg/L	0.0025	0.00011	1	08/30/19 16:08	09/04/19 00:06	7440-43-9		
Chromium	0.00092J	mg/L	0.010	0.00039	1	08/30/19 16:08	09/04/19 00:06	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	08/30/19 16:08	09/04/19 00:06	7440-48-4		
Lead	0.00021J	mg/L	0.0050	0.000046	1	08/30/19 16:08	09/04/19 00:06	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	08/30/19 16:08	09/04/19 00:06	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	08/30/19 16:08	09/04/19 00:06	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	08/30/19 16:08	09/04/19 00:06	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	08/30/19 16:08	09/04/19 00:06	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	08/30/19 11:45	08/30/19 15:34	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	ND	mg/L	0.10	0.050	1		09/06/19 18:42	16984-48-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622502

Sample: GWC-22		Lab ID: 2622502012		Collected: 08/27/19 14:30		Received: 08/28/19 13:45		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	0.00045J	mg/L	0.0030	0.00027	1	08/30/19 16:08	09/04/19 00:40	7440-36-0		
Arsenic	0.00044J	mg/L	0.0050	0.00035	1	08/30/19 16:08	09/04/19 00:40	7440-38-2		
Barium	0.097	mg/L	0.010	0.00049	1	08/30/19 16:08	09/04/19 00:40	7440-39-3		
Beryllium	0.000090J	mg/L	0.0030	0.000074	1	08/30/19 16:08	09/04/19 00:40	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00011	1	08/30/19 16:08	09/04/19 00:40	7440-43-9		
Chromium	0.00057J	mg/L	0.010	0.00039	1	08/30/19 16:08	09/04/19 00:40	7440-47-3		
Cobalt	0.00077J	mg/L	0.0050	0.00030	1	08/30/19 16:08	09/04/19 00:40	7440-48-4		
Lead	0.0030J	mg/L	0.0050	0.000046	1	08/30/19 16:08	09/04/19 00:40	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	08/30/19 16:08	09/04/19 00:40	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	08/30/19 16:08	09/04/19 00:40	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	08/30/19 16:08	09/04/19 00:40	7782-49-2		
Thallium	0.000086J	mg/L	0.0010	0.000052	1	08/30/19 16:08	09/04/19 00:40	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	08/30/19 11:45	08/30/19 15:42	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	0.10	mg/L	0.10	0.050	1		09/06/19 19:25	16984-48-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622502

Sample: EB-1-8-27-19		Lab ID: 2622502013		Collected: 08/27/19 15:30		Received: 08/28/19 13:45		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/30/19 16:08	09/04/19 00:46	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	08/30/19 16:08	09/04/19 00:46	7440-38-2		
Barium	ND	mg/L	0.010	0.00049	1	08/30/19 16:08	09/04/19 00:46	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	08/30/19 16:08	09/04/19 00:46	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00011	1	08/30/19 16:08	09/04/19 00:46	7440-43-9		
Chromium	ND	mg/L	0.010	0.00039	1	08/30/19 16:08	09/04/19 00:46	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	08/30/19 16:08	09/04/19 00:46	7440-48-4		
Lead	ND	mg/L	0.0050	0.000046	1	08/30/19 16:08	09/04/19 00:46	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	08/30/19 16:08	09/04/19 00:46	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	08/30/19 16:08	09/04/19 00:46	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	08/30/19 16:08	09/04/19 00:46	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	08/30/19 16:08	09/04/19 00:46	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	08/30/19 11:45	08/30/19 15:44	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	ND	mg/L	0.10	0.050	1		09/06/19 19:39	16984-48-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622502

Sample: GWC-1		Lab ID: 2622502014		Collected: 08/27/19 17:00		Received: 08/28/19 13:45		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/30/19 16:08	09/04/19 00:52	7440-36-0		
Arsenic	0.0022J	mg/L	0.0050	0.00035	1	08/30/19 16:08	09/04/19 00:52	7440-38-2		
Barium	0.054	mg/L	0.010	0.00049	1	08/30/19 16:08	09/04/19 00:52	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	08/30/19 16:08	09/04/19 00:52	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00011	1	08/30/19 16:08	09/04/19 00:52	7440-43-9		
Chromium	0.0062J	mg/L	0.010	0.00039	1	08/30/19 16:08	09/04/19 00:52	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	08/30/19 16:08	09/04/19 00:52	7440-48-4		
Lead	ND	mg/L	0.0050	0.000046	1	08/30/19 16:08	09/04/19 00:52	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	08/30/19 16:08	09/04/19 00:52	7439-93-2		
Molybdenum	0.060	mg/L	0.010	0.00095	1	08/30/19 16:08	09/04/19 00:52	7439-98-7		
Selenium	0.0016J	mg/L	0.010	0.0013	1	08/30/19 16:08	09/04/19 00:52	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	08/30/19 16:08	09/04/19 00:52	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	08/30/19 11:45	08/30/19 15:46	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	ND	mg/L	0.10	0.050	1		09/06/19 19:53	16984-48-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622502

Sample: Dup-1		Lab ID: 2622502015		Collected: 08/27/19 00:00		Received: 08/28/19 13:45		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/30/19 16:08	09/04/19 00:57	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	08/30/19 16:08	09/04/19 00:57	7440-38-2		
Barium	0.023	mg/L	0.010	0.00049	1	08/30/19 16:08	09/04/19 00:57	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	08/30/19 16:08	09/04/19 00:57	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00011	1	08/30/19 16:08	09/04/19 00:57	7440-43-9		
Chromium	ND	mg/L	0.010	0.00039	1	08/30/19 16:08	09/04/19 00:57	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	08/30/19 16:08	09/04/19 00:57	7440-48-4		
Lead	0.000091J	mg/L	0.0050	0.000046	1	08/30/19 16:08	09/04/19 00:57	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	08/30/19 16:08	09/04/19 00:57	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	08/30/19 16:08	09/04/19 00:57	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	08/30/19 16:08	09/04/19 00:57	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	08/30/19 16:08	09/04/19 00:57	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	08/30/19 11:45	08/30/19 15:49	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	ND	mg/L	0.10	0.050	1		09/06/19 20:07	16984-48-8		

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622502

QC Batch: 34545 Analysis Method: EPA 7470A
 QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
 Associated Lab Samples: 2622502001, 2622502002, 2622502003, 2622502004, 2622502005, 2622502006, 2622502007, 2622502008, 2622502009, 2622502010, 2622502011, 2622502012, 2622502013, 2622502014, 2622502015

METHOD BLANK: 155582 Matrix: Water
 Associated Lab Samples: 2622502001, 2622502002, 2622502003, 2622502004, 2622502005, 2622502006, 2622502007, 2622502008, 2622502009, 2622502010, 2622502011, 2622502012, 2622502013, 2622502014, 2622502015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.00014	08/30/19 14:47	

LABORATORY CONTROL SAMPLE: 155583

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 155584 155585

Parameter	Units	2622502001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0021	0.0021	84	85	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622502

QC Batch: 34528 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2622502001, 2622502002, 2622502003

METHOD BLANK: 155360 Matrix: Water
Associated Lab Samples: 2622502001, 2622502002, 2622502003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	09/03/19 20:11	
Arsenic	mg/L	ND	0.0050	0.00035	09/03/19 20:11	
Barium	mg/L	ND	0.010	0.00049	09/03/19 20:11	
Beryllium	mg/L	ND	0.0030	0.000074	09/03/19 20:11	
Cadmium	mg/L	ND	0.0025	0.00011	09/03/19 20:11	
Chromium	mg/L	ND	0.010	0.00039	09/03/19 20:11	
Cobalt	mg/L	ND	0.0050	0.00030	09/03/19 20:11	
Lead	mg/L	ND	0.0050	0.000046	09/03/19 20:11	
Lithium	mg/L	ND	0.030	0.00078	09/03/19 20:11	
Molybdenum	mg/L	ND	0.010	0.00095	09/03/19 20:11	
Selenium	mg/L	ND	0.010	0.0013	09/03/19 20:11	
Thallium	mg/L	ND	0.0010	0.000052	09/03/19 20:11	

LABORATORY CONTROL SAMPLE: 155361

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.12	118	80-120	
Arsenic	mg/L	0.1	0.10	105	80-120	
Barium	mg/L	0.1	0.11	105	80-120	
Beryllium	mg/L	0.1	0.11	109	80-120	
Cadmium	mg/L	0.1	0.11	108	80-120	
Chromium	mg/L	0.1	0.11	107	80-120	
Cobalt	mg/L	0.1	0.11	106	80-120	
Lead	mg/L	0.1	0.10	105	80-120	
Lithium	mg/L	0.1	0.11	107	80-120	
Molybdenum	mg/L	0.1	0.11	108	80-120	
Selenium	mg/L	0.1	0.11	107	80-120	
Thallium	mg/L	0.1	0.10	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 155362 155363

Parameter	Units	2622481002 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.11	0.12	114	117	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	100	103	75-125	3	20	
Barium	mg/L	0.027	0.1	0.1	0.13	0.13	101	107	75-125	4	20	
Beryllium	mg/L	ND	0.1	0.1	0.10	0.10	101	102	75-125	1	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.11	103	106	75-125	2	20	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622502

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 155362		155363		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2622481002 Result	MS Spike Conc.	MSD Spike Conc.									
Chromium	mg/L	0.0018J	0.1	0.1	0.11	0.11	104	107	75-125	3	20		
Cobalt	mg/L	ND	0.1	0.1	0.10	0.11	103	107	75-125	4	20		
Lead	mg/L	ND	0.1	0.1	0.10	0.10	101	104	75-125	3	20		
Lithium	mg/L	0.0014J	0.1	0.1	0.10	0.10	100	103	75-125	3	20		
Molybdenum	mg/L	ND	0.1	0.1	0.11	0.11	106	110	75-125	4	20		
Selenium	mg/L	ND	0.1	0.1	0.10	0.11	103	106	75-125	4	20		
Thallium	mg/L	ND	0.1	0.1	0.10	0.10	102	104	75-125	3	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622502

QC Batch: 34568 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2622502004, 2622502005, 2622502006, 2622502007, 2622502008, 2622502009, 2622502010, 2622502011, 2622502012, 2622502013, 2622502014, 2622502015

METHOD BLANK: 155672 Matrix: Water
Associated Lab Samples: 2622502004, 2622502005, 2622502006, 2622502007, 2622502008, 2622502009, 2622502010, 2622502011, 2622502012, 2622502013, 2622502014, 2622502015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	09/03/19 23:14	
Arsenic	mg/L	ND	0.0050	0.00035	09/03/19 23:14	
Barium	mg/L	ND	0.010	0.00049	09/03/19 23:14	
Beryllium	mg/L	ND	0.0030	0.000074	09/03/19 23:14	
Cadmium	mg/L	ND	0.0025	0.00011	09/03/19 23:14	
Chromium	mg/L	ND	0.010	0.00039	09/03/19 23:14	
Cobalt	mg/L	ND	0.0050	0.00030	09/03/19 23:14	
Lead	mg/L	ND	0.0050	0.000046	09/03/19 23:14	
Lithium	mg/L	ND	0.030	0.00078	09/03/19 23:14	
Molybdenum	mg/L	ND	0.010	0.00095	09/03/19 23:14	
Selenium	mg/L	ND	0.010	0.0013	09/03/19 23:14	
Thallium	mg/L	ND	0.0010	0.000052	09/03/19 23:14	

LABORATORY CONTROL SAMPLE: 155673

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	112	80-120	
Arsenic	mg/L	0.1	0.10	102	80-120	
Barium	mg/L	0.1	0.10	101	80-120	
Beryllium	mg/L	0.1	0.10	102	80-120	
Cadmium	mg/L	0.1	0.10	102	80-120	
Chromium	mg/L	0.1	0.10	103	80-120	
Cobalt	mg/L	0.1	0.10	103	80-120	
Lead	mg/L	0.1	0.10	100	80-120	
Lithium	mg/L	0.1	0.10	103	80-120	
Molybdenum	mg/L	0.1	0.10	104	80-120	
Selenium	mg/L	0.1	0.10	102	80-120	
Thallium	mg/L	0.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 155674 155675

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2622502011 Result	Spike Conc.	Spike Conc.	MS Result								
Antimony	mg/L	0.00033J	0.1	0.1	0.11	0.12	114	118	75-125	4	20		
Arsenic	mg/L	ND	0.1	0.1	0.10	0.11	102	106	75-125	4	20		
Barium	mg/L	0.12	0.1	0.1	0.22	0.22	100	107	75-125	3	20		
Beryllium	mg/L	ND	0.1	0.1	0.10	0.11	101	106	75-125	5	20		

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622502

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 155674		155675		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		2622502011 Result	MS Spike Conc.	MSD Spike Conc.									
Cadmium	mg/L	0.00044J	0.1	0.1	0.10	0.11	103	105	75-125	2	20		
Chromium	mg/L	0.00092J	0.1	0.1	0.10	0.10	102	104	75-125	2	20		
Cobalt	mg/L	ND	0.1	0.1	0.10	0.10	101	103	75-125	1	20		
Lead	mg/L	0.00021J	0.1	0.1	0.099	0.10	98	101	75-125	3	20		
Lithium	mg/L	ND	0.1	0.1	0.10	0.11	100	105	75-125	5	20		
Molybdenum	mg/L	ND	0.1	0.1	0.11	0.11	106	110	75-125	4	20		
Selenium	mg/L	ND	0.1	0.1	0.10	0.11	99	107	75-125	8	20		
Thallium	mg/L	ND	0.1	0.1	0.099	0.10	99	101	75-125	2	20		

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622502

QC Batch: 34680 Analysis Method: EPA 300.0
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
 Associated Lab Samples: 2622502001, 2622502002, 2622502003, 2622502004, 2622502005, 2622502006, 2622502007

METHOD BLANK: 156099 Matrix: Water
 Associated Lab Samples: 2622502001, 2622502002, 2622502003, 2622502004, 2622502005, 2622502006, 2622502007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.30	0.029	09/03/19 20:58	

LABORATORY CONTROL SAMPLE: 156100

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	10	9.4	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 156101 156102

Parameter	Units	2622398001		2622402001		2622502001		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					MS % Rec
Fluoride	mg/L	0.11J	0.11J	10	10	9.4	9.2	92	91	90-110	1	15

MATRIX SPIKE SAMPLE: 156103

Parameter	Units	2622402001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	ND	10	9.6	96	90-110	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622502

QC Batch: 496440 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2622502008, 2622502009, 2622502010, 2622502011, 2622502012, 2622502013, 2622502014, 2622502015

METHOD BLANK: 2673683 Matrix: Water
Associated Lab Samples: 2622502008, 2622502009, 2622502010, 2622502011, 2622502012, 2622502013, 2622502014, 2622502015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	09/06/19 13:48	

LABORATORY CONTROL SAMPLE: 2673684

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.4	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2673685 2673686

Parameter	Units	2622572001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	0.78	2.5	2.5	4.9	4.8	164	160	90-110	2	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2673687 2673688

Parameter	Units	2622502009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	ND	2.5	2.5	3.1	2.7	124	106	90-110	16	10	M1,R1

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QUALIFIERS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622502

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-A Pace Analytical Services - Asheville

PASI-GA Pace Analytical Services - Atlanta, GA

ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

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

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622502

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2622502001	GWA-7	EPA 3005A	34528	EPA 6020B	34560
2622502002	GWC-15	EPA 3005A	34528	EPA 6020B	34560
2622502003	GWC-14	EPA 3005A	34528	EPA 6020B	34560
2622502004	GWC-2	EPA 3005A	34568	EPA 6020B	34599
2622502005	GWC-13	EPA 3005A	34568	EPA 6020B	34599
2622502006	GWB-6R	EPA 3005A	34568	EPA 6020B	34599
2622502007	GWB-4R	EPA 3005A	34568	EPA 6020B	34599
2622502008	GWA-8	EPA 3005A	34568	EPA 6020B	34599
2622502009	FB-1-8-27-19	EPA 3005A	34568	EPA 6020B	34599
2622502010	GWC-12	EPA 3005A	34568	EPA 6020B	34599
2622502011	GWC-11	EPA 3005A	34568	EPA 6020B	34599
2622502012	GWC-22	EPA 3005A	34568	EPA 6020B	34599
2622502013	EB-1-8-27-19	EPA 3005A	34568	EPA 6020B	34599
2622502014	GWC-1	EPA 3005A	34568	EPA 6020B	34599
2622502015	Dup-1	EPA 3005A	34568	EPA 6020B	34599
2622502001	GWA-7	EPA 7470A	34545	EPA 7470A	34574
2622502002	GWC-15	EPA 7470A	34545	EPA 7470A	34574
2622502003	GWC-14	EPA 7470A	34545	EPA 7470A	34574
2622502004	GWC-2	EPA 7470A	34545	EPA 7470A	34574
2622502005	GWC-13	EPA 7470A	34545	EPA 7470A	34574
2622502006	GWB-6R	EPA 7470A	34545	EPA 7470A	34574
2622502007	GWB-4R	EPA 7470A	34545	EPA 7470A	34574
2622502008	GWA-8	EPA 7470A	34545	EPA 7470A	34574
2622502009	FB-1-8-27-19	EPA 7470A	34545	EPA 7470A	34574
2622502010	GWC-12	EPA 7470A	34545	EPA 7470A	34574
2622502011	GWC-11	EPA 7470A	34545	EPA 7470A	34574
2622502012	GWC-22	EPA 7470A	34545	EPA 7470A	34574
2622502013	EB-1-8-27-19	EPA 7470A	34545	EPA 7470A	34574
2622502014	GWC-1	EPA 7470A	34545	EPA 7470A	34574
2622502015	Dup-1	EPA 7470A	34545	EPA 7470A	34574
2622502001	GWA-7	EPA 300.0	34680		
2622502002	GWC-15	EPA 300.0	34680		
2622502003	GWC-14	EPA 300.0	34680		
2622502004	GWC-2	EPA 300.0	34680		
2622502005	GWC-13	EPA 300.0	34680		
2622502006	GWB-6R	EPA 300.0	34680		
2622502007	GWB-4R	EPA 300.0	34680		
2622502008	GWA-8	EPA 300.0 Rev 2.1 1993	496440		
2622502009	FB-1-8-27-19	EPA 300.0 Rev 2.1 1993	496440		
2622502010	GWC-12	EPA 300.0 Rev 2.1 1993	496440		
2622502011	GWC-11	EPA 300.0 Rev 2.1 1993	496440		
2622502012	GWC-22	EPA 300.0 Rev 2.1 1993	496440		
2622502013	EB-1-8-27-19	EPA 300.0 Rev 2.1 1993	496440		
2622502014	GWC-1	EPA 300.0 Rev 2.1 1993	496440		
2622502015	Dup-1	EPA 300.0 Rev 2.1 1993	496440		

REPORT OF LABORATORY ANALYSIS

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CHAIN OF CUSTODY RECORD

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

Form containing client information, project details, analysis requested, and a table of samples with collection dates, times, and identification numbers.

WO#: 2622502
Barcode with number 2622502



CHAIN OF CUSTODY RECORD

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308
REPORT TO: EPERRYE@TCLL.NET
PROJECT NAME/STATE: Plant Kraft Grumman Road
PROJECT #: 2019 AIV Scan Event

Table with columns: CONTAINER TYPE, ANALYSIS REQUESTED, CONTAINERS, MATRIX CODE, COLLECTION TIME, SAMPLE IDENTIFICATION, and REMARKS/ADDITIONAL INFORMATION.

CONTAINER TYPE: P - PLASTIC, A - AMBER GLASS, G - CLEAR GLASS, V - VOA VIAL, S - STERILE, O - OTHER
PRESERVATION: 1 - HCl, $\le 6^{\circ}\text{C}$, 2 - H_2SO_4, $\le 6^{\circ}\text{C}$, 3 - HNO_3, 4 - NaOH, $\le 6^{\circ}\text{C}$, 5 - NaOH/ZnAc, $\le 6^{\circ}\text{C}$, 6 - $\text{Na}_2\text{S}_2\text{O}_8$, $\le 6^{\circ}\text{C}$, 7 - $\le 6^{\circ}\text{C}$ not frozen
MATRIX CODES: DW - DRINKING WATER, WW - WASTEWATER, GW - GROUNDWATER, SW - SURFACE WATER, ST - STORM WATER, W - WATER, S - SOIL, SL - SLUDGE, SD - SOLID, A - AIR, L - LIQUID, P - PRODUCT

NO#: 2622502

PM: BM Due Date: 09/05/19
CLIENT: GAPower-CCR

SAMPLED BY AND TITLE: J. Bellisario (FG)
RECEIVED BY: Dawn Dicson
RECEIVED BY LAB: M. A. ...
DATE/TIME: 8-27-19 1700

Table with columns: RELINQUISHED BY, DATE/TIME, CLIENT, OTHER, FS

Copy of Plant Kraft - Grumman Rd COC - 2019 AIV SCAN EVENT .xlsx



Sample Condition Upon Receipt

Client Name: GIA Power Project # _____

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____
Tracking #: _____

WO#: **2622502**

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

PM: **BM** Due Date: **09/05/19**
CLIENT: **GAPower-CCR**

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used 83 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 4.0 Biological Tissue is Frozen: Yes No
Temp should be above freezing to 6°C

Date and Initials of person examining contents: 8/28/19 MK

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>Dup-1 was not listed on the COC.</u>
-Includes date/time/ID/Analysis Matrix:	<u>W</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):	_____	

Client Notification/ Resolution: _____ Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: Dup-1 was added to the report.

Project Manager Review: _____ Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

September 24, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Kraft - Grumman Road
Pace Project No.: 2622503

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on August 28, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622503

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

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SAMPLE SUMMARY

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622503

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2622503001	GWA-7	Water	08/26/19 16:15	08/28/19 13:45
2622503002	GWC-15	Water	08/27/19 09:25	08/28/19 13:45
2622503003	GWC-14	Water	08/27/19 10:20	08/28/19 13:45
2622503004	GWC-2	Water	08/27/19 11:15	08/28/19 13:45
2622503005	GWC-13	Water	08/27/19 12:30	08/28/19 13:45
2622503006	GWB-6R	Water	08/27/19 14:15	08/28/19 13:45
2622503007	GWB-4R	Water	08/27/19 17:15	08/28/19 13:45
2622503008	GWA-8	Water	08/26/19 15:40	08/28/19 13:45
2622503009	FB-1-8-27-19	Water	08/27/19 09:10	08/28/19 13:45
2622503010	GWC-12	Water	08/27/19 09:30	08/28/19 13:45
2622503011	GWC-11	Water	08/27/19 11:55	08/28/19 13:45
2622503012	GWC-22	Water	08/27/19 14:30	08/28/19 13:45
2622503013	EB-1-8-27-19	Water	08/27/19 15:30	08/28/19 13:45
2622503014	GWC-1	Water	08/27/19 17:00	08/28/19 13:45
2622503015	Dup-1	Water	08/27/19 00:00	08/28/19 13:45

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622503

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2622503001	GWA-7	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622503002	GWC-15	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622503003	GWC-14	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622503004	GWC-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622503005	GWC-13	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622503006	GWB-6R	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622503007	GWB-4R	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622503008	GWA-8	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622503009	FB-1-8-27-19	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622503010	GWC-12	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622503011	GWC-11	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622503012	GWC-22	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622503013	EB-1-8-27-19	EPA 9315	LAL	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622503

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2622503014	GWC-1	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
2622503015	Dup-1	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622503

Sample: GWA-7 **Lab ID: 2622503001** Collected: 08/26/19 16:15 Received: 08/28/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	4.24 ± 0.830 (0.236) C:61% T:NA	pCi/L	09/24/19 10:11	13982-63-3	
Radium-228	EPA 9320	1.79 ± 0.668 (1.03) C:75% T:81%	pCi/L	09/19/19 14:39	15262-20-1	
Total Radium	Total Radium Calculation	6.03 ± 1.50 (1.27)	pCi/L	09/24/19 12:59	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622503

Sample: GWC-15 **Lab ID: 2622503002** Collected: 08/27/19 09:25 Received: 08/28/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.923 ± 0.366 (0.334) C:95% T:NA	pCi/L	09/17/19 08:42	13982-63-3	
Radium-228	EPA 9320	0.825 ± 0.462 (0.843) C:78% T:85%	pCi/L	09/19/19 14:40	15262-20-1	
Total Radium	Total Radium Calculation	1.75 ± 0.828 (1.18)	pCi/L	09/24/19 12:59	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622503

Sample: GWC-14 **Lab ID: 2622503003** Collected: 08/27/19 10:20 Received: 08/28/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.852 ± 0.389 (0.491) C:86% T:NA	pCi/L	09/17/19 08:42	13982-63-3	
Radium-228	EPA 9320	0.467 ± 0.405 (0.814) C:75% T:81%	pCi/L	09/19/19 14:40	15262-20-1	
Total Radium	Total Radium Calculation	1.32 ± 0.794 (1.31)	pCi/L	09/24/19 12:59	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622503

Sample: GWC-2 **Lab ID: 2622503004** Collected: 08/27/19 11:15 Received: 08/28/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.640 ± 0.326 (0.397) C:92% T:NA	pCi/L	09/17/19 08:42	13982-63-3	
Radium-228	EPA 9320	0.147 ± 0.437 (0.980) C:79% T:75%	pCi/L	09/19/19 14:40	15262-20-1	
Total Radium	Total Radium Calculation	0.787 ± 0.763 (1.38)	pCi/L	09/24/19 12:59	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622503

Sample: GWC-13 **Lab ID: 2622503005** Collected: 08/27/19 12:30 Received: 08/28/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.499 ± 0.278 (0.319) C:91% T:NA	pCi/L	09/18/19 08:37	13982-63-3	
Radium-228	EPA 9320	0.773 ± 0.469 (0.878) C:72% T:75%	pCi/L	09/20/19 11:52	15262-20-1	
Total Radium	Total Radium Calculation	1.27 ± 0.747 (1.20)	pCi/L	09/23/19 12:55	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622503

Sample: GWB-6R **Lab ID: 2622503006** Collected: 08/27/19 14:15 Received: 08/28/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	4.08 ± 0.937 (0.439) C:89% T:NA	pCi/L	09/18/19 08:37	13982-63-3	
Radium-228	EPA 9320	0.554 ± 0.554 (1.15) C:71% T:68%	pCi/L	09/20/19 12:25	15262-20-1	
Total Radium	Total Radium Calculation	4.63 ± 1.49 (1.59)	pCi/L	09/23/19 12:55	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622503

Sample: GWB-4R **Lab ID: 2622503007** Collected: 08/27/19 17:15 Received: 08/28/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	2.03 ± 0.634 (0.469) C:75% T:NA	pCi/L	09/18/19 08:37	13982-63-3	
Radium-228	EPA 9320	0.941 ± 0.405 (0.634) C:75% T:80%	pCi/L	09/20/19 11:53	15262-20-1	
Total Radium	Total Radium Calculation	2.97 ± 1.04 (1.10)	pCi/L	09/23/19 12:55	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622503

Sample: GWA-8 **Lab ID: 2622503008** Collected: 08/26/19 15:40 Received: 08/28/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.69 ± 0.521 (0.310) C:91% T:NA	pCi/L	09/17/19 08:42	13982-63-3	
Radium-228	EPA 9320	1.34 ± 0.565 (0.928) C:76% T:86%	pCi/L	09/19/19 14:39	15262-20-1	
Total Radium	Total Radium Calculation	3.03 ± 1.09 (1.24)	pCi/L	09/24/19 12:59	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622503

Sample: FB-1-8-27-19 **Lab ID: 2622503009** Collected: 08/27/19 09:10 Received: 08/28/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.333 ± 0.258 (0.435) C:91% T:NA	pCi/L	09/17/19 08:42	13982-63-3	
Radium-228	EPA 9320	0.0955 ± 0.351 (0.797) C:79% T:80%	pCi/L	09/19/19 14:40	15262-20-1	
Total Radium	Total Radium Calculation	0.429 ± 0.609 (1.23)	pCi/L	09/24/19 12:59	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622503

Sample: GWC-12 **Lab ID: 2622503010** Collected: 08/27/19 09:30 Received: 08/28/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.34 ± 0.469 (0.402) C:88% T:NA	pCi/L	09/17/19 08:42	13982-63-3	
Radium-228	EPA 9320	0.746 ± 0.536 (1.05) C:76% T:80%	pCi/L	09/19/19 15:41	15262-20-1	
Total Radium	Total Radium Calculation	2.09 ± 1.01 (1.45)	pCi/L	09/24/19 12:59	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622503

Sample: GWC-11 **Lab ID: 2622503011** Collected: 08/27/19 11:55 Received: 08/28/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	2.75 ± 0.731 (0.557) C:95% T:NA	pCi/L	09/18/19 08:31	13982-63-3	
Radium-228	EPA 9320	2.34 ± 0.670 (0.810) C:77% T:85%	pCi/L	09/20/19 11:52	15262-20-1	
Total Radium	Total Radium Calculation	5.09 ± 1.40 (1.37)	pCi/L	09/23/19 12:55	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622503

Sample: GWC-22 **Lab ID: 2622503012** Collected: 08/27/19 14:30 Received: 08/28/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	3.75 ± 0.874 (0.401) C:92% T:NA	pCi/L	09/18/19 08:37	13982-63-3	
Radium-228	EPA 9320	3.29 ± 0.773 (0.565) C:77% T:87%	pCi/L	09/20/19 11:53	15262-20-1	
Total Radium	Total Radium Calculation	7.04 ± 1.65 (0.966)	pCi/L	09/23/19 12:55	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622503

Sample: EB-1-8-27-19 **Lab ID: 2622503013** Collected: 08/27/19 15:30 Received: 08/28/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.396 ± 0.277 (0.443) C:94% T:NA	pCi/L	09/18/19 08:37	13982-63-3	
Radium-228	EPA 9320	0.381 ± 0.316 (0.628) C:79% T:81%	pCi/L	09/20/19 11:53	15262-20-1	
Total Radium	Total Radium Calculation	0.777 ± 0.593 (1.07)	pCi/L	09/23/19 12:55	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622503

Sample: GWC-1 **Lab ID: 2622503014** Collected: 08/27/19 17:00 Received: 08/28/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.36 ± 0.472 (0.367) C:92% T:NA	pCi/L	09/18/19 08:37	13982-63-3	
Radium-228	EPA 9320	1.05 ± 0.420 (0.642) C:78% T:83%	pCi/L	09/20/19 11:53	15262-20-1	
Total Radium	Total Radium Calculation	2.41 ± 0.892 (1.01)	pCi/L	09/23/19 12:55	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622503

Sample: Dup-1 **Lab ID: 2622503015** Collected: 08/27/19 00:00 Received: 08/28/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.645 ± 0.319 (0.389) C:94% T:NA	pCi/L	09/17/19 08:42	13982-63-3	
Radium-228	EPA 9320	0.0669 ± 0.345 (0.788) C:78% T:85%	pCi/L	09/19/19 14:40	15262-20-1	
Total Radium	Total Radium Calculation	0.712 ± 0.664 (1.18)	pCi/L	09/24/19 12:59	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622503

QC Batch: 359960

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 2622503001, 2622503002, 2622503003, 2622503004, 2622503008, 2622503009, 2622503010, 2622503015

METHOD BLANK: 1747379

Matrix: Water

Associated Lab Samples: 2622503001, 2622503002, 2622503003, 2622503004, 2622503008, 2622503009, 2622503010, 2622503015

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.192 ± 0.159 (0.292) C:91% T:NA	pCi/L	09/16/19 20:09	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622503

QC Batch:	359964	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	2622503005, 2622503006, 2622503007, 2622503011, 2622503012, 2622503013, 2622503014		

METHOD BLANK:	1747386	Matrix:	Water
Associated Lab Samples:	2622503005, 2622503006, 2622503007, 2622503011, 2622503012, 2622503013, 2622503014		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.204 ± 0.233 (0.472) C:94% T:NA	pCi/L	09/18/19 08:31	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622503

QC Batch: 359966

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 2622503005, 2622503006, 2622503007, 2622503011, 2622503012, 2622503013, 2622503014

METHOD BLANK: 1747390

Matrix: Water

Associated Lab Samples: 2622503005, 2622503006, 2622503007, 2622503011, 2622503012, 2622503013, 2622503014

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.232 ± 0.311 (0.664) C:77% T:89%	pCi/L	09/20/19 11:52	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622503

QC Batch: 359961 Analysis Method: EPA 9320

QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228

Associated Lab Samples: 2622503001, 2622503002, 2622503003, 2622503004, 2622503008, 2622503009, 2622503010, 2622503015

METHOD BLANK: 1747380 Matrix: Water

Associated Lab Samples: 2622503001, 2622503002, 2622503003, 2622503004, 2622503008, 2622503009, 2622503010, 2622503015

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.232 ± 0.345 (0.742) C:77% T:84%	pCi/L	09/19/19 14:40	

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QUALIFIERS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622503

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622503

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2622503001	GWA-7	EPA 9315	359960		
2622503002	GWC-15	EPA 9315	359960		
2622503003	GWC-14	EPA 9315	359960		
2622503004	GWC-2	EPA 9315	359960		
2622503005	GWC-13	EPA 9315	359964		
2622503006	GWB-6R	EPA 9315	359964		
2622503007	GWB-4R	EPA 9315	359964		
2622503008	GWA-8	EPA 9315	359960		
2622503009	FB-1-8-27-19	EPA 9315	359960		
2622503010	GWC-12	EPA 9315	359960		
2622503011	GWC-11	EPA 9315	359964		
2622503012	GWC-22	EPA 9315	359964		
2622503013	EB-1-8-27-19	EPA 9315	359964		
2622503014	GWC-1	EPA 9315	359964		
2622503015	Dup-1	EPA 9315	359960		
2622503001	GWA-7	EPA 9320	359961		
2622503002	GWC-15	EPA 9320	359961		
2622503003	GWC-14	EPA 9320	359961		
2622503004	GWC-2	EPA 9320	359961		
2622503005	GWC-13	EPA 9320	359966		
2622503006	GWB-6R	EPA 9320	359966		
2622503007	GWB-4R	EPA 9320	359966		
2622503008	GWA-8	EPA 9320	359961		
2622503009	FB-1-8-27-19	EPA 9320	359961		
2622503010	GWC-12	EPA 9320	359961		
2622503011	GWC-11	EPA 9320	359966		
2622503012	GWC-22	EPA 9320	359966		
2622503013	EB-1-8-27-19	EPA 9320	359966		
2622503014	GWC-1	EPA 9320	359966		
2622503015	Dup-1	EPA 9320	359961		
2622503001	GWA-7	Total Radium Calculation	362865		
2622503002	GWC-15	Total Radium Calculation	362865		
2622503003	GWC-14	Total Radium Calculation	362865		
2622503004	GWC-2	Total Radium Calculation	362865		
2622503005	GWC-13	Total Radium Calculation	362632		
2622503006	GWB-6R	Total Radium Calculation	362632		
2622503007	GWB-4R	Total Radium Calculation	362632		
2622503008	GWA-8	Total Radium Calculation	362865		
2622503009	FB-1-8-27-19	Total Radium Calculation	362865		
2622503010	GWC-12	Total Radium Calculation	362865		
2622503011	GWC-11	Total Radium Calculation	362632		
2622503012	GWC-22	Total Radium Calculation	362632		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622503

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2622503013	EB-1-8-27-19	Total Radium Calculation	362632		
2622503014	GWC-1	Total Radium Calculation	362632		
2622503015	Dup-1	Total Radium Calculation	362865		

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CHAIN OF CUSTODY RECORD

PAGE: 1 OF 2

CLIENT NAME: Georgia Power CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30306 404-506-7239 REPORT TO: <u>EXPEDIENT LLC</u> REQUESTED COMPLETION DATE: _____ PROJECT NAME/STATE: Plant Kraft Grumman Road PROJECT #: 2019 AIV Scan Event		ANALYSIS REQUESTED CONTAINER TYPE: P 3 PRESERVATION: # of CONTAINERS →		CONTAINER TYPE P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER PRESERVATION 1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O ₃ , ≤6°C 7 - ≤6°C not frozen MATRIX CODES: DW - DRINKING WATER S - SOIL WW - WASTEWATER SL - SLUDGE GW - GROUNDWATER SD - SOLID SW - SURFACE WATER A - AIR ST - STORM WATER L - LIQUID W - WATER P - PRODUCT REMARKS/ADDITIONAL INFORMATION App IV only					
Collection DATE 8-25-19 8-27-19 8-27-19 8-27-19 8-27-19 8-27-19 8-27-19	Collection TIME 1015 1115 1020 1115 1230 1415 1715	MATRIX CODE* GW GW GW GW GW GW GW	SAMPLE IDENTIFICATION GWA-7 GWC-15 GWC-14 GWC-Z GWC-13 GWB-6R GWB-4R	GRA B X X X X X X X	CONTAINER TYPE P P P P P P P	PRESERVATION 3 # of CONTAINERS →	ANALYSIS REQUESTED Metals App. IV (EPA 6020/470) Flouride Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER WO#: 2622503 	CONTAINER TYPE PRESERVATION MATRIX CODES REMARKS/ADDITIONAL INFORMATION
Collection DATE 8-27-19	Collection TIME 	MATRIX CODE* GW	SAMPLE IDENTIFICATION DUP-1	GRA B X	CONTAINER TYPE P	PRESERVATION 3	ANALYSIS REQUESTED 	LAB ID NUMBER WO#: 2622503 	CONTAINER TYPE PRESERVATION MATRIX CODES REMARKS/ADDITIONAL INFORMATION
SAMPLED BY AND TITLE: O. FOUQUA (GTE) DATE/TIME: 8-27-19 1715 RECEIVED BY: <u>W. Williams</u> DATE/TIME: 8-28-19 0830 RECEIVED BY LAB: <u>Grumman</u> DATE/TIME: 8-28-19 1545 Temperature: _____ Mfr: 4.0 Max: _____ Log #: _____ NA #: _____ NA #: _____				RELINQUISHED BY: _____ DATE/TIME: 8-28-19 0330 RELINQUISHED BY: _____ DATE/TIME: _____		SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER OTHER FS Crashy Seal: Intact Broken Not Present Client: _____ Cooler ID: _____		LAB #: _____ Entered Into LIMS: _____ Tracking #: _____	



Sample Condition Upon Receipt

Client Name: GIA Power

Project # _____

Courier: Fed Ex UPS USPS Client Commercial Pace Other

WO#: **2622503**

Tracking #: _____

PM: BM

Due Date: 09/26/19

Custody Seal on Cooler/Box Present: yes no Seals intact: yes

CLIENT: GAPower-CCR

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used 23

Type of Ice: Wet Blue None

Samples on ice, cooling process has begun

Cooler Temperature 4'0

Biological Tissue Is Frozen: Yes No

Date and Initials of person examining contents: 8/28/19 ml

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>W</u>	<u>Dup-1 was not listed on the COC.</u>
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required?

Y / N

Person Contacted: _____

Date/Time: _____

Comments/ Resolution: Dup-1 was added to the report.

Project Manager Review: _____

Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

December 11, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Kraft - Grumman Road
Pace Project No.: 2622578

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on August 29, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Kevin Herring for
Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Betsy McDaniel, Atlantic Coast Consulting
Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622578

Pace Analytical Services Atlanta

110 Technology Parkway Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622578

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2622578001	GWB-5R	Water	08/28/19 15:50	08/29/19 11:52

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622578

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2622578001	GWB-5R	EPA 6020B	CSW	10

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622578

Sample: GWB-5R		Lab ID: 2622578001		Collected: 08/28/19 15:50		Received: 08/29/19 11:52		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony, Dissolved	ND	mg/L	0.0030	0.00027	1	09/03/19 13:22	09/04/19 11:50	7440-36-0		
Arsenic, Dissolved	0.0022J	mg/L	0.0050	0.00035	1	09/03/19 13:22	09/04/19 11:50	7440-38-2		
Barium, Dissolved	0.098	mg/L	0.010	0.00049	1	09/03/19 13:22	09/04/19 11:50	7440-39-3		
Boron, Dissolved	5.6	mg/L	0.040	0.0049	1	09/03/19 13:22	09/04/19 11:50	7440-42-8	M1	
Calcium, Dissolved	26.0	mg/L	5.0	0.55	50	09/03/19 13:22	09/04/19 11:56	7440-70-2	M6	
Chromium, Dissolved	0.0062J	mg/L	0.010	0.00039	1	09/03/19 13:22	09/04/19 11:50	7440-47-3		
Lead, Dissolved	0.00014J	mg/L	0.0050	0.000046	1	09/03/19 13:22	09/04/19 11:50	7439-92-1		
Selenium, Dissolved	0.0018J	mg/L	0.010	0.0013	1	09/03/19 13:22	09/04/19 11:50	7782-49-2		
Vanadium, Dissolved	0.028	mg/L	0.010	0.00071	1	09/03/19 13:22	09/04/19 11:50	7440-62-2		
Zinc, Dissolved	0.0019J	mg/L	0.010	0.0015	1	09/03/19 13:22	09/04/19 11:50	7440-66-6		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622578

QC Batch: 34656 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET Dissolved
Associated Lab Samples: 2622578001

METHOD BLANK: 156009 Matrix: Water
Associated Lab Samples: 2622578001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	mg/L	ND	0.0030	0.00027	09/04/19 11:39	
Arsenic, Dissolved	mg/L	ND	0.0050	0.00035	09/04/19 11:39	
Barium, Dissolved	mg/L	ND	0.010	0.00049	09/04/19 11:39	
Boron, Dissolved	mg/L	ND	0.040	0.0049	09/04/19 11:39	
Calcium, Dissolved	mg/L	ND	0.10	0.011	09/04/19 11:39	
Chromium, Dissolved	mg/L	ND	0.010	0.00039	09/04/19 11:39	
Lead, Dissolved	mg/L	ND	0.0050	0.000046	09/04/19 11:39	
Selenium, Dissolved	mg/L	ND	0.010	0.0013	09/04/19 11:39	
Vanadium, Dissolved	mg/L	ND	0.010	0.00071	09/04/19 11:39	
Zinc, Dissolved	mg/L	ND	0.010	0.0015	09/04/19 11:39	

LABORATORY CONTROL SAMPLE: 156010

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	mg/L	0.1	0.12	118	80-120	
Arsenic, Dissolved	mg/L	0.1	0.10	103	80-120	
Barium, Dissolved	mg/L	0.1	0.11	105	80-120	
Boron, Dissolved	mg/L	1	1.1	105	80-120	
Calcium, Dissolved	mg/L	1	1.1	106	80-120	
Chromium, Dissolved	mg/L	0.1	0.11	105	80-120	
Lead, Dissolved	mg/L	0.1	0.10	102	80-120	
Selenium, Dissolved	mg/L	0.1	0.10	105	80-120	
Vanadium, Dissolved	mg/L	0.1	0.10	104	80-120	
Zinc, Dissolved	mg/L	0.1	0.11	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 156011 156012

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2622578001 Result	Spike Conc.	Spike Conc.	MS Result								
Antimony, Dissolved	mg/L	ND	0.1	0.1	0.12	0.12	116	115	75-125	0	20		
Arsenic, Dissolved	mg/L	0.0022J	0.1	0.1	0.10	0.11	102	105	75-125	2	20		
Barium, Dissolved	mg/L	0.098	0.1	0.1	0.20	0.20	103	103	75-125	0	20		
Boron, Dissolved	mg/L	5.6	1	1	6.7	6.9	107	129	75-125	3	20	M1	
Calcium, Dissolved	mg/L	26.0	1	1	26.0	27.6	6	158	75-125	6	20	M6	
Chromium, Dissolved	mg/L	0.0062J	0.1	0.1	0.11	0.11	103	105	75-125	1	20		
Lead, Dissolved	mg/L	0.00014J	0.1	0.1	0.098	0.097	98	97	75-125	1	20		
Selenium, Dissolved	mg/L	0.0018J	0.1	0.1	0.10	0.11	102	106	75-125	4	20		
Vanadium, Dissolved	mg/L	0.028	0.1	0.1	0.14	0.14	107	108	75-125	0	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622578

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 156011												156012	
Parameter	Units	2622578001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
Zinc, Dissolved	mg/L	0.0019J	0.1	0.1	0.10	0.10	100	102	75-125	2	20		

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622578

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622578

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2622578001	GWB-5R	EPA 3005A	34656	EPA 6020B	34674

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
 (770) 734-4200 : FAX (770) 734-4201

PAGE: 1 OF 7

CHAIN OF CUSTODY RECORD

CLIENT NAME: Georgia Power CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-506-7239 REPORT TO:		ANALYSIS REQUESTED P P P P P P P 3 3 3 3 3 3 3 7 Metals App. III (EPA 6020/7470) Boron, Calcium #Field Filtered State Metals (see below) Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C)		CONTAINER TYPE P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER		PRESERVATION 1 - HCl, 56°C 2 - H ₂ SO ₄ , 56°C 3 - HNO ₃ 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - Na ₂ S ₂ O ₃ , 56°C 7 - 56°C not frozen	
REQUESTED COMPLETION DATE: PO #:		PROJECT NAME/STATE: Plant Kraft Grumman Road		CONTAINER TYPE DW - DRINKING WATER S - SOIL WW - WASTEWATER SL - SLUDGE GW - GROUNDWATER SD - SOLID SW - SURFACE WATER A - AIR ST - STORM WATER L - LIQUID W - WATER P - PRODUCT		REMARKS/ADDITIONAL INFORMATION APP III plus State Metals	
PROJECT #:		PROJECT #:		MATRIX CODES:		WO#: 2622578 	
Collection DATE 8-28-19		Collection TIME 1550		MATRIX CODE* GW		SAMPLE IDENTIFICATION X GWB-5R	
RECEIVED BY: [Signature]		DATE/TIME: 8-28-19 1550		RELINQUISHED BY: [Signature]		DATE/TIME: 8/29/19 1152	
RECEIVED BY LAB: [Signature]		DATE/TIME: 8/29/19 1152		USPS		CLIENT	
Temperature: Min: Max:		USPS		USPS		OTHER FS	
Intact		Broken		Net Press		Cooler ID:	

Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
 Plant Kraft -Grumman Rd COC Phase 2 CCR State (002)



Sample Condition Upon Receipt

Client Name: GAPower Project # _____

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

WO#: **2622578**

Tracking #: _____

PM: **BM** Due Date: **09/06/19**

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

CLIENT: **GAPower-CCR**

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used 83

Type of Ice: Wet Blue None

Samples on ice, cooling process has begun

Cooler Temperature 0.4

Biological Tissue is Frozen: Yes No

Date and initials of person examining contents: 8/29/19 MK

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>W</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: _____ Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

December 11, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Kraft - Grumman Road
Pace Project No.: 2622579

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on August 29, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

This revised report replaces the report issued on 9/10/2019. The report has been revised to correct the project-required RLs per consultant request. No other changes have been made to this report.

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

Sincerely,



Kevin Herring for
Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Betsy McDaniel, Atlantic Coast Consulting
Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622579

Pace Analytical Services Atlanta

110 Technology Parkway Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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SAMPLE SUMMARY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622579

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2622579001	Dup-2	Water	08/28/19 00:00	08/29/19 11:52
2622579002	GWC-16	Water	08/28/19 09:39	08/29/19 11:52
2622579003	GWC-21	Water	08/28/19 11:00	08/29/19 11:52
2622579004	GWC-20	Water	08/28/19 12:10	08/29/19 11:52
2622579005	FB-2-8-28-19	Water	08/28/19 10:00	08/29/19 11:52
2622579006	GWC-17	Water	08/28/19 12:00	08/29/19 11:52
2622579007	EB-2-8-28-19	Water	08/28/19 12:40	08/29/19 11:52
2622579008	GWC-9	Water	08/28/19 12:50	08/29/19 11:52
2622579009	GWB-5R	Water	08/28/19 15:50	08/29/19 11:52

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622579

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2622579001	Dup-2	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	1	PASI-A
2622579002	GWC-16	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	1	PASI-A
2622579003	GWC-21	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	1	PASI-A
2622579004	GWC-20	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	1	PASI-A
2622579005	FB-2-8-28-19	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	1	PASI-A
2622579006	GWC-17	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	1	PASI-A
2622579007	EB-2-8-28-19	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	1	PASI-A
2622579008	GWC-9	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	1	PASI-A
2622579009	GWB-5R	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	1	PASI-A

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622579

Sample: Dup-2		Lab ID: 2622579001		Collected: 08/28/19 00:00		Received: 08/29/19 11:52		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/30/19 16:08	09/04/19 23:26	7440-36-0		
Arsenic	0.089	mg/L	0.0050	0.00035	1	08/30/19 16:08	09/04/19 23:26	7440-38-2		
Barium	0.087	mg/L	0.010	0.00049	1	08/30/19 16:08	09/04/19 23:26	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	08/30/19 16:08	09/04/19 23:26	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00011	1	08/30/19 16:08	09/04/19 23:26	7440-43-9		
Chromium	0.0045J	mg/L	0.010	0.00039	1	08/30/19 16:08	09/04/19 23:26	7440-47-3	B	
Cobalt	ND	mg/L	0.0050	0.00030	1	08/30/19 16:08	09/04/19 23:26	7440-48-4		
Lead	0.00010J	mg/L	0.0050	0.000046	1	08/30/19 16:08	09/04/19 23:26	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	08/30/19 16:08	09/04/19 23:26	7439-93-2		
Molybdenum	0.21	mg/L	0.010	0.00095	1	08/30/19 16:08	09/04/19 23:26	7439-98-7		
Selenium	0.0032J	mg/L	0.010	0.0013	1	08/30/19 16:08	09/04/19 23:26	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	08/30/19 16:08	09/04/19 23:26	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	09/04/19 09:14	09/04/19 13:37	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	ND	mg/L	0.10	0.050	1		09/08/19 01:45	16984-48-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622579

Sample: GWC-16		Lab ID: 2622579002		Collected: 08/28/19 09:39		Received: 08/29/19 11:52		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/30/19 16:08	09/04/19 23:43	7440-36-0		
Arsenic	0.091	mg/L	0.0050	0.00035	1	08/30/19 16:08	09/04/19 23:43	7440-38-2		
Barium	0.090	mg/L	0.010	0.00049	1	08/30/19 16:08	09/04/19 23:43	7440-39-3		
Beryllium	0.000080J	mg/L	0.0030	0.000074	1	08/30/19 16:08	09/04/19 23:43	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00011	1	08/30/19 16:08	09/04/19 23:43	7440-43-9		
Chromium	0.0011J	mg/L	0.010	0.00039	1	08/30/19 16:08	09/04/19 23:43	7440-47-3	B	
Cobalt	ND	mg/L	0.0050	0.00030	1	08/30/19 16:08	09/04/19 23:43	7440-48-4		
Lead	0.00010J	mg/L	0.0050	0.000046	1	08/30/19 16:08	09/04/19 23:43	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	08/30/19 16:08	09/04/19 23:43	7439-93-2		
Molybdenum	0.22	mg/L	0.010	0.00095	1	08/30/19 16:08	09/04/19 23:43	7439-98-7		
Selenium	0.0040J	mg/L	0.010	0.0013	1	08/30/19 16:08	09/04/19 23:43	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	08/30/19 16:08	09/04/19 23:43	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	09/04/19 09:14	09/04/19 13:44	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	ND	mg/L	0.10	0.050	1		09/08/19 02:32	16984-48-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622579

Sample: GWC-21		Lab ID: 2622579003		Collected: 08/28/19 11:00		Received: 08/29/19 11:52		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/30/19 16:08	09/04/19 23:49	7440-36-0		
Arsenic	0.0020J	mg/L	0.0050	0.00035	1	08/30/19 16:08	09/04/19 23:49	7440-38-2		
Barium	0.063	mg/L	0.010	0.00049	1	08/30/19 16:08	09/04/19 23:49	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	08/30/19 16:08	09/04/19 23:49	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00011	1	08/30/19 16:08	09/04/19 23:49	7440-43-9		
Chromium	0.00087J	mg/L	0.010	0.00039	1	08/30/19 16:08	09/04/19 23:49	7440-47-3	B	
Cobalt	ND	mg/L	0.0050	0.00030	1	08/30/19 16:08	09/04/19 23:49	7440-48-4		
Lead	0.00018J	mg/L	0.0050	0.000046	1	08/30/19 16:08	09/04/19 23:49	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	08/30/19 16:08	09/04/19 23:49	7439-93-2		
Molybdenum	0.070	mg/L	0.010	0.00095	1	08/30/19 16:08	09/04/19 23:49	7439-98-7		
Selenium	0.019	mg/L	0.010	0.0013	1	08/30/19 16:08	09/04/19 23:49	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	08/30/19 16:08	09/04/19 23:49	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	09/04/19 09:14	09/04/19 13:46	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	ND	mg/L	0.10	0.050	1		09/08/19 02:47	16984-48-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622579

Sample: GWC-20		Lab ID: 2622579004		Collected: 08/28/19 12:10		Received: 08/29/19 11:52		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/30/19 16:08	09/04/19 23:55	7440-36-0		
Arsenic	0.43	mg/L	0.0050	0.00035	1	08/30/19 16:08	09/04/19 23:55	7440-38-2		
Barium	0.078	mg/L	0.010	0.00049	1	08/30/19 16:08	09/04/19 23:55	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	08/30/19 16:08	09/04/19 23:55	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00011	1	08/30/19 16:08	09/04/19 23:55	7440-43-9		
Chromium	0.00089J	mg/L	0.010	0.00039	1	08/30/19 16:08	09/04/19 23:55	7440-47-3	B	
Cobalt	ND	mg/L	0.0050	0.00030	1	08/30/19 16:08	09/04/19 23:55	7440-48-4		
Lead	0.00065J	mg/L	0.0050	0.000046	1	08/30/19 16:08	09/04/19 23:55	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	08/30/19 16:08	09/04/19 23:55	7439-93-2		
Molybdenum	0.11	mg/L	0.010	0.00095	1	08/30/19 16:08	09/04/19 23:55	7439-98-7		
Selenium	0.0014J	mg/L	0.010	0.0013	1	08/30/19 16:08	09/04/19 23:55	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	08/30/19 16:08	09/04/19 23:55	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	09/04/19 09:14	09/04/19 13:48	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	ND	mg/L	0.10	0.050	1		09/08/19 03:03	16984-48-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622579

Sample: FB-2-8-28-19		Lab ID: 2622579005		Collected: 08/28/19 10:00		Received: 08/29/19 11:52		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00027	1	08/30/19 16:08	09/05/19 00:00	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	08/30/19 16:08	09/05/19 00:00	7440-38-2	
Barium	ND	mg/L	0.010	0.00049	1	08/30/19 16:08	09/05/19 00:00	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	08/30/19 16:08	09/05/19 00:00	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	08/30/19 16:08	09/05/19 00:00	7440-43-9	
Chromium	0.00041J	mg/L	0.010	0.00039	1	08/30/19 16:08	09/05/19 00:00	7440-47-3	B
Cobalt	ND	mg/L	0.0050	0.00030	1	08/30/19 16:08	09/05/19 00:00	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	08/30/19 16:08	09/05/19 00:00	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	08/30/19 16:08	09/05/19 00:00	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	08/30/19 16:08	09/05/19 00:00	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	08/30/19 16:08	09/05/19 00:00	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	08/30/19 16:08	09/05/19 00:00	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.00014	1	09/04/19 09:14	09/04/19 13:51	7439-97-6	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993							
Fluoride	ND	mg/L	0.10	0.050	1		09/08/19 03:18	16984-48-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622579

Sample: GWC-17		Lab ID: 2622579006		Collected: 08/28/19 12:00		Received: 08/29/19 11:52		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/30/19 16:08	09/05/19 00:06	7440-36-0		
Arsenic	0.0011J	mg/L	0.0050	0.00035	1	08/30/19 16:08	09/05/19 00:06	7440-38-2		
Barium	0.026	mg/L	0.010	0.00049	1	08/30/19 16:08	09/05/19 00:06	7440-39-3		
Beryllium	0.0017J	mg/L	0.0030	0.000074	1	08/30/19 16:08	09/05/19 00:06	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00011	1	08/30/19 16:08	09/05/19 00:06	7440-43-9		
Chromium	0.0013J	mg/L	0.010	0.00039	1	08/30/19 16:08	09/05/19 00:06	7440-47-3	B	
Cobalt	0.0023J	mg/L	0.0050	0.00030	1	08/30/19 16:08	09/05/19 00:06	7440-48-4		
Lead	ND	mg/L	0.0050	0.000046	1	08/30/19 16:08	09/05/19 00:06	7439-92-1		
Lithium	0.0041J	mg/L	0.030	0.00078	1	08/30/19 16:08	09/05/19 00:06	7439-93-2		
Molybdenum	0.0040J	mg/L	0.010	0.00095	1	08/30/19 16:08	09/05/19 00:06	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	08/30/19 16:08	09/05/19 00:06	7782-49-2		
Thallium	0.000066J	mg/L	0.0010	0.000052	1	08/30/19 16:08	09/05/19 00:06	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	09/04/19 09:14	09/04/19 13:53	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	0.61	mg/L	0.10	0.050	1		09/08/19 03:34	16984-48-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622579

Sample: EB-2-8-28-19		Lab ID: 2622579007		Collected: 08/28/19 12:40		Received: 08/29/19 11:52		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/30/19 16:08	09/05/19 17:47	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	08/30/19 16:08	09/05/19 17:47	7440-38-2		
Barium	ND	mg/L	0.010	0.00049	1	08/30/19 16:08	09/05/19 17:47	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	08/30/19 16:08	09/05/19 17:47	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00011	1	08/30/19 16:08	09/05/19 17:47	7440-43-9		
Chromium	ND	mg/L	0.010	0.00039	1	08/30/19 16:08	09/05/19 17:47	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	08/30/19 16:08	09/05/19 17:47	7440-48-4		
Lead	ND	mg/L	0.0050	0.000046	1	08/30/19 16:08	09/05/19 17:47	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	08/30/19 16:08	09/05/19 17:47	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	08/30/19 16:08	09/05/19 17:47	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	08/30/19 16:08	09/05/19 17:47	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	08/30/19 16:08	09/05/19 17:47	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	09/04/19 09:14	09/04/19 13:56	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	ND	mg/L	0.10	0.050	1		09/08/19 03:49	16984-48-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622579

Sample: GWC-9		Lab ID: 2622579008		Collected: 08/28/19 12:50		Received: 08/29/19 11:52		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/30/19 16:08	09/05/19 17:53	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	08/30/19 16:08	09/05/19 17:53	7440-38-2		
Barium	0.17	mg/L	0.010	0.00049	1	08/30/19 16:08	09/05/19 17:53	7440-39-3		
Beryllium	0.00022J	mg/L	0.0030	0.000074	1	08/30/19 16:08	09/05/19 17:53	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00011	1	08/30/19 16:08	09/05/19 17:53	7440-43-9		
Chromium	0.00089J	mg/L	0.010	0.00039	1	08/30/19 16:08	09/05/19 17:53	7440-47-3		
Cobalt	0.00099J	mg/L	0.0050	0.00030	1	08/30/19 16:08	09/05/19 17:53	7440-48-4		
Lead	0.000061J	mg/L	0.0050	0.000046	1	08/30/19 16:08	09/05/19 17:53	7439-92-1		
Lithium	0.0018J	mg/L	0.030	0.00078	1	08/30/19 16:08	09/05/19 17:53	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	08/30/19 16:08	09/05/19 17:53	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	08/30/19 16:08	09/05/19 17:53	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	08/30/19 16:08	09/05/19 17:53	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	09/04/19 09:14	09/04/19 13:58	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	0.088J	mg/L	0.10	0.050	1		09/08/19 04:51	16984-48-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622579

Sample: GWB-5R		Lab ID: 2622579009		Collected: 08/28/19 15:50		Received: 08/29/19 11:52		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	0.00054J	mg/L	0.0030	0.00027	1	08/30/19 16:08	09/05/19 18:45	7440-36-0		
Arsenic	0.0023J	mg/L	0.0050	0.00035	1	08/30/19 16:08	09/05/19 18:45	7440-38-2		
Barium	0.10	mg/L	0.010	0.00049	1	08/30/19 16:08	09/05/19 18:45	7440-39-3		
Beryllium	0.000076J	mg/L	0.0030	0.000074	1	08/30/19 16:08	09/05/19 18:45	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00011	1	08/30/19 16:08	09/05/19 18:45	7440-43-9		
Chromium	0.0071J	mg/L	0.010	0.00039	1	08/30/19 16:08	09/05/19 18:45	7440-47-3		
Cobalt	0.0024J	mg/L	0.0050	0.00030	1	08/30/19 16:08	09/05/19 18:45	7440-48-4		
Lead	0.0011J	mg/L	0.0050	0.000046	1	08/30/19 16:08	09/05/19 18:45	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	08/30/19 16:08	09/05/19 18:45	7439-93-2		
Molybdenum	0.0012J	mg/L	0.010	0.00095	1	08/30/19 16:08	09/05/19 18:45	7439-98-7		
Selenium	0.0033J	mg/L	0.010	0.0013	1	08/30/19 16:08	09/05/19 18:45	7782-49-2		
Thallium	0.000057J	mg/L	0.0010	0.000052	1	08/30/19 16:08	09/05/19 18:45	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	09/04/19 09:14	09/04/19 14:00	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	0.097J	mg/L	0.10	0.050	1		09/08/19 05:07	16984-48-8		

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622579

QC Batch: 34690 Analysis Method: EPA 7470A
 QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
 Associated Lab Samples: 2622579001, 2622579002, 2622579003, 2622579004, 2622579005, 2622579006, 2622579007, 2622579008, 2622579009

METHOD BLANK: 156136 Matrix: Water
 Associated Lab Samples: 2622579001, 2622579002, 2622579003, 2622579004, 2622579005, 2622579006, 2622579007, 2622579008, 2622579009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.00014	09/04/19 13:04	

LABORATORY CONTROL SAMPLE: 156137

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0026	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 156138 156139

Parameter	Units	2622572006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0024	0.0025	96	99	75-125	3	20	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622579

QC Batch: 34570 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2622579001, 2622579002, 2622579003, 2622579004, 2622579005, 2622579006

METHOD BLANK: 155680 Matrix: Water
Associated Lab Samples: 2622579001, 2622579002, 2622579003, 2622579004, 2622579005, 2622579006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	09/04/19 21:26	
Arsenic	mg/L	ND	0.0050	0.00035	09/04/19 21:26	
Barium	mg/L	ND	0.010	0.00049	09/04/19 21:26	
Beryllium	mg/L	ND	0.0030	0.000074	09/04/19 21:26	
Cadmium	mg/L	ND	0.0025	0.00011	09/04/19 21:26	
Chromium	mg/L	0.00055J	0.010	0.00039	09/04/19 21:26	
Cobalt	mg/L	ND	0.0050	0.00030	09/04/19 21:26	
Lead	mg/L	ND	0.0050	0.000046	09/04/19 21:26	
Lithium	mg/L	ND	0.030	0.00078	09/04/19 21:26	
Molybdenum	mg/L	ND	0.010	0.00095	09/04/19 21:26	
Selenium	mg/L	ND	0.010	0.0013	09/04/19 21:26	
Thallium	mg/L	ND	0.0010	0.000052	09/04/19 21:26	

LABORATORY CONTROL SAMPLE: 155681

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	113	80-120	
Arsenic	mg/L	0.1	0.10	100	80-120	
Barium	mg/L	0.1	0.10	103	80-120	
Beryllium	mg/L	0.1	0.10	103	80-120	
Cadmium	mg/L	0.1	0.10	103	80-120	
Chromium	mg/L	0.1	0.10	104	80-120	
Cobalt	mg/L	0.1	0.10	103	80-120	
Lead	mg/L	0.1	0.099	99	80-120	
Lithium	mg/L	0.1	0.11	105	80-120	
Molybdenum	mg/L	0.1	0.11	106	80-120	
Selenium	mg/L	0.1	0.10	102	80-120	
Thallium	mg/L	0.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 155682 155683

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2622563003	Spike Conc.	Spike Conc.	MS Result								
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	114	114	75-125	0	20		
Arsenic	mg/L	0.00044J	0.1	0.1	0.10	0.10	101	101	75-125	0	20		
Barium	mg/L	0.039	0.1	0.1	0.14	0.14	103	104	75-125	0	20		
Beryllium	mg/L	0.00016J	0.1	0.1	0.10	0.099	101	99	75-125	2	20		
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	104	102	75-125	2	20		

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622579

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 155682		155683		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		2622563003 Result	MS Spike Conc.	MSD Spike Conc.								
Chromium	mg/L	0.0071J	0.1	0.1	0.11	0.11	105	106	75-125	1	20	
Cobalt	mg/L	ND	0.1	0.1	0.11	0.10	106	104	75-125	2	20	
Lead	mg/L	ND	0.1	0.1	0.098	0.098	98	98	75-125	1	20	
Lithium	mg/L	0.0021J	0.1	0.1	0.10	0.098	98	96	75-125	2	20	
Molybdenum	mg/L	ND	0.1	0.1	0.11	0.11	108	107	75-125	1	20	
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	102	102	75-125	0	20	
Thallium	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125	0	20	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622579

QC Batch: 34572 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2622579007, 2622579008, 2622579009

METHOD BLANK: 155685 Matrix: Water
Associated Lab Samples: 2622579007, 2622579008, 2622579009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	09/05/19 17:36	
Arsenic	mg/L	ND	0.0050	0.00035	09/05/19 17:36	
Barium	mg/L	ND	0.010	0.00049	09/05/19 17:36	
Beryllium	mg/L	ND	0.0030	0.000074	09/05/19 17:36	
Cadmium	mg/L	ND	0.0025	0.00011	09/05/19 17:36	
Chromium	mg/L	ND	0.010	0.00039	09/05/19 17:36	
Cobalt	mg/L	ND	0.0050	0.00030	09/05/19 17:36	
Lead	mg/L	ND	0.0050	0.000046	09/05/19 17:36	
Lithium	mg/L	ND	0.030	0.00078	09/05/19 17:36	
Molybdenum	mg/L	ND	0.010	0.00095	09/05/19 17:36	
Selenium	mg/L	ND	0.010	0.0013	09/05/19 17:36	
Thallium	mg/L	ND	0.0010	0.000052	09/05/19 17:36	

LABORATORY CONTROL SAMPLE: 155686

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	108	80-120	
Arsenic	mg/L	0.1	0.097	97	80-120	
Barium	mg/L	0.1	0.10	103	80-120	
Beryllium	mg/L	0.1	0.097	97	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.099	99	80-120	
Lithium	mg/L	0.1	0.10	100	80-120	
Molybdenum	mg/L	0.1	0.10	104	80-120	
Selenium	mg/L	0.1	0.097	97	80-120	
Thallium	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 155687 155688

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		2622579008 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
Antimony	mg/L	ND	0.1	0.1	0.10	0.11	104	106	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.099	0.097	99	97	75-125	2	20	
Barium	mg/L	0.17	0.1	0.1	0.25	0.27	84	96	75-125	4	20	
Beryllium	mg/L	0.00022J	0.1	0.1	0.094	0.095	94	95	75-125	1	20	
Cadmium	mg/L	ND	0.1	0.1	0.098	0.097	98	97	75-125	1	20	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622579

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 155687		155688		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		2622579008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Chromium	mg/L	0.00089J	0.1	0.1	0.096	0.099	95	98	75-125	2	20	
Cobalt	mg/L	0.00099J	0.1	0.1	0.096	0.097	95	96	75-125	1	20	
Lead	mg/L	0.000061J	0.1	0.1	0.096	0.098	96	98	75-125	2	20	
Lithium	mg/L	0.0018J	0.1	0.1	0.097	0.098	95	96	75-125	1	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	100	103	75-125	3	20	
Selenium	mg/L	ND	0.1	0.1	0.098	0.095	98	95	75-125	3	20	
Thallium	mg/L	ND	0.1	0.1	0.095	0.098	95	98	75-125	3	20	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622579

QC Batch: 496583 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2622579001, 2622579002, 2622579003, 2622579004, 2622579005, 2622579006, 2622579007, 2622579008, 2622579009

METHOD BLANK: 2674483 Matrix: Water
Associated Lab Samples: 2622579001, 2622579002, 2622579003, 2622579004, 2622579005, 2622579006, 2622579007, 2622579008, 2622579009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	09/07/19 20:35	

LABORATORY CONTROL SAMPLE: 2674484

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.7	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2674485 2674486

Parameter	Units	92443935013 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.6	99	102	90-110	3	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2674487 2674488

Parameter	Units	2622579001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Fluoride	mg/L	ND	2.5	2.5	2.4	2.4	96	96	90-110	0	10

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622579

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-A Pace Analytical Services - Asheville

PASI-GA Pace Analytical Services - Atlanta, GA

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622579

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2622579001	Dup-2	EPA 3005A	34570	EPA 6020B	34601
2622579002	GWC-16	EPA 3005A	34570	EPA 6020B	34601
2622579003	GWC-21	EPA 3005A	34570	EPA 6020B	34601
2622579004	GWC-20	EPA 3005A	34570	EPA 6020B	34601
2622579005	FB-2-8-28-19	EPA 3005A	34570	EPA 6020B	34601
2622579006	GWC-17	EPA 3005A	34570	EPA 6020B	34601
2622579007	EB-2-8-28-19	EPA 3005A	34572	EPA 6020B	34602
2622579008	GWC-9	EPA 3005A	34572	EPA 6020B	34602
2622579009	GWB-5R	EPA 3005A	34572	EPA 6020B	34602
2622579001	Dup-2	EPA 7470A	34690	EPA 7470A	34713
2622579002	GWC-16	EPA 7470A	34690	EPA 7470A	34713
2622579003	GWC-21	EPA 7470A	34690	EPA 7470A	34713
2622579004	GWC-20	EPA 7470A	34690	EPA 7470A	34713
2622579005	FB-2-8-28-19	EPA 7470A	34690	EPA 7470A	34713
2622579006	GWC-17	EPA 7470A	34690	EPA 7470A	34713
2622579007	EB-2-8-28-19	EPA 7470A	34690	EPA 7470A	34713
2622579008	GWC-9	EPA 7470A	34690	EPA 7470A	34713
2622579009	GWB-5R	EPA 7470A	34690	EPA 7470A	34713
2622579001	Dup-2	EPA 300.0 Rev 2.1 1993	496583		
2622579002	GWC-16	EPA 300.0 Rev 2.1 1993	496583		
2622579003	GWC-21	EPA 300.0 Rev 2.1 1993	496583		
2622579004	GWC-20	EPA 300.0 Rev 2.1 1993	496583		
2622579005	FB-2-8-28-19	EPA 300.0 Rev 2.1 1993	496583		
2622579006	GWC-17	EPA 300.0 Rev 2.1 1993	496583		
2622579007	EB-2-8-28-19	EPA 300.0 Rev 2.1 1993	496583		
2622579008	GWC-9	EPA 300.0 Rev 2.1 1993	496583		
2622579009	GWB-5R	EPA 300.0 Rev 2.1 1993	496583		

REPORT OF LABORATORY ANALYSIS

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CHAIN OF CUSTODY RECORD

Pace Analytical Services, Inc.
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
 (770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power		CONTAINER TYPE: PRESERVATION:		ANALYSIS REQUESTED		CONTAINER TYPE		PRESERVATION	
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-506-7239		# of		P		P		1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O ₃ , ≤6°C 7 - ≤6°C not frozen	
REPORT TO:		CC:		Metals App. IV (EPA 6020/7470)		Flouride		*MATRIX CODES:	
REQUESTED COMPLETION DATE:		PO #:		Radium 226 & 228 (SW-846 9315/9320)		DW - DRINKING WATER		S - SOIL	
PROJECT NAME/STATE: Plant Kraft Grumman Road		PROJECT #: 2019 AIV Scan Event		Relinquished By:		WW - WASTEWATER		SL - SLUDGE	
Collection DATE		Collection TIME		MATRIX CODE*		CGRAMP		SD - SOLID	
Sample Identification		DATE/TIME		DATE/TIME		SW - GROUNDWATER		A - AIR	
8-28-19	1000	W	X	FB-2-8-28-19	8-28-19	1550	ST - STORM WATER	L - LIQUID	
8-28-19	1200	GW	X	6WC-17	8-28-19	1550	W - WATER	P - PRODUCT	
8-28-19	1240	W	X	FB-2-8-28-19	8-28-19	1550	REMARKS/ADDITIONAL INFORMATION		
8-28-19	1250	GW	X	6WC-9	8-28-19	1550	App IV only		
8-28-19	1550	GW	X	6WB-5R	8-28-19	1550	W0#: 2622579		
SAMPLED BY AND TITLE: [Signature]		DATE/TIME: 8-28-19 1550		RELINQUISHED BY:		DATE/TIME: 8-29-19 1152		PM: BM	
RECEIVED BY:		DATE/TIME:		RELINQUISHED BY:		DATE/TIME:		Due Date: 09/06/19	
RECEIVED BY LAB: [Signature]		DATE/TIME: 8/29/19 1152		RELINQUISHED BY:		DATE/TIME:		CLIENT: GAPower-CCR	
LAB #:		ENTERED INTO LIMS:		Tracking #:		FOR LAB USE ONLY			
PH checked:		Temperture:		USPS		FED-EX		USPS	
Intact		Broken		NonPresent		COURIER		CLIENT	
Other		FS		Other		FS		FS	



Sample Condition Upon Receipt

Client Name: GAPower

Project # _____

WO#: **2622579**

Courier: Fed Ex UPS USPS Client Commercial Pace Other
Tracking #: _____

PM: BM Due Date: 09/06/19

Custody Seal on Cooler/Box Present: yes no Seals intact: yes

CLIENT: GAPower-CCR

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used 83

Type of Ice: Wet Blue None

Samples on ice, cooling process has begun

Cooler Temperature 0.4

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 8/29/19 ml

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>W</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: _____ Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

September 24, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Kraft - Grumman Road
Pace Project No.: 2622581

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on August 29, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622581

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

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SAMPLE SUMMARY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622581

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2622581001	Dup-2	Water	08/28/19 00:00	08/29/19 11:52
2622581002	GWC-16	Water	08/28/19 09:39	08/29/19 11:52
2622581003	GWC-21	Water	08/28/19 11:00	08/29/19 11:52
2622581004	GWC-20	Water	08/28/19 12:10	08/29/19 11:52
2622581005	FB-2-8-28-19	Water	08/28/19 10:00	08/29/19 11:52
2622581006	GWC-17	Water	08/28/19 12:00	08/29/19 11:52
2622581007	EB-2-8-28-19	Water	08/28/19 12:40	08/29/19 11:52
2622581008	GWC-9	Water	08/28/19 12:50	08/29/19 11:52
2622581009	GWB-5R	Water	08/28/19 15:50	08/29/19 11:52

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622581

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2622581001	Dup-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622581002	GWC-16	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622581003	GWC-21	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622581004	GWC-20	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622581005	FB-2-8-28-19	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622581006	GWC-17	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622581007	EB-2-8-28-19	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622581008	GWC-9	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622581009	GWB-5R	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622581

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.19 ± 0.442 (0.480) C:96% T:NA	pCi/L	09/13/19 08:10	13982-63-3	
Radium-228	EPA 9320	1.15 ± 0.521 (0.870) C:65% T:81%	pCi/L	09/19/19 15:19	15262-20-1	
Total Radium	Total Radium Calculation	2.34 ± 0.963 (1.35)	pCi/L	09/23/19 11:59	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622581

Sample: GWC-16 **Lab ID: 2622581002** Collected: 08/28/19 09:39 Received: 08/29/19 11:52 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.10 ± 0.433 (0.486) C:90% T:NA	pCi/L	09/13/19 08:10	13982-63-3	
Radium-228	EPA 9320	0.944 ± 0.455 (0.771) C:71% T:79%	pCi/L	09/19/19 15:19	15262-20-1	
Total Radium	Total Radium Calculation	2.04 ± 0.888 (1.26)	pCi/L	09/23/19 11:59	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622581

Sample: GWC-21 **Lab ID: 2622581003** Collected: 08/28/19 11:00 Received: 08/29/19 11:52 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.693 ± 0.462 (0.663) C:30% T:NA	pCi/L	09/13/19 09:44	13982-63-3	
Radium-228	EPA 9320	0.702 ± 0.421 (0.782) C:79% T:83%	pCi/L	09/19/19 11:32	15262-20-1	
Total Radium	Total Radium Calculation	1.40 ± 0.883 (1.45)	pCi/L	09/24/19 10:28	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622581

Sample: GWC-20 **Lab ID: 2622581004** Collected: 08/28/19 12:10 Received: 08/29/19 11:52 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.940 ± 0.460 (0.563) C:60% T:NA	pCi/L	09/13/19 11:01	13982-63-3	
Radium-228	EPA 9320	0.193 ± 0.344 (0.753) C:80% T:93%	pCi/L	09/19/19 11:33	15262-20-1	
Total Radium	Total Radium Calculation	1.13 ± 0.804 (1.32)	pCi/L	09/24/19 10:28	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622581

Sample: FB-2-8-28-19 **Lab ID: 2622581005** Collected: 08/28/19 10:00 Received: 08/29/19 11:52 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.180 ± 0.285 (0.635) C:88% T:NA	pCi/L	09/13/19 08:10	13982-63-3	
Radium-228	EPA 9320	0.726 ± 0.503 (0.956) C:67% T:72%	pCi/L	09/19/19 16:56	15262-20-1	
Total Radium	Total Radium Calculation	0.906 ± 0.788 (1.59)	pCi/L	09/23/19 11:59	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622581

Sample: GWC-17 **Lab ID: 2622581006** Collected: 08/28/19 12:00 Received: 08/29/19 11:52 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.29 ± 0.492 (0.511) C:72% T:NA	pCi/L	09/13/19 11:01	13982-63-3	
Radium-228	EPA 9320	0.718 ± 0.436 (0.817) C:77% T:86%	pCi/L	09/19/19 11:33	15262-20-1	
Total Radium	Total Radium Calculation	2.01 ± 0.928 (1.33)	pCi/L	09/24/19 10:28	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622581

Sample: EB-2-8-28-19 **Lab ID: 2622581007** Collected: 08/28/19 12:40 Received: 08/29/19 11:52 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.210 ± 0.208 (0.376) C:80% T:NA	pCi/L	09/13/19 11:01	13982-63-3	
Radium-228	EPA 9320	0.169 ± 0.403 (0.898) C:73% T:82%	pCi/L	09/19/19 11:33	15262-20-1	
Total Radium	Total Radium Calculation	0.379 ± 0.611 (1.27)	pCi/L	09/24/19 10:28	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622581

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.06 ± 0.449 (0.481) C:68% T:NA	pCi/L	09/13/19 11:01	13982-63-3	
Radium-228	EPA 9320	0.848 ± 0.485 (0.892) C:75% T:80%	pCi/L	09/19/19 11:33	15262-20-1	
Total Radium	Total Radium Calculation	1.91 ± 0.934 (1.37)	pCi/L	09/24/19 10:28	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622581

Sample: GWB-5R **Lab ID: 2622581009** Collected: 08/28/19 15:50 Received: 08/29/19 11:52 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	2.60 ± 0.533 (0.175) C:78% T:NA	pCi/L	09/23/19 08:23	13982-63-3	
Radium-228	EPA 9320	1.14 ± 0.531 (0.911) C:70% T:87%	pCi/L	09/19/19 11:33	15262-20-1	
Total Radium	Total Radium Calculation	3.74 ± 1.06 (1.09)	pCi/L	09/24/19 10:28	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622581

QC Batch: 359959 Analysis Method: EPA 9320

QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228

Associated Lab Samples: 2622581003, 2622581004, 2622581006, 2622581007, 2622581008, 2622581009

METHOD BLANK: 1747376 Matrix: Water

Associated Lab Samples: 2622581003, 2622581004, 2622581006, 2622581007, 2622581008, 2622581009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.0495 ± 0.365 (0.863) C:80% T:75%	pCi/L	09/19/19 11:35	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622581

QC Batch: 359955 Analysis Method: EPA 9315

QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium

Associated Lab Samples: 2622581001, 2622581002, 2622581005

METHOD BLANK: 1747367 Matrix: Water

Associated Lab Samples: 2622581001, 2622581002, 2622581005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.428 ± 0.255 (0.325) C:92% T:NA	pCi/L	09/13/19 09:00	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622581

QC Batch: 359957

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 2622581001, 2622581002, 2622581005

METHOD BLANK: 1747374

Matrix: Water

Associated Lab Samples: 2622581001, 2622581002, 2622581005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.461 ± 0.411 (0.833) C:71% T:76%	pCi/L	09/19/19 12:11	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622581

QC Batch: 359958

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 2622581003, 2622581004, 2622581006, 2622581007, 2622581008, 2622581009

METHOD BLANK: 1747375

Matrix: Water

Associated Lab Samples: 2622581003, 2622581004, 2622581006, 2622581007, 2622581008, 2622581009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.446 ± 0.266 (0.338) C:85% T:NA	pCi/L	09/13/19 11:01	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2622581

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road
Pace Project No.: 2622581

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2622581001	Dup-2	EPA 9315	359955		
2622581002	GWC-16	EPA 9315	359955		
2622581003	GWC-21	EPA 9315	359958		
2622581004	GWC-20	EPA 9315	359958		
2622581005	FB-2-8-28-19	EPA 9315	359955		
2622581006	GWC-17	EPA 9315	359958		
2622581007	EB-2-8-28-19	EPA 9315	359958		
2622581008	GWC-9	EPA 9315	359958		
2622581009	GWB-5R	EPA 9315	359958		
2622581001	Dup-2	EPA 9320	359957		
2622581002	GWC-16	EPA 9320	359957		
2622581003	GWC-21	EPA 9320	359959		
2622581004	GWC-20	EPA 9320	359959		
2622581005	FB-2-8-28-19	EPA 9320	359957		
2622581006	GWC-17	EPA 9320	359959		
2622581007	EB-2-8-28-19	EPA 9320	359959		
2622581008	GWC-9	EPA 9320	359959		
2622581009	GWB-5R	EPA 9320	359959		
2622581001	Dup-2	Total Radium Calculation	362617		
2622581002	GWC-16	Total Radium Calculation	362617		
2622581003	GWC-21	Total Radium Calculation	362814		
2622581004	GWC-20	Total Radium Calculation	362814		
2622581005	FB-2-8-28-19	Total Radium Calculation	362617		
2622581006	GWC-17	Total Radium Calculation	362814		
2622581007	EB-2-8-28-19	Total Radium Calculation	362814		
2622581008	GWC-9	Total Radium Calculation	362814		
2622581009	GWB-5R	Total Radium Calculation	362814		

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
 (770) 734-4200 : FAX (770) 734-4201

PAGE: 1 OF 2

CHAIN OF CUSTODY RECORD

CLIENT NAME: Georgia Power
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
 241 Ralph McGill Blvd SE B10185
 Atlanta, GA 30308
 404-505-7239

REPORT TO: CC:
REQUESTED COMPLETION DATE: PO #:

PROJECT NAME/STATE: Plant Kraft Grumman Road
PROJECT #: 2019 AIV Scan Event

Collection DATE	Collection TIME	MATRIX CODE*	C O M P	SAMPLE IDENTIFICATION	ANALYSIS REQUESTED				CONTAINER TYPE	PRESERVATION	# of CONTAINERS	REMARKS/ADDITIONAL INFORMATION
					P	P	P	P				
8-28-19	17:00	GW	X	DUP-2	Metals App. IV (EPA 6020/7470)	Flouride	Radium 226 & 228 (SW-846 9315/9320)	3	7	3		
8-28-19	09:39	GW	X	GWC-16								
8-28-19	11:00	GW	X	GWC-21								
8-28-19	12:10	GW	X	GWC-20								

CONTAINER TYPE: P - PLASTIC, A - AMBER GLASS, G - CLEAR GLASS, V - VOA VIAL, S - STERILE, O - OTHER
PRESERVATION: 1 - HCl, 56°C, 2 - H₂SO₄, 56°C, 3 - HNO₃, 4 - NaOH, 56°C, 5 - NaOH/ZnAc, 56°C, 6 - Na₂S₂O₃, 56°C, 7 - 56°C not frozen

MATRIX CODES:
 DW - DRINKING WATER, WW - WASTEWATER, GW - GROUNDWATER, SW - SURFACE WATER, ST - STORM WATER, W - WATER, S - SOIL, SL - SLUDGE, SD - SOLID, A - AIR, L - LIQUID, P - PRODUCT

LAB #: 152
DATE/TIME: 8-29-19 12:10
RELINQUISHED BY: [Signature]
RELINQUISHED BY: [Signature]

W0#: 2622581

FOR LAB USE ONLY

SAMPLE SHIPPED VIA: UPS, FED-EX, USPS, COURIER, OTHER FS
 Custody Seal: Intact, Broken, Not Present
 Temperature: 10.4°C, 15.2°C
 Date/Time: 8-28-19 12:10, 8-29-19 11:52

Copy of Plant Kraft - Grumman Rd COC - 2019 AIV SCAN EVENT.xlsx



Pace Analytical Services, Inc.
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
 (770) 734-4200 : FAX (770) 734-4201

CHAIN OF CUSTODY RECORD

CLIENT NAME: Georgia Power		ANALYSIS REQUESTED		CONTAINER TYPE: P P P		PRESERVATION	
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 104-508-7239		CONTAINER TYPE: 3 7 3		PRESERVATION: 3 7 3		CONTAINER TYPE: P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER	
REPORT TO:		CONTAINER TYPE: # of		PRESERVATION: # of		PRESERVATION: 1 - HCl, 56°C 2 - H ₂ SO ₄ , 56°C 3 - HNO ₃ 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - Na ₂ S ₂ O ₈ , 56°C 7 - 56°C not frozen	
REQUESTED COMPLETION DATE:		CONTAINER TYPE: C O N T A I N E R S →		PRESERVATION: C O N T A I N E R S →		PRESERVATION: *MATRIX CODES: DW - DRINKING WATER S - SOIL WW - WASTEWATER SL - SLUDGE GW - GROUNDWATER SD - SOLID SW - SURFACE WATER A - AIR ST - STORM WATER L - LIQUID W - WATER P - PRODUCT	
PROJECT NAME/STATE: Plant Kraft Grumman Road		CONTAINER TYPE: 4 4 4 4 6		PRESERVATION: 4 4 4 4 6		REMARKS/ADDITIONAL INFORMATION	
PROJECT #: 2019 AIV Scan Event		CONTAINER TYPE: 4 4 4 4 6		PRESERVATION: 4 4 4 4 6		App IV only	
Collection DATE	Collection TIME	MATRIX CODE	GRA B	COM P	IDENTIFICATION	REMARKS/ADDITIONAL INFORMATION	REMARKS/ADDITIONAL INFORMATION
8-28-19	1000	WR	X	X	FB-2-8-28-19		
8-28-19	1200	GW	X	X	6WC-17		
8-28-19	1240	W	X	X	FB-2-8-28-19		
8-28-19	1250	GW	X	X	6WC-9		
8-28-19	1550	GW	X	X	6WB-5K		
SAMPLED BY AND TITLE: Brett Ford (FG)		DATE/TIME: 8-28-19 1550		RELINQUISHED BY: [Signature]		DATE/TIME: 8-29-19 1152	
RECEIVED BY: [Signature]		DATE/TIME: 8-28-19 1550		RELINQUISHED BY: [Signature]		DATE/TIME: 8-29-19 1152	
RECEIVED BY LAB: [Signature]		DATE/TIME: 8-29-19 1152		COURIER		OTHER FS	
pH checked: [initials]		Temperature: [initials]		Cooler ID: [initials]		Cooler ID: [initials]	

WO#: 2622581

PM: BM Due Date: 09/27/19
 CLIENT: GAPower-CCR

FOR LAB USE ONLY

LAB #:
 Entered into LIMS:
 Tracking #:

SAMPLE SHIPPED VIA:
 UPS FED-EX USPS COURIER OTHER FS
 CUSTODY SEAL:
 Intact Broken Not Present



Sample Condition Upon Receipt

Client Name: GA Power

Project # _____

WO#: **2622581**

Courier: Fed Ex UPS USPS Client Commercial Pace Other
Tracking #: _____

PM: BM Due Date: 09/27/19

Custody Seal on Cooler/Box Present: yes no Seals intact: yes

CLIENT: GAPower-CCR

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used 83

Type of Ice: Wet Blue None

Samples on ice, cooling process has begun

Cooler Temperature 0.4

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 8/29/19 ml

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>W</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):	_____	

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____

Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

LEVEL 2A LABORATORY DATA VALIDATIONS

Grumman Road

Scan Event

August 2019

Georgia Power Company – Grumman Road

Quality Control Review of Analytical Data – August 2019

This narrative presents results of the Quality Control (QC) data review performed on analytical data submitted by Pace Analytical Services, Atlanta, Asheville, and Pittsburgh for groundwater samples collected at Grumman Road between August 26, 2019 and August 28, 2019. The chemical data were reviewed to identify quality issues which could affect the use of the data for decision-making purposes.

Information regarding the primary sample locations, analytical parameters, QC samples, sampling dates, and laboratory sample delivery group (SDG) designations is summarized in Table 1 of this Appendix. SDGs 2622502 and 2622579 were revised by the laboratory to correct the reporting limits (RLs) in accordance with project requirements.

In accordance with groundwater monitoring and corrective action procedures discussed in Title 40 CFR, Subpart D – Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments, the samples were analyzed for detected monitoring constituents listed in 40 CFR, Part 257, Appendix III and assessment monitoring constituents listed in 40 CFR, Part 257, Appendix IV. Test methods included Inductively Coupled Plasma – Mass Spectrometry (USEPA Method 6020B), Mercury in Liquid Wastes (USEPA Method 7470A), Determination of Inorganic Anions (USEPA Method 300.0), Solids in Water (Standard Methods 2540C), Radium-226 (USEPA 9315), and Radium-228 (USEPA Method 9320).

Data were reviewed in accordance with the US EPA Region IV Data Validation Standard Operating Procedures for Contract Laboratory Program Inorganic Data by Inductively Coupled Plasma – Atomic Emission Spectroscopy and Inductively Coupled Plasma – Mass Spectroscopy (September 2011, Rev. 2.0)¹ and the National Functional Guidelines for Inorganic Superfund Methods Data Review (January 2017)². The review included an assessment of the results for completeness, precision (laboratory duplicate recoveries and matrix spike/matrix spike duplicate recoveries), accuracy (laboratory control samples and matrix spike samples), and blank contamination (field, equipment, and laboratory blanks). Sample receipt conditions, holding times, and chains of custody (COCs) were reviewed. Where there was a discrepancy between the QC criteria in the guidelines and the QC criterion established in the analytical methodology, method-specific criteria or professional judgment were used.

DATA QUALITY OBJECTIVES

- Laboratory Precision:** Laboratory goals for precision were met, with the exception of Radium-226 on GWC-1 (2622503014) as described in the qualifications section below.
- Field Precision:** Field goals for precision were met, with the exception of Chromium on GWC-16 (2622579002) and DUP-2 (2622579001) as described in the qualifications section below.
- Accuracy:** Laboratory goals for accuracy were met.
- Detection Limits:** Project goals for detection limits were met. Certain samples were diluted due to the concentration of target or non-target analyte interferences. Dilutions do not require qualifications based on USEPA guidelines. RLs of non-detect compounds are elevated proportional to the dilution when undiluted sample results were not provided by the laboratory. The data usability of diluted results was evaluated by the data user in the context of site-wide characterization.
- Completeness:** There were no rejected analytical results for this event, resulting in a completion of 100%.
- Holding Times:** Holding time requirements were met.

QUALIFICATIONS

In general, chemical results for the samples collected at the site were qualified on the basis of low precision or low accuracy or on the basis of professional judgment. The following definitions provide brief explanations of the qualifiers which may have been assigned to data by the laboratory during the validation process:

- J:** The analyte was positively identified above the method detection limit; however, the associated numerical value is the approximate concentration of the analyte in the sample
- ND:** The analyte was not detected above the method detection limit

The data generated as part of this sampling event met the QC criteria established in the respective analytical methods and data validation guidelines except as specified below. The

applied qualifications may not have been required for all samples collected at the site. A summary of sample qualifications can be found in Table 2 of this Appendix.

- Sample GWC-1 (262250314) was qualified as estimated (J) for Radium-226 as the laboratory relative percent difference (RPD) exceeded QC criteria (65.94% above limit of 25).
- Samples GWC-16 (2622579002) and DUP-2 (2622579001) were qualified as estimated (J) for Chromium as the field RPD exceeded QC criteria (121.4% above limit of 25).
- Certain chromium results in SDG 2622579 were qualified as non-detect (ND) due to the analyte being detected at a similar concentration in an associated blank sample. As shown in Table 2, the method detection limit (MDL) was raised to the sample result as part of the qualification process.
- Certain radium results in SDGs 2622503 and 2622581 were qualified as non-detect (ND) due to the analyte being detected at a similar concentration in an associated blank sample. As shown in Table 2, the minimum detectable concentration (MDC) was raised to the sample result as part of the qualification process

Atlantic Coast Consulting, Inc. reviewed the laboratory data from Grumman Road sampled between August 26, 2019 and August 28, 2019 in accordance with the analytical methods, the laboratory-specified QC criteria, and the guidelines. As described above, the results were acceptable for project use.

REFERENCES

¹USEPA, September 2011, Region 4, Science and Ecosystem Support Division, Quality Assurance Section, MTSB, Data Validation Standard Operating Procedures for Contract Laboratory Program Inorganic Data by Inductively Coupled Plasma – Atomic Emission Spectroscopy and Inductively Coupled Plasma – Mass Spectroscopy, Revision 2.0

²USEPA, January 2017, National Office of Superfund Remediation and Technology Innovation, National Functional Guidelines for Inorganic Superfund Methods Data Review, Revision 0.0

TABLE 1

Georgia Power Company – Grumman Road

Sample Summary Table – August 2019

SDG	Field Identification	Collection Date	Lab Identification	Matrix	QC Samples	Analyses			
						Metals (6020B, 7470A)	Anions (300.0)	TDS (SM 2540C)	Radium-226/-228 (9315, 9320)
22502	GWA-7	8/26/2019	2622502001	GW		X	X		
22503	GWA-7	8/26/2019	2622503001	GW					X
22502	GWC-15	8/27/2019	2622502002	GW		X	X		
22503	GWC-15	8/27/2019	2622503002	GW					X
22502	GWC-14	8/27/2019	2622502003	GW		X	X		
22503	GWC-14	8/27/2019	2622503003	GW					X
22502	GWC-2	8/27/2019	2622502004	GW		X	X		
22503	GWC-2	8/27/2019	2622503004	GW					X
22502	GWC-13	8/27/2019	2622502005	GW		X	X		
22503	GWC-13	8/27/2019	2622503005	GW					X
22502	GWB-6R	8/27/2019	2622502006	GW		X	X		
22503	GWB-6R	8/27/2019	2622503006	GW					X
22502	GWB-4R	8/27/2019	2622502007	GW		X	X		
22503	GWB-4R	8/27/2019	2622503007	GW					X
22502	GWA-8	8/26/2019	2622502008	GW		X	X		
22503	GWA-8	8/26/2019	2622503008	GW					X
22502	FB-1-8-27-19	8/27/2019	2622502009	WQ	FB	X	X		
22503	FB-1-8-27-19	8/27/2019	2622503009	WQ	FB				X
22502	GWC-12	8/27/2019	2622502010	GW		X	X		
22503	GWC-12	8/27/2019	2622503010	GW					X
22502	GWC-11	8/27/2019	2622502011	GW		X	X		
22503	GWC-11	8/27/2019	2622503011	GW					X
22502	GWC-22	8/27/2019	2622502012	GW		X	X		
22503	GWC-22	8/27/2019	2622503012	GW					X
22502	EB-1-8-27-19	8/27/2019	2622502013	WQ	FB	X	X		
22503	EB-1-8-27-19	8/27/2019	2622503013	WQ	FB				X
22502	GWC-1	8/27/2019	2622502014	GW		X	X		
22503	GWC-1	8/27/2019	2622503014	GW					X

Abbreviations:

EB – Equipment Blank

FB – Field Blank

FD – Field Duplicate

GW – Groundwater

QC – Quality Control

TDS – Total Dissolved Solids

WQ – Water Quality Control

TABLE 1 (continued)

Georgia Power Company – Grumman Road

Sample Summary Table – August 2019

SDG	Field Identification	Collection Date	Lab Identification	Matrix	QC Samples	Analyses			
						Metals (6020B, 7470A)	Anions (300.0)	TDS (SM 2540C)	Radium-226/-228 (9315, 9320)
22502	DUP-1	8/27/2019	2622502015	GW	FD (GWC-13)	X	X		
22503	DUP-1	8/27/2019	2622503015	GW	FD (GWC-13)				X
22579	DUP-2	8/28/2019	2622579001	GW	FD (GWC-16)	X	X		
22581	DUP-2	8/28/2019	2622581001	GW	FD (GWC-16)				X
22579	GWC-16	8/28/2019	2622579002	GW		X	X		
22581	GWC-16	8/28/2019	2622581002	GW					X
22579	GWC-21	8/28/2019	2622579003	GW		X	X		
22581	GWC-21	8/28/2019	2622581003	GW					X
22579	GWC-20	8/28/2019	2622579004	GW		X	X		
22581	GWC-20	8/28/2019	2622581004	GW					X
22579	FB-2-8-28-19	8/28/2019	2622579005	WQ	FB	X	X		
22581	FB-2-8-28-19	8/28/2019	2622581005	WQ	FB				X
22579	GWC-17	8/28/2019	2622579006	GW		X	X		
22581	GWC-17	8/28/2019	2622581006	GW					X
22579	EB-2-8-28-19	8/28/2019	2622579007	WQ	EB	X	X		
22581	EB-2-8-28-19	8/28/2019	2622581007	WQ	EB				X
22579	GWC-9	8/28/2019	2622579008	GW		X	X		
22581	GWC-9	8/28/2019	2522581008	GW					X
22579	GWB-5R	8/28/2019	2622579009	GW		X	X		
22581	GWB-5R	8/28/2019	2622581009	GW					X

Abbreviations:

- EB – Equipment Blank
- FB – Field Blank
- FD – Field Duplicate
- GW – Groundwater
- QC – Quality Control
- TDS – Total Dissolved Solids
- WQ – Water Quality Control

TABLE 2

Georgia Power Company – Grumman Road

Qualifier Summary Table – August 2019

SDG	Field Identification	Constituent	New RL	New MDL or MDC	Qualifier	Reason
22503	GWA-7	Radium-226		0.236	ND	Blank detection
22503	GWB-4R	Radium-228		0.634	ND	Blank detection
22503	GWA-8	Radium-226		0.310	ND	Blank detection
22503	GWC-22	Radium-226		0.401	ND	Blank detection
22503	GWC-22	Radium-228		0.565	ND	Blank detection
22503	GWC-1	Radium-226			J	RPD exceeds laboratory goal
22503	GWC-1	Radium-228		0.642	ND	Blank detection
22579	DUP-2	Chromium			J	RPD exceeds field goal
22579	GWC-16	Chromium			J	RPD exceeds field goal
22579	GWC-21	Chromium		0.00087	ND	Blank detection
22579	GWC-20	Chromium		0.00089	ND	Blank detection
22579	GWC-17	Chromium		0.013	ND	Blank detection
22581	GWC-16	Radium-228		0.771	ND	Blank detection
22581	GWC-21	Radium-228		0.782	ND	Blank detection
22581	GWC-20	Radium-228		0.753	ND	Blank detection
22581	GWC-17	Radium-228		0.817	ND	Blank detection
22581	GWB-5R	Radium-226		0.175	ND	Blank detection

Abbreviations:

MDC – Minimum Detectable Concentration
MS/MSD – Matrix Spike / Matrix Spike Duplicate
MDL – Method Detection Limit
RL – Reporting Limit
RPD – Relative Percent Difference
SDG – Sample Delivery Group

Qualifiers:

J – Estimated Result
ND – Non-Detect Result

Product Name: Low-Flow System

Date: 2019-08-26 16:16:35

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name Grumman Road
Site Name Default Site
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri. Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 19.6 ft

Well Information:

Well ID GWA-7
Well diameter 2 in
Well Total Depth 7.01 ft
Screen Length 5 ft
Depth to Water 7.01 ft

Pumping Information:

Final Pumping Rate 225 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5 in
Total Volume Pumped 11.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 0.2	+/- 100
Last 5	15:55:13	600.02	23.47	5.91	2020.04	509.00	7.50	0.03	88.98
Last 5	16:00:13	900.01	23.43	5.90	1997.06	598.00	7.50	0.03	87.46
Last 5	16:05:13	1200.01	23.36	5.89	2062.36	691.00	7.50	0.03	86.76
Last 5	16:10:16	1503.01	23.34	5.90	2060.91	708.00	7.50	0.03	85.89
Last 5	16:15:20	1807.00	23.38	5.91	2062.53	683.00	7.50	0.02	85.11
Variance 0			-0.06	-0.00	65.30			-0.00	-0.71
Variance 1			-0.02	0.01	-1.46			-0.00	-0.87
Variance 2			0.04	0.01	1.62			-0.00	-0.78

Notes

Sampled at 1615. 88F cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-26 16:02:53

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name 2019 AIV Scan Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 501336
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peru Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 20 ft

Pump placement from TOC 17 ft

Well Information:

Well ID GWA-8
Well diameter 2 in
Well Total Depth 20.9 ft
Screen Length 5 ft
Depth to Water 9.03 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.1792685 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 15.2 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	15:20:29	300.09	26.23	4.82	359.21	15.50	10.00	0.18	78.83
Last 5	15:25:29	600.03	25.75	4.45	407.81	8.45	10.20	0.12	72.01
Last 5	15:30:29	900.02	25.55	4.33	428.73	7.30	10.30	0.09	70.76
Last 5	15:35:29	1200.02	25.26	4.29	432.67	5.52	10.30	0.08	69.12
Last 5	15:40:29	1500.02	25.33	4.26	437.82	4.11	10.30	0.07	67.22
Variance 0			-0.20	-0.12	20.92			-0.03	-1.25
Variance 1			-0.29	-0.04	3.94			-0.02	-1.64
Variance 2			0.07	-0.04	5.15			-0.01	-1.90

Notes

Cloudy, Sample time- 1540

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-27 17:15:51

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name Grumman Road
Site Name Default Site
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 20.8 ft

Well Information:

Well ID GWB-4R
Well diameter 2 in
Well Total Depth 23.30 ft
Screen Length 5 ft
Depth to Water 11.54 ft

Pumping Information:

Final Pumping Rate 300 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5 in
Total Volume Pumped 55.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 0.2	+/- 100
Last 5	16:55:05	7201.96	22.64	5.70	703.23	9.80	12.00	0.05	104.39
Last 5	17:00:05	7501.95	22.62	5.70	700.91	7.20	12.00	0.05	103.57
Last 5	17:05:05	7801.94	22.61	5.70	701.53	6.10	12.00	0.05	102.80
Last 5	17:10:05	8101.94	22.63	5.70	696.31	5.78	12.00	0.05	101.85
Last 5	17:15:05	8401.93	22.64	5.70	696.91	4.98	12.00	0.05	101.23
Variance 0			-0.01	0.00	0.61			-0.00	-0.76
Variance 1			0.02	-0.01	-5.22			0.00	-0.95
Variance 2			0.01	0.00	0.60			-0.00	-0.62

Notes

Sampled at 1715. Rain 84F.

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-28 15:52:01

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name Grumman Road
Site Name Default Site
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri. Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 29 ft

Pump placement from TOC 24.00 ft

Well Information:

Well ID GWB-5R
Well diameter 2 in
Well Total Depth 26.50 ft
Screen Length 10 ft
Depth to Water 10.58 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2194393 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5 in
Total Volume Pumped 35 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 0.2	+/- 100
Last 5	15:30:29	9605.92	24.33	5.95	1721.98	53.00	11.00	0.01	221.09
Last 5	15:35:29	9905.92	24.24	5.95	1747.03	55.00	11.00	0.01	199.88
Last 5	15:40:29	10205.93	24.34	5.94	1723.63	52.00	11.00	0.01	186.90
Last 5	15:45:29	10505.92	24.33	5.95	1731.01	54.00	11.00	0.01	178.36
Last 5	15:50:31	10807.91	24.38	5.95	1744.30	53.00	11.00	0.01	171.65
Variance 0			0.11	-0.01	-23.40			-0.00	-12.98
Variance 1			-0.01	0.01	7.39			-0.00	-8.55
Variance 2			0.05	0.00	13.28			-0.00	-6.71

Notes

Sunny, sample Time-1550, 2nd Rad collected here.

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-27 14:16:34

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name Grumman Road
Site Name Default Site
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 20.2 ft

Well Information:

Well ID GWB-6R
Well diameter 2 in
Well Total Depth 22.70 ft
Screen Length 5 ft
Depth to Water 8.46 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 0.2	+/- 100
Last 5	13:55:13	1500.01	23.93	5.64	871.46	59.90	8.70	0.08	116.93
Last 5	14:00:13	1800.01	23.93	5.66	908.20	64.00	8.70	0.07	115.09
Last 5	14:05:13	2100.00	23.96	5.67	924.65	61.90	8.70	0.06	113.16
Last 5	14:10:14	2401.00	24.01	5.67	937.23	64.20	8.70	0.05	111.70
Last 5	14:15:14	2700.99	24.45	5.67	933.03	59.40	8.70	0.04	110.23
Variance 0			0.03	0.01	16.45			-0.00	-1.93
Variance 1			0.05	0.01	12.59			-0.01	-1.46
Variance 2			0.44	-0.00	-4.20			-0.01	-1.47

Notes

Sampled at 1415. 82F heavy rain.

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-27 17:01:53

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name 2019 AIV Scan Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 501336
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peru Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 28 ft

Pump placement from TOC 25 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 28.10 ft
Screen Length 5 ft
Depth to Water 19.18 ft

Pumping Information:

Final Pumping Rate 300 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.4 in
Total Volume Pumped 7.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	16:40:16	300.03	96.33	5.82	181.31	4.01	19.30	-0.04	97.05
Last 5	16:45:16	600.03	96.33	5.86	184.58	3.25	19.30	-0.06	96.71
Last 5	16:50:16	900.03	96.33	5.85	185.38	3.22	19.30	-0.07	97.00
Last 5	16:55:16	1200.03	96.33	5.84	184.49	3.05	19.30	-0.08	98.22
Last 5	17:00:16	1500.02	96.33	5.84	184.80	3.01	19.30	-0.09	97.97
Variance 0			-0.00	-0.00	0.80			-0.01	0.29
Variance 1			-0.01	-0.02	-0.90			-0.00	1.22
Variance 2			0.01	0.01	0.32			-0.01	-0.26

Notes

Rain, Sample time 1700, 2nd rad here

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-27 11:15:46

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name Grumman Road
Site Name Default Site
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri. Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 35 ft

Pump placement from TOC 28.8 ft

Well Information:

Well ID GWC-2
Well diameter 2 in
Well Total Depth 31.4 ft
Screen Length 5 ft
Depth to Water 19.53 ft

Pumping Information:

Final Pumping Rate 220 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 10.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 0.2	+/- 100
Last 5	10:55:02	600.02	21.77	4.77	62.09	2.30	19.60	0.14	115.48
Last 5	11:00:02	900.01	21.77	4.76	61.76	2.10	19.60	0.14	123.03
Last 5	11:05:02	1200.01	21.80	4.75	62.20	0.10	19.60	0.10	130.61
Last 5	11:10:02	1500.01	22.13	4.76	61.34	0.01	19.60	0.10	137.88
Last 5	11:15:04	1802.00	21.99	4.77	61.24	0.07	19.60	0.11	146.98
Variance 0			0.03	-0.01	0.44			-0.03	7.58
Variance 1			0.33	0.01	-0.86			-0.01	7.27
Variance 2			-0.14	0.01	-0.10			0.01	9.10

Notes

Sampled at 1115. Cloudy 85F.

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-27 16:11:35

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name 2019 AIV Scan Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 501336
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peru Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 25 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 27.4 ft
Screen Length 5 ft
Depth to Water 10.13 ft

Pumping Information:

Final Pumping Rate 110 mL/min
Total System Volume 0.2105124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	15:50:03	2401.05	96.29	5.10	79.53	4.55	21.60	0.11	52.80
Last 5	15:55:03	2701.03	96.28	5.09	79.42	4.21	23.00	0.20	53.65
Last 5	16:00:03	3001.01	96.29	5.14	80.19	11.00	24.40	0.30	55.43
Last 5	16:05:03	3301.01	96.30	5.12	79.48	8.32	25.30	-0.02	52.53
Last 5	16:10:03	3601.01	96.30	5.11	79.55	6.62	26.60	0.00	50.55
Variance 0			0.01	0.05	0.77			0.10	1.78
Variance 1			0.01	-0.02	-0.71			-0.32	-2.90
Variance 2			-0.00	-0.01	0.07			0.02	-1.98

Notes

Cloudy, well purged dry, allow for overnight recharge.

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-28 12:54:13

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name 2019 AIV Scan Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 642533
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peru Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 25 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 27.4 ft
Screen Length 5 ft
Depth to Water 10.13 ft

Pumping Information:

Final Pumping Rate 130 mL/min
Total System Volume 0.2105124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 29.6 in
Total Volume Pumped 2.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	12:35:11	300.04	29.20	4.73	189.75	10.00	10.90	1.18	38.58
Last 5	12:40:11	600.03	27.57	4.71	194.27	8.21	11.60	0.66	36.63
Last 5	12:45:11	900.02	29.48	4.71	193.06	5.30	12.10	0.63	32.46
Last 5	12:50:11	1200.02	29.30	4.68	193.80	4.30	12.70	0.23	31.55
Last 5									
Variance 0			-1.63	-0.02	4.53			-0.52	-1.95
Variance 1			1.90	0.00	-1.22			-0.03	-4.17
Variance 2			-0.18	-0.03	0.75			-0.40	-0.91

Notes

Sunny ,Sample time-1250

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-27 11:57:04

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name 2019 AIV Scan Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 501336
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peru Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 22.5 ft

Pump placement from TOC 20 ft

Well Information:

Well ID GWC-11
Well diameter 2 in
Well Total Depth 22.55 ft
Screen Length 5 ft
Depth to Water 13.67 ft

Pumping Information:

Final Pumping Rate 130 mL/min
Total System Volume 0.190427 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 39.9 in
Total Volume Pumped 14.3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	11:35:14	5401.99	79.59	5.17	343.02	4.33	17.00	0.08	119.02
Last 5	11:40:14	5701.99	78.80	5.17	370.24	4.55	17.00	0.18	121.06
Last 5	11:45:14	6001.99	76.65	5.15	380.27	3.77	17.00	0.05	121.52
Last 5	11:50:14	6301.99	77.35	5.15	398.70	3.12	17.00	0.07	122.33
Last 5	11:55:14	6601.99	78.98	5.17	381.45	3.10	17.00	0.03	122.03
Variance 0			-2.14	-0.01	10.03			-0.13	0.46
Variance 1			0.70	-0.00	18.42			0.02	0.81
Variance 2			1.64	0.02	-17.25			-0.04	-0.30

Notes

Cloudy, Sample time -1155

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-27 09:33:15

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name 2019 AIV Scan Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 501336
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peru Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 26 ft

Pump placement from TOC 23 ft

Well Information:

Well ID GWC-12
Well diameter 2 in
Well Total Depth 26.7 ft
Screen Length 5 ft
Depth to Water 13.34 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.206049 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5.5 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	09:10:22	1200.02	24.17	4.13	863.14	9.19	13.80	0.09	99.81
Last 5	09:15:22	1500.02	24.05	4.07	960.88	5.10	13.80	0.08	97.85
Last 5	09:20:22	1800.02	23.92	4.03	1035.26	4.22	13.80	0.07	93.76
Last 5	09:25:22	2100.02	24.19	4.02	1034.43	3.05	13.80	0.06	91.55
Last 5	09:30:22	2400.01	23.94	4.02	1041.03	4.62	13.80	0.06	90.17
Variance 0			-0.13	-0.04	74.38			-0.00	-4.09
Variance 1			0.27	-0.01	-0.83			-0.01	-2.21
Variance 2			-0.25	-0.01	6.61			-0.00	-1.38

Notes

Cloudy, Sample time 0930, FB-1-8-27-19 here at 0910

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-27 12:32:53

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name Grumman Road
Site Name Default Site
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri. Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 50 ft

Pump placement from TOC 45.28 ft

Well Information:

Well ID GWC-13
Well diameter 2 in
Well Total Depth 47.78 ft
Screen Length 5 ft
Depth to Water 14.34 ft

Pumping Information:

Final Pumping Rate 225 mL/min
Total System Volume 0.3131711 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6.5 in
Total Volume Pumped 11.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 0.2	+/- 100
Last 5	12:10:03	900.01	23.34	4.91	94.03	3.89	15.00	0.08	180.02
Last 5	12:15:03	1200.01	23.32	4.91	89.38	2.11	15.00	0.08	201.72
Last 5	12:20:03	1500.01	23.43	4.91	87.74	2.01	15.00	0.07	212.00
Last 5	12:25:03	1800.00	23.17	4.90	86.49	1.11	15.00	0.07	219.28
Last 5	12:30:03	2100.00	23.19	4.90	85.07	0.87	15.00	0.07	222.68
Variance 0			0.10	-0.00	-1.63			-0.01	10.28
Variance 1			-0.25	-0.01	-1.25			-0.00	7.28
Variance 2			0.01	0.01	-1.42			0.00	3.40

Notes

Sampled at 1230. 87F cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-27 10:21:04

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name Grumman Road
Site Name Default Site
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri. Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 24.5 ft

Well Information:

Well ID GWC-14
Well diameter 2 in
Well Total Depth 27 ft
Screen Length 5 ft
Depth to Water 19.65 ft

Pumping Information:

Final Pumping Rate 220 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.5 in
Total Volume Pumped 8.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 0.2	+/- 100
Last 5	10:00:01	600.02	21.94	5.58	992.18	4.78	20.00	0.27	120.01
Last 5	10:05:01	900.01	21.86	5.58	1003.12	1.07	20.00	0.27	124.03
Last 5	10:10:06	1205.01	21.83	5.58	1002.97	1.16	20.00	0.25	128.65
Last 5	10:15:09	1508.01	21.76	5.58	999.96	0.01	20.00	0.27	133.84
Last 5	10:20:16	1815.00	21.71	5.58	999.72	0.01	20.00	0.27	138.60
Variance 0			-0.03	-0.00	-0.15			-0.02	4.61
Variance 1			-0.07	-0.00	-3.01			0.01	5.20
Variance 2			-0.05	-0.00	-0.24			0.01	4.75

Notes

Sampled at 1020. Cloudy 84F.

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-27 09:26:49

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name Grumman Road
Site Name Default Site
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri. Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 24.3 ft

Well Information:

Well ID GWC-15
Well diameter 2 in
Well Total Depth 26.8 ft
Screen Length 5 ft
Depth to Water 19.31 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4 in
Total Volume Pumped 8.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 0.2	+/- 100
Last 5	09:04:59	600.02	23.05	6.54	784.46	21.00	19.60	0.18	115.44
Last 5	09:09:59	900.01	23.03	6.56	807.60	15.00	19.70	0.15	114.97
Last 5	09:14:59	1200.01	22.97	6.57	819.55	5.08	19.70	0.14	114.93
Last 5	09:19:59	1499.99	23.00	6.57	827.76	4.75	19.70	0.12	115.43
Last 5	09:25:03	1804.00	23.07	6.57	826.86	4.99	19.70	0.09	116.70
Variance 0			-0.05	0.01	11.96			-0.01	-0.04
Variance 1			0.03	0.00	8.21			-0.01	0.50
Variance 2			0.07	-0.00	-0.90			-0.03	1.27

Notes

Sampled at 0925. 80F cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-28 09:23:24

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name Grumman Road
Site Name Default Site
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri. Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 32 ft

Pump placement from TOC 25.7 ft

Well Information:

Well ID GWC-16
Well diameter 2 in
Well Total Depth 28.20 ft
Screen Length 5 ft
Depth to Water 20.7 ft

Pumping Information:

Final Pumping Rate 0 mL/min
Total System Volume 0.2328295 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 0.2	+/- 100
Last 5	09:00:55	900.01	22.43	5.10	1337.13	29.20	21.10	0.59	154.59
Last 5	09:05:55	1200.01	22.44	5.34	1386.66	34.90	21.10	0.54	152.24
Last 5	09:10:55	1500.01	22.44	5.42	1437.30	10.00	21.10	0.50	152.91
Last 5	09:15:55	1800.00	22.34	5.47	1439.00	9.70	21.10	0.51	153.74
Last 5	09:20:55	2100.00	22.26	5.51	1445.97	6.41	21.10	0.51	155.11
Variance 0			0.00	0.08	50.64			-0.04	0.68
Variance 1			-0.10	0.05	1.69			0.01	0.83
Variance 2			-0.07	0.04	6.97			-0.00	1.37

Notes

Accidentally canceled purge.

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-28 09:41:45

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name Grumman Road
Site Name Default Site
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri. Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 32 ft

Pump placement from TOC 25.7 ft

Well Information:

Well ID GWC-16
Well diameter 2 in
Well Total Depth 28.2 ft
Screen Length 5 ft
Depth to Water 20.7 ft

Pumping Information:

Final Pumping Rate 230 mL/min
Total System Volume 0.2328295 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4 in
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 0.2	+/- 100
Last 5	09:29:25	300.03	22.25	5.54	1467.40	3.41	21.10	0.49	155.56
Last 5	09:34:25	600.02	22.26	5.56	1439.05	4.64	21.10	0.47	154.82
Last 5	09:39:25	900.01	22.26	5.57	1460.28	0.56	21.10	0.46	155.19
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.02	0.02	-28.34			-0.02	-0.75
Variance 2			0.00	0.01	21.22			-0.01	0.38

Notes

Continued 2/2. Sampled at 0939. Sunny 85F.

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-28 12:06:37

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name 2019 AIV Scan Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 642533
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peru Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 23 ft

Pump placement from TOC 21 ft

Well Information:

Well ID GWC-17
Well diameter 2 in
Well Total Depth 23 ft
Screen Length 5 ft
Depth to Water 6.52 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.1926587 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 15.3 in
Total Volume Pumped 18.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	11:40:08	9899.97	28.83	4.78	1686.39	16.00	7.80	0.09	46.79
Last 5	11:45:08	10199.96	28.41	4.59	1807.06	12.00	7.80	0.08	50.00
Last 5	11:50:08	10499.96	28.64	4.69	1728.24	11.00	7.80	0.08	48.88
Last 5	11:55:08	10799.96	28.83	4.64	1750.81	11.00	7.80	0.08	50.25
Last 5	12:00:08	11099.96	29.72	4.62	1785.53	9.52	7.80	0.06	50.52
Variance 0			0.23	0.10	-78.83			-0.00	-1.12
Variance 1			0.19	-0.04	22.57			0.00	1.38
Variance 2			0.89	-0.02	34.72			-0.02	0.27

Notes

Sunny, Sample time 1200, FB-2-8-28-19 here at 1000

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-28 12:12:16

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name Grumman Road
Site Name Default Site
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri. Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 28 ft

Pump placement from TOC 22.4 ft

Well Information:

Well ID GWC-20
Well diameter 2 in
Well Total Depth 24.90 ft
Screen Length 5 ft
Depth to Water 21.06 ft

Pumping Information:

Final Pumping Rate 175 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.5 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 0.2	+/- 100
Last 5	11:50:29	1200.01	23.34	6.34	617.62	0.20	21.50	0.14	124.61
Last 5	11:55:29	1500.01	23.31	6.34	618.57	0.20	21.50	0.14	124.70
Last 5	12:00:30	1801.01	23.34	6.34	620.18	0.20	21.50	0.14	124.26
Last 5	12:05:30	2101.00	23.64	6.34	616.95	0.20	21.50	0.19	125.05
Last 5	12:10:34	2405.00	23.47	6.34	618.79	0.40	21.50	0.24	126.23
Variance 0			0.03	0.00	1.61			-0.00	-0.45
Variance 1			0.30	0.00	-3.23			0.06	0.79
Variance 2			-0.17	0.00	1.84			0.05	1.18

Notes

Sampled at 1210. 84F cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-28 11:02:06

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name Grumman Road
Site Name Default Site
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 22 ft

Well Information:

Well ID GWC-21
Well diameter 2 in
Well Total Depth 23.8 ft
Screen Length 5 ft
Depth to Water 20.55 ft

Pumping Information:

Final Pumping Rate 115 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 10.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 0.2	+/- 100
Last 5	10:40:07	1500.01	23.32	6.00	218.38	4.61	20.80	2.80	258.56
Last 5	10:45:08	1801.00	24.06	6.13	291.95	4.55	20.80	1.95	234.74
Last 5	10:50:08	2101.00	24.23	6.07	254.79	7.58	20.80	2.39	236.20
Last 5	10:55:08	2401.00	24.16	6.06	251.47	2.05	20.80	2.54	236.57
Last 5	11:00:08	2700.99	24.19	6.05	252.63	--	--	2.50	232.72
Variance 0			0.18	-0.06	-37.16			0.44	1.46
Variance 1			-0.07	-0.01	-3.32			0.15	0.37
Variance 2			0.03	-0.01	1.16			-0.04	-3.85

Notes

Sampled at 1100. Sunny 86F.

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-27 14:35:06

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name 2019 AIV Scan Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 501336
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peru Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 18.6 ft

Pump placement from TOC 16 ft

Well Information:

Well ID GWC-22
Well diameter 2 in
Well Total Depth 18.6 ft
Screen Length 5 ft
Depth to Water 9.51 ft

Pumping Information:

Final Pumping Rate 165 mL/min
Total System Volume 0.1730197 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.4 in
Total Volume Pumped 10.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	14:10:30	2700.01	89.47	4.92	946.54	4.26	9.70	-0.04	179.05
Last 5	14:15:30	3000.01	90.82	4.91	998.23	4.55	9.70	-0.05	184.08
Last 5	14:20:30	3300.00	87.48	4.88	1068.28	4.92	9.70	-0.04	188.86
Last 5	14:25:30	3600.00	88.33	4.88	1103.13	3.77	9.70	-0.04	193.54
Last 5	14:30:30	3900.01	89.73	4.89	1114.20	3.03	9.70	-0.06	197.68
Variance 0			-3.34	-0.03	70.05			0.01	4.78
Variance 1			0.84	-0.00	34.85			-0.00	4.68
Variance 2			1.40	0.00	11.07			-0.01	4.15

Notes

Rain, Sample time-1430

Grab Samples

December 11, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Kraft - Grumman Road
Pace Project No.: 2624186

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on October 10, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Kevin Herring for
Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Betsy McDaniel, Atlantic Coast Consulting
Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624186

Pace Analytical Services Atlanta

110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

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SAMPLE SUMMARY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624186

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2624186001	GWA-7	Water	10/08/19 09:45	10/10/19 13:45
2624186002	GWB-5R	Water	10/09/19 16:20	10/10/19 13:45

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624186

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2624186001	GWA-7	EPA 6020B	CSW	16
		EPA 7470A	DRB	1
2624186002	GWB-5R	EPA 6020B	CSW	16
		EPA 7470A	DRB	1

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624186

Sample: GWA-7 Lab ID: 2624186001 Collected: 10/08/19 09:45 Received: 10/10/19 13:45 Matrix: Water									
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS, Dissolved Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Antimony, Dissolved	ND	mg/L	0.015	0.0014	5	10/11/19 14:13	10/16/19 15:50	7440-36-0	D3
Arsenic, Dissolved	0.0055J	mg/L	0.025	0.0018	5	10/11/19 14:13	10/16/19 15:50	7440-38-2	B,D3
Barium, Dissolved	0.077	mg/L	0.050	0.0024	5	10/11/19 14:13	10/16/19 15:50	7440-39-3	
Beryllium, Dissolved	ND	mg/L	0.015	0.00037	5	10/11/19 14:13	10/16/19 15:50	7440-41-7	D3
Boron, Dissolved	6.2	mg/L	0.20	0.025	5	10/11/19 14:13	10/16/19 15:50	7440-42-8	M1
Cadmium, Dissolved	ND	mg/L	0.012	0.00057	5	10/11/19 14:13	10/16/19 15:50	7440-43-9	D3
Calcium, Dissolved	3.2	mg/L	0.50	0.055	5	10/11/19 14:13	10/16/19 15:50	7440-70-2	
Chromium, Dissolved	0.014J	mg/L	0.050	0.0020	5	10/11/19 14:13	10/16/19 15:50	7440-47-3	D3
Cobalt, Dissolved	0.0025J	mg/L	0.025	0.0015	5	10/11/19 14:13	10/16/19 15:50	7440-48-4	D3
Lead, Dissolved	0.00031J	mg/L	0.025	0.00023	5	10/11/19 14:13	10/16/19 15:50	7439-92-1	D3
Lithium, Dissolved	ND	mg/L	0.15	0.0039	5	10/11/19 14:13	10/16/19 15:50	7439-93-2	D3
Molybdenum, Dissolved	ND	mg/L	0.050	0.0047	5	10/11/19 14:13	10/16/19 15:50	7439-98-7	D3
Selenium, Dissolved	0.0087J	mg/L	0.050	0.0063	5	10/11/19 14:13	10/16/19 15:50	7782-49-2	D3
Thallium, Dissolved	ND	mg/L	0.0050	0.00026	5	10/11/19 14:13	10/16/19 15:50	7440-28-0	D3
Vanadium, Dissolved	0.12	mg/L	0.050	0.0035	5	10/11/19 14:13	10/17/19 16:37	7440-62-2	
Zinc, Dissolved	ND	mg/L	0.050	0.0077	5	10/11/19 14:13	10/16/19 15:50	7440-66-6	D3
7470 Mercury, Dissolved Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Mercury, Dissolved	ND	mg/L	0.00020	0.00014	1	10/16/19 09:37	10/17/19 11:28	7439-97-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624186

Sample: GWB-5R Lab ID: 2624186002 Collected: 10/09/19 16:20 Received: 10/10/19 13:45 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS, Dissolved Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Antimony, Dissolved	ND	mg/L	0.015	0.0014	5	10/11/19 14:13	10/16/19 17:06	7440-36-0	D3
Arsenic, Dissolved	0.0080J	mg/L	0.025	0.0018	5	10/11/19 14:13	10/16/19 17:06	7440-38-2	B,D3
Barium, Dissolved	0.13	mg/L	0.050	0.0024	5	10/11/19 14:13	10/16/19 17:06	7440-39-3	
Beryllium, Dissolved	ND	mg/L	0.015	0.00037	5	10/11/19 14:13	10/16/19 17:06	7440-41-7	D3
Boron, Dissolved	8.5	mg/L	2.0	0.25	50	10/11/19 14:13	10/16/19 17:12	7440-42-8	
Cadmium, Dissolved	ND	mg/L	0.012	0.00057	5	10/11/19 14:13	10/16/19 17:06	7440-43-9	D3
Calcium, Dissolved	18.2	mg/L	0.50	0.055	5	10/11/19 14:13	10/16/19 17:06	7440-70-2	
Chromium, Dissolved	0.012J	mg/L	0.050	0.0020	5	10/11/19 14:13	10/16/19 17:06	7440-47-3	D3
Cobalt, Dissolved	0.0042J	mg/L	0.025	0.0015	5	10/11/19 14:13	10/16/19 17:06	7440-48-4	D3
Lead, Dissolved	ND	mg/L	0.025	0.00023	5	10/11/19 14:13	10/16/19 17:06	7439-92-1	D3
Lithium, Dissolved	ND	mg/L	0.15	0.0039	5	10/11/19 14:13	10/16/19 17:06	7439-93-2	D3
Molybdenum, Dissolved	ND	mg/L	0.050	0.0047	5	10/11/19 14:13	10/16/19 17:06	7439-98-7	D3
Selenium, Dissolved	ND	mg/L	0.050	0.0063	5	10/11/19 14:13	10/16/19 17:06	7782-49-2	D3
Thallium, Dissolved	ND	mg/L	0.0050	0.00026	5	10/11/19 14:13	10/16/19 17:06	7440-28-0	D3
Vanadium, Dissolved	0.043J	mg/L	0.050	0.0035	5	10/11/19 14:13	10/17/19 16:42	7440-62-2	
Zinc, Dissolved	ND	mg/L	0.050	0.0077	5	10/11/19 14:13	10/16/19 17:06	7440-66-6	D3
7470 Mercury, Dissolved Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Mercury, Dissolved	ND	mg/L	0.00020	0.00014	1	10/16/19 09:37	10/17/19 11:37	7439-97-6	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624186

QC Batch: 37007 Analysis Method: EPA 7470A
 QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury Dissolved
 Associated Lab Samples: 2624186001, 2624186002

METHOD BLANK: 167295 Matrix: Water

Associated Lab Samples: 2624186001, 2624186002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	mg/L	ND	0.00020	0.00014	10/17/19 11:23	

LABORATORY CONTROL SAMPLE: 167296

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	mg/L	0.0025	0.0025	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 167297 167298

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2624186001 Result	Spike Conc.	Spike Conc.	Result						
Mercury, Dissolved	mg/L	ND	0.0025	0.0025	0.0024	0.0022	94	89	75-125	5	20

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624186

QC Batch: 36866 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET Dissolved
Associated Lab Samples: 2624186001, 2624186002

METHOD BLANK: 166659 Matrix: Water
Associated Lab Samples: 2624186001, 2624186002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	mg/L	ND	0.0030	0.00027	10/16/19 15:38	
Arsenic, Dissolved	mg/L	0.0011J	0.0050	0.00035	10/16/19 15:38	
Barium, Dissolved	mg/L	ND	0.010	0.00049	10/16/19 15:38	
Beryllium, Dissolved	mg/L	ND	0.0030	0.000074	10/16/19 15:38	
Boron, Dissolved	mg/L	ND	0.040	0.0049	10/16/19 15:38	
Cadmium, Dissolved	mg/L	ND	0.0025	0.00011	10/16/19 15:38	
Calcium, Dissolved	mg/L	ND	0.10	0.011	10/16/19 15:38	
Chromium, Dissolved	mg/L	ND	0.010	0.00039	10/16/19 15:38	
Cobalt, Dissolved	mg/L	ND	0.0050	0.00030	10/16/19 15:38	
Lead, Dissolved	mg/L	ND	0.0050	0.000046	10/16/19 15:38	
Lithium, Dissolved	mg/L	ND	0.030	0.00078	10/16/19 15:38	
Molybdenum, Dissolved	mg/L	ND	0.010	0.00095	10/16/19 15:38	
Selenium, Dissolved	mg/L	ND	0.010	0.0013	10/16/19 15:38	
Thallium, Dissolved	mg/L	ND	0.0010	0.000052	10/16/19 15:38	
Vanadium, Dissolved	mg/L	0.0058J	0.010	0.00071	10/16/19 15:38	
Zinc, Dissolved	mg/L	0.0046J	0.010	0.0015	10/16/19 15:38	

LABORATORY CONTROL SAMPLE: 166660

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	mg/L	0.1	0.097	97	80-120	
Arsenic, Dissolved	mg/L	0.1	0.10	100	80-120	
Barium, Dissolved	mg/L	0.1	0.10	100	80-120	
Beryllium, Dissolved	mg/L	0.1	0.11	111	80-120	
Boron, Dissolved	mg/L	1	1.1	111	80-120	
Cadmium, Dissolved	mg/L	0.1	0.10	102	80-120	
Calcium, Dissolved	mg/L	1	1.0	100	80-120	
Chromium, Dissolved	mg/L	0.1	0.10	103	80-120	
Cobalt, Dissolved	mg/L	0.1	0.10	101	80-120	
Lead, Dissolved	mg/L	0.1	0.10	101	80-120	
Lithium, Dissolved	mg/L	0.1	0.11	112	80-120	
Molybdenum, Dissolved	mg/L	0.1	0.10	100	80-120	
Selenium, Dissolved	mg/L	0.1	0.098	98	80-120	
Thallium, Dissolved	mg/L	0.1	0.10	102	80-120	
Vanadium, Dissolved	mg/L	0.1	0.11	106	80-120	
Zinc, Dissolved	mg/L	0.1	0.10	105	80-120	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624186

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 166661 166662											
Parameter	Units	2624186001	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Antimony, Dissolved	mg/L	ND	0.1	0.1	0.096	0.093	96	92	75-125	4	20
Arsenic, Dissolved	mg/L	0.0055J	0.1	0.1	0.10	0.10	95	95	75-125	0	20
Barium, Dissolved	mg/L	0.077	0.1	0.1	0.17	0.17	97	93	75-125	2	20
Beryllium, Dissolved	mg/L	ND	0.1	0.1	0.10	0.10	100	102	75-125	3	20
Boron, Dissolved	mg/L	6.2	1	1	7.7	7.8	145	161	75-125	2	20 M1
Cadmium, Dissolved	mg/L	ND	0.1	0.1	0.095	0.097	95	97	75-125	3	20
Calcium, Dissolved	mg/L	3.2	1	1	4.3	4.2	117	104	75-125	3	20
Chromium, Dissolved	mg/L	0.014J	0.1	0.1	0.11	0.11	97	98	75-125	1	20
Cobalt, Dissolved	mg/L	0.0025J	0.1	0.1	0.098	0.099	96	96	75-125	1	20
Lead, Dissolved	mg/L	0.00031J	0.1	0.1	0.093	0.092	93	92	75-125	1	20
Lithium, Dissolved	mg/L	ND	0.1	0.1	0.10J	0.10J	102	105	75-125		20
Molybdenum, Dissolved	mg/L	ND	0.1	0.1	0.097	0.098	97	97	75-125	1	20
Selenium, Dissolved	mg/L	0.0087J	0.1	0.1	0.10	0.10	96	95	75-125	0	20
Thallium, Dissolved	mg/L	ND	0.1	0.1	0.094	0.093	94	93	75-125	1	20
Vanadium, Dissolved	mg/L	0.12	0.1	0.1	0.24	0.24	125	126	75-125	0	20
Zinc, Dissolved	mg/L	ND	0.1	0.1	0.10	0.10	96	98	75-125	2	20

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624186

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624186

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2624186001	GWA-7	EPA 3005A	36866	EPA 6020B	36889
2624186002	GWB-5R	EPA 3005A	36866	EPA 6020B	36889
2624186001	GWA-7	EPA 7470A	37007	EPA 7470A	37097
2624186002	GWB-5R	EPA 7470A	37007	EPA 7470A	37097

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
 (770) 734-4200 : FAX (770) 734-4201

CHAIN OF CUSTODY RECORD

PAGE: 1 OF 1

CLIENT NAME: Georgia Power CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-506-7239		REPORT TO: <i>PRM/Collector</i> CC: REQUESTED COMPLETION DATE: PO #:		PROJECT NAME/STATE: Plant Kraft Gramman Road PROJECT #:	
CONTAINER TYPE: # of PRESERVATION:		ANALYSIS REQUESTED		CONTAINER TYPE P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER	
CONTAINERS		P 3 P 7 P 7 P 7 P 7 P 7 Metals App. III Boron, Calcium - Field Filtered Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C) Detected App IV: Radium 226 & 228 (SW-846 9315/9320) Detected App IV Metals: (see list below) State Metals (see below)		PRESERVATION 1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/HZnAc, ≤6°C 6 - Na ₂ S ₂ O ₃ , ≤6°C 7 - ≤6°C not frozen	
MATRIX CODES: DW - DRINKING WATER S - SOIL WW - WASTEWATER SL - SLUDGE GW - GROUNDWATER SD - SOLID SW - SURFACE WATER A - AIR ST - STORM WATER L - LIQUID W - WATER P - PRODUCT		REMARKS/ADDITIONAL INFORMATION App III and detected App IV - OF P-9-19		WO#: 2624186 	
Collection DATE	Collection TIME	MATRIX CODE*	COMPARISON	SAMPLE IDENTIFICATION	RELINQUISHED BY
10-3-19	1945	GW	X	GWA-7	<i>A. Dell</i>
10-9-19		GW	X	GWB-GR	
10-9-19	1620	GW		GWB-SR	
SAMPLED BY AND TITLE: <i>H. B. [unclear]</i> (MC)		DATE/TIME: DATE/TIME: 10/10/19 1345		FOR LAB USE ONLY LAB #: Entered into LIMS: Tracking #:	
RECEIVED BY:		RECEIVED BY LAB: <i>W. Adelman</i> 10/10/19 1345		RELINQUISHED BY:	
Yes No NA (S) No NA		Temperature: Min. 0.4 Max.		SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS # of Coasters Broken Not Present	

Detected App IV Metals: Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Lead, Lithium, Molybdenum, Selenium, and Thallium
 State Metals: As, Ba, Cr, Pb, Sb, Se, V, Zn



Sample Condition Upon Receipt

Client Name: GIA Power

Project # _____

Courier: Fed Ex UPS USPS Client Commercial Pace Other
Tracking #: _____

WO#: **2624186**

PM: **BM** Due Date: **10/17/19**
CLIENT: **GAPower-CCR**

Custody Seal on Cooler/Box Present: yes no Seals intact: yes

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used 83 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 0.4 Biological Tissue is Frozen: Yes No
Temp should be above freezing to 6°C

Date and Initials of person examining contents: 10/10/19 MR

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: _____ Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

December 11, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on October 10, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Kevin Herring for
Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Betsy McDaniel, Atlantic Coast Consulting
Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624187

Pace Analytical Services Atlanta

110 Technology Parkway Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2624187001	Dup-1	Water	10/08/19 00:00	10/10/19 13:15
2624187002	EB-1-10-8-19	Water	10/08/19 16:15	10/10/19 13:15
2624187003	GWC-16	Water	10/08/19 12:30	10/10/19 13:15
2624187004	GWC-21	Water	10/08/19 14:25	10/10/19 13:15
2624187005	GWC-15	Water	10/08/19 15:25	10/10/19 13:15
2624187006	GWC-14	Water	10/08/19 16:30	10/10/19 13:15
2624187007	GWB-4R	Water	10/09/19 11:40	10/10/19 13:15
2624187008	GWC-2	Water	10/09/19 13:00	10/10/19 13:15
2624187009	FB-2-10-9-19	Water	10/09/19 13:20	10/10/19 13:15
2624187010	GWC-20	Water	10/09/19 14:25	10/10/19 13:15
2624187011	GWA-8	Water	10/07/19 17:25	10/10/19 13:15
2624187012	GWA-7	Water	10/08/19 09:45	10/10/19 13:15
2624187013	FB-1-10-8-19	Water	10/08/19 10:40	10/10/19 13:15
2624187014	GWC-13	Water	10/08/19 11:25	10/10/19 13:15
2624187015	GWC-11	Water	10/08/19 15:15	10/10/19 13:15
2624187016	GWC-12	Water	10/09/19 09:55	10/10/19 13:15
2624187017	Dup-2	Water	10/09/19 00:00	10/10/19 13:15
2624187018	GWC-17	Water	10/09/19 11:10	10/10/19 13:15
2624187019	GWC-22	Water	10/09/19 13:18	10/10/19 13:15
2624187020	GWB-6R	Water	10/09/19 15:13	10/10/19 13:15
2624187021	GWB-5R	Water	10/09/19 16:20	10/10/19 13:15
2624187022	GWC-1	Water	10/09/19 15:40	10/10/19 13:15
2624187023	GWC-9	Water	10/09/19 12:10	10/10/19 13:15
2624187024	EB-2-10-9-19	Water	10/09/19 12:30	10/10/19 13:15

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2624187001	Dup-1	EPA 6020B	CSW	16
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2624187002	EB-1-10-8-19	EPA 6020B	CSW	16
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2624187003	GWC-16	EPA 6020B	CSW	16
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2624187004	GWC-21	EPA 6020B	CSW	16
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2624187005	GWC-15	EPA 6020B	CSW	16
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2624187006	GWC-14	EPA 6020B	CSW	16
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2624187007	GWB-4R	EPA 6020B	CSW	16
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2624187008	GWC-2	EPA 6020B	CSW	16
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2624187009	FB-2-10-9-19	EPA 6020B	CSW	16
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2624187010	GWC-20	EPA 6020B	CSW	16
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2624187011	GWA-8	EPA 6020B	CSW	16
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2624187012	GWA-7	EPA 6020B	CSW	16
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2624187013	FB-1-10-8-19	EPA 6020B	CSW	16

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2624187014	GWC-13	SM 2540C	ALW	1
		EPA 300.0	MWB	3
		EPA 6020B	CSW	16
2624187015	GWC-11	SM 2540C	ALW	1
		EPA 300.0	MWB	3
		EPA 6020B	CSW	16
2624187016	GWC-12	SM 2540C	ALW	1
		EPA 300.0	MWB	3
		EPA 6020B	CSW	16
2624187017	Dup-2	SM 2540C	ALW	1
		EPA 300.0	MWB	3
		EPA 6020B	CSW	16
2624187018	GWC-17	SM 2540C	ALW	1
		EPA 300.0	MWB	3
		EPA 6020B	CSW	16
2624187019	GWC-22	SM 2540C	ALW	1
		EPA 300.0	MWB	3
		EPA 6020B	CSW	16
2624187020	GWB-6R	SM 2540C	ALW	1
		EPA 300.0	MWB	3
		EPA 6020B	CSW	16
2624187021	GWB-5R	SM 2540C	ALW	1
		EPA 300.0	MWB	3
		EPA 6020B	CSW	16
2624187022	GWC-1	EPA 7470A	DRB	1
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2624187023	GWC-9	EPA 6020B	CSW	16
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2624187024	EB-2-10-9-19	EPA 6020B	CSW	16
		SM 2540C	ALW	1
		EPA 300.0	MWB	3

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Sample: Dup-1		Lab ID: 2624187001		Collected: 10/08/19 00:00	Received: 10/10/19 13:15	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	10/14/19 14:35	10/17/19 20:00	7440-36-0		
Arsenic	0.089	mg/L	0.0050	0.00035	1	10/14/19 14:35	10/17/19 20:00	7440-38-2		
Barium	0.13	mg/L	0.010	0.00049	1	10/14/19 14:35	10/17/19 20:00	7440-39-3		
Beryllium	0.000088J	mg/L	0.0030	0.000074	1	10/14/19 14:35	10/17/19 20:00	7440-41-7		
Boron	8.4	mg/L	2.0	0.25	50	10/14/19 14:35	10/18/19 17:40	7440-42-8	M6	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/14/19 14:35	10/17/19 20:00	7440-43-9		
Calcium	206	mg/L	5.0	0.55	50	10/14/19 14:35	10/17/19 20:06	7440-70-2	M6	
Chromium	0.00087J	mg/L	0.010	0.00039	1	10/14/19 14:35	10/17/19 20:00	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	10/14/19 14:35	10/17/19 20:00	7440-48-4		
Lead	0.00010J	mg/L	0.0050	0.000046	1	10/14/19 14:35	10/17/19 20:00	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	10/14/19 14:35	10/17/19 20:00	7439-93-2		
Molybdenum	0.20	mg/L	0.010	0.00095	1	10/14/19 14:35	10/17/19 20:00	7439-98-7		
Selenium	0.0024J	mg/L	0.010	0.0013	1	10/14/19 14:35	10/17/19 20:00	7782-49-2		
Thallium	0.00011J	mg/L	0.0010	0.000052	1	10/14/19 14:35	10/17/19 20:00	7440-28-0		
Vanadium	ND	mg/L	0.010	0.00071	1	10/14/19 14:35	10/17/19 20:00	7440-62-2		
Zinc	0.010	mg/L	0.010	0.0015	1	10/14/19 14:35	10/17/19 20:00	7440-66-6	B	
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	1500	mg/L	10.0	10.0	1		10/11/19 11:28			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	45.8	mg/L	1.0	0.024	1		10/15/19 06:03	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		10/15/19 06:03	16984-48-8		
Sulfate	943	mg/L	20.0	0.34	20		10/15/19 22:29	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Sample: EB-1-10-8-19		Lab ID: 2624187002		Collected: 10/08/19 16:15		Received: 10/10/19 13:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00027	1	10/14/19 14:35	10/17/19 20:52	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	10/14/19 14:35	10/17/19 20:52	7440-38-2	
Barium	ND	mg/L	0.010	0.00049	1	10/14/19 14:35	10/17/19 20:52	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	10/14/19 14:35	10/17/19 20:52	7440-41-7	
Boron	0.0089J	mg/L	0.040	0.0049	1	10/14/19 14:35	10/17/19 20:52	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/14/19 14:35	10/17/19 20:52	7440-43-9	
Calcium	0.014J	mg/L	0.10	0.011	1	10/14/19 14:35	10/17/19 20:52	7440-70-2	
Chromium	ND	mg/L	0.010	0.00039	1	10/14/19 14:35	10/17/19 20:52	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	10/14/19 14:35	10/17/19 20:52	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	10/14/19 14:35	10/17/19 20:52	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	10/14/19 14:35	10/17/19 20:52	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	10/14/19 14:35	10/17/19 20:52	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	10/14/19 14:35	10/17/19 20:52	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	10/14/19 14:35	10/17/19 20:52	7440-28-0	
Vanadium	ND	mg/L	0.010	0.00071	1	10/14/19 14:35	10/17/19 20:52	7440-62-2	
Zinc	0.0046J	mg/L	0.010	0.0015	1	10/14/19 14:35	10/17/19 20:52	7440-66-6	B
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	20.0	mg/L	10.0	10.0	1		10/11/19 11:29		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	ND	mg/L	1.0	0.024	1		10/15/19 06:25	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/15/19 06:25	16984-48-8	
Sulfate	0.26J	mg/L	1.0	0.017	1		10/15/19 06:25	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Sample: GWC-16 Lab ID: 2624187003 Collected: 10/08/19 12:30 Received: 10/10/19 13:15 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Antimony	ND	mg/L	0.0030	0.00027	1	10/14/19 14:35	10/17/19 20:57	7440-36-0	
Arsenic	0.088	mg/L	0.0050	0.00035	1	10/14/19 14:35	10/17/19 20:57	7440-38-2	
Barium	0.13	mg/L	0.010	0.00049	1	10/14/19 14:35	10/17/19 20:57	7440-39-3	
Beryllium	0.000098J	mg/L	0.0030	0.000074	1	10/14/19 14:35	10/17/19 20:57	7440-41-7	
Boron	8.4	mg/L	2.0	0.25	50	10/14/19 14:35	10/18/19 17:45	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/14/19 14:35	10/17/19 20:57	7440-43-9	
Calcium	205	mg/L	5.0	0.55	50	10/14/19 14:35	10/17/19 21:03	7440-70-2	
Chromium	0.00099J	mg/L	0.010	0.00039	1	10/14/19 14:35	10/17/19 20:57	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	10/14/19 14:35	10/17/19 20:57	7440-48-4	
Lead	0.00010J	mg/L	0.0050	0.000046	1	10/14/19 14:35	10/17/19 20:57	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	10/14/19 14:35	10/17/19 20:57	7439-93-2	
Molybdenum	0.20	mg/L	0.010	0.00095	1	10/14/19 14:35	10/17/19 20:57	7439-98-7	
Selenium	0.0023J	mg/L	0.010	0.0013	1	10/14/19 14:35	10/17/19 20:57	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	10/14/19 14:35	10/17/19 20:57	7440-28-0	
Vanadium	ND	mg/L	0.010	0.00071	1	10/14/19 14:35	10/17/19 20:57	7440-62-2	
Zinc	0.010	mg/L	0.010	0.0015	1	10/14/19 14:35	10/17/19 20:57	7440-66-6	B
2540C Total Dissolved Solids Analytical Method: SM 2540C									
Total Dissolved Solids	1500	mg/L	10.0	10.0	1		10/11/19 11:29		
300.0 IC Anions 28 Days Analytical Method: EPA 300.0									
Chloride	46.4	mg/L	1.0	0.024	1		10/15/19 07:53	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/15/19 07:53	16984-48-8	
Sulfate	872	mg/L	50.0	0.85	50		10/15/19 22:52	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Sample: GWC-21		Lab ID: 2624187004		Collected: 10/08/19 14:25		Received: 10/10/19 13:15		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Beryllium	ND	mg/L	0.0030	0.000074	1	10/14/19 14:35	10/17/19 21:09	7440-41-7		
Boron	1.0	mg/L	0.040	0.0049	1	10/14/19 14:35	10/17/19 21:09	7440-42-8		
Chromium	0.00065J	mg/L	0.010	0.00039	1	10/14/19 14:35	10/17/19 21:09	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	10/14/19 14:35	10/17/19 21:09	7440-48-4		
Arsenic	0.0028J	mg/L	0.0050	0.00035	1	10/14/19 14:35	10/17/19 21:09	7440-38-2		
Selenium	0.019	mg/L	0.010	0.0013	1	10/14/19 14:35	10/17/19 21:09	7782-49-2		
Molybdenum	0.078	mg/L	0.010	0.00095	1	10/14/19 14:35	10/17/19 21:09	7439-98-7		
Cadmium	ND	mg/L	0.0025	0.00011	1	10/14/19 14:35	10/17/19 21:09	7440-43-9		
Antimony	ND	mg/L	0.0030	0.00027	1	10/14/19 14:35	10/17/19 21:09	7440-36-0		
Barium	0.079	mg/L	0.010	0.00049	1	10/14/19 14:35	10/17/19 21:09	7440-39-3		
Thallium	ND	mg/L	0.0010	0.000052	1	10/14/19 14:35	10/17/19 21:09	7440-28-0		
Lead	0.00016J	mg/L	0.0050	0.000046	1	10/14/19 14:35	10/17/19 21:09	7439-92-1		
Calcium	49.5	mg/L	1.0	0.11	10	10/14/19 14:35	10/18/19 17:51	7440-70-2		
Lithium	ND	mg/L	0.030	0.00078	1	10/14/19 14:35	10/17/19 21:09	7439-93-2		
Vanadium	ND	mg/L	0.010	0.00071	1	10/14/19 14:35	10/17/19 21:09	7440-62-2		
Zinc	0.0071J	mg/L	0.010	0.0015	1	10/14/19 14:35	10/17/19 21:09	7440-66-6	B	
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	278	mg/L	10.0	10.0	1		10/11/19 11:29			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	7.8	mg/L	1.0	0.024	1		10/15/19 08:15	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		10/15/19 08:15	16984-48-8		
Sulfate	85.6	mg/L	5.0	0.085	5		10/15/19 23:36	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Sample: GWC-15		Lab ID: 2624187005		Collected: 10/08/19 15:25	Received: 10/10/19 13:15	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	10/14/19 14:35	10/17/19 21:20	7440-36-0		
Arsenic	0.13	mg/L	0.0050	0.00035	1	10/14/19 14:35	10/17/19 21:20	7440-38-2		
Barium	0.057	mg/L	0.010	0.00049	1	10/14/19 14:35	10/17/19 21:20	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	10/14/19 14:35	10/17/19 21:20	7440-41-7		
Boron	1.1	mg/L	0.40	0.049	10	10/14/19 14:35	10/18/19 17:57	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00011	1	10/14/19 14:35	10/17/19 21:20	7440-43-9		
Calcium	129	mg/L	5.0	0.55	50	10/14/19 14:35	10/17/19 21:26	7440-70-2		
Chromium	0.0017J	mg/L	0.010	0.00039	1	10/14/19 14:35	10/17/19 21:20	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	10/14/19 14:35	10/17/19 21:20	7440-48-4		
Lead	0.00012J	mg/L	0.0050	0.000046	1	10/14/19 14:35	10/17/19 21:20	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	10/14/19 14:35	10/17/19 21:20	7439-93-2		
Molybdenum	0.091	mg/L	0.010	0.00095	1	10/14/19 14:35	10/17/19 21:20	7439-98-7		
Selenium	0.014	mg/L	0.010	0.0013	1	10/14/19 14:35	10/17/19 21:20	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	10/14/19 14:35	10/17/19 21:20	7440-28-0		
Vanadium	ND	mg/L	0.010	0.00071	1	10/14/19 14:35	10/17/19 21:20	7440-62-2		
Zinc	0.0051J	mg/L	0.010	0.0015	1	10/14/19 14:35	10/17/19 21:20	7440-66-6	B	
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	526	mg/L	10.0	10.0	1		10/14/19 11:50			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	2.9	mg/L	1.0	0.024	1		10/15/19 08:37	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		10/15/19 08:37	16984-48-8		
Sulfate	45.8	mg/L	1.0	0.017	1		10/15/19 08:37	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Sample: GWC-14 Lab ID: 2624187006 Collected: 10/08/19 16:30 Received: 10/10/19 13:15 Matrix: Water									
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Antimony	ND	mg/L	0.0030	0.00027	1	10/14/19 14:35	10/17/19 21:32	7440-36-0	
Arsenic	0.0017J	mg/L	0.0050	0.00035	1	10/14/19 14:35	10/17/19 21:32	7440-38-2	
Barium	0.085	mg/L	0.010	0.00049	1	10/14/19 14:35	10/17/19 21:32	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	10/14/19 14:35	10/17/19 21:32	7440-41-7	
Boron	0.048	mg/L	0.040	0.0049	1	10/14/19 14:35	10/17/19 21:32	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/14/19 14:35	10/17/19 21:32	7440-43-9	
Calcium	146	mg/L	5.0	0.55	50	10/14/19 14:35	10/17/19 21:38	7440-70-2	
Chromium	0.00053J	mg/L	0.010	0.00039	1	10/14/19 14:35	10/17/19 21:32	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	10/14/19 14:35	10/17/19 21:32	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	10/14/19 14:35	10/17/19 21:32	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	10/14/19 14:35	10/17/19 21:32	7439-93-2	
Molybdenum	0.034	mg/L	0.010	0.00095	1	10/14/19 14:35	10/17/19 21:32	7439-98-7	
Selenium	0.0026J	mg/L	0.010	0.0013	1	10/14/19 14:35	10/17/19 21:32	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	10/14/19 14:35	10/17/19 21:32	7440-28-0	
Vanadium	ND	mg/L	0.010	0.00071	1	10/14/19 14:35	10/17/19 21:32	7440-62-2	
Zinc	0.0052J	mg/L	0.010	0.0015	1	10/14/19 14:35	10/17/19 21:32	7440-66-6	B
2540C Total Dissolved Solids Analytical Method: SM 2540C									
Total Dissolved Solids	841	mg/L	10.0	10.0	1		10/14/19 11:50		
300.0 IC Anions 28 Days Analytical Method: EPA 300.0									
Chloride	40.2	mg/L	1.0	0.024	1		10/16/19 01:26	16887-00-6	M1
Fluoride	ND	mg/L	0.30	0.029	1		10/16/19 01:26	16984-48-8	
Sulfate	428	mg/L	50.0	0.85	50		10/16/19 22:49	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Sample: GWB-4R		Lab ID: 2624187007		Collected: 10/09/19 11:40		Received: 10/10/19 13:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00027	1	10/14/19 14:35	10/17/19 21:55	7440-36-0	
Arsenic	0.0024J	mg/L	0.0050	0.00035	1	10/14/19 14:35	10/17/19 21:55	7440-38-2	
Barium	0.076	mg/L	0.010	0.00049	1	10/14/19 14:35	10/17/19 21:55	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	10/14/19 14:35	10/17/19 21:55	7440-41-7	
Boron	5.7	mg/L	2.0	0.25	50	10/14/19 14:35	10/17/19 22:00	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/14/19 14:35	10/17/19 21:55	7440-43-9	
Calcium	46.7	mg/L	5.0	0.55	50	10/14/19 14:35	10/17/19 22:00	7440-70-2	
Chromium	0.0020J	mg/L	0.010	0.00039	1	10/14/19 14:35	10/17/19 21:55	7440-47-3	
Cobalt	0.0015J	mg/L	0.0050	0.00030	1	10/14/19 14:35	10/17/19 21:55	7440-48-4	
Lead	0.00041J	mg/L	0.0050	0.000046	1	10/14/19 14:35	10/17/19 21:55	7439-92-1	
Lithium	0.013J	mg/L	0.030	0.00078	1	10/14/19 14:35	10/17/19 21:55	7439-93-2	
Molybdenum	0.10	mg/L	0.010	0.00095	1	10/14/19 14:35	10/17/19 21:55	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	10/14/19 14:35	10/17/19 21:55	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	10/14/19 14:35	10/17/19 21:55	7440-28-0	
Vanadium	ND	mg/L	0.010	0.00071	1	10/14/19 14:35	10/17/19 21:55	7440-62-2	
Zinc	0.0064J	mg/L	0.010	0.0015	1	10/14/19 14:35	10/17/19 21:55	7440-66-6	B
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	502	mg/L	10.0	10.0	1		10/15/19 17:20		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	32.1	mg/L	1.0	0.024	1		10/16/19 02:32	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/16/19 02:32	16984-48-8	
Sulfate	38.5	mg/L	10.0	0.17	10		10/16/19 23:11	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Sample: GWC-2 Lab ID: 2624187008 Collected: 10/09/19 13:00 Received: 10/10/19 13:15 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Antimony	ND	mg/L	0.0030	0.00027	1	10/14/19 14:35	10/17/19 22:06	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	10/14/19 14:35	10/17/19 22:06	7440-38-2	
Barium	0.050	mg/L	0.010	0.00049	1	10/14/19 14:35	10/17/19 22:06	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	10/14/19 14:35	10/17/19 22:06	7440-41-7	
Boron	0.024J	mg/L	0.040	0.0049	1	10/14/19 14:35	10/17/19 22:06	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/14/19 14:35	10/17/19 22:06	7440-43-9	
Calcium	0.18	mg/L	0.10	0.011	1	10/14/19 14:35	10/17/19 22:06	7440-70-2	
Chromium	0.00049J	mg/L	0.010	0.00039	1	10/14/19 14:35	10/17/19 22:06	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	10/14/19 14:35	10/17/19 22:06	7440-48-4	
Lead	0.000064J	mg/L	0.0050	0.000046	1	10/14/19 14:35	10/17/19 22:06	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	10/14/19 14:35	10/17/19 22:06	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	10/14/19 14:35	10/17/19 22:06	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	10/14/19 14:35	10/17/19 22:06	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	10/14/19 14:35	10/17/19 22:06	7440-28-0	
Vanadium	ND	mg/L	0.010	0.00071	1	10/14/19 14:35	10/17/19 22:06	7440-62-2	
Zinc	0.0050J	mg/L	0.010	0.0015	1	10/14/19 14:35	10/17/19 22:06	7440-66-6	B
2540C Total Dissolved Solids Analytical Method: SM 2540C									
Total Dissolved Solids	46.0	mg/L	10.0	10.0	1		10/15/19 17:20		
300.0 IC Anions 28 Days Analytical Method: EPA 300.0									
Chloride	7.0	mg/L	1.0	0.024	1		10/16/19 02:55	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/16/19 02:55	16984-48-8	
Sulfate	10.1	mg/L	1.0	0.017	1		10/16/19 02:55	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Sample: FB-2-10-9-19		Lab ID: 2624187009		Collected: 10/09/19 13:20		Received: 10/10/19 13:15		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	10/14/19 14:35	10/17/19 22:18	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	10/14/19 14:35	10/17/19 22:18	7440-38-2		
Barium	ND	mg/L	0.010	0.00049	1	10/14/19 14:35	10/17/19 22:18	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	10/14/19 14:35	10/17/19 22:18	7440-41-7		
Boron	ND	mg/L	0.040	0.0049	1	10/14/19 14:35	10/17/19 22:18	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00011	1	10/14/19 14:35	10/17/19 22:18	7440-43-9		
Calcium	0.027J	mg/L	0.10	0.011	1	10/14/19 14:35	10/17/19 22:18	7440-70-2		
Chromium	ND	mg/L	0.010	0.00039	1	10/14/19 14:35	10/17/19 22:18	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	10/14/19 14:35	10/17/19 22:18	7440-48-4		
Lead	ND	mg/L	0.0050	0.000046	1	10/14/19 14:35	10/17/19 22:18	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	10/14/19 14:35	10/17/19 22:18	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	10/14/19 14:35	10/17/19 22:18	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	10/14/19 14:35	10/17/19 22:18	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	10/14/19 14:35	10/17/19 22:18	7440-28-0		
Vanadium	ND	mg/L	0.010	0.00071	1	10/14/19 14:35	10/17/19 22:18	7440-62-2		
Zinc	0.0049J	mg/L	0.010	0.0015	1	10/14/19 14:35	10/17/19 22:18	7440-66-6	B	
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		10/15/19 17:20			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	ND	mg/L	1.0	0.024	1		10/16/19 03:17	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		10/16/19 03:17	16984-48-8		
Sulfate	0.13J	mg/L	1.0	0.017	1		10/16/19 03:17	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Sample: GWC-20		Lab ID: 2624187010		Collected: 10/09/19 14:25		Received: 10/10/19 13:15		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	10/14/19 14:35	10/17/19 22:23	7440-36-0		
Arsenic	0.35	mg/L	0.0050	0.00035	1	10/14/19 14:35	10/17/19 22:23	7440-38-2		
Barium	0.078	mg/L	0.010	0.00049	1	10/14/19 14:35	10/17/19 22:23	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	10/14/19 14:35	10/17/19 22:23	7440-41-7		
Boron	0.79	mg/L	0.040	0.0049	1	10/14/19 14:35	10/17/19 22:23	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00011	1	10/14/19 14:35	10/17/19 22:23	7440-43-9		
Calcium	80.1	mg/L	5.0	0.55	50	10/14/19 14:35	10/17/19 22:29	7440-70-2		
Chromium	0.0011J	mg/L	0.010	0.00039	1	10/14/19 14:35	10/17/19 22:23	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	10/14/19 14:35	10/17/19 22:23	7440-48-4		
Lead	0.00018J	mg/L	0.0050	0.000046	1	10/14/19 14:35	10/17/19 22:23	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	10/14/19 14:35	10/17/19 22:23	7439-93-2		
Molybdenum	0.071	mg/L	0.010	0.00095	1	10/14/19 14:35	10/17/19 22:23	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	10/14/19 14:35	10/17/19 22:23	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	10/14/19 14:35	10/17/19 22:23	7440-28-0		
Vanadium	ND	mg/L	0.010	0.00071	1	10/14/19 14:35	10/17/19 22:23	7440-62-2		
Zinc	0.0049J	mg/L	0.010	0.0015	1	10/14/19 14:35	10/17/19 22:23	7440-66-6	B	
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	434	mg/L	10.0	10.0	1		10/15/19 17:20			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	5.4	mg/L	1.0	0.024	1		10/16/19 03:39	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		10/16/19 03:39	16984-48-8		
Sulfate	58.5	mg/L	10.0	0.17	10		10/16/19 23:33	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Sample: GWA-8		Lab ID: 2624187011		Collected: 10/07/19 17:25		Received: 10/10/19 13:15		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00027	1	10/14/19 14:35	10/17/19 22:35	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	10/14/19 14:35	10/17/19 22:35	7440-38-2	
Barium	0.069	mg/L	0.010	0.00049	1	10/14/19 14:35	10/17/19 22:35	7440-39-3	
Beryllium	0.00024J	mg/L	0.0030	0.000074	1	10/14/19 14:35	10/17/19 22:35	7440-41-7	
Boron	0.12	mg/L	0.040	0.0049	1	10/14/19 14:35	10/17/19 22:35	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/14/19 14:35	10/17/19 22:35	7440-43-9	
Calcium	31.6	mg/L	5.0	0.55	50	10/14/19 14:35	10/17/19 22:41	7440-70-2	
Chromium	0.00052J	mg/L	0.010	0.00039	1	10/14/19 14:35	10/17/19 22:35	7440-47-3	
Cobalt	0.00046J	mg/L	0.0050	0.00030	1	10/14/19 14:35	10/17/19 22:35	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	10/14/19 14:35	10/17/19 22:35	7439-92-1	
Lithium	0.0012J	mg/L	0.030	0.00078	1	10/14/19 14:35	10/17/19 22:35	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	10/14/19 14:35	10/17/19 22:35	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	10/14/19 14:35	10/17/19 22:35	7782-49-2	
Thallium	0.000062J	mg/L	0.0010	0.000052	1	10/14/19 14:35	10/17/19 22:35	7440-28-0	
Vanadium	ND	mg/L	0.010	0.00071	1	10/14/19 14:35	10/17/19 22:35	7440-62-2	
Zinc	0.0077J	mg/L	0.010	0.0015	1	10/14/19 14:35	10/17/19 22:35	7440-66-6	B
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	275	mg/L	10.0	10.0	1		10/11/19 11:27		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	18.0	mg/L	1.0	0.024	1		10/16/19 04:01	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/16/19 04:01	16984-48-8	
Sulfate	156	mg/L	10.0	0.17	10		10/16/19 23:55	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Sample: GWA-7 Lab ID: 2624187012 Collected: 10/08/19 09:45 Received: 10/10/19 13:15 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Antimony	ND	mg/L	0.015	0.0014	5	10/14/19 14:35	10/17/19 22:58	7440-36-0	D3
Arsenic	0.0030J	mg/L	0.025	0.0018	5	10/14/19 14:35	10/17/19 22:58	7440-38-2	D3
Barium	0.10	mg/L	0.050	0.0024	5	10/14/19 14:35	10/17/19 22:58	7440-39-3	
Beryllium	ND	mg/L	0.015	0.00037	5	10/14/19 14:35	10/17/19 22:58	7440-41-7	D3
Boron	6.4	mg/L	0.20	0.025	5	10/14/19 14:35	10/17/19 22:58	7440-42-8	
Cadmium	ND	mg/L	0.012	0.00057	5	10/14/19 14:35	10/17/19 22:58	7440-43-9	D3
Calcium	3.5	mg/L	0.50	0.055	5	10/14/19 14:35	10/17/19 22:58	7440-70-2	
Chromium	0.021J	mg/L	0.050	0.0020	5	10/14/19 14:35	10/17/19 22:58	7440-47-3	D3
Cobalt	0.0028J	mg/L	0.025	0.0015	5	10/14/19 14:35	10/17/19 22:58	7440-48-4	D3
Lead	0.0098J	mg/L	0.025	0.00023	5	10/14/19 14:35	10/17/19 22:58	7439-92-1	D3
Lithium	ND	mg/L	0.15	0.0039	5	10/14/19 14:35	10/17/19 22:58	7439-93-2	D3
Molybdenum	ND	mg/L	0.050	0.0047	5	10/14/19 14:35	10/17/19 22:58	7439-98-7	D3
Selenium	0.0072J	mg/L	0.050	0.0063	5	10/14/19 14:35	10/17/19 22:58	7782-49-2	D3
Thallium	ND	mg/L	0.0050	0.00026	5	10/14/19 14:35	10/17/19 22:58	7440-28-0	D3
Vanadium	0.11	mg/L	0.050	0.0035	5	10/14/19 14:35	10/17/19 22:58	7440-62-2	
Zinc	0.095	mg/L	0.050	0.0077	5	10/14/19 14:35	10/17/19 22:58	7440-66-6	B
2540C Total Dissolved Solids Analytical Method: SM 2540C									
Total Dissolved Solids	1840	mg/L	10.0	10.0	1		10/14/19 11:51		
300.0 IC Anions 28 Days Analytical Method: EPA 300.0									
Chloride	125	mg/L	20.0	0.48	20		10/17/19 00:18	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/16/19 04:23	16984-48-8	
Sulfate	32.8	mg/L	1.0	0.017	1		10/16/19 04:23	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Sample: FB-1-10-8-19		Lab ID: 2624187013		Collected: 10/08/19 10:40	Received: 10/10/19 13:15	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	10/14/19 14:35	10/17/19 23:09	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	10/14/19 14:35	10/17/19 23:09	7440-38-2		
Barium	ND	mg/L	0.010	0.00049	1	10/14/19 14:35	10/17/19 23:09	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	10/14/19 14:35	10/17/19 23:09	7440-41-7		
Boron	ND	mg/L	0.040	0.0049	1	10/14/19 14:35	10/17/19 23:09	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00011	1	10/14/19 14:35	10/17/19 23:09	7440-43-9		
Calcium	ND	mg/L	0.10	0.011	1	10/14/19 14:35	10/17/19 23:09	7440-70-2		
Chromium	ND	mg/L	0.010	0.00039	1	10/14/19 14:35	10/17/19 23:09	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	10/14/19 14:35	10/17/19 23:09	7440-48-4		
Lead	ND	mg/L	0.0050	0.000046	1	10/14/19 14:35	10/17/19 23:09	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	10/14/19 14:35	10/17/19 23:09	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	10/14/19 14:35	10/17/19 23:09	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	10/14/19 14:35	10/17/19 23:09	7782-49-2		
Thallium	ND	mg/L	0.0010	0.000052	1	10/14/19 14:35	10/17/19 23:09	7440-28-0		
Vanadium	ND	mg/L	0.010	0.00071	1	10/14/19 14:35	10/17/19 23:09	7440-62-2		
Zinc	0.0044J	mg/L	0.010	0.0015	1	10/14/19 14:35	10/17/19 23:09	7440-66-6	B	
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	16.0	mg/L	10.0	10.0	1		10/14/19 11:51			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	0.038J	mg/L	1.0	0.024	1		10/16/19 04:45	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		10/16/19 04:45	16984-48-8		
Sulfate	0.20J	mg/L	1.0	0.017	1		10/16/19 04:45	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624187

Sample: GWC-13		Lab ID: 2624187014		Collected: 10/08/19 11:25		Received: 10/10/19 13:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00027	1	10/14/19 14:35	10/17/19 23:15	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	10/14/19 14:35	10/17/19 23:15	7440-38-2	
Barium	0.024	mg/L	0.010	0.00049	1	10/14/19 14:35	10/17/19 23:15	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	10/14/19 14:35	10/17/19 23:15	7440-41-7	
Boron	0.18	mg/L	0.040	0.0049	1	10/14/19 14:35	10/17/19 23:15	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/14/19 14:35	10/17/19 23:15	7440-43-9	
Calcium	2.3	mg/L	0.10	0.011	1	10/14/19 14:35	10/17/19 23:15	7440-70-2	
Chromium	ND	mg/L	0.010	0.00039	1	10/14/19 14:35	10/17/19 23:15	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	10/14/19 14:35	10/17/19 23:15	7440-48-4	
Lead	0.00013J	mg/L	0.0050	0.000046	1	10/14/19 14:35	10/17/19 23:15	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	10/14/19 14:35	10/17/19 23:15	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	10/14/19 14:35	10/17/19 23:15	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	10/14/19 14:35	10/17/19 23:15	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	10/14/19 14:35	10/17/19 23:15	7440-28-0	
Vanadium	ND	mg/L	0.010	0.00071	1	10/14/19 14:35	10/17/19 23:15	7440-62-2	
Zinc	0.053	mg/L	0.010	0.0015	1	10/14/19 14:35	10/17/19 23:15	7440-66-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	51.0	mg/L	10.0	10.0	1		10/14/19 11:51		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	4.0	mg/L	1.0	0.024	1		10/16/19 06:13	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/16/19 06:13	16984-48-8	
Sulfate	22.0	mg/L	1.0	0.017	1		10/16/19 06:13	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Sample: GWC-11		Lab ID: 2624187015		Collected: 10/08/19 15:15		Received: 10/10/19 13:15		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	0.00046J	mg/L	0.0030	0.00027	1	10/14/19 14:35	10/17/19 23:26	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	10/14/19 14:35	10/17/19 23:26	7440-38-2		
Barium	0.13	mg/L	0.010	0.00049	1	10/14/19 14:35	10/17/19 23:26	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000074	1	10/14/19 14:35	10/17/19 23:26	7440-41-7		
Boron	0.22	mg/L	0.040	0.0049	1	10/14/19 14:35	10/17/19 23:26	7440-42-8		
Cadmium	0.00043J	mg/L	0.0025	0.00011	1	10/14/19 14:35	10/17/19 23:26	7440-43-9		
Calcium	69.2	mg/L	5.0	0.55	50	10/14/19 14:35	10/17/19 23:32	7440-70-2		
Chromium	0.00091J	mg/L	0.010	0.00039	1	10/14/19 14:35	10/17/19 23:26	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00030	1	10/14/19 14:35	10/17/19 23:26	7440-48-4		
Lead	0.00028J	mg/L	0.0050	0.000046	1	10/14/19 14:35	10/17/19 23:26	7439-92-1		
Lithium	ND	mg/L	0.030	0.00078	1	10/14/19 14:35	10/17/19 23:26	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	10/14/19 14:35	10/17/19 23:26	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	10/14/19 14:35	10/17/19 23:26	7782-49-2		
Thallium	0.000098J	mg/L	0.0010	0.000052	1	10/14/19 14:35	10/17/19 23:26	7440-28-0		
Vanadium	ND	mg/L	0.010	0.00071	1	10/14/19 14:35	10/17/19 23:26	7440-62-2		
Zinc	0.0061J	mg/L	0.010	0.0015	1	10/14/19 14:35	10/17/19 23:26	7440-66-6	B	
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	613	mg/L	10.0	10.0	1		10/14/19 11:51			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	89.0	mg/L	10.0	0.24	10		10/17/19 00:40	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		10/16/19 06:36	16984-48-8		
Sulfate	310	mg/L	10.0	0.17	10		10/17/19 00:40	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Sample: GWC-12		Lab ID: 2624187016		Collected: 10/09/19 09:55	Received: 10/10/19 13:15	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	10/14/19 14:35	10/17/19 23:38	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00035	1	10/14/19 14:35	10/17/19 23:38	7440-38-2		
Barium	0.019	mg/L	0.010	0.00049	1	10/14/19 14:35	10/17/19 23:38	7440-39-3		
Beryllium	0.00046J	mg/L	0.0030	0.000074	1	10/14/19 14:35	10/17/19 23:38	7440-41-7		
Boron	8.2	mg/L	2.0	0.25	50	10/14/19 14:35	10/17/19 23:43	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00011	1	10/14/19 14:35	10/17/19 23:38	7440-43-9		
Calcium	54.2	mg/L	5.0	0.55	50	10/14/19 14:35	10/17/19 23:43	7440-70-2		
Chromium	0.00081J	mg/L	0.010	0.00039	1	10/14/19 14:35	10/17/19 23:38	7440-47-3		
Cobalt	0.00094J	mg/L	0.0050	0.00030	1	10/14/19 14:35	10/17/19 23:38	7440-48-4		
Lead	0.000066J	mg/L	0.0050	0.000046	1	10/14/19 14:35	10/17/19 23:38	7439-92-1		
Lithium	0.0011J	mg/L	0.030	0.00078	1	10/14/19 14:35	10/17/19 23:38	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00095	1	10/14/19 14:35	10/17/19 23:38	7439-98-7		
Selenium	ND	mg/L	0.010	0.0013	1	10/14/19 14:35	10/17/19 23:38	7782-49-2		
Thallium	0.00014J	mg/L	0.0010	0.000052	1	10/14/19 14:35	10/17/19 23:38	7440-28-0		
Vanadium	0.0021J	mg/L	0.010	0.00071	1	10/14/19 14:35	10/17/19 23:38	7440-62-2		
Zinc	0.0057J	mg/L	0.010	0.0015	1	10/14/19 14:35	10/17/19 23:38	7440-66-6	B	
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	647	mg/L	10.0	10.0	1		10/15/19 17:20			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	44.1	mg/L	1.0	0.024	1		10/16/19 07:20	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		10/16/19 07:20	16984-48-8		
Sulfate	392	mg/L	50.0	0.85	50		10/17/19 01:02	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Sample: Dup-2		Lab ID: 2624187017		Collected: 10/09/19 00:00		Received: 10/10/19 13:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00027	1	10/14/19 14:35	10/18/19 00:01	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	10/14/19 14:35	10/18/19 00:01	7440-38-2	
Barium	0.018	mg/L	0.010	0.00049	1	10/14/19 14:35	10/18/19 00:01	7440-39-3	
Beryllium	0.00055J	mg/L	0.0030	0.000074	1	10/14/19 14:35	10/18/19 00:01	7440-41-7	
Boron	8.0	mg/L	2.0	0.25	50	10/14/19 14:35	10/18/19 00:06	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/14/19 14:35	10/18/19 00:01	7440-43-9	
Calcium	56.7	mg/L	5.0	0.55	50	10/14/19 14:35	10/18/19 00:06	7440-70-2	
Chromium	0.0010J	mg/L	0.010	0.00039	1	10/14/19 14:35	10/18/19 00:01	7440-47-3	
Cobalt	0.00092J	mg/L	0.0050	0.00030	1	10/14/19 14:35	10/18/19 00:01	7440-48-4	
Lead	0.000060J	mg/L	0.0050	0.000046	1	10/14/19 14:35	10/18/19 00:01	7439-92-1	
Lithium	0.0010J	mg/L	0.030	0.00078	1	10/14/19 14:35	10/18/19 00:01	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	10/14/19 14:35	10/18/19 00:01	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	10/14/19 14:35	10/18/19 00:01	7782-49-2	
Thallium	0.00014J	mg/L	0.0010	0.000052	1	10/14/19 14:35	10/18/19 00:01	7440-28-0	
Vanadium	0.00099J	mg/L	0.010	0.00071	1	10/14/19 14:35	10/18/19 00:01	7440-62-2	
Zinc	0.0060J	mg/L	0.010	0.0015	1	10/14/19 14:35	10/18/19 00:01	7440-66-6	B
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	705	mg/L	10.0	10.0	1		10/15/19 17:20		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	43.3	mg/L	1.0	0.024	1		10/16/19 07:42	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/16/19 07:42	16984-48-8	
Sulfate	433	mg/L	10.0	0.17	10		10/17/19 01:24	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Sample: GWC-17 Lab ID: 2624187018 Collected: 10/09/19 11:10 Received: 10/10/19 13:15 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Antimony	ND	mg/L	0.0030	0.00027	1	10/14/19 14:35	10/18/19 00:12	7440-36-0	
Arsenic	0.0011J	mg/L	0.0050	0.00035	1	10/14/19 14:35	10/18/19 00:12	7440-38-2	
Barium	0.032	mg/L	0.010	0.00049	1	10/14/19 14:35	10/18/19 00:12	7440-39-3	
Beryllium	0.0018J	mg/L	0.0030	0.000074	1	10/14/19 14:35	10/18/19 00:12	7440-41-7	
Boron	1.3	mg/L	0.040	0.0049	1	10/14/19 14:35	10/18/19 00:12	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/14/19 14:35	10/18/19 00:12	7440-43-9	
Calcium	56.6	mg/L	5.0	0.55	50	10/14/19 14:35	10/18/19 00:18	7440-70-2	
Chromium	0.00081J	mg/L	0.010	0.00039	1	10/14/19 14:35	10/18/19 00:12	7440-47-3	
Cobalt	0.0024J	mg/L	0.0050	0.00030	1	10/14/19 14:35	10/18/19 00:12	7440-48-4	
Lead	0.00015J	mg/L	0.0050	0.000046	1	10/14/19 14:35	10/18/19 00:12	7439-92-1	
Lithium	0.0046J	mg/L	0.030	0.00078	1	10/14/19 14:35	10/18/19 00:12	7439-93-2	
Molybdenum	0.0036J	mg/L	0.010	0.00095	1	10/14/19 14:35	10/18/19 00:12	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	10/14/19 14:35	10/18/19 00:12	7782-49-2	
Thallium	0.000076J	mg/L	0.0010	0.000052	1	10/14/19 14:35	10/18/19 00:12	7440-28-0	
Vanadium	ND	mg/L	0.010	0.00071	1	10/14/19 14:35	10/18/19 00:12	7440-62-2	
Zinc	0.011	mg/L	0.010	0.0015	1	10/14/19 14:35	10/18/19 00:12	7440-66-6	B
2540C Total Dissolved Solids Analytical Method: SM 2540C									
Total Dissolved Solids	1100	mg/L	10.0	10.0	1		10/15/19 17:20		
300.0 IC Anions 28 Days Analytical Method: EPA 300.0									
Chloride	330	mg/L	100	2.4	100		10/17/19 01:46	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/16/19 08:04	16984-48-8	
Sulfate	346	mg/L	100	1.7	100		10/17/19 01:46	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Sample: GWC-22 Lab ID: 2624187019 Collected: 10/09/19 13:18 Received: 10/10/19 13:15 Matrix: Water									
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Antimony	ND	mg/L	0.0030	0.00027	1	10/14/19 14:35	10/18/19 00:24	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	10/14/19 14:35	10/18/19 00:24	7440-38-2	
Barium	0.065	mg/L	0.010	0.00049	1	10/14/19 14:35	10/18/19 00:24	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	10/14/19 14:35	10/18/19 00:24	7440-41-7	
Boron	0.39	mg/L	0.040	0.0049	1	10/14/19 14:35	10/18/19 00:24	7440-42-8	
Cadmium	0.00012J	mg/L	0.0025	0.00011	1	10/14/19 14:35	10/18/19 00:24	7440-43-9	
Calcium	30.1	mg/L	5.0	0.55	50	10/14/19 14:35	10/18/19 00:29	7440-70-2	
Chromium	0.00072J	mg/L	0.010	0.00039	1	10/14/19 14:35	10/18/19 00:24	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	10/14/19 14:35	10/18/19 00:24	7440-48-4	
Lead	0.00032J	mg/L	0.0050	0.000046	1	10/14/19 14:35	10/18/19 00:24	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	10/14/19 14:35	10/18/19 00:24	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	10/14/19 14:35	10/18/19 00:24	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	10/14/19 14:35	10/18/19 00:24	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	10/14/19 14:35	10/18/19 00:24	7440-28-0	
Vanadium	ND	mg/L	0.010	0.00071	1	10/14/19 14:35	10/18/19 00:24	7440-62-2	
Zinc	0.0079J	mg/L	0.010	0.0015	1	10/14/19 14:35	10/18/19 00:24	7440-66-6	B
2540C Total Dissolved Solids Analytical Method: SM 2540C									
Total Dissolved Solids	211	mg/L	10.0	10.0	1		10/15/19 17:21		
300.0 IC Anions 28 Days Analytical Method: EPA 300.0									
Chloride	25.3	mg/L	1.0	0.024	1		10/16/19 08:26	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/16/19 08:26	16984-48-8	
Sulfate	80.2	mg/L	20.0	0.34	20		10/17/19 02:08	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624187

Sample: GWB-6R		Lab ID: 2624187020		Collected: 10/09/19 15:13	Received: 10/10/19 13:15	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.015	0.0014	5	10/14/19 14:35	10/18/19 00:35	7440-36-0	D3	
Arsenic	0.0018J	mg/L	0.025	0.0018	5	10/14/19 14:35	10/18/19 00:35	7440-38-2	D3	
Barium	0.014J	mg/L	0.050	0.0024	5	10/14/19 14:35	10/18/19 00:35	7440-39-3	D3	
Beryllium	ND	mg/L	0.015	0.00037	5	10/14/19 14:35	10/18/19 00:35	7440-41-7	D3	
Boron	6.3	mg/L	0.20	0.025	5	10/14/19 14:35	10/18/19 00:35	7440-42-8		
Cadmium	ND	mg/L	0.012	0.00057	5	10/14/19 14:35	10/18/19 00:35	7440-43-9	D3	
Calcium	10.1	mg/L	0.50	0.055	5	10/14/19 14:35	10/18/19 00:35	7440-70-2		
Chromium	0.011J	mg/L	0.050	0.0020	5	10/14/19 14:35	10/18/19 00:35	7440-47-3	D3	
Cobalt	ND	mg/L	0.025	0.0015	5	10/14/19 14:35	10/18/19 00:35	7440-48-4	D3	
Lead	0.00033J	mg/L	0.025	0.00023	5	10/14/19 14:35	10/18/19 00:35	7439-92-1	D3	
Lithium	ND	mg/L	0.15	0.0039	5	10/14/19 14:35	10/18/19 00:35	7439-93-2	D3	
Molybdenum	ND	mg/L	0.050	0.0047	5	10/14/19 14:35	10/18/19 00:35	7439-98-7	D3	
Selenium	ND	mg/L	0.050	0.0063	5	10/14/19 14:35	10/18/19 00:35	7782-49-2	D3	
Thallium	ND	mg/L	0.0050	0.00026	5	10/14/19 14:35	10/18/19 00:35	7440-28-0	D3	
Vanadium	0.018J	mg/L	0.050	0.0035	5	10/14/19 14:35	10/18/19 00:35	7440-62-2		
Zinc	0.016J	mg/L	0.050	0.0077	5	10/14/19 14:35	10/18/19 00:35	7440-66-6	B	
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	903	mg/L	10.0	10.0	1		10/15/19 17:21			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	49.7	mg/L	1.0	0.024	1		10/16/19 08:48	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		10/16/19 08:48	16984-48-8		
Sulfate	255	mg/L	20.0	0.34	20		10/17/19 03:37	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624187

Sample: GWB-5R		Lab ID: 2624187021		Collected: 10/09/19 16:20		Received: 10/10/19 13:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.015	0.0014	5	10/14/19 14:09	10/16/19 16:28	7440-36-0	
Arsenic	0.0053J	mg/L	0.025	0.0018	5	10/14/19 14:09	10/16/19 16:28	7440-38-2	
Barium	0.13	mg/L	0.050	0.0024	5	10/14/19 14:09	10/16/19 16:28	7440-39-3	
Beryllium	ND	mg/L	0.015	0.00037	5	10/14/19 14:09	10/16/19 16:28	7440-41-7	
Boron	6.8	mg/L	0.20	0.025	5	10/14/19 14:09	10/16/19 16:28	7440-42-8	M1
Cadmium	ND	mg/L	0.012	0.00057	5	10/14/19 14:09	10/16/19 16:28	7440-43-9	
Calcium	17.7	mg/L	0.50	0.055	5	10/14/19 14:09	10/16/19 16:28	7440-70-2	M1
Chromium	0.012J	mg/L	0.050	0.0020	5	10/14/19 14:09	10/16/19 16:28	7440-47-3	B
Cobalt	0.0037J	mg/L	0.025	0.0015	5	10/14/19 14:09	10/16/19 16:28	7440-48-4	
Lead	0.0025J	mg/L	0.025	0.00023	5	10/14/19 14:09	10/16/19 16:28	7439-92-1	
Lithium	ND	mg/L	0.15	0.0039	5	10/14/19 14:09	10/16/19 16:28	7439-93-2	
Molybdenum	ND	mg/L	0.050	0.0047	5	10/14/19 14:09	10/16/19 16:28	7439-98-7	
Selenium	0.0073J	mg/L	0.050	0.0063	5	10/14/19 14:09	10/16/19 16:28	7782-49-2	
Thallium	0.00031J	mg/L	0.0050	0.00026	5	10/14/19 14:09	10/16/19 16:28	7440-28-0	
Vanadium	0.033J	mg/L	0.050	0.0035	5	10/14/19 14:09	10/16/19 16:28	7440-62-2	
Zinc	0.0081J	mg/L	0.050	0.0077	5	10/14/19 14:09	10/16/19 16:28	7440-66-6	B
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.00014	1	10/16/19 09:16	10/17/19 10:02	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	2010	mg/L	10.0	10.0	1		10/15/19 17:21		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	239	mg/L	10.0	0.24	10		10/17/19 03:59	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/16/19 09:10	16984-48-8	
Sulfate	90.8	mg/L	10.0	0.17	10		10/17/19 03:59	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Sample: GWC-1 Lab ID: 2624187022 Collected: 10/09/19 15:40 Received: 10/10/19 13:15 Matrix: Water									
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Antimony	ND	mg/L	0.0030	0.00027	1	10/14/19 14:09	10/16/19 17:26	7440-36-0	
Arsenic	0.0042J	mg/L	0.0050	0.00035	1	10/14/19 14:09	10/16/19 17:26	7440-38-2	
Barium	0.058	mg/L	0.010	0.00049	1	10/14/19 14:09	10/16/19 17:26	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	10/14/19 14:09	10/16/19 17:26	7440-41-7	
Boron	0.93	mg/L	0.040	0.0049	1	10/14/19 14:09	10/16/19 17:26	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/14/19 14:09	10/16/19 17:26	7440-43-9	
Calcium	51.2	mg/L	5.0	0.55	50	10/14/19 14:09	10/16/19 17:32	7440-70-2	
Chromium	0.0019J	mg/L	0.010	0.00039	1	10/14/19 14:09	10/16/19 17:26	7440-47-3	B
Cobalt	ND	mg/L	0.0050	0.00030	1	10/14/19 14:09	10/16/19 17:26	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	10/14/19 14:09	10/16/19 17:26	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	10/14/19 14:09	10/16/19 17:26	7439-93-2	
Molybdenum	0.060	mg/L	0.010	0.00095	1	10/14/19 14:09	10/16/19 17:26	7439-98-7	
Selenium	0.0024J	mg/L	0.010	0.0013	1	10/14/19 14:09	10/16/19 17:26	7782-49-2	
Thallium	0.000054J	mg/L	0.0010	0.000052	1	10/14/19 14:09	10/16/19 17:26	7440-28-0	
Vanadium	ND	mg/L	0.010	0.00071	1	10/14/19 14:09	10/16/19 17:26	7440-62-2	
Zinc	0.0057J	mg/L	0.010	0.0015	1	10/14/19 14:09	10/16/19 17:26	7440-66-6	B
2540C Total Dissolved Solids Analytical Method: SM 2540C									
Total Dissolved Solids	338	mg/L	10.0	10.0	1		10/15/19 17:21		
300.0 IC Anions 28 Days Analytical Method: EPA 300.0									
Chloride	7.2	mg/L	1.0	0.024	1		10/16/19 09:32	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/16/19 09:32	16984-48-8	
Sulfate	76.3	mg/L	10.0	0.17	10		10/17/19 04:21	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Sample: GWC-9		Lab ID: 2624187023		Collected: 10/09/19 12:10		Received: 10/10/19 13:15		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00027	1	10/14/19 14:09	10/16/19 17:37	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	10/14/19 14:09	10/16/19 17:37	7440-38-2	
Barium	0.18	mg/L	0.010	0.00049	1	10/14/19 14:09	10/16/19 17:37	7440-39-3	
Beryllium	0.00023J	mg/L	0.0030	0.000074	1	10/14/19 14:09	10/16/19 17:37	7440-41-7	
Boron	0.019J	mg/L	0.040	0.0049	1	10/14/19 14:09	10/16/19 17:37	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/14/19 14:09	10/16/19 17:37	7440-43-9	
Calcium	6.0	mg/L	0.10	0.011	1	10/14/19 14:09	10/16/19 17:37	7440-70-2	
Chromium	0.00090J	mg/L	0.010	0.00039	1	10/14/19 14:09	10/16/19 17:37	7440-47-3	B
Cobalt	0.00099J	mg/L	0.0050	0.00030	1	10/14/19 14:09	10/16/19 17:37	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	10/14/19 14:09	10/16/19 17:37	7439-92-1	
Lithium	0.0018J	mg/L	0.030	0.00078	1	10/14/19 14:09	10/16/19 17:37	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	10/14/19 14:09	10/16/19 17:37	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	10/14/19 14:09	10/16/19 17:37	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	10/14/19 14:09	10/16/19 17:37	7440-28-0	
Vanadium	ND	mg/L	0.010	0.00071	1	10/14/19 14:09	10/16/19 17:37	7440-62-2	
Zinc	0.0054J	mg/L	0.010	0.0015	1	10/14/19 14:09	10/16/19 17:37	7440-66-6	B
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	128	mg/L	10.0	10.0	1		10/15/19 17:21		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	19.0	mg/L	1.0	0.024	1		10/16/19 11:01	16887-00-6	
Fluoride	0.068J	mg/L	0.30	0.029	1		10/16/19 11:01	16984-48-8	
Sulfate	41.1	mg/L	1.0	0.017	1		10/16/19 11:01	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Sample: EB-2-10-9-19		Lab ID: 2624187024		Collected: 10/09/19 12:30		Received: 10/10/19 13:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00027	1	10/14/19 14:09	10/16/19 17:49	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	10/14/19 14:09	10/16/19 17:49	7440-38-2	
Barium	ND	mg/L	0.010	0.00049	1	10/14/19 14:09	10/16/19 17:49	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	10/14/19 14:09	10/16/19 17:49	7440-41-7	
Boron	ND	mg/L	0.040	0.0049	1	10/14/19 14:09	10/16/19 17:49	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/14/19 14:09	10/16/19 17:49	7440-43-9	
Calcium	0.018J	mg/L	0.10	0.011	1	10/14/19 14:09	10/16/19 17:49	7440-70-2	
Chromium	0.00041J	mg/L	0.010	0.00039	1	10/14/19 14:09	10/16/19 17:49	7440-47-3	B
Cobalt	ND	mg/L	0.0050	0.00030	1	10/14/19 14:09	10/16/19 17:49	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	10/14/19 14:09	10/16/19 17:49	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	10/14/19 14:09	10/16/19 17:49	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	10/14/19 14:09	10/16/19 17:49	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	10/14/19 14:09	10/16/19 17:49	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	10/14/19 14:09	10/16/19 17:49	7440-28-0	
Vanadium	ND	mg/L	0.010	0.00071	1	10/14/19 14:09	10/16/19 17:49	7440-62-2	
Zinc	0.0054J	mg/L	0.010	0.0015	1	10/14/19 14:09	10/16/19 17:49	7440-66-6	B
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		10/15/19 17:21		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	0.042J	mg/L	1.0	0.024	1		10/16/19 11:23	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/16/19 11:23	16984-48-8	
Sulfate	0.23J	mg/L	1.0	0.017	1		10/16/19 11:23	14808-79-8	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

QC Batch: 36917 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 2624187021

METHOD BLANK: 166881 Matrix: Water
Associated Lab Samples: 2624187021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.00014	10/17/19 09:58	

LABORATORY CONTROL SAMPLE: 166882

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 166883 166884

Parameter	Units	2624187021 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Mercury	mg/L	ND	0.0025	0.0025	0.0025	0.0024	100	95	75-125	5	20		

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

QC Batch: 36893 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2624187001, 2624187002, 2624187003, 2624187004, 2624187005, 2624187006, 2624187007, 2624187008, 2624187009, 2624187010, 2624187011, 2624187012, 2624187013, 2624187014, 2624187015, 2624187016, 2624187017, 2624187018, 2624187019, 2624187020

METHOD BLANK: 166795 Matrix: Water
Associated Lab Samples: 2624187001, 2624187002, 2624187003, 2624187004, 2624187005, 2624187006, 2624187007, 2624187008, 2624187009, 2624187010, 2624187011, 2624187012, 2624187013, 2624187014, 2624187015, 2624187016, 2624187017, 2624187018, 2624187019, 2624187020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	10/17/19 19:46	
Arsenic	mg/L	ND	0.0050	0.00035	10/17/19 19:46	
Barium	mg/L	ND	0.010	0.00049	10/17/19 19:46	
Beryllium	mg/L	ND	0.0030	0.000074	10/17/19 19:46	
Boron	mg/L	ND	0.040	0.0049	10/17/19 19:46	
Cadmium	mg/L	ND	0.0025	0.00011	10/17/19 19:46	
Calcium	mg/L	ND	0.10	0.011	10/17/19 19:46	
Chromium	mg/L	ND	0.010	0.00039	10/17/19 19:46	
Cobalt	mg/L	ND	0.0050	0.00030	10/17/19 19:46	
Lead	mg/L	ND	0.0050	0.000046	10/17/19 19:46	
Lithium	mg/L	ND	0.030	0.00078	10/17/19 19:46	
Molybdenum	mg/L	ND	0.010	0.00095	10/17/19 19:46	
Selenium	mg/L	ND	0.010	0.0013	10/17/19 19:46	
Thallium	mg/L	ND	0.0010	0.000052	10/17/19 19:46	
Vanadium	mg/L	ND	0.010	0.00071	10/17/19 19:46	
Zinc	mg/L	0.0051J	0.010	0.0015	10/17/19 19:46	

LABORATORY CONTROL SAMPLE: 166796

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.089	89	80-120	
Arsenic	mg/L	0.1	0.095	95	80-120	
Barium	mg/L	0.1	0.090	90	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	0.99	99	80-120	
Cadmium	mg/L	0.1	0.096	96	80-120	
Calcium	mg/L	1	0.96	96	80-120	
Chromium	mg/L	0.1	0.096	96	80-120	
Cobalt	mg/L	0.1	0.095	95	80-120	
Lead	mg/L	0.1	0.095	95	80-120	
Lithium	mg/L	0.1	0.098	98	80-120	
Molybdenum	mg/L	0.1	0.093	93	80-120	
Selenium	mg/L	0.1	0.095	95	80-120	
Thallium	mg/L	0.1	0.097	97	80-120	
Vanadium	mg/L	0.1	0.097	97	80-120	
Zinc	mg/L	0.1	0.099	99	80-120	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 166797		166798		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		2624187001 Result	MS Spike Conc.	MSD Spike Conc.									
Antimony	mg/L	ND	0.1	0.1	0.097	0.095	97	94	75-125	3	20		
Arsenic	mg/L	0.089	0.1	0.1	0.19	0.19	96	104	75-125	4	20		
Barium	mg/L	0.13	0.1	0.1	0.24	0.23	108	101	75-125	3	20		
Beryllium	mg/L	0.000088J	0.1	0.1	0.096	0.094	96	94	75-125	2	20		
Boron	mg/L	8.4	1	1	10.5	11.0	212	255	75-125	4	20	M6	
Cadmium	mg/L	ND	0.1	0.1	0.093	0.095	93	95	75-125	2	20		
Calcium	mg/L	206	1	1	198	205	-783	-148	75-125	3	20	M6	
Chromium	mg/L	0.00087J	0.1	0.1	0.099	0.099	98	98	75-125	0	20		
Cobalt	mg/L	ND	0.1	0.1	0.094	0.096	94	96	75-125	2	20		
Lead	mg/L	0.00010J	0.1	0.1	0.094	0.096	94	95	75-125	1	20		
Lithium	mg/L	ND	0.1	0.1	0.097	0.095	97	95	75-125	2	20		
Molybdenum	mg/L	0.20	0.1	0.1	0.30	0.30	100	97	75-125	1	20		
Selenium	mg/L	0.0024J	0.1	0.1	0.10	0.11	100	105	75-125	5	20		
Thallium	mg/L	0.00011J	0.1	0.1	0.094	0.095	94	95	75-125	1	20		
Vanadium	mg/L	ND	0.1	0.1	0.10	0.099	100	99	75-125	1	20		
Zinc	mg/L	0.010	0.1	0.1	0.10	0.10	92	93	75-125	1	20		

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

QC Batch: 36894 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2624187021, 2624187022, 2624187023, 2624187024

METHOD BLANK: 166799 Matrix: Water
Associated Lab Samples: 2624187021, 2624187022, 2624187023, 2624187024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	10/16/19 16:16	
Arsenic	mg/L	ND	0.0050	0.00035	10/16/19 16:16	
Barium	mg/L	ND	0.010	0.00049	10/16/19 16:16	
Beryllium	mg/L	ND	0.0030	0.000074	10/16/19 16:16	
Boron	mg/L	ND	0.040	0.0049	10/16/19 16:16	
Cadmium	mg/L	ND	0.0025	0.00011	10/16/19 16:16	
Calcium	mg/L	ND	0.10	0.011	10/16/19 16:16	
Chromium	mg/L	0.00056J	0.010	0.00039	10/16/19 16:16	
Cobalt	mg/L	ND	0.0050	0.00030	10/16/19 16:16	
Lead	mg/L	ND	0.0050	0.000046	10/16/19 16:16	
Lithium	mg/L	ND	0.030	0.00078	10/16/19 16:16	
Molybdenum	mg/L	ND	0.010	0.00095	10/16/19 16:16	
Selenium	mg/L	ND	0.010	0.0013	10/16/19 16:16	
Thallium	mg/L	ND	0.0010	0.000052	10/16/19 16:16	
Vanadium	mg/L	ND	0.010	0.00071	10/16/19 16:16	
Zinc	mg/L	0.0050J	0.010	0.0015	10/16/19 16:16	

LABORATORY CONTROL SAMPLE: 166800

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.096	96	80-120	
Arsenic	mg/L	0.1	0.095	95	80-120	
Barium	mg/L	0.1	0.095	95	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	1.0	100	80-120	
Cadmium	mg/L	0.1	0.095	95	80-120	
Calcium	mg/L	1	0.95	95	80-120	
Chromium	mg/L	0.1	0.097	97	80-120	
Cobalt	mg/L	0.1	0.095	95	80-120	
Lead	mg/L	0.1	0.094	94	80-120	
Lithium	mg/L	0.1	0.098	98	80-120	
Molybdenum	mg/L	0.1	0.094	94	80-120	
Selenium	mg/L	0.1	0.094	94	80-120	
Thallium	mg/L	0.1	0.094	94	80-120	
Vanadium	mg/L	0.1	0.096	96	80-120	
Zinc	mg/L	0.1	0.10	102	80-120	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624187

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 166801		166802		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		2624187021 Result	MS Spike Conc.	MSD Spike Conc.									
Antimony	mg/L	ND	0.1	0.1	0.089	0.097	89	96	75-125	8	20		
Arsenic	mg/L	0.0053J	0.1	0.1	0.096	0.098	91	93	75-125	3	20		
Barium	mg/L	0.13	0.1	0.1	0.21	0.22	87	96	75-125	4	20		
Beryllium	mg/L	ND	0.1	0.1	0.092	0.091	92	91	75-125	2	20		
Boron	mg/L	6.8	1	1	8.0	7.5	121	71	75-125	6	20	M1	
Cadmium	mg/L	ND	0.1	0.1	0.090	0.092	90	92	75-125	2	20		
Calcium	mg/L	17.7	1	1	19.4	18.5	163	79	75-125	4	20	M1	
Chromium	mg/L	0.012J	0.1	0.1	0.11	0.10	95	91	75-125	4	20		
Cobalt	mg/L	0.0037J	0.1	0.1	0.092	0.092	88	88	75-125	0	20		
Lead	mg/L	0.0025J	0.1	0.1	0.089	0.091	86	89	75-125	3	20		
Lithium	mg/L	ND	0.1	0.1	0.092J	0.092J	92	91	75-125		20		
Molybdenum	mg/L	ND	0.1	0.1	0.092	0.10	89	97	75-125	8	20		
Selenium	mg/L	0.0073J	0.1	0.1	0.088	0.10	81	95	75-125	15	20		
Thallium	mg/L	0.00031J	0.1	0.1	0.088	0.089	87	89	75-125	1	20		
Vanadium	mg/L	0.033J	0.1	0.1	0.14	0.14	104	103	75-125	1	20		
Zinc	mg/L	0.0081J	0.1	0.1	0.11	0.10	98	93	75-125	6	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

QC Batch: 36858 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2624187001, 2624187002, 2624187003, 2624187004, 2624187011

LABORATORY CONTROL SAMPLE: 166584

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	411	103	84-108	

SAMPLE DUPLICATE: 166585

Parameter	Units	2624021007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	7930	8140	3	10	

SAMPLE DUPLICATE: 166586

Parameter	Units	2624140002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	324	337	4	10	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

QC Batch: 36914 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2624187005, 2624187006, 2624187012, 2624187013, 2624187014, 2624187015

LABORATORY CONTROL SAMPLE: 166870

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	366	92	84-108	

SAMPLE DUPLICATE: 166871

Parameter	Units	2624187005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	526	532	1	10	

SAMPLE DUPLICATE: 166872

Parameter	Units	2624140004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	18.0	13.0	32	10	D6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

QC Batch: 36986 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2624187007, 2624187008, 2624187009, 2624187010, 2624187016, 2624187017, 2624187018, 2624187019,
2624187020, 2624187021, 2624187022, 2624187023, 2624187024

LABORATORY CONTROL SAMPLE: 167157

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	400	100	84-108	

SAMPLE DUPLICATE: 167158

Parameter	Units	2624142008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	115	101	13	10	D6

SAMPLE DUPLICATE: 167159

Parameter	Units	2624187019 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	211	210	0	10	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

QC Batch: 36938 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2624187001, 2624187002, 2624187003, 2624187004, 2624187005

METHOD BLANK: 166950 Matrix: Water
Associated Lab Samples: 2624187001, 2624187002, 2624187003, 2624187004, 2624187005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.024	10/14/19 21:35	
Fluoride	mg/L	ND	0.30	0.029	10/14/19 21:35	
Sulfate	mg/L	ND	1.0	0.017	10/14/19 21:35	

LABORATORY CONTROL SAMPLE: 166951

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.7	97	90-110	
Fluoride	mg/L	10	9.9	99	90-110	
Sulfate	mg/L	10	9.7	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 166952 166953

Parameter	Units	2624142005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	4.1	10	10	13.6	13.6	95	95	90-110	0	15	
Fluoride	mg/L	ND	10	10	9.9	9.8	99	98	90-110	1	15	

MATRIX SPIKE SAMPLE: 166954

Parameter	Units	2624142006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.3	10	12.1	97	90-110	
Fluoride	mg/L	ND	10	10.2	102	90-110	
Sulfate	mg/L	279	10	23.4	-2560	90-110 M1	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

QC Batch: 36992 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2624187006, 2624187007, 2624187008, 2624187009, 2624187010, 2624187011, 2624187012, 2624187013, 2624187014, 2624187015, 2624187016, 2624187017, 2624187018, 2624187019, 2624187020, 2624187021, 2624187022, 2624187023, 2624187024

METHOD BLANK: 167194 Matrix: Water
Associated Lab Samples: 2624187006, 2624187007, 2624187008, 2624187009, 2624187010, 2624187011, 2624187012, 2624187013, 2624187014, 2624187015, 2624187016, 2624187017, 2624187018, 2624187019, 2624187020, 2624187021, 2624187022, 2624187023, 2624187024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.024	10/16/19 00:42	
Fluoride	mg/L	ND	0.30	0.029	10/16/19 00:42	
Sulfate	mg/L	ND	1.0	0.017	10/16/19 00:42	

LABORATORY CONTROL SAMPLE: 167195

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.0	100	90-110	
Fluoride	mg/L	10	10.3	103	90-110	
Sulfate	mg/L	10	10.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 167196 167197

Parameter	Units	2624187006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	40.2	10	10	44.8	44.5	47	43	90-110	1	15	M1
Fluoride	mg/L	ND	10	10	10.1	10.4	101	104	90-110	3	15	

MATRIX SPIKE SAMPLE: 167198

Parameter	Units	2624187015 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	ND	10	10.4	104	90-110	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624187

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

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

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2624187001	Dup-1	EPA 3005A	36893	EPA 6020B	36929
2624187002	EB-1-10-8-19	EPA 3005A	36893	EPA 6020B	36929
2624187003	GWC-16	EPA 3005A	36893	EPA 6020B	36929
2624187004	GWC-21	EPA 3005A	36893	EPA 6020B	36929
2624187005	GWC-15	EPA 3005A	36893	EPA 6020B	36929
2624187006	GWC-14	EPA 3005A	36893	EPA 6020B	36929
2624187007	GWB-4R	EPA 3005A	36893	EPA 6020B	36929
2624187008	GWC-2	EPA 3005A	36893	EPA 6020B	36929
2624187009	FB-2-10-9-19	EPA 3005A	36893	EPA 6020B	36929
2624187010	GWC-20	EPA 3005A	36893	EPA 6020B	36929
2624187011	GWA-8	EPA 3005A	36893	EPA 6020B	36929
2624187012	GWA-7	EPA 3005A	36893	EPA 6020B	36929
2624187013	FB-1-10-8-19	EPA 3005A	36893	EPA 6020B	36929
2624187014	GWC-13	EPA 3005A	36893	EPA 6020B	36929
2624187015	GWC-11	EPA 3005A	36893	EPA 6020B	36929
2624187016	GWC-12	EPA 3005A	36893	EPA 6020B	36929
2624187017	Dup-2	EPA 3005A	36893	EPA 6020B	36929
2624187018	GWC-17	EPA 3005A	36893	EPA 6020B	36929
2624187019	GWC-22	EPA 3005A	36893	EPA 6020B	36929
2624187020	GWB-6R	EPA 3005A	36893	EPA 6020B	36929
2624187021	GWB-5R	EPA 3005A	36894	EPA 6020B	36932
2624187022	GWC-1	EPA 3005A	36894	EPA 6020B	36932
2624187023	GWC-9	EPA 3005A	36894	EPA 6020B	36932
2624187024	EB-2-10-9-19	EPA 3005A	36894	EPA 6020B	36932
2624187021	GWB-5R	EPA 7470A	36917	EPA 7470A	37089
2624187001	Dup-1	SM 2540C	36858		
2624187002	EB-1-10-8-19	SM 2540C	36858		
2624187003	GWC-16	SM 2540C	36858		
2624187004	GWC-21	SM 2540C	36858		
2624187005	GWC-15	SM 2540C	36914		
2624187006	GWC-14	SM 2540C	36914		
2624187007	GWB-4R	SM 2540C	36986		
2624187008	GWC-2	SM 2540C	36986		
2624187009	FB-2-10-9-19	SM 2540C	36986		
2624187010	GWC-20	SM 2540C	36986		
2624187011	GWA-8	SM 2540C	36858		
2624187012	GWA-7	SM 2540C	36914		
2624187013	FB-1-10-8-19	SM 2540C	36914		
2624187014	GWC-13	SM 2540C	36914		
2624187015	GWC-11	SM 2540C	36914		
2624187016	GWC-12	SM 2540C	36986		
2624187017	Dup-2	SM 2540C	36986		
2624187018	GWC-17	SM 2540C	36986		
2624187019	GWC-22	SM 2540C	36986		
2624187020	GWB-6R	SM 2540C	36986		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624187

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2624187021	GWB-5R	SM 2540C	36986		
2624187022	GWC-1	SM 2540C	36986		
2624187023	GWC-9	SM 2540C	36986		
2624187024	EB-2-10-9-19	SM 2540C	36986		
2624187001	Dup-1	EPA 300.0	36938		
2624187002	EB-1-10-8-19	EPA 300.0	36938		
2624187003	GWC-16	EPA 300.0	36938		
2624187004	GWC-21	EPA 300.0	36938		
2624187005	GWC-15	EPA 300.0	36938		
2624187006	GWC-14	EPA 300.0	36992		
2624187007	GWB-4R	EPA 300.0	36992		
2624187008	GWC-2	EPA 300.0	36992		
2624187009	FB-2-10-9-19	EPA 300.0	36992		
2624187010	GWC-20	EPA 300.0	36992		
2624187011	GWA-8	EPA 300.0	36992		
2624187012	GWA-7	EPA 300.0	36992		
2624187013	FB-1-10-8-19	EPA 300.0	36992		
2624187014	GWC-13	EPA 300.0	36992		
2624187015	GWC-11	EPA 300.0	36992		
2624187016	GWC-12	EPA 300.0	36992		
2624187017	Dup-2	EPA 300.0	36992		
2624187018	GWC-17	EPA 300.0	36992		
2624187019	GWC-22	EPA 300.0	36992		
2624187020	GWB-6R	EPA 300.0	36992		
2624187021	GWB-5R	EPA 300.0	36992		
2624187022	GWC-1	EPA 300.0	36992		
2624187023	GWC-9	EPA 300.0	36992		
2624187024	EB-2-10-9-19	EPA 300.0	36992		

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
 (770) 734-4200 : FAX (770) 734-4201

CHAIN OF CUSTODY RECORD

PAGE: 1 OF 3

CLIENT NAME: Georgia Power
 CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-506-7239
 REPORT TO: *C. Perry*
 REQUESTED COMPLETION DATE: *10/10/19*
 PROJECT NAME/STATE: Plant Kraft Grumman Road
 PROJECT #:

Collection DATE	Collection TIME	MATRIX CODE*	C O M P	G R A B	SAMPLE IDENTIFICATION
10-8-19	1	GW	X	X	DUP-1
10-8-19	1815	W	X	X	EB-1-10-8-19
10-8-19	1230	GW	X	X	GWC-16
10-8-19	1425	GW	X	X	GWC-21
10-8-19	1525	GW	X	X	GWC-15
10-8-19	1630	GW	X	X	GWC-14
10-9-19	0824	GW	X	X	GWB-4R
10-9-19	1140	GW	X	X	GWB-4R
10-9-19	1300	GW	X	X	GWC-2
10-9-19	1320	W	X	X	FB-2-10-9-19
10-9-19	1425	GW	X	X	Ball-20

ANALYSIS REQUESTED: Metals App. III, Boron, Calcium, GI, T, SO₄ & TDS, (EPA 300.0 & SM 2540C), Detected App IV Metals: (see list below), Detected App IV: Radium 226 & 228 (SW-846 9315/9320), State Metals (see below)

CONTAINER TYPE: P- PLASTIC, A- AMBER GLASS, G- CLEAR GLASS, V- VOA VIAL, S- STERILE, O- OTHER
 PRESERVATION: 1- HCl, 56°C, 2- H₂SO₄, 56°C, 3- HNO₃, 4- NaOH, 56°C, 5- NaOH/ZnAc, 56°C, 6- Na₂S₂O₃, 56°C, 7- 56°C not frozen

MATRIX CODES: DW- DRINKING WATER, WW- WASTEWATER, GW- GROUNDWATER, SW- SURFACE WATER, ST- STORM WATER, W- WATER, S- SOIL, SL- SLUDGE, SD- SOLID, A- AIR, L- LIQUID, P- PRODUCT

REMARKS/ADDITIONAL INFORMATION: App III and detected App IV

LAB #: *10-9-19 OF*

RELINQUISHED BY: *[Signature]* DATE/TIME: 10/10/19 1345
 RELINQUISHED BY: DATE/TIME:

SAMPLED BY AND TITLE: O. FURQUEA (ACC) DATE/TIME: 10-9-19 1425
 RECEIVED BY: DATE/TIME:

RECEIVED BY LAB: *[Signature]* DATE/TIME: 10/10/19 1345
 Temperature: *0.4* Min, *0.4* Max
 Intact: Broken: Not Present: # of Coolers:

NO#: 2624187



2624187

Detected App IV Metals: Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Lead, Lithium, Molybdenum, Selenium, a. State Metals: As, Ba, Cr, Pb, Sb, Se, V, Zn



Pace Analytical Services, Inc.
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
 (770) 734-4200 : FAX (770) 734-4201

CHAIN OF CUSTODY RECORD

PAGE: 2 OF 3

CLIENT NAME: Georgia Power
 CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
 241 Ralph McGill Blvd SE B10185
 Atlanta, GA 30308
 404-508-7239
 REPORT TO: Spina@pac.net
 REQUESTED COMPLETION DATE:
 PROJECT NAME/STATE: Plant Kraft Gnumman Road
 PROJECT #:

CONTAINER TYPE	ANALYSIS REQUESTED							PRESERVATION
	P	P	P	P	P	P	P	
3								1 - HCl, 58°C 2 - H ₂ SO ₄ , 58°C 3 - HNO ₃ 4 - NaOH, 58°C 5 - NaOH/ZnAc, 58°C 6 - Na ₂ O ₃ , 58°C 7 - 58°C not frozen
# of								
Metal's App. III Boron, Calcium Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C) Detected App IV: Radium 226 & 228 (SW-646 9315/9320) Detected App IV Metals: (see list below) State Metals (see below)								

Collection DATE	Collection TIME	MATRIX CODE*	SAMPLE IDENTIFICATION	CONTAINERS				REMARKS/ADDITIONAL INFORMATION
				C	G	R	A	
10-2-19	1725	GW	GWA-3	✓				App III and detected App IV
10-3-19	0945	GW	GWA-7	✓				
10-3-19	1040	GW	FA-10-FB-1-10-3-19	✓				
10-3-19	1125	GW	GWC-13	✓				
10-3-19	1515	GW	GWC-11	✓				
10-9-19	0955	GW	GWC-12	✓				
		GW	DUP-2	✓				
10-9-19	1110	GW	GWC-17	✓				
10-9-19	1318	GW	GWC-22	✓				
10-9-19	1513	GW	GNB-6R	✓				
10-9-19	1620	GW	GNB-5R	✓				

RELINQUISHED BY: H. Auld (AIC) DATE/TIME: 10-9-19 1620
 RELINQUISHED BY: H. Auld DATE/TIME: 10/10/19 1345
 RECEIVED BY LAB: Madalman DATE/TIME: 10/10/19 1345
 Temperature: 0.4 Min: 0.4 Max: Misc
 pH checked: Yes No NA Yes No NA
 SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS
 # of Coolers: 2 Intact 0 Broken 0 Not Present

FOR LAB USE ONLY
 LAB #:
WO#: 2624187
 PH: BM Due Date: 10/17/19
 CLIENT: GAPower-CCR



Pace Analytical Services, Inc.
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
 (770) 734-4200 : FAX (770) 734-4201

CHAIN OF CUSTODY RECORD

PAGE: 3 OF 3

CLIENT NAME: Georgia Power
 CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-506-7239
 REPORT TO: *epers@ge.com* CC:
 REQUESTED COMPLETION DATE: PO #:
 PROJECT NAME/STATE: Plant Kraft Grumman Road
 PROJECT #:

Collection DATE	Collection TIME	MATRIX CODE*	C O M P	G R A B	SAMPLE IDENTIFICATION
10-9-19	1540	GW	X		GWC-1
10-9-19	1210	GW	X		GWC-9
10-9-19	1230	W	X		EB-2-10-9-19

CONTAINER TYPE: P 3 PRESERVATION: # of CONTAINERS

ANALYSIS REQUESTED: Metals App. III Boron, Calcium (EPA 300.0 & SM 2540C) Cl, F, SO₄ & TDS (SW-846 9315/9320) Detected App IV: Radium 226 & 228 (SW-846 9315/9320) Detected App IV Metals: (see list below) State Metals (see below)

CONTAINER TYPE: P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER PRESERVATION: 1 - HCl, ≤6°C 2 - H₂SO₄, ≤6°C 3 - HNO₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na₂S₂O₃, ≤6°C 7 - ≤6°C not frozen

*MATRIX CODES: DW - DRINKING WATER S - SOIL WW - WASTEWATER SL - SLUDGE GW - GROUNDWATER SD - SOLID SW - SURFACE WATER A - AIR ST - STORM WATER L - LIQUID W - WATER P - PRODUCT

REMARKS/ADDITIONAL INFORMATION: App III and detected App IV

SAMPLED BY AND TITLE: O. FURUEA (ACC) DATE/TIME: 10-9-19 1540 RECEIVED BY: DATE/TIME: RELINQUISHED BY: H. Bell DATE/TIME: 10/10/19 1345

RECEIVED BY LAB: *Maalman* DATE/TIME: 10/10/19 1345 SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

Temperature: Min: 0.4 Max: Custody Seal: Intact Broken Not Present # of Coolers: 0

WO#: 2624187

PH: BM Due Date: 10/17/19 CLIENT: GAPower-CCR

Detected App IV Metals: Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Lead, Lithium, Molybdenum, Selenium, and State Metals: As, Ba, Cr, Pb, Sb, Se, V, Zn



Sample Condition Upon Receipt

Client Name: GIA Power

Project # _____

WO#: **2624187**

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: _____

PM: **BM** Due Date: **10/17/19**

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

CLIENT: **GAPower-CCR**

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used 83 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 0.4 Biological Tissue is Frozen: Yes No

Date and initials of person examining contents: 10/10/19 ma

Temp should be above freezing to 6°C Comments: _____

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____

Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

November 20, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

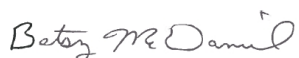
RE: Project: Plant Kraft - Grumman Road
Pace Project No.: 2624188

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on October 10, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Betsy McDaniel, Atlantic Coast Consulting
Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624188

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2624188001	Dup-1	Water	10/08/19 00:00	10/10/19 13:45
2624188002	EB-1-10-8-19	Water	10/08/19 16:15	10/10/19 13:45
2624188003	GWC-16	Water	10/08/19 12:30	10/10/19 13:45
2624188004	GWC-21	Water	10/08/19 14:25	10/10/19 13:45
2624188005	GWC-15	Water	10/08/19 15:25	10/10/19 13:45
2624188006	GWC-14	Water	10/08/19 16:30	10/10/19 13:45
2624188007	GWB-4R	Water	10/09/19 11:40	10/10/19 13:45
2624188008	GWC-2	Water	10/09/19 13:00	10/10/19 13:45
2624188009	FB-2-10-9-19	Water	10/09/19 13:20	10/10/19 13:45
2624188010	GWC-20	Water	10/09/19 14:25	10/10/19 13:45
2624188011	GWA-8	Water	10/07/19 17:25	10/10/19 13:45
2624188012	GWA-7	Water	10/08/19 09:45	10/10/19 13:45
2624188013	FB-1-10-8-19	Water	10/08/19 10:40	10/10/19 13:45
2624188014	GWC-13	Water	10/08/19 11:25	10/10/19 13:45
2624188015	GWC-11	Water	10/08/19 15:15	10/10/19 13:45
2624188016	GWC-12	Water	10/09/19 09:55	10/10/19 13:45
2624188017	Dup-2	Water	10/09/19 00:00	10/10/19 13:45
2624188018	GWC-17	Water	10/09/19 11:10	10/10/19 13:45
2624188019	GWC-22	Water	10/09/19 13:18	10/10/19 13:45
2624188020	GWB-6R	Water	10/09/19 15:13	10/10/19 13:45
2624188021	GWB-5R	Water	10/09/19 16:20	10/10/19 13:45
2624188022	GWC-1	Water	10/09/19 15:40	10/10/19 13:45
2624188023	GWC-9	Water	10/09/19 12:10	10/10/19 13:45
2624188024	EB-2-10-9-19	Water	10/09/19 12:30	10/10/19 13:45

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624188

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2624188001	Dup-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624188002	EB-1-10-8-19	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624188003	GWC-16	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624188004	GWC-21	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624188005	GWC-15	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624188006	GWC-14	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624188007	GWB-4R	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624188008	GWC-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624188009	FB-2-10-9-19	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624188010	GWC-20	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624188011	GWA-8	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624188012	GWA-7	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624188013	FB-1-10-8-19	EPA 9315	LAL	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624188

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2624188014	GWC-13	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2624188015	GWC-11	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2624188016	GWC-12	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2624188017	Dup-2	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2624188018	GWC-17	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2624188019	GWC-22	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2624188020	GWB-6R	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2624188021	GWB-5R	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2624188022	GWC-1	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2624188023	GWC-9	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
2624188024	EB-2-10-9-19	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: Dup-1 **Lab ID: 2624188001** Collected: 10/08/19 00:00 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.40 ± 0.391 (0.281) C:98% T:NA	pCi/L	11/04/19 08:31	13982-63-3	
Radium-228	EPA 9320	0.422 ± 0.462 (0.968) C:69% T:74%	pCi/L	11/01/19 15:45	15262-20-1	
Total Radium	Total Radium Calculation	1.82 ± 0.853 (1.25)	pCi/L	11/05/19 14:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: EB-1-10-8-19 **Lab ID: 2624188002** Collected: 10/08/19 16:15 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.402 ± 0.220 (0.336) C:96% T:NA	pCi/L	11/04/19 08:31	13982-63-3	
Radium-228	EPA 9320	0.129 ± 0.382 (0.861) C:68% T:73%	pCi/L	11/01/19 15:45	15262-20-1	
Total Radium	Total Radium Calculation	0.531 ± 0.602 (1.20)	pCi/L	11/05/19 14:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: GWC-16 **Lab ID: 2624188003** Collected: 10/08/19 12:30 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.17 ± 0.350 (0.273) C:98% T:NA	pCi/L	11/04/19 08:31	13982-63-3	
Radium-228	EPA 9320	0.715 ± 0.388 (0.688) C:74% T:83%	pCi/L	11/01/19 15:45	15262-20-1	
Total Radium	Total Radium Calculation	1.89 ± 0.738 (0.961)	pCi/L	11/05/19 14:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: GWC-21 **Lab ID: 2624188004** Collected: 10/08/19 14:25 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.28 ± 0.368 (0.269) C:98% T:NA	pCi/L	11/04/19 08:31	13982-63-3	
Radium-228	EPA 9320	0.597 ± 0.406 (0.772) C:71% T:74%	pCi/L	11/01/19 15:45	15262-20-1	
Total Radium	Total Radium Calculation	1.88 ± 0.774 (1.04)	pCi/L	11/05/19 14:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: GWC-15 **Lab ID: 2624188005** Collected: 10/08/19 15:25 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.882 ± 0.301 (0.286) C:100% T:NA	pCi/L	11/04/19 08:31	13982-63-3	
Radium-228	EPA 9320	0.639 ± 0.379 (0.691) C:70% T:86%	pCi/L	11/01/19 15:45	15262-20-1	
Total Radium	Total Radium Calculation	1.52 ± 0.680 (0.977)	pCi/L	11/05/19 14:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: GWC-14 **Lab ID: 2624188006** Collected: 10/08/19 16:30 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.684 ± 0.264 (0.260) C:95% T:NA	pCi/L	11/04/19 08:31	13982-63-3	
Radium-228	EPA 9320	0.721 ± 0.474 (0.896) C:59% T:80%	pCi/L	11/01/19 15:45	15262-20-1	
Total Radium	Total Radium Calculation	1.41 ± 0.738 (1.16)	pCi/L	11/05/19 14:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: GWB-4R **Lab ID: 2624188007** Collected: 10/09/19 11:40 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.61 ± 0.435 (0.331) C:95% T:NA	pCi/L	11/04/19 08:31	13982-63-3	
Radium-228	EPA 9320	0.558 ± 0.466 (0.946) C:72% T:79%	pCi/L	11/01/19 15:46	15262-20-1	
Total Radium	Total Radium Calculation	2.17 ± 0.901 (1.28)	pCi/L	11/05/19 14:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: GWC-2 **Lab ID: 2624188008** Collected: 10/09/19 13:00 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.220 ± 0.191 (0.362) C:92% T:NA	pCi/L	11/04/19 08:31	13982-63-3	
Radium-228	EPA 9320	-0.833 ± 0.475 (1.18) C:67% T:83%	pCi/L	11/01/19 15:46	15262-20-1	
Total Radium	Total Radium Calculation	0.220 ± 0.666 (1.54)	pCi/L	11/05/19 14:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: FB-2-10-9-19 **Lab ID: 2624188009** Collected: 10/09/19 13:20 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.462 ± 0.211 (0.235) C:95% T:NA	pCi/L	11/04/19 08:31	13982-63-3	
Radium-228	EPA 9320	-0.173 ± 0.299 (0.731) C:72% T:92%	pCi/L	11/01/19 15:46	15262-20-1	
Total Radium	Total Radium Calculation	0.462 ± 0.510 (0.966)	pCi/L	11/05/19 14:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: GWC-20 **Lab ID: 2624188010** Collected: 10/09/19 14:25 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.25 ± 0.383 (0.358) C:91% T:NA	pCi/L	11/04/19 08:31	13982-63-3	
Radium-228	EPA 9320	1.03 ± 0.563 (1.04) C:71% T:78%	pCi/L	11/01/19 16:20	15262-20-1	
Total Radium	Total Radium Calculation	2.28 ± 0.946 (1.40)	pCi/L	11/05/19 14:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: GWA-8 **Lab ID: 2624188011** Collected: 10/07/19 17:25 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.66 ± 0.438 (0.307) C:95% T:NA	pCi/L	11/04/19 08:37	13982-63-3	
Radium-228	EPA 9320	1.17 ± 0.536 (0.912) C:69% T:83%	pCi/L	11/04/19 12:58	15262-20-1	
Total Radium	Total Radium Calculation	2.83 ± 0.974 (1.22)	pCi/L	11/05/19 14:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: GWA-7 **Lab ID: 2624188012** Collected: 10/08/19 09:45 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	32.3 ± 4.86 (0.298) C:98% T:NA	pCi/L	11/18/19 17:53	13982-63-3	
Radium-228	EPA 9320	1.52 ± 0.681 (1.15) C:70% T:86%	pCi/L	11/04/19 13:43	15262-20-1	
Total Radium	Total Radium Calculation	33.8 ± 5.54 (1.45)	pCi/L	11/20/19 14:11	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: FB-1-10-8-19 **Lab ID: 2624188013** Collected: 10/08/19 10:40 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.654 ± 0.262 (0.274) C:89% T:NA	pCi/L	11/04/19 08:45	13982-63-3	
Radium-228	EPA 9320	0.485 ± 0.409 (0.820) C:69% T:93%	pCi/L	11/04/19 13:43	15262-20-1	
Total Radium	Total Radium Calculation	1.14 ± 0.671 (1.09)	pCi/L	11/05/19 14:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: GWC-13 **Lab ID: 2624188014** Collected: 10/08/19 11:25 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.792 ± 0.289 (0.273) C:90% T:NA	pCi/L	11/04/19 08:45	13982-63-3	
Radium-228	EPA 9320	0.830 ± 0.529 (1.01) C:70% T:86%	pCi/L	11/04/19 13:43	15262-20-1	
Total Radium	Total Radium Calculation	1.62 ± 0.818 (1.28)	pCi/L	11/05/19 14:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: GWC-11 **Lab ID: 2624188015** Collected: 10/08/19 15:15 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	3.31 ± 0.704 (0.235) C:89% T:NA	pCi/L	11/04/19 08:45	13982-63-3	
Radium-228	EPA 9320	3.08 ± 0.862 (1.01) C:72% T:82%	pCi/L	11/04/19 13:44	15262-20-1	
Total Radium	Total Radium Calculation	6.39 ± 1.57 (1.25)	pCi/L	11/05/19 14:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: GWC-12 **Lab ID: 2624188016** Collected: 10/09/19 09:55 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.884 ± 0.326 (0.366) C:91% T:NA	pCi/L	11/04/19 08:45	13982-63-3	
Radium-228	EPA 9320	2.23 ± 0.691 (0.884) C:67% T:88%	pCi/L	11/04/19 13:44	15262-20-1	
Total Radium	Total Radium Calculation	3.11 ± 1.02 (1.25)	pCi/L	11/05/19 14:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: Dup-2 **Lab ID: 2624188017** Collected: 10/09/19 00:00 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.895 ± 0.311 (0.275) C:91% T:NA	pCi/L	11/04/19 08:45	13982-63-3	
Radium-228	EPA 9320	2.26 ± 0.706 (0.930) C:67% T:84%	pCi/L	11/04/19 12:59	15262-20-1	
Total Radium	Total Radium Calculation	3.16 ± 1.02 (1.21)	pCi/L	11/05/19 14:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: GWC-17 **Lab ID: 2624188018** Collected: 10/09/19 11:10 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.36 ± 0.383 (0.176) C:96% T:NA	pCi/L	11/04/19 08:45	13982-63-3	
Radium-228	EPA 9320	1.55 ± 0.610 (0.954) C:69% T:86%	pCi/L	11/04/19 13:44	15262-20-1	
Total Radium	Total Radium Calculation	2.91 ± 0.993 (1.13)	pCi/L	11/05/19 14:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: GWC-22 **Lab ID: 2624188019** Collected: 10/09/19 13:18 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.65 ± 0.436 (0.247) C:93% T:NA	pCi/L	11/04/19 08:50	13982-63-3	
Radium-228	EPA 9320	2.03 ± 0.729 (1.09) C:67% T:74%	pCi/L	11/04/19 13:00	15262-20-1	
Total Radium	Total Radium Calculation	3.68 ± 1.17 (1.34)	pCi/L	11/05/19 14:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: GWB-6R **Lab ID: 2624188020** Collected: 10/09/19 15:13 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	4.01 ± 0.798 (0.221) C:95% T:NA	pCi/L	11/04/19 08:50	13982-63-3	
Radium-228	EPA 9320	1.44 ± 0.640 (1.05) C:67% T:82%	pCi/L	11/04/19 13:00	15262-20-1	
Total Radium	Total Radium Calculation	5.45 ± 1.44 (1.27)	pCi/L	11/05/19 14:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: GWB-5R **Lab ID: 2624188021** Collected: 10/09/19 16:20 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	4.90 ± 0.947 (0.348) C:92% T:NA	pCi/L	11/04/19 08:50	13982-63-3	
Radium-228	EPA 9320	2.33 ± 0.782 (1.08) C:65% T:86%	pCi/L	11/04/19 13:00	15262-20-1	
Total Radium	Total Radium Calculation	7.23 ± 1.73 (1.43)	pCi/L	11/05/19 14:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: GWC-1 **Lab ID: 2624188022** Collected: 10/09/19 15:40 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.11 ± 0.339 (0.202) C:94% T:NA	pCi/L	11/04/19 08:50	13982-63-3	
Radium-228	EPA 9320	2.02 ± 0.724 (1.08) C:67% T:76%	pCi/L	11/04/19 13:00	15262-20-1	
Total Radium	Total Radium Calculation	3.13 ± 1.06 (1.28)	pCi/L	11/05/19 14:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Sample: GWC-9 **Lab ID: 2624188023** Collected: 10/09/19 12:10 Received: 10/10/19 13:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.46 ± 0.412 (0.294) C:90% T:NA	pCi/L	11/04/19 08:50	13982-63-3	
Radium-228	EPA 9320	1.63 ± 0.584 (0.861) C:68% T:87%	pCi/L	11/04/19 13:00	15262-20-1	
Total Radium	Total Radium Calculation	3.09 ± 0.996 (1.16)	pCi/L	11/05/19 14:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.385 ± 0.203 (0.261) C:94% T:NA	pCi/L	11/04/19 08:50	13982-63-3	
Radium-228	EPA 9320	1.40 ± 0.551 (0.840) C:70% T:83%	pCi/L	11/04/19 13:43	15262-20-1	
Total Radium	Total Radium Calculation	1.79 ± 0.754 (1.10)	pCi/L	11/05/19 14:24	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

QC Batch:	366966	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	2624188001, 2624188002, 2624188003, 2624188004, 2624188005, 2624188006, 2624188007, 2624188008, 2624188009, 2624188010		

METHOD BLANK:	1780028	Matrix:	Water
Associated Lab Samples:	2624188001, 2624188002, 2624188003, 2624188004, 2624188005, 2624188006, 2624188007, 2624188008, 2624188009, 2624188010		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.371 ± 0.194 (0.239) C:96% T:NA	pCi/L	11/04/19 08:29	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

QC Batch:	366971	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
Associated Lab Samples:	2624188011, 2624188012, 2624188013, 2624188014, 2624188015, 2624188016, 2624188017, 2624188018, 2624188019, 2624188020, 2624188021, 2624188022, 2624188023, 2624188024		

METHOD BLANK:	1780043	Matrix:	Water
Associated Lab Samples:	2624188011, 2624188012, 2624188013, 2624188014, 2624188015, 2624188016, 2624188017, 2624188018, 2624188019, 2624188020, 2624188021, 2624188022, 2624188023, 2624188024		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.325 ± 0.327 (0.672) C:75% T:91%	pCi/L	11/04/19 13:01	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

QC Batch: 366967

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 2624188001, 2624188002, 2624188003, 2624188004, 2624188005, 2624188006, 2624188007, 2624188008, 2624188009, 2624188010

METHOD BLANK: 1780030

Matrix: Water

Associated Lab Samples: 2624188001, 2624188002, 2624188003, 2624188004, 2624188005, 2624188006, 2624188007, 2624188008, 2624188009, 2624188010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0313 ± 0.302 (0.696) C:73% T:90%	pCi/L	11/01/19 12:27	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

QC Batch: 366969

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 2624188011, 2624188013, 2624188014, 2624188015, 2624188016, 2624188017, 2624188018, 2624188019, 2624188020, 2624188021, 2624188022, 2624188023, 2624188024

METHOD BLANK: 1780037

Matrix: Water

Associated Lab Samples: 2624188011, 2624188013, 2624188014, 2624188015, 2624188016, 2624188017, 2624188018, 2624188019, 2624188020, 2624188021, 2624188022, 2624188023, 2624188024

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.340 ± 0.211 (0.351) C:96% T:NA	pCi/L	11/04/19 08:33	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

QC Batch: 370852

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 2624188012

METHOD BLANK: 1799486

Matrix: Water

Associated Lab Samples: 2624188012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.487 ± 0.286 (0.389) C:88% T:NA	pCi/L	11/19/19 08:38	

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QUALIFIERS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624188

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road

Pace Project No.: 2624188

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2624188001	Dup-1	EPA 9315	366966		
2624188002	EB-1-10-8-19	EPA 9315	366966		
2624188003	GWC-16	EPA 9315	366966		
2624188004	GWC-21	EPA 9315	366966		
2624188005	GWC-15	EPA 9315	366966		
2624188006	GWC-14	EPA 9315	366966		
2624188007	GWB-4R	EPA 9315	366966		
2624188008	GWC-2	EPA 9315	366966		
2624188009	FB-2-10-9-19	EPA 9315	366966		
2624188010	GWC-20	EPA 9315	366966		
2624188011	GWA-8	EPA 9315	366969		
2624188012	GWA-7	EPA 9315	370852		
2624188013	FB-1-10-8-19	EPA 9315	366969		
2624188014	GWC-13	EPA 9315	366969		
2624188015	GWC-11	EPA 9315	366969		
2624188016	GWC-12	EPA 9315	366969		
2624188017	Dup-2	EPA 9315	366969		
2624188018	GWC-17	EPA 9315	366969		
2624188019	GWC-22	EPA 9315	366969		
2624188020	GWB-6R	EPA 9315	366969		
2624188021	GWB-5R	EPA 9315	366969		
2624188022	GWC-1	EPA 9315	366969		
2624188023	GWC-9	EPA 9315	366969		
2624188024	EB-2-10-9-19	EPA 9315	366969		
2624188001	Dup-1	EPA 9320	366967		
2624188002	EB-1-10-8-19	EPA 9320	366967		
2624188003	GWC-16	EPA 9320	366967		
2624188004	GWC-21	EPA 9320	366967		
2624188005	GWC-15	EPA 9320	366967		
2624188006	GWC-14	EPA 9320	366967		
2624188007	GWB-4R	EPA 9320	366967		
2624188008	GWC-2	EPA 9320	366967		
2624188009	FB-2-10-9-19	EPA 9320	366967		
2624188010	GWC-20	EPA 9320	366967		
2624188011	GWA-8	EPA 9320	366971		
2624188012	GWA-7	EPA 9320	366971		
2624188013	FB-1-10-8-19	EPA 9320	366971		
2624188014	GWC-13	EPA 9320	366971		
2624188015	GWC-11	EPA 9320	366971		
2624188016	GWC-12	EPA 9320	366971		
2624188017	Dup-2	EPA 9320	366971		
2624188018	GWC-17	EPA 9320	366971		
2624188019	GWC-22	EPA 9320	366971		
2624188020	GWB-6R	EPA 9320	366971		
2624188021	GWB-5R	EPA 9320	366971		
2624188022	GWC-1	EPA 9320	366971		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road
Pace Project No.: 2624188

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2624188023	GWC-9	EPA 9320	366971		
2624188024	EB-2-10-9-19	EPA 9320	366971		
2624188001	Dup-1	Total Radium Calculation	369493		
2624188002	EB-1-10-8-19	Total Radium Calculation	369493		
2624188003	GWC-16	Total Radium Calculation	369493		
2624188004	GWC-21	Total Radium Calculation	369493		
2624188005	GWC-15	Total Radium Calculation	369493		
2624188006	GWC-14	Total Radium Calculation	369493		
2624188007	GWB-4R	Total Radium Calculation	369493		
2624188008	GWC-2	Total Radium Calculation	369493		
2624188009	FB-2-10-9-19	Total Radium Calculation	369493		
2624188010	GWC-20	Total Radium Calculation	369493		
2624188011	GWA-8	Total Radium Calculation	369493		
2624188012	GWA-7	Total Radium Calculation	371954		
2624188013	FB-1-10-8-19	Total Radium Calculation	369493		
2624188014	GWC-13	Total Radium Calculation	369493		
2624188015	GWC-11	Total Radium Calculation	369493		
2624188016	GWC-12	Total Radium Calculation	369493		
2624188017	Dup-2	Total Radium Calculation	369495		
2624188018	GWC-17	Total Radium Calculation	369495		
2624188019	GWC-22	Total Radium Calculation	369495		
2624188020	GWB-6R	Total Radium Calculation	369495		
2624188021	GWB-5R	Total Radium Calculation	369495		
2624188022	GWC-1	Total Radium Calculation	369495		
2624188023	GWC-9	Total Radium Calculation	369495		
2624188024	EB-2-10-9-19	Total Radium Calculation	369495		

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Pace Analytical Services, Inc.
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
 (770) 734-4200 : FAX (770) 734-4201

CHAIN OF CUSTODY RECORD

CLIENT NAME: Georgia Power
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-508-7239
REPORT TO: *Cherry Carter* **CC:**
REQUESTED COMPLETION DATE: **PO #:**
PROJECT NAME/STATE: Plant Kraft Grumman Road
PROJECT #:

Collection DATE	Collection TIME	MATRIX CODE	C O R M P	SAMPLE IDENTIFICATION	ANALYSIS REQUESTED	CONTAINER TYPE	CONTAINER TYPE	PRESERVATION	PRESERVATION
10-8-19	1015	GW	X	DUP-1	Detected App IV Metals: (see list below)	4	P	7	1 - HCl, 56°C
10-8-19	1230	GW	X	EB-1-10-8-19	Detected App IV Metals: (see list below)	4	P	7	2 - H ₂ SO ₄ , 56°C
10-8-19	1425	GW	X	GWC-16	Detected App IV: Radium 226 & 228 (SW-846 9315/9320)	4	P	7	3 - HNO ₃
10-8-19	1525	GW	X	GWC-21	Detected App IV: Radium 226 & 228 (SW-846 9315/9320)	4	P	7	4 - NaOH, 56°C
10-8-19	1630	GW	X	GWC-15	Q, F, SO, & TDS (EPA 300.0 & SM 2540C)	4	P	7	5 - NaOH/ZnAg, 56°C
10-9-19	0824	GW	X	GWB-HR	Metals App. III (Boron, Calcium)	4	P	7	6 - Na ₂ S ₂ O ₃ , 56°C
10-9-19	1140	GW	X	GWB-4R	Metals App. III (Boron, Calcium)	4	P	7	7 - 56°C not frozen
10-9-19	1300	GW	X	GWC-2	Q, F, SO, & TDS (EPA 300.0 & SM 2540C)	4	P	7	
10-9-19	1320	W	X	FB-2-10-9-19	Q, F, SO, & TDS (EPA 300.0 & SM 2540C)	4	P	7	
10-9-19	1425	GW	X	GWL-20	Q, F, SO, & TDS (EPA 300.0 & SM 2540C)	4	P	7	

CONTAINERS →

ANALYSIS REQUESTED

CONTAINER TYPE
 P - PLASTIC
 A - AMBER GLASS
 G - CLEAR GLASS
 V - VOA VIAL
 S - STERILE
 O - OTHER

PRESERVATION
 1 - HCl, 56°C
 2 - H₂SO₄, 56°C
 3 - HNO₃
 4 - NaOH, 56°C
 5 - NaOH/ZnAg, 56°C
 6 - Na₂S₂O₃, 56°C
 7 - 56°C not frozen

MATRIX CODES:
 DW - DRINKING WATER
 WW - WASTEWATER
 GW - GROUNDWATER
 SW - SURFACE WATER
 ST - STORM WATER
 W - WATER
 S - SOIL
 SL - SLUDGE
 SD - SOLID
 A - AIR
 L - LIQUID
 P - PRODUCT

REMARKS/ADDITIONAL INFORMATION
 App III and detected App IV
 10-9-19 of

NO# : 2624188

LAB #: 2624186

RELINQUISHED BY: *[Signature]* **DATE/TIME:** 10/10/19 1345
RELINQUISHED BY: *[Signature]* **DATE/TIME:**

SAMPLE SHIPPED VIA: UPS
RECEIVED BY LAB: *[Signature]* **DATE/TIME:** 10/10/19 1345
RECEIVED BY: *[Signature]* **DATE/TIME:**

ENTERED INTO LIMS:
TRACKING #:



Pace Analytical Services, Inc.
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
 (770) 734-4200 : FAX (770) 734-4201

CHAIN OF CUSTODY RECORD

PAGE: 2 OF 3

CLIENT NAME: Georgia Power		CONTAINER TYPE: PRESERVATION:		ANALYSIS REQUESTED		CONTAINER TYPE		PRESERVATION			
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-508-7239		# of		P P P P P P P P P P P P		P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER		1 - HCl, 56°C 2 - H ₂ SO ₄ , 56°C 3 - HNO ₃ 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - Na ₂ S ₂ O ₃ , 56°C 7 - 56°C not frozen			
REPORT TO: <i>Erico Salicrude</i>	CC:	CONTAINERS →		Metals App. III Boron, Calcium Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C)		Detected App IV: Radium 226 & 228 (SV-848 8315/9320)		Detected App IV Metals: (see list below)		State Metals (see below)	
REQUESTED COMPLETION DATE:	PO #:	PROJECT NAME/STATE: Plant Kraft Grumman Road		PROJECT #:		REMARKS/ADDITIONAL INFORMATION					
Collection DATE	Collection TIME	MATRIX CODE*	GRA B	SAMPLE IDENTIFICATION							
10-7-19	1725	GW	✓	GWA-3			App III and detected App IV				
10-8-19	0945	GW	✓	GWA-7							
10-8-19	1040	GW	✓	FA-10-FB-1-10-8-19							
10-8-19	1125	GW	✓	GWC-13							
10-8-19	1515	GW	✓	GWC-11							
10-9-19	0955	GW	✓	GWC-12							
10-9-19	1110	GW	✓	DUP-2							
10-9-19	1318	GW	✓	GWL-17							
10-9-19	1513	GW	✓	GWC-22							
10-9-19	1620	GW	✓	GNB-6R							
10-9-19	1620	GW	✓	GNB-5R							
SAMPLED BY AND TITLE: H. Auld (sic)		DATE/TIME: 10-9-19 1620		RELINQUISHED BY: <i>H. Auld</i>		DATE/TIME: 10/10/19 1345		FOR LAB USE ONLY		LAB #:	
RECEIVED BY:		DATE/TIME:		RELINQUISHED BY:		DATE/TIME:		ENTERED INTO LIMS:		Tracking #:	
RECEIVED BY LAB: <i>Kraft Grumman</i>		DATE/TIME: 10/10/19 1345		SAMPLE SHIPPED VIA: UPS		FED-EX		USPS		COURIER	
pH checked: 166		No		No		No		NA		NA	
Temp checked: 166		No		No		No		NA		NA	
Temp checked: 166		No		No		No		NA		NA	
Temp checked: 166		No		No		No		NA		NA	

W0#: 2624188

PH: BH Due Date: 11/07/19
 CLIENT: GAPower-CCR

Detected App IV Metals: Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Lead, Lithium, Molybdenum, Selenium, and Thallium
 State Metals: As, Ba, Cr, Pb, Sb, Se, V, Zn



Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CHAIN OF CUSTODY RECORD

PAGE: 3 OF 3

CLIENT NAME: Georgia Power CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE 810185 Atlanta, GA 30308 404-506-7239 REPORT TO: <i>eperi@ep.com</i> CC: REQUESTED COMPLETION DATE: PO #:		CONTAINER TYPE: 3 7 PRESERVATION: # of CONTAINERS →		ANALYSIS REQUESTED Metals App. III Boron, Calcium Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C) Detected App IV: Radium 226 & 228 (SW-846 9315/9320) Detected App IV Metals: (see list below) State Metals (see below)		CONTAINER TYPE: P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER PRESERVATION 1 - HCl, 56°C 2 - H ₂ SO ₄ , 56°C 3 - HNO ₃ 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - Na ₂ S ₂ O ₃ , 56°C 7 - 56°C not frozen	
PROJECT NAME/STATE: Plant Kraft Grumman Road PROJECT #:		MATRIX CODE: X GW-1 X GW-9 X EW-2-10-9-19		DATE: 10-9-19 10-9-19 10-9-19		TIME: 15:40 12:10 12:30	
RECEIVED BY AND TITLE: O. FURUEA (ACC) DATE/TIME: 10-9-19 15:40 RECEIVED BY:		RELINQUISHED BY: DATE/TIME: RELINQUISHED BY:		DATE/TIME: DATE/TIME:		LAB #: ENTERED INTO LIMS: TRACKING #:	
RECEIVED BY LAB: Pace Analytical DATE/TIME: 10/10/19 1345 TEMPERATURE: 0.4 Mac		SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS Intact Broken Not Present		DATE/TIME: 10/09/19 1345 DATE/TIME:		FOR LAB USE ONLY	
REMARKS/ADDITIONAL INFORMATION App III and detected App IV WO#: 2624188 PM: BM Due Date: 11/07/19 CLIENT: GAPower-CCR							

Sample Condition Upon Receipt



Client Name: GIA Power Project # _____

Courier: Fed Ex UPS USPS Client Commercial Pace Other
 Tracking #: _____

WO#: 2624188

PM: **BM** Due Date: **11/07/19**
 CLIENT: **GAPower-CCR**

Custody Seal on Cooler/Box Present: yes no Seals intact: yes

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used 83 Type of Ice: Wet Blue None

Samples on ice, cooling process has begun

Cooler Temperature 0.4 Biological Tissue is Frozen: Yes No

Date and initials of person examining contents: 10/10/19 ma

Temp should be above freezing to 6°C

Comments:	
Chain of Custody Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>	
All containers needing preservation have been checked. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
	Lot # of added preservative
Samples checked for dechlorination: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm): <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____	

Client Notification/ Resolution: _____ Field Data Required? Y / N
 Person Contacted: _____ Date/Time: _____
 Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

LEVEL 2A LABORATORY DATA VALIDATIONS

Grumman Road

2nd Semi-Annual Event

October 2019

Georgia Power Company – Grumman Road

Quality Control Review of Analytical Data – October 2019

This narrative presents results of the Quality Control (QC) data review performed on analytical data submitted by Pace Analytical Services, Atlanta and Pittsburgh for groundwater samples collected at Grumman Road between October 7, 2019 and October 9, 2019. The chemical data were reviewed to identify quality issues which could affect the use of the data for decision-making purposes.

Information regarding the primary sample locations, analytical parameters, QC samples, sampling dates, and laboratory sample delivery group (SDG) designations is summarized in Table 1 of this Appendix. SDG 2624187 was revised by the laboratory to add target analytes that were missing from the original report. Sample GWA-7 (2624188012) had limited sample volume for radium analysis; the radium-226 result may have a high bias.

In accordance with groundwater monitoring and corrective action procedures discussed in Title 40 CFR, Subpart D – Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments, the samples were analyzed for detected monitoring constituents listed in 40 CFR, Part 257, Appendix III and assessment monitoring constituents listed in 40 CFR, Part 257, Appendix IV. Test methods included Inductively Coupled Plasma – Mass Spectrometry (USEPA Method 6020B), Mercury in Liquid Wastes (USEPA Method 7470A), Determination of Inorganic Anions (USEPA Method 300.0), Solids in Water (Standard Methods 2540C), Radium-226 (USEPA 9315), and Radium-228 (USEPA Method 9320).

Data were reviewed in accordance with the US EPA Region IV Data Validation Standard Operating Procedures for Contract Laboratory Program Inorganic Data by Inductively Coupled Plasma – Atomic Emission Spectroscopy and Inductively Coupled Plasma – Mass Spectroscopy (September 2011, Rev. 2.0)¹ and the National Functional Guidelines for Inorganic Superfund Methods Data Review (January 2017)². The review included an assessment of the results for completeness, precision (laboratory duplicate recoveries and matrix spike/matrix spike duplicate recoveries), accuracy (laboratory control samples and matrix spike samples), and blank contamination (field, equipment, and laboratory blanks). Sample receipt conditions, holding times, and chains of custody (COCs) were reviewed. Where there was a discrepancy between the QC criteria in the guidelines and the QC criterion established in the analytical methodology, method-specific criteria or professional judgment were used.

DATA QUALITY OBJECTIVES

- Laboratory Precision:** Laboratory goals for precision were met, with the exceptions of Radium-226 on GWA-8 (2624188011) as described in the qualifications section below. Additionally, Radium-228 in SDG 2624188 yielded a relative percent difference (RPD) for the laboratory control sample/laboratory control sample duplicate that exceeded the QC criteria (53.11% above limit of 36). This batch was passed on the individual recoveries, and no batch qualification was necessary for Radium-228.
- Field Precision:** Field goals for precision were met, with the exception of Vanadium on GWC-12 (2624187016) and DUP-2 (2624187017) as described in the qualifications section below.
- Accuracy:** Laboratory goals for accuracy were met, with the exceptions of Boron, Calcium, and Chloride in SDG 2624187 as described in the qualifications section below.
- Detection Limits:** Project goals for detection limits were met. Certain samples were diluted due to the concentration of target or non-target analyte interferences. Dilutions do not require qualifications based on USEPA guidelines. Reporting limits (RLs) of non-detect compounds are elevated proportional to the dilution when undiluted sample results were not provided by the laboratory. The data usability of diluted results was evaluated by the data user in the context of site-wide characterization.
- Completeness:** There were no rejected analytical results for this event, resulting in a completion of 100%.
- Holding Times:** Holding time requirements were met.

QUALIFICATIONS

In general, chemical results for the samples collected at the site were qualified on the basis of low precision or low accuracy or on the basis of professional judgment. The following definitions provide brief explanations of the qualifiers which may have been assigned to data by the laboratory during the validation process:

J: The analyte was positively identified above the method detection limit; however, the associated numerical value is the approximate concentration of the analyte in the sample

ND: The analyte was not detected above the method detection limit

The data generated as part of this sampling event met the QC criteria established in the respective analytical methods and data validation guidelines except as specified below. The applied qualifications may not have been required for all samples collected at the site. A summary of sample qualifications can be found in Table 2 of this Appendix.

- Sample GWC-14 (2624187006) was qualified as estimated (J) for Chloride as the associated matrix spike and matrix spike duplicate recoveries were below QC criteria (47% and 43% below the range of 90-110).
- Sample DUP-1 (2624187001) was qualified as estimated (J) for Boron and Calcium as the associated matrix spike and matrix spike duplicate recoveries were outside the QC criteria. The sample received 50-times dilution, which yielded spike recoveries that could not be evaluated.
- Sample GWB-5R (2624187021) was qualified as estimated (J) for Boron as the associated matrix spike duplicate recovery was below QC criteria (71% below the range of 75-125).
- Sample GWB-5R (2624187021) was qualified as estimated (J) for Calcium as the associated matrix spike recovery was above QC criteria (163% above the range of 75-125).
- Sample GWA-8 (2624188011) was qualified as estimated (J) for Radium-226 as the laboratory RPD exceeded QC criteria (27.58% above limit of 25).
- Samples GWC-12 (2624187016) and DUP-2 (2624187017) were qualified as estimated (J) for Vanadium as the field RPD exceeded QC criteria (71.8% above limit of 25).
- Certain chromium and/or zinc results in SDG 2624187 were qualified as non-detect (ND) due to the analyte being detected at a similar concentration in an associated blank sample. As shown in Table 2, when the original sample result was above the RL, both the RL and method detection limit (MDL) were raised to the sample result as part of the qualification process. When the original sample result was below the RL, only the MDL was raised to the sample result as part of the qualification process.

- Certain radium results in SDG 2624188 were qualified as non-detect (ND) due to the analyte being detected at a similar concentration in an associated blank sample. As shown in Table 2, the minimum detectable concentration (MDC) was raised to the sample result as part of the qualification process.

Atlantic Coast Consulting, Inc. reviewed the laboratory data from Grumman Road sampled between October 7, 2019 and October 9, 2019 in accordance with the analytical methods, the laboratory-specified QC criteria, and the guidelines. As described above, the results were acceptable for project use.

REFERENCES

¹USEPA, September 2011, Region 4, Science and Ecosystem Support Division, Quality Assurance Section, MTSB, Data Validation Standard Operating Procedures for Contract Laboratory Program Inorganic Data by Inductively Coupled Plasma – Atomic Emission Spectroscopy and Inductively Coupled Plasma – Mass Spectroscopy, Revision 2.0

²USEPA, January 2017, National Office of Superfund Remediation and Technology Innovation, National Functional Guidelines for Inorganic Superfund Methods Data Review, Revision 0.0

TABLE 1

Georgia Power Company – Grumman Road

Sample Summary Table – October 2019

SDG	Field Identification	Collection Date	Lab Identification	Matrix	QC Samples	Analyses			
						Metals (6020B, 7470A)	Anions (300.0)	TDS (SM 2540C)	Radium-226/-228 (9315, 9320)
24187	DUP-1	10/8/2019	2624187001	GW	FD (GWC-16)	X	X	X	
24188	DUP-1	10/8/2019	2624188001	GW	FD (GWC-16)				X
24187	EB-1-10-8-19	10/8/2019	2624187002	WQ	EB	X	X	X	
24188	EB-1-10-8-19	10/8/2019	2624188002	WQ	EB				X
24187	GWC-16	10/8/2019	2624187003	GW		X	X	X	
24188	GWC-16	10/8/2019	2624188003	GW					X
24187	GWC-21	10/8/2019	2624187004	GW		X	X	X	
24188	GWC-21	10/8/2019	2624188004	GW					X
24187	GWC-15	10/8/2019	2624187005	GW		X	X	X	
24188	GWC-15	10/8/2019	2624188005	GW					X
24187	GWC-14	10/8/2019	2624187006	GW		X	X	X	
24188	GWC-14	10/8/2019	2624188006	GW					X
24187	GWB-4R	10/9/2019	2624187007	GW		X	X	X	
24188	GWB-4R	10/9/2019	2624188007	GW					X
24187	GWC-2	10/9/2019	2624187008	GW		X	X	X	
24188	GWC-2	10/9/2019	2624188008	GW					X
24187	FB-2-10-9-19	10/9/2019	2624187009	WQ	FB	X	X	X	
24188	FB-2-10-9-19	10/9/2019	2624188009	WQ	FB				X
24187	GWC-20	10/9/2019	2624187010	GW		X	X	X	
24188	GWC-20	10/9/2019	2624188010	GW					X
24187	GWA-8	10/7/2019	2624187011	GW		X	X	X	
24188	GWA-8	10/7/2019	2624188011	GW					X
24187	GWA-7	10/8/2019	2624187012	GW		X	X	X	
24188	GWA-7	10/8/2019	2624188012	GW					X
24187	FB-1-10-8-19	10/8/2019	2624187013	WQ	FB	X	X	X	
24188	FB-1-10-8-19	10/8/2019	2624188013	WQ	FB				X
24187	GWC-13	10/8/2019	2624187014	GW		X	X	X	
24188	GWC-13	10/8/2019	2624188014	GW					X

Abbreviations:

EB – Equipment Blank

FB – Field Blank

FD – Field Duplicate

GW – Groundwater

QC – Quality Control

TDS – Total Dissolved Solids

WQ – Water Quality Control

TABLE 1 (continued)

Georgia Power Company – Grumman Road

Sample Summary Table – October 2019

SDG	Field Identification	Collection Date	Lab Identification	Matrix	QC Samples	Analyses			
						Metals (6020B, 7470A)	Anions (300.0)	TDS (SM 2540C)	Radium-226/-228 (9315, 9320)
24187	GWC-11	10/8/2019	2624187015	GW		X	X	X	
24188	GWC-11	10/8/2019	2624188015	GW					X
24187	GWC-12	10/9/2019	2624187016	GW		X	X	X	
24188	GWC-12	10/9/2019	2624188016	GW					X
24187	DUP-2	10/9/2019	2624187017	GW	FD (GWC-12)	X	X	X	
24188	DUP-2	10/9/2019	2624188017	GW	FD (GWC-12)				X
24187	GWC-17	10/9/2019	2624187018	GW		X	X	X	
24188	GWC-17	10/9/2019	2624188018	GW					X
24187	GWC-22	10/9/2019	2624187019	GW		X	X	X	
24188	GWC-22	10/9/2019	2624188019	GW					X
24187	GWB-6R	10/9/2019	2624187020	GW		X	X	X	
24188	GWB-6R	10/9/2019	2624188020	GW					X
24187	GWB-5R	10/9/2019	2624187021	GW		X	X	X	
24188	GWB-5R	10/9/2019	2624188021	GW					X
24187	GWC-1	10/9/2019	2624187022	GW		X	X	X	
24188	GWC-1	10/9/2019	2624188022	GW					X
24187	GWC-9	10/9/2019	2624187023	GW		X	X	X	
24188	GWC-9	10/9/2019	2624188023	GW					X
24187	EB-2-10-9-19	10/9/2019	2624187024	WQ	EB	X	X	X	
24188	EB-2-10-9-19	10/9/2019	2624188024	WQ	EB				X

Abbreviations:

EB – Equipment Blank

FB – Field Blank

FD – Field Duplicate

GW – Groundwater

QC – Quality Control

TDS – Total Dissolved Solids

WQ – Water Quality Control

TABLE 2

Georgia Power Company – Grumman Road

Qualifier Summary Table – October 2019

SDG	Field Identification	Constituent	New RL	New MDL or MDC	Qualifier	Reason
24187	DUP-1	Boron			J	MS/MSD outside QC criteria
24187	DUP-1	Calcium			J	MS/MSD outside QC criteria
24187	GWC-16	Zinc	0.01	0.01	ND	Blank detection
24188	GWC-16	Radium-228		0.688	ND	Blank detection
24187	GWC-21	Zinc		0.0071	ND	Blank detection
24187	GWC-15	Zinc		0.0051	ND	Blank detection
24188	GWC-15	Radium-228		0.691	ND	Blank detection
24187	GWC-14	Zinc		0.0052	ND	Blank detection
24187	GWC-14	Chloride			J	MS/MSD below QC criteria
24187	GWB-4R	Zinc		0.0064	ND	Blank detection
24187	GWC-2	Zinc		0.005	ND	Blank detection
24187	GWC-20	Zinc		0.0049	ND	Blank detection
24187	GWA-8	Zinc		0.0077	ND	Blank detection
24188	GWA-8	Radium-226			J	RPD exceeds laboratory goal
24187	GWA-7	Zinc	0.095	0.095	ND	Blank detection
24188	GWA-7	Radium-226		0.298	ND	Blank detection
24188	GWC-13	Radium-226		0.273	ND	Blank detection
24187	GWC-11	Zinc		0.0061	ND	Blank detection
24188	GWC-11	Radium-226		0.235	ND	Blank detection
24187	GWC-12	Zinc		0.0057	ND	Blank detection
24187	GWC-12	Vanadium			J	RPD exceeds field goal
24187	DUP-2	Vanadium			J	RPD exceeds field goal
24187	GWC-17	Zinc	0.011	0.011	ND	Blank detection
24188	GWC-17	Radium-226		0.176	ND	Blank detection
24187	GWC-22	Zinc		0.0079	ND	Blank detection
24188	GWC-22	Radium-226		0.247	ND	Blank detection
24187	GWB-6R	Zinc		0.016	ND	Blank detection
24188	GWB-6R	Radium-226		0.221	ND	Blank detection

Abbreviations:

MDC – Minimum Detectable Concentration
MS/MSD – Matrix Spike / Matrix Spike Duplicate
MDL – Method Detection Limit
RL – Reporting Limit
RPD – Relative Percent Difference
SDG – Sample Delivery Group

Qualifiers:

J – Estimated Result
ND – Non-Detect Result

TABLE 2 (continued)

Georgia Power Company – Grumman Road

Qualifier Summary Table – October 2019

SDG	Field Identification	Constituent	New RL	New MDL or MDC	Qualifier	Reason
24187	GWB-5R	Boron			J	MSD below QC criteria
24187	GWB-5R	Calcium			J	MS above QC criteria
24187	GWB-5R	Chromium		0012	ND	Blank detection
24187	GWB-5R	Zinc		0.0081	ND	Blank detection
24188	GWB-5R	Radium-226		0.348	ND	Blank detection
24187	GWC-1	Chromium		0019	ND	Blank detection
24187	GWC-1	Zinc		0.0057	ND	Blank detection
24188	GWC-1	Radium-226		0.202	ND	Blank detection
24187	GWC-9	Chromium		0.009	ND	Blank detection
24187	GWC-9	Zinc		0.0054	ND	Blank detection
24188	GWC-9	Radium-226		0.294	ND	Blank detection

Abbreviations:

MDC – Minimum Detectable Concentration
 MS/MSD – Matrix Spike / Matrix Spike Duplicate
 MDL – Method Detection Limit
 RL – Reporting Limit
 RPD – Relative Percent Difference
 SDG – Sample Delivery Group

Qualifiers:

J – Estimated Result
 ND – Non-Detect Result

Product Name: Low-Flow System

Date: 2019-10-08 09:52:40

Project Information:

Operator Name H. Auld
Company Name Atlantic Coast Consulting
Project Name October Monitoring Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369323
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type
Tubing Type
Tubing Diameter .17 in
Tubing Length 21 ft

Peri. Pump
poly
.17 in
21 ft

Pump placement from TOC 16.5 ft

Well Information:

Well ID GWA-7
Well diameter 2 in
Well Total Depth 21.10 ft
Screen Length 5 ft
Depth to Water 7.37 ft

Pumping Information:

Final Pumping Rate 220 mL/min
Total System Volume 0.1837319 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5.2 in
Total Volume Pumped 5.9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	09:23:19	300.10	24.35	5.70	1726.78	96.00	7.70	0.05	1.20
Last 5	09:28:19	600.04	24.26	5.71	1724.79	153.00	7.70	0.04	-3.82
Last 5	09:33:19	900.03	24.31	5.72	1723.72	230.00	7.80	0.03	-7.47
Last 5	09:38:19	1200.02	24.31	5.73	1717.46	303.00	7.80	0.02	-10.45
Last 5	09:43:19	1500.01	24.27	5.74	1700.46	315.00	7.80	0.02	-13.33
Variance 0			0.04	0.01	-1.07			-0.01	-3.65
Variance 1			-0.00	0.01	-6.26			-0.01	-2.98
Variance 2			-0.04	0.01	-17.00			-0.00	-2.87

Notes

Sampled at 0945 on 10-8-19. Cloudy 70s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-07 17:25:50

Project Information:

Operator Name H. Auld
Company Name Atlantic Coast Consulting
Project Name October Monitoring Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369323
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type
Tubing Type
Tubing Diameter .17 in
Tubing Length 21 ft

Peri. Pump
poly
.17 in
21 ft

Pump placement from TOC

16 ft

Well Information:

Well ID GWA-8
Well diameter 2 in
Well Total Depth 20.9 ft
Screen Length 5 ft
Depth to Water 8.81 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.1837319 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 20.3 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	17:02:59	300.10	25.22	4.19	352.82	1.80	10.50	0.15	151.17
Last 5	17:07:59	600.03	25.09	4.22	350.93	1.90	10.50	0.13	139.76
Last 5	17:12:59	900.03	25.03	4.23	350.57	2.04	10.50	0.12	132.97
Last 5	17:17:59	1200.02	24.94	4.22	349.79	2.20	10.50	0.11	130.70
Last 5	17:22:59	1500.01	24.91	4.24	349.77	2.20	10.50	0.10	128.68
Variance 0			-0.06	0.01	-0.36			-0.01	-6.80
Variance 1			-0.09	-0.01	-0.78			-0.01	-2.27
Variance 2			-0.03	0.01	-0.02			-0.01	-2.02

Notes

Sampled at 1725 on 10-7-19. Cloudy 80s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-09 11:41:24

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name October Monitoring Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 478733
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri. Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 26 ft

Pump placement from TOC 18.3 ft

Well Information:

Well ID GWB-4R
Well diameter 2 in
Well Total Depth 23.3 ft
Screen Length 10 ft
Depth to Water 11.85 ft

Pumping Information:

Final Pumping Rate 230 mL/min
Total System Volume 0.206049 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4 in
Total Volume Pumped 39 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	11:20:14	7804.91	23.51	5.79	715.49	8.33	12.20	0.15	-90.81
Last 5	11:25:14	8104.90	23.51	5.79	717.39	8.69	12.20	0.15	-91.51
Last 5	11:30:16	8406.90	23.51	5.79	716.17	8.49	12.20	0.15	-91.13
Last 5	11:35:17	8707.89	23.54	5.79	714.78	8.84	12.20	0.15	-90.04
Last 5	11:40:17	9007.89	23.61	5.79	715.81	9.00	12.20	0.14	-89.35
Variance 0			0.00	0.00	-1.22			-0.00	0.37
Variance 1			0.03	-0.00	-1.40			-0.00	1.10
Variance 2			0.08	0.00	1.04			-0.00	0.69

Notes

Sampled at 1140. Cloudy 71F.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-09 16:26:08

Project Information:

Operator Name H. Auld
Company Name Atlantic Coast Consulting
Project Name October Monitoring Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369323
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri. Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 26.5 ft

Pump placement from TOC 24 ft

Well Information:

Well ID GWB-5R
Well diameter 2 in
Well Total Depth 26.5 ft
Screen Length 5 ft
Depth to Water 10.94 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2082807 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5.5 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	15:54:11	300.05	26.40	6.04	1997.48	92.00	11.30	0.10	-58.64
Last 5	15:59:11	600.04	25.98	6.08	2125.48	94.00	11.40	0.07	-63.05
Last 5	16:09:11	1200.03	25.87	6.11	2106.10	90.00	11.40	0.04	-65.41
Last 5	16:14:11	1500.02	25.89	6.12	2141.80	102.00	11.40	0.03	-65.84
Last 5	16:19:11	1800.02	25.54	6.11	2115.42	107.00	11.40	0.02	-65.75
Variance 0			-0.11	0.03	-19.38			-0.03	-2.36
Variance 1			0.02	0.01	35.70			-0.01	-0.44
Variance 2			-0.35	-0.01	-26.38			-0.00	0.10

Notes

Sampled at 1620 on 10-9-19. Sunny 80s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-09 15:17:16

Project Information:

Operator Name H. Auld
Company Name Atlantic Coast Consulting
Project Name October Monitoring Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369323
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri. Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 22.7 ft

Pump placement from TOC 20 ft

Well Information:

Well ID GWB-6R
Well diameter 2 in
Well Total Depth 22.7 ft
Screen Length 5 ft
Depth to Water 8.67 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.1913197 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 14.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	14:51:10	3000.00	26.40	5.71	915.07	5.70	7.80	0.04	-25.90
Last 5	14:56:10	3299.97	26.38	5.68	925.29	5.40	7.80	0.04	-25.79
Last 5	15:01:10	3600.00	26.43	5.66	919.07	5.50	7.80	0.04	-24.95
Last 5	15:06:10	3899.98	26.58	5.71	905.96	5.00	7.80	0.03	-26.45
Last 5	15:11:10	4199.97	26.90	5.66	920.53	4.90	7.80	0.03	-24.57
Variance 0			0.05	-0.02	-6.23			-0.00	0.84
Variance 1			0.15	0.04	-13.11			-0.00	-1.50
Variance 2			0.32	-0.05	14.58			-0.00	1.88

Notes

Sampled at 1513 on 10-9-19. Sunny 80s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-09 15:42:23

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name October Monitoring Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 478733
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri. Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 32 ft

Pump placement from TOC 25.6 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 28.1 ft
Screen Length 5 ft
Depth to Water 19.55 ft

Pumping Information:

Final Pumping Rate 275 mL/min
Total System Volume 0.2328295 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 12 in
Total Volume Pumped 8.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	15:20:21	900.01	24.67	5.83	446.90	0.95	20.60	0.22	75.75
Last 5	15:25:21	1200.01	24.87	5.83	444.23	0.33	20.60	0.20	81.05
Last 5	15:30:24	1503.00	24.77	5.82	446.30	0.42	20.60	0.19	81.46
Last 5	15:35:24	1803.00	24.81	5.82	443.87	0.39	20.70	0.18	78.64
Last 5	15:40:26	2105.00	24.63	5.82	444.59	0.47	20.70	0.18	74.75
Variance 0			-0.10	-0.02	2.07			-0.01	0.41
Variance 1			0.04	0.00	-2.43			-0.01	-2.82
Variance 2			-0.18	-0.00	0.72			-0.00	-3.89

Notes

Sampled at 1540. 77F clear.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-09 13:01:54

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name October Monitoring Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 478733
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri. Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 36 ft

Pump placement from TOC 30 ft

Well Information:

Well ID GWC-2
Well diameter 2 in
Well Total Depth 33.75 ft
Screen Length 5 ft
Depth to Water 19.94 ft

Pumping Information:

Final Pumping Rate 225 mL/min
Total System Volume 0.2506832 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 9.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	12:35:10	900.01	23.34	4.78	60.12	3.62	20.20	0.20	20.90
Last 5	12:40:10	1200.06	23.15	4.80	60.51	3.54	20.20	0.19	17.18
Last 5	12:45:10	1500.01	22.88	4.79	60.78	2.48	20.20	0.18	16.89
Last 5	12:50:12	1802.00	22.71	4.79	60.59	2.56	20.20	0.18	15.32
Last 5	13:00:19	2408.99	22.75	4.79	60.18	2.29	20.20	0.18	14.92
Variance 0			-0.26	-0.01	0.27			-0.01	-0.29
Variance 1			-0.17	-0.01	-0.19			-0.00	-1.57
Variance 2			0.04	0.00	-0.40			-0.00	-0.40

Notes

Sampled at 1300. 73F cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-09 12:09:17

Project Information:

Operator Name H. Auld
Company Name Atlantic Coast Consulting
Project Name October Monitoring Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369323
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type
Tubing Type
Tubing Diameter
Tubing Length
Peri. Pump
poly
.17 in
26 ft

Pump placement from TOC 23 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 25.7 ft
Screen Length 5 ft
Depth to Water 10.1 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.206049 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 32.4 in
Total Volume Pumped 2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	11:55:48	300.04	23.51	4.67	147.29	0.80	11.10	0.39	18.71
Last 5	12:00:48	600.04	23.44	4.66	146.80	1.30	11.90	0.23	17.35
Last 5	12:05:48	900.03	23.37	4.62	146.89	1.10	12.80	0.19	18.21
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.07	-0.01	-0.49			-0.16	-1.36
Variance 2			-0.07	-0.04	0.09			-0.04	0.86

Notes

Sampled at 1210 on 10-9-19. Cloudy 70s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-08 16:56:20

Project Information:

Operator Name H. Auld
Company Name Atlantic Coast Consulting
Project Name October Monitoring Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369323
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri. Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 26 ft

Pump placement from TOC 23 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 25.7 ft
Screen Length 5 ft
Depth to Water 9.93 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.206049 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 162.8 in
Total Volume Pumped 10.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	16:33:53	1800.01	24.49	4.65	152.33	1.70	18.70	0.13	49.14
Last 5	16:38:53	2100.01	24.58	4.64	151.23	2.80	20.10	0.14	53.52
Last 5	16:43:53	2400.00	24.26	4.57	150.42	3.30	21.20	0.20	62.39
Last 5	16:48:53	2700.00	24.20	4.52	148.67	5.30	22.20	0.34	73.38
Last 5	16:53:53	2999.99	24.31	4.49	149.05	5.60	23.50	0.58	71.91
Variance 0			-0.32	-0.07	-0.81			0.06	8.88
Variance 1			-0.06	-0.05	-1.75			0.14	10.99
Variance 2			0.11	-0.02	0.38			0.24	-1.47

Notes

Purged dry, allow for overnight recharge.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-08 15:26:33

Project Information:

Operator Name H. Auld
Company Name Atlantic Coast Consulting
Project Name October Monitoring Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369323
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 23 ft

Pump placement from TOC 20 ft

Well Information:

Well ID GWC-11
Well diameter 2 in
Well Total Depth 22.5 ft
Screen Length 5 ft
Depth to Water 10.15 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.1926587 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 32 in
Total Volume Pumped 15 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	14:50:27	7501.90	25.85	4.95	636.99	0.80	16.80	0.20	176.12
Last 5	14:55:27	7801.90	25.53	4.94	698.53	0.90	16.80	0.15	172.00
Last 5	15:00:27	8101.89	25.35	4.95	757.63	0.90	16.80	0.14	171.03
Last 5	15:05:27	8401.89	25.76	4.93	775.65	1.00	16.80	0.14	171.50
Last 5	15:10:28	8702.88	25.48	4.93	794.80	0.40	16.80	0.14	166.94
Variance 0			-0.18	0.00	59.10			-0.01	-0.97
Variance 1			0.41	-0.02	18.02			0.00	0.47
Variance 2			-0.27	0.00	19.15			0.00	-4.56

Notes

Sampled at 1515 on 10-8-19. Sunny, 80s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-09 09:59:28

Project Information:

Operator Name H. Auld
Company Name Atlantic Coast Consulting
Project Name October Monitoring Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369323
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri. Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 26.5 ft

Pump placement from TOC 23 ft

Well Information:

Well ID GWC-12
Well diameter 2 in
Well Total Depth 26.7 ft
Screen Length 5 ft
Depth to Water 13.7 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2082807 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.4 in
Total Volume Pumped 5.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	09:33:48	300.04	23.32	4.31	628.47	1.50	13.90	0.87	74.69
Last 5	09:38:48	600.03	23.32	4.31	624.01	2.00	13.90	0.27	69.94
Last 5	09:43:48	900.03	23.35	4.28	623.44	1.40	13.90	0.19	66.52
Last 5	09:48:48	1200.02	23.27	4.29	623.48	1.10	13.90	0.18	63.02
Last 5	09:53:48	1500.01	23.17	4.25	649.52	1.10	13.90	0.17	57.18
Variance 0			0.03	-0.04	-0.57			-0.08	-3.42
Variance 1			-0.08	0.01	0.04			-0.01	-3.50
Variance 2			-0.11	-0.03	26.04			-0.02	-5.83

Notes

Sampled at 0955 on 10-9-19. Cloudy, 60s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-08 11:28:13

Project Information:

Operator Name H. Auld
Company Name Atlantic Coast Consulting
Project Name October Monitoring Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369323
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type
Tubing Type
Tubing Diameter .17 in
Tubing Length 24 ft

Peri. Pump
poly
.17 in
24 ft

Pump placement from TOC

21 ft

Well Information:

Well ID GWC-13
Well diameter 2 in
Well Total Depth 24.1 ft
Screen Length 5 ft
Depth to Water 14.76 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.1971222 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.1 in
Total Volume Pumped 9.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	10:54:06	1800.01	23.86	4.73	80.54	4.50	15.10	0.16	149.23
Last 5	10:59:06	2100.00	23.90	4.81	77.97	2.10	15.10	0.15	149.15
Last 5	11:14:06	2999.99	24.76	4.81	74.19	1.20	15.10	0.13	135.78
Last 5	11:19:06	3299.97	24.98	4.81	73.50	1.70	15.10	0.13	134.04
Last 5	11:24:06	3599.97	24.86	4.81	72.97	1.30	15.10	0.13	133.07
Variance 0			0.86	0.00	-3.78			-0.02	-13.37
Variance 1			0.22	0.00	-0.69			0.00	-1.75
Variance 2			-0.12	0.00	-0.54			-0.00	-0.97

Notes

Sampled at 1125 on 10-8-19. Sunny 70s. FB-1-10-8-19 here at 1040.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-08 16:32:02

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name October Monitoring Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 478733
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri. Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 32 ft

Pump placement from TOC 24.5 ft

Well Information:

Well ID GWC-14
Well diameter 2 in
Well Total Depth 27 ft
Screen Length 5 ft
Depth to Water 19.92 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2328295 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 6.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	16:10:02	600.02	23.64	5.69	1091.73	2.08	20.20	0.37	53.48
Last 5	16:15:02	900.01	23.60	5.69	1097.36	1.68	20.20	0.35	27.18
Last 5	16:20:02	1200.01	23.42	5.69	1096.01	1.91	20.20	0.37	11.57
Last 5	16:25:04	1502.01	23.35	5.68	1095.65	1.25	20.20	0.37	4.22
Last 5	16:30:09	1807.00	23.42	5.68	1091.53	1.51	20.20	0.37	3.33
Variance 0			-0.18	-0.00	-1.35			0.01	-15.60
Variance 1			-0.06	-0.00	-0.36			0.00	-7.35
Variance 2			0.06	-0.00	-4.11			0.00	-0.88

Notes

Sampled at 1630. 83F Sunny.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-08 15:27:16

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name October Monitoring Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 478733
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri. Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 24.3 ft

Well Information:

Well ID GWC-15
Well diameter 2 in
Well Total Depth 26.8 ft
Screen Length 5 ft
Depth to Water 19.54 ft

Pumping Information:

Final Pumping Rate 185 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4 in
Total Volume Pumped 6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	15:05:03	300.06	25.86	6.62	704.18	3.38	19.90	0.25	39.70
Last 5	15:10:03	600.02	25.49	6.63	742.35	3.19	19.90	0.22	38.57
Last 5	15:15:03	900.02	25.68	6.64	746.95	5.13	19.90	0.20	40.50
Last 5	15:20:03	1201.01	25.74	6.65	751.00	4.89	19.90	0.19	41.87
Last 5	15:25:10	1507.01	25.47	6.65	752.43	4.20	19.90	0.19	41.37
Variance 0			0.18	0.01	4.60			-0.02	1.94
Variance 1			0.07	0.01	4.05			-0.01	1.36
Variance 2			-0.27	0.00	1.43			-0.00	-0.49

Notes

Sampled at 1525. 86F Sunny.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-08 12:35:45

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name October Monitoring Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 478733
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type
Tubing Type
Tubing Diameter .17 in
Tubing Length 32 ft

Peri. Pump
poly
.17 in
32 ft

Pump placement from TOC 25.7 ft

Well Information:

Well ID GWC-16
Well diameter 2 in
Well Total Depth 28.2 ft
Screen Length 5 ft
Depth to Water 20.92 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2328295 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 13.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	12:10:03	1200.01	24.07	5.43	1777.15	10.90	21.10	0.33	-44.23
Last 5	12:15:03	1500.00	24.27	5.47	1759.57	5.39	21.20	0.35	-46.30
Last 5	12:20:05	1802.00	24.37	5.50	1744.14	8.97	21.20	0.39	-47.21
Last 5	12:25:05	2102.05	24.36	5.52	1744.57	4.24	21.20	0.39	-48.10
Last 5	12:30:05	2402.01	24.39	5.54	1737.96	4.33	21.20	0.43	-48.91
Variance 0			0.10	0.03	-15.43			0.04	-0.92
Variance 1			-0.01	0.02	0.42			0.01	-0.88
Variance 2			0.03	0.02	-6.61			0.04	-0.81

Notes

Sampled at 1230. Sunny 83F.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-09 11:13:17

Project Information:

Operator Name H. Auld
Company Name Atlantic Coast Consulting
Project Name October Monitoring Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369323
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type
Tubing Type
Tubing Diameter .17 in
Tubing Length 23 ft

Peri. Pump
poly
.17 in
23 ft

Pump placement from TOC 20.5 ft

Well Information:

Well ID GWC-17
Well diameter 2 in
Well Total Depth 23 ft
Screen Length 5 ft
Depth to Water 7.35 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.1926587 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 16.2 in
Total Volume Pumped 13.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	10:48:17	300.03	23.88	4.43	1559.79	2.80	8.60	0.15	55.88
Last 5	10:53:17	600.03	23.90	4.61	1472.84	3.10	8.70	0.14	47.42
Last 5	10:58:17	900.03	23.83	4.68	1458.43	2.90	8.70	0.13	42.32
Last 5	11:03:17	1200.02	23.86	4.70	1441.66	3.80	8.70	0.12	41.13
Last 5	11:08:17	1500.02	23.86	4.66	1454.25	4.00	8.70	0.12	41.11
Variance 0			-0.07	0.07	-14.40			-0.01	-5.09
Variance 1			0.03	0.03	-16.77			-0.01	-1.20
Variance 2			-0.01	-0.04	12.58			-0.01	-0.02

Notes

Sampled at 1110 on 10-9-19. Cloudy 60s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-09 14:26:23

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name October Monitoring Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 478733
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri. Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 28 ft

Pump placement from TOC 23.4 ft

Well Information:

Well ID GWC-20
Well diameter 2 in
Well Total Depth 24.9 ft
Screen Length 5 ft
Depth to Water 21.39 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	14:05:05	1500.00	23.69	6.52	638.87	0.80	21.80	0.76	-46.60
Last 5	14:10:05	1800.00	23.70	6.51	637.98	0.70	21.80	0.71	-49.58
Last 5	14:15:05	2100.00	23.74	6.51	637.11	0.77	21.80	0.71	-51.87
Last 5	14:20:05	2399.99	23.86	6.51	634.22	0.66	21.80	0.69	-52.96
Last 5	14:25:06	2700.99	23.96	6.50	638.35	0.82	21.80	0.66	-54.61
Variance 0			0.04	-0.00	-0.88			-0.00	-2.28
Variance 1			0.13	0.00	-2.88			-0.02	-1.09
Variance 2			0.09	-0.01	4.13			-0.03	-1.65

Notes

Sampled at 1425. 75F cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-08 14:27:40

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name October Monitoring Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 478733
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type
Tubing Type
Tubing Diameter
Tubing Length
Peri. Pump
poly
.17 in
25 ft

Pump placement from TOC 22.8 ft

Well Information:

Well ID GWC-21
Well diameter 2 in
Well Total Depth 23.8 ft
Screen Length 5 ft
Depth to Water 20.85 ft

Pumping Information:

Final Pumping Rate 165 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 11 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	14:05:01	2699.99	25.60	6.06	360.58	3.47	21.00	2.14	-15.02
Last 5	14:10:01	2999.98	25.54	6.07	367.22	3.38	21.00	2.12	-19.81
Last 5	14:15:01	3299.98	25.31	6.07	384.86	1.53	21.00	2.12	-26.50
Last 5	14:20:01	3599.97	25.46	6.09	393.39	1.40	21.00	2.10	-32.36
Last 5	14:25:01	3899.97	25.33	6.09	399.71	1.41	21.00	2.06	-36.37
Variance 0			-0.23	0.00	17.64			-0.00	-6.69
Variance 1			0.15	0.01	8.53			-0.02	-5.86
Variance 2			-0.13	0.01	6.31			-0.04	-4.02

Notes

Sampled at 1425. Sunny 87F.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-09 13:20:38

Project Information:

Operator Name H. Auld
Company Name Atlantic Coast Consulting
Project Name October Monitoring Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369323
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri. Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 18.6 ft

Pump placement from TOC 16 ft

Well Information:

Well ID GWC-22
Well diameter 2 in
Well Total Depth 18.6 ft
Screen Length 5 ft
Depth to Water 9.74 ft

Pumping Information:

Final Pumping Rate 165 mL/min
Total System Volume 0.1730197 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.9 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	12:54:58	300.04	25.58	4.65	213.75	4.60	9.90	0.34	106.88
Last 5	12:59:58	600.04	25.53	4.64	254.42	2.10	9.90	0.23	108.76
Last 5	13:04:58	900.03	25.44	4.66	262.99	5.10	9.90	0.19	107.67
Last 5	13:09:58	1200.02	25.43	4.66	263.87	2.50	9.90	0.17	108.65
Last 5	13:14:58	1500.02	25.49	4.68	263.46	3.10	9.90	0.15	109.73
Variance 0			-0.09	0.02	8.57			-0.04	-1.09
Variance 1			-0.01	0.00	0.88			-0.02	0.98
Variance 2			0.06	0.01	-0.41			-0.02	1.08

Notes

Sampled at 1318 on 10-9-19. Cloudy 70s.

Grab Samples

APPENDIX B

Statistical Analyses

100% ND

Date: 12/9/2019 3:36 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

Antimony (mg/L)

GWC-1, GWC-12, GWC-15, GWC-17, GWC-2, GWC-21, GWB-6R

Arsenic (mg/L)

GWC-11, GWC-9

Beryllium (mg/L)

GWC-1, GWC-11, GWC-15, GWC-20, GWC-21, GWB-6R

Cadmium (mg/L)

GWC-12, GWC-13, GWC-15, GWC-16, GWC-17, GWC-2, GWC-20, GWC-21, GWC-9, GWB-5R, GWB-6R

Cobalt (mg/L)

GWC-1, GWC-13, GWC-15, GWC-16, GWC-20, GWC-21

Fluoride (mg/L)

GWC-11

Lithium (mg/L)

GWC-1, GWC-11, GWC-13, GWC-14, GWC-15, GWC-16, GWC-2, GWC-20, GWC-21, GWC-22, GWB-6R

Molybdenum (mg/L)

GWC-12, GWC-13, GWC-2, GWC-22, GWC-9

Selenium (mg/L)

GWC-13

Thallium (mg/L)

GWC-13, GWC-15, GWC-20, GWC-9, GWB-6R

Appendix III Statistics

Interwell Prediction Limit Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 12/10/2019, 11:08 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Calcium (mg/L)	GWC-1	31.7	n/a	10/9/2019	51.2	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-11	31.7	n/a	10/8/2019	69.2	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-12	31.7	n/a	10/9/2019	54.2	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-14	31.7	n/a	10/8/2019	146	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-15	31.7	n/a	10/8/2019	129	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-16	31.7	n/a	10/8/2019	205	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-17	31.7	n/a	10/9/2019	56.6	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-20	31.7	n/a	10/9/2019	80.1	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-21	31.7	n/a	10/8/2019	49.5	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-4R	31.7	n/a	10/9/2019	46.7	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-17	260	n/a	10/9/2019	330	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
pH (SU)	GWC-15	6.43	4.24	10/8/2019	6.65	Yes	22	0	n/a	0.006133	NP Inter (normality) 1 of 2
pH (SU)	GWC-20	6.43	4.24	10/9/2019	6.5	Yes	22	0	n/a	0.006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-11	160	n/a	10/8/2019	310	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-12	160	n/a	10/9/2019	392	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-14	160	n/a	10/8/2019	428	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-16	160	n/a	10/8/2019	872	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-17	160	n/a	10/9/2019	346	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-6R	160	n/a	10/9/2019	255	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2

Interwell Prediction Limit All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 12/10/2019, 11:08 AM

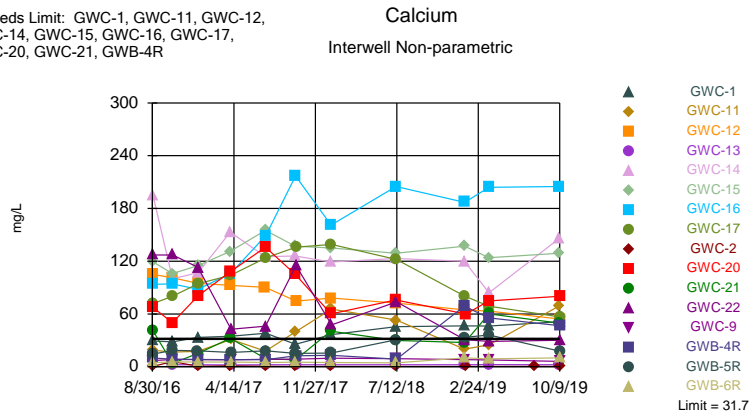
Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Calcium (mg/L)	GWC-1	31.7	n/a	10/9/2019	51.2	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-11	31.7	n/a	10/8/2019	69.2	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-12	31.7	n/a	10/9/2019	54.2	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-13	31.7	n/a	10/8/2019	2.3	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-14	31.7	n/a	10/8/2019	146	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-15	31.7	n/a	10/8/2019	129	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-16	31.7	n/a	10/8/2019	205	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-17	31.7	n/a	10/9/2019	56.6	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-2	31.7	n/a	10/9/2019	0.18	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-20	31.7	n/a	10/9/2019	80.1	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-21	31.7	n/a	10/8/2019	49.5	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-22	31.7	n/a	10/9/2019	30.1	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-9	31.7	n/a	10/9/2019	6	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-4R	31.7	n/a	10/9/2019	46.7	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-5R	31.7	n/a	10/9/2019	17.7	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-6R	31.7	n/a	10/9/2019	10.1	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-1	260	n/a	10/9/2019	7.2	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-11	260	n/a	10/8/2019	89	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-12	260	n/a	10/9/2019	44.1	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-13	260	n/a	10/8/2019	4	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-14	260	n/a	10/8/2019	40.2	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-15	260	n/a	10/8/2019	2.9	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-16	260	n/a	10/8/2019	46.4	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-17	260	n/a	10/9/2019	330	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-2	260	n/a	10/9/2019	7	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-20	260	n/a	10/9/2019	5.4	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-21	260	n/a	10/8/2019	7.8	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-22	260	n/a	10/9/2019	25.3	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-9	260	n/a	10/9/2019	19	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWB-4R	260	n/a	10/9/2019	32.1	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWB-5R	260	n/a	10/9/2019	239	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWB-6R	260	n/a	10/9/2019	49.7	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Fluoride (mg/L)	GWC-1	0.4774	n/a	10/9/2019	0.3ND	No	24	25	No	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-11	0.4774	n/a	10/8/2019	0.3ND	No	24	25	No	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-12	0.4774	n/a	10/9/2019	0.3ND	No	24	25	No	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-13	0.4774	n/a	10/8/2019	0.3ND	No	24	25	No	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-14	0.4774	n/a	10/8/2019	0.3ND	No	24	25	No	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-15	0.4774	n/a	10/8/2019	0.3ND	No	24	25	No	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-16	0.4774	n/a	10/8/2019	0.3ND	No	24	25	No	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-17	0.4774	n/a	10/9/2019	0.3ND	No	24	25	No	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-2	0.4774	n/a	10/9/2019	0.3ND	No	24	25	No	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-20	0.4774	n/a	10/9/2019	0.3ND	No	24	25	No	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-21	0.4774	n/a	10/8/2019	0.3ND	No	24	25	No	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-22	0.4774	n/a	10/9/2019	0.3ND	No	24	25	No	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-9	0.4774	n/a	10/9/2019	0.068	No	24	25	No	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWB-4R	0.4774	n/a	10/9/2019	0.3ND	No	24	25	No	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWB-5R	0.4774	n/a	10/9/2019	0.3ND	No	24	25	No	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWB-6R	0.4774	n/a	10/9/2019	0.3ND	No	24	25	No	0.0004702	Param Inter 1 of 2
pH (SU)	GWC-1	6.43	4.24	10/9/2019	5.82	No	22	0	n/a	0.006133	NP Inter (normality) 1 of 2
pH (SU)	GWC-11	6.43	4.24	10/8/2019	4.93	No	22	0	n/a	0.006133	NP Inter (normality) 1 of 2

Interwell Prediction Limit All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 12/10/2019, 11:08 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
pH (SU)	GWC-12	6.43	4.24	10/9/2019	4.25	No	22	0	n/a	0.006133	NP Inter (normality) 1 of 2
pH (SU)	GWC-13	6.43	4.24	10/8/2019	4.81	No	22	0	n/a	0.006133	NP Inter (normality) 1 of 2
pH (SU)	GWC-14	6.43	4.24	10/8/2019	5.68	No	22	0	n/a	0.006133	NP Inter (normality) 1 of 2
pH (SU)	GWC-15	6.43	4.24	10/8/2019	6.65	Yes	22	0	n/a	0.006133	NP Inter (normality) 1 of 2
pH (SU)	GWC-16	6.43	4.24	10/8/2019	5.54	No	22	0	n/a	0.006133	NP Inter (normality) 1 of 2
pH (SU)	GWC-17	6.43	4.24	10/9/2019	4.66	No	22	0	n/a	0.006133	NP Inter (normality) 1 of 2
pH (SU)	GWC-2	6.43	4.24	10/9/2019	4.79	No	22	0	n/a	0.006133	NP Inter (normality) 1 of 2
pH (SU)	GWC-20	6.43	4.24	10/9/2019	6.5	Yes	22	0	n/a	0.006133	NP Inter (normality) 1 of 2
pH (SU)	GWC-21	6.43	4.24	10/8/2019	6.09	No	22	0	n/a	0.006133	NP Inter (normality) 1 of 2
pH (SU)	GWC-22	6.43	4.24	10/9/2019	4.68	No	22	0	n/a	0.006133	NP Inter (normality) 1 of 2
pH (SU)	GWC-9	6.43	4.24	10/9/2019	4.62	No	22	0	n/a	0.006133	NP Inter (normality) 1 of 2
pH (SU)	GWB-4R	6.43	4.24	10/9/2019	5.79	No	22	0	n/a	0.006133	NP Inter (normality) 1 of 2
pH (SU)	GWB-5R	6.43	4.24	10/9/2019	6.11	No	22	0	n/a	0.006133	NP Inter (normality) 1 of 2
pH (SU)	GWB-6R	6.43	4.24	10/9/2019	5.66	No	22	0	n/a	0.006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-1	160	n/a	10/9/2019	76.3	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-11	160	n/a	10/8/2019	310	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-12	160	n/a	10/9/2019	392	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-13	160	n/a	10/8/2019	22	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-14	160	n/a	10/8/2019	428	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-15	160	n/a	10/8/2019	45.8	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-16	160	n/a	10/8/2019	872	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-17	160	n/a	10/9/2019	346	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-2	160	n/a	10/9/2019	10.1	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-20	160	n/a	10/9/2019	58.5	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-21	160	n/a	10/8/2019	85.6	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-22	160	n/a	10/9/2019	80.2	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-9	160	n/a	10/9/2019	41.1	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-4R	160	n/a	10/9/2019	38.5	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-5R	160	n/a	10/9/2019	90.8	No	22	0	n/a	0.003067	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-6R	160	n/a	10/9/2019	255	Yes	22	0	n/a	0.003067	NP Inter (normality) 1 of 2

Exceeds Limit: GWC-1, GWC-11, GWC-12, GWC-14, GWC-15, GWC-16, GWC-17, GWC-20, GWC-21, GWB-4R



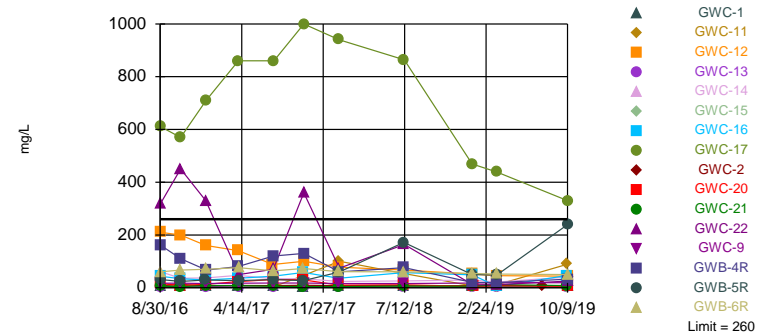
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 22 background values. Annual per-constituent alpha = 0.09361. Individual comparison alpha = 0.003067 (1 of 2). Comparing 16 points to limit.

Prediction Limit Analysis Run 12/10/2019 11:05 AM View: Appendix III Interwell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit: GWC-17

Chloride

Interwell Non-parametric

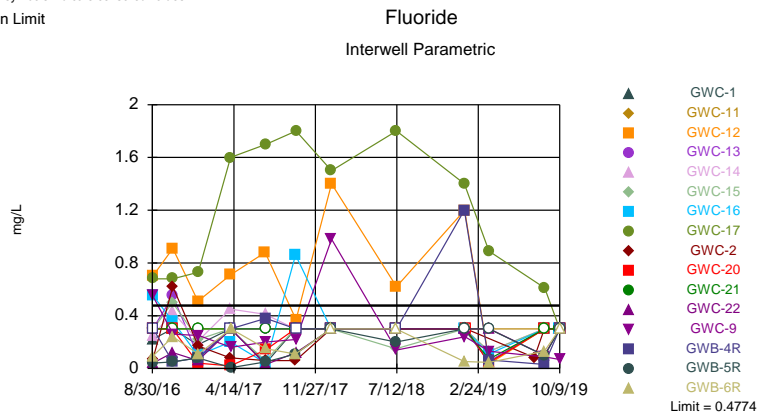


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 22 background values. Annual per-constituent alpha = 0.09361. Individual comparison alpha = 0.003067 (1 of 2). Comparing 16 points to limit.

Prediction Limit Analysis Run 12/10/2019 11:05 AM View: Appendix III Interwell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Hollow symbols indicate censored values.

Within Limit



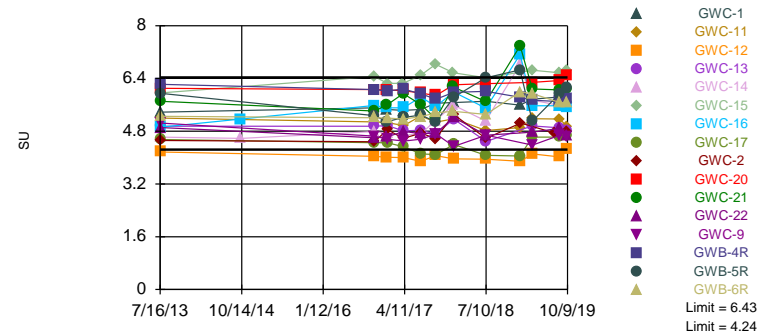
Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.1598, Std. Dev.=0.1359, n=24, 25% NDs.
 Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9355, critical = 0.884. Kappa = 2.338 (c=7, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0004702. Comparing 16 points to limit.

Prediction Limit Analysis Run 12/10/2019 11:05 AM View: Appendix III Interwell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limits: GWC-15, GWC-20

pH

Interwell Non-parametric

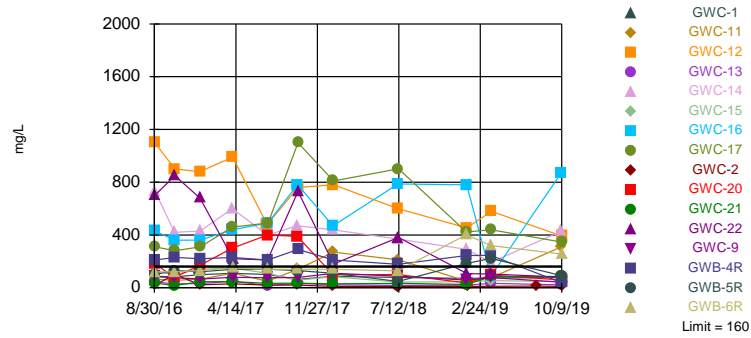


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 22 background values. Annual per-constituent alpha = 0.1872. Individual comparison alpha = 0.006133 (1 of 2). Comparing 16 points to limit.

Prediction Limit Analysis Run 12/10/2019 11:05 AM View: Appendix III Interwell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit: GWC-11, GWC-12, GWC-14, GWC-16, GWC-17, GWC-6R

Sulfate Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 22 background values. Annual per-constituent alpha = 0.09361. Individual comparison alpha = 0.003067 (1 of 2). Comparing 16 points to limit.

Prediction Limit Analysis Run 12/10/2019 11:05 AM View: Appendix III Interwell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 12/10/2019 11:08 AM View: Appendix III Interwell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-6R	GWB-5R	GWA-8 (bg)	GWC-1	GWC-9	GWC-22	GWC-2	GWC-12	GWC-11
8/30/2016	4.68	14.3	23.8	29.4					
8/31/2016					6.9	127	0.371 (J)	105	18.8
9/1/2016									
10/24/2016			22.5						
10/25/2016				28.3					
10/26/2016	5.45	18.6				127	5.84	101	16.6
10/27/2016					8.2				
1/3/2017		18.1	22.1						
1/4/2017				33.4		113		94.9	17.6
1/5/2017	5.35						0.379 (J)		
1/6/2017					7.97				
4/3/2017			24.6 (J)						
4/4/2017				34.6			0.993		
4/5/2017								92.5	
4/6/2017	5.41	16.2			7.95	42.7			30.9
7/10/2017								90.3	
7/11/2017			23.5			46			17.7
7/12/2017	4.81	18.1		38	8.37				
7/13/2017							0.388 (J)		
10/2/2017			22.7						
10/3/2017	5.17	15.2		25.5			0.251 (J)		39.8
10/4/2017					8.57	115		74.6	
1/9/2018	4.73		23.2						
1/10/2018		15.5		36.5			0.177 (J)		
1/11/2018					9.78	47.6		78.1	65.6
7/9/2018			24.6 (J)						
7/10/2018	4.5	30.6		45.5			0.17 (J)		
7/11/2018					9.2	73.7		72.2	53
1/16/2019	10.1	33.3	27.7	46.5					
1/17/2019								64.7	19.8 (J)
1/18/2019					8.1	30.6			
1/21/2019							0.19 (J)		
3/25/2019			31.7						
3/26/2019	9	36.1		46.3					
3/27/2019					7.7	28.8		63.1	25.1
7/30/2019							0.43		
10/7/2019			31.6						
10/8/2019									69.2
10/9/2019	10.1	17.7		51.2	6	30.1	0.18	54.2	

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 12/10/2019 11:08 AM View: Appendix III Interwell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWB-4R	GWC-21	GWC-20	GWC-16	GWC-15	GWC-14	GWC-17	GWC-13
8/30/2016									
8/31/2016									
9/1/2016	5.59	9.91	40.5	67.2	93.8	119	194	71.9	
10/24/2016									
10/25/2016	6.43		3.91	50.1	94.1	106	100		
10/26/2016		8.56						80.3	2.25
10/27/2016									
1/3/2017									
1/4/2017			15.2	80.4	88.2				
1/5/2017						115	107	94.4	2.27
1/6/2017	8.13	8.18							
4/3/2017						131			
4/4/2017		8.12	32.3	108			153		
4/5/2017					106			104	
4/6/2017	7.72								2.04
7/10/2017									
7/11/2017				136		155	125		
7/12/2017		8			149				2.25
7/13/2017	4.57		8.92					124	
10/2/2017				105		137	126		
10/3/2017			7.88		217				
10/4/2017	6.41	12.5						136	2.19
1/9/2018	4.68		40.5			135	119		
1/10/2018				60.1	161				2.28
1/11/2018		12.9						139	
7/9/2018				75.9			123		
7/10/2018			29.8		205	129			
7/11/2018	3.9	8.6						122	2.3
1/16/2019	4.3	68.8					120	80.5	2.3
1/17/2019			27.6		187	137			
1/18/2019									
1/21/2019				60					
3/25/2019	3.9	55.6		74.8					
3/26/2019			60.1		204	124	84.2	68.8	2.4
3/27/2019									
7/30/2019									
10/7/2019									
10/8/2019	3.5		49.5		205	129	146		2.3
10/9/2019		46.7		80.1				56.6	

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 12/10/2019 11:08 AM View: Appendix III Interwell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-5R	GWC-1	GWA-8 (bg)	GWB-6R	GWC-12	GWC-13	GWC-11	GWC-9	GWC-2
8/30/2016	31	5.5	15	60					
8/31/2016					210	4.3	3.5	17	7.8
9/1/2016									
10/24/2016			13						
10/25/2016		5.1							
10/26/2016	24			67	200	4.9	2.5		12
10/27/2016								17	
1/3/2017	29		13						
1/4/2017		6.9			160		3.8		
1/5/2017				70		4.1			7.4
1/6/2017								16	
4/3/2017			14						
4/4/2017		6.5							8.7
4/5/2017					140				
4/6/2017	27			76		3.7	7.1	17	
7/10/2017					88				
7/11/2017			13				3.1		
7/12/2017	31	6.5		64		2.6		18	
7/13/2017									8.3
10/2/2017			15						
10/3/2017	27	4.5		73			46		9
10/4/2017					100	3		18	
1/9/2018			13	61					
1/10/2018	59	6.9				3.4			8.2
1/11/2018					78		100	16	
7/9/2018			15.4						
7/10/2018	172	6.2		60.2					7.3
7/11/2018					66.9	3.2	53.7	16.2	
1/16/2019	49.7	6.6	16	54.1		3.8			
1/17/2019					52		6.6		
1/18/2019								17.5	
1/21/2019									6.9
3/25/2019			17.7						
3/26/2019	47.9	7		51.8		3.2			
3/27/2019					45.6		11.9	18.9	
7/30/2019									7.1
10/7/2019			18						
10/8/2019						4	89		
10/9/2019	239	7.2		49.7	44.1			19	7

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 12/10/2019 11:08 AM View: Appendix III Interwell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-22	GWC-14	GWC-15	GWC-16	GWC-17	GWC-21	GWC-20	GWA-7 (bg)	GWB-4R
8/30/2016									
8/31/2016	320								
9/1/2016		60	10	43	610	5.9	16	190	160
10/24/2016									
10/25/2016		36	6.5	34		4.4	8.1	175 (D)	
10/26/2016	450				570				110
10/27/2016									
1/3/2017									
1/4/2017	330			29		7.7	13		
1/5/2017		37	10		710				
1/6/2017								180	67
4/3/2017			7.3						
4/4/2017		47				8	23		80
4/5/2017				36	860				
4/6/2017	50							200	
7/10/2017									
7/11/2017	70	34	5.7				31		
7/12/2017				44					120
7/13/2017					860	5.4		200	
10/2/2017		34	4.4				30		
10/3/2017				58		4.4			
10/4/2017	360				1000			260	130
1/9/2018		24	5.7			4.4		210	
1/10/2018				36			9.7		
1/11/2018	74				940				60
7/9/2018		25.9					10.8		
7/10/2018			3.1	57		6.3			
7/11/2018	164				864			177	75.9
1/16/2019		29.2			469			165	20.2
1/17/2019			3.2	48.9		5.4			
1/18/2019	11								
1/21/2019							5.1		
3/25/2019							9.4	147	19.7
3/26/2019		21.1	3	5.1	439	11.9			
3/27/2019	11.5								
7/30/2019									
10/7/2019									
10/8/2019		40.2	2.9	46.4		7.8		125	
10/9/2019	25.3				330		5.4		32.1

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/10/2019 11:08 AM View: Appendix III Interwell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-6R	GWB-5R	GWA-8 (bg)	GWC-1	GWC-13	GWC-22	GWC-9	GWC-11	GWC-12
8/30/2016	0.09 (J)	0.04 (J)	0.1 (J)	0.22 (J)					
8/31/2016					<0.3	0.04 (J)	0.55	<0.3	0.7
9/1/2016									
10/24/2016			0.18 (J)						
10/25/2016				<0.3					
10/26/2016	0.24 (J)	0.05 (J)			0.55	0.12 (J)		<0.3	0.91
10/27/2016							0.26 (J)		
1/3/2017		0.08 (J)	0.18 (J)						
1/4/2017				0.18 (J)		0.06 (J)		<0.3	0.51
1/5/2017	0.11 (J)				0.09 (J)				
1/6/2017							0.25 (J)		
4/3/2017			0.12 (J)						
4/4/2017				<0.3					
4/5/2017									0.71
4/6/2017	0.3	0.006 (J)			<0.3	<0.3	0.16 (J)	<0.3	
7/10/2017									0.88
7/11/2017			0.39			0.03 (J)		<0.3	
7/12/2017	0.15 (J)	0.05 (J)		0.04 (J)	<0.3		0.2 (J)		
7/13/2017									
10/2/2017			0.12 (J)						
10/3/2017	0.11 (J)	0.11 (J)		<0.3				<0.3	
10/4/2017					<0.3	0.12 (J)	0.22 (J)		0.37
1/9/2018	<0.3		0.21 (J)						
1/10/2018		<0.3		<0.3	<0.3				
1/11/2018						<0.3	0.98	<0.3	1.4
7/9/2018			0.04 (J)						
7/10/2018	<0.3	0.2 (J)		<0.3					
7/11/2018					<0.3	<0.3	0.14 (J)	<0.3	0.62
1/16/2019	0.053 (J)	<0.3	<0.3	<0.3	<0.3				
1/17/2019								<0.3	1.2
1/18/2019						<0.3	0.24 (J)		
1/21/2019									
3/25/2019			0.082 (J)						
3/26/2019	0.046 (J)	<0.3		0.051 (J)	0.052 (J)				
3/27/2019						<0.3	0.13 (J)	<0.3	0.036 (J)
7/30/2019									
8/26/2019			0.13						
8/27/2019	0.13 (J)			<0.3	<0.3	0.1		<0.3	0.3
8/28/2019		0.097 (J)					0.088 (J)		
10/7/2019			<0.3						
10/8/2019					<0.3			<0.3	
10/9/2019	<0.3	<0.3		<0.3		<0.3	0.068 (J)		<0.3

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/10/2019 11:08 AM View: Appendix III Interwell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-2	GWA-7 (bg)	GWC-20	GWC-17	GWB-4R	GWC-16	GWC-15	GWC-14	GWC-21
8/30/2016									
8/31/2016	0.07 (J)								
9/1/2016		<0.3	<0.3	0.68	<0.3	0.55	<0.3	0.25 (J)	<0.3
10/24/2016									
10/25/2016		0.07 (J)	<0.3			0.36	0.5	0.43	<0.3
10/26/2016	0.62			0.68	0.05 (J)				
10/27/2016									
1/3/2017									
1/4/2017			0.04 (J)			0.1 (J)			<0.3
1/5/2017	0.17 (J)			0.73			0.22 (J)	0.21 (J)	
1/6/2017		0.2 (J)			0.08 (J)				
4/3/2017							<0.3		
4/4/2017	0.08 (J)		0.02 (J)		<0.3			0.45	<0.3
4/5/2017				1.6		0.2 (J)			
4/6/2017		0.05 (J)							
7/10/2017									
7/11/2017			0.14 (J)				0.06 (J)	0.41	
7/12/2017					0.38	0.04 (J)			
7/13/2017	0.06 (J)	0.41		1.7					<0.3
10/2/2017			<0.3				<0.3	<0.3	
10/3/2017	0.06 (J)					0.86			<0.3
10/4/2017		0.04 (J)		1.8	<0.3				
1/9/2018		0.46					<0.3	<0.3	<0.3
1/10/2018	<0.3		<0.3			<0.3			
1/11/2018				1.5	<0.3				
7/9/2018			<0.3					<0.3	
7/10/2018	<0.3					<0.3	0.15 (J)		<0.3
7/11/2018		<0.3		1.8	<0.3				
1/16/2019		0.49		1.4	1.2			<0.3	
1/17/2019						<0.3	<0.3		<0.3
1/18/2019									
1/21/2019	<0.3		<0.3						
3/25/2019		0.21 (J)	0.043 (J)		0.064 (J)				
3/26/2019				0.89		0.11 (J)	0.13 (J)	0.13 (J)	0.071 (J)
3/27/2019									
7/30/2019	0.083 (J)								
8/26/2019		<0.3							
8/27/2019	<0.3				0.031 (J)		<0.3	<0.3	
8/28/2019			<0.3	0.61		<0.3			<0.3
10/7/2019									
10/8/2019		<0.3				<0.3	<0.3	<0.3	<0.3
10/9/2019	<0.3		<0.3	<0.3	<0.3				

Prediction Limit

Constituent: pH (SU) Analysis Run 12/10/2019 11:08 AM View: Appendix III Interwell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-12	GWC-20	GWC-17	GWB-6R	GWC-21	GWC-16	GWC-2	GWC-22	GWC-15
7/16/2013	4.17	6.1	4.55	5.25	5.71	4.92	4.52	4.91	5.96
10/11/2014						5.17			
10/24/2016									
10/25/2016		6.06			5.41	5.58			6.46
10/26/2016	4.04		4.45	5.21			4.48	4.6	
10/27/2016									
1/3/2017									
1/4/2017	4.01	6.05			5.6	5.51		4.63	
1/5/2017			4.45	5.2			4.85		6.25
1/6/2017									
4/3/2017									6.25
4/4/2017		6.03			5.94		4.58		
4/5/2017	4		4.33			5.51			
4/6/2017				5.17				4.79	
7/10/2017	3.89								
7/11/2017		5.96						4.73	6.5
7/12/2017				5.24		5.84			
7/13/2017			4.11		5.6		4.74		
10/2/2017		5.88							6.83
10/3/2017				5.36	5.18	5.55	4.57		
10/4/2017	4.06		4.09					4.74	
1/9/2018				5.4	6.14				6.57
1/10/2018		6.21				5.99	5.31		
1/11/2018	3.96		4.4					5.22	
7/9/2018		6.24							
7/10/2018				5.31	5.7	5.5	4.58		6.42
7/11/2018	3.95		4.07					4.68	
1/16/2019			4.05	5.99					
1/17/2019	3.89				7.39	7.13			
1/21/2019							5.05		
3/25/2019		6.28							
3/26/2019			4.62	5.94	6.08	5.57			6.65
3/27/2019	4.11							4.77	
7/30/2019							4.74		
8/26/2019									
8/27/2019	4.02			5.67			4.77	4.89	6.57
8/28/2019		6.34	4.62		6.05	5.57			
10/7/2019									
10/8/2019					6.09	5.54			6.65
10/9/2019	4.25	6.5	4.66	5.66			4.79	4.68	

Prediction Limit

Constituent: pH (SU) Analysis Run 12/10/2019 11:08 AM View: Appendix III Interwell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-1	GWC-9	GWC-11	GWB-4R	GWB-5R	GWC-14	GWC-13	GWA-8 (bg)	GWA-7 (bg)
7/16/2013	5.38	5.05	5.2	6.22	5.95	4.62	4.95		
10/11/2014						4.58		4.42	
10/24/2016								4.36	
10/25/2016	5.51					4.79			6.17
10/26/2016			5.08	6.06	5.27		4.95		
10/27/2016		4.65							
1/3/2017					5.09			4.28	
1/4/2017	5.46		5.06						
1/5/2017						4.73	4.97		
1/6/2017		4.56		6.02					6.16
4/3/2017								4.29	
4/4/2017	5.43			6.08		4.68			
4/5/2017							4.81		
4/6/2017		4.5	4.97		5.22				6.26
7/10/2017									
7/11/2017			5.26			4.72		4.35	
7/12/2017	5.46	4.56		5.93	5.29		4.83		
7/13/2017									5.99
10/2/2017						5.13		4.32	
10/3/2017	5.65		5.07		5.08				
10/4/2017		4.72		5.77			4.71		6.16
1/9/2018						5.59		4.44	6.43
1/10/2018	5.67				5.83		5.17		
1/11/2018		4.34	5.18	5.98					
7/9/2018						5.11		4.4	
7/10/2018	5.71				6.42				
7/11/2018		4.68	4.82	6.01			4.49		6.1
1/16/2019	5.59			5.83	6.66	6.82			6.05
1/17/2019			4.91						
1/21/2019									
3/25/2019				5.74				4.4	6.06
3/26/2019	5.77				5.1	5.74	4.96		
3/27/2019		4.38	5.18						
7/30/2019									
8/26/2019								4.26	5.91
8/27/2019	5.84		5.17	5.7		5.58	4.9		
8/28/2019		4.68			5.95				
10/7/2019								4.24	
10/8/2019			4.93			5.68	4.81		5.74
10/9/2019	5.82	4.62		5.79	6.11				

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 12/10/2019 11:08 AM View: Appendix III Interwell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-5R	GWC-1	GWA-8 (bg)	GWB-6R	GWC-12	GWC-13	GWC-11	GWC-9	GWC-2
8/30/2016	100	87	140	120					
8/31/2016					1100	43	64	84	21
9/1/2016									
10/24/2016			160						
10/25/2016		83							
10/26/2016	130			120	900	29	56		100
10/27/2016								76	
1/3/2017	120		140						
1/4/2017		99			880		65		
1/5/2017				130		32			22
1/6/2017								66	
4/3/2017			140						
4/4/2017		110							29
4/5/2017					990				
4/6/2017	140			150		49	110	79	
7/10/2017					480				
7/11/2017			130				49		
7/12/2017	140	100		140		16		75	
7/13/2017									20
10/2/2017			150						
10/3/2017	130	63		140			140		20
10/4/2017					760	33		78	
1/9/2018			120	140					
1/10/2018	110	86				22			9.5
1/11/2018					780		270	110	
7/9/2018			123						
7/10/2018	48.1	77.7		128					8.5
7/11/2018					598	17.8	211	87.4	
1/16/2019	184	71.2	129	402		20.2			
1/17/2019					454		50.3		
1/18/2019								56.9	
1/21/2019									10.2
3/25/2019			152						
3/26/2019	222	73.8		319		33.6			
3/27/2019					579		76.8	76.2	
7/30/2019									12.3
10/7/2019			156						
10/8/2019						22	310		
10/9/2019	90.8	76.3		255	392			41.1	10.1

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 12/10/2019 11:08 AM View: Appendix III Interwell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-22	GWC-14	GWC-15	GWC-16	GWC-17	GWC-21	GWC-20	GWA-7 (bg)	GWB-4R
8/30/2016									
8/31/2016	700								
9/1/2016		730	120	430	310	36	180	73	210
10/24/2016									
10/25/2016		420	100	360		16	79	26	
10/26/2016	850				280				230
10/27/2016									
1/3/2017									
1/4/2017	680			360		45	170		
1/5/2017		430	140		310				
1/6/2017								23	220
4/3/2017			150						
4/4/2017		600				46	300		230
4/5/2017				440	460				
4/6/2017	220							25	
7/10/2017									
7/11/2017	210	400	110				400		
7/12/2017				490					210
7/13/2017					490	33		65	
10/2/2017		470	56				390		
10/3/2017				780		34			
10/4/2017	730				1100			13	290
1/9/2018		440	84			29		45	
1/10/2018				470			99		
1/11/2018	180				810				210
7/9/2018		369					99.2		
7/10/2018			43	787		33.2			
7/11/2018	381				902			37.7	177
1/16/2019		291			422			24.5	244
1/17/2019			45.2	780		24.1			
1/18/2019	107								
1/21/2019							35.5		
3/25/2019							95.6	14.7	245
3/26/2019		192	54	87.9	439	83.9			
3/27/2019	103								
7/30/2019									
10/7/2019									
10/8/2019		428	45.8	872		85.6		32.8	
10/9/2019	80.2				346		58.5		38.5

Intrawell Prediction Limit Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 12/10/2019, 12:33 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	GWC-16	6.286	10/8/2019	8.4	Yes	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWB-6R	4.2	10/9/2019	6.3	Yes	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-16	1386	10/8/2019	1500	Yes	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWB-5R	559.8	10/9/2019	2010	Yes	7	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWB-6R	569	10/9/2019	903	Yes	8	0	No	0.0004702	Param Intra 1 of 3

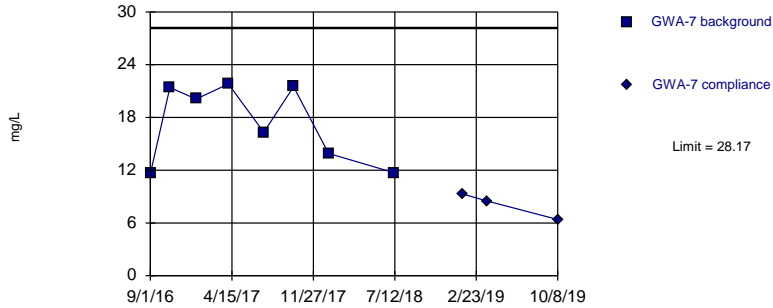
Intrawell Prediction Limit All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 12/10/2019, 12:33 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	GWA-7	28.17	10/8/2019	6.4	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWA-8	0.1446	10/7/2019	0.12	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-1	1.625	10/9/2019	0.93	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-11	0.3714	10/8/2019	0.22	No	8	0	ln(x)	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-12	9.63	10/9/2019	8.2	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-13	0.3009	10/8/2019	0.18	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-14	0.08961	10/8/2019	0.048	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-15	1.943	10/8/2019	1.1	No	7	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-16	6.286	10/8/2019	8.4	Yes	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-17	1.869	10/9/2019	1.3	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-2	0.05241	10/9/2019	0.024	No	8	0	sqrt(x)	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-20	5.558	10/9/2019	0.79	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-21	1.031	10/8/2019	1	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-22	16.9	10/9/2019	0.39	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-9	0.03214	10/9/2019	0.019	No	7	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWB-4R	9.727	10/9/2019	5.7	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWB-5R	7.397	10/9/2019	6.8	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWB-6R	4.2	10/9/2019	6.3	Yes	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWA-7	4478	10/8/2019	1840	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWA-8	384.6	10/7/2019	275	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-1	460.5	10/9/2019	338	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-11	760	10/8/2019	613	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-12	1845	10/9/2019	647	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-13	150.3	10/8/2019	51	No	8	25	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-14	1226	10/8/2019	841	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-15	672	10/8/2019	526	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-16	1386	10/8/2019	1500	Yes	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-17	2945	10/9/2019	1100	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-2	157.3	10/9/2019	46	No	8	12.5	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-20	1016	10/9/2019	434	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-21	328.6	10/8/2019	278	No	8	12.5	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-22	2575	10/9/2019	211	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-9	272.4	10/9/2019	128	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWB-4R	1282	10/9/2019	502	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWB-5R	559.8	10/9/2019	2010	Yes	7	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWB-6R	569	10/9/2019	903	Yes	8	0	No	0.0004702	Param Intra 1 of 3

Within Limit

Boron
Intrawell Parametric

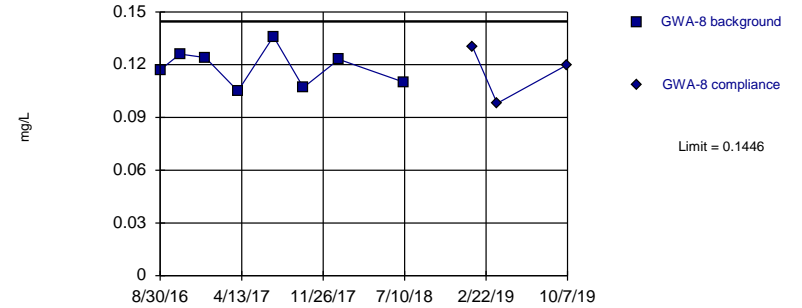


Background Data Summary: Mean=17.29, Std. Dev.=4.455, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8385, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:09 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron
Intrawell Parametric

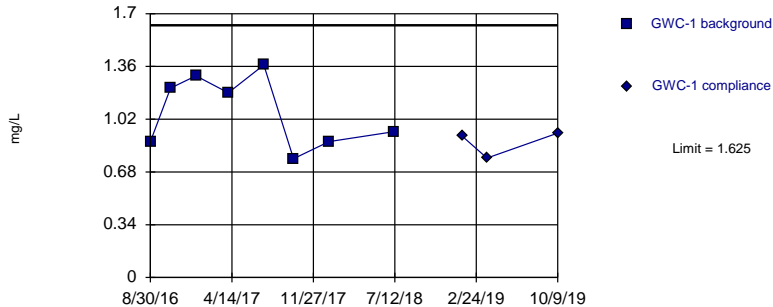


Background Data Summary: Mean=0.1185, Std. Dev.=0.0107, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9464, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:09 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron
Intrawell Parametric

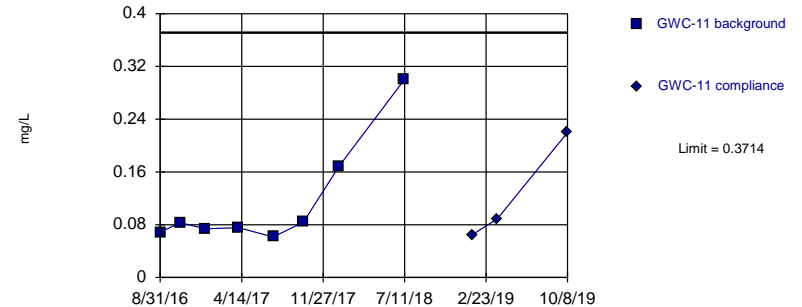


Background Data Summary: Mean=1.067, Std. Dev.=0.2284, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9038, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:09 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron
Intrawell Parametric

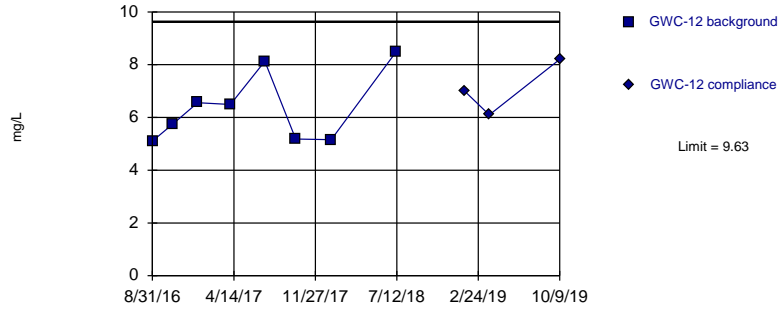


Background Data Summary (based on natural log transformation): Mean=-2.326, Std. Dev.=0.5469, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7728, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:09 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron
Intrawell Parametric

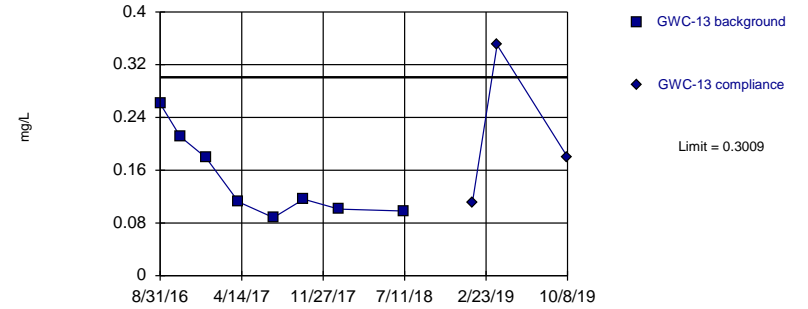


Background Data Summary: Mean=6.358, Std. Dev.=1.34, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8556, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:09 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron
Intrawell Parametric

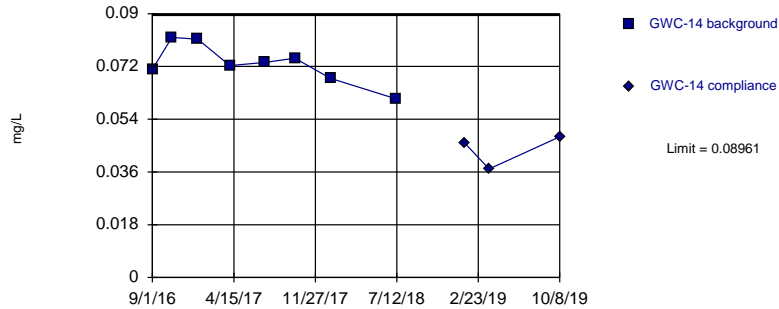


Background Data Summary: Mean=0.1458, Std. Dev.=0.06354, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8407, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:09 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron
Intrawell Parametric

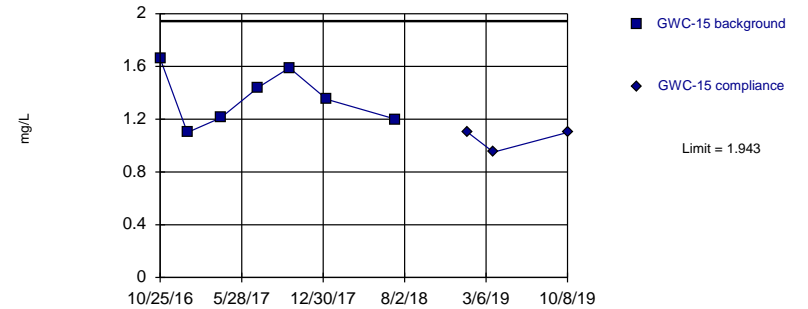


Background Data Summary: Mean=0.07295, Std. Dev.=0.006824, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9516, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:09 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron
Intrawell Parametric

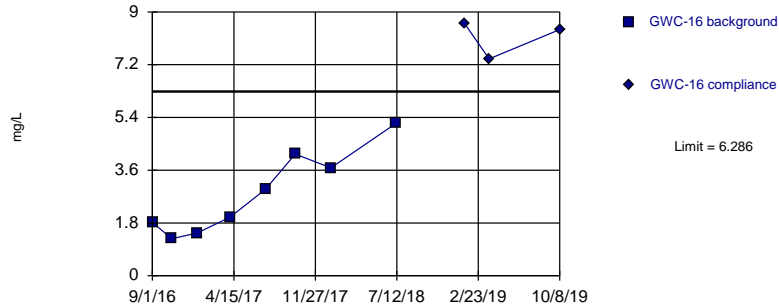


Background Data Summary: Mean=1.364, Std. Dev.=0.2101, n=7. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9415, critical = 0.73. Kappa = 2.756 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:09 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit

Boron
Intrawell Parametric

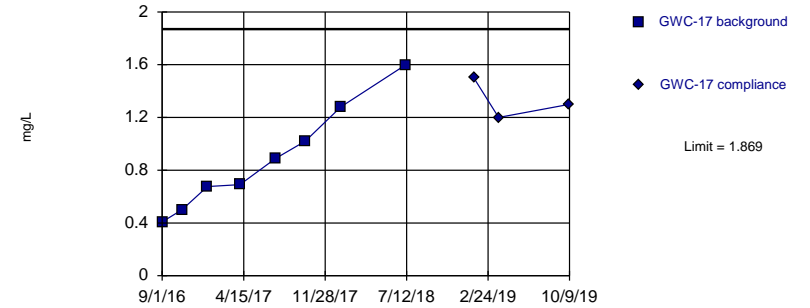


Background Data Summary: Mean=2.815, Std. Dev.=1.422, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9229, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:09 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron
Intrawell Parametric

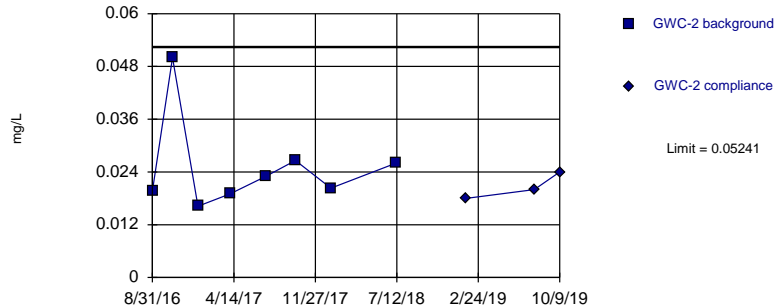


Background Data Summary: Mean=0.8828, Std. Dev.=0.4041, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.945, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:09 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron
Intrawell Parametric

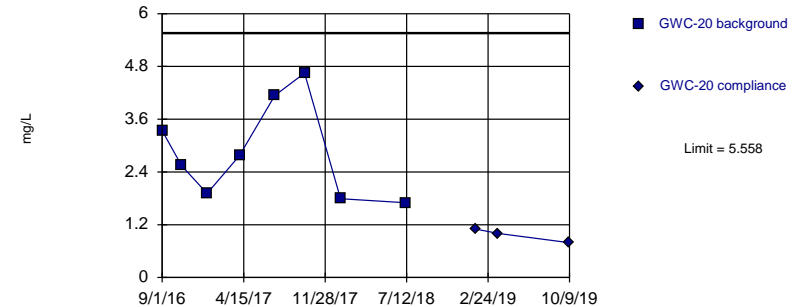


Background Data Summary (based on square root transformation): Mean=0.1559, Std. Dev.=0.02991, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.794, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:09 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron
Intrawell Parametric

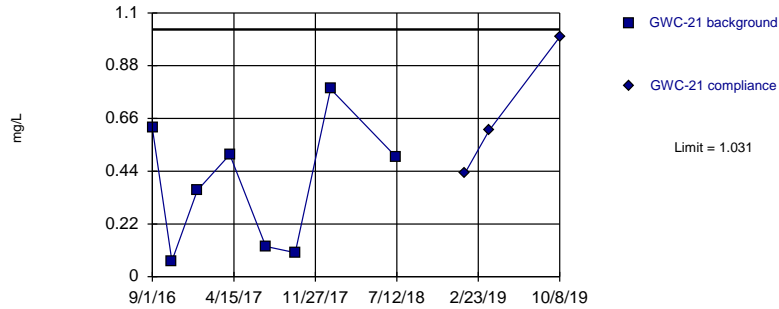


Background Data Summary: Mean=2.855, Std. Dev.=1.107, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9083, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:09 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron Intrawell Parametric

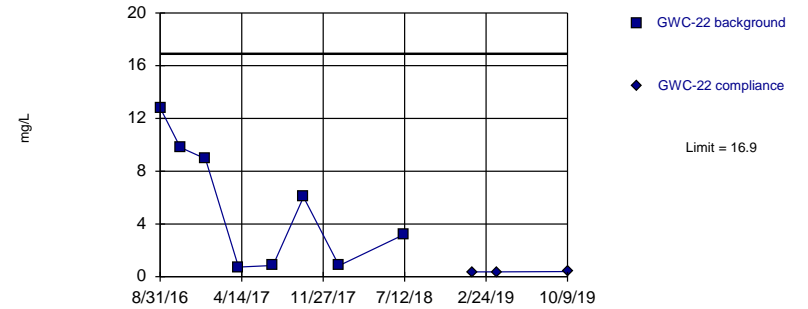


Background Data Summary: Mean=0.383, Std. Dev.=0.2654, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9192, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:09 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron Intrawell Parametric

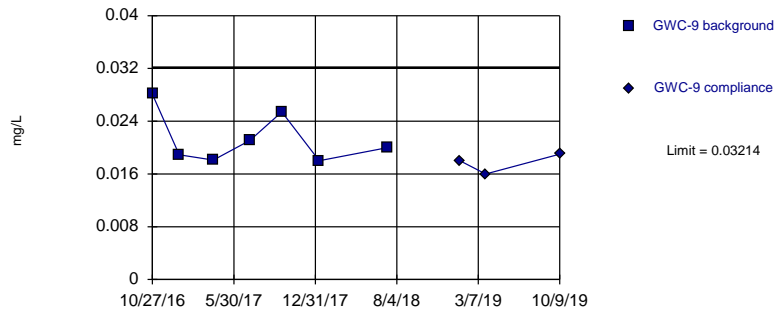


Background Data Summary: Mean=5.403, Std. Dev.=4.71, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8833, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:09 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron Intrawell Parametric

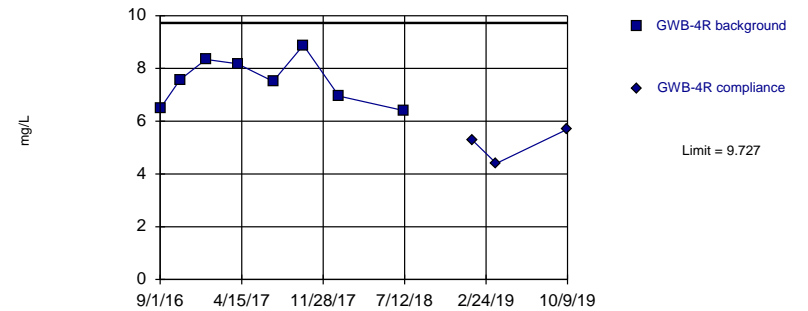


Background Data Summary: Mean=0.02137, Std. Dev.=0.003908, n=7. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8482, critical = 0.73. Kappa = 2.756 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:09 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron Intrawell Parametric

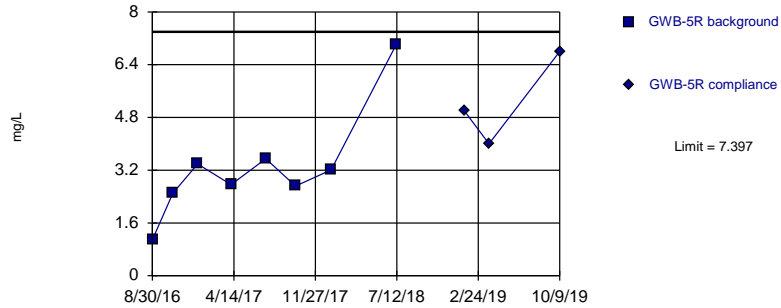


Background Data Summary: Mean=7.539, Std. Dev.=0.8959, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9474, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:09 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron
Intrawell Parametric

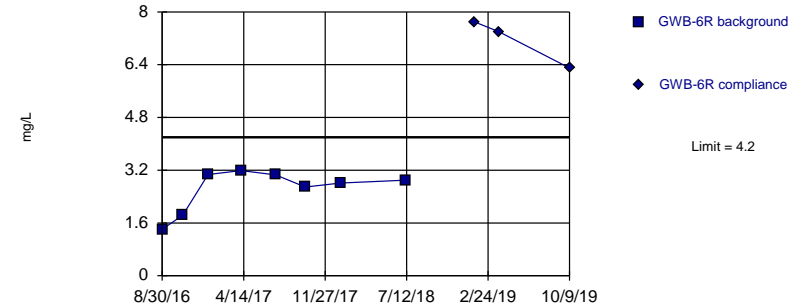


Background Data Summary: Mean=3.278, Std. Dev.=1.687, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.824, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:09 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit

Boron
Intrawell Parametric

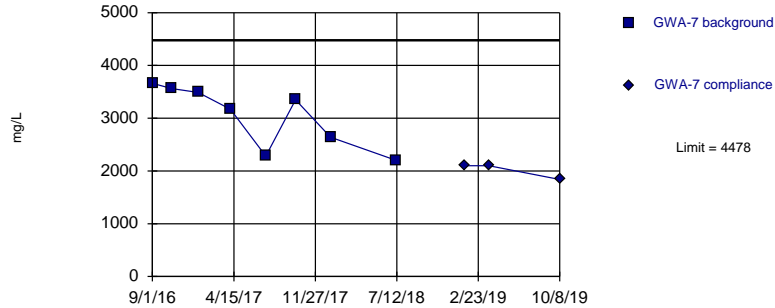


Background Data Summary: Mean=2.62, Std. Dev.=0.6468, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8089, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:09 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

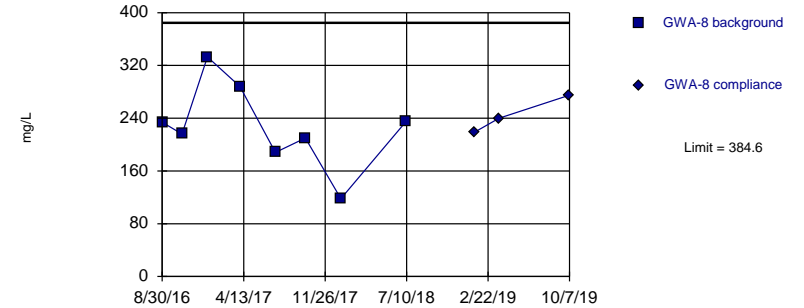


Background Data Summary: Mean=3044, Std. Dev.=587.2, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8674, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:09 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

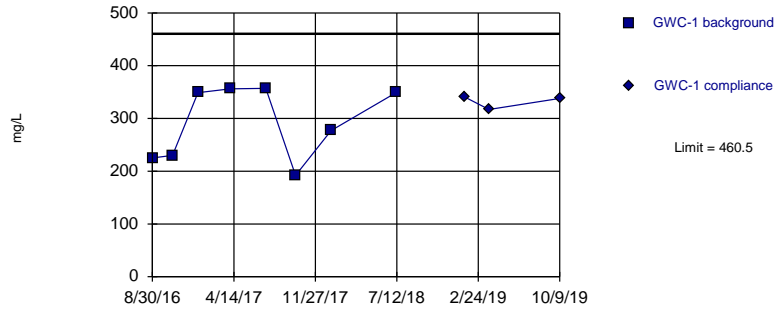


Background Data Summary: Mean=227.8, Std. Dev.=64.23, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9672, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:09 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids Intrawell Parametric

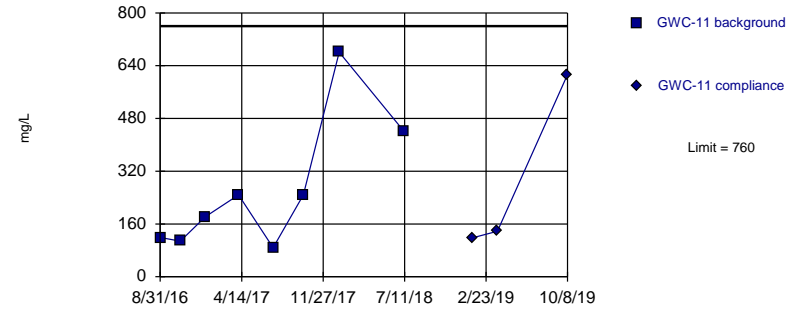


Background Data Summary: Mean=291.9, Std. Dev.=69.05, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8265, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:09 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids Intrawell Parametric

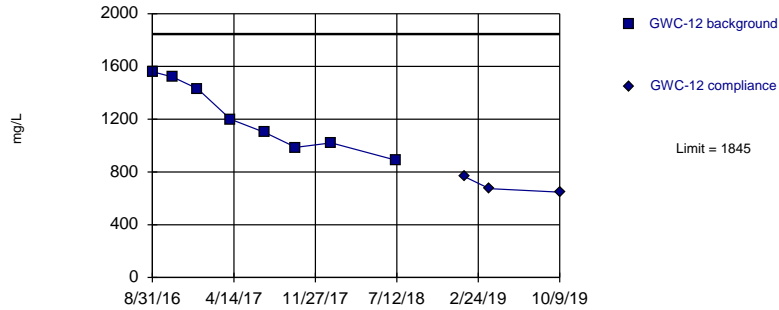


Background Data Summary: Mean=264.3, Std. Dev.=203, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8328, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:10 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids Intrawell Parametric



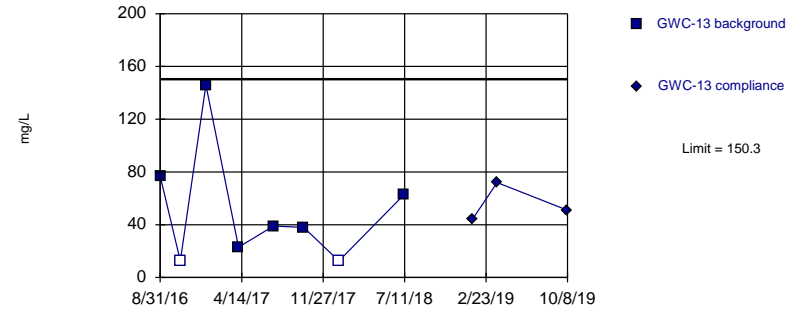
Background Data Summary: Mean=1213, Std. Dev.=258.9, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9083, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:10 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Hollow symbols indicate censored values.

Within Limit

Total Dissolved Solids Intrawell Parametric

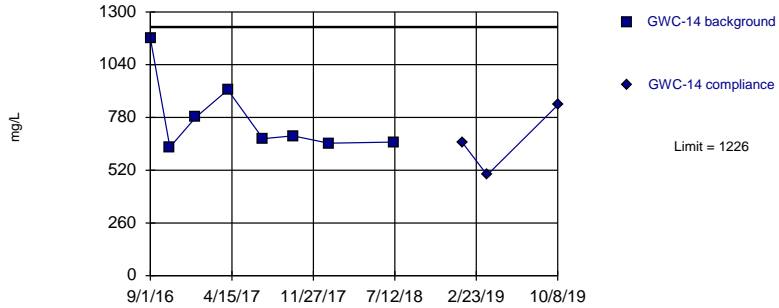


Background Data Summary (after Kaplan-Meier Adjustment): Mean=54, Std. Dev.=39.43, n=8, 25% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8424, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:10 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

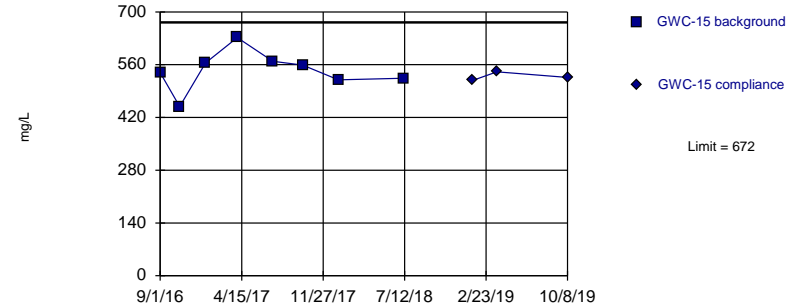


Background Data Summary: Mean=772, Std. Dev.=185.8, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7657, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:10 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

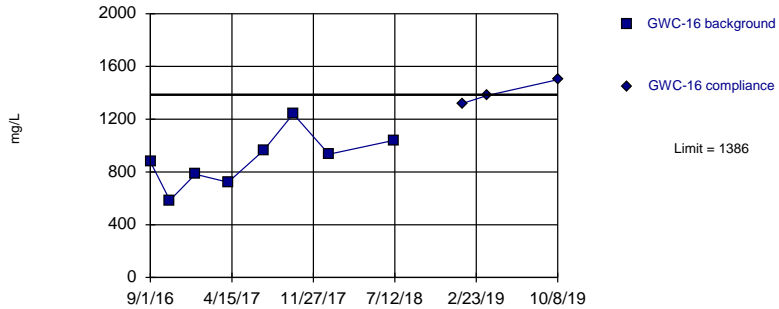


Background Data Summary: Mean=544.6, Std. Dev.=52.18, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9496, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:10 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit

Total Dissolved Solids
Intrawell Parametric

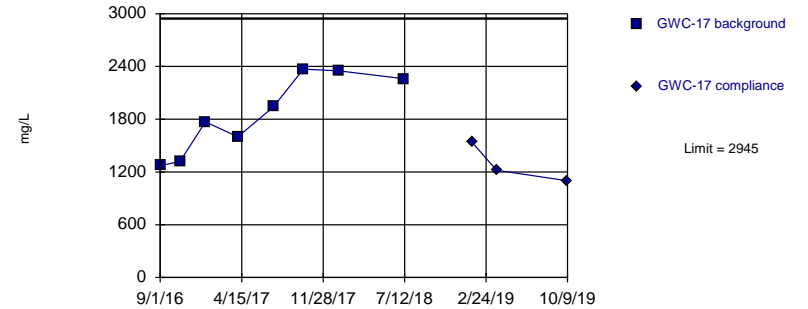


Background Data Summary: Mean=893.1, Std. Dev.=201.8, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.991, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:10 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

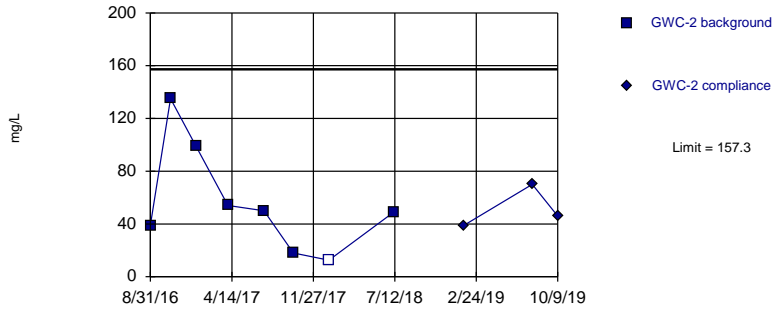


Background Data Summary: Mean=1860, Std. Dev.=444.3, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9015, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:10 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

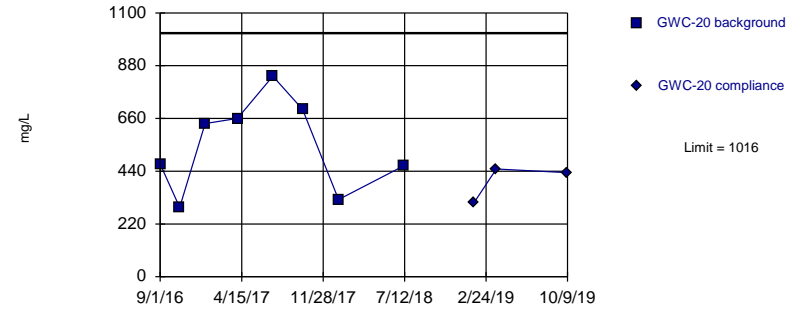


Background Data Summary: Mean=57.06, Std. Dev.=41.05, n=8, 12.5% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8896, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:10 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

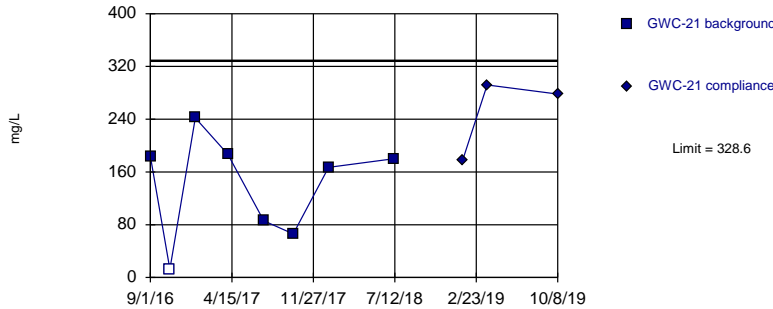


Background Data Summary: Mean=546.9, Std. Dev.=192, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9463, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:10 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

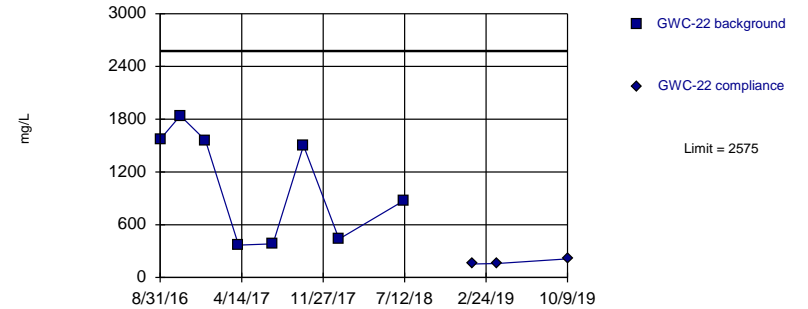


Background Data Summary: Mean=140.6, Std. Dev.=77.02, n=8, 12.5% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9156, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:10 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

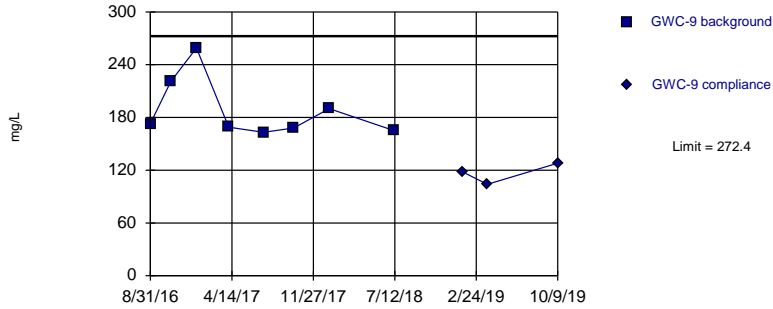


Background Data Summary: Mean=1067, Std. Dev.=617.6, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8394, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:10 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

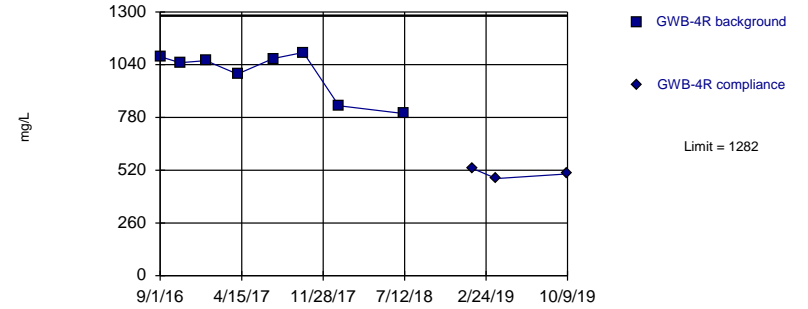


Background Data Summary: Mean=188.5, Std. Dev.=34.38, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7713, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:10 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

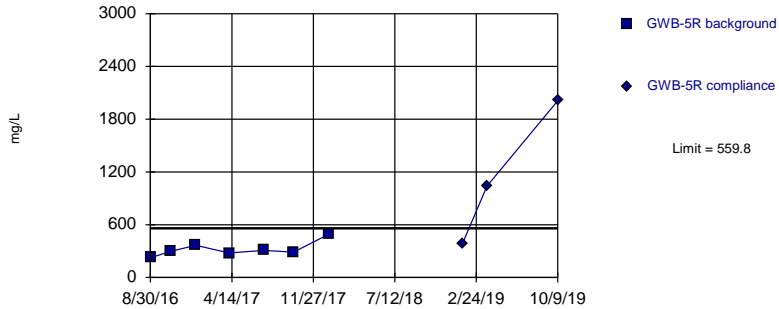


Background Data Summary: Mean=998.9, Std. Dev.=115.9, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7896, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:10 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit

Total Dissolved Solids
Intrawell Parametric

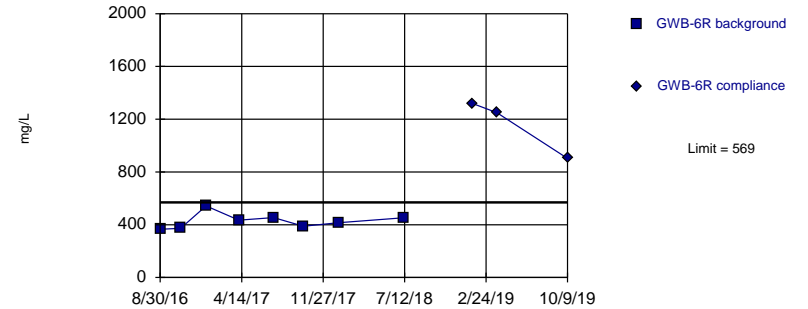


Background Data Summary: Mean=322.1, Std. Dev.=86.22, n=7. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8686, critical = 0.73. Kappa = 2.756 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:10 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit

Total Dissolved Solids
Intrawell Parametric



Background Data Summary: Mean=428.3, Std. Dev.=57.63, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9117, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 12/10/2019 11:10 AM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Prediction Limit

Constituent: Boron Analysis Run 12/10/2019 12:33 PM View: Appendix III Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7	GWA-7	GWA-8	GWA-8	GWC-1	GWC-1	GWC-11	GWC-11
8/30/2016			0.117		0.875			
8/31/2016							0.0688 (J)	
9/1/2016	11.6							
10/24/2016			0.126					
10/25/2016	21.4				1.22			
10/26/2016							0.083 (J)	
1/3/2017			0.124					
1/4/2017					1.3		0.0738	
1/6/2017	20.1							
4/3/2017			0.105					
4/4/2017					1.19			
4/6/2017	21.8						0.0754	
7/11/2017			0.136				0.0614	
7/12/2017					1.37			
7/13/2017	16.3							
10/2/2017			0.107					
10/3/2017					0.765		0.0838	
10/4/2017	21.5							
1/9/2018	13.9		0.123					
1/10/2018					0.876			
1/11/2018							0.169	
7/9/2018			0.11					
7/10/2018					0.94			
7/11/2018	11.7						0.3	
1/16/2019		9.3		0.13		0.91		
1/17/2019								0.065
3/25/2019		8.5		0.098				
3/26/2019						0.77		
3/27/2019								0.089
10/7/2019				0.12				
10/8/2019		6.4						0.22
10/9/2019						0.93		

Prediction Limit

Constituent: Boron Analysis Run 12/10/2019 12:33 PM View: Appendix III Intrawell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-12	GWC-12	GWC-13	GWC-13	GWC-14	GWC-14	GWC-15	GWC-15
8/31/2016	5.1		0.261					
9/1/2016					0.071 (J)			
10/25/2016					0.0819 (J)		1.66	
10/26/2016	5.74		0.211					
1/4/2017	6.56							
1/5/2017			0.179		0.0813		1.1	
4/3/2017							1.21	
4/4/2017					0.0723			
4/5/2017	6.49							
4/6/2017			0.112					
7/10/2017	8.13							
7/11/2017					0.0734		1.44	
7/12/2017			0.0882					
10/2/2017					0.0748		1.59	
10/4/2017	5.18		0.116					
1/9/2018					0.0679		1.35	
1/10/2018			0.101					
1/11/2018	5.16							
7/9/2018					0.061			
7/10/2018							1.2	
7/11/2018	8.5		0.098					
1/16/2019				0.11		0.046		
1/17/2019		7						1.1
3/26/2019				0.35		0.037 (J)		0.95
3/27/2019		6.1						
10/8/2019				0.18		0.048		1.1
10/9/2019		8.2						

Prediction Limit

Constituent: Boron Analysis Run 12/10/2019 12:33 PM View: Appendix III Intrawell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-16	GWC-16	GWC-17	GWC-17	GWC-2	GWC-2	GWC-20	GWC-20
8/31/2016					0.0196 (J)			
9/1/2016	1.82		0.408				3.34	
10/25/2016	1.26						2.54	
10/26/2016			0.5		0.05 (J)			
1/4/2017	1.46						1.91	
1/5/2017			0.676		0.0162 (J)			
4/4/2017					0.019 (J)		2.77	
4/5/2017	2		0.69					
7/11/2017							4.14	
7/12/2017	2.95							
7/13/2017			0.888		0.023 (J)			
10/2/2017							4.65	
10/3/2017	4.15				0.0266 (J)			
10/4/2017			1.02					
1/10/2018	3.68				0.0203 (J)		1.79	
1/11/2018			1.28					
7/9/2018							1.7	
7/10/2018	5.2				0.026 (J)			
7/11/2018			1.6					
1/16/2019				1.5				
1/17/2019		8.6						
1/21/2019						0.018 (J)		1.1
3/25/2019								1
3/26/2019		7.4		1.2				
7/30/2019						0.02 (J)		
10/8/2019		8.4						
10/9/2019				1.3		0.024 (J)		0.79

Prediction Limit

Constituent: Boron Analysis Run 12/10/2019 12:33 PM View: Appendix III Intrawell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-21	GWC-21	GWC-22	GWC-22	GWC-9	GWC-9	GWB-4R	GWB-4R
8/31/2016			12.8					
9/1/2016	0.62						6.48	
10/25/2016	0.0658 (J)							
10/26/2016			9.81				7.57	
10/27/2016					0.0281 (J)			
1/4/2017	0.36		8.94					
1/6/2017					0.0189 (J)		8.34	
4/4/2017	0.509						8.18	
4/6/2017			0.733		0.0181 (J)			
7/11/2017			0.852					
7/12/2017					0.0211 (J)		7.51	
7/13/2017	0.126							
10/3/2017	0.1							
10/4/2017			6.05		0.0254 (J)		8.88	
1/9/2018	0.783							
1/11/2018			0.838		0.018 (J)		6.95	
7/10/2018	0.5							
7/11/2018			3.2		0.02 (J)		6.4	
1/16/2019								5.3
1/17/2019		0.43						
1/18/2019				0.37		0.018 (J)		
3/25/2019								4.4
3/26/2019		0.61						
3/27/2019				0.37		0.016 (J)		
10/8/2019		1						
10/9/2019				0.39		0.019 (J)		5.7

Prediction Limit

Constituent: Boron, T Total Dissolved Solids Analysis Run 12/10/2019 12:33 PM View: Appendix III Intrawell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-5R	GWB-5R	GWB-6R	GWB-6R	GWA-7	GWA-7	GWA-8	GWA-8
8/30/2016	1.09		1.41				234	
9/1/2016					3660			
10/24/2016							216	
10/25/2016					3560			
10/26/2016	2.5		1.83					
1/3/2017	3.39						333	
1/5/2017			3.07					
1/6/2017					3490			
4/3/2017							288	
4/6/2017	2.76		3.19		3170			
7/11/2017							188	
7/12/2017	3.55		3.06					
7/13/2017					2280			
10/2/2017							210	
10/3/2017	2.72		2.69					
10/4/2017					3350			
1/9/2018			2.81		2640		118	
1/10/2018	3.21							
7/9/2018							235	
7/10/2018	7		2.9					
7/11/2018					2200			
1/16/2019		5		7.7		2100		219
3/25/2019						2100		240
3/26/2019		4		7.4				
10/7/2019								275
10/8/2019						1840		
10/9/2019		6.8		6.3				

Prediction Limit

Constituent: Total Dissolved Solids Analysis Run 12/10/2019 12:33 PM View: Appendix III Intrawell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-1	GWC-1	GWC-11	GWC-11	GWC-12	GWC-12	GWC-13	GWC-13
8/30/2016	225							
8/31/2016			119		1560		77	
10/25/2016	230							
10/26/2016			108		1520		<25	
1/4/2017	349		182		1430			
1/5/2017							146	
4/4/2017	356							
4/5/2017					1200			
4/6/2017			248				23 (J)	
7/10/2017					1100			
7/11/2017			88					
7/12/2017	357						39	
10/3/2017	192		248					
10/4/2017					986		38	
1/10/2018	277						<25	
1/11/2018			681		1020			
7/10/2018	349							
7/11/2018			440		888		63	
1/16/2019		341						44
1/17/2019				118		765		
3/26/2019		317						72
3/27/2019				138		673		
10/8/2019				613				51
10/9/2019		338				647		

Prediction Limit

Constituent: Total Dissolved Solids Analysis Run 12/10/2019 12:33 PM View: Appendix III IntraWell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-2	GWC-2	GWC-20	GWC-20	GWC-21	GWC-21	GWC-22	GWC-22
8/31/2016	39						1570	
9/1/2016			470		184			
10/25/2016			289		<25			
10/26/2016	135						1840	
1/4/2017			639		242		1560	
1/5/2017	99							
4/4/2017	54		660		187			
4/6/2017							368	
7/11/2017			836				383	
7/13/2017	50				86			
10/2/2017			698					
10/3/2017	18 (J)				66			
10/4/2017							1500	
1/9/2018					167			
1/10/2018	<25		322					
1/11/2018							438	
7/9/2018			461					
7/10/2018	49				180			
7/11/2018							876	
1/17/2019						178		
1/18/2019								154
1/21/2019		39		307				
3/25/2019				449				
3/26/2019						292		
3/27/2019								158
7/30/2019		70						
10/8/2019						278		
10/9/2019		46		434				211

Prediction Limit

Constituent: Total Dissolved Solids Analysis Run 12/10/2019 12:33 PM View: Appendix III Intrawell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWC-9	GWB-4R	GWB-4R	GWB-5R	GWB-5R	GWB-6R	GWB-6R
8/30/2016					224		365	
8/31/2016	173							
9/1/2016			1080					
10/26/2016			1050		297		373	
10/27/2016	221							
1/3/2017					366			
1/5/2017							543	
1/6/2017	259		1060					
4/4/2017			994					
4/6/2017	169				279		434	
7/12/2017	163		1070		308		454	
10/3/2017					288		389	
10/4/2017	168		1100					
1/9/2018							415	
1/10/2018					493			
1/11/2018	190		838					
7/10/2018							453	
7/11/2018	165		799					
1/16/2019				530		382		1320
1/18/2019		118						
3/25/2019				479				
3/26/2019						1040		1250
3/27/2019		104						
10/9/2019		128		502		2010		903

CCR Trend Test Significant Results

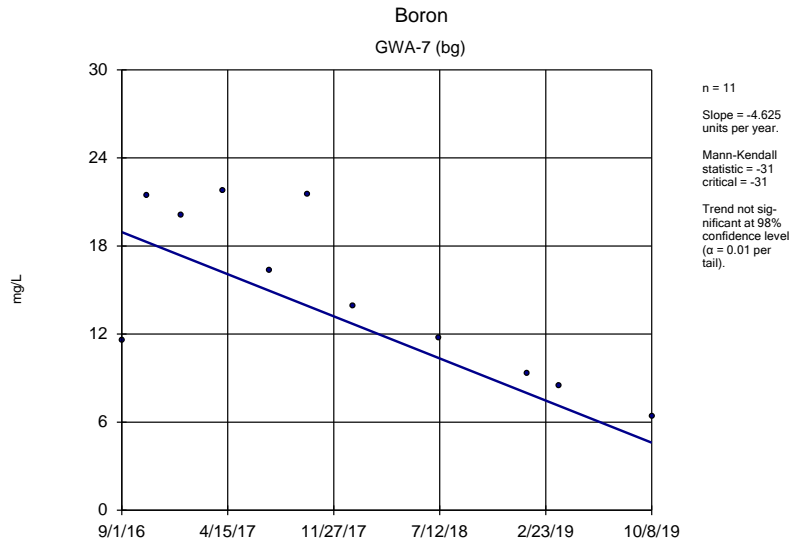
Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2020, 4:15 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	GWC-16	2.432	45	31	Yes	11	0	n/a	0.02	NP
Calcium (mg/L)	GWA-7 (bg)	-1.048	-36	-31	Yes	11	0	n/a	0.02	NP
Calcium (mg/L)	GWC-1	7.011	39	31	Yes	11	0	n/a	0.02	NP
Calcium (mg/L)	GWC-12	-15.88	-53	-31	Yes	11	0	n/a	0.02	NP
Calcium (mg/L)	GWC-16	42.34	36	31	Yes	11	0	n/a	0.02	NP
Chloride (mg/L)	GWA-8 (bg)	1.474	32	31	Yes	11	0	n/a	0.02	NP
Sulfate (mg/L)	GWC-12	-186.1	-39	-31	Yes	11	0	n/a	0.02	NP
Total Dissolved Solids (mg/L)	GWA-7 (bg)	-604.9	-48	-31	Yes	11	0	n/a	0.02	NP
Total Dissolved Solids (mg/L)	GWC-16	263.8	41	31	Yes	11	0	n/a	0.02	NP
Total Dissolved Solids (mg/L)	GWB-5R	280	31	27	Yes	10	0	n/a	0.02	NP

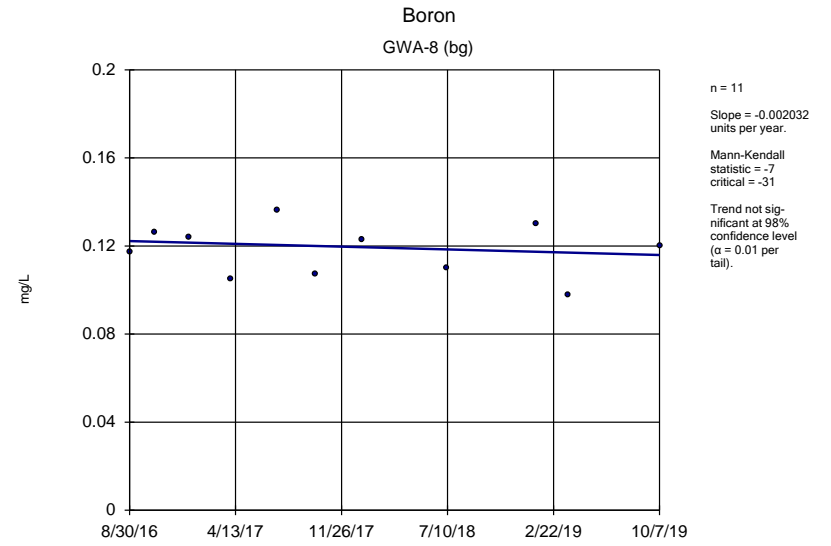
CCR Trend Test All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2020, 4:15 PM

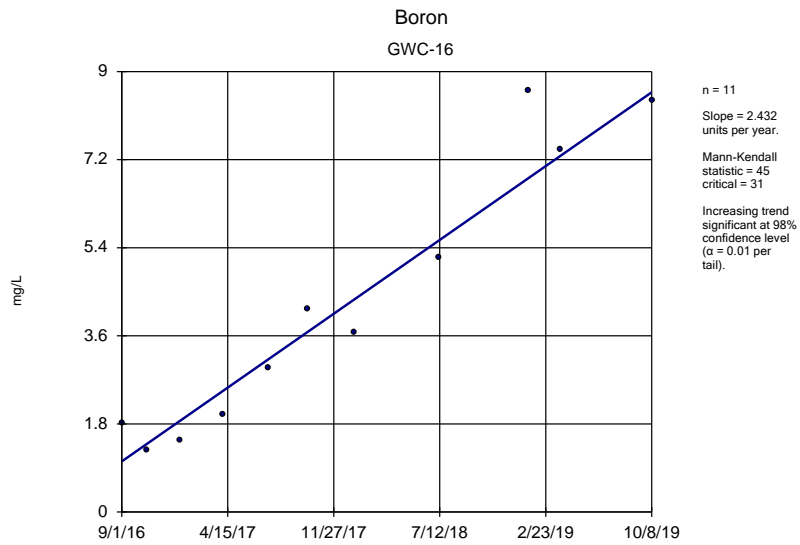
<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	GWA-7 (bg)	-4.625	-31	-31	No	11	0	n/a	0.02	NP
Boron (mg/L)	GWA-8 (bg)	-0.002032	-7	-31	No	11	0	n/a	0.02	NP
Boron (mg/L)	GWC-16	2.432	45	31	Yes	11	0	n/a	0.02	NP
Boron (mg/L)	GWB-6R	1.513	27	31	No	11	0	n/a	0.02	NP
Calcium (mg/L)	GWA-7 (bg)	-1.048	-36	-31	Yes	11	0	n/a	0.02	NP
Calcium (mg/L)	GWA-8 (bg)	2.477	30	31	No	11	0	n/a	0.02	NP
Calcium (mg/L)	GWC-1	7.011	39	31	Yes	11	0	n/a	0.02	NP
Calcium (mg/L)	GWC-11	15.28	29	31	No	11	0	n/a	0.02	NP
Calcium (mg/L)	GWC-12	-15.88	-53	-31	Yes	11	0	n/a	0.02	NP
Calcium (mg/L)	GWC-14	-3.911	-7	-31	No	11	0	n/a	0.02	NP
Calcium (mg/L)	GWC-15	4.056	11	31	No	11	0	n/a	0.02	NP
Calcium (mg/L)	GWC-16	42.34	36	31	Yes	11	0	n/a	0.02	NP
Calcium (mg/L)	GWC-17	-1.209	-1	-31	No	11	0	n/a	0.02	NP
Calcium (mg/L)	GWC-20	-0.09707	-1	-31	No	11	0	n/a	0.02	NP
Calcium (mg/L)	GWC-21	10.62	18	31	No	11	0	n/a	0.02	NP
Calcium (mg/L)	GWB-4R	6.187	23	31	No	11	0	n/a	0.02	NP
Chloride (mg/L)	GWA-7 (bg)	-16.93	-18	-31	No	11	0	n/a	0.02	NP
Chloride (mg/L)	GWA-8 (bg)	1.474	32	31	Yes	11	0	n/a	0.02	NP
Chloride (mg/L)	GWC-17	-66.68	-8	-31	No	11	0	n/a	0.02	NP
pH (SU)	GWA-7 (bg)	-0.09485	-30	-31	No	11	0	n/a	0.02	NP
pH (SU)	GWA-8 (bg)	-0.0145	-12	-31	No	11	0	n/a	0.02	NP
pH (SU)	GWC-15	0.09971	30	31	No	11	0	n/a	0.02	NP
pH (SU)	GWC-20	0.1036	25	31	No	11	0	n/a	0.02	NP
Sulfate (mg/L)	GWA-7 (bg)	-5.236	-13	-31	No	11	0	n/a	0.02	NP
Sulfate (mg/L)	GWA-8 (bg)	0	-2	-31	No	11	0	n/a	0.02	NP
Sulfate (mg/L)	GWC-11	77.02	21	31	No	11	0	n/a	0.02	NP
Sulfate (mg/L)	GWC-12	-186.1	-39	-31	Yes	11	0	n/a	0.02	NP
Sulfate (mg/L)	GWC-14	-97.38	-27	-31	No	11	0	n/a	0.02	NP
Sulfate (mg/L)	GWC-16	147.2	25	31	No	11	0	n/a	0.02	NP
Sulfate (mg/L)	GWC-17	58.13	14	31	No	11	0	n/a	0.02	NP
Sulfate (mg/L)	GWB-6R	41.84	29	31	No	11	0	n/a	0.02	NP
Total Dissolved Solids (mg/L)	GWA-7 (bg)	-604.9	-48	-31	Yes	11	0	n/a	0.02	NP
Total Dissolved Solids (mg/L)	GWA-8 (bg)	1.345	3	31	No	11	0	n/a	0.02	NP
Total Dissolved Solids (mg/L)	GWC-16	263.8	41	31	Yes	11	0	n/a	0.02	NP
Total Dissolved Solids (mg/L)	GWB-5R	280	31	27	Yes	10	0	n/a	0.02	NP
Total Dissolved Solids (mg/L)	GWB-6R	115	29	31	No	11	0	n/a	0.02	NP



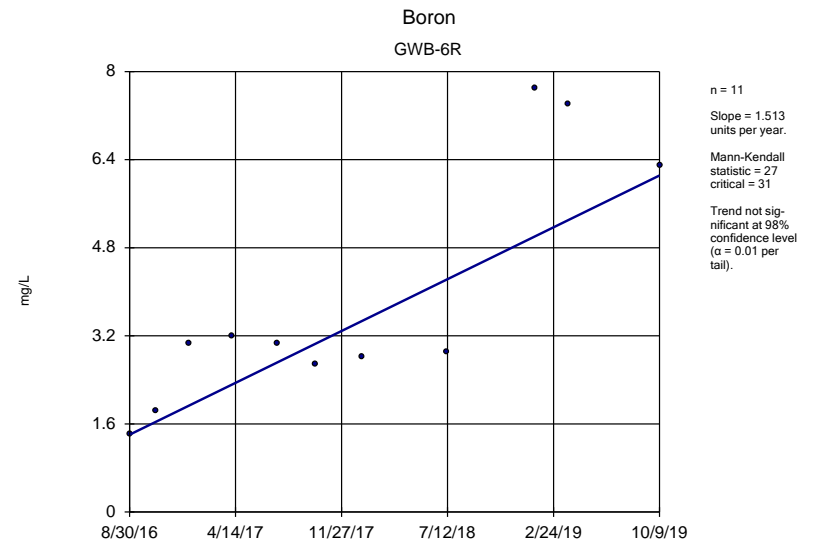
Sen's Slope Estimator Analysis Run 2/17/2020 4:13 PM View: Appendix III Trend
Grumman Road Landfill Client: Southern Company Data: Grumman Road



Sen's Slope Estimator Analysis Run 2/17/2020 4:13 PM View: Appendix III Trend
Grumman Road Landfill Client: Southern Company Data: Grumman Road

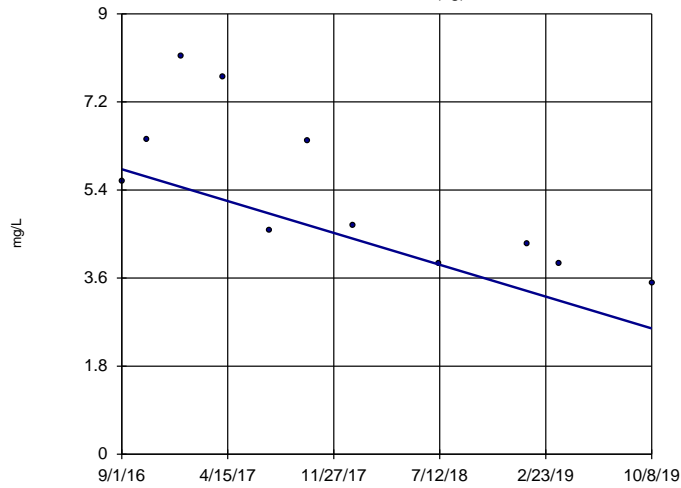


Sen's Slope Estimator Analysis Run 2/17/2020 4:13 PM View: Appendix III Trend
Grumman Road Landfill Client: Southern Company Data: Grumman Road



Sen's Slope Estimator Analysis Run 2/17/2020 4:13 PM View: Appendix III Trend
Grumman Road Landfill Client: Southern Company Data: Grumman Road

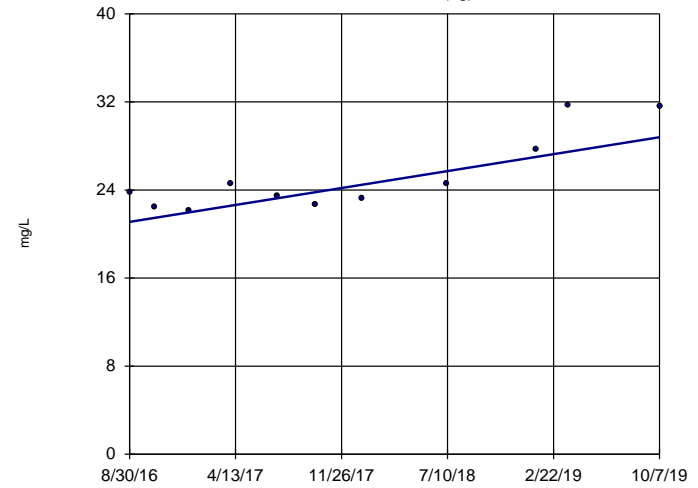
Calcium GWA-7 (bg)



n = 11
 Slope = -1.048
 units per year.
 Mann-Kendall
 statistic = -36
 critical = -31
 Decreasing trend
 significant at 98%
 confidence level
 ($\alpha = 0.01$ per
 tail).

Sen's Slope Estimator Analysis Run 2/17/2020 4:13 PM View: Appendix III Trend
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

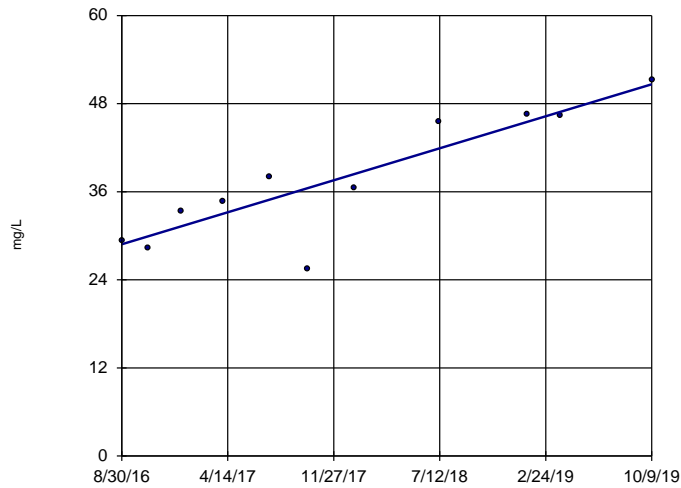
Calcium GWA-8 (bg)



n = 11
 Slope = 2.477
 units per year.
 Mann-Kendall
 statistic = 30
 critical = 31
 Trend not sig-
 nificant at 98%
 confidence level
 ($\alpha = 0.01$ per
 tail).

Sen's Slope Estimator Analysis Run 2/17/2020 4:13 PM View: Appendix III Trend
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

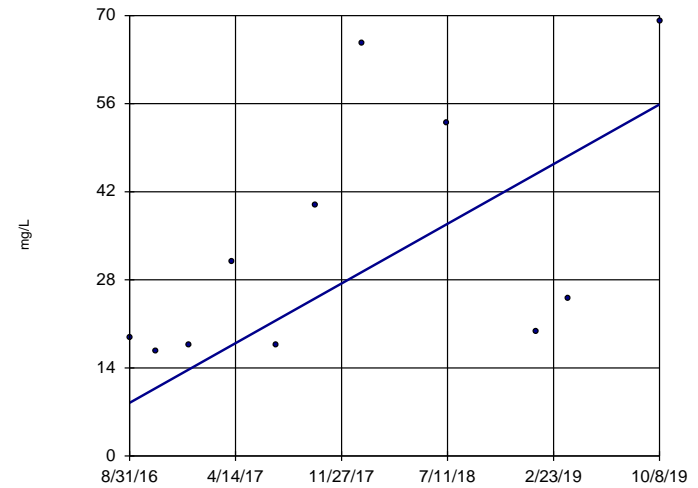
Calcium GWC-1



n = 11
 Slope = 7.011
 units per year.
 Mann-Kendall
 statistic = 39
 critical = 31
 Increasing trend
 significant at 98%
 confidence level
 ($\alpha = 0.01$ per
 tail).

Sen's Slope Estimator Analysis Run 2/17/2020 4:13 PM View: Appendix III Trend
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

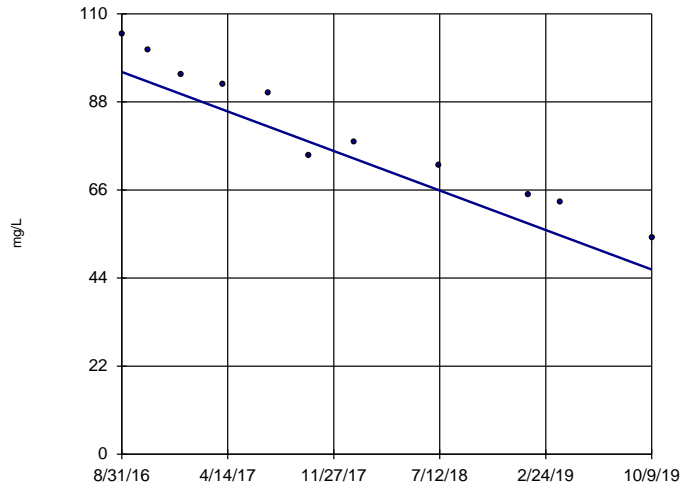
Calcium GWC-11



n = 11
 Slope = 15.28
 units per year.
 Mann-Kendall
 statistic = 29
 critical = 31
 Trend not sig-
 nificant at 98%
 confidence level
 ($\alpha = 0.01$ per
 tail).

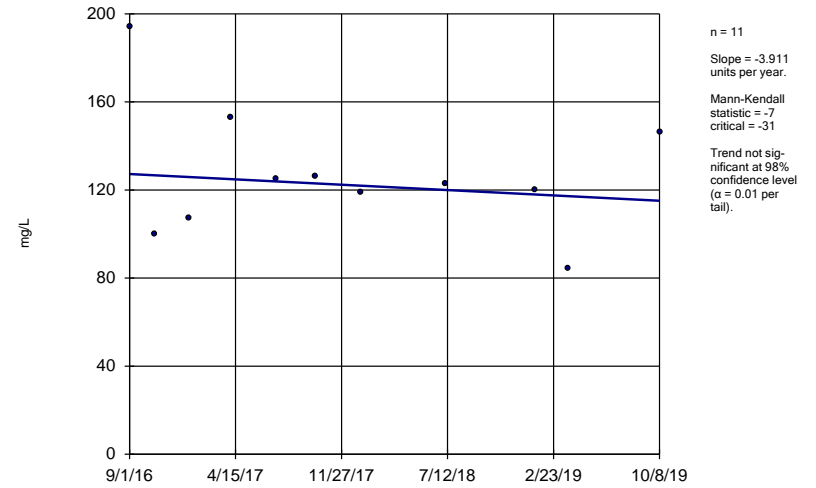
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Calcium GWC-12



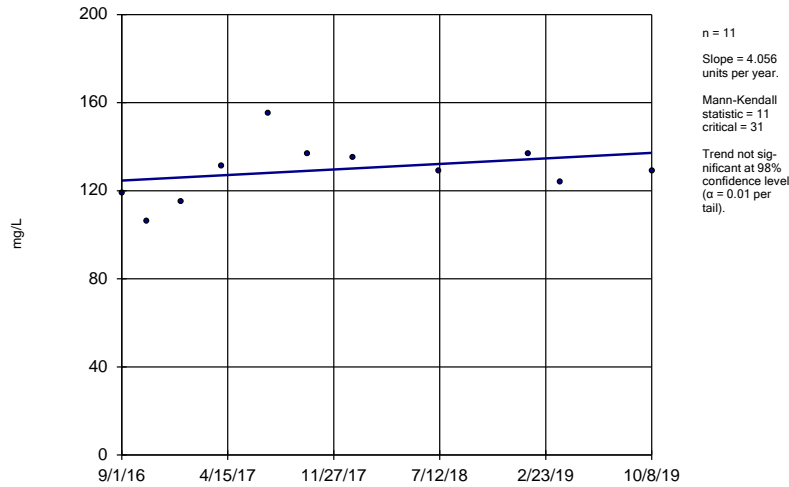
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Calcium GWC-14



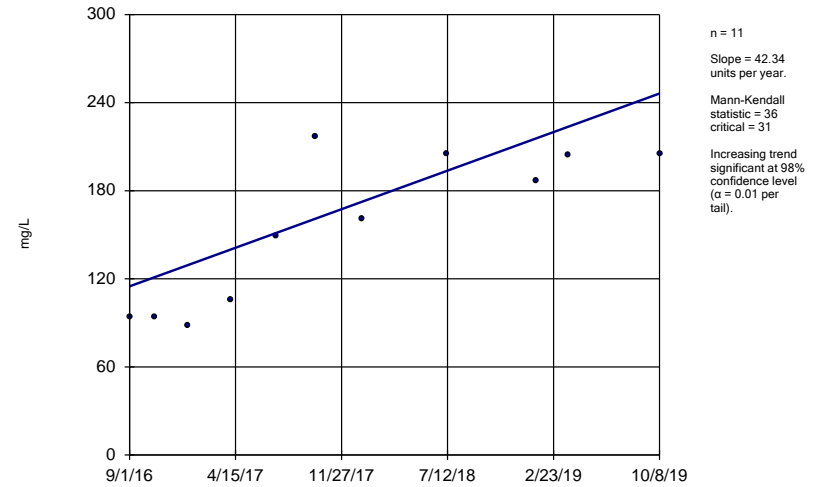
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Calcium GWC-15



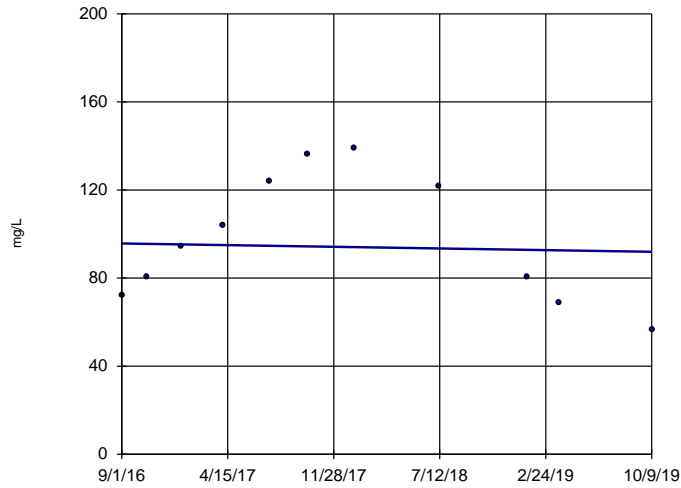
Sen's Slope Estimator Analysis Run 2/17/2020 4:13 PM View: Appendix III Trend
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Calcium GWC-16



Sen's Slope Estimator Analysis Run 2/17/2020 4:13 PM View: Appendix III Trend
Grumman Road Landfill Client: Southern Company Data: Grumman Road

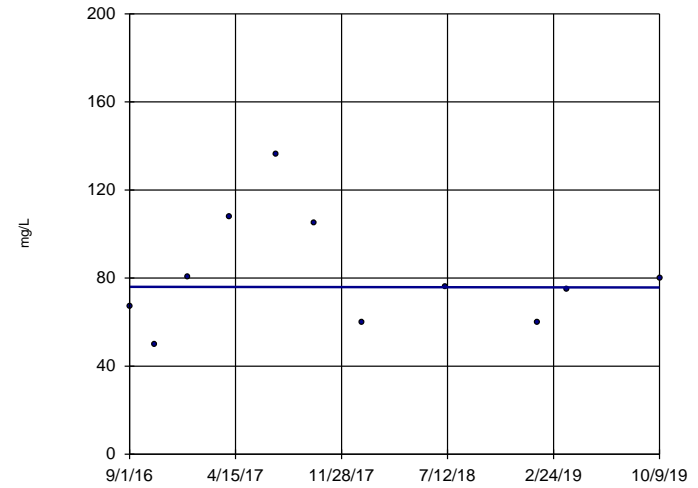
Calcium GWC-17



n = 11
 Slope = -1.209
 units per year.
 Mann-Kendall
 statistic = -1
 critical = -31
 Trend not sig-
 nificant at 98%
 confidence level
 ($\alpha = 0.01$ per
 tail).

Sen's Slope Estimator Analysis Run 2/17/2020 4:13 PM View: Appendix III Trend
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

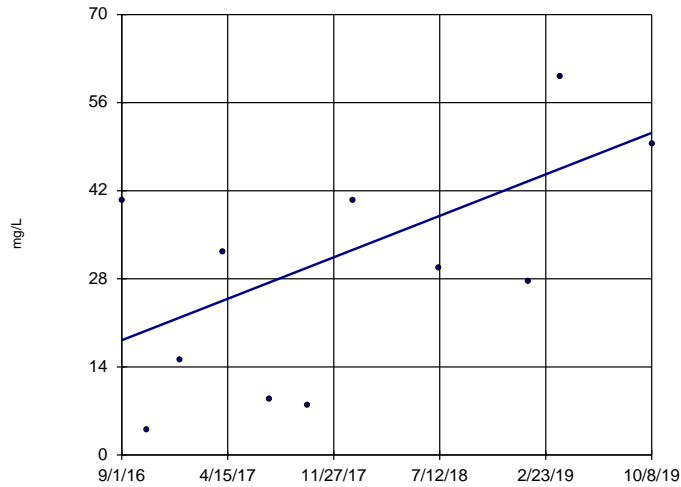
Calcium GWC-20



n = 11
 Slope = -0.09707
 units per year.
 Mann-Kendall
 statistic = -1
 critical = -31
 Trend not sig-
 nificant at 98%
 confidence level
 ($\alpha = 0.01$ per
 tail).

Sen's Slope Estimator Analysis Run 2/17/2020 4:13 PM View: Appendix III Trend
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

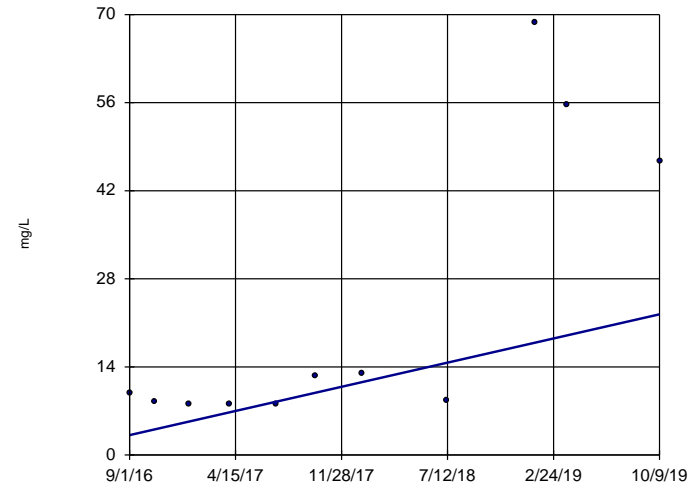
Calcium GWC-21



n = 11
 Slope = 10.62
 units per year.
 Mann-Kendall
 statistic = 18
 critical = 31
 Trend not sig-
 nificant at 98%
 confidence level
 ($\alpha = 0.01$ per
 tail).

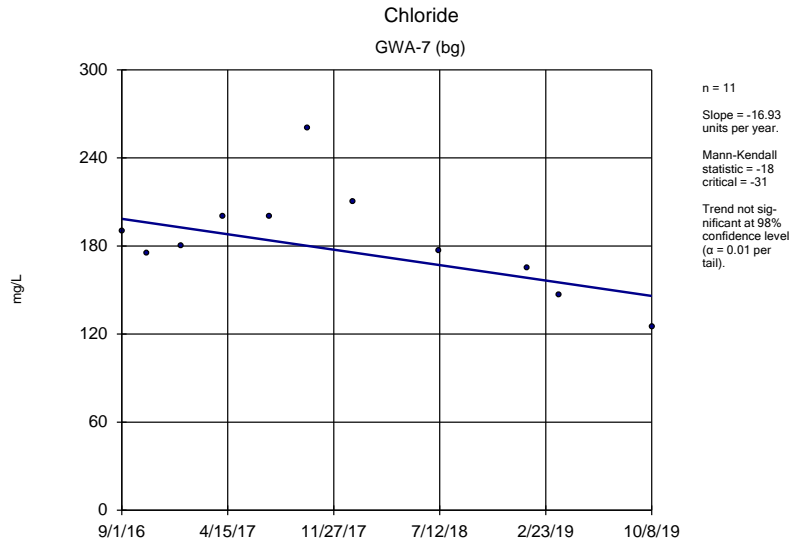
Sen's Slope Estimator Analysis Run 2/17/2020 4:14 PM View: Appendix III Trend
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Calcium GWB-4R

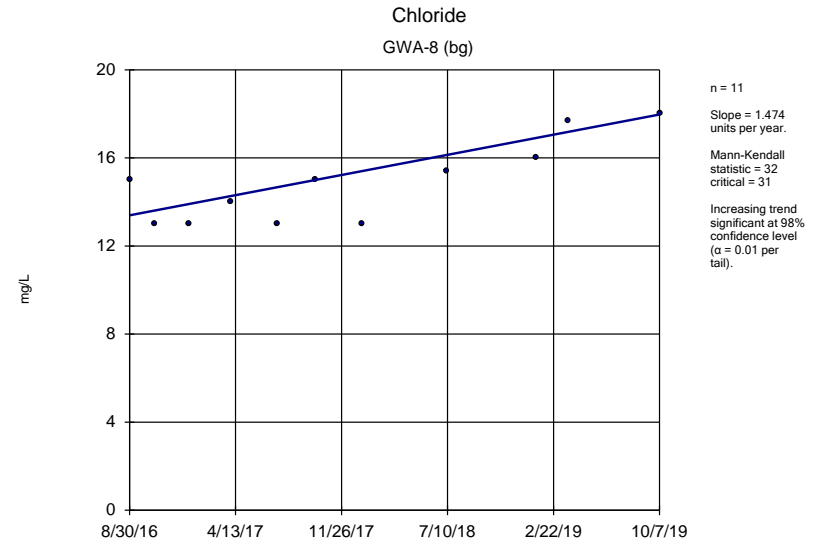


n = 11
 Slope = 6.187
 units per year.
 Mann-Kendall
 statistic = 23
 critical = 31
 Trend not sig-
 nificant at 98%
 confidence level
 ($\alpha = 0.01$ per
 tail).

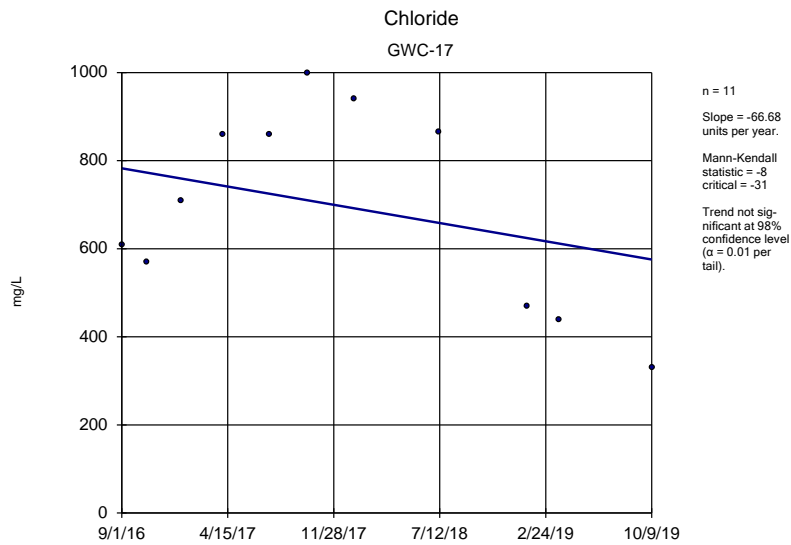
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road



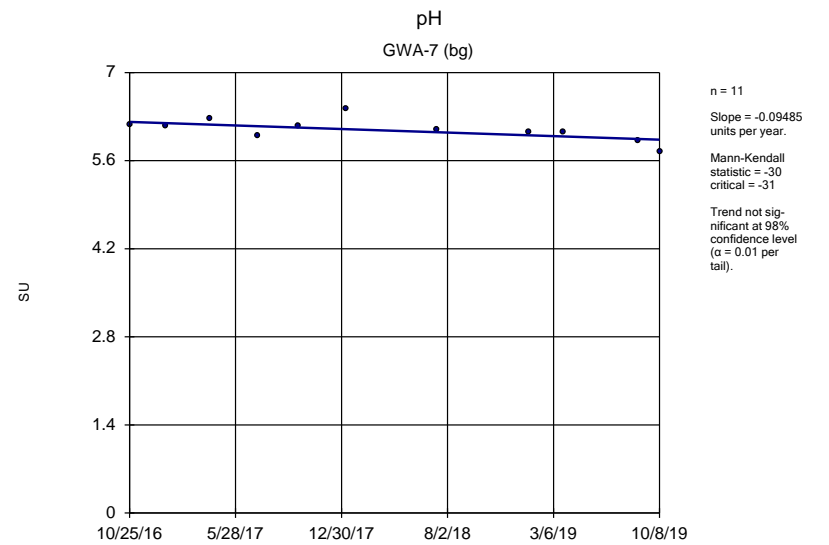
Sen's Slope Estimator Analysis Run 2/17/2020 4:14 PM View: Appendix III Trend
Grumman Road Landfill Client: Southern Company Data: Grumman Road



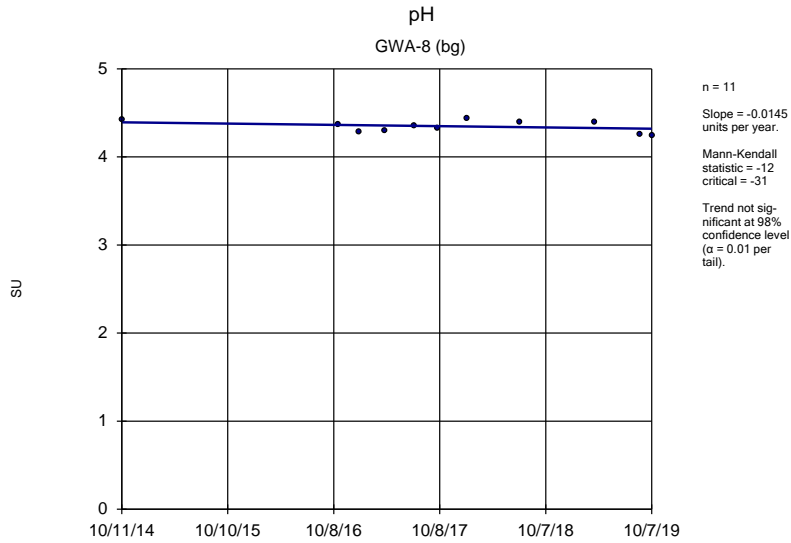
Sen's Slope Estimator Analysis Run 2/17/2020 4:14 PM View: Appendix III Trend
Grumman Road Landfill Client: Southern Company Data: Grumman Road



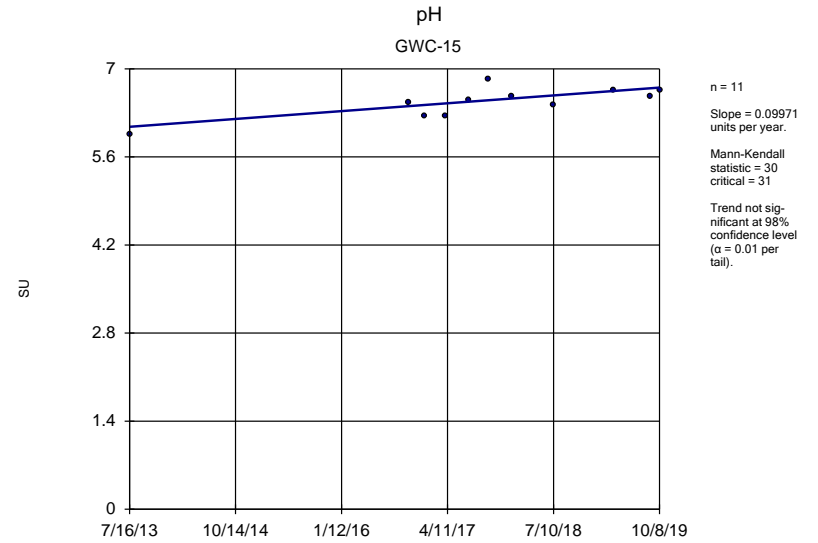
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Grumman Road Landfill Client: Southern Company Data: Grumman Road



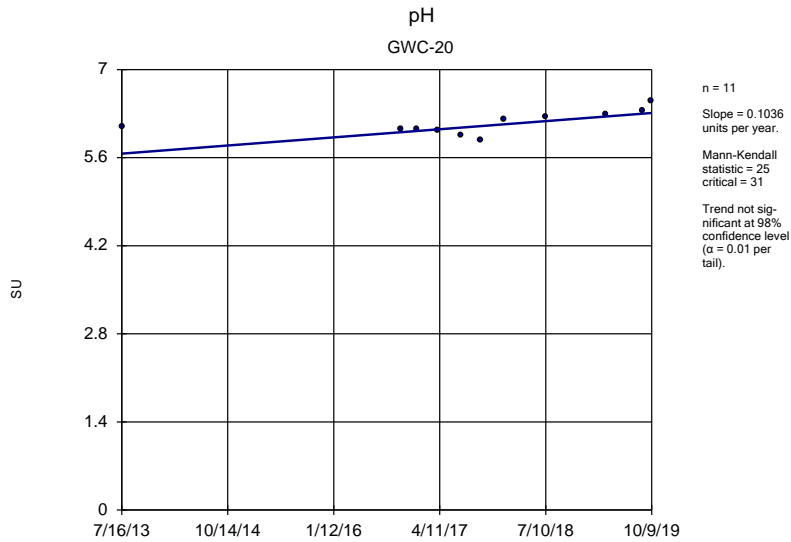
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Grumman Road Landfill Client: Southern Company Data: Grumman Road



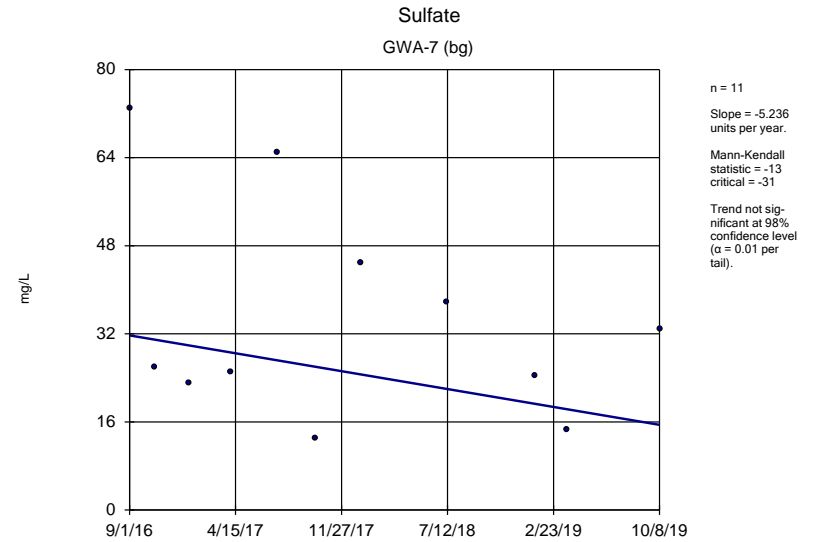
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Grumman Road Landfill Client: Southern Company Data: Grumman Road



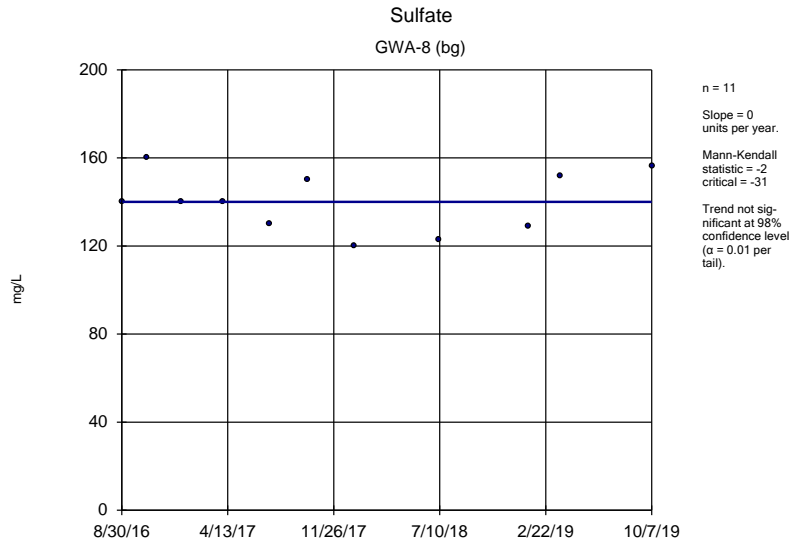
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Grumman Road Landfill Client: Southern Company Data: Grumman Road



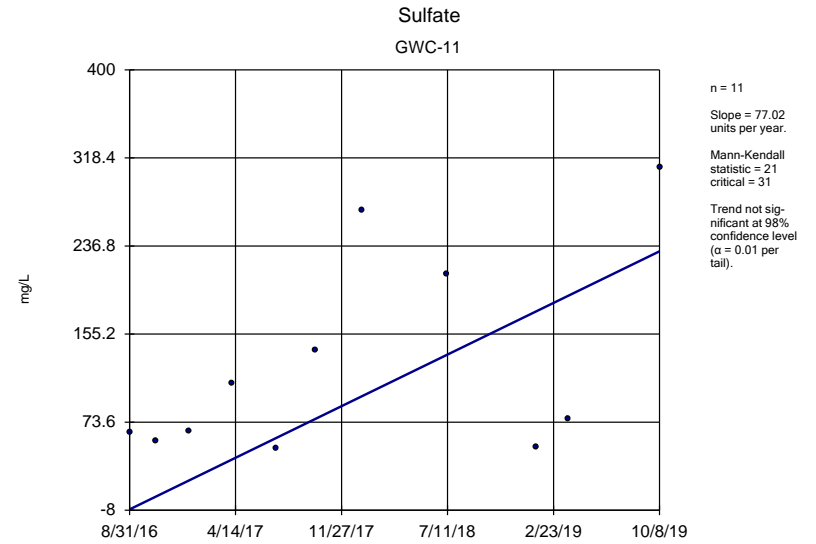
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Grumman Road Landfill Client: Southern Company Data: Grumman Road



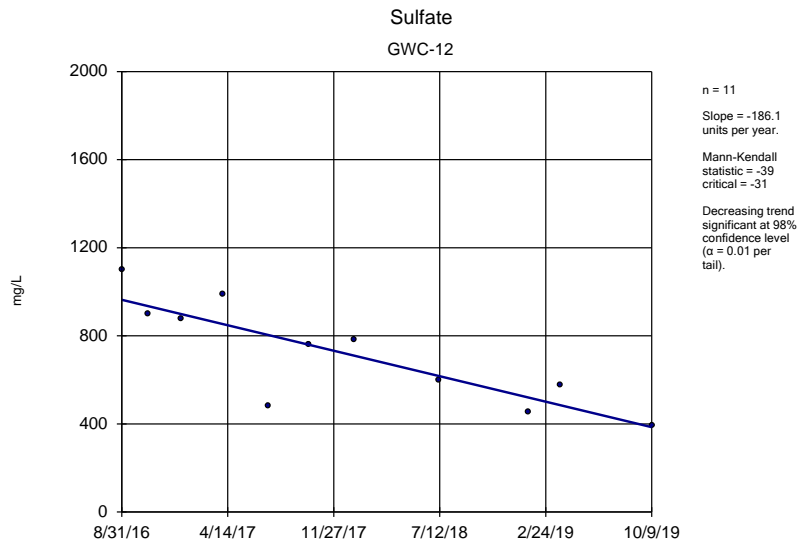
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Grumman Road Landfill Client: Southern Company Data: Grumman Road



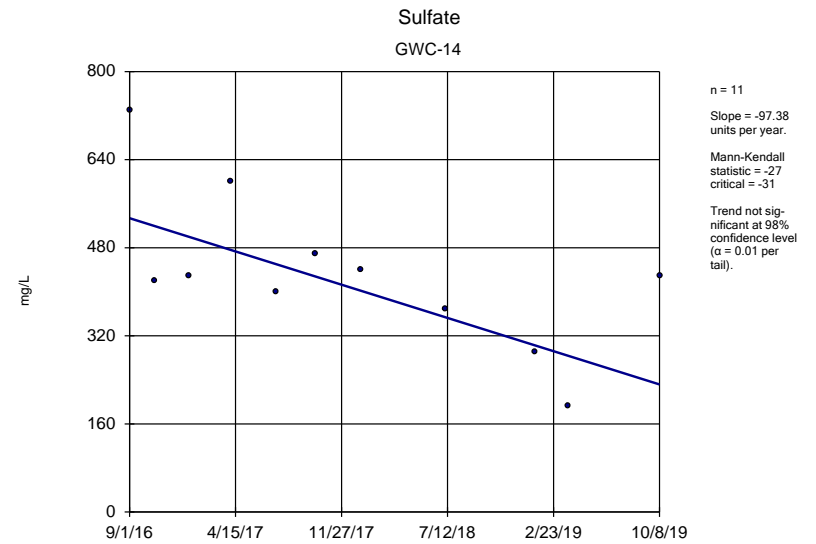
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Grumman Road Landfill Client: Southern Company Data: Grumman Road



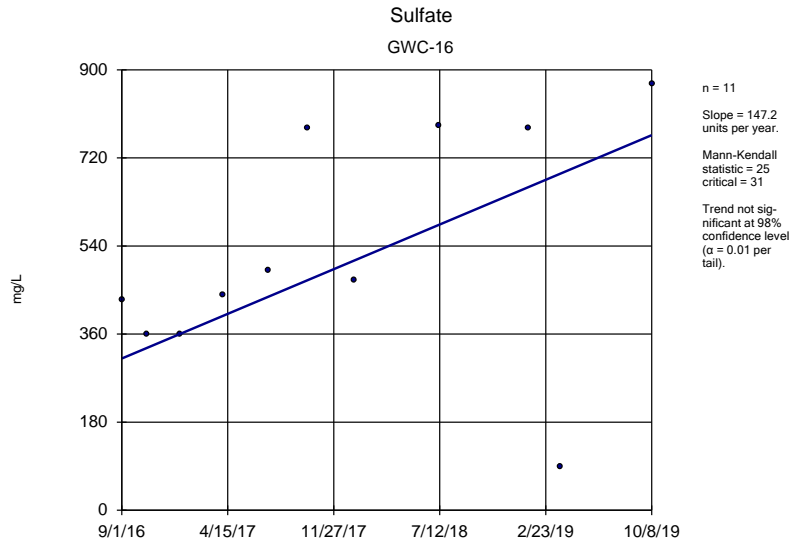
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Grumman Road Landfill Client: Southern Company Data: Grumman Road



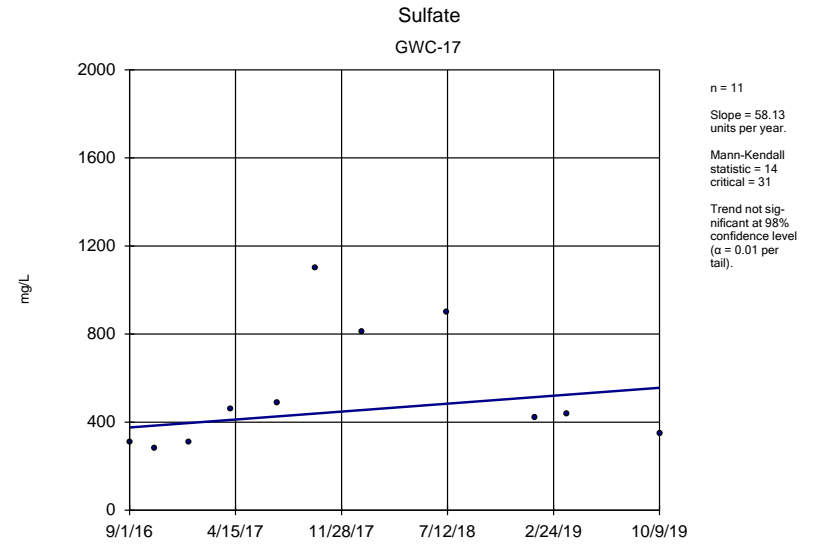
Sen's Slope Estimator Analysis Run 2/17/2020 4:14 PM View: Appendix III Trend
Grumman Road Landfill Client: Southern Company Data: Grumman Road



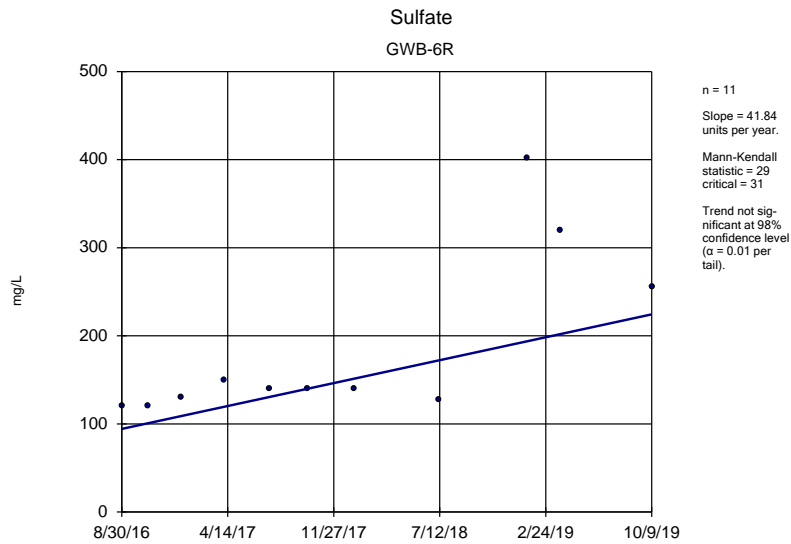
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Grumman Road Landfill Client: Southern Company Data: Grumman Road



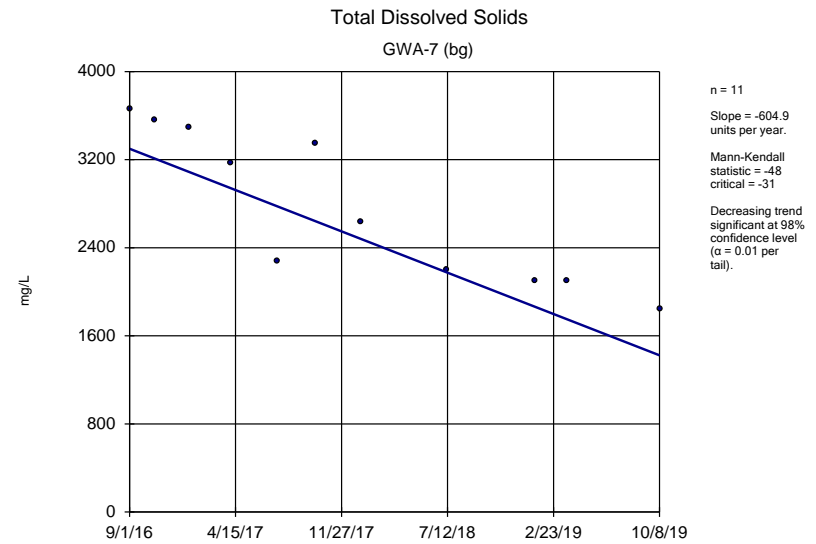
Sen's Slope Estimator Analysis Run 2/17/2020 4:14 PM View: Appendix III Trend
Grumman Road Landfill Client: Southern Company Data: Grumman Road



Sen's Slope Estimator Analysis Run 2/17/2020 4:14 PM View: Appendix III Trend
Grumman Road Landfill Client: Southern Company Data: Grumman Road

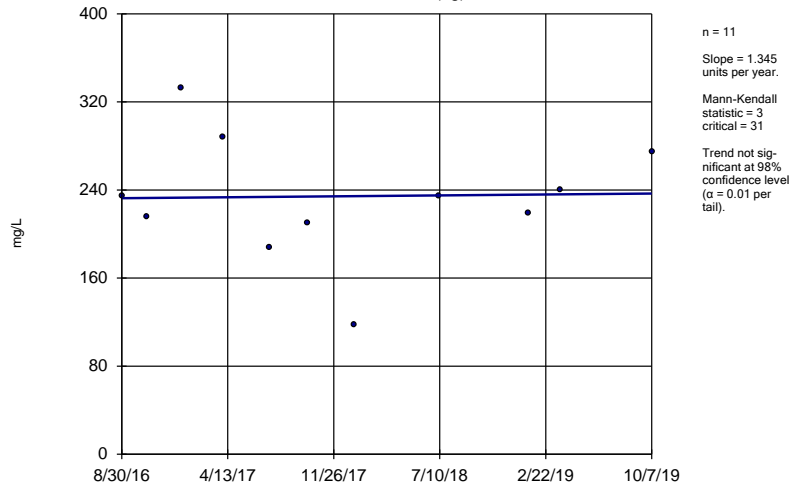


Sen's Slope Estimator Analysis Run 2/17/2020 4:14 PM View: Appendix III Trend
Grumman Road Landfill Client: Southern Company Data: Grumman Road



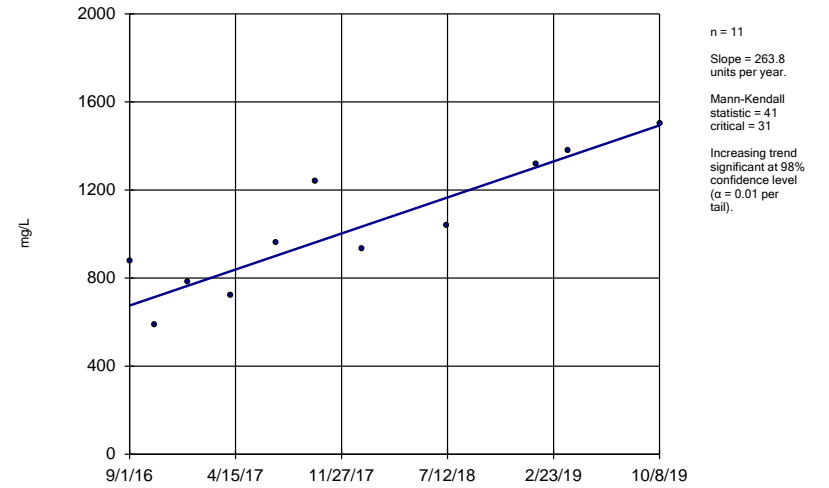
Sen's Slope Estimator Analysis Run 2/17/2020 4:14 PM View: Appendix III Trend
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Total Dissolved Solids GWA-8 (bg)



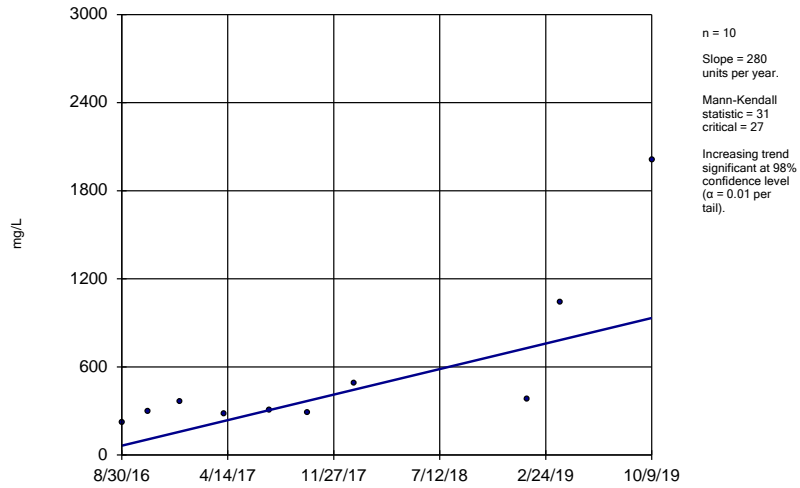
Sen's Slope Estimator Analysis Run 2/17/2020 4:14 PM View: Appendix III Trend
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Total Dissolved Solids GWC-16



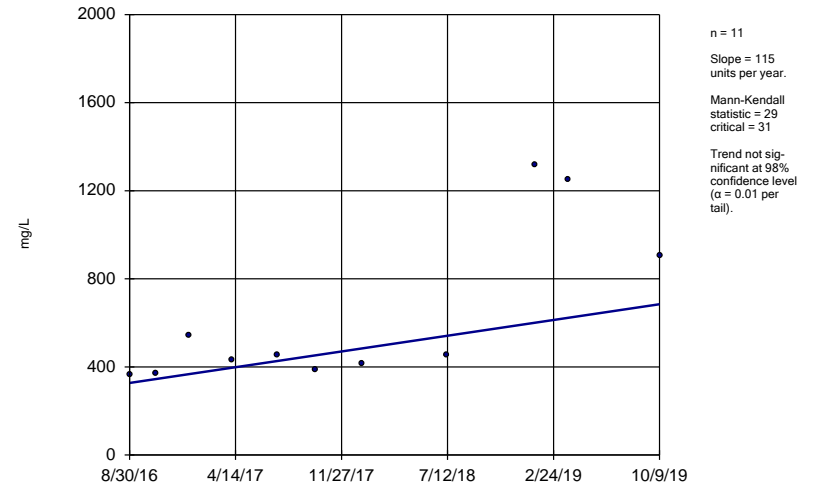
Sen's Slope Estimator Analysis Run 2/17/2020 4:14 PM View: Appendix III Trend
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Total Dissolved Solids GWB-5R



Sen's Slope Estimator Analysis Run 2/17/2020 4:14 PM View: Appendix III Trend
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Total Dissolved Solids GWB-6R



Sen's Slope Estimator Analysis Run 2/17/2020 4:14 PM View: Appendix III Trend
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator

Constituent: Boron Analysis Run 2/17/2020 4:15 PM View: Appendix III Trend

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-16	GWB-6R
8/30/2016		0.117		1.41
9/1/2016	11.6		1.82	
10/24/2016		0.126		
10/25/2016	21.4		1.26	
10/26/2016				1.83
1/3/2017		0.124		
1/4/2017			1.46	
1/5/2017				3.07
1/6/2017	20.1			
4/3/2017		0.105		
4/5/2017			2	
4/6/2017	21.8			3.19
7/11/2017		0.136		
7/12/2017			2.95	3.06
7/13/2017	16.3			
10/2/2017		0.107		
10/3/2017			4.15	2.69
10/4/2017	21.5			
1/9/2018	13.9	0.123		2.81
1/10/2018			3.68	
7/9/2018		0.11		
7/10/2018			5.2	2.9
7/11/2018	11.7			
1/16/2019	9.3	0.13		7.7
1/17/2019			8.6	
3/25/2019	8.5	0.098		
3/26/2019			7.4	7.4
10/7/2019		0.12		
10/8/2019	6.4		8.4	
10/9/2019				6.3

Sen's Slope Estimator

Constituent: Calcium Analysis Run 2/17/2020 4:15 PM View: Appendix III Trend
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11
8/30/2016		23.8	29.4	
8/31/2016				18.8
9/1/2016	5.59			
10/24/2016		22.5		
10/25/2016	6.43		28.3	
10/26/2016				16.6
1/3/2017		22.1		
1/4/2017			33.4	17.6
1/6/2017	8.13			
4/3/2017		24.6 (J)		
4/4/2017			34.6	
4/6/2017	7.72			30.9
7/11/2017		23.5		17.7
7/12/2017			38	
7/13/2017	4.57			
10/2/2017		22.7		
10/3/2017			25.5	39.8
10/4/2017	6.41			
1/9/2018	4.68	23.2		
1/10/2018			36.5	
1/11/2018				65.6
7/9/2018		24.6 (J)		
7/10/2018			45.5	
7/11/2018	3.9			53
1/16/2019	4.3	27.7	46.5	
1/17/2019				19.8 (J)
3/25/2019	3.9	31.7		
3/26/2019			46.3	
3/27/2019				25.1
10/7/2019		31.6		
10/8/2019	3.5			69.2
10/9/2019			51.2	

Sen's Slope Estimator

Constituent: Calcium Analysis Run 2/17/2020 4:15 PM View: Appendix III Trend

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-12	GWC-14	GWC-15	GWC-16
8/31/2016	105			
9/1/2016		194	119	93.8
10/25/2016		100	106	94.1
10/26/2016	101			
1/4/2017	94.9			88.2
1/5/2017		107	115	
4/3/2017			131	
4/4/2017		153		
4/5/2017	92.5			106
7/10/2017	90.3			
7/11/2017		125	155	
7/12/2017				149
10/2/2017		126	137	
10/3/2017				217
10/4/2017	74.6			
1/9/2018		119	135	
1/10/2018				161
1/11/2018	78.1			
7/9/2018		123		
7/10/2018			129	205
7/11/2018	72.2			
1/16/2019		120		
1/17/2019	64.7		137	187
3/26/2019		84.2	124	204
3/27/2019	63.1			
10/8/2019		146	129	205
10/9/2019	54.2			

Sen's Slope Estimator

Constituent: Calcium Analysis Run 2/17/2020 4:15 PM View: Appendix III Trend

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-20	GWC-21	GWB-4R
9/1/2016	71.9	67.2	40.5	9.91
10/25/2016		50.1	3.91	
10/26/2016	80.3			8.56
1/4/2017		80.4	15.2	
1/5/2017	94.4			
1/6/2017				8.18
4/4/2017		108	32.3	8.12
4/5/2017	104			
7/11/2017		136		
7/12/2017				8
7/13/2017	124		8.92	
10/2/2017		105		
10/3/2017			7.88	
10/4/2017	136			12.5
1/9/2018			40.5	
1/10/2018		60.1		
1/11/2018	139			12.9
7/9/2018		75.9		
7/10/2018			29.8	
7/11/2018	122			8.6
1/16/2019	80.5			68.8
1/17/2019			27.6	
1/21/2019		60		
3/25/2019		74.8		55.6
3/26/2019	68.8		60.1	
10/8/2019			49.5	
10/9/2019	56.6	80.1		46.7

Sen's Slope Estimator

Constituent: Chloride, pH Analysis Run 2/17/2020 4:15 PM View: Appendix III Trend

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-17	GWA-7 (bg)
8/30/2016		15		
9/1/2016	190		610	
10/24/2016		13		
10/25/2016	175 (D)			6.17
10/26/2016			570	
1/3/2017		13		
1/5/2017			710	
1/6/2017	180			6.16
4/3/2017		14		
4/5/2017			860	
4/6/2017	200			6.26
7/11/2017		13		
7/13/2017	200		860	5.99
10/2/2017		15		
10/4/2017	260		1000	6.16
1/9/2018	210	13		6.43
1/11/2018			940	
7/9/2018		15.4		
7/11/2018	177		864	6.1
1/16/2019	165	16	469	6.05
3/25/2019	147	17.7		6.06
3/26/2019			439	
8/26/2019				5.91
10/7/2019		18		
10/8/2019	125			5.74
10/9/2019			330	

Sen's Slope Estimator

Constituent: pH, Sulfate Analysis Run 2/17/2020 4:15 PM View: Appendix III Trend

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-8 (bg)	GWC-15	GWC-20	GWA-7 (bg)
7/16/2013		5.96	6.1	
10/11/2014	4.42			
9/1/2016				73
10/24/2016	4.36			
10/25/2016		6.46	6.06	26
1/3/2017	4.28			
1/4/2017			6.05	
1/5/2017		6.25		
1/6/2017				23
4/3/2017	4.29	6.25		
4/4/2017			6.03	
4/6/2017				25
7/11/2017	4.35	6.5	5.96	
7/13/2017				65
10/2/2017	4.32	6.83	5.88	
10/4/2017				13
1/9/2018	4.44	6.57		45
1/10/2018			6.21	
7/9/2018	4.4		6.24	
7/10/2018		6.42		
7/11/2018				37.7
1/16/2019				24.5
3/25/2019	4.4		6.28	14.7
3/26/2019		6.65		
8/26/2019	4.26			
8/27/2019		6.57		
8/28/2019			6.34	
10/7/2019	4.24			
10/8/2019		6.65		32.8
10/9/2019			6.5	

Sen's Slope Estimator

Constituent: Sulfate Analysis Run 2/17/2020 4:15 PM View: Appendix III Trend
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-8 (bg)	GWC-11	GWC-12	GWC-14
8/30/2016	140			
8/31/2016		64	1100	
9/1/2016				730
10/24/2016	160			
10/25/2016				420
10/26/2016		56	900	
1/3/2017	140			
1/4/2017		65	880	
1/5/2017				430
4/3/2017	140			
4/4/2017				600
4/5/2017			990	
4/6/2017		110		
7/10/2017			480	
7/11/2017	130	49		400
10/2/2017	150			470
10/3/2017		140		
10/4/2017			760	
1/9/2018	120			440
1/11/2018		270	780	
7/9/2018	123			369
7/11/2018		211	598	
1/16/2019	129			291
1/17/2019		50.3	454	
3/25/2019	152			
3/26/2019				192
3/27/2019		76.8	579	
10/7/2019	156			
10/8/2019		310		428
10/9/2019			392	

Sen's Slope Estimator

Constituent: Sulfate, Total Dissolved Solids Analysis Run 2/17/2020 4:15 PM View: Appendix III Trend

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-16	GWC-17	GWB-6R	GWA-7 (bg)
8/30/2016			120	
9/1/2016	430	310		3660
10/25/2016	360			3560
10/26/2016		280	120	
1/4/2017	360			
1/5/2017		310	130	
1/6/2017				3490
4/5/2017	440	460		
4/6/2017			150	3170
7/12/2017	490		140	
7/13/2017		490		2280
10/3/2017	780		140	
10/4/2017		1100		3350
1/9/2018			140	2640
1/10/2018	470			
1/11/2018		810		
7/10/2018	787		128	
7/11/2018		902		2200
1/16/2019		422	402	2100
1/17/2019	780			
3/25/2019				2100
3/26/2019	87.9	439	319	
10/8/2019	872			1840
10/9/2019		346	255	

Sen's Slope Estimator

Constituent: Total Dissolved Solids Analysis Run 2/17/2020 4:15 PM View: Appendix III Trend

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-8 (bg)	GWC-16	GWB-5R	GWB-6R
8/30/2016	234		224	365
9/1/2016		878		
10/24/2016	216			
10/25/2016		585		
10/26/2016			297	373
1/3/2017	333		366	
1/4/2017		783		
1/5/2017				543
4/3/2017	288			
4/5/2017		722		
4/6/2017			279	434
7/11/2017	188			
7/12/2017		962	308	454
10/2/2017	210			
10/3/2017		1240	288	389
1/9/2018	118			415
1/10/2018		935	493	
7/9/2018	235			
7/10/2018		1040		453
1/16/2019	219		382	1320
1/17/2019		1320		
3/25/2019	240			
3/26/2019		1380	1040	1250
10/7/2019	275			
10/8/2019		1500		
10/9/2019			2010	903

Appendix I and II Statistics (State Permit)

Intrawell Prediction Limits Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2020, 3:56 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	GWC-15	0.09	10/8/2019	0.13	Yes	43	58.14	n/a	0.001037	NP Intra (NDs) 1 of 2
Barium (mg/L)	GWC-16	0.0944	10/8/2019	0.13	Yes	59	0	n/a	0.0005506	NP Intra (normality) 1 of 2
Selenium (mg/L)	GWC-15	0.01	10/8/2019	0.014	Yes	39	92.31	n/a	0.001226	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWA-7	0.0853	10/8/2019	0.095	Yes	39	30.77	n/a	0.001226	NP Intra (normality) 1 of 2
Zinc (mg/L)	GWC-13	0.036	10/8/2019	0.053	Yes	38	28.95	n/a	0.001294	NP Intra (normality) 1 of 2

Intrawell Prediction Limits All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2020, 3:56 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	GWA-7	0.015	10/8/2019	0.015ND	No	41	85.37	n/a	0.001118	NP Intra (NDs) 1 of 2
Antimony (mg/L)	GWC-11	0.003	10/8/2019	0.00046	No	43	90.7	n/a	0.001037	NP Intra (NDs) 1 of 2
Antimony (mg/L)	GWC-13	0.003	10/8/2019	0.003ND	No	43	97.67	n/a	0.001037	NP Intra (NDs) 1 of 2
Antimony (mg/L)	GWC-14	0.005	10/8/2019	0.003ND	No	64	98.44	n/a	0.0004732	NP Intra (NDs) 1 of 2
Antimony (mg/L)	GWC-16	0.006	10/8/2019	0.003ND	No	64	98.44	n/a	0.0004732	NP Intra (NDs) 1 of 2
Antimony (mg/L)	GWC-20	0.003	10/9/2019	0.003ND	No	22	95.45	n/a	0.003707	NP Intra (NDs) 1 of 2
Antimony (mg/L)	GWC-22	0.003	10/9/2019	0.003ND	No	21	100	n/a	0.003999	NP Intra (NDs) 1 of 2
Antimony (mg/L)	GWC-9	0.003	10/9/2019	0.003ND	No	43	97.67	n/a	0.001037	NP Intra (NDs) 1 of 2
Antimony (mg/L)	GWB-4R	0.003	10/9/2019	0.003ND	No	43	93.02	n/a	0.001037	NP Intra (NDs) 1 of 2
Antimony (mg/L)	GWB-5R	0.015	10/9/2019	0.015ND	No	43	100	n/a	0.001037	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWA-7	0.0287	10/8/2019	0.003	No	41	58.54	n/a	0.001118	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWA-8	0.005	10/7/2019	0.005ND	No	63	92.06	n/a	0.000487	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWC-1	0.0071	10/9/2019	0.0042	No	39	69.23	n/a	0.001226	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWC-12	0.005	10/9/2019	0.005ND	No	43	93.02	n/a	0.001037	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWC-13	0.0064	10/8/2019	0.005ND	No	43	95.35	n/a	0.001037	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWC-14	0.011	10/8/2019	0.0017	No	64	81.25	n/a	0.0004732	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWC-15	0.09	10/8/2019	0.13	Yes	43	58.14	n/a	0.001037	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWC-16	0.1212	10/8/2019	0.088	No	62	0	No	0.0004115	Param Intra 1 of 2
Arsenic (mg/L)	GWC-17	0.005	10/9/2019	0.0011	No	43	86.05	n/a	0.001037	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWC-2	0.005	10/9/2019	0.005ND	No	41	97.56	n/a	0.001118	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWC-20	0.5741	10/9/2019	0.35	No	22	4.545	No	0.0004115	Param Intra 1 of 2
Arsenic (mg/L)	GWC-21	0.005	10/8/2019	0.0028	No	17	76.47	n/a	0.005914	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWC-22	0.005	10/9/2019	0.005ND	No	21	61.9	n/a	0.003999	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWB-4R	0.0068	10/9/2019	0.0024	No	39	61.54	n/a	0.001226	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWB-5R	0.023	10/9/2019	0.0053	No	42	71.43	n/a	0.001077	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWB-6R	0.025	10/9/2019	0.0018	No	43	60.47	n/a	0.001037	NP Intra (NDs) 1 of 2
Barium (mg/L)	GWA-7	0.2043	10/8/2019	0.1	No	41	0	No	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWA-8	0.14	10/7/2019	0.069	No	60	0	n/a	0.0005281	NP Intra (normality) 1 of 2
Barium (mg/L)	GWC-1	0.1141	10/9/2019	0.058	No	42	0	sqrt(x)	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWC-11	0.2074	10/8/2019	0.13	No	42	0	sqrt(x)	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWC-12	0.1722	10/9/2019	0.019	No	38	0	ln(x)	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWC-13	0.03175	10/8/2019	0.024	No	42	14.29	No	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWC-14	0.1324	10/8/2019	0.085	No	62	0	x^(1/3)	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWC-15	0.05948	10/8/2019	0.057	No	40	0	No	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWC-16	0.0944	10/8/2019	0.13	Yes	59	0	n/a	0.0005506	NP Intra (normality) 1 of 2
Barium (mg/L)	GWC-17	0.247	10/9/2019	0.032	No	42	0	x^2	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWC-2	0.07214	10/9/2019	0.05	No	39	0	No	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWC-20	0.1775	10/9/2019	0.078	No	22	0	No	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWC-21	0.1503	10/8/2019	0.079	No	21	0	No	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWC-22	0.1535	10/9/2019	0.065	No	21	0	No	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWC-9	0.356	10/9/2019	0.18	No	42	0	n/a	0.001077	NP Intra (normality) 1 of 2
Barium (mg/L)	GWB-4R	0.261	10/9/2019	0.076	No	42	0	No	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWB-5R	0.3072	10/9/2019	0.13	No	40	0	No	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWB-6R	0.2605	10/9/2019	0.014	No	42	0	sqrt(x)	0.0004115	Param Intra 1 of 2
Chromium (mg/L)	GWA-7	0.068	10/8/2019	0.021	No	41	36.59	n/a	0.001118	NP Intra (normality) 1 of 2
Chromium (mg/L)	GWA-8	0.014	10/7/2019	0.00052	No	61	93.44	n/a	0.0005144	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-1	0.0021	10/9/2019	0.0019	No	41	70.73	n/a	0.001118	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-11	0.01	10/8/2019	0.00091	No	43	69.77	n/a	0.001037	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-12	0.01	10/9/2019	0.00081	No	43	72.09	n/a	0.001037	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-13	0.01	10/8/2019	0.01ND	No	43	79.07	n/a	0.001037	NP Intra (NDs) 1 of 2

Intrawell Prediction Limits All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2020, 3:56 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Chromium (mg/L)	GWC-14	0.014	10/8/2019	0.00053	No	61	67.21	n/a	0.0005144	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-15	0.01	10/8/2019	0.0017	No	43	72.09	n/a	0.001037	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-16	0.01	10/8/2019	0.00099	No	62	80.65	n/a	0.0005007	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-17	0.01	10/9/2019	0.00081	No	42	78.57	n/a	0.001077	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-2	0.01	10/9/2019	0.00049	No	41	90.24	n/a	0.001118	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-20	0.01	10/9/2019	0.0011	No	22	54.55	n/a	0.003707	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-21	0.01	10/8/2019	0.00065	No	21	57.14	n/a	0.003999	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-22	0.01	10/9/2019	0.00072	No	21	80.95	n/a	0.003999	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-9	0.014	10/9/2019	0.0009	No	43	65.12	n/a	0.001037	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWB-4R	0.03411	10/9/2019	0.002	No	43	0	No	0.0004115	Param Intra 1 of 2
Chromium (mg/L)	GWB-5R	0.03	10/9/2019	0.012	No	38	39.47	n/a	0.001294	NP Intra (normality) 1 of 2
Chromium (mg/L)	GWB-6R	0.025	10/9/2019	0.011	No	42	7.143	n/a	0.001077	NP Intra (normality) 1 of 2
Lead (mg/L)	GWA-7	0.013	10/8/2019	0.0098	No	40	65	n/a	0.001159	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWA-8	0.0095	10/7/2019	0.005ND	No	62	90.32	n/a	0.0005007	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-1	0.005	10/9/2019	0.005ND	No	43	97.67	n/a	0.001037	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-11	0.013	10/8/2019	0.00028	No	42	78.57	n/a	0.001077	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-12	0.005	10/9/2019	0.000066	No	43	76.74	n/a	0.001037	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-13	0.0078	10/8/2019	0.00013	No	43	81.4	n/a	0.001037	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-14	0.005	10/8/2019	0.005ND	No	62	95.16	n/a	0.0005007	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-15	0.0065	10/8/2019	0.00012	No	43	88.37	n/a	0.001037	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-16	0.017	10/8/2019	0.0001	No	62	88.71	n/a	0.0005007	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-17	0.005	10/9/2019	0.00015	No	43	93.02	n/a	0.001037	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-2	0.0069	10/9/2019	0.000064	No	41	90.24	n/a	0.001118	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-20	0.005	10/9/2019	0.00018	No	22	86.36	n/a	0.003707	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-21	0.005	10/8/2019	0.00016	No	21	80.95	n/a	0.003999	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-22	0.013	10/9/2019	0.00032	No	21	57.14	n/a	0.003999	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-9	0.0051	10/9/2019	0.005ND	No	42	88.1	n/a	0.001077	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWB-4R	0.011	10/9/2019	0.00041	No	37	59.46	n/a	0.001361	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWB-5R	0.075	10/9/2019	0.0025	No	42	64.29	n/a	0.001077	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWB-6R	0.025	10/9/2019	0.00033	No	43	81.4	n/a	0.001037	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWA-7	0.0438	10/8/2019	0.0072	No	40	65	n/a	0.001159	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWA-8	0.01	10/7/2019	0.01ND	No	62	96.77	n/a	0.0005007	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWC-1	0.023	10/9/2019	0.0024	No	41	58.54	n/a	0.001118	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWC-11	0.036	10/8/2019	0.01ND	No	43	62.79	n/a	0.001037	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWC-12	0.01	10/9/2019	0.01ND	No	43	93.02	n/a	0.001037	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWC-14	0.1	10/8/2019	0.0026	No	63	23.81	n/a	0.000487	NP Intra (normality) 1 of 2
Selenium (mg/L)	GWC-15	0.01	10/8/2019	0.014	Yes	39	92.31	n/a	0.001226	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWC-16	0.0085	10/8/2019	0.0023	No	62	75.81	n/a	0.0005007	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWC-17	0.01	10/9/2019	0.01ND	No	43	83.72	n/a	0.001037	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWC-2	0.01	10/9/2019	0.01ND	No	41	92.68	n/a	0.001118	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWC-20	0.01	10/9/2019	0.01ND	No	22	86.36	n/a	0.003707	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWC-21	0.04932	10/8/2019	0.019	No	21	4.762	No	0.0004115	Param Intra 1 of 2
Selenium (mg/L)	GWC-22	0.01	10/9/2019	0.01ND	No	21	80.95	n/a	0.003999	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWC-9	0.01	10/9/2019	0.01ND	No	43	97.67	n/a	0.001037	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWB-4R	0.01	10/9/2019	0.01ND	No	34	67.65	n/a	0.001599	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWB-5R	0.011	10/9/2019	0.0073	No	43	88.37	n/a	0.001037	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWB-6R	0.05	10/9/2019	0.05ND	No	43	83.72	n/a	0.001037	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWA-7	0.425	10/8/2019	0.11	No	41	29.27	n/a	0.001118	NP Intra (normality) 1 of 2
Vanadium (mg/L)	GWA-8	0.01	10/7/2019	0.01ND	No	60	91.67	n/a	0.0005281	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWC-1	0.01	10/9/2019	0.01ND	No	39	58.97	n/a	0.001226	NP Intra (NDs) 1 of 2

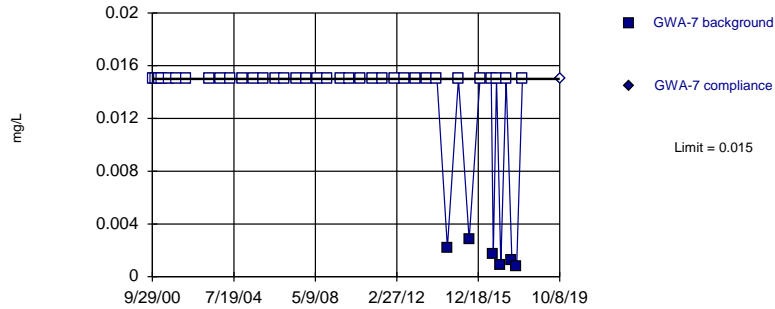
Intrawell Prediction Limits All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2020, 3:56 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Vanadium (mg/L)	GWC-11	0.01	10/8/2019	0.01ND	No	40	55	n/a	0.001159	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWC-12	0.01	10/9/2019	0.0021	No	40	80	n/a	0.001159	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWC-13	0.01	10/8/2019	0.01ND	No	40	80	n/a	0.001159	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWC-14	0.04797	10/8/2019	0.01ND	No	62	16.13	x^(1/3)	0.0004115	Param Intra 1 of 2
Vanadium (mg/L)	GWC-15	0.01	10/8/2019	0.01ND	No	40	72.5	n/a	0.001159	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWC-16	0.012	10/8/2019	0.01ND	No	62	50	n/a	0.0005007	NP Intra (normality) 1 of 2
Vanadium (mg/L)	GWC-17	0.01	10/9/2019	0.01ND	No	40	75	n/a	0.001159	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWC-2	0.01	10/9/2019	0.01ND	No	38	100	n/a	0.001294	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWC-20	0.01	10/9/2019	0.01ND	No	21	38.1	n/a	0.003999	NP Intra (normality) 1 of 2
Vanadium (mg/L)	GWC-21	0.007919	10/8/2019	0.01ND	No	18	33.33	ln(x)	0.0004115	Param Intra 1 of 2
Vanadium (mg/L)	GWC-22	0.01	10/9/2019	0.01ND	No	18	61.11	n/a	0.005373	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWC-9	0.014	10/9/2019	0.01ND	No	40	87.5	n/a	0.001159	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWB-4R	0.1423	10/9/2019	0.01ND	No	40	0	sqrt(x)	0.0004115	Param Intra 1 of 2
Vanadium (mg/L)	GWB-5R	0.04817	10/9/2019	0.033	No	33	15.15	ln(x)	0.0004115	Param Intra 1 of 2
Vanadium (mg/L)	GWB-6R	0.18	10/9/2019	0.018	No	40	7.5	n/a	0.001159	NP Intra (normality) 1 of 2
Zinc (mg/L)	GWA-7	0.0853	10/8/2019	0.095	Yes	39	30.77	n/a	0.001226	NP Intra (normality) 1 of 2
Zinc (mg/L)	GWA-8	0.01	10/7/2019	0.0077	No	57	24.56	n/a	0.0005955	NP Intra (normality) 1 of 2
Zinc (mg/L)	GWC-1	0.011	10/9/2019	0.0057	No	40	85	n/a	0.001159	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWC-11	0.013	10/8/2019	0.0061	No	39	69.23	n/a	0.001226	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWC-12	0.053	10/9/2019	0.0057	No	35	25.71	n/a	0.001497	NP Intra (normality) 1 of 2
Zinc (mg/L)	GWC-13	0.036	10/8/2019	0.053	Yes	38	28.95	n/a	0.001294	NP Intra (normality) 1 of 2
Zinc (mg/L)	GWC-14	0.011	10/8/2019	0.0052	No	63	87.3	n/a	0.000487	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWC-15	0.011	10/8/2019	0.0051	No	41	90.24	n/a	0.001118	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWC-16	0.01	10/8/2019	0.01	No	61	67.21	n/a	0.0005144	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWC-17	0.0175	10/9/2019	0.011	No	40	32.5	n/a	0.001159	NP Intra (normality) 1 of 2
Zinc (mg/L)	GWC-2	0.012	10/9/2019	0.005	No	37	81.08	n/a	0.001361	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWC-20	0.01	10/9/2019	0.0049	No	20	85	n/a	0.004291	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWC-21	0.01	10/8/2019	0.0071	No	17	58.82	n/a	0.005914	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWC-22	0.02471	10/9/2019	0.0079	No	17	11.76	No	0.0004115	Param Intra 1 of 2
Zinc (mg/L)	GWC-9	0.0059	10/9/2019	0.0054	No	37	45.95	n/a	0.001361	NP Intra (normality) 1 of 2
Zinc (mg/L)	GWB-4R	0.1912	10/9/2019	0.0064	No	40	17.5	ln(x)	0.0004115	Param Intra 1 of 2
Zinc (mg/L)	GWB-5R	0.036	10/9/2019	0.0081	No	33	51.52	n/a	0.001701	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWB-6R	0.05	10/9/2019	0.016	No	19	26.32	n/a	0.004832	NP Intra (normality) 1 of 2

Within Limit

Antimony Intrawell Non-parametric

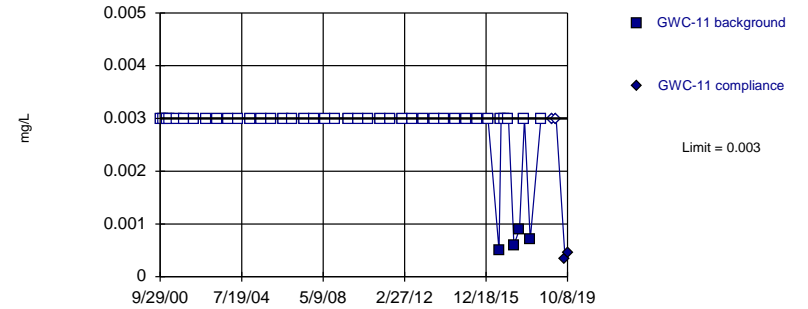


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 41 background values. 85.37% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:42 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Antimony Intrawell Non-parametric

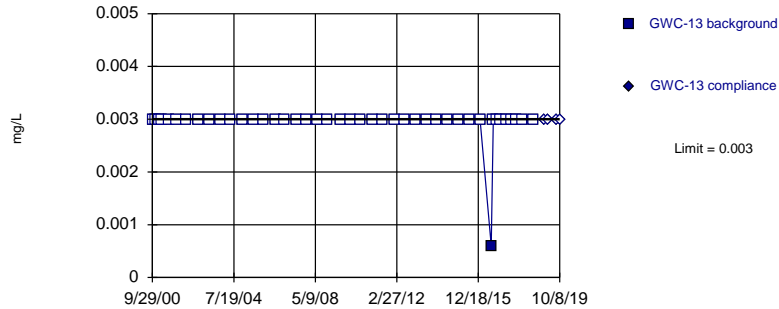


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 90.7% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:43 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Antimony Intrawell Non-parametric

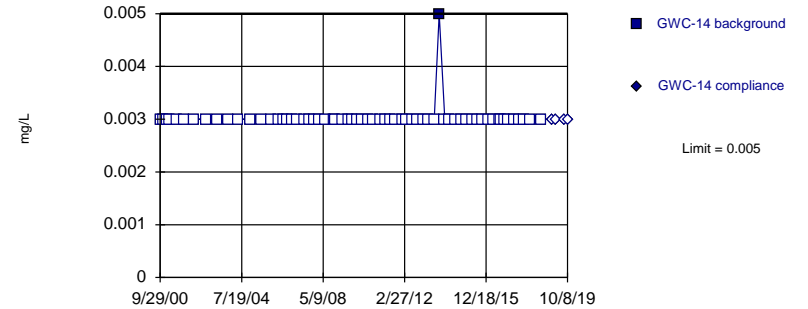


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 97.67% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:43 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Antimony Intrawell Non-parametric

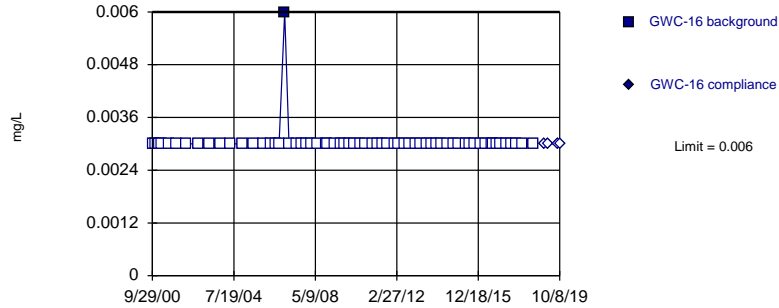


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 64 background values. 98.44% NDs. Well-constituent pair annual alpha = 0.0009462. Individual comparison alpha = 0.0004732 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:43 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Antimony Intrawell Non-parametric

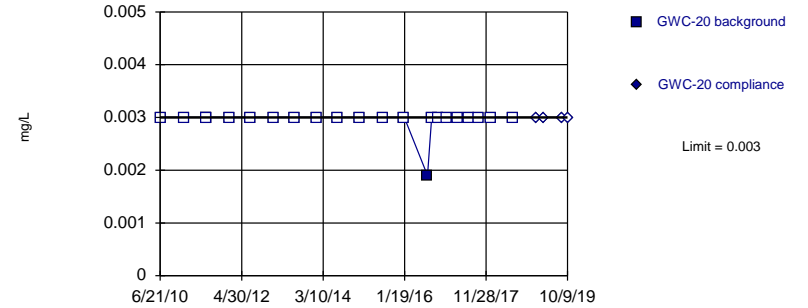


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 64 background values. 98.44% NDs. Well-constituent pair annual alpha = 0.0009462. Individual comparison alpha = 0.0004732 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:43 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Antimony Intrawell Non-parametric

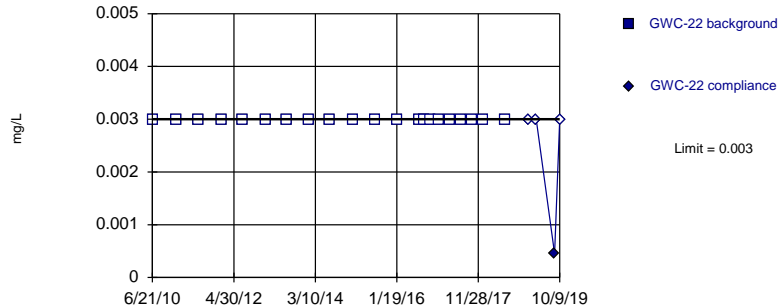


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 22 background values. 95.45% NDs. Well-constituent pair annual alpha = 0.007401. Individual comparison alpha = 0.003707 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:43 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Antimony Intrawell Non-parametric

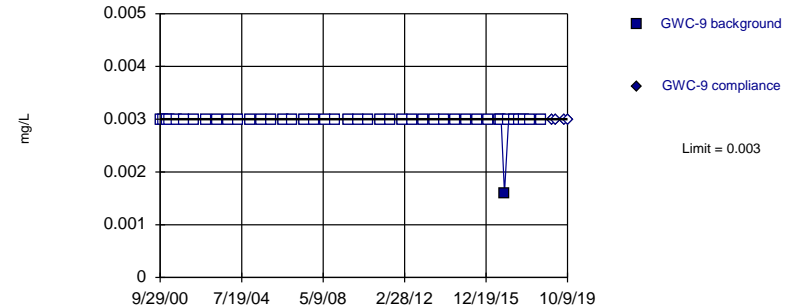


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 21 background values. 100% NDs. Well-constituent pair annual alpha = 0.007982. Individual comparison alpha = 0.003999 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:43 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Antimony Intrawell Non-parametric

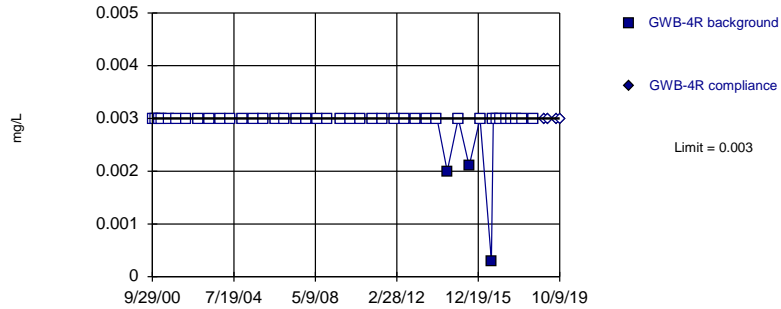


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 97.67% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:43 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Antimony
Intrawell Non-parametric

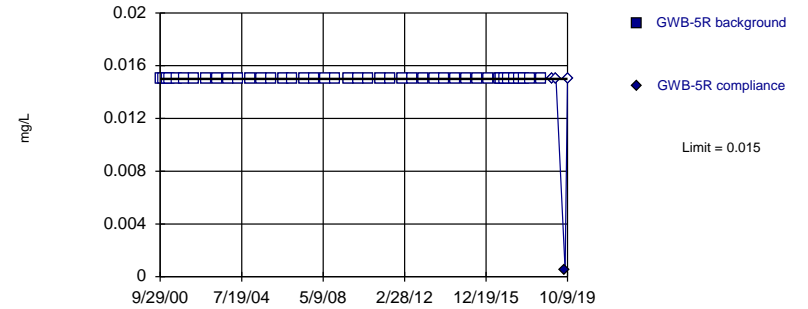


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 93.02% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:43 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Antimony
Intrawell Non-parametric

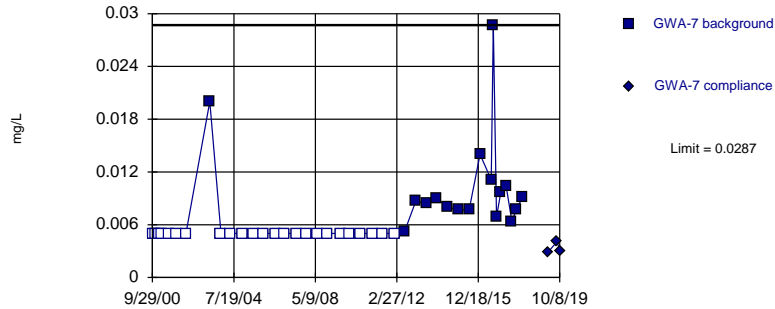


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 100% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:43 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic
Intrawell Non-parametric

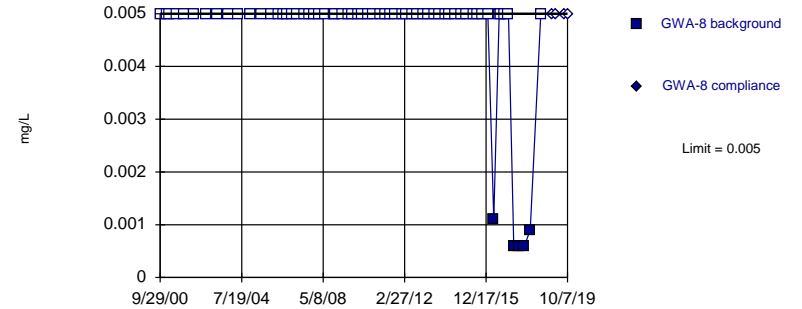


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 41 background values. 58.54% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:43 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic
Intrawell Non-parametric

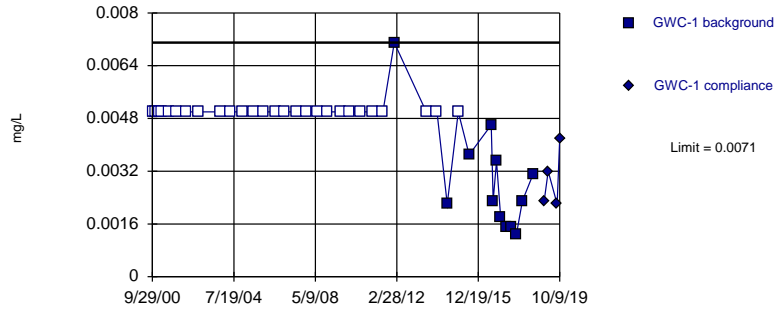


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 63 background values. 92.06% NDs. Well-constituent pair annual alpha = 0.0009737. Individual comparison alpha = 0.000487 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:43 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic
Intrawell Non-parametric

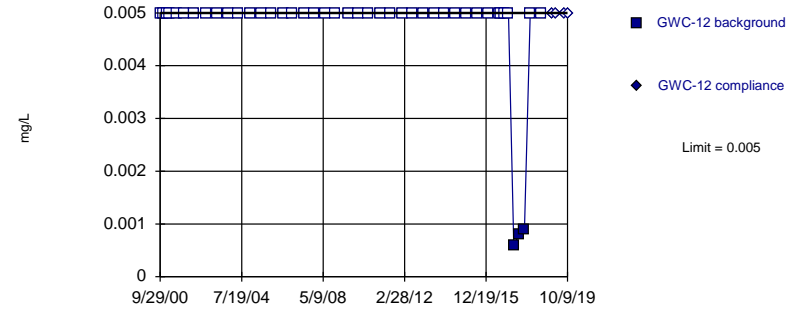


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 39 background values. 69.23% NDs. Well-constituent pair annual alpha = 0.002451. Individual comparison alpha = 0.001226 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:43 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic
Intrawell Non-parametric

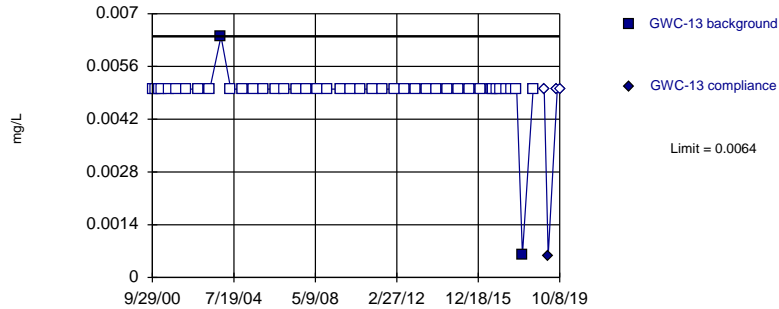


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 93.02% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:43 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic
Intrawell Non-parametric

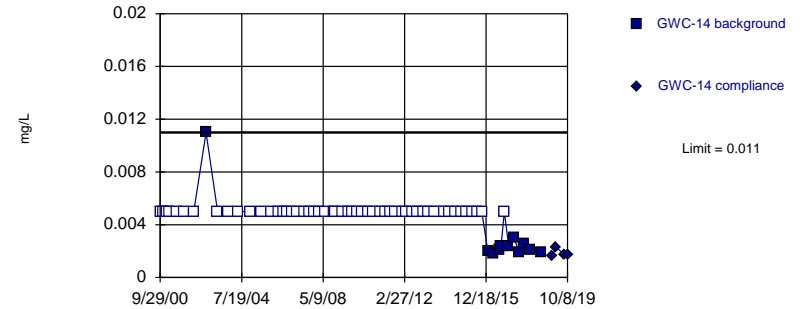


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 95.35% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:43 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic
Intrawell Non-parametric

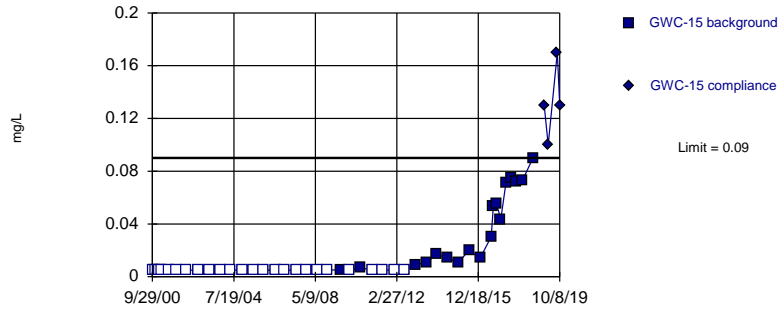


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 64 background values. 81.25% NDs. Well-constituent pair annual alpha = 0.0009462. Individual comparison alpha = 0.0004732 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:43 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit

Arsenic Intrawell Non-parametric

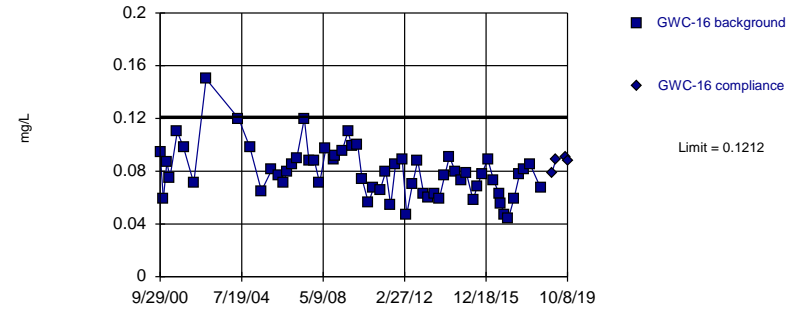


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 58.14% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:43 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic Intrawell Parametric

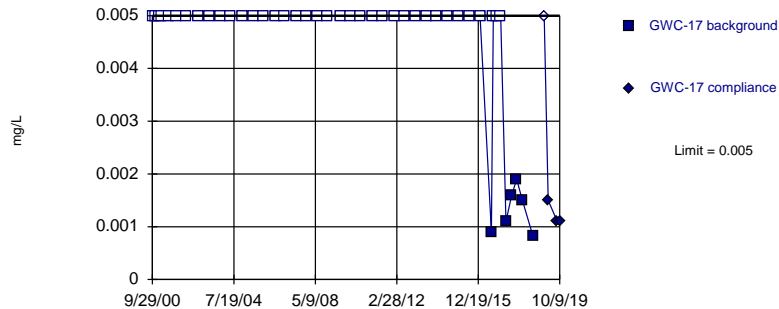


Background Data Summary: Mean=0.07945, Std. Dev.=0.01932, n=62. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9486, critical = 0.947. Kappa = 2.162 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:43 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic Intrawell Non-parametric

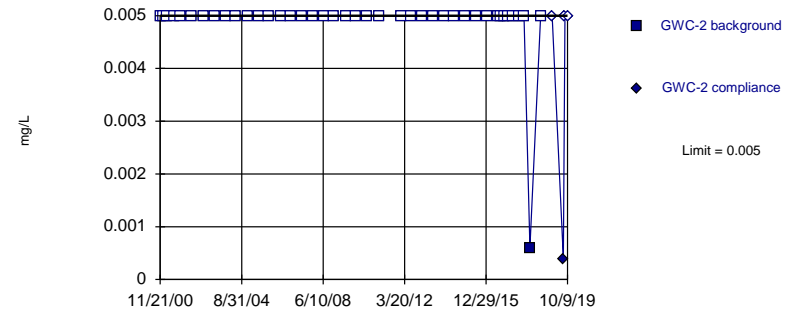


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 86.05% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:43 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic Intrawell Non-parametric

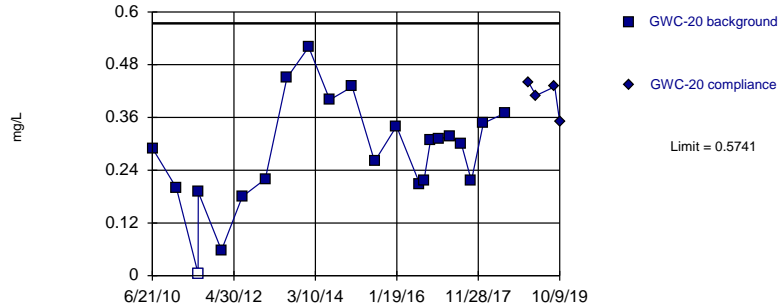


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 41 background values. 97.56% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:44 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic
Intrawell Parametric

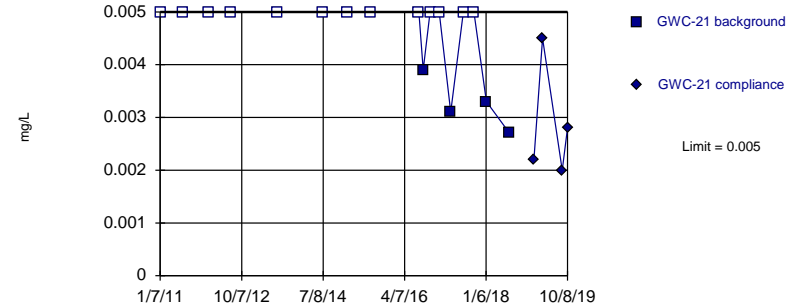


Background Data Summary: Mean=0.2788, Std. Dev.=0.1215, n=22, 4.545% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9753, critical = 0.878. Kappa = 2.431 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:44 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic
Intrawell Non-parametric

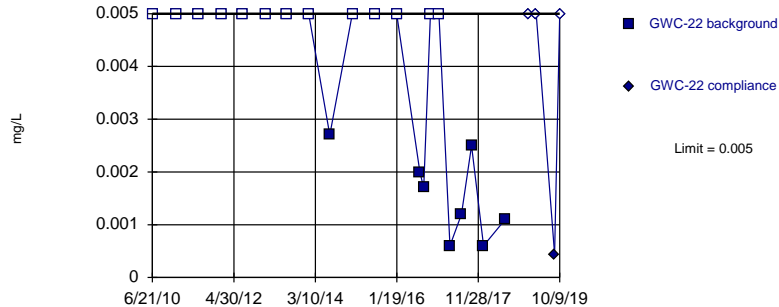


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 76.47% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:44 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic
Intrawell Non-parametric

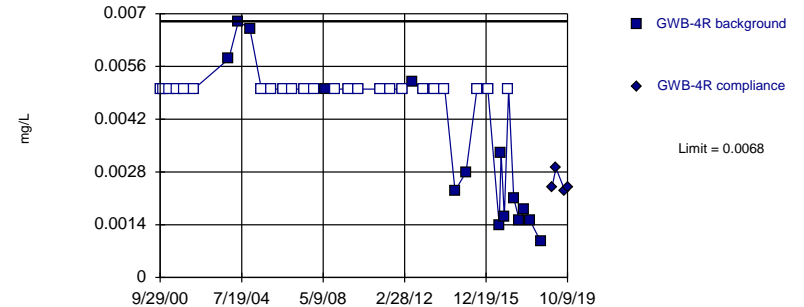


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 21 background values. 61.9% NDs. Well-constituent pair annual alpha = 0.007982. Individual comparison alpha = 0.003999 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:44 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic
Intrawell Non-parametric

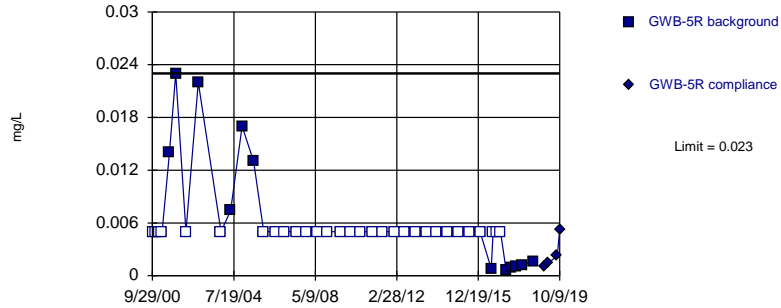


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 39 background values. 61.54% NDs. Well-constituent pair annual alpha = 0.002451. Individual comparison alpha = 0.001226 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:44 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic
Intrawell Non-parametric

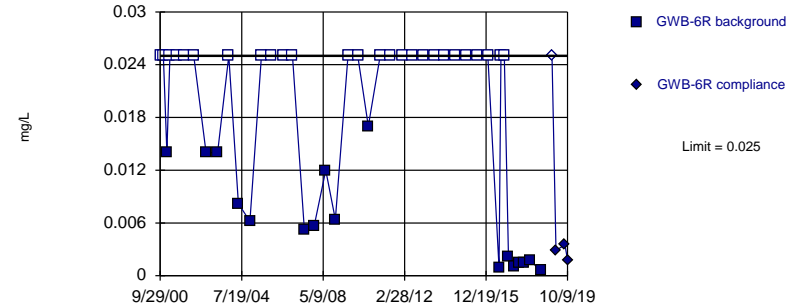


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 42 background values. 71.43% NDs. Well-constituent pair annual alpha = 0.002154. Individual comparison alpha = 0.001077 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:44 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic
Intrawell Non-parametric

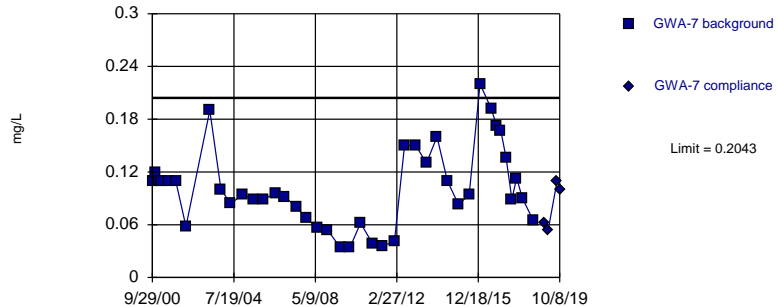


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 60.47% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:44 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium
Intrawell Parametric

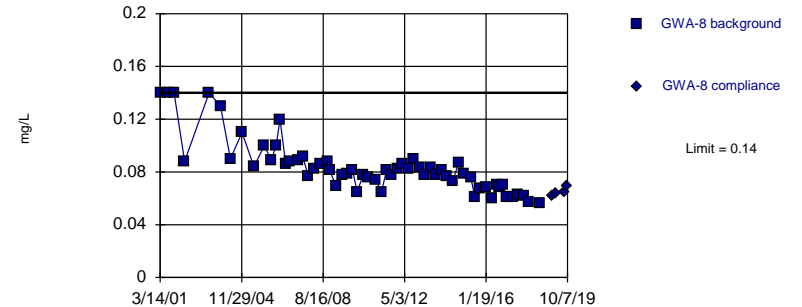


Background Data Summary: Mean=0.1021, Std. Dev.=0.04574, n=41. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9479, critical = 0.92. Kappa = 2.233 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:44 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium
Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 60 background values. Well-constituent pair annual alpha = 0.001056. Individual comparison alpha = 0.0005281 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:44 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium Intrawell Parametric

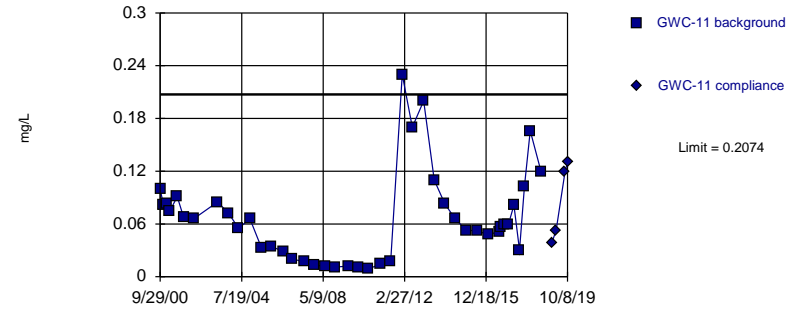


Background Data Summary (based on square root transformation): Mean=0.2379, Std. Dev.=0.04483, n=42.
 Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9416, critical = 0.922. Kappa = 2.228 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:44 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium Intrawell Parametric

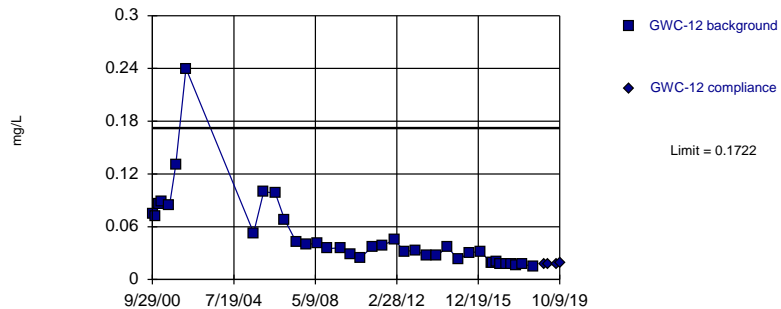


Background Data Summary (based on square root transformation): Mean=0.2407, Std. Dev.=0.09636, n=42.
 Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9464, critical = 0.922. Kappa = 2.228 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:44 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium Intrawell Parametric

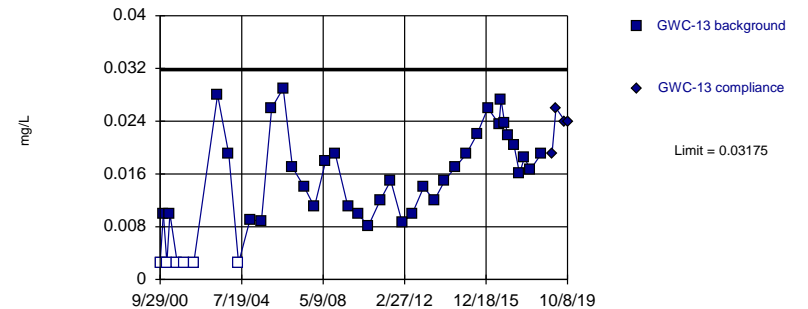


Background Data Summary (based on natural log transformation): Mean=-3.263, Std. Dev.=0.6683, n=38. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9444, critical = 0.916. Kappa = 2.25 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:44 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium Intrawell Parametric

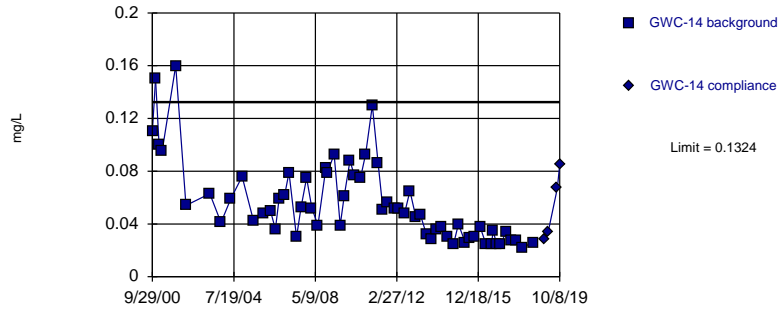


Background Data Summary: Mean=0.01478, Std. Dev.=0.00762, n=42, 14.29% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9482, critical = 0.922. Kappa = 2.228 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:44 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium
Intrawell Parametric

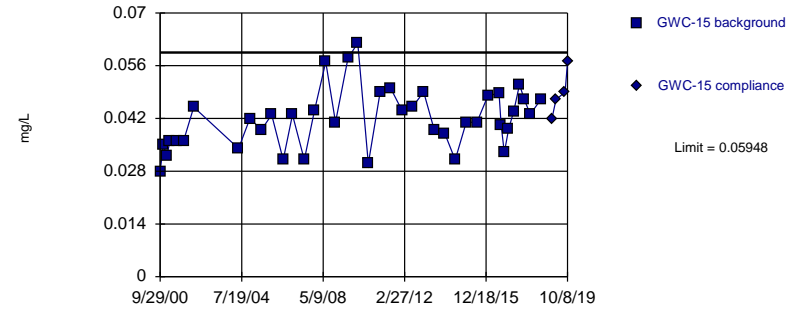


Background Data Summary (based on cube root transformation): Mean=0.3719, Std. Dev.=0.06371, n=62. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9525, critical = 0.947. Kappa = 2.162 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:44 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium
Intrawell Parametric

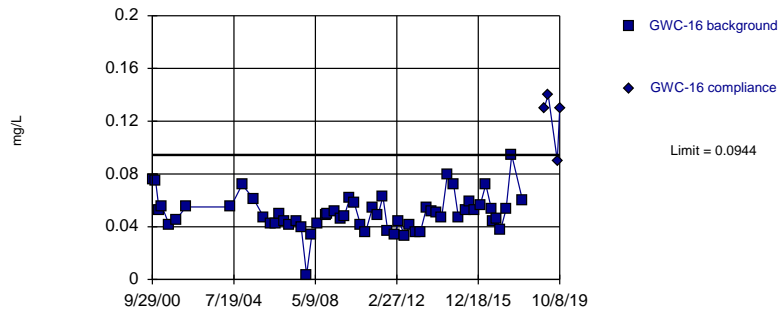


Background Data Summary: Mean=0.04178, Std. Dev.=0.00791, n=40. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.969, critical = 0.919. Kappa = 2.238 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:45 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit

Barium
Intrawell Non-parametric

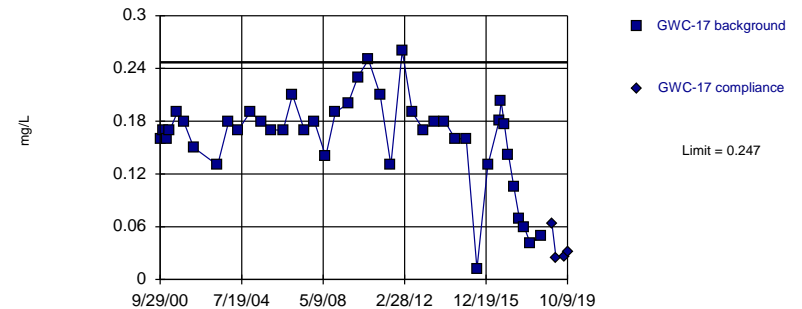


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 59 background values. Well-constituent pair annual alpha = 0.001101. Individual comparison alpha = 0.0005506 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:45 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium
Intrawell Parametric

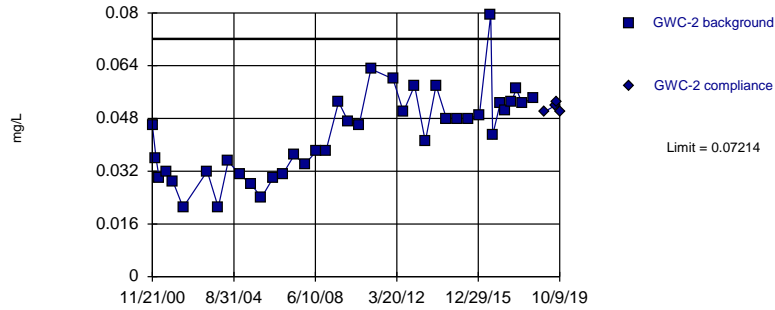


Background Data Summary (based on square transformation): Mean=0.02849, Std. Dev.=0.01459, n=42. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9442, critical = 0.922. Kappa = 2.228 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:45 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium Intrawell Parametric

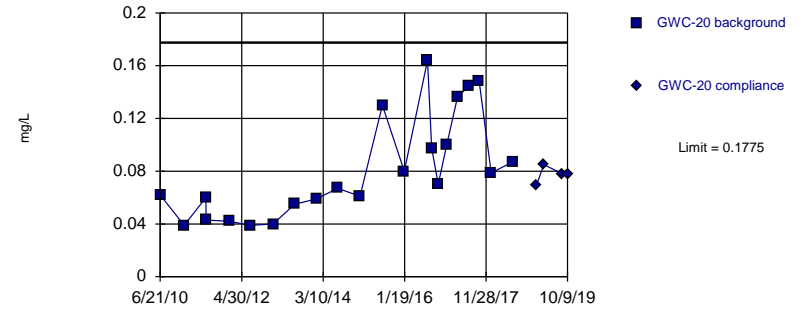


Background Data Summary: Mean=0.04318, Std. Dev.=0.0129, n=39. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9652, critical = 0.917. Kappa = 2.244 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:45 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium Intrawell Parametric

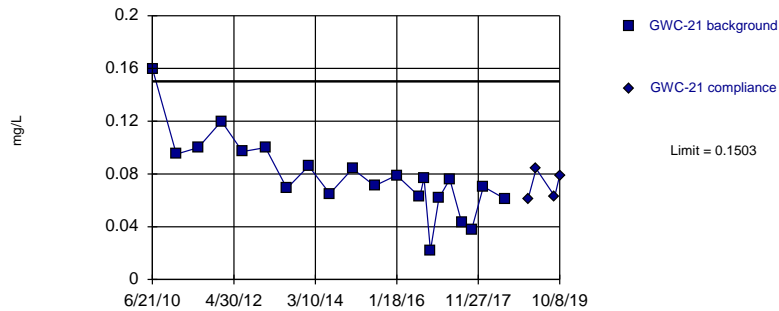


Background Data Summary: Mean=0.08198, Std. Dev.=0.03928, n=22. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8843, critical = 0.878. Kappa = 2.431 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:45 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium Intrawell Parametric

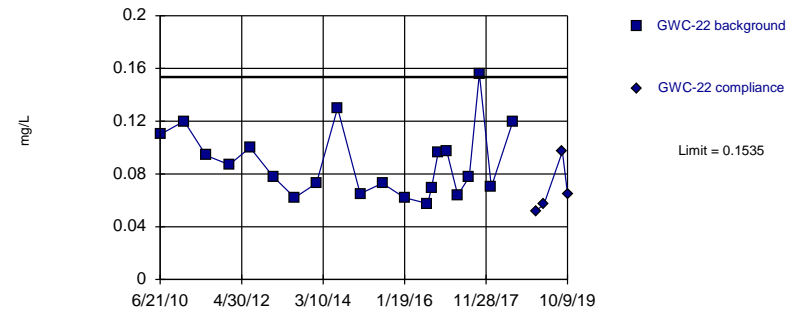


Background Data Summary: Mean=0.07795, Std. Dev.=0.0295, n=21. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9451, critical = 0.873. Kappa = 2.452 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:45 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium Intrawell Parametric

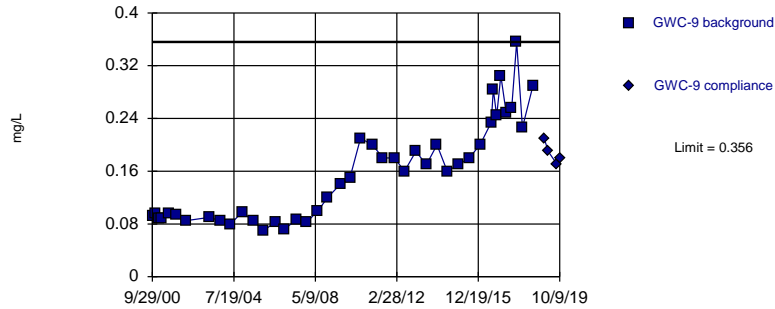


Background Data Summary: Mean=0.08871, Std. Dev.=0.02642, n=21. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9073, critical = 0.873. Kappa = 2.452 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:45 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium
Intrawell Non-parametric

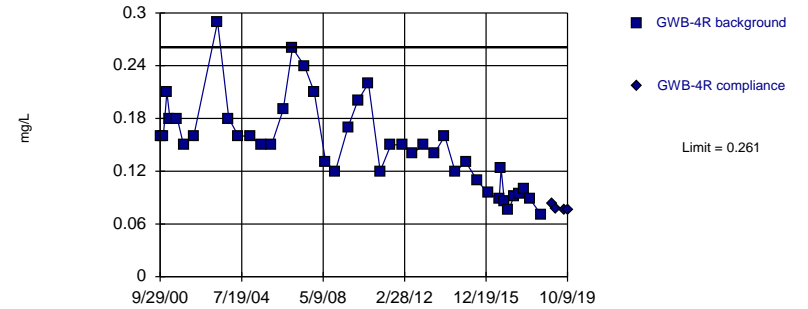


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 42 background values. Well-constituent pair annual alpha = 0.002154. Individual comparison alpha = 0.001077 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:45 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium
Intradwell Parametric

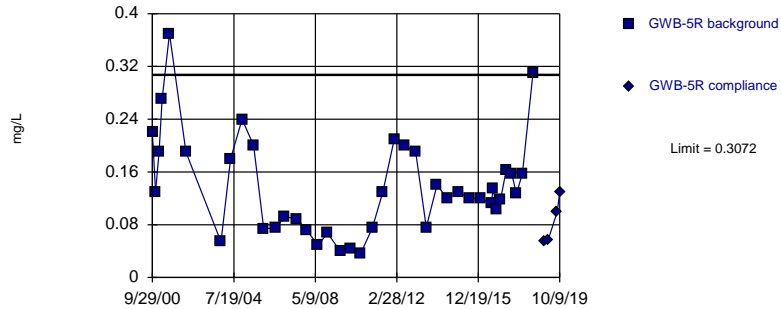


Background Data Summary: Mean=0.1503, Std. Dev.=0.04972, n=42. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9535, critical = 0.922. Kappa = 2.228 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:45 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium
Intradwell Parametric

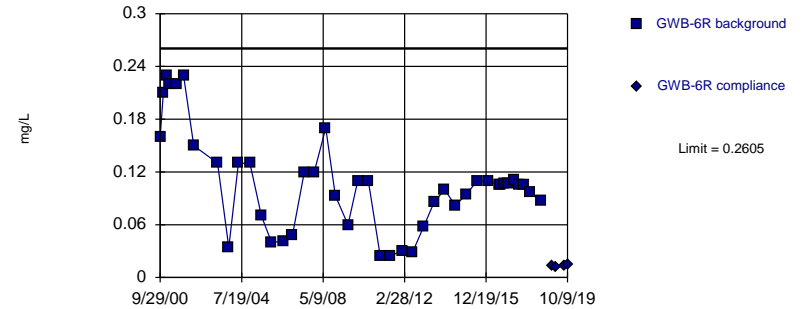


Background Data Summary: Mean=0.1394, Std. Dev.=0.07497, n=40. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.93, critical = 0.919. Kappa = 2.238 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:45 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium
Intradwell Parametric

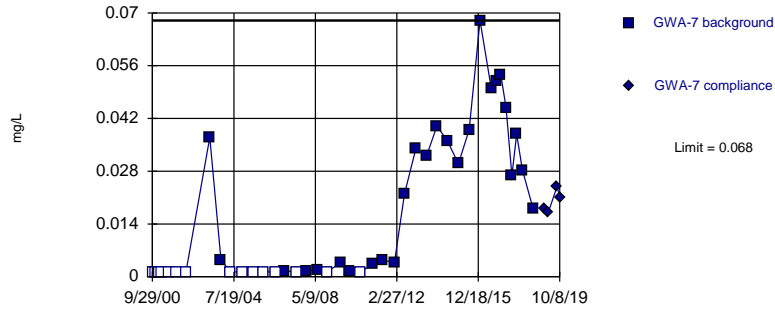


Background Data Summary (based on square root transformation): Mean=0.3159, Std. Dev.=0.0873, n=42. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9364, critical = 0.922. Kappa = 2.228 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:45 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium
Intrawell Non-parametric

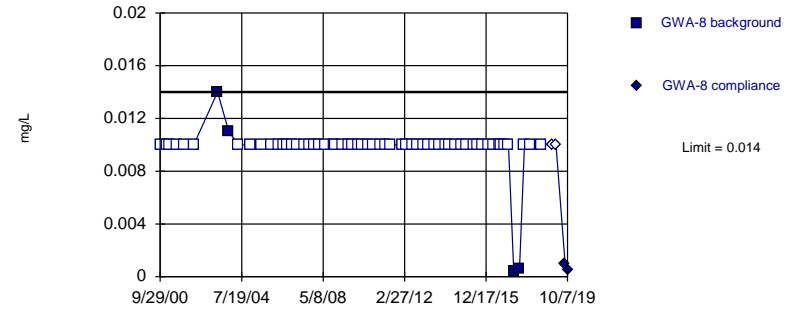


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 41 background values. 36.59% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:45 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium
Intrawell Non-parametric

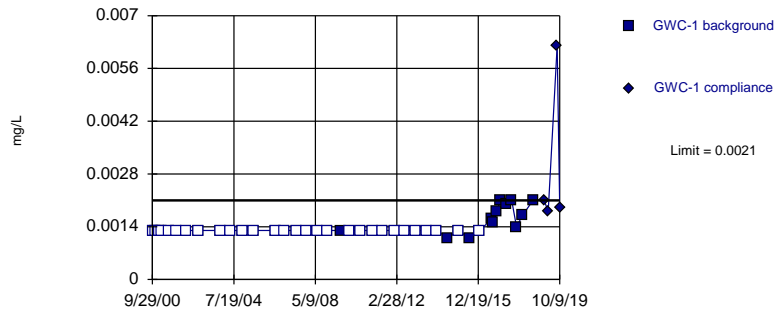


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 61 background values. 93.44% NDs. Well-constituent pair annual alpha = 0.001029. Individual comparison alpha = 0.0005144 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:45 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium
Intrawell Non-parametric

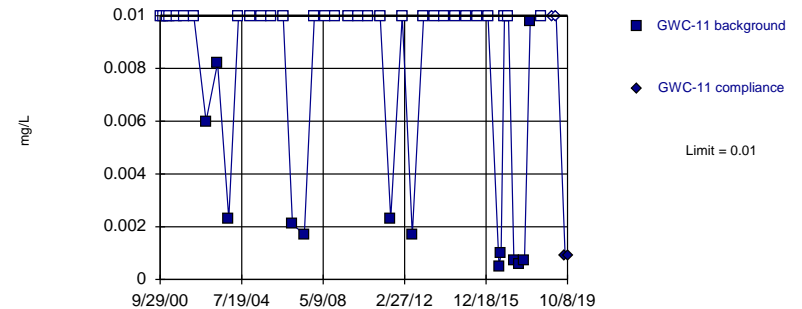


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 41 background values. 70.73% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:45 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium
Intrawell Non-parametric

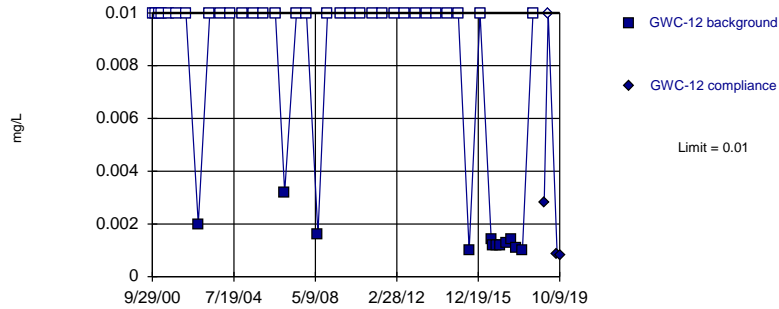


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 69.77% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:45 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium Intrawell Non-parametric

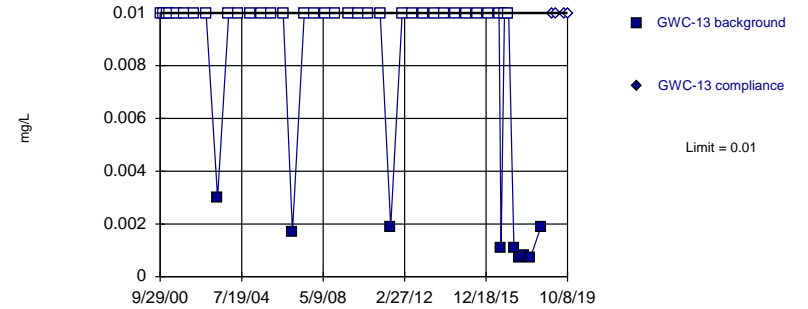


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 72.09% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:46 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium Intrawell Non-parametric

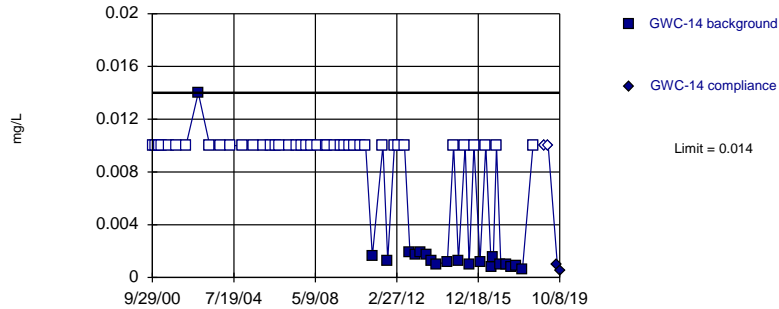


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 79.07% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:46 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium Intrawell Non-parametric

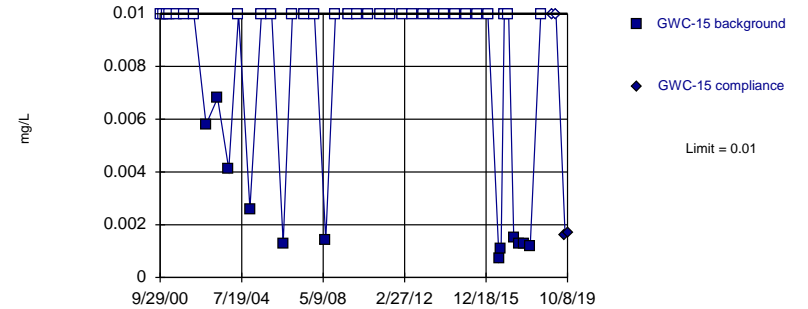


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 61 background values. 67.21% NDs. Well-constituent pair annual alpha = 0.001029. Individual comparison alpha = 0.0005144 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:46 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium Intrawell Non-parametric

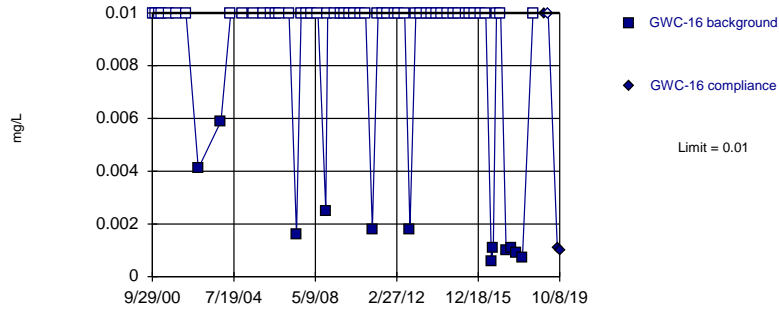


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 72.09% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:46 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium Intrawell Non-parametric

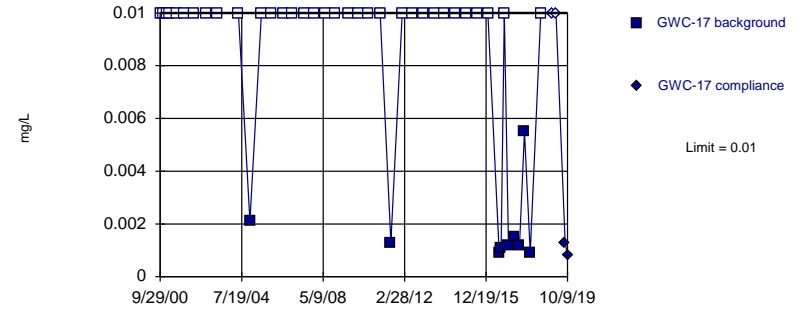


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 62 background values. 80.65% NDs. Well-constituent pair annual alpha = 0.001001. Individual comparison alpha = 0.0005007 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:46 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium Intrawell Non-parametric

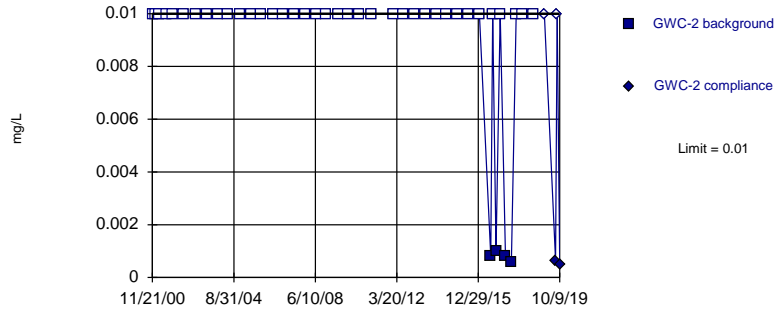


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 42 background values. 78.57% NDs. Well-constituent pair annual alpha = 0.002154. Individual comparison alpha = 0.001077 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:46 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium Intrawell Non-parametric

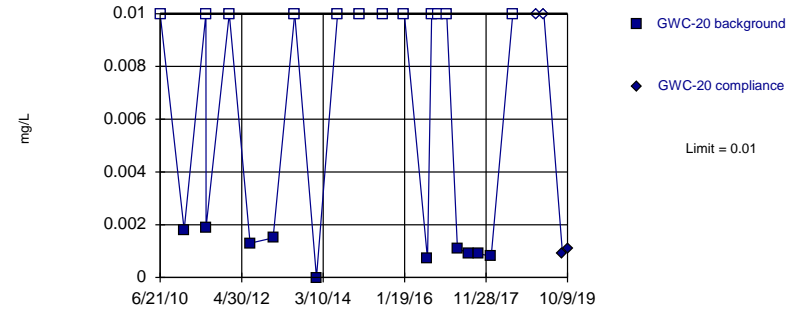


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 41 background values. 90.24% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:46 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium Intrawell Non-parametric

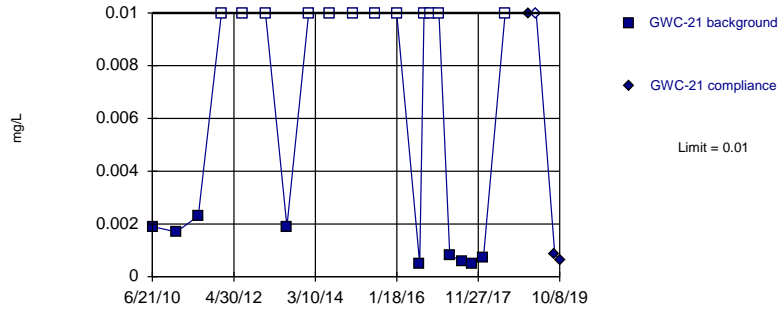


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 22 background values. 54.55% NDs. Well-constituent pair annual alpha = 0.007401. Individual comparison alpha = 0.003707 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:46 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium
Intrawell Non-parametric

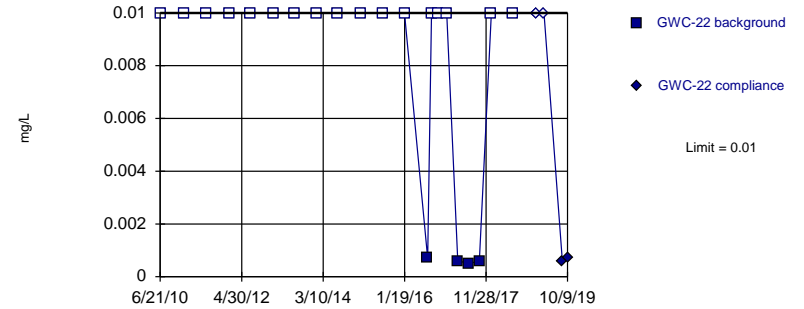


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 21 background values. 57.14% NDs. Well-constituent pair annual alpha = 0.007982. Individual comparison alpha = 0.003999 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:46 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium
Intrawell Non-parametric

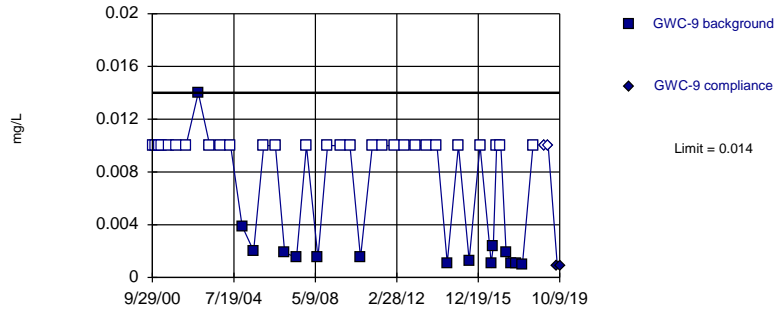


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 21 background values. 80.95% NDs. Well-constituent pair annual alpha = 0.007982. Individual comparison alpha = 0.003999 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:46 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium
Intrawell Non-parametric

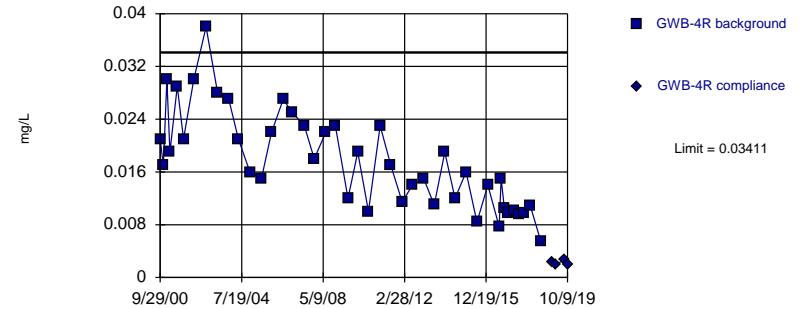


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 65.12% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:46 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium
Intrawell Parametric

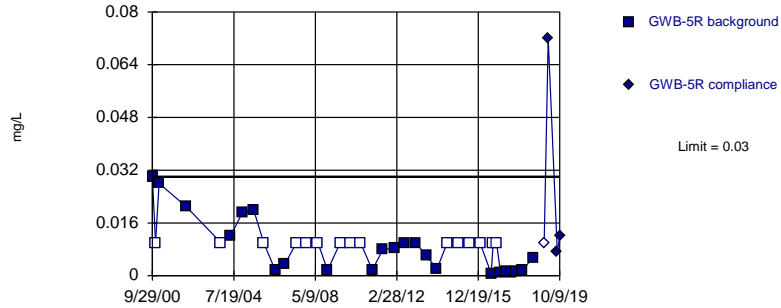


Background Data Summary: Mean=0.01774, Std. Dev.=0.007368, n=43. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9562, critical = 0.923. Kappa = 2.222 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:46 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium
Intrawell Non-parametric

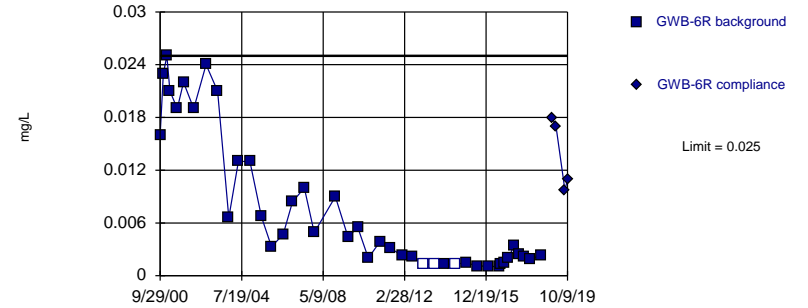


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 38 background values. 39.47% NDs. Well-constituent pair annual alpha = 0.002586. Individual comparison alpha = 0.001294 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:46 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium
Intrawell Non-parametric

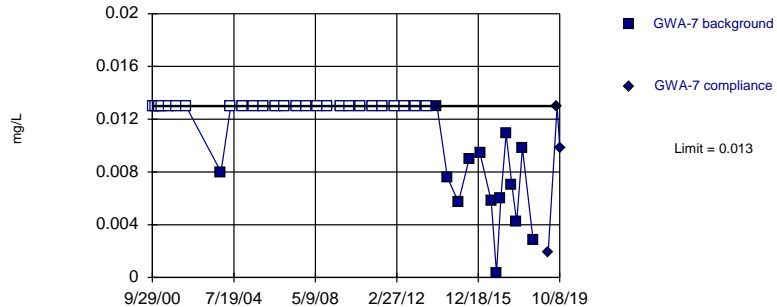


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 42 background values. 7.143% NDs. Well-constituent pair annual alpha = 0.002154. Individual comparison alpha = 0.001077 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:46 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead
Intrawell Non-parametric

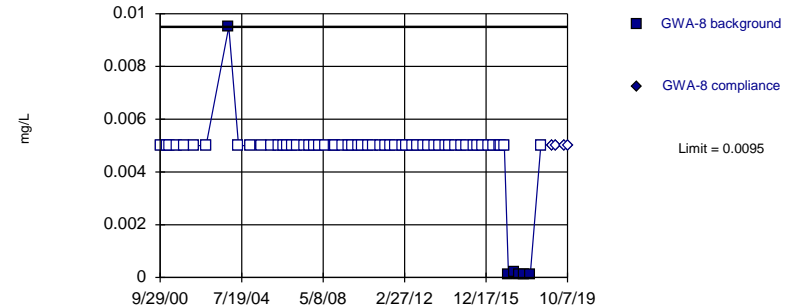


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 40 background values. 65% NDs. Well-constituent pair annual alpha = 0.002316. Individual comparison alpha = 0.001159 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:46 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead
Intrawell Non-parametric

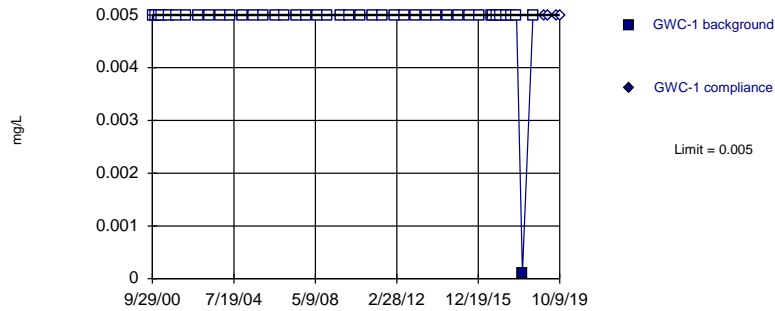


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 62 background values. 90.32% NDs. Well-constituent pair annual alpha = 0.001001. Individual comparison alpha = 0.0005007 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:46 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

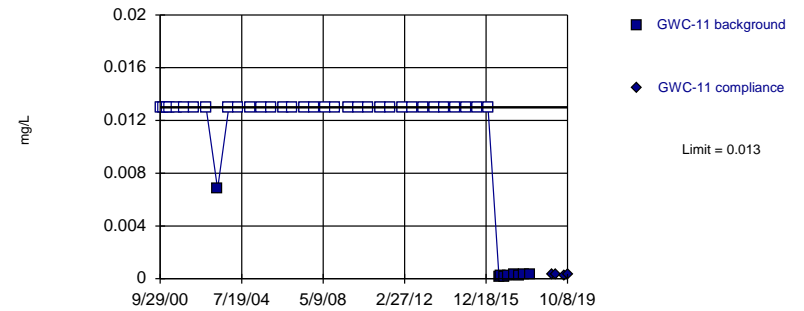


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 97.67% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:47 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

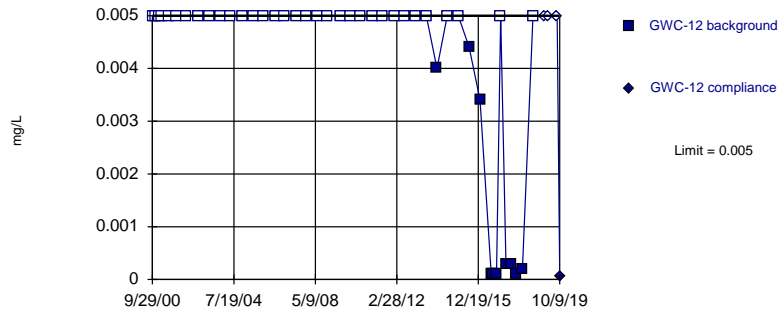


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 42 background values. 78.57% NDs. Well-constituent pair annual alpha = 0.002154. Individual comparison alpha = 0.001077 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:47 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

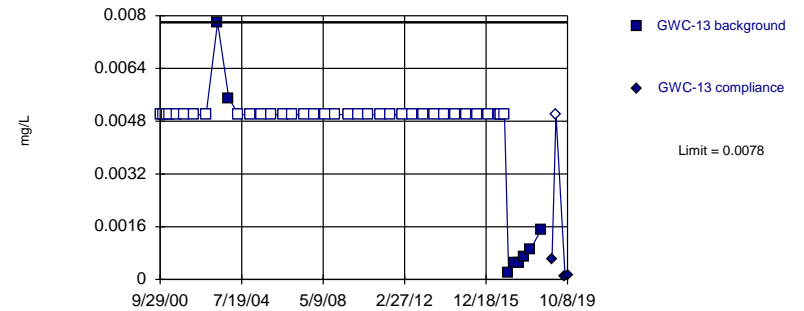


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 76.74% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:47 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

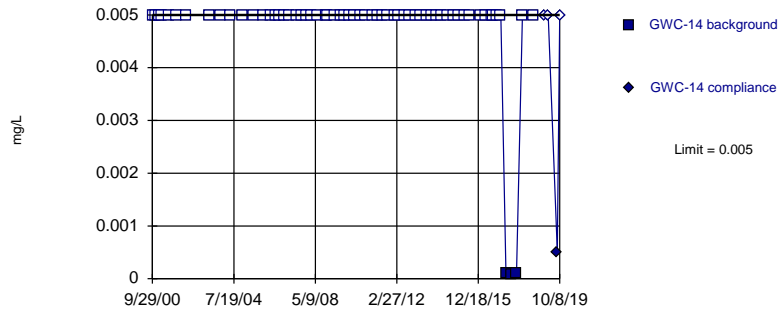


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 81.4% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:47 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

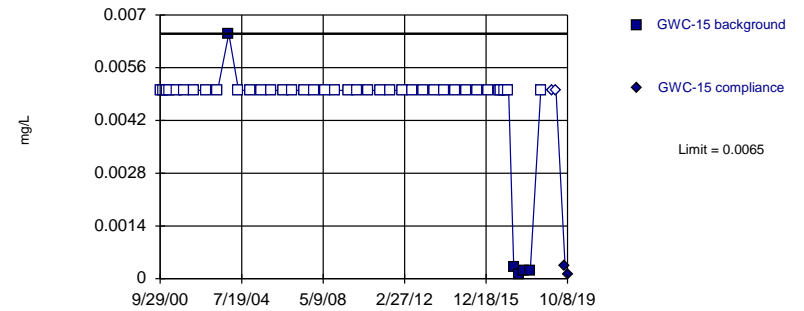


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 62 background values. 95.16% NDs. Well-constituent pair annual alpha = 0.001001. Individual comparison alpha = 0.0005007 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:47 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

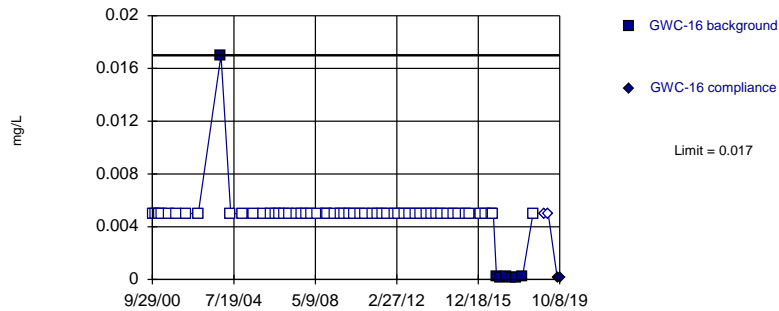


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 88.37% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:47 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

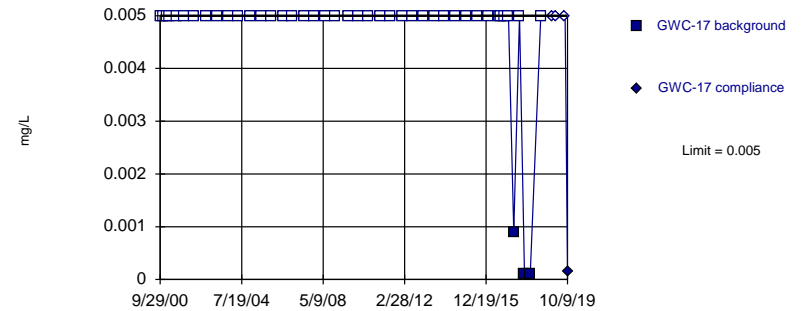


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 62 background values. 88.71% NDs. Well-constituent pair annual alpha = 0.001001. Individual comparison alpha = 0.0005007 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:47 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

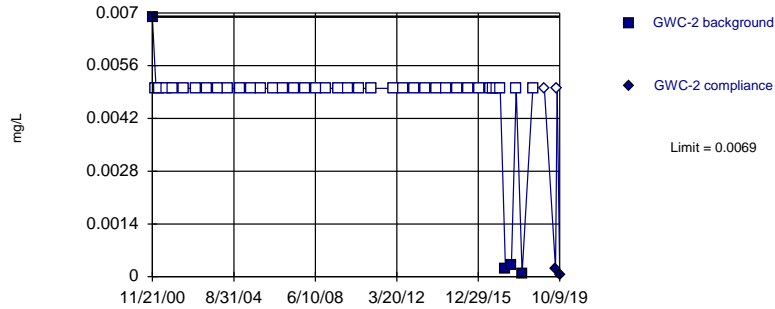


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 93.02% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:47 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

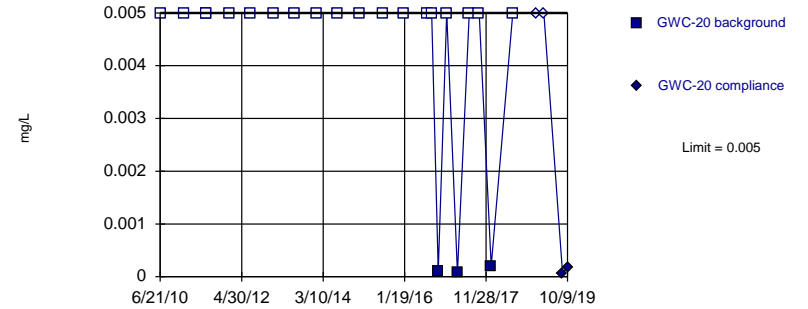


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 41 background values. 90.24% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:47 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

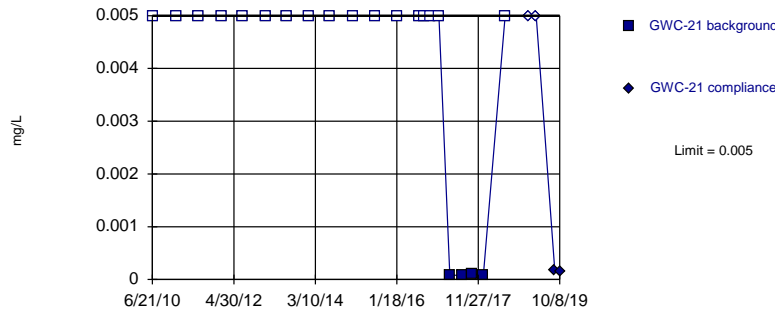


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 22 background values. 86.36% NDs. Well-constituent pair annual alpha = 0.007401. Individual comparison alpha = 0.003707 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:47 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

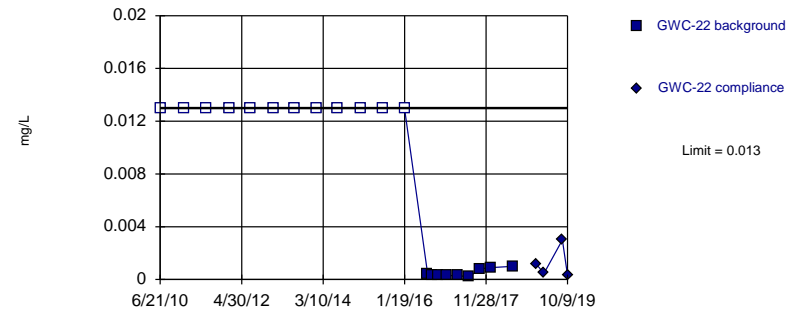


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 21 background values. 80.95% NDs. Well-constituent pair annual alpha = 0.007982. Individual comparison alpha = 0.003999 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:47 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

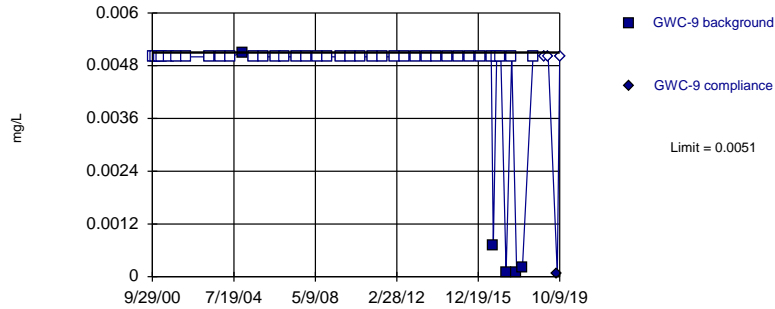


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 21 background values. 57.14% NDs. Well-constituent pair annual alpha = 0.007982. Individual comparison alpha = 0.003999 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:47 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

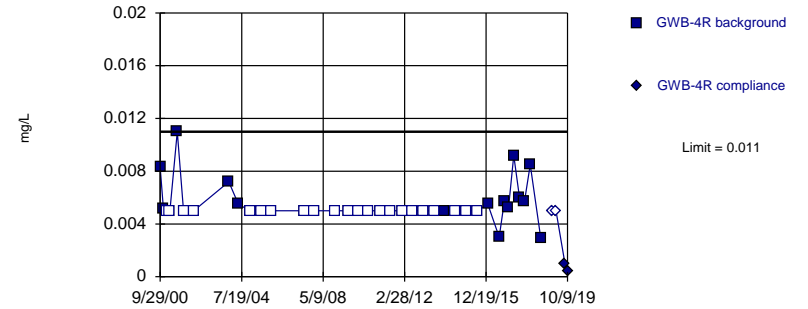


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 42 background values. 88.1% NDs. Well-constituent pair annual alpha = 0.002154. Individual comparison alpha = 0.001077 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:47 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

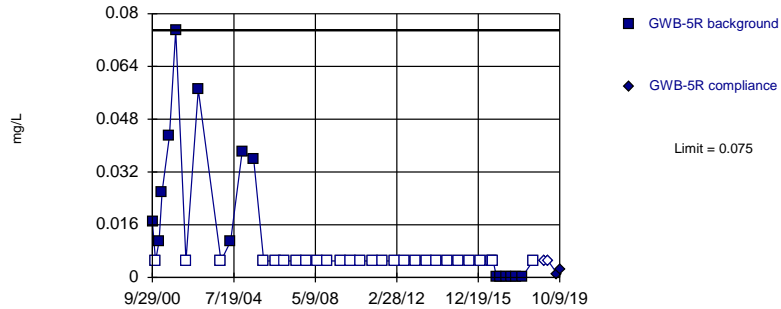


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 37 background values. 59.46% NDs. Well-constituent pair annual alpha = 0.002721. Individual comparison alpha = 0.001361 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:47 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

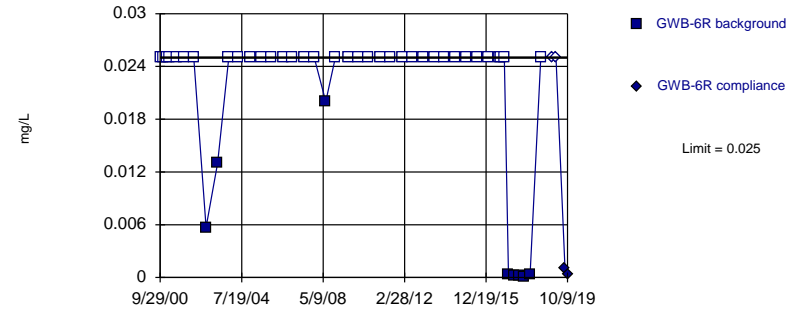


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 42 background values. 64.29% NDs. Well-constituent pair annual alpha = 0.002154. Individual comparison alpha = 0.001077 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:47 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

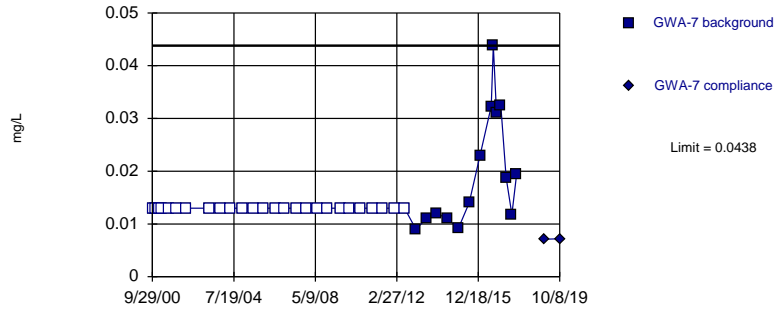


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 81.4% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:47 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium
Intrawell Non-parametric

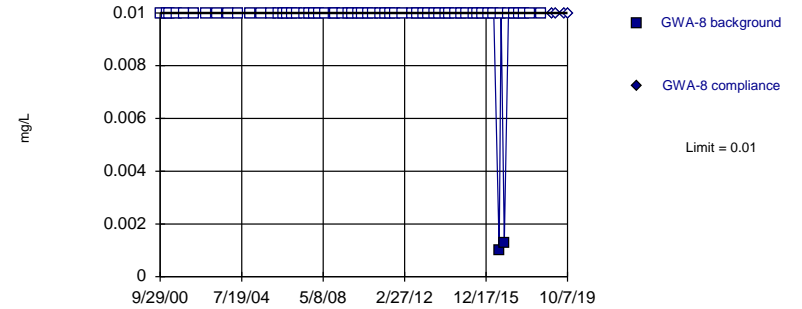


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 40 background values. 65% NDs. Well-constituent pair annual alpha = 0.002316. Individual comparison alpha = 0.001159 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:48 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium
Intrawell Non-parametric

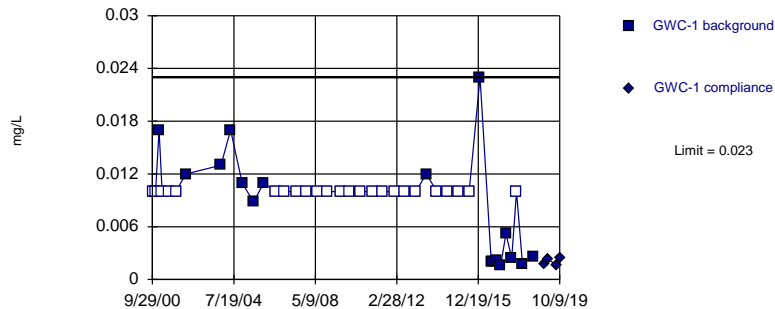


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 62 background values. 96.77% NDs. Well-constituent pair annual alpha = 0.001001. Individual comparison alpha = 0.0005007 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:48 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium
Intrawell Non-parametric

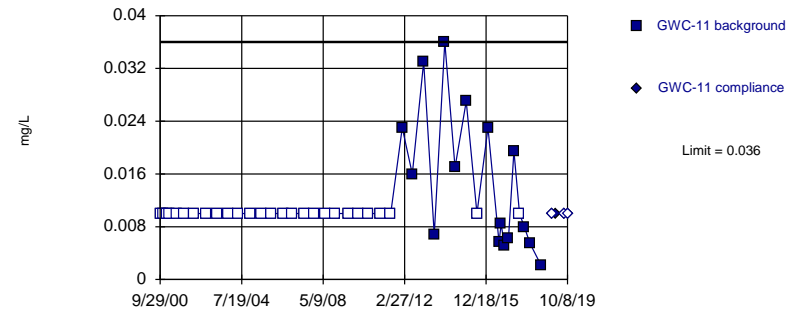


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 41 background values. 58.54% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:48 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium
Intrawell Non-parametric

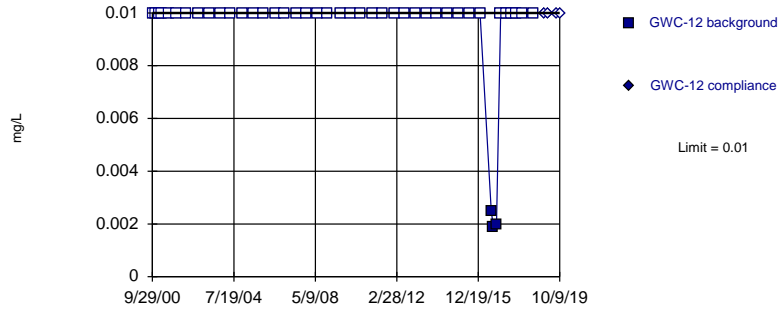


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 62.79% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:48 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium
Intrawell Non-parametric

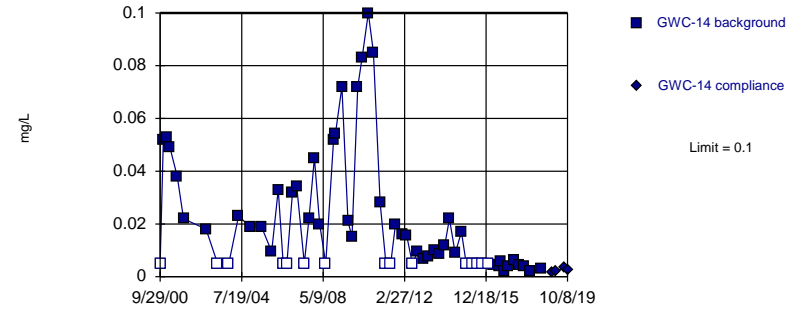


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 93.02% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:48 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium
Intrawell Non-parametric

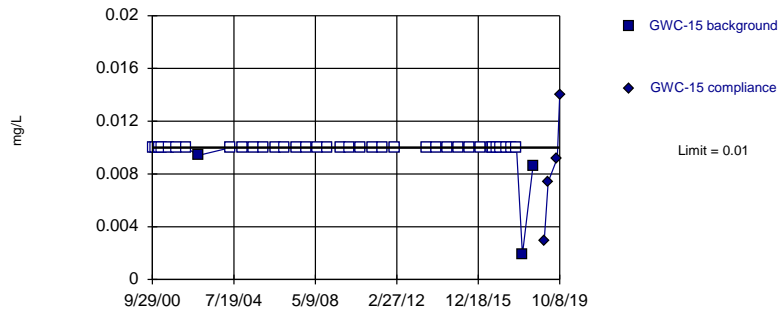


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 63 background values. 23.81% NDs. Well-constituent pair annual alpha = 0.0009737. Individual comparison alpha = 0.000487 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:48 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit

Selenium
Intrawell Non-parametric

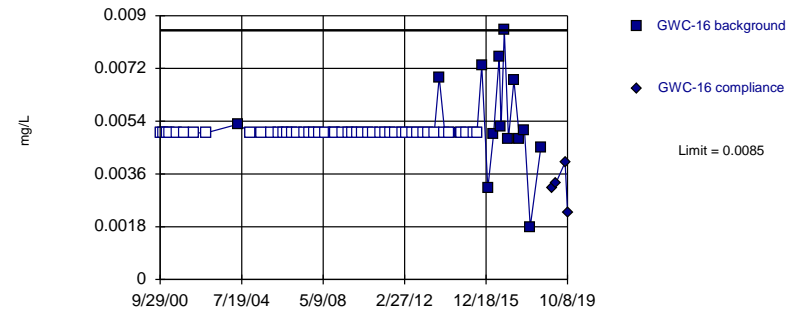


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 39 background values. 92.31% NDs. Well-constituent pair annual alpha = 0.002451. Individual comparison alpha = 0.001226 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:48 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium
Intrawell Non-parametric

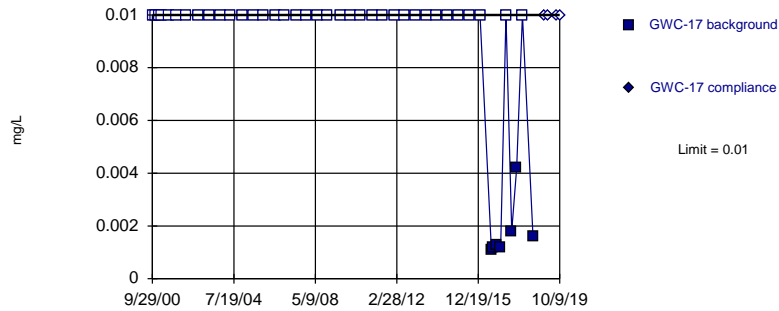


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 62 background values. 75.81% NDs. Well-constituent pair annual alpha = 0.001001. Individual comparison alpha = 0.0005007 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:48 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium Intrawell Non-parametric

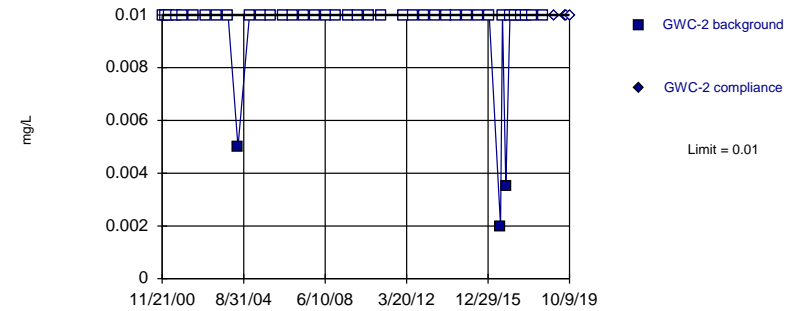


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 83.72% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:48 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium Intrawell Non-parametric

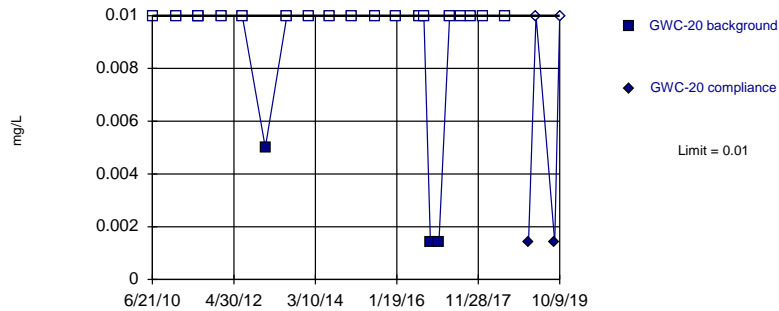


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 41 background values. 92.68% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:48 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium Intrawell Non-parametric

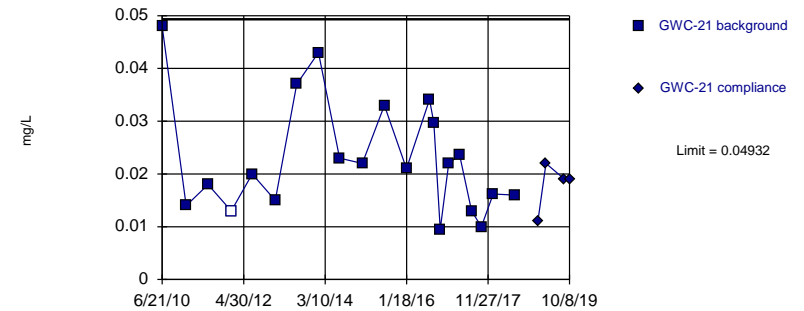


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 22 background values. 86.36% NDs. Well-constituent pair annual alpha = 0.007401. Individual comparison alpha = 0.003707 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:48 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium Intrawell Parametric

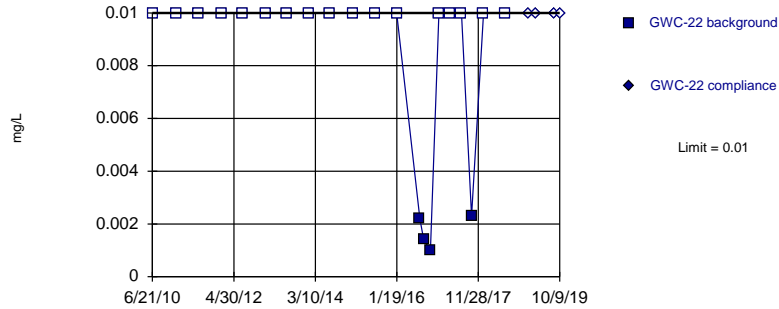


Background Data Summary: Mean=0.02291, Std. Dev.=0.01077, n=21, 4.762% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9134, critical = 0.873. Kappa = 2.452 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:48 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium
Intrawell Non-parametric

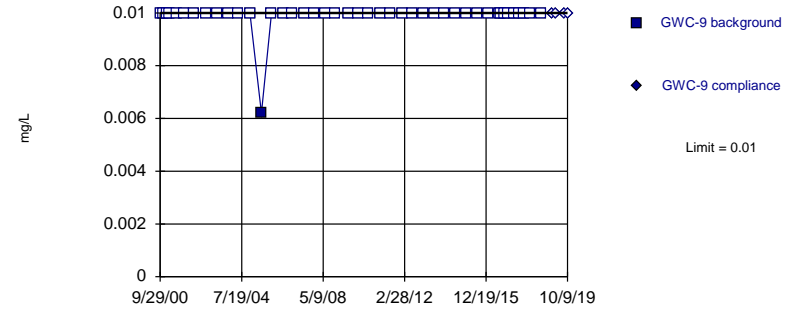


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 21 background values. 80.95% NDs. Well-constituent pair annual alpha = 0.007982. Individual comparison alpha = 0.003999 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:48 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium
Intrawell Non-parametric

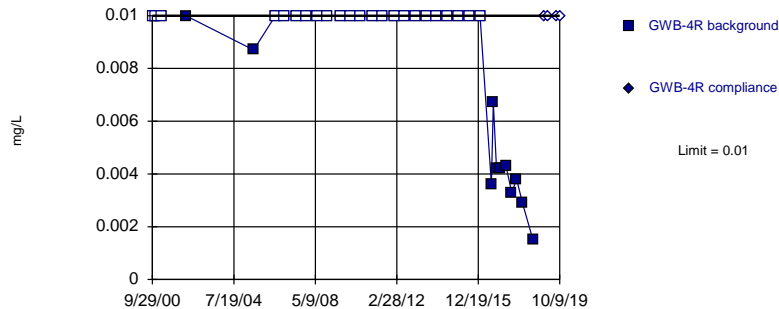


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 97.67% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:48 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium
Intrawell Non-parametric

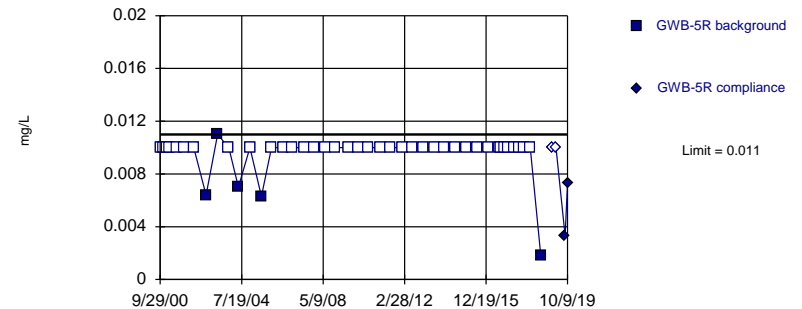


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 67.65% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:48 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium
Intrawell Non-parametric

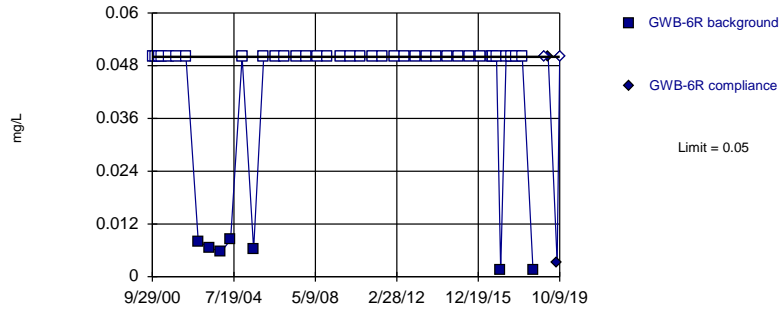


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 88.37% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:48 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium Intrawell Non-parametric

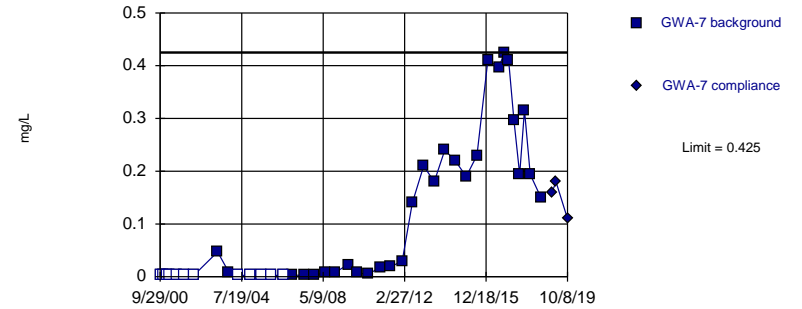


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 83.72% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:48 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium Intrawell Non-parametric

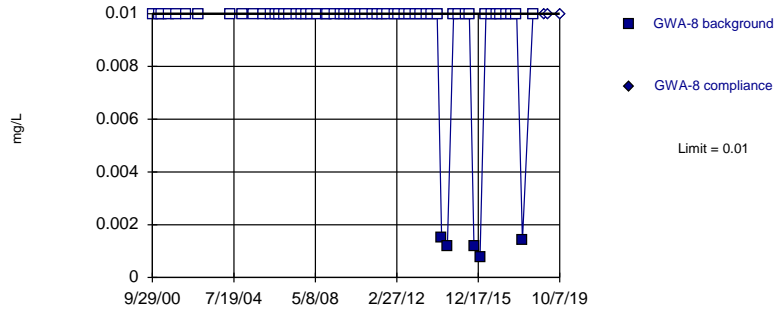


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 41 background values. 29.27% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:49 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium Intrawell Non-parametric

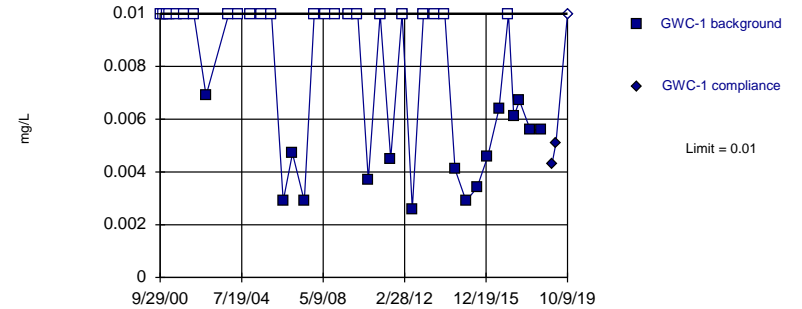


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 60 background values. 91.67% NDs. Well-constituent pair annual alpha = 0.001056. Individual comparison alpha = 0.0005281 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:49 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium Intrawell Non-parametric

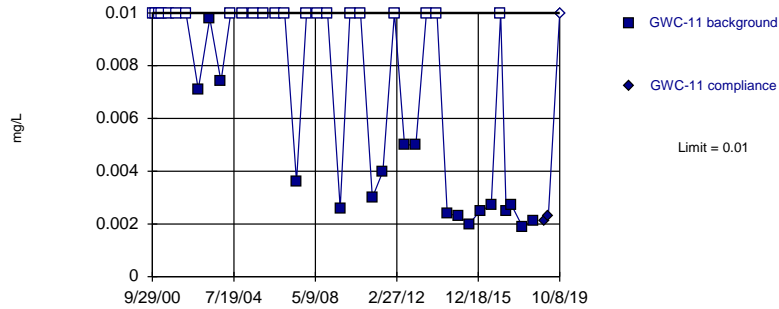


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 39 background values. 58.97% NDs. Well-constituent pair annual alpha = 0.002451. Individual comparison alpha = 0.001226 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:49 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium
Intrawell Non-parametric

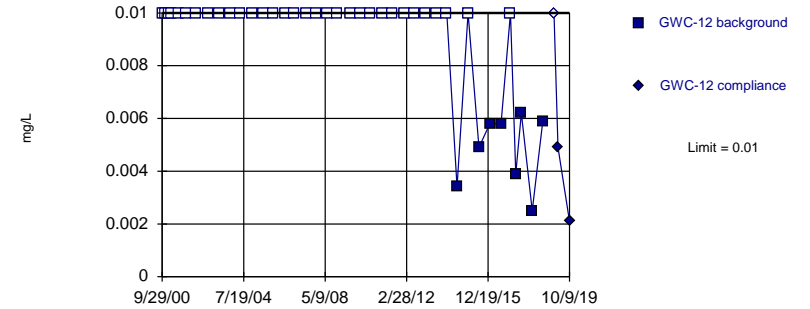


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 40 background values. 55% NDs. Well-constituent pair annual alpha = 0.002316. Individual comparison alpha = 0.001159 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:49 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium
Intrawell Non-parametric

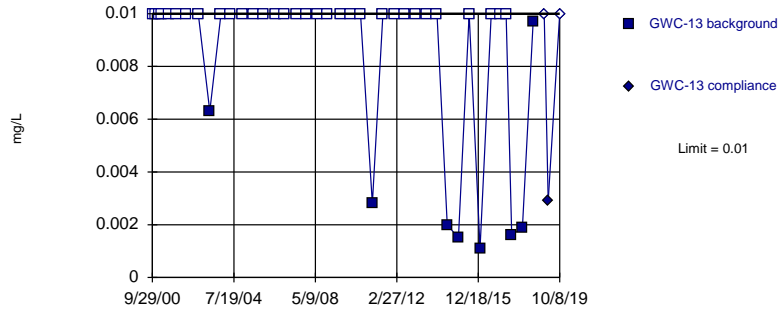


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 40 background values. 80% NDs. Well-constituent pair annual alpha = 0.002316. Individual comparison alpha = 0.001159 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:49 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium
Intrawell Non-parametric

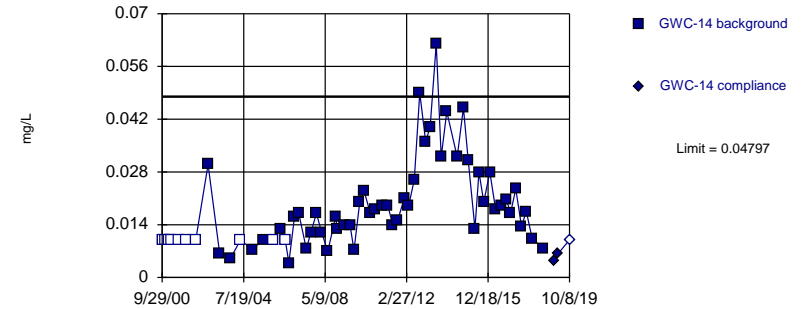


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 40 background values. 80% NDs. Well-constituent pair annual alpha = 0.002316. Individual comparison alpha = 0.001159 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:49 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium
Intrawell Parametric

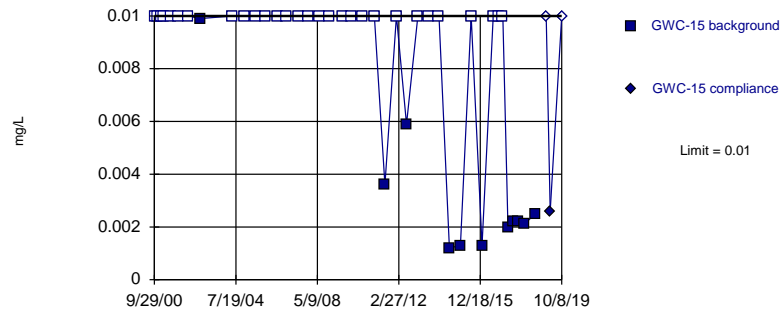


Background Data Summary (based on cube root transformation) (after Kaplan-Meier Adjustment): Mean=0.2392, Std. Dev.=0.05743, n=62, 16.13% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9619, critical = 0.947. Kappa = 2.162 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:49 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium Intrawell Non-parametric

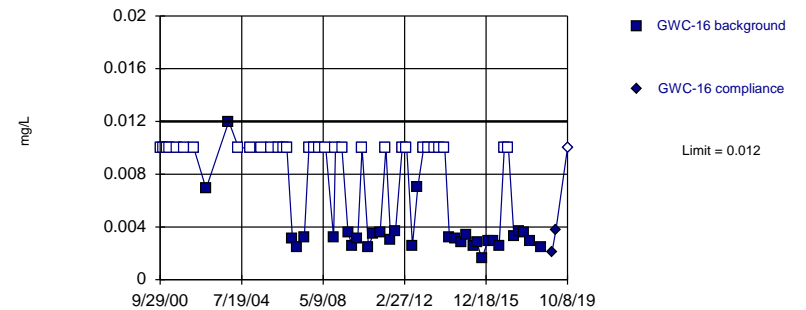


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 40 background values. 72.5% NDs. Well-constituent pair annual alpha = 0.002316. Individual comparison alpha = 0.001159 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:49 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium Intrawell Non-parametric

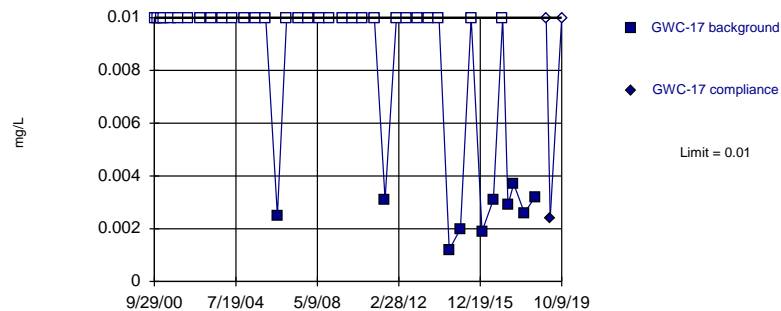


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 62 background values. 50% NDs. Well-constituent pair annual alpha = 0.001001. Individual comparison alpha = 0.0005007 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:49 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium Intrawell Non-parametric

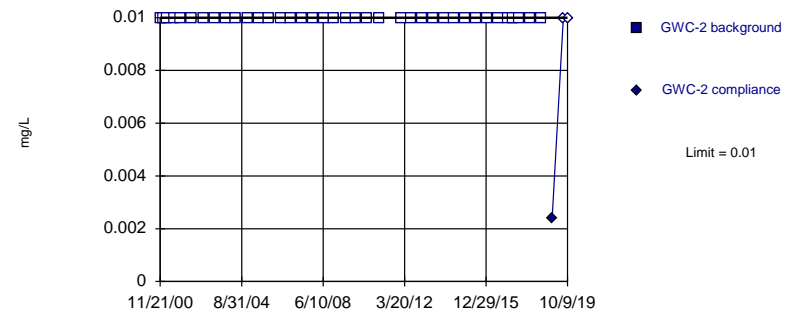


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 40 background values. 75% NDs. Well-constituent pair annual alpha = 0.002316. Individual comparison alpha = 0.001159 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:49 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium Intrawell Non-parametric

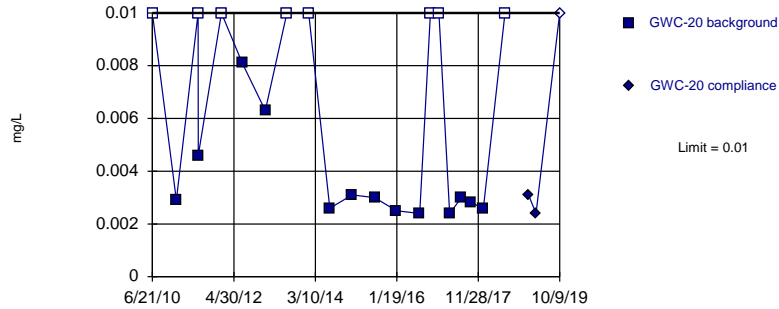


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 38 background values. 100% NDs. Well-constituent pair annual alpha = 0.002586. Individual comparison alpha = 0.001294 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:49 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium
Intrawell Non-parametric

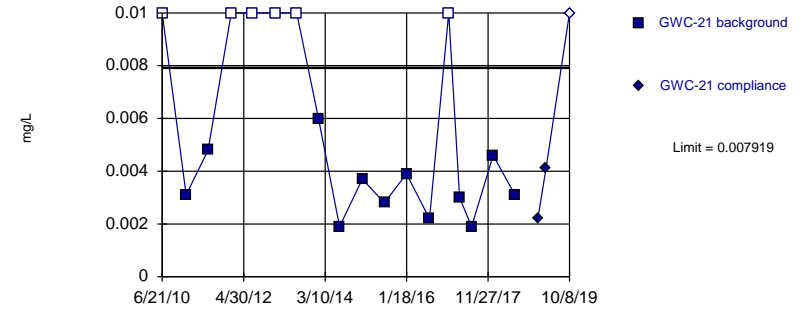


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 21 background values. 38.1% NDs. Well-constituent pair annual alpha = 0.007982. Individual comparison alpha = 0.003999 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:49 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium
Intrawell Parametric

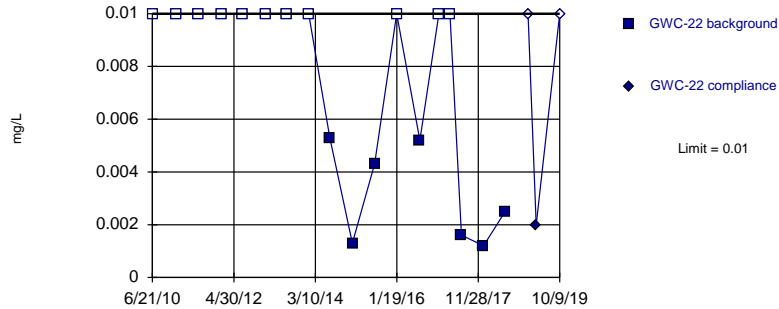


Background Data Summary (based on natural log transformation) (after Kaplan-Meier Adjustment): Mean=-5.764, Std. Dev.=0.3646, n=18, 33.33% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8708, critical = 0.858. Kappa = 2.538 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:49 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium
Intrawell Non-parametric

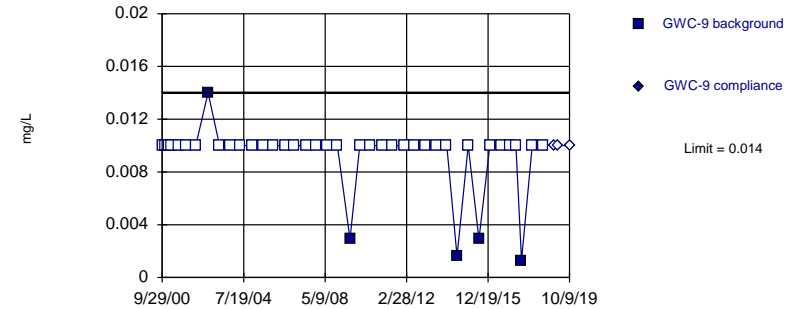


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 18 background values. 61.11% NDs. Well-constituent pair annual alpha = 0.01072. Individual comparison alpha = 0.005373 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:49 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium
Intrawell Non-parametric

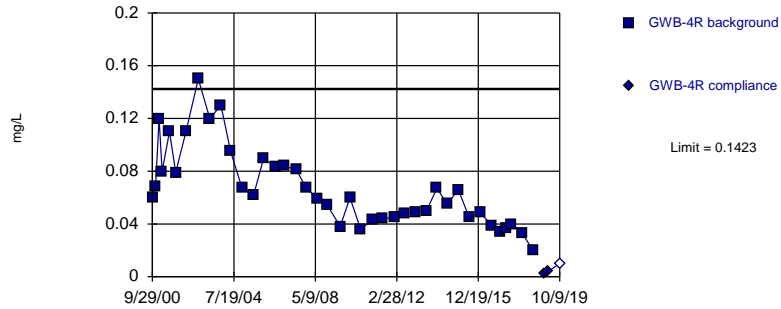


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 40 background values. 87.5% NDs. Well-constituent pair annual alpha = 0.002316. Individual comparison alpha = 0.001159 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:49 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium
Intrawell Parametric

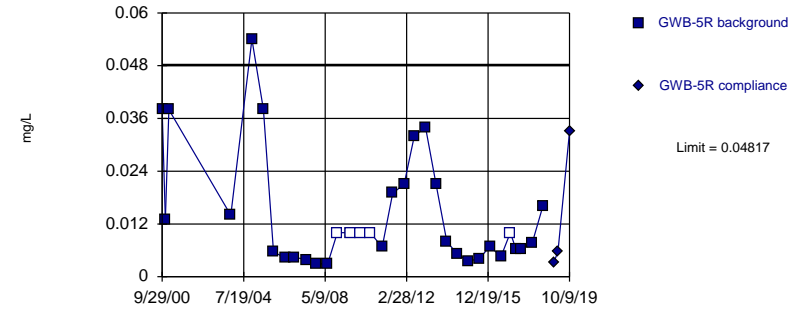


Background Data Summary (based on square root transformation): Mean=0.2522, Std. Dev.=0.05587, n=40.
Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9631, critical = 0.919. Kappa = 2.238 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:49 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium
Intrawell Parametric

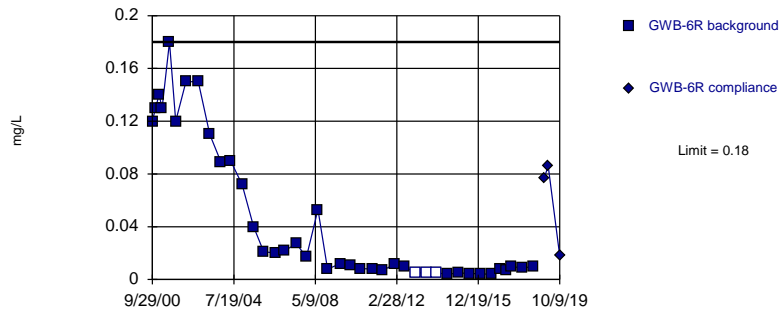


Background Data Summary (based on natural log transformation) (after Kaplan-Meier Adjustment): Mean=4.848, Std. Dev.=0.7947, n=33, 15.15% NDs.
Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9378, critical = 0.906. Kappa = 2.284 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:50 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium
Intrawell Non-parametric

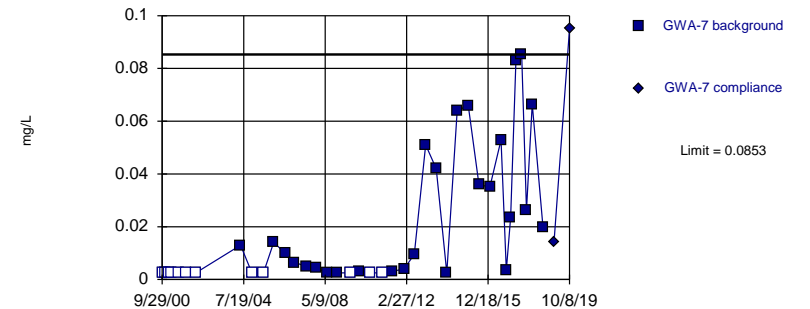


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 40 background values. 7.5% NDs. Well-constituent pair annual alpha = 0.002316. Individual comparison alpha = 0.001159 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:50 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit

Zinc
Intrawell Non-parametric

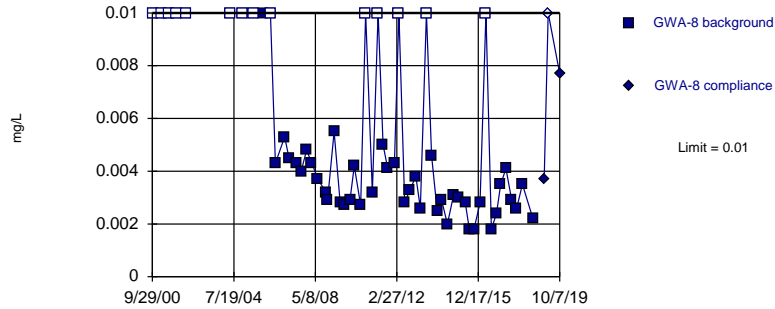


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 39 background values. 30.77% NDs. Well-constituent pair annual alpha = 0.002451. Individual comparison alpha = 0.001226 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:50 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc
Intrawell Non-parametric

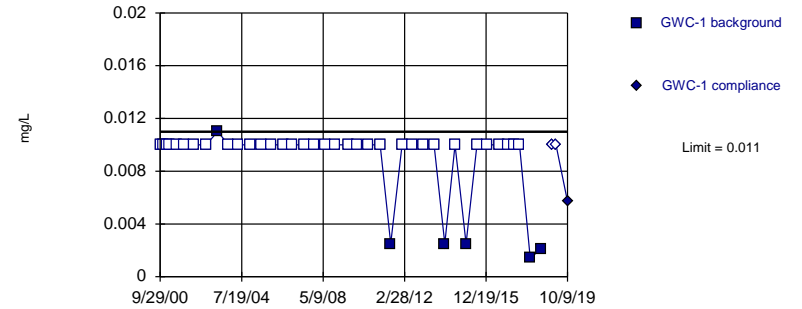


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 57 background values. 24.56% NDs. Well-constituent pair annual alpha = 0.001191. Individual comparison alpha = 0.0005955 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:50 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc
Intrawell Non-parametric

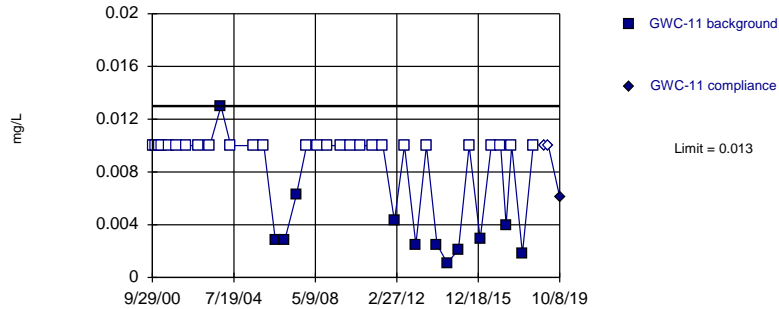


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 40 background values. 85% NDs. Well-constituent pair annual alpha = 0.002316. Individual comparison alpha = 0.001159 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:50 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc
Intrawell Non-parametric

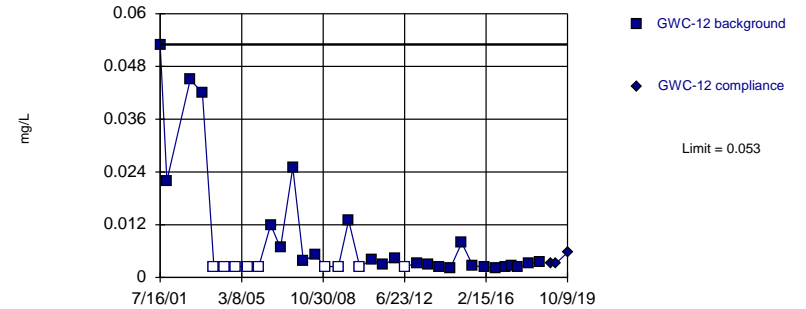


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 39 background values. 69.23% NDs. Well-constituent pair annual alpha = 0.002451. Individual comparison alpha = 0.001226 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:50 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc
Intrawell Non-parametric

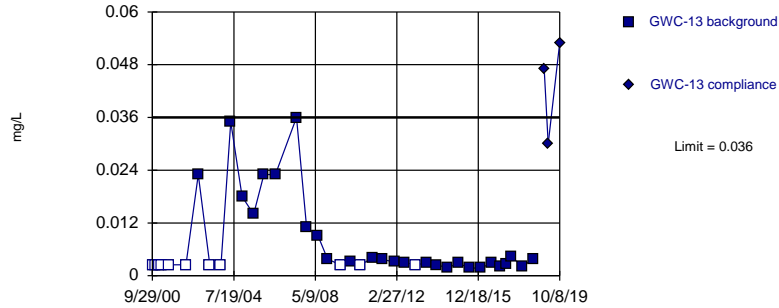


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 35 background values. 25.71% NDs. Well-constituent pair annual alpha = 0.002991. Individual comparison alpha = 0.001497 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:50 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit

Zinc Intrawell Non-parametric

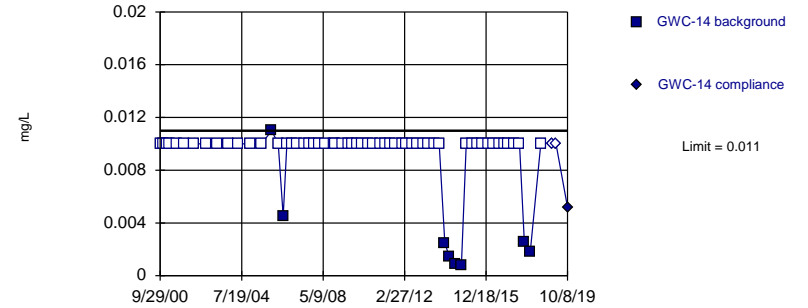


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 38 background values. 28.95% NDs. Well-constituent pair annual alpha = 0.002586. Individual comparison alpha = 0.001294 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:50 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc Intrawell Non-parametric

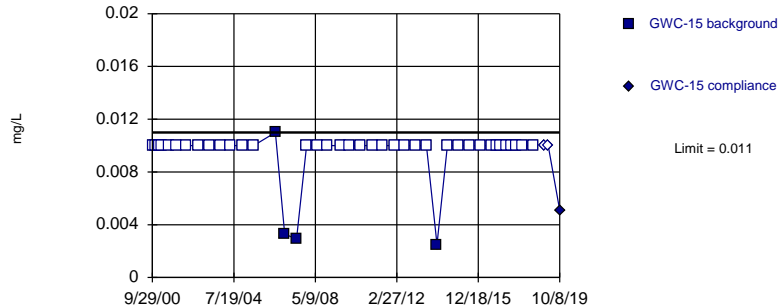


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 63 background values. 87.3% NDs. Well-constituent pair annual alpha = 0.0009737. Individual comparison alpha = 0.000487 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:50 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc Intrawell Non-parametric

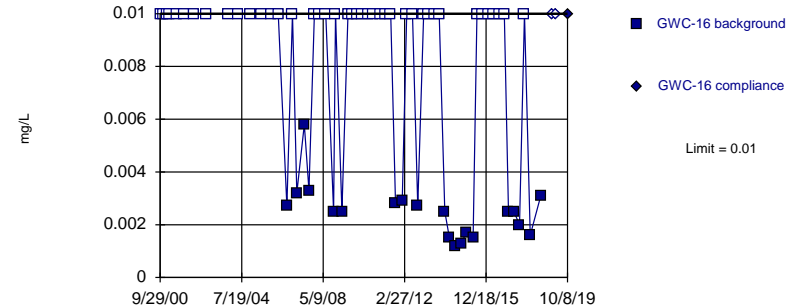


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 41 background values. 90.24% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:50 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc Intrawell Non-parametric

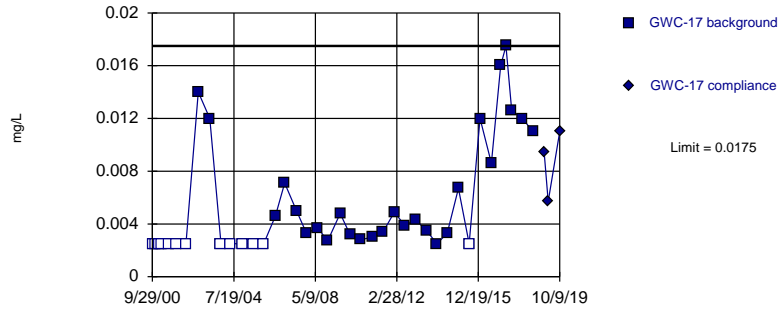


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 61 background values. 67.21% NDs. Well-constituent pair annual alpha = 0.001029. Individual comparison alpha = 0.0005144 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:50 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc
Intrawell Non-parametric

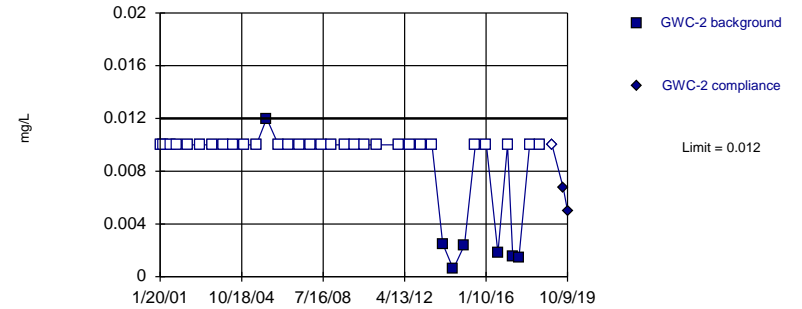


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 40 background values. 32.5% NDs. Well-constituent pair annual alpha = 0.002316. Individual comparison alpha = 0.001159 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:50 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc
Intrawell Non-parametric

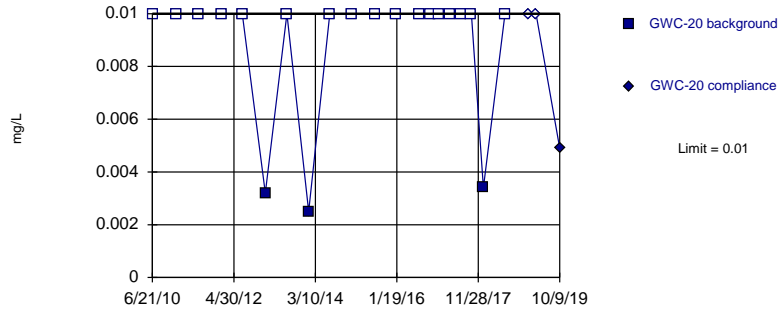


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 37 background values. 81.08% NDs. Well-constituent pair annual alpha = 0.002721. Individual comparison alpha = 0.001361 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:50 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc
Intrawell Non-parametric

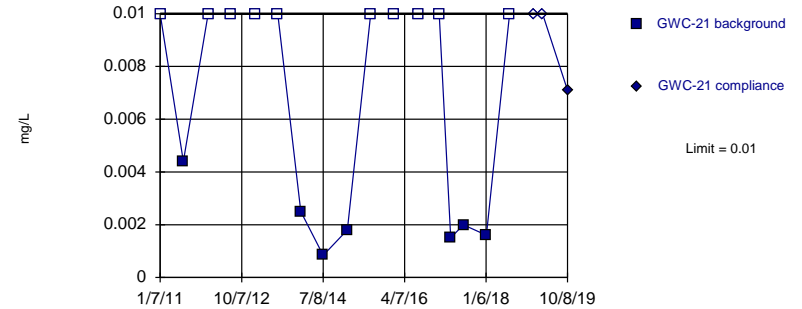


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 20 background values. 85% NDs. Well-constituent pair annual alpha = 0.008564. Individual comparison alpha = 0.004291 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:50 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc
Intrawell Non-parametric

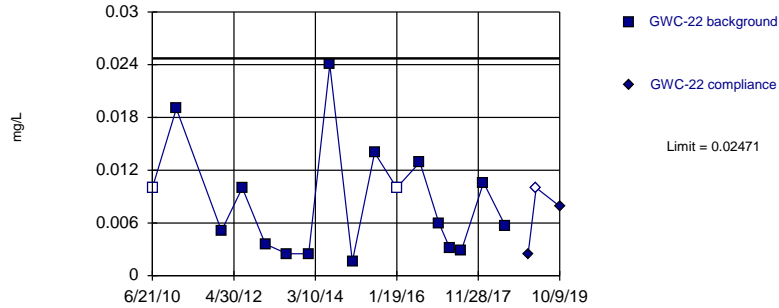


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 58.82% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:50 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc Intrawell Parametric

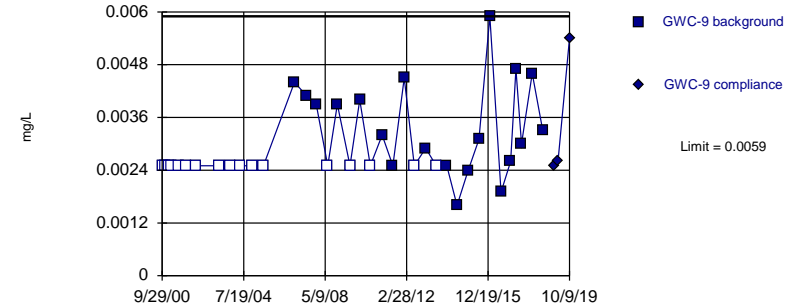


Background Data Summary: Mean=0.008441, Std. Dev.=0.00633, n=17, 11.76% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8837, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:50 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc Intrawell Non-parametric

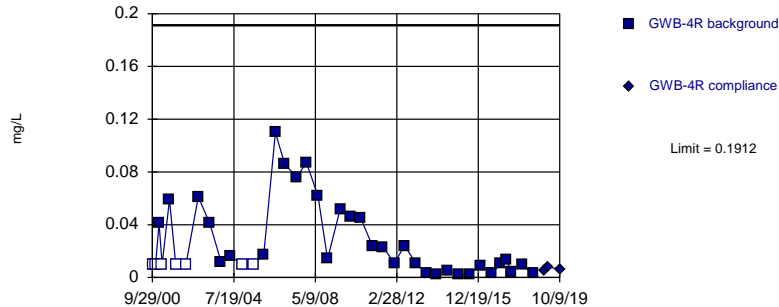


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 37 background values. 45.95% NDs. Well-constituent pair annual alpha = 0.002721. Individual comparison alpha = 0.001361 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:51 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc Intrawell Parametric

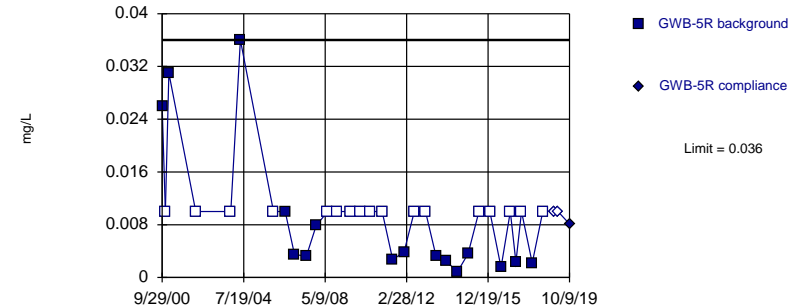


Background Data Summary (based on natural log transformation) (after Kaplan-Meier Adjustment): Mean=4.471, Std. Dev.=1.259, n=40, 17.5% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.936, critical = 0.919. Kappa = 2.238 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 2/17/2020 3:51 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc Intrawell Non-parametric

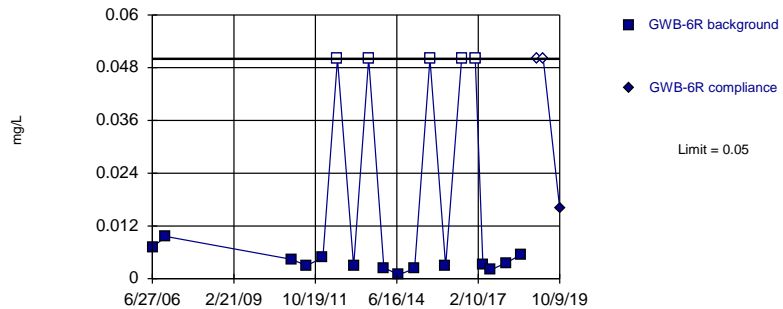


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 33 background values. 51.52% NDs. Well-constituent pair annual alpha = 0.003399. Individual comparison alpha = 0.001701 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:51 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 19 background values. 26.32% NDs. Well-constituent pair annual alpha = 0.009641. Individual comparison alpha = 0.004832 (1 of 2).

Prediction Limit Analysis Run 2/17/2020 3:51 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Prediction Limit

Constituent: Antimony Analysis Run 2/17/2020 3:57 PM View: Intrawell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7	GWA-7	GWC-11	GWC-11	GWC-13	GWC-13	GWC-14	GWC-14
9/29/2000	<0.015		<0.003		<0.003		<0.003	
11/21/2000	<0.015		<0.003		<0.003		<0.003	
1/20/2001	<0.015		<0.003		<0.003		<0.003	
3/14/2001	<0.015		<0.003		<0.003		<0.003	
7/16/2001	<0.015		<0.003		<0.003		<0.003	
11/1/2001	<0.015		<0.003		<0.003		<0.003	
4/25/2002	<0.015		<0.003		<0.003		<0.003	
11/20/2002			<0.003		<0.003		<0.003	
6/6/2003	<0.015		<0.003		<0.003		<0.003	
12/12/2003	<0.015		<0.003		<0.003		<0.003	
5/26/2004	<0.015		<0.003		<0.003		<0.003	
12/7/2004	<0.015		<0.003		<0.003		<0.003	
6/21/2005	<0.015		<0.003		<0.003		<0.003	
12/12/2005	<0.015		<0.003		<0.003		<0.003	
4/4/2006							<0.003	
6/27/2006	<0.015		<0.003		<0.003		<0.003	
8/30/2006							<0.003	
12/4/2006	<0.015		<0.003		<0.003		<0.003	
2/15/2007							<0.003	
6/23/2007	<0.015		<0.003		<0.003		<0.003	
9/11/2007							<0.003	
12/11/2007	<0.015		<0.003		<0.003		<0.003	
3/11/2008							<0.003	
6/23/2008	<0.015		<0.003		<0.003			
6/24/2008							<0.003	
11/3/2008							<0.003	
12/4/2008	<0.015		<0.003		<0.003		<0.003	
3/25/2009							<0.003	
7/7/2009	<0.015							
7/8/2009			<0.003		<0.003		<0.003	
9/14/2009							<0.003	
12/20/2009	<0.015						<0.003	
12/21/2009			<0.003		<0.003			
3/4/2010							<0.003	
6/20/2010	<0.015		<0.003		<0.003		<0.003	
9/14/2010							<0.003	
1/6/2011			<0.003		<0.003			
1/7/2011	<0.015						<0.003	
4/15/2011							<0.003	
7/7/2011	<0.015		<0.003		<0.003		<0.003	
9/25/2011							<0.003	
1/17/2012	<0.015		<0.003		<0.003		<0.003	
4/4/2012							<0.003	
7/9/2012	<0.015		<0.003		<0.003		<0.003	
10/9/2012							<0.003	
1/17/2013			<0.003		<0.003			
1/18/2013	<0.015						<0.003	
4/5/2013							<0.003	
7/16/2013			<0.003		<0.003			
7/17/2013	<0.015						<0.003	
10/11/2013							0.005	
1/13/2014	<0.015		<0.003		<0.003			

Prediction Limit

Constituent: Antimony Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7	GWA-7	GWC-11	GWC-11	GWC-13	GWC-13	GWC-14	GWC-14
1/14/2014							<0.003	
4/3/2014							<0.003	
7/8/2014			<0.003		<0.003			
7/9/2014	0.0022 (J)						<0.003	
10/24/2014							<0.003	
1/13/2015	<0.015		<0.003		<0.003			
1/14/2015							<0.003	
5/10/2015							<0.003	
7/16/2015	0.0028 (J)		<0.003		<0.003			
7/17/2015							<0.003	
10/6/2015							<0.003	
1/17/2016							<0.003	
1/18/2016	<0.015				<0.003			
1/19/2016			<0.003					
4/26/2016							<0.003	
7/26/2016			0.0005 (J)		0.0006 (J)			
7/27/2016	<0.015						<0.003	
8/31/2016			<0.003		<0.003			
9/1/2016	0.0017 (J)						<0.003	
10/25/2016	<0.015						<0.003	
10/26/2016			<0.003		<0.003			
1/4/2017			<0.003					
1/5/2017					<0.003		<0.003	
1/6/2017	0.0009 (J)							
4/4/2017							<0.003	
4/6/2017	<0.015		0.0006 (J)		<0.003			
7/11/2017			0.0009 (J)				<0.003	
7/12/2017					<0.003			
7/13/2017	0.0013 (J)							
10/2/2017							<0.003	
10/3/2017			<0.003					
10/4/2017	0.0008 (J)				<0.003			
1/9/2018	<0.015						<0.003	
1/10/2018					<0.003			
1/11/2018			0.0007 (J)					
7/9/2018							<0.003	
7/11/2018			<0.003		<0.003			
1/16/2019						<0.003		<0.003
1/17/2019				<0.003				
3/26/2019						<0.003		<0.003
3/27/2019				<0.003				
8/27/2019				0.00033 (J)		<0.003		<0.003
10/8/2019		<0.015		0.00046 (J)		<0.003		<0.003

Prediction Limit

Constituent: Antimony Analysis Run 2/17/2020 3:57 PM View: Intrawell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-16	GWC-16	GWC-20	GWC-20	GWC-22	GWC-22	GWC-9	GWC-9
9/29/2000	<0.003						<0.003	
11/21/2000	<0.003						<0.003	
1/20/2001	<0.003						<0.003	
3/14/2001	<0.003						<0.003	
7/16/2001	<0.003						<0.003	
11/1/2001	<0.003						<0.003	
4/25/2002	<0.003						<0.003	
11/20/2002	<0.003						<0.003	
6/6/2003	<0.003						<0.003	
12/12/2003	<0.003						<0.003	
5/26/2004	<0.003						<0.003	
12/7/2004	<0.003						<0.003	
6/21/2005	<0.003						<0.003	
12/12/2005	<0.003						<0.003	
4/4/2006	<0.003							
6/27/2006	<0.003						<0.003	
8/30/2006	<0.003							
12/4/2006	0.006						<0.003	
2/15/2007	<0.003							
6/23/2007	<0.003						<0.003	
9/11/2007	<0.003							
12/11/2007	<0.003						<0.003	
3/11/2008	<0.003							
6/23/2008							<0.003	
6/24/2008	<0.003							
11/3/2008	<0.003							
12/4/2008							<0.003	
12/5/2008	<0.003							
3/25/2009	<0.003							
7/8/2009	<0.003						<0.003	
9/14/2009	<0.003							
12/20/2009	<0.003							
12/21/2009							<0.003	
3/4/2010	<0.003							
6/20/2010							<0.003	
6/21/2010	<0.003		<0.003		<0.003			
9/14/2010	<0.003							
1/7/2011	<0.003		<0.003		<0.003		<0.003	
4/15/2011	<0.003							
7/7/2011	<0.003		<0.003					
7/8/2011			<0.003		<0.003		<0.003	
9/25/2011	<0.003							
1/18/2012	<0.003		<0.003		<0.003		<0.003	
4/4/2012	<0.003							
7/10/2012	<0.003		<0.003		<0.003		<0.003	
10/9/2012	<0.003							
1/18/2013	<0.003		<0.003		<0.003		<0.003	
4/5/2013	<0.003							
7/17/2013	<0.003		<0.003		<0.003		<0.003	
10/11/2013	<0.003							
1/14/2014	<0.003		<0.003		<0.003		<0.003	
4/3/2014	<0.003							

Prediction Limit

Constituent: Antimony Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-16	GWC-16	GWC-20	GWC-20	GWC-22	GWC-22	GWC-9	GWC-9
7/9/2014	<0.003						<0.003	
7/10/2014			<0.003		<0.003			
10/24/2014	<0.003							
1/12/2015			<0.003					
1/14/2015	<0.003				<0.003		<0.003	
5/11/2015	<0.003							
7/16/2015	<0.003							
7/17/2015							<0.003	
7/18/2015			<0.003		<0.003			
10/6/2015	<0.003							
1/17/2016	<0.003		<0.003					
1/18/2016					<0.003		<0.003	
4/26/2016	<0.003							
7/28/2016	<0.003		0.0019 (J)				<0.003	
7/29/2016					<0.003			
8/31/2016					<0.003		<0.003	
9/1/2016	<0.003		<0.003					
10/25/2016	<0.003		<0.003					
10/26/2016					<0.003			
10/27/2016							0.0016 (J)	
1/4/2017	<0.003		<0.003		<0.003			
1/6/2017							<0.003	
4/4/2017			<0.003					
4/5/2017	<0.003							
4/6/2017					<0.003		<0.003	
7/11/2017			<0.003		<0.003			
7/12/2017	<0.003						<0.003	
10/2/2017			<0.003					
10/3/2017	<0.003							
10/4/2017					<0.003		<0.003	
1/10/2018	<0.003		<0.003					
1/11/2018					<0.003		<0.003	
7/9/2018			<0.003					
7/10/2018	<0.003							
7/11/2018					<0.003		<0.003	
1/17/2019		<0.003						
1/18/2019						<0.003		<0.003
1/21/2019				<0.003				
3/25/2019				<0.003				
3/26/2019		<0.003						
3/27/2019						<0.003		<0.003
8/27/2019						0.00045 (J)		
8/28/2019		<0.003		<0.003				<0.003
10/8/2019		<0.003						
10/9/2019				<0.003		<0.003		<0.003

Prediction Limit

Constituent: Antimony, Arsenic Analysis Run 2/17/2020 3:57 PM View: Intrawell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-4R	GWB-4R	GWB-5R	GWB-5R	GWA-7	GWA-7	GWA-8	GWA-8
9/29/2000	<0.003		<0.015		<0.005		<0.005	
11/21/2000	<0.003		<0.015		<0.005			
1/20/2001	<0.003		<0.015		<0.005		<0.005	
3/14/2001	<0.003		<0.015		<0.005		<0.005	
7/16/2001	<0.003		<0.015		<0.005		<0.005	
11/1/2001	<0.003		<0.015		<0.005		<0.005	
4/25/2002	<0.003		<0.015		<0.005		<0.005	
11/20/2002	<0.003		<0.015				<0.005	
6/6/2003	<0.003		<0.015		0.02		<0.005	
12/12/2003	<0.003		<0.015		<0.005		<0.005	
5/26/2004	<0.003		<0.015		<0.005		<0.005	
12/7/2004	<0.003		<0.015		<0.005		<0.005	
6/21/2005	<0.003		<0.015		<0.005		<0.005	
12/12/2005	<0.003		<0.015		<0.005		<0.005	
4/4/2006							<0.005	
6/27/2006	<0.003		<0.015		<0.005		<0.005	
8/30/2006							<0.005	
12/4/2006	<0.003		<0.015		<0.005		<0.005	
2/15/2007							<0.005	
6/23/2007	<0.003		<0.015		<0.005		<0.005	
9/11/2007							<0.005	
12/11/2007	<0.003		<0.015		<0.005		<0.005	
3/11/2008							<0.005	
6/23/2008					<0.005		<0.005	
6/24/2008	<0.003		<0.015					
11/3/2008							<0.005	
12/4/2008					<0.005		<0.005	
12/5/2008	<0.003		<0.015					
3/25/2009							<0.005	
7/7/2009	<0.003		<0.015		<0.005		<0.005	
9/14/2009							<0.005	
12/20/2009					<0.005		<0.005	
12/21/2009	<0.003		<0.015					
3/4/2010							<0.005	
6/20/2010			<0.015		<0.005		<0.005	
6/21/2010	<0.003							
9/14/2010							<0.005	
1/6/2011			<0.015					
1/7/2011	<0.003				<0.005		<0.005	
4/15/2011							<0.005	
7/7/2011			<0.015		<0.005		<0.005	
7/8/2011	<0.003							
9/25/2011							<0.005	
1/17/2012			<0.015		<0.005		<0.005	
1/18/2012	<0.003							
4/4/2012							<0.005	
7/9/2012			<0.015		0.0052			
7/10/2012	<0.003						<0.005	
10/9/2012							<0.005	
1/17/2013			<0.015					
1/18/2013	<0.003				0.0087		<0.005	
4/5/2013							<0.005	

Prediction Limit

Constituent: Antimony, Arsenic Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-4R	GWB-4R	GWB-5R	GWB-5R	GWA-7	GWA-7	GWA-8	GWA-8
7/16/2013			<0.015					
7/17/2013	<0.003				0.0084		<0.005	
10/11/2013							<0.005	
1/13/2014			<0.015		0.009			
1/14/2014	<0.003						<0.005	
4/3/2014							<0.005	
7/9/2014	0.002 (J)		<0.015		0.008		<0.005	
10/24/2014							<0.005	
1/12/2015	<0.003							
1/13/2015			<0.015		0.0077			
1/14/2015							<0.005	
5/10/2015							<0.005	
7/16/2015	0.0021 (J)		<0.015		0.0077			
7/17/2015							<0.005	
10/6/2015							<0.005	
1/18/2016	<0.003		<0.015		0.014		<0.005	
4/26/2016							0.0011 (J)	
7/27/2016			<0.015		0.0111			
7/28/2016							<0.005	
7/29/2016	0.0003 (J)							
8/30/2016			<0.015				<0.005	
9/1/2016	<0.003				0.0287			
10/24/2016							<0.005	
10/25/2016					0.0069			
10/26/2016	<0.003		<0.015					
1/3/2017			<0.015				<0.005	
1/6/2017	<0.003				0.0097			
4/3/2017							0.0006 (J)	
4/4/2017	<0.003							
4/6/2017			<0.015		0.0104			
7/11/2017							0.0006 (J)	
7/12/2017	<0.003		<0.015					
7/13/2017					0.0064			
10/2/2017							0.0006 (J)	
10/3/2017			<0.015					
10/4/2017	<0.003				0.0078			
1/9/2018					0.0091 (J)		0.0009 (J)	
1/10/2018			<0.015					
1/11/2018	<0.003							
7/9/2018							<0.005	
7/10/2018			<0.015					
7/11/2018	<0.003							
1/16/2019		<0.003		<0.015				<0.005
3/25/2019		<0.003				0.0029 (J)		<0.005
3/26/2019				<0.015				
8/26/2019						0.0041 (J)		<0.005
8/27/2019		<0.003						
8/28/2019				0.00054 (J)				
10/7/2019								<0.005
10/8/2019						0.003 (J)		
10/9/2019		<0.003		<0.015				

Prediction Limit

Constituent: Arsenic Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-1	GWC-1	GWC-12	GWC-12	GWC-13	GWC-13	GWC-14	GWC-14
1/13/2014	<0.005		<0.005		<0.005			
1/14/2014							<0.005	
4/3/2014							<0.005	
7/8/2014			<0.005		<0.005			
7/9/2014	0.0022 (J)						<0.005	
10/24/2014							<0.005	
1/13/2015	<0.005		<0.005		<0.005			
1/14/2015							<0.005	
5/10/2015							<0.005	
7/16/2015	0.0037 (J)		<0.005		<0.005			
7/17/2015							<0.005	
10/6/2015							<0.005	
1/17/2016							0.002 (J)	
1/18/2016			<0.005		<0.005			
4/26/2016							0.00183 (J)	
7/26/2016					<0.005			
7/27/2016	0.0046 (J)		<0.005				0.0021 (J)	
8/30/2016	0.0023 (J)							
8/31/2016			<0.005		<0.005			
9/1/2016							0.0024 (J)	
10/25/2016	0.0035 (J)						<0.005	
10/26/2016			<0.005		<0.005			
1/4/2017	0.0018 (J)		<0.005					
1/5/2017					<0.005		0.0024 (J)	
4/4/2017	0.0015 (J)						0.003 (J)	
4/5/2017			0.0006 (J)					
4/6/2017					<0.005			
7/10/2017			0.0008 (J)					
7/11/2017							0.0019 (J)	
7/12/2017	0.0015 (J)				<0.005			
10/2/2017							0.0026 (J)	
10/3/2017	0.0013 (J)							
10/4/2017			0.0009 (J)		<0.005			
1/9/2018							0.0021 (J)	
1/10/2018	0.0023 (J)				0.0006 (J)			
1/11/2018			<0.005					
7/9/2018							0.0019 (J)	
7/10/2018	0.0031 (J)							
7/11/2018			<0.005		<0.005			
1/16/2019		0.0023 (J)				<0.005		0.0016 (J)
1/17/2019				<0.005				
3/26/2019		0.0032 (J)				0.00058 (J)		0.0023 (J)
3/27/2019				<0.005				
8/27/2019		0.0022 (J)		<0.005		<0.005		0.0017 (J)
10/8/2019						<0.005		0.0017 (J)
10/9/2019		0.0042 (J)		<0.005				

Prediction Limit

Constituent: Arsenic Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-15	GWC-15	GWC-16	GWC-16	GWC-17	GWC-17	GWC-2	GWC-2
9/29/2000	<0.005		0.094		<0.005			
11/21/2000	<0.005		0.059		<0.005		<0.005	
1/20/2001	<0.005		0.087		<0.005		<0.005	
3/14/2001	<0.005		0.075		<0.005		<0.005	
7/16/2001	<0.005		0.11		<0.005		<0.005	
11/1/2001	<0.005		0.098		<0.005		<0.005	
4/25/2002	<0.005		0.071		<0.005		<0.005	
11/20/2002	<0.005		0.15		<0.005		<0.005	
6/6/2003	<0.005				<0.005		<0.005	
12/12/2003	<0.005				<0.005		<0.005	
5/26/2004	<0.005		0.12		<0.005		<0.005	
12/7/2004	<0.005		0.098		<0.005		<0.005	
6/21/2005	<0.005		0.065		<0.005		<0.005	
12/12/2005	<0.005		0.081		<0.005		<0.005	
4/4/2006			0.077					
6/27/2006	<0.005		0.071		<0.005		<0.005	
8/30/2006			0.08					
12/4/2006	<0.005		0.085		<0.005		<0.005	
2/15/2007			0.09					
6/23/2007	<0.005		0.12		<0.005		<0.005	
9/11/2007			0.088					
12/11/2007	<0.005		0.088		<0.005		<0.005	
3/11/2008			0.071					
6/24/2008	<0.005		0.097		<0.005		<0.005	
11/3/2008			0.089					
12/4/2008							<0.005	
12/5/2008	<0.005		0.092		<0.005			
3/25/2009			0.095					
7/8/2009	0.0052		0.11		<0.005		<0.005	
9/14/2009			0.099					
12/20/2009	<0.005		0.1				<0.005	
12/21/2009					<0.005			
3/4/2010			0.074					
6/20/2010	0.0068						<0.005	
6/21/2010			0.056		<0.005			
9/14/2010			0.067					
1/6/2011							<0.005	
1/7/2011	<0.005		0.066		<0.005			
4/15/2011			0.08					
7/7/2011	<0.005		0.054					
7/8/2011					<0.005			
9/25/2011			0.085					
1/17/2012	<0.005						<0.005	
1/18/2012			0.089		<0.005			
4/4/2012			0.0473					
7/9/2012	<0.005						<0.005	
7/10/2012			0.07		<0.005			
10/9/2012			0.088					
1/17/2013							<0.005	
1/18/2013	0.0089		0.063		<0.005			
4/5/2013			0.06					
7/17/2013	0.011		0.063		<0.005		<0.005	

Prediction Limit

Constituent: Arsenic Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-15	GWC-15	GWC-16	GWC-16	GWC-17	GWC-17	GWC-2	GWC-2
10/11/2013			0.059					
1/13/2014	0.017						<0.005	
1/14/2014			0.077		<0.005			
4/3/2014			0.091					
7/9/2014	0.014		0.08		<0.005		<0.005	
10/24/2014			0.073					
1/13/2015	0.011						<0.005	
1/14/2015			0.079		<0.005			
5/11/2015			0.058					
7/16/2015	0.02		0.068				<0.005	
7/18/2015					<0.005			
10/6/2015			0.078					
1/17/2016	0.014		0.089				<0.005	
1/18/2016					<0.005			
4/26/2016			0.0731					
7/27/2016	0.0303						<0.005	
7/28/2016			0.0627					
7/29/2016					0.0009 (J)			
8/31/2016							<0.005	
9/1/2016	0.0533		0.0551		<0.005			
10/25/2016	0.0551		0.0466					
10/26/2016					<0.005		<0.005	
1/4/2017			0.0444					
1/5/2017	0.0437				<0.005		<0.005	
4/3/2017	0.0713							
4/4/2017							<0.005	
4/5/2017			0.0591		0.0011 (J)			
7/11/2017	0.0745							
7/12/2017			0.0776					
7/13/2017					0.0016 (J)		<0.005	
10/2/2017	0.0723							
10/3/2017			0.0813				<0.005	
10/4/2017					0.0019 (J)			
1/9/2018	0.0731							
1/10/2018			0.085				0.0006 (J)	
1/11/2018					0.0015 (J)			
7/10/2018	0.09		0.067				<0.005	
7/11/2018					0.00082 (J)			
1/16/2019						<0.005		
1/17/2019		0.13		0.079				
1/21/2019								<0.005
3/26/2019		0.1		0.089		0.0015 (J)		
7/30/2019								0.00039 (J)
8/27/2019		0.17						<0.005
8/28/2019				0.091		0.0011 (J)		
10/8/2019		0.13		0.088				
10/9/2019						0.0011 (J)		<0.005

Prediction Limit

Constituent: Arsenic Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-20	GWC-20	GWC-21	GWC-21	GWC-22	GWC-22	GWB-4R	GWB-4R
9/29/2000							<0.005	
11/21/2000							<0.005	
3/14/2001							<0.005	
7/16/2001							<0.005	
11/1/2001							<0.005	
4/25/2002							<0.005	
12/12/2003							0.0058	
5/26/2004							0.0068	
12/7/2004							0.0066	
6/21/2005							<0.005	
12/12/2005							<0.005	
6/27/2006							<0.005	
12/4/2006							<0.005	
6/23/2007							<0.005	
12/11/2007							<0.005	
6/24/2008							0.005	
12/5/2008							<0.005	
7/7/2009							<0.005	
12/21/2009							<0.005	
6/21/2010	0.29				<0.005			
1/7/2011	0.2		<0.005		<0.005		<0.005	
7/7/2011	<0.005							
7/8/2011	0.19		<0.005		<0.005		<0.005	
1/18/2012	0.058		<0.005		<0.005		<0.005	
7/10/2012	0.18		<0.005		<0.005		0.0052	
1/18/2013	0.22				<0.005		<0.005	
7/17/2013	0.45		<0.005		<0.005		<0.005	
1/14/2014	0.52				<0.005		<0.005	
7/9/2014			<0.005				0.0023 (J)	
7/10/2014	0.4				0.0027 (J)			
1/12/2015	0.43						0.0028 (J)	
1/14/2015			<0.005		<0.005			
7/16/2015							<0.005	
7/17/2015			<0.005					
7/18/2015	0.26				<0.005			
1/17/2016	0.34							
1/18/2016					<0.005		<0.005	
7/28/2016	0.209		<0.005					
7/29/2016					0.002 (J)		0.0014 (J)	
8/31/2016					0.0017 (J)			
9/1/2016	0.215		0.0039 (J)				0.0033 (J)	
10/25/2016	0.307		<0.005					
10/26/2016					<0.005		0.0016 (J)	
1/4/2017	0.311		<0.005		<0.005			
1/6/2017							<0.005	
4/4/2017	0.317		0.0031 (J)				0.0021 (J)	
4/6/2017					0.0006 (J)			
7/11/2017	0.299				0.0012 (J)			
7/12/2017							0.0015 (J)	
7/13/2017			<0.005					
10/2/2017	0.216							
10/3/2017			<0.005					

Prediction Limit

Constituent: Arsenic Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-20	GWC-20	GWC-21	GWC-21	GWC-22	GWC-22	GWB-4R	GWB-4R
10/4/2017					0.0025 (J)		0.0018 (J)	
1/9/2018			0.0033 (J)					
1/10/2018	0.347							
1/11/2018					0.0006 (J)		0.0015 (J)	
7/9/2018	0.37							
7/10/2018			0.0027 (J)					
7/11/2018					0.0011 (J)		0.00095 (J)	
1/16/2019								0.0024 (J)
1/17/2019				0.0022 (J)				
1/18/2019						<0.005		
1/21/2019	0.44							
3/25/2019	0.41							0.0029 (J)
3/26/2019				0.0045 (J)				
3/27/2019						<0.005		
8/27/2019						0.00044 (J)		0.0023 (J)
8/28/2019	0.43			0.002 (J)				
10/8/2019				0.0028 (J)				
10/9/2019	0.35					<0.005		0.0024 (J)

Prediction Limit

Constituent: Arsenic, Barium Analysis Run 2/17/2020 3:57 PM View: IntraWell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-5R	GWB-5R	GWB-6R	GWB-6R	GWA-7	GWA-7	GWA-8	GWA-8
9/29/2000	<0.005		<0.025		0.11			
11/21/2000	<0.005		<0.025		0.12			
1/20/2001	<0.005		0.014		0.11			
3/14/2001	<0.005		<0.025		0.11		0.14	
7/16/2001	0.014		<0.025		0.11		0.14	
11/1/2001	0.023		<0.025		0.11		0.14	
4/25/2002	<0.005		<0.025		0.058		0.088	
11/20/2002	0.022		0.014					
6/6/2003			0.014		0.19		0.14	
12/12/2003	<0.005		<0.025		0.1		0.13	
5/26/2004	0.0074		0.0082		0.084		0.09	
12/7/2004	0.017		0.0062		0.094		0.11	
6/21/2005	0.013		<0.025		0.089		0.084	
12/12/2005	<0.005		<0.025		0.089		0.1	
4/4/2006							0.089	
6/27/2006	<0.005		<0.025		0.096		0.1	
8/30/2006							0.12	
12/4/2006	<0.005		<0.025		0.092		0.086	
2/15/2007							0.088	
6/23/2007	<0.005		0.0053		0.08		0.089	
9/11/2007							0.092	
12/11/2007	<0.005		0.0057		0.067		0.077	
3/11/2008							0.082	
6/23/2008					0.056		0.086	
6/24/2008	<0.005		0.012					
11/3/2008							0.088	
12/4/2008					0.054		0.081	
12/5/2008	<0.005		0.0064					
3/25/2009							0.069	
7/7/2009	<0.005		<0.025		0.034		0.078	
9/14/2009							0.079	
12/20/2009					0.034		0.081	
12/21/2009	<0.005		<0.025					
3/4/2010							0.065	
6/20/2010	<0.005		0.017		0.062		0.078	
9/14/2010							0.076	
1/6/2011	<0.005							
1/7/2011			<0.025		0.039		0.074	
4/15/2011							0.065	
7/7/2011	<0.005		<0.025		0.036		0.081	
9/25/2011							0.078	
1/17/2012	<0.005				0.041		0.082	
1/18/2012			<0.025					
4/4/2012							0.0861	
7/9/2012	<0.005				0.15			
7/10/2012			<0.025				0.082	
10/9/2012							0.09	
1/17/2013	<0.005							
1/18/2013			<0.025		0.15		0.083	
4/5/2013							0.078	
7/16/2013	<0.005							
7/17/2013			<0.025		0.13		0.083	

Prediction Limit

Constituent: Arsenic, Barium Analysis Run 2/17/2020 3:57 PM View: IntraWell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-5R	GWB-5R	GWB-6R	GWB-6R	GWA-7	GWA-7	GWA-8	GWA-8
10/11/2013							0.078	
1/13/2014	<0.005				0.16			
1/14/2014			<0.025				0.081	
4/3/2014							0.077	
7/9/2014	<0.005		<0.025		0.11		0.073	
10/24/2014							0.087	
1/13/2015	<0.005				0.083			
1/14/2015			<0.025				0.079	
5/10/2015							0.076	
7/16/2015	<0.005				0.094			
7/17/2015			<0.025				0.061	
10/6/2015							0.067	
1/18/2016	<0.005		<0.025		0.22		0.068	
4/26/2016							0.0596	
7/27/2016	0.0008 (J)				0.192			
7/28/2016			0.0009 (J)				0.0701	
8/30/2016	<0.005		<0.025				0.0687	
10/24/2016							0.07	
10/25/2016					0.173			
10/26/2016	<0.005		<0.025					
1/3/2017	<0.005						0.061	
1/5/2017			0.0021 (J)					
1/6/2017					0.167			
4/3/2017							0.0612	
4/6/2017	0.0006 (J)		0.0011 (J)		0.136			
7/11/2017							0.0624	
7/12/2017	0.0009 (J)		0.0014 (J)					
7/13/2017					0.0891			
10/2/2017							0.0618	
10/3/2017	0.001 (J)		0.0014 (J)					
10/4/2017					0.113			
1/9/2018			0.0017 (J)		0.0901		0.0574	
1/10/2018	0.0012 (J)							
7/9/2018							0.056	
7/10/2018	0.0016 (J)		0.00063 (J)					
7/11/2018					0.065			
1/16/2019		0.0011 (J)		<0.025		0.062		0.062
3/25/2019						0.054		0.064
3/26/2019		0.0014 (J)		0.0029 (J)				
8/26/2019						0.11		0.065
8/27/2019				0.0035 (J)				
8/28/2019		0.0023 (J)						
10/7/2019								0.069
10/8/2019						0.1		
10/9/2019		0.0053 (J)		0.0018 (J)				

Prediction Limit

Constituent: Barium Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-1	GWC-1	GWC-11	GWC-11	GWC-12	GWC-12	GWC-13	GWC-13
9/29/2000	0.044		0.1		0.075		<0.005	
11/21/2000	0.047		0.082		0.072		0.01	
1/20/2001	0.051		0.083		0.086		<0.005	
3/14/2001	0.048		0.075		0.088		0.01	
7/16/2001	0.054		0.091		0.084		<0.005	
11/1/2001	0.063		0.068		0.13		<0.005	
4/25/2002	0.032		0.066		0.24		<0.005	
6/6/2003	0.046		0.085				0.028	
12/12/2003	0.034		0.072				0.019	
5/26/2004	0.035		0.055				<0.005	
12/7/2004	0.024		0.066				0.009	
6/21/2005	0.039		0.033		0.053		0.0089	
12/12/2005	0.042		0.034		0.1		0.026	
6/27/2006	0.033		0.029		0.098		0.029	
12/4/2006	0.04		0.02		0.068		0.017	
6/23/2007	0.044		0.017		0.042		0.014	
12/11/2007	0.049		0.013		0.04		0.011	
6/23/2008			0.012		0.041		0.018	
6/24/2008	0.038							
12/4/2008			0.011		0.035		0.019	
12/5/2008	0.06							
7/7/2009	0.043							
7/8/2009			0.012		0.036		0.011	
12/20/2009	0.065							
12/21/2009			0.011		0.028		0.01	
6/20/2010	0.095		0.0089		0.025		0.0081	
1/6/2011	0.093		0.014				0.012	
1/7/2011					0.037			
7/7/2011	0.095		0.018		0.039		0.015	
1/17/2012	0.1		0.23		0.045		0.0086	
7/9/2012	0.11		0.17		0.032		0.01	
1/17/2013	0.12		0.2		0.033		0.014	
7/16/2013	0.081		0.11		0.027		0.012	
1/13/2014	0.096		0.083		0.027		0.015	
7/8/2014			0.066		0.037		0.017	
7/9/2014	0.066							
1/13/2015	0.068		0.053		0.023		0.019	
7/16/2015	0.07		0.052		0.03		0.022	
1/17/2016	0.062							
1/18/2016					0.032		0.026	
1/19/2016			0.048					
7/26/2016			0.051				0.0236	
7/27/2016	0.0417				0.0191			
8/30/2016	0.0545							
8/31/2016			0.0565		0.019		0.0273	
10/25/2016	0.0504							
10/26/2016			0.0591		0.0197		0.0238	
1/4/2017	0.0534		0.0598		0.0174			
1/5/2017							0.0218	
4/4/2017	0.0549							
4/5/2017					0.0174			
4/6/2017			0.0813				0.0204	

Prediction Limit

Constituent: Barium Analysis Run 2/17/2020 3:57 PM View: Inrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-1	GWC-1	GWC-11	GWC-11	GWC-12	GWC-12	GWC-13	GWC-13
7/10/2017					0.0172			
7/11/2017			0.0302					
7/12/2017	0.0614						0.0161	
10/3/2017	0.0436		0.103					
10/4/2017					0.0162		0.0185	
1/10/2018	0.053						0.0166	
1/11/2018			0.166		0.018			
7/10/2018	0.059							
7/11/2018			0.12		0.014		0.019	
1/16/2019		0.054						0.019
1/17/2019				0.039		0.017		
3/26/2019		0.055						0.026
3/27/2019				0.053		0.017		
8/27/2019		0.054		0.12		0.017		0.024
10/8/2019				0.13				0.024
10/9/2019		0.058				0.019		

Prediction Limit

Constituent: Barium Analysis Run 2/17/2020 3:57 PM View: IntraWell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-14	GWC-14	GWC-15	GWC-15	GWC-16	GWC-16	GWC-17	GWC-17
9/29/2000	0.11		0.028		0.076		0.16	
11/21/2000	0.15		0.035		0.075		0.17	
1/20/2001	0.1		0.032		0.053		0.16	
3/14/2001	0.095		0.036		0.055		0.17	
7/16/2001			0.036		0.041		0.19	
11/1/2001	0.16		0.036		0.045		0.18	
4/25/2002	0.054		0.045		0.055		0.15	
6/6/2003	0.063						0.13	
12/12/2003	0.041						0.18	
5/26/2004	0.059		0.034		0.055		0.17	
12/7/2004	0.076		0.042		0.072		0.19	
6/21/2005	0.042		0.039		0.061		0.18	
12/12/2005	0.048		0.043		0.047		0.17	
4/4/2006	0.05				0.042			
6/27/2006	0.036		0.031		0.042		0.17	
8/30/2006	0.059				0.05			
12/4/2006	0.062		0.043		0.044		0.21	
2/15/2007	0.079				0.041			
6/23/2007	0.03		0.031		0.044		0.17	
9/11/2007	0.053				0.04			
12/11/2007	0.075		0.044		0.0035		0.18	
3/11/2008	0.052				0.034			
6/24/2008	0.039		0.057		0.042		0.14	
11/3/2008	0.082				0.049			
12/4/2008	0.079							
12/5/2008			0.041		0.05		0.19	
3/25/2009	0.093				0.052			
7/8/2009	0.039		0.058		0.046		0.2	
9/14/2009	0.061				0.048			
12/20/2009	0.088		0.062		0.062			
12/21/2009							0.23	
3/4/2010	0.077				0.058			
6/20/2010	0.075		0.03					
6/21/2010					0.041		0.25	
9/14/2010	0.093				0.036			
1/7/2011	0.13		0.049		0.054		0.21	
4/15/2011	0.086				0.049			
7/7/2011	0.051		0.05		0.063			
7/8/2011							0.13	
9/25/2011	0.056				0.037			
1/17/2012	0.052		0.044					
1/18/2012					0.034		0.26	
4/4/2012	0.0519				0.0446			
7/9/2012	0.048		0.045					
7/10/2012					0.033		0.19	
10/9/2012	0.065				0.041			
1/18/2013	0.045		0.049		0.036		0.17	
4/5/2013	0.047				0.036			
7/17/2013	0.032		0.039		0.054		0.18	
10/11/2013	0.028				0.052			
1/13/2014			0.038					
1/14/2014	0.036				0.051		0.18	

Prediction Limit

Constituent: Barium Analysis Run 2/17/2020 3:57 PM View: Inrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-2	GWC-2	GWC-20	GWC-20	GWC-21	GWC-21	GWC-22	GWC-22
1/4/2017			0.0999		0.0617		0.0975	
1/5/2017	0.0526							
4/4/2017	0.0503		0.136		0.0761			
4/6/2017							0.064	
7/11/2017			0.145				0.0778	
7/13/2017	0.0529				0.0428			
10/2/2017			0.148					
10/3/2017	0.057				0.0376			
10/4/2017							0.156	
1/9/2018					0.0704			
1/10/2018	0.0527		0.0788					
1/11/2018							0.0702	
7/9/2018			0.087					
7/10/2018	0.054				0.061			
7/11/2018							0.12	
1/17/2019						0.061		
1/18/2019								0.052
1/21/2019		0.05		0.069				
3/25/2019				0.085				
3/26/2019						0.084		
3/27/2019								0.057
7/30/2019		0.052						
8/27/2019		0.053						0.097
8/28/2019				0.078		0.063		
10/8/2019						0.079		
10/9/2019		0.05		0.078				0.065

Prediction Limit

Constituent: Barium Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWC-9	GWB-4R	GWB-4R	GWB-5R	GWB-5R	GWB-6R	GWB-6R
9/29/2000	0.093		0.16		0.22		0.16	
11/21/2000	0.095		0.16		0.13		0.21	
1/20/2001	0.089		0.21		0.19		0.23	
3/14/2001	0.088		0.18		0.27		0.22	
7/16/2001	0.096		0.18		0.37		0.22	
11/1/2001	0.094		0.15				0.23	
4/25/2002	0.085		0.16		0.19		0.15	
6/6/2003	0.09		0.29				0.13	
12/12/2003	0.084		0.18		0.054		0.034	
5/26/2004	0.08		0.16		0.18		0.13	
12/7/2004	0.098		0.16		0.24		0.13	
6/21/2005	0.084		0.15		0.2		0.07	
12/12/2005	0.07		0.15		0.074		0.04	
6/27/2006	0.083		0.19		0.075		0.041	
12/4/2006	0.072		0.26		0.092		0.048	
6/23/2007	0.087		0.24		0.089		0.12	
12/11/2007	0.082		0.21		0.072		0.12	
6/23/2008	0.1							
6/24/2008			0.13		0.049		0.17	
12/4/2008	0.12							
12/5/2008			0.12		0.067		0.093	
7/7/2009			0.17		0.04		0.06	
7/8/2009	0.14							
12/21/2009	0.15		0.2		0.044		0.11	
6/20/2010	0.21				0.036		0.11	
6/21/2010			0.22					
1/6/2011					0.075			
1/7/2011	0.2		0.12				0.025	
7/7/2011					0.13		0.025	
7/8/2011	0.18		0.15					
1/17/2012					0.21			
1/18/2012	0.18		0.15				0.03	
7/9/2012					0.2			
7/10/2012	0.16		0.14				0.028	
1/17/2013					0.19			
1/18/2013	0.19		0.15				0.058	
7/16/2013					0.076			
7/17/2013	0.17		0.14				0.086	
1/13/2014					0.14			
1/14/2014	0.2		0.16				0.1	
7/9/2014	0.16		0.12		0.12		0.082	
1/12/2015			0.13					
1/13/2015					0.13			
1/14/2015	0.17						0.094	
7/16/2015			0.11		0.12			
7/17/2015	0.18						0.11	
1/18/2016	0.2		0.095		0.12		0.11	
7/27/2016					0.112			
7/28/2016	0.234						0.105	
7/29/2016			0.0883					
8/30/2016					0.135		0.106	
8/31/2016	0.284							

Prediction Limit

Constituent: Barium Analysis Run 2/17/2020 3:57 PM View: Inrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWC-9	GWB-4R	GWB-4R	GWB-5R	GWB-5R	GWB-6R	GWB-6R
9/1/2016			0.123					
10/26/2016			0.0863		0.103		0.107	
10/27/2016	0.244							
1/3/2017					0.118			
1/5/2017							0.107	
1/6/2017	0.305		0.0758					
4/4/2017			0.091					
4/6/2017	0.249				0.162		0.111	
7/12/2017	0.256		0.0941		0.157		0.106	
10/3/2017					0.127		0.105	
10/4/2017	0.356		0.0994					
1/9/2018							0.0969	
1/10/2018					0.158			
1/11/2018	0.226		0.088					
7/10/2018					0.31		0.087	
7/11/2018	0.29		0.071					
1/16/2019				0.083		0.054		0.013 (J)
1/18/2019		0.21						
3/25/2019				0.077				
3/26/2019						0.057		0.012 (J)
3/27/2019		0.19						
8/27/2019				0.076				0.013
8/28/2019		0.17				0.1		
10/9/2019		0.18		0.076		0.13		0.014 (J)

Prediction Limit

Constituent: Chromium Analysis Run 2/17/2020 3:57 PM View: IntraWell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7	GWA-7	GWA-8	GWA-8	GWC-1	GWC-1	GWC-11	GWC-11
9/29/2000	<0.0013		<0.01		<0.0013		<0.01	
11/21/2000	<0.0013				<0.0013		<0.01	
1/20/2001	<0.0013		<0.01		<0.0013		<0.01	
3/14/2001	<0.0013		<0.01		<0.0013		<0.01	
7/16/2001	<0.0013		<0.01		<0.0013		<0.01	
11/1/2001	<0.0013		<0.01		<0.0013		<0.01	
4/25/2002	<0.0013		<0.01		<0.0013		<0.01	
11/20/2002					<0.0013		0.006	
6/6/2003	0.037		0.014				0.0082	
12/12/2003	0.0044		0.011		<0.0013		0.0023	
5/26/2004	<0.0013		<0.01		<0.0013		<0.01	
12/7/2004	<0.0013		<0.01		<0.0013		<0.01	
6/21/2005	<0.0013		<0.01		<0.0013		<0.01	
12/12/2005	<0.0013		<0.01				<0.01	
4/4/2006			<0.01					
6/27/2006	<0.0013		<0.01		<0.0013		<0.01	
8/30/2006			<0.01					
12/4/2006	0.0015		<0.01		<0.0013		0.0021	
2/15/2007			<0.01					
6/23/2007	<0.0013		<0.01		<0.0013		0.0017	
9/11/2007			<0.01					
12/11/2007	0.0016		<0.01		<0.0013		<0.01	
3/11/2008			<0.01					
6/23/2008	0.0019		<0.01				<0.01	
6/24/2008					<0.0013			
11/3/2008			<0.01					
12/4/2008	<0.0013		<0.01				<0.01	
12/5/2008					<0.0013			
3/25/2009			<0.01					
7/7/2009	0.0037		<0.01		0.0013			
7/8/2009							<0.01	
9/14/2009			<0.01					
12/20/2009	0.0016		<0.01		<0.0013			
12/21/2009							<0.01	
3/4/2010			<0.01					
6/20/2010	<0.0013		<0.01		<0.0013		<0.01	
9/14/2010			<0.01					
1/6/2011					<0.0013		<0.01	
1/7/2011	0.0033		<0.01					
4/15/2011			<0.01					
7/7/2011	0.0044		<0.01		<0.0013		0.0023	
1/17/2012	0.0038		<0.01		<0.0013		<0.01	
4/4/2012			<0.01					
7/9/2012	0.022				<0.0013		0.0017	
7/10/2012			<0.01					
10/9/2012			<0.01					
1/17/2013					<0.0013		<0.01	
1/18/2013	0.034		<0.01					
4/5/2013			<0.01					
7/16/2013					<0.0013		<0.01	
7/17/2013	0.032		<0.01					
10/11/2013			<0.01					

Prediction Limit

Constituent: Chromium Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7	GWA-7	GWA-8	GWA-8	GWC-1	GWC-1	GWC-11	GWC-11
1/13/2014	0.04				<0.0013		<0.01	
1/14/2014			<0.01					
4/3/2014			<0.01					
7/8/2014							<0.01	
7/9/2014	0.036		<0.01		0.0011 (J)			
10/24/2014			<0.01					
1/13/2015	0.03				<0.0013		<0.01	
1/14/2015			<0.01					
5/10/2015			<0.01					
7/16/2015	0.039				0.0011 (J)		<0.01	
7/17/2015			<0.01					
10/6/2015			<0.01					
1/17/2016					<0.0013			
1/18/2016	0.068		<0.01					
1/19/2016							<0.01	
4/26/2016			<0.01					
7/26/2016							0.0005 (J)	
7/27/2016	0.05				0.0016 (J)			
7/28/2016			<0.01					
8/30/2016			<0.01		0.0015 (J)			
8/31/2016							0.001 (J)	
10/24/2016			<0.01					
10/25/2016	0.0519				0.0018 (J)			
10/26/2016							<0.01	
1/3/2017			<0.01					
1/4/2017					0.0021 (J)		<0.01	
1/6/2017	0.0536							
4/3/2017			0.0004 (J)					
4/4/2017					0.002 (J)			
4/6/2017	0.0447 (J)						0.0007 (J)	
7/11/2017			0.0006 (J)				0.0006 (J)	
7/12/2017					0.0021 (J)			
7/13/2017	0.0269							
10/2/2017			<0.01					
10/3/2017					0.0014 (J)		0.0007 (J)	
10/4/2017	0.0378							
1/9/2018	0.0283 (J)		<0.01					
1/10/2018					0.0017 (J)			
1/11/2018							0.0098 (J)	
7/9/2018			<0.01					
7/10/2018					0.0021 (J)			
7/11/2018	0.018 (J)						<0.01	
1/16/2019		0.018 (J)		<0.01		0.0021 (J)		
1/17/2019								<0.01
3/25/2019		0.017 (J)		<0.01				
3/26/2019						0.0018 (J)		
3/27/2019								<0.01
8/26/2019		0.024 (J)		0.001 (J)				
8/27/2019						0.0062 (J)		0.00092 (J)
10/7/2019				0.00052 (J)				
10/8/2019		0.021 (J)						0.00091 (J)
10/9/2019						0.0019 (J)		

Prediction Limit

Constituent: Chromium Analysis Run 2/17/2020 3:57 PM View: IntraWell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-12	GWC-12	GWC-13	GWC-13	GWC-14	GWC-14	GWC-15	GWC-15
9/29/2000	<0.01		<0.01		<0.01		<0.01	
11/21/2000	<0.01		<0.01		<0.01		<0.01	
1/20/2001	<0.01		<0.01		<0.01		<0.01	
3/14/2001	<0.01		<0.01		<0.01		<0.01	
7/16/2001	<0.01		<0.01		<0.01		<0.01	
11/1/2001	<0.01		<0.01		<0.01		<0.01	
4/25/2002	<0.01		<0.01		<0.01		<0.01	
11/20/2002	0.002		<0.01		0.014		0.0058	
6/6/2003	<0.01		0.003		<0.01		0.0068	
12/12/2003	<0.01		<0.01		<0.01		0.0041	
5/26/2004	<0.01		<0.01		<0.01		<0.01	
12/7/2004	<0.01		<0.01		<0.01		0.0026	
6/21/2005	<0.01		<0.01		<0.01		<0.01	
12/12/2005	<0.01		<0.01		<0.01		<0.01	
4/4/2006					<0.01			
6/27/2006	<0.01		<0.01		<0.01		0.0013	
8/30/2006					<0.01			
12/4/2006	0.0032		0.0017				<0.01	
2/15/2007					<0.01			
6/23/2007	<0.01		<0.01		<0.01		<0.01	
9/11/2007					<0.01			
12/11/2007	<0.01		<0.01		<0.01		<0.01	
3/11/2008					<0.01			
6/23/2008	0.0016		<0.01					
6/24/2008					<0.01		0.0014	
11/3/2008					<0.01			
12/4/2008	<0.01		<0.01		<0.01			
12/5/2008							<0.01	
3/25/2009					<0.01			
7/8/2009	<0.01		<0.01		<0.01		<0.01	
9/14/2009					<0.01			
12/20/2009					<0.01		<0.01	
12/21/2009	<0.01		<0.01					
3/4/2010					<0.01			
6/20/2010	<0.01		<0.01		<0.01		<0.01	
9/14/2010					<0.01			
1/6/2011			<0.01					
1/7/2011	<0.01				0.0016		<0.01	
7/7/2011	<0.01		0.0019		<0.01		<0.01	
9/25/2011					0.0013			
1/17/2012	<0.01		<0.01		<0.01		<0.01	
4/4/2012					<0.01			
7/9/2012	<0.01		<0.01		<0.01		<0.01	
10/9/2012					0.0019			
1/17/2013	<0.01		<0.01					
1/18/2013					0.0017		<0.01	
4/5/2013					0.0019			
7/16/2013	<0.01		<0.01					
7/17/2013					0.0017		<0.01	
10/11/2013					0.0013			
1/13/2014	<0.01		<0.01				<0.01	
1/14/2014					0.001			

Prediction Limit

Constituent: Chromium Analysis Run 2/17/2020 3:57 PM View: IntraWell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-12	GWC-12	GWC-13	GWC-13	GWC-14	GWC-14	GWC-15	GWC-15
7/8/2014	<0.01		<0.01					
7/9/2014					0.0012 (J)		<0.01	
10/24/2014					<0.01			
1/13/2015	<0.01		<0.01				<0.01	
1/14/2015					0.0013			
5/10/2015					<0.01			
7/16/2015	0.001 (J)		<0.01				<0.01	
7/17/2015					0.001 (J)			
10/6/2015					<0.01			
1/17/2016					0.0012 (J)		<0.01	
1/18/2016	<0.01		<0.01					
4/26/2016					<0.01			
7/26/2016			<0.01					
7/27/2016	0.0014 (J)				0.0008 (J)		0.0007 (J)	
8/31/2016	0.0012 (J)		0.0011 (J)					
9/1/2016					0.0015 (J)		0.0011 (J)	
10/25/2016					<0.01		<0.01	
10/26/2016	0.0012 (J)		<0.01					
1/4/2017	0.0012 (J)							
1/5/2017			<0.01		0.001 (J)		<0.01	
4/3/2017							0.0015 (J)	
4/4/2017					0.001 (J)			
4/5/2017	0.0013 (J)							
4/6/2017			0.0011 (J)					
7/10/2017	0.0014 (J)							
7/11/2017					0.0008 (J)		0.0013 (J)	
7/12/2017			0.0007 (J)					
10/2/2017					0.0009 (J)		0.0013 (J)	
10/4/2017	0.0011 (J)		0.0008 (J)					
1/9/2018					0.0006 (J)		0.0012 (J)	
1/10/2018			0.0007 (J)					
1/11/2018	0.001 (J)							
7/9/2018					<0.01			
7/10/2018							<0.01	
7/11/2018	<0.01		0.0019 (J)					
1/16/2019				<0.01		<0.01		
1/17/2019		0.0028 (J)						<0.01
3/26/2019				<0.01		<0.01		<0.01
3/27/2019		<0.01						
8/27/2019		0.00085 (J)		<0.01		0.001 (J)		0.0016 (J)
10/8/2019				<0.01		0.00053 (J)		0.0017 (J)
10/9/2019		0.00081 (J)						

Prediction Limit

Constituent: Chromium Analysis Run 2/17/2020 3:57 PM View: IntraWell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-16	GWC-16	GWC-17	GWC-17	GWC-2	GWC-2	GWC-20	GWC-20
9/29/2000	<0.01		<0.01					
11/21/2000	<0.01		<0.01		<0.01			
1/20/2001	<0.01		<0.01		<0.01			
3/14/2001	<0.01		<0.01		<0.01			
7/16/2001	<0.01		<0.01		<0.01			
11/1/2001	<0.01		<0.01		<0.01			
4/25/2002	<0.01		<0.01		<0.01			
11/20/2002	0.0041		<0.01		<0.01			
6/6/2003			<0.01		<0.01			
12/12/2003	0.0059				<0.01			
5/26/2004	<0.01		<0.01		<0.01			
12/7/2004	<0.01		0.0021		<0.01			
6/21/2005	<0.01		<0.01		<0.01			
12/12/2005	<0.01		<0.01		<0.01			
4/4/2006	<0.01							
6/27/2006	<0.01		<0.01		<0.01			
8/30/2006	<0.01							
12/4/2006			<0.01		<0.01			
2/15/2007	<0.01							
6/23/2007	0.0016		<0.01		<0.01			
9/11/2007	<0.01							
12/11/2007	<0.01		<0.01		<0.01			
3/11/2008	<0.01							
6/24/2008	<0.01		<0.01		<0.01			
11/3/2008	0.0025							
12/4/2008					<0.01			
12/5/2008	<0.01		<0.01					
3/25/2009	<0.01							
7/8/2009	<0.01		<0.01		<0.01			
9/14/2009	<0.01							
12/20/2009	<0.01				<0.01			
12/21/2009			<0.01					
3/4/2010	<0.01							
6/20/2010					<0.01			
6/21/2010	<0.01		<0.01				<0.01	
9/14/2010	<0.01							
1/6/2011					<0.01			
1/7/2011	0.0018		<0.01				0.0018	
4/15/2011	<0.01							
7/7/2011	<0.01						<0.01	
7/8/2011			0.0013				0.0019	
9/25/2011	<0.01							
1/17/2012					<0.01			
1/18/2012	<0.01		<0.01				<0.01	
4/4/2012	<0.01							
7/9/2012					<0.01			
7/10/2012	<0.01		<0.01				0.0013	
10/9/2012	0.0018							
1/17/2013					<0.01			
1/18/2013	<0.01		<0.01				0.0015	
4/5/2013	<0.01							
7/17/2013	<0.01		<0.01		<0.01		<0.01	

Prediction Limit

Constituent: Chromium Analysis Run 2/17/2020 3:57 PM View: IntraWell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-16	GWC-16	GWC-17	GWC-17	GWC-2	GWC-2	GWC-20	GWC-20
10/11/2013	<0.01							
1/13/2014					<0.01			
1/14/2014	<0.01		<0.01				0	
4/3/2014	<0.01							
7/9/2014	<0.01		<0.01		<0.01			
7/10/2014							<0.01	
10/24/2014	<0.01							
1/12/2015							<0.01	
1/13/2015					<0.01			
1/14/2015	<0.01		<0.01					
5/11/2015	<0.01							
7/16/2015	<0.01				<0.01			
7/18/2015			<0.01				<0.01	
10/6/2015	<0.01							
1/17/2016	<0.01				<0.01		<0.01	
1/18/2016			<0.01					
4/26/2016	<0.01							
7/27/2016					0.0008 (J)			
7/28/2016	0.0006 (J)						0.0007 (J)	
7/29/2016			0.0009 (J)					
8/31/2016					<0.01			
9/1/2016	0.0011 (J)		0.0011 (J)				<0.01	
10/25/2016	<0.01						<0.01	
10/26/2016			<0.01		0.001 (J)			
1/4/2017	<0.01						<0.01	
1/5/2017			0.0012 (J)		<0.01			
4/4/2017					0.0008 (J)		0.0011 (J)	
4/5/2017	0.001 (J)		0.0015 (J)					
7/11/2017							0.0009 (J)	
7/12/2017	0.0011 (J)							
7/13/2017			0.0012 (J)		0.0006 (J)			
10/2/2017							0.0009 (J)	
10/3/2017	0.0009 (J)				<0.01			
10/4/2017			0.0055 (J)					
1/10/2018	0.0007 (J)				<0.01		0.0008 (J)	
1/11/2018			0.0009 (J)					
7/9/2018							<0.01	
7/10/2018	<0.01				<0.01			
7/11/2018			<0.01					
1/16/2019				<0.01				
1/17/2019		0.01 (J)						
1/21/2019						<0.01		<0.01
3/25/2019								<0.01
3/26/2019		<0.01		<0.01				
7/30/2019						0.00065 (J)		
8/27/2019						<0.01		
8/28/2019		0.0011 (J)		0.0013 (J)				0.00089 (J)
10/8/2019		0.00099 (J)						
10/9/2019				0.00081 (J)		0.00049 (J)		0.0011 (J)

Prediction Limit

Constituent: Chromium Analysis Run 2/17/2020 3:57 PM View: IntraWell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-21	GWC-21	GWC-22	GWC-22	GWC-9	GWC-9	GWB-4R	GWB-4R
9/29/2000					<0.01		0.021	
11/21/2000					<0.01		0.017	
1/20/2001					<0.01		0.03	
3/14/2001					<0.01		0.019	
7/16/2001					<0.01		0.029	
11/1/2001					<0.01		0.021	
4/25/2002					<0.01		0.03	
11/20/2002					0.014		0.038	
6/6/2003					<0.01		0.028	
12/12/2003					<0.01		0.027	
5/26/2004					<0.01		0.021	
12/7/2004					0.0039		0.016	
6/21/2005					0.002		0.015	
12/12/2005					<0.01		0.022	
6/27/2006					<0.01		0.027	
12/4/2006					0.0019		0.025	
6/23/2007					0.0015		0.023	
12/11/2007					<0.01		0.018	
6/23/2008					0.0015			
6/24/2008							0.022	
12/4/2008					<0.01			
12/5/2008							0.023	
7/7/2009							0.012	
7/8/2009					<0.01			
12/21/2009					<0.01		0.019	
6/20/2010					0.0015			
6/21/2010	0.0019		<0.01				0.01	
1/7/2011	0.0017		<0.01		<0.01		0.023	
7/8/2011	0.0023		<0.01		<0.01		0.017	
1/18/2012	<0.01		<0.01		<0.01		0.0114	
7/10/2012	<0.01		<0.01		<0.01		0.014	
1/18/2013	<0.01		<0.01		<0.01		0.015	
7/17/2013	0.0019		<0.01		<0.01		0.011	
1/14/2014	<0.01		<0.01		<0.01		0.019	
7/9/2014	<0.01				0.0011 (J)		0.012	
7/10/2014			<0.01					
1/12/2015							0.016	
1/14/2015	<0.01		<0.01		<0.01			
7/16/2015							0.0084	
7/17/2015	<0.01				0.0013			
7/18/2015			<0.01					
1/17/2016	<0.01							
1/18/2016			<0.01		<0.01		0.014	
7/28/2016	0.0005 (J)				0.0011 (J)			
7/29/2016			0.0007 (J)				0.0077 (J)	
8/31/2016			<0.01		0.0024 (J)			
9/1/2016	<0.01						0.015	
10/25/2016	<0.01							
10/26/2016			<0.01				0.0106	
10/27/2016					<0.01			
1/4/2017	<0.01		<0.01					
1/6/2017					<0.01		0.0098 (J)	

Prediction Limit

Constituent: Chromium Analysis Run 2/17/2020 3:57 PM View: IntraWell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-21	GWC-21	GWC-22	GWC-22	GWC-9	GWC-9	GWB-4R	GWB-4R
4/4/2017	0.0008 (J)						0.0101	
4/6/2017			0.0006 (J)		0.0019 (J)			
7/11/2017			0.0005 (J)					
7/12/2017					0.0011 (J)		0.0096 (J)	
7/13/2017	0.0006 (J)							
10/3/2017	0.0005 (J)							
10/4/2017			0.0006 (J)		0.0011 (J)		0.0097 (J)	
1/9/2018	0.0007 (J)							
1/11/2018			<0.01		0.001 (J)		0.0109	
7/10/2018	<0.01							
7/11/2018			<0.01		<0.01		0.0055 (J)	
1/16/2019								0.0024 (J)
1/17/2019		0.01						
1/18/2019				<0.01		<0.01		
3/25/2019								0.002 (J)
3/26/2019		<0.01						
3/27/2019				<0.01		<0.01		
8/27/2019				0.00057 (J)				0.0027 (J)
8/28/2019		0.00087 (J)				0.00089 (J)		
10/8/2019		0.00065 (J)						
10/9/2019				0.00072 (J)		0.0009 (J)		0.002 (J)

Prediction Limit

Constituent: Chromium, Lead Analysis Run 2/17/2020 3:57 PM View: Intrawell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-5R	GWB-5R	GWB-6R	GWB-6R	GWA-7	GWA-7	GWA-8	GWA-8
9/29/2000	0.03		0.016		<0.013		<0.005	
11/21/2000	<0.01		0.023		<0.013			
1/20/2001	0.028		0.025		<0.013		<0.005	
3/14/2001			0.021		<0.013		<0.005	
7/16/2001			0.019		<0.013		<0.005	
11/1/2001			0.022		<0.013		<0.005	
4/25/2002	0.021		0.019		<0.013		<0.005	
11/20/2002			0.024				<0.005	
6/6/2003			0.021					
12/12/2003	<0.01		0.0066		0.008		0.0095	
5/26/2004	0.012		0.013		<0.013		<0.005	
12/7/2004	0.019		0.013		<0.013		<0.005	
6/21/2005	0.02		0.0067		<0.013		<0.005	
12/12/2005	<0.01		0.0033		<0.013		<0.005	
4/4/2006							<0.005	
6/27/2006	0.0015		0.0047		<0.013		<0.005	
8/30/2006							<0.005	
12/4/2006	0.0034		0.0084		<0.013		<0.005	
2/15/2007							<0.005	
6/23/2007	<0.01		0.01		<0.013		<0.005	
9/11/2007							<0.005	
12/11/2007	<0.01		0.0049		<0.013		<0.005	
3/11/2008							<0.005	
6/23/2008					<0.013		<0.005	
6/24/2008	<0.01							
11/3/2008							<0.005	
12/4/2008					<0.013		<0.005	
12/5/2008	0.0016		0.009					
3/25/2009							<0.005	
7/7/2009	<0.01		0.0044		<0.013		<0.005	
9/14/2009							<0.005	
12/20/2009					<0.013		<0.005	
12/21/2009	<0.01		0.0055					
3/4/2010							<0.005	
6/20/2010	<0.01		0.002		<0.013		<0.005	
9/14/2010							<0.005	
1/6/2011	0.0017							
1/7/2011			0.0039		<0.013		<0.005	
4/15/2011							<0.005	
7/7/2011	0.008		0.0031		<0.013		<0.005	
9/25/2011							<0.005	
1/17/2012	0.0082				<0.013		<0.005	
1/18/2012			0.0023					
4/4/2012							<0.005	
7/9/2012	0.01				<0.013			
7/10/2012			0.0022				<0.005	
10/9/2012							<0.005	
1/17/2013	0.01							
1/18/2013			<0.0013		<0.013		<0.005	
4/5/2013							<0.005	
7/16/2013	0.0061							
7/17/2013			<0.0013		<0.013		<0.005	

Prediction Limit

Constituent: Chromium, Lead Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-5R	GWB-5R	GWB-6R	GWB-6R	GWA-7	GWA-7	GWA-8	GWA-8
10/11/2013							<0.005	
1/13/2014	0.002				0.013			
1/14/2014			0.0013				<0.005	
4/3/2014							<0.005	
7/9/2014	<0.01		<0.0013		0.0076 (J)		<0.005	
10/24/2014							<0.005	
1/13/2015	<0.01				0.0057 (J)			
1/14/2015			0.0015				<0.005	
5/10/2015							<0.005	
7/16/2015	<0.01				0.009 (J)			
7/17/2015			0.0011 (J)				<0.005	
10/6/2015							<0.005	
1/18/2016	<0.01		0.0011 (J)		0.0094 (J)		<0.005	
4/26/2016							<0.005	
7/27/2016	0.0006 (J)				0.0058			
7/28/2016			0.001 (J)				<0.005	
8/30/2016	<0.01		0.0013 (J)				<0.005	
10/24/2016							<0.005	
10/25/2016					0.0003 (J)			
10/26/2016	<0.01		0.0014 (J)					
1/3/2017	0.001 (J)						0.0001 (J)	
1/5/2017			0.002 (J)					
1/6/2017					0.006			
4/3/2017							0.0002 (J)	
4/6/2017	0.0013 (J)		0.0034 (J)		0.0109			
7/11/2017							0.0001 (J)	
7/12/2017	0.0011 (J)		0.0024 (J)					
7/13/2017					0.007			
10/2/2017							0.0001 (J)	
10/3/2017	0.0012 (J)		0.0022 (J)					
10/4/2017					0.0042 (J)			
1/9/2018			0.0019 (J)		0.0098		0.0001 (J)	
1/10/2018	0.0016 (J)							
7/9/2018							<0.005	
7/10/2018	0.0055 (J)		0.0023 (J)					
7/11/2018					0.0028 (J)			
1/16/2019		<0.01		0.018 (J)				<0.005
3/25/2019						0.0019 (J)		<0.005
3/26/2019		0.072		0.017 (J)				
8/26/2019						0.013 (J)		<0.005
8/27/2019				0.0097 (J)				
8/28/2019		0.0071 (J)						
10/7/2019								<0.005
10/8/2019						0.0098 (J)		
10/9/2019		0.012 (J)		0.011 (J)				

Prediction Limit

Constituent: Lead Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-1	GWC-1	GWC-11	GWC-11	GWC-12	GWC-12	GWC-13	GWC-13
9/29/2000	<0.005		<0.013		<0.005		<0.005	
11/21/2000	<0.005		<0.013		<0.005		<0.005	
1/20/2001	<0.005		<0.013		<0.005		<0.005	
3/14/2001	<0.005		<0.013		<0.005		<0.005	
7/16/2001	<0.005		<0.013		<0.005		<0.005	
11/1/2001	<0.005		<0.013		<0.005		<0.005	
4/25/2002	<0.005		<0.013		<0.005		<0.005	
11/20/2002	<0.005		<0.013		<0.005		<0.005	
6/6/2003	<0.005		0.0068		<0.005		0.0078	
12/12/2003	<0.005		<0.013		<0.005		0.0055	
5/26/2004	<0.005		<0.013		<0.005		<0.005	
12/7/2004	<0.005		<0.013		<0.005		<0.005	
6/21/2005	<0.005		<0.013		<0.005		<0.005	
12/12/2005	<0.005		<0.013		<0.005		<0.005	
6/27/2006	<0.005		<0.013		<0.005		<0.005	
12/4/2006	<0.005		<0.013		<0.005		<0.005	
6/23/2007	<0.005		<0.013		<0.005		<0.005	
12/11/2007	<0.005		<0.013		<0.005		<0.005	
6/23/2008			<0.013		<0.005		<0.005	
6/24/2008	<0.005							
12/4/2008			<0.013		<0.005		<0.005	
12/5/2008	<0.005							
7/7/2009	<0.005							
7/8/2009			<0.013		<0.005		<0.005	
12/20/2009	<0.005							
12/21/2009			<0.013		<0.005		<0.005	
6/20/2010	<0.005		<0.013		<0.005		<0.005	
1/6/2011	<0.005		<0.013				<0.005	
1/7/2011					<0.005			
7/7/2011	<0.005		<0.013		<0.005		<0.005	
1/17/2012	<0.005		<0.013		<0.005		<0.005	
7/9/2012	<0.005		<0.013		<0.005		<0.005	
1/17/2013	<0.005		<0.013		<0.005		<0.005	
7/16/2013	<0.005		<0.013		<0.005		<0.005	
1/13/2014	<0.005		<0.013		0.004		<0.005	
7/8/2014			<0.013		<0.005		<0.005	
7/9/2014	<0.005							
1/13/2015	<0.005		<0.013		<0.005		<0.005	
7/16/2015	<0.005		<0.013		0.0044 (J)		<0.005	
1/17/2016	<0.005							
1/18/2016					0.0034 (J)		<0.005	
1/19/2016			<0.013					
7/26/2016			0.0001 (J)				<0.005	
7/27/2016	<0.005				0.0001 (J)			
8/30/2016	<0.005							
8/31/2016			0.0002 (J)		0.0001 (J)		<0.005	
10/25/2016	<0.005							
10/26/2016			0.0001 (J)		0.0001 (J)		<0.005	
1/4/2017	<0.005		0.0002 (J)		<0.005			
1/5/2017							0.0002 (J)	
4/4/2017	<0.005							
4/5/2017					0.0003 (J)			

Prediction Limit

Constituent: Lead Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-1	GWC-1	GWC-11	GWC-11	GWC-12	GWC-12	GWC-13	GWC-13
4/6/2017			0.0003 (J)				0.0005 (J)	
7/10/2017					0.0003 (J)			
7/11/2017			0.0002 (J)					
7/12/2017	<0.005						0.0005 (J)	
10/3/2017	<0.005		0.0003 (J)					
10/4/2017					0.0001 (J)		0.0007 (J)	
1/10/2018	0.0001 (J)						0.0009 (J)	
1/11/2018			0.0003 (J)		0.0002 (J)			
7/10/2018	<0.005							
7/11/2018					<0.005		0.0015 (J)	
1/16/2019		<0.005						0.00061 (J)
1/17/2019				0.00028 (J)		<0.005		
3/26/2019		<0.005						<0.005
3/27/2019				0.00029 (J)		<0.005		
8/27/2019		<0.005		0.00021 (J)		<0.005		0.0001 (J)
10/8/2019				0.00028 (J)				0.00013 (J)
10/9/2019		<0.005				6.6E-05 (J)		

Prediction Limit

Constituent: Lead Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-14	GWC-14	GWC-15	GWC-15	GWC-16	GWC-16	GWC-17	GWC-17
9/29/2000	<0.005		<0.005		<0.005		<0.005	
11/21/2000	<0.005		<0.005		<0.005		<0.005	
1/20/2001	<0.005		<0.005		<0.005		<0.005	
3/14/2001	<0.005		<0.005		<0.005		<0.005	
7/16/2001	<0.005		<0.005		<0.005		<0.005	
11/1/2001	<0.005		<0.005		<0.005		<0.005	
4/25/2002	<0.005		<0.005		<0.005		<0.005	
11/20/2002			<0.005		<0.005		<0.005	
6/6/2003	<0.005		<0.005				<0.005	
12/12/2003	<0.005		0.0065		0.017		<0.005	
5/26/2004	<0.005		<0.005		<0.005		<0.005	
12/7/2004	<0.005		<0.005		<0.005		<0.005	
6/21/2005	<0.005		<0.005		<0.005		<0.005	
12/12/2005	<0.005		<0.005		<0.005		<0.005	
4/4/2006	<0.005				<0.005			
6/27/2006	<0.005		<0.005		<0.005		<0.005	
8/30/2006	<0.005				<0.005			
12/4/2006	<0.005		<0.005		<0.005		<0.005	
2/15/2007	<0.005				<0.005			
6/23/2007	<0.005		<0.005		<0.005		<0.005	
9/11/2007	<0.005				<0.005			
12/11/2007	<0.005		<0.005		<0.005		<0.005	
3/11/2008	<0.005				<0.005			
6/24/2008	<0.005		<0.005		<0.005		<0.005	
11/3/2008	<0.005				<0.005			
12/4/2008	<0.005							
12/5/2008			<0.005		<0.005		<0.005	
3/25/2009	<0.005				<0.005			
7/8/2009	<0.005		<0.005		<0.005		<0.005	
9/14/2009	<0.005				<0.005			
12/20/2009	<0.005		<0.005		<0.005			
12/21/2009							<0.005	
3/4/2010	<0.005				<0.005			
6/20/2010	<0.005		<0.005					
6/21/2010					<0.005		<0.005	
9/14/2010	<0.005				<0.005			
1/7/2011	<0.005		<0.005		<0.005		<0.005	
4/15/2011	<0.005				<0.005			
7/7/2011	<0.005		<0.005		<0.005			
7/8/2011							<0.005	
9/25/2011	<0.005				<0.005			
1/17/2012	<0.005		<0.005					
1/18/2012					<0.005		<0.005	
4/4/2012	<0.005				<0.005			
7/9/2012	<0.005		<0.005					
7/10/2012					<0.005		<0.005	
10/9/2012	<0.005				<0.005			
1/18/2013	<0.005		<0.005		<0.005		<0.005	
4/5/2013	<0.005				<0.005			
7/17/2013	<0.005		<0.005		<0.005		<0.005	
10/11/2013	<0.005				<0.005			
1/13/2014			<0.005					

Prediction Limit

Constituent: Lead Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-2	GWC-2	GWC-20	GWC-20	GWC-21	GWC-21	GWC-22	GWC-22
11/21/2000	0.0069							
1/20/2001	<0.005							
3/14/2001	<0.005							
7/16/2001	<0.005							
11/1/2001	<0.005							
4/25/2002	<0.005							
11/20/2002	<0.005							
6/6/2003	<0.005							
12/12/2003	<0.005							
5/26/2004	<0.005							
12/7/2004	<0.005							
6/21/2005	<0.005							
12/12/2005	<0.005							
6/27/2006	<0.005							
12/4/2006	<0.005							
6/23/2007	<0.005							
12/11/2007	<0.005							
6/24/2008	<0.005							
12/4/2008	<0.005							
7/8/2009	<0.005							
12/20/2009	<0.005							
6/20/2010	<0.005							
6/21/2010			<0.005		<0.005			<0.013
1/6/2011	<0.005							
1/7/2011			<0.005		<0.005			<0.013
7/7/2011			<0.005					
7/8/2011			<0.005		<0.005			<0.013
1/17/2012	<0.005							
1/18/2012			<0.005		<0.005			<0.013
7/9/2012	<0.005							
7/10/2012			<0.005		<0.005			<0.013
1/17/2013	<0.005							
1/18/2013			<0.005		<0.005			<0.013
7/17/2013	<0.005		<0.005		<0.005			<0.013
1/13/2014	<0.005							
1/14/2014			<0.005		<0.005			<0.013
7/9/2014	<0.005				<0.005			
7/10/2014			<0.005					<0.013
1/12/2015			<0.005					
1/13/2015	<0.005							
1/14/2015					<0.005			<0.013
7/16/2015	<0.005							
7/17/2015					<0.005			
7/18/2015			<0.005					<0.013
1/17/2016	<0.005		<0.005		<0.005			
1/18/2016								<0.013
7/27/2016	<0.005							
7/28/2016			<0.005		<0.005			
7/29/2016								0.0004 (J)
8/31/2016	<0.005							0.0003 (J)
9/1/2016			<0.005		<0.005			
10/25/2016			0.0001 (J)		<0.005			

Prediction Limit

Constituent: Lead Analysis Run 2/17/2020 3:57 PM View: IntraWell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-2	GWC-2	GWC-20	GWC-20	GWC-21	GWC-21	GWC-22	GWC-22
10/26/2016	<0.005						0.0003 (J)	
1/4/2017			<0.005		<0.005		0.0003 (J)	
1/5/2017	<0.005							
4/4/2017	0.0002 (J)		7E-05 (J)		9E-05 (J)			
4/6/2017							0.0003 (J)	
7/11/2017			<0.005				0.0002 (J)	
7/13/2017	0.0003 (J)				7E-05 (J)			
10/2/2017			<0.005					
10/3/2017	<0.005				0.0001 (J)			
10/4/2017							0.0008 (J)	
1/9/2018					9E-05 (J)			
1/10/2018	8E-05 (J)		0.0002 (J)					
1/11/2018							0.0009 (J)	
7/9/2018			<0.005					
7/10/2018	<0.005				<0.005			
7/11/2018							0.001 (J)	
1/17/2019						<0.005		
1/18/2019								0.0012 (J)
1/21/2019		<0.005		<0.005				
3/25/2019				<0.005				
3/26/2019						<0.005		
3/27/2019								0.00047 (J)
7/30/2019		0.0002 (J)						
8/27/2019		<0.005						0.003 (J)
8/28/2019				6.5E-05 (J)		0.00018 (J)		
10/8/2019						0.00016 (J)		
10/9/2019		6.4E-05 (J)		0.00018 (J)				0.00032 (J)

Prediction Limit

Constituent: Lead Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWC-9	GWB-4R	GWB-4R	GWB-5R	GWB-5R	GWB-6R	GWB-6R
9/29/2000	<0.005		0.0083		0.017		<0.025	
11/21/2000	<0.005		0.0052		<0.005		<0.025	
1/20/2001	<0.005		<0.005		0.011		<0.025	
3/14/2001	<0.005		<0.005		0.026		<0.025	
7/16/2001	<0.005		0.011		0.043		<0.025	
11/1/2001	<0.005		<0.005		0.075		<0.025	
4/25/2002	<0.005		<0.005		<0.005		<0.025	
11/20/2002					0.057		0.0057 (J)	
6/6/2003	<0.005						0.013	
12/12/2003	<0.005		0.0072		<0.005		<0.025	
5/26/2004	<0.005		0.0055		0.011		<0.025	
12/7/2004	0.0051		<0.005		0.038		<0.025	
6/21/2005	<0.005		<0.005		0.036		<0.025	
12/12/2005	<0.005		<0.005		<0.005		<0.025	
6/27/2006	<0.005				<0.005		<0.025	
12/4/2006	<0.005				<0.005		<0.025	
6/23/2007	<0.005		<0.005		<0.005		<0.025	
12/11/2007	<0.005		<0.005		<0.005		<0.025	
6/23/2008	<0.005							
6/24/2008					<0.005		0.02	
12/4/2008	<0.005							
12/5/2008			<0.005		<0.005		<0.025	
7/7/2009			<0.005		<0.005		<0.025	
7/8/2009	<0.005							
12/21/2009	<0.005		<0.005		<0.005		<0.025	
6/20/2010	<0.005				<0.005		<0.025	
6/21/2010			<0.005					
1/6/2011					<0.005			
1/7/2011	<0.005		<0.005				<0.025	
7/7/2011					<0.005		<0.025	
7/8/2011	<0.005		<0.005					
1/17/2012					<0.005			
1/18/2012	<0.005		<0.005				<0.025	
7/9/2012					<0.005			
7/10/2012	<0.005		<0.005				<0.025	
1/17/2013					<0.005			
1/18/2013	<0.005		<0.005				<0.025	
7/16/2013					<0.005			
7/17/2013	<0.005		<0.005				<0.025	
1/13/2014					<0.005			
1/14/2014	<0.005		0.005				<0.025	
7/9/2014	<0.005		<0.005		<0.005		<0.025	
1/12/2015			<0.005					
1/13/2015					<0.005			
1/14/2015	<0.005						<0.025	
7/16/2015			<0.005		<0.005			
7/17/2015	<0.005						<0.025	
1/18/2016	<0.005		0.0055 (J)		<0.005		<0.025	
7/27/2016					<0.005			
7/28/2016	<0.005						<0.025	
7/29/2016			0.003 (J)					
8/30/2016					<0.005		<0.025	

Prediction Limit

Constituent: Lead Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWC-9	GWB-4R	GWB-4R	GWB-5R	GWB-5R	GWB-6R	GWB-6R
8/31/2016	0.0007 (J)							
10/26/2016			0.0057		0.0002 (J)		<0.025	
10/27/2016	<0.005							
1/3/2017					0.0001 (J)			
1/5/2017							0.0003 (J)	
1/6/2017	<0.005		0.0053					
4/4/2017			0.0092					
4/6/2017	0.0001 (J)				0.0003 (J)		0.0002 (J)	
7/12/2017	<0.005		0.006		0.0002 (J)		0.0002 (J)	
10/3/2017					0.0002 (J)		0.0001 (J)	
10/4/2017	9E-05 (J)		0.0057					
1/9/2018							0.0003 (J)	
1/10/2018					0.0003 (J)			
1/11/2018	0.0002 (J)		0.0085					
7/10/2018					<0.005		<0.025	
7/11/2018	<0.005		0.0029 (J)					
1/16/2019				<0.005		<0.005		<0.025
1/18/2019		<0.005						
3/25/2019				<0.005				
3/26/2019						<0.005		<0.025
3/27/2019		<0.005						
8/27/2019				0.001 (J)				0.0011 (J)
8/28/2019		6.1E-05 (J)				0.0011 (J)		
10/9/2019		<0.005		0.00041 (J)		0.0025 (J)		0.00033 (J)

Prediction Limit

Constituent: Selenium Analysis Run 2/17/2020 3:57 PM View: Intrawell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7	GWA-7	GWA-8	GWA-8	GWC-1	GWC-1	GWC-11	GWC-11
9/29/2000	<0.013		<0.01		<0.01		<0.01	
11/21/2000	<0.013				<0.01		<0.01	
1/20/2001	<0.013		<0.01		0.017		<0.01	
3/14/2001	<0.013		<0.01		<0.01		<0.01	
7/16/2001	<0.013		<0.01		<0.01		<0.01	
11/1/2001	<0.013		<0.01		<0.01		<0.01	
4/25/2002	<0.013		<0.01		0.012		<0.01	
11/20/2002			<0.01				<0.01	
6/6/2003	<0.013		<0.01				<0.01	
12/12/2003	<0.013		<0.01		0.013		<0.01	
5/26/2004	<0.013		<0.01		0.017		<0.01	
12/7/2004	<0.013		<0.01		0.011		<0.01	
6/21/2005	<0.013		<0.01		0.0088		<0.01	
12/12/2005	<0.013		<0.01		0.011		<0.01	
4/4/2006			<0.01					
6/27/2006	<0.013		<0.01		<0.01		<0.01	
8/30/2006			<0.01					
12/4/2006	<0.013		<0.01		<0.01		<0.01	
2/15/2007			<0.01					
6/23/2007	<0.013		<0.01		<0.01		<0.01	
9/11/2007			<0.01					
12/11/2007	<0.013		<0.01		<0.01		<0.01	
3/11/2008			<0.01					
6/23/2008	<0.013		<0.01				<0.01	
6/24/2008					<0.01			
11/3/2008			<0.01					
12/4/2008	<0.013		<0.01				<0.01	
12/5/2008					<0.01			
3/25/2009			<0.01					
7/7/2009	<0.013		<0.01		<0.01			
7/8/2009							<0.01	
9/14/2009			<0.01					
12/20/2009	<0.013		<0.01		<0.01			
12/21/2009							<0.01	
3/4/2010			<0.01					
6/20/2010	<0.013		<0.01		<0.01		<0.01	
9/14/2010			<0.01					
1/6/2011					<0.01		<0.01	
1/7/2011	<0.013		<0.01					
4/15/2011			<0.01					
7/7/2011	<0.013		<0.01		<0.01		<0.01	
9/25/2011			<0.01					
1/17/2012	<0.013		<0.01		<0.01		0.023	
7/9/2012	<0.013				<0.01		0.016	
7/10/2012			<0.01					
10/9/2012			<0.01					
1/17/2013					<0.01		0.033	
1/18/2013	0.009		<0.01					
4/5/2013			<0.01					
7/16/2013					0.012		0.0068	
7/17/2013	0.011		<0.01					
10/11/2013			<0.01					

Prediction Limit

Constituent: Selenium Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7	GWA-7	GWA-8	GWA-8	GWC-1	GWC-1	GWC-11	GWC-11
1/13/2014	0.012				<0.01		0.036	
1/14/2014			<0.01					
4/3/2014			<0.01					
7/8/2014							0.017	
7/9/2014	0.011		<0.01		<0.01			
10/24/2014			<0.01					
1/13/2015	0.0092				<0.01		0.027	
1/14/2015			<0.01					
5/10/2015			<0.01					
7/16/2015	0.014				<0.01		<0.01	
7/17/2015			<0.01					
10/6/2015			<0.01					
1/17/2016					0.023			
1/18/2016	0.023		<0.01					
1/19/2016							0.023	
4/26/2016			<0.01					
7/26/2016							0.0056 (J)	
7/27/2016	0.0323				0.002 (J)			
7/28/2016			0.001 (J)					
8/30/2016			<0.01		0.002 (J)			
8/31/2016							0.0084 (J)	
9/1/2016	0.0438							
10/24/2016			0.0013 (J)					
10/25/2016	0.031				0.0022 (J)			
10/26/2016							0.0052 (J)	
1/3/2017			<0.01					
1/4/2017					0.0016 (J)		0.0062 (J)	
1/6/2017	0.0324							
4/3/2017			<0.01					
4/4/2017					0.0052 (J)			
4/6/2017	0.0188 (J)						0.0195	
7/11/2017			<0.01				<0.01	
7/12/2017					0.0024 (J)			
7/13/2017	0.0118							
10/2/2017			<0.01					
10/3/2017					<0.01		0.0079 (J)	
10/4/2017	0.0195							
1/9/2018			<0.01					
1/10/2018					0.0018 (J)			
1/11/2018							0.0054 (J)	
7/9/2018			<0.01					
7/10/2018					0.0026 (J)			
7/11/2018							0.0022 (J)	
1/16/2019		0.0071 (J)		<0.01		0.0018 (J)		
1/17/2019								<0.01
3/25/2019				<0.01				
3/26/2019						0.0023 (J)		
3/27/2019								0.01 (J)
8/26/2019				<0.01				
8/27/2019						0.0016 (J)		<0.01
10/7/2019				<0.01				
10/8/2019		0.0072 (J)						<0.01

Prediction Limit

Constituent: Selenium Analysis Run 2/17/2020 3:57 PM View: IntraWell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

10/9/2019	GWA-7	GWA-7	GWA-8	GWA-8	GWC-1	GWC-1	GWC-11	GWC-11
						0.0024 (J)		

Prediction Limit

Constituent: Selenium Analysis Run 2/17/2020 3:57 PM View: Intrawell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-12	GWC-12	GWC-14	GWC-14	GWC-15	GWC-15	GWC-16	GWC-16
9/29/2000	<0.01		<0.005		<0.01		<0.005	
11/21/2000	<0.01		0.052		<0.01		<0.005	
1/20/2001	<0.01		0.053		<0.01		<0.005	
3/14/2001	<0.01		0.049		<0.01		<0.005	
7/16/2001	<0.01		0.038		<0.01		<0.005	
11/1/2001	<0.01		0.022		<0.01		<0.005	
4/25/2002	<0.01				<0.01		<0.005	
11/20/2002	<0.01		0.018		0.0094		<0.005	
6/6/2003	<0.01		<0.005					
12/12/2003	<0.01		<0.005					
5/26/2004	<0.01		0.023		<0.01		0.0053	
12/7/2004	<0.01		0.019		<0.01		<0.005	
6/21/2005	<0.01		0.019		<0.01		<0.005	
12/12/2005	<0.01		0.0095		<0.01		<0.005	
4/4/2006			0.033				<0.005	
6/27/2006	<0.01		<0.005		<0.01		<0.005	
8/30/2006			<0.005				<0.005	
12/4/2006	<0.01		0.032		<0.01		<0.005	
2/15/2007			0.034				<0.005	
6/23/2007	<0.01		<0.005		<0.01		<0.005	
9/11/2007			0.022				<0.005	
12/11/2007	<0.01		0.045		<0.01		<0.005	
3/11/2008			0.02				<0.005	
6/23/2008	<0.01							
6/24/2008			<0.005		<0.01		<0.005	
11/3/2008			0.052				<0.005	
12/4/2008	<0.01		0.054					
12/5/2008					<0.01		<0.005	
3/25/2009			0.072				<0.005	
7/8/2009	<0.01		0.021		<0.01		<0.005	
9/14/2009			0.015				<0.005	
12/20/2009			0.072		<0.01		<0.005	
12/21/2009	<0.01							
3/4/2010			0.083				<0.005	
6/20/2010	<0.01		0.1		<0.01			
6/21/2010							<0.005	
9/14/2010			0.085				<0.005	
1/7/2011	<0.01		0.028		<0.01		<0.005	
4/15/2011			<0.005				<0.005	
7/7/2011	<0.01		<0.005		<0.01		<0.005	
9/25/2011			0.02				<0.005	
1/17/2012	<0.01		0.016		<0.01			
1/18/2012							<0.005	
4/4/2012			0.0156				<0.005	
7/9/2012	<0.01		<0.005					
7/10/2012							<0.005	
10/9/2012			0.0094				<0.005	
1/17/2013	<0.01							
1/18/2013			0.0067				<0.005	
4/5/2013			0.0077				<0.005	
7/16/2013	<0.01							
7/17/2013			0.01		<0.01		<0.005	

Prediction Limit

Constituent: Selenium Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-12	GWC-12	GWC-14	GWC-14	GWC-15	GWC-15	GWC-16	GWC-16
10/11/2013			0.0087				0.0069	
1/13/2014	<0.01				<0.01			
1/14/2014			0.012				<0.005	
4/3/2014			0.022				<0.005	
7/8/2014	<0.01							
7/9/2014			0.0089		<0.01		0.005	
10/24/2014			0.017				<0.005	
1/13/2015	<0.01				<0.01			
1/14/2015			<0.005				<0.005	
5/10/2015			<0.005					
5/11/2015							<0.005	
7/16/2015	<0.01				<0.01		<0.005	
7/17/2015			<0.005					
10/6/2015			<0.005				0.0073	
1/17/2016			<0.005		<0.01		0.0031 (J)	
1/18/2016	<0.01							
4/26/2016			0.00428 (J)				0.00497 (J)	
7/27/2016	0.0025 (J)		0.0038 (J)		<0.01			
7/28/2016							0.0076 (J)	
8/31/2016	0.0019 (J)							
9/1/2016			0.0056 (J)		<0.01		0.0052 (J)	
10/25/2016			0.0023 (J)		<0.01		0.0085 (J)	
10/26/2016	0.002 (J)							
1/4/2017	<0.01						0.0048 (J)	
1/5/2017			0.0038 (J)		<0.01			
4/3/2017					<0.01			
4/4/2017			0.0064 (J)					
4/5/2017	<0.01						0.0068 (J)	
7/10/2017	<0.01							
7/11/2017			0.0044 (J)		<0.01			
7/12/2017							0.0048 (J)	
10/2/2017			0.004 (J)		<0.01			
10/3/2017							0.0051 (J)	
10/4/2017	<0.01							
1/9/2018			0.0019 (J)		0.0019 (J)			
1/10/2018							0.0018 (J)	
1/11/2018	<0.01							
7/9/2018			0.0029 (J)					
7/10/2018					0.0086 (J)		0.0045 (J)	
7/11/2018	<0.01							
1/16/2019				0.0016 (J)				
1/17/2019		<0.01				0.0029 (J)		0.0031 (J)
3/26/2019				0.0022 (J)		0.0074 (J)		0.0033 (J)
3/27/2019		<0.01						
8/27/2019		<0.01		0.0035 (J)		0.0092 (J)		
8/28/2019								0.004 (J)
10/8/2019				0.0026 (J)		0.014		0.0023 (J)
10/9/2019		<0.01						

Prediction Limit

Constituent: Selenium Analysis Run 2/17/2020 3:57 PM View: Intrawell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-17	GWC-2	GWC-2	GWC-20	GWC-20	GWC-21	GWC-21
9/29/2000	<0.01							
11/21/2000	<0.01		<0.01					
1/20/2001	<0.01		<0.01					
3/14/2001	<0.01		<0.01					
7/16/2001	<0.01		<0.01					
11/1/2001	<0.01		<0.01					
4/25/2002	<0.01		<0.01					
11/20/2002	<0.01		<0.01					
6/6/2003	<0.01		<0.01					
12/12/2003	<0.01		<0.01					
5/26/2004	<0.01		0.005					
12/7/2004	<0.01		<0.01					
6/21/2005	<0.01		<0.01					
12/12/2005	<0.01		<0.01					
6/27/2006	<0.01		<0.01					
12/4/2006	<0.01		<0.01					
6/23/2007	<0.01		<0.01					
12/11/2007	<0.01		<0.01					
6/24/2008	<0.01		<0.01					
12/4/2008			<0.01					
12/5/2008	<0.01							
7/8/2009	<0.01		<0.01					
12/20/2009			<0.01					
12/21/2009	<0.01							
6/20/2010			<0.01					
6/21/2010	<0.01				<0.01		0.048	
1/6/2011			<0.01					
1/7/2011	<0.01				<0.01		0.014	
7/7/2011					<0.01			
7/8/2011	<0.01				<0.01		0.018	
1/17/2012			<0.01					
1/18/2012	<0.01				<0.01		<0.013	
7/9/2012			<0.01					
7/10/2012	<0.01				<0.01		0.02	
1/17/2013			<0.01					
1/18/2013	<0.01				0.005		0.015	
7/17/2013	<0.01		<0.01		<0.01		0.037	
1/13/2014			<0.01					
1/14/2014	<0.01				<0.01		0.043	
7/9/2014	<0.01		<0.01				0.023	
7/10/2014					<0.01			
1/12/2015					<0.01			
1/13/2015			<0.01					
1/14/2015	<0.01						0.022	
7/16/2015			<0.01					
7/17/2015							0.033	
7/18/2015	<0.01				<0.01			
1/17/2016			<0.01		<0.01		0.021	
1/18/2016	<0.01							
7/27/2016			0.002 (J)					
7/28/2016					<0.01		0.0341	
7/29/2016	0.0011 (J)							

Prediction Limit

Constituent: Selenium Analysis Run 2/17/2020 3:57 PM View: IntraWell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-17	GWC-2	GWC-2	GWC-20	GWC-20	GWC-21	GWC-21
8/31/2016			<0.01					
9/1/2016	0.0012 (J)				<0.01		0.0297	
10/25/2016					0.0014 (J)		0.0095 (J)	
10/26/2016	0.0013 (J)		0.0035 (J)					
1/4/2017					0.0014 (J)		0.022	
1/5/2017	0.0012 (J)		<0.01					
4/4/2017			<0.01		<0.01		0.0236	
4/5/2017	<0.01							
7/11/2017					<0.01			
7/13/2017	0.0018 (J)		<0.01				0.013	
10/2/2017					<0.01			
10/3/2017			<0.01				0.01 (J)	
10/4/2017	0.0042 (J)							
1/9/2018							0.0162	
1/10/2018			<0.01		<0.01			
1/11/2018	<0.01							
7/9/2018					<0.01			
7/10/2018			<0.01				0.016	
7/11/2018	0.0016 (J)							
1/16/2019		<0.01						
1/17/2019								0.011
1/21/2019				<0.01		0.0014 (J)		
3/25/2019						<0.01		
3/26/2019		<0.01						0.022
7/30/2019				<0.01				
8/27/2019				<0.01				
8/28/2019		<0.01				0.0014 (J)		0.019
10/8/2019								0.019
10/9/2019		<0.01		<0.01		<0.01		

Prediction Limit

Constituent: Selenium Analysis Run 2/17/2020 3:57 PM View: IntraWell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-22	GWC-22	GWC-9	GWC-9	GWB-4R	GWB-4R	GWB-5R	GWB-5R
9/29/2000			<0.01		<0.01		<0.01	
11/21/2000			<0.01		<0.01		<0.01	
1/20/2001			<0.01				<0.01	
3/14/2001			<0.01		<0.01		<0.01	
7/16/2001			<0.01				<0.01	
11/1/2001			<0.01				<0.01	
4/25/2002			<0.01		0.01		<0.01	
11/20/2002			<0.01				0.0064	
6/6/2003			<0.01				0.011	
12/12/2003			<0.01				<0.01	
5/26/2004			<0.01				0.007	
12/7/2004			<0.01				<0.01	
6/21/2005			0.0062		0.0087		0.0063	
12/12/2005			<0.01				<0.01	
6/27/2006			<0.01		<0.01		<0.01	
12/4/2006			<0.01		<0.01		<0.01	
6/23/2007			<0.01		<0.01		<0.01	
12/11/2007			<0.01		<0.01		<0.01	
6/23/2008			<0.01					
6/24/2008					<0.01		<0.01	
12/4/2008			<0.01					
12/5/2008					<0.01		<0.01	
7/7/2009					<0.01		<0.01	
7/8/2009			<0.01					
12/21/2009			<0.01		<0.01		<0.01	
6/20/2010			<0.01				<0.01	
6/21/2010	<0.01				<0.01			
1/6/2011							<0.01	
1/7/2011	<0.01		<0.01		<0.01			
7/7/2011							<0.01	
7/8/2011	<0.01		<0.01		<0.01			
1/17/2012							<0.01	
1/18/2012	<0.01		<0.01		<0.01			
7/9/2012							<0.01	
7/10/2012	<0.01		<0.01		<0.01			
1/17/2013							<0.01	
1/18/2013	<0.01		<0.01		<0.01			
7/16/2013							<0.01	
7/17/2013	<0.01		<0.01		<0.01			
1/13/2014							<0.01	
1/14/2014	<0.01		<0.01		<0.01			
7/9/2014			<0.01		<0.01		<0.01	
7/10/2014	<0.01							
1/12/2015					<0.01			
1/13/2015							<0.01	
1/14/2015	<0.01		<0.01					
7/16/2015					<0.01		<0.01	
7/17/2015			<0.01					
7/18/2015	<0.01							
1/18/2016	<0.01		<0.01		<0.01		<0.01	
7/27/2016							<0.01	
7/28/2016			<0.01					

Prediction Limit

Constituent: Selenium Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-22	GWC-22	GWC-9	GWC-9	GWB-4R	GWB-4R	GWB-5R	GWB-5R
7/29/2016	0.0022 (J)				0.0036 (J)			
8/30/2016							<0.01	
8/31/2016	0.0014 (J)		<0.01					
9/1/2016					0.0067 (J)			
10/26/2016	0.001 (J)				0.0042 (J)		<0.01	
10/27/2016			<0.01					
1/3/2017							<0.01	
1/4/2017	<0.01							
1/6/2017			<0.01		0.0042 (J)			
4/4/2017					0.0043 (J)			
4/6/2017	<0.01		<0.01				<0.01	
7/11/2017	<0.01							
7/12/2017			<0.01		0.0033 (J)		<0.01	
10/3/2017							<0.01	
10/4/2017	0.0023 (J)		<0.01		0.0038 (J)			
1/10/2018							<0.01	
1/11/2018	<0.01		<0.01		0.0029 (J)			
7/10/2018							0.0018 (J)	
7/11/2018	<0.01		<0.01		0.0015 (J)			
1/16/2019						<0.01		<0.01
1/18/2019		<0.01		<0.01				
3/25/2019						<0.01		
3/26/2019								<0.01
3/27/2019		<0.01		<0.01				
8/27/2019		<0.01				<0.01		
8/28/2019				<0.01				0.0033 (J)
10/9/2019		<0.01		<0.01		<0.01		0.0073 (J)

Prediction Limit

Constituent: Selenium, Vanadium Analysis Run 2/17/2020 3:57 PM View: IntraWell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-6R	GWB-6R	GWA-7	GWA-7	GWA-8	GWA-8	GWC-1	GWC-1
9/29/2000	<0.05		<0.0025		<0.01		<0.01	
11/21/2000	<0.05		<0.0025				<0.01	
1/20/2001	<0.05		<0.0025		<0.01		<0.01	
3/14/2001	<0.05		<0.0025		<0.01		<0.01	
7/16/2001	<0.05		<0.0025		<0.01		<0.01	
11/1/2001	<0.05		<0.0025		<0.01		<0.01	
4/25/2002	<0.05		<0.0025		<0.01		<0.01	
11/20/2002	0.008				<0.01		0.0069	
6/6/2003	0.0066		0.047					
12/12/2003	0.0056		0.0086				<0.01	
5/26/2004	0.0084		<0.0025		<0.01		<0.01	
12/7/2004	<0.05		<0.0025		<0.01		<0.01	
6/21/2005	0.0062		<0.0025		<0.01		<0.01	
12/12/2005	<0.05		<0.0025		<0.01		<0.01	
4/4/2006					<0.01			
6/27/2006	<0.05		<0.0025		<0.01		0.0029	
8/30/2006					<0.01			
12/4/2006	<0.05		0.0027		<0.01		0.0047	
2/15/2007					<0.01			
6/23/2007	<0.05		0.0027		<0.01		0.0029	
9/11/2007					<0.01			
12/11/2007	<0.05		0.0033		<0.01		<0.01	
3/11/2008					<0.01			
6/23/2008			0.0074		<0.01			
6/24/2008	<0.05						<0.01	
11/3/2008					<0.01			
12/4/2008			0.0084		<0.01			
12/5/2008	<0.05						<0.01	
3/25/2009					<0.01			
7/7/2009	<0.05		0.023		<0.01		<0.01	
9/14/2009					<0.01			
12/20/2009			0.007		<0.01		<0.01	
12/21/2009	<0.05							
3/4/2010					<0.01			
6/20/2010	<0.05		0.0047		<0.01		0.0037	
9/14/2010					<0.01			
1/6/2011							<0.01	
1/7/2011	<0.05		0.018		<0.01			
4/15/2011					<0.01			
7/7/2011	<0.05		0.019		<0.01		0.0045	
9/25/2011					<0.01			
1/17/2012			0.0298		<0.01		<0.01	
1/18/2012	<0.05							
4/4/2012					<0.01			
7/9/2012			0.14				0.0026	
7/10/2012	<0.05				<0.01			
10/9/2012					<0.01			
1/17/2013							<0.01	
1/18/2013	<0.05		0.21		<0.01			
4/5/2013					<0.01			
7/16/2013							<0.01	
7/17/2013	<0.05		0.18		<0.01			

Prediction Limit

Constituent: Selenium, Vanadium Analysis Run 2/17/2020 3:57 PM View: Intrawell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-6R	GWB-6R	GWA-7	GWA-7	GWA-8	GWA-8	GWC-1	GWC-1
10/11/2013					<0.01			
1/13/2014			0.24				<0.01	
1/14/2014	<0.05				<0.01			
4/3/2014					0.0015 (J)			
7/9/2014	<0.05		0.22		0.0012 (J)		0.0041 (J)	
10/24/2014					<0.01			
1/13/2015			0.19				0.0029 (J)	
1/14/2015	<0.05				<0.01			
5/10/2015					<0.01			
7/16/2015			0.23				0.0034 (J)	
7/17/2015	<0.05				<0.01			
10/6/2015					0.0012 (J)			
1/17/2016							0.0046 (J)	
1/18/2016	<0.05		0.41		0.00079 (J)			
4/26/2016					<0.01			
7/27/2016			0.397				0.0064 (J)	
7/28/2016	<0.05				<0.01			
8/30/2016	<0.05							
10/24/2016					<0.01			
10/25/2016			0.425					
10/26/2016	<0.05							
1/3/2017					<0.01			
1/4/2017							<0.01	
1/5/2017	0.0014 (J)							
1/6/2017			0.41					
4/3/2017					<0.01			
4/4/2017							0.0061 (J)	
4/6/2017	<0.05		0.297					
7/11/2017					<0.01			
7/12/2017	<0.05						0.0067 (J)	
7/13/2017			0.194					
10/2/2017					<0.01			
10/3/2017	<0.05							
10/4/2017			0.316					
1/9/2018	<0.05		0.194		0.0014 (J)			
1/10/2018							0.0056 (J)	
7/9/2018					<0.01			
7/10/2018	0.0016 (J)						0.0056 (J)	
7/11/2018			0.15					
1/16/2019		<0.05		0.16		<0.01		0.0043 (J)
3/25/2019				0.18		<0.01		
3/26/2019		0.05 (J)						0.0051 (J)
8/27/2019		0.0033 (J)						
10/7/2019						<0.01		
10/8/2019				0.11				
10/9/2019		<0.05						<0.01

Prediction Limit

Constituent: Vanadium Analysis Run 2/17/2020 3:57 PM View: IntraWell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-11	GWC-12	GWC-12	GWC-13	GWC-13	GWC-14	GWC-14
7/8/2014	0.0024 (J)		0.0034 (J)		0.002 (J)			
7/9/2014							0.032	
10/24/2014							0.045	
1/13/2015	0.0023 (J)		<0.01		0.0015 (J)			
1/14/2015							0.031	
5/10/2015							0.013	
7/16/2015	0.002 (J)		0.0049 (J)		<0.01			
7/17/2015							0.028	
10/6/2015							0.02	
1/17/2016							0.028	
1/18/2016			0.0058		0.0011 (J)			
1/19/2016	0.0025 (J)							
4/26/2016							0.0181	
7/26/2016	0.0027 (J)				<0.01			
7/27/2016			0.0058 (J)				0.0189	
10/25/2016							0.0206	
1/4/2017	<0.01		<0.01					
1/5/2017					<0.01		0.0172	
4/4/2017							0.0235	
4/5/2017			0.0039 (J)					
4/6/2017	0.0025 (J)				<0.01			
7/10/2017			0.0062 (J)					
7/11/2017	0.0027 (J)						0.0136	
7/12/2017					0.0016 (J)			
10/2/2017							0.0175	
1/9/2018							0.0103	
1/10/2018					0.0019 (J)			
1/11/2018	0.0019 (J)		0.0025 (J)					
7/9/2018							0.0078 (J)	
7/11/2018	0.0021 (J)		0.0059 (J)		0.0097 (J)			
1/16/2019						<0.01		0.0043 (J)
1/17/2019		0.0021 (J)		<0.01				
3/26/2019						0.0029 (J)		0.0063 (J)
3/27/2019		0.0023 (J)		0.0049 (J)				
10/8/2019		<0.01				<0.01		<0.01
10/9/2019				0.0021 (J)				

Prediction Limit

Constituent: Vanadium Analysis Run 2/17/2020 3:57 PM View: IntraWell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-15	GWC-15	GWC-16	GWC-16	GWC-17	GWC-17	GWC-2	GWC-2
9/29/2000	<0.01		<0.01		<0.01			
11/21/2000	<0.01		<0.01		<0.01		<0.01	
1/20/2001	<0.01		<0.01		<0.01		<0.01	
3/14/2001	<0.01		<0.01		<0.01		<0.01	
7/16/2001	<0.01		<0.01		<0.01		<0.01	
11/1/2001	<0.01		<0.01		<0.01		<0.01	
4/25/2002	<0.01		<0.01		<0.01		<0.01	
11/20/2002	0.0099		0.0069		<0.01		<0.01	
6/6/2003					<0.01		<0.01	
12/12/2003			0.012		<0.01		<0.01	
5/26/2004	<0.01		<0.01		<0.01		<0.01	
12/7/2004	<0.01		<0.01		<0.01		<0.01	
6/21/2005	<0.01		<0.01		<0.01		<0.01	
12/12/2005	<0.01		<0.01		<0.01		<0.01	
4/4/2006			<0.01					
6/27/2006	<0.01		<0.01		0.0025		<0.01	
8/30/2006			<0.01					
12/4/2006	<0.01		0.0031		<0.01		<0.01	
2/15/2007			0.0025					
6/23/2007	<0.01		0.0032		<0.01		<0.01	
9/11/2007			<0.01					
12/11/2007	<0.01		<0.01		<0.01		<0.01	
3/11/2008			<0.01					
6/24/2008	<0.01		<0.01		<0.01		<0.01	
11/3/2008			0.0032					
12/4/2008							<0.01	
12/5/2008	<0.01		<0.01		<0.01			
3/25/2009			<0.01					
7/8/2009	<0.01		0.0036		<0.01		<0.01	
9/14/2009			0.0026					
12/20/2009	<0.01		0.0031				<0.01	
12/21/2009					<0.01			
3/4/2010			<0.01					
6/20/2010	<0.01						<0.01	
6/21/2010			0.0025		<0.01			
9/14/2010			0.0035					
1/6/2011							<0.01	
1/7/2011	<0.01		0.0036		<0.01			
4/15/2011			<0.01					
7/7/2011	0.0036		0.003					
7/8/2011					0.0031			
9/25/2011			0.0037					
1/17/2012	<0.01						<0.01	
1/18/2012			<0.01		<0.01			
4/4/2012			<0.01					
7/9/2012	0.0059						<0.01	
7/10/2012			0.0026		<0.01			
10/9/2012			0.007					
1/17/2013							<0.01	
1/18/2013	<0.01		<0.01		<0.01			
4/5/2013			<0.01					
7/17/2013	<0.01		<0.01		<0.01		<0.01	

Prediction Limit

Constituent: Vanadium Analysis Run 2/17/2020 3:57 PM View: IntraWell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-15	GWC-15	GWC-16	GWC-16	GWC-17	GWC-17	GWC-2	GWC-2
10/11/2013			<0.01					
1/13/2014	<0.01						<0.01	
1/14/2014			<0.01		<0.01			
4/3/2014			0.0032 (J)					
7/9/2014	0.0012 (J)		0.0031 (J)		0.0012 (J)		<0.01	
10/24/2014			0.0028 (J)					
1/13/2015	0.0013 (J)						<0.01	
1/14/2015			0.0034 (J)		0.002 (J)			
5/11/2015			0.0026 (J)					
7/16/2015	<0.01		0.0028 (J)				<0.01	
7/18/2015					<0.01			
10/6/2015			0.0016 (J)					
1/17/2016	0.0013 (J)		0.0029 (J)				<0.01	
1/18/2016					0.0019 (J)			
4/26/2016			0.00296 (J)					
7/27/2016	<0.01						<0.01	
7/28/2016			0.0026 (J)					
7/29/2016					0.0031 (J)			
10/25/2016	<0.01		<0.01					
1/4/2017			<0.01					
1/5/2017	<0.01				<0.01		<0.01	
4/3/2017	0.002 (J)							
4/4/2017							<0.01	
4/5/2017			0.0033 (J)		0.0029 (J)			
7/11/2017	0.0022 (J)							
7/12/2017			0.0037 (J)					
7/13/2017					0.0037 (J)		<0.01	
10/2/2017	0.0022 (J)							
10/3/2017			0.0036 (J)					
1/9/2018	0.0021 (J)							
1/10/2018			0.0029 (J)				<0.01	
1/11/2018					0.0026 (J)			
7/10/2018	0.0025 (J)		0.0025 (J)				<0.01	
7/11/2018					0.0032 (J)			
1/16/2019						<0.01		
1/17/2019		<0.01		0.0021 (J)				
1/21/2019								0.0024 (J)
3/26/2019		0.0026 (J)		0.0038 (J)		0.0024 (J)		
7/30/2019								<0.01
10/8/2019		<0.01		<0.01				
10/9/2019						<0.01		<0.01

Prediction Limit

Constituent: Vanadium Analysis Run 2/17/2020 3:57 PM View: IntraWell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-20	GWC-20	GWC-21	GWC-21	GWC-22	GWC-22	GWC-9	GWC-9
9/29/2000							<0.01	
11/21/2000							<0.01	
1/20/2001							<0.01	
3/14/2001							<0.01	
7/16/2001							<0.01	
11/1/2001							<0.01	
4/25/2002							<0.01	
11/20/2002							0.014	
6/6/2003							<0.01	
12/12/2003							<0.01	
5/26/2004							<0.01	
12/7/2004							<0.01	
6/21/2005							<0.01	
12/12/2005							<0.01	
6/27/2006							<0.01	
12/4/2006							<0.01	
6/23/2007							<0.01	
12/11/2007							<0.01	
6/23/2008							<0.01	
12/4/2008							<0.01	
7/8/2009							0.0029	
12/21/2009							<0.01	
6/20/2010							<0.01	
6/21/2010	<0.01		<0.01		<0.01			
1/7/2011	0.0029		0.0031		<0.01		<0.01	
7/7/2011	<0.01							
7/8/2011	0.0046		0.0048		<0.01		<0.01	
1/18/2012	<0.01		<0.01		<0.01		<0.01	
7/10/2012	0.0081		<0.01		<0.01		<0.01	
1/18/2013	0.0063		<0.01		<0.01		<0.01	
7/17/2013	<0.01		<0.01		<0.01		<0.01	
1/14/2014	<0.01		0.006		<0.01		<0.01	
7/9/2014			0.0019 (J)				0.0016 (J)	
7/10/2014	0.0026 (J)				0.0053			
1/12/2015	0.0031 (J)							
1/14/2015			0.0037 (J)		0.0013 (J)		<0.01	
7/17/2015			0.0028 (J)				0.0029 (J)	
7/18/2015	0.003 (J)				0.0043 (J)			
1/17/2016	0.0025 (J)		0.0039 (J)					
1/18/2016					<0.01		<0.01	
7/28/2016	0.0024 (J)		0.0022 (J)				<0.01	
7/29/2016					0.0052 (J)			
10/25/2016	<0.01							
1/4/2017	<0.01		<0.01		<0.01			
1/6/2017							<0.01	
4/4/2017	0.0024 (J)		0.003 (J)					
4/6/2017					<0.01		<0.01	
7/11/2017	0.003 (J)				0.0016 (J)			
7/12/2017							0.0013 (J)	
7/13/2017			0.0019 (J)					
10/2/2017	0.0028 (J)							
1/9/2018			0.0046 (J)					

Prediction Limit

Constituent: Vanadium Analysis Run 2/17/2020 3:57 PM View: IntraWell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-20	GWC-20	GWC-21	GWC-21	GWC-22	GWC-22	GWC-9	GWC-9
1/10/2018	0.0026 (J)							
1/11/2018					0.0012 (J)		<0.01	
7/9/2018	<0.01							
7/10/2018			0.0031 (J)					
7/11/2018					0.0025 (J)		<0.01	
1/17/2019				0.0022 (J)				
1/18/2019						<0.01		<0.01
1/21/2019		0.0031 (J)						
3/25/2019		0.0024 (J)						
3/26/2019				0.0041 (J)				
3/27/2019						0.002 (J)		<0.01
10/8/2019				<0.01				
10/9/2019		<0.01				<0.01		<0.01

Prediction Limit

Constituent: Vanadium, Zinc Analysis Run 2/17/2020 3:57 PM View: IntraWell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-4R	GWB-4R	GWB-5R	GWB-5R	GWB-6R	GWB-6R	GWA-7	GWA-7
9/29/2000	0.06		0.038		0.12		<0.0025	
11/21/2000	0.068		0.013		0.13		<0.0025	
1/20/2001	0.12		0.038		0.14		<0.0025	
3/14/2001	0.08				0.13		<0.0025	
7/16/2001	0.11				0.18		<0.0025	
11/1/2001	0.079				0.12		<0.0025	
4/25/2002	0.11				0.15		<0.0025	
11/20/2002	0.15				0.15			
6/6/2003	0.12				0.11			
12/12/2003	0.13		0.014		0.089			
5/26/2004	0.095				0.09		0.013	
12/7/2004	0.067		0.054		0.072		<0.0025	
6/21/2005	0.062		0.038		0.04		<0.0025	
12/12/2005	0.09		0.0056		0.021		0.014	
6/27/2006	0.083		0.0043		0.02		0.01	
12/4/2006	0.084		0.0044		0.022		0.0065	
6/23/2007	0.081		0.0039		0.027		0.0049	
12/11/2007	0.067		0.0029		0.017		0.0043	
6/23/2008							0.0025	
6/24/2008	0.059		0.003		0.053			
12/4/2008							0.0025	
12/5/2008	0.054		<0.01		0.0078			
7/7/2009	0.038		<0.01		0.012		<0.0025	
12/20/2009							0.0031	
12/21/2009	0.06		<0.01		0.011			
6/20/2010			<0.01		0.0083		<0.0025	
6/21/2010	0.036							
1/6/2011			0.0067					
1/7/2011	0.043				0.0079		<0.0025	
7/7/2011			0.019		0.007		0.0031	
7/8/2011	0.044							
1/17/2012			0.021				0.004	
1/18/2012	0.045				0.0116			
7/9/2012			0.032				0.0096	
7/10/2012	0.048				0.0096			
1/17/2013			0.034					
1/18/2013	0.049				<0.005		0.051	
7/16/2013			0.021					
7/17/2013	0.05				<0.005		0.042	
1/13/2014			0.008				0.0025	
1/14/2014	0.067				<0.005			
7/9/2014	0.055		0.0052		0.0039 (J)		0.064	
1/12/2015	0.066							
1/13/2015			0.0036 (J)				0.066	
1/14/2015					0.005			
7/16/2015	0.045		0.004 (J)				0.036	
7/17/2015					0.0045 (J)			
1/18/2016	0.049		0.0069		0.0044 (J)		0.035	
7/27/2016			0.0046 (J)				0.0529	
7/28/2016					0.0038 (J)			
7/29/2016	0.0388							
10/25/2016							0.0035 (J)	

Prediction Limit

Constituent: Vanadium, Zinc Analysis Run 2/17/2020 3:57 PM View: IntraWell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-4R	GWB-4R	GWB-5R	GWB-5R	GWB-6R	GWB-6R	GWA-7	GWA-7
1/3/2017			<0.01					
1/5/2017					0.0077 (J)			
1/6/2017	0.0341						0.0235	
4/4/2017	0.0371							
4/6/2017			0.0063 (J)		0.0069 (J)		0.0829	
7/12/2017	0.0399		0.0064 (J)		0.0098 (J)			
7/13/2017							0.0853	
10/4/2017							0.0263	
1/9/2018					0.0086 (J)		0.0665	
1/10/2018			0.0077 (J)					
1/11/2018	0.0327							
7/10/2018			0.016		0.0098 (J)			
7/11/2018	0.02						0.02 (J)	
1/16/2019		0.0022 (J)		0.0033 (J)		0.077		0.014 (J)
3/25/2019		0.004 (J)						
3/26/2019				0.0058 (J)		0.086		
10/8/2019								0.095
10/9/2019		<0.01		0.033 (J)		0.018 (J)		

Prediction Limit

Constituent: Zinc Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-8	GWA-8	GWC-1	GWC-1	GWC-11	GWC-11	GWC-12	GWC-12
9/29/2000	<0.01		<0.01		<0.01			
11/21/2000			<0.01		<0.01			
1/20/2001			<0.01		<0.01			
3/14/2001	<0.01		<0.01		<0.01			
7/16/2001	<0.01		<0.01		<0.01		0.053	
11/1/2001	<0.01		<0.01		<0.01		0.022	
4/25/2002	<0.01		<0.01		<0.01			
11/20/2002			<0.01		<0.01		0.045	
6/6/2003			0.011		<0.01		0.042	
12/12/2003			<0.01		0.013		<0.0025	
5/26/2004	<0.01		<0.01		<0.01		<0.0025	
12/7/2004	<0.01		<0.01				<0.0025	
6/21/2005	<0.01		<0.01		<0.01		<0.0025	
12/12/2005	0.01		<0.01		<0.01		<0.0025	
4/4/2006	<0.01							
6/27/2006	0.0043		<0.01		0.0028		0.012	
12/4/2006	0.0053		<0.01		0.0028		0.0067	
2/15/2007	0.0045							
6/23/2007	0.0043		<0.01		0.0063		0.025	
9/11/2007	0.004							
12/11/2007	0.0048		<0.01		<0.01		0.0038	
3/11/2008	0.0043							
6/23/2008	0.0037				<0.01		0.0051	
6/24/2008			<0.01					
11/3/2008	0.0032							
12/4/2008	0.0029				<0.01		<0.0025	
12/5/2008			<0.01					
3/25/2009	0.0055							
7/7/2009	0.0028		<0.01					
7/8/2009					<0.01		<0.0025	
9/14/2009	0.0027							
12/20/2009	0.0029		<0.01					
12/21/2009					<0.01		0.013	
3/4/2010	0.0042							
6/20/2010	0.0027		<0.01		<0.01		<0.0025	
9/14/2010	<0.01							
1/6/2011			<0.01		<0.01			
1/7/2011	0.0032						0.004	
4/15/2011	<0.01							
7/7/2011	0.005		0.0025		<0.01		0.0028	
9/25/2011	0.0041							
1/17/2012	0.0043		<0.01		0.0043		0.0043	
4/4/2012	<0.01							
7/9/2012			<0.01		<0.01		<0.0025	
7/10/2012	0.0028							
10/9/2012	0.0033							
1/17/2013			<0.01		0.0025		0.0033	
1/18/2013	0.0038							
4/5/2013	0.0026							
7/16/2013			<0.01		<0.01		0.0028	
7/17/2013	<0.01							
10/11/2013	0.0046							

Prediction Limit

Constituent: Zinc Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-8	GWA-8	GWC-1	GWC-1	GWC-11	GWC-11	GWC-12	GWC-12
1/13/2014			0.0025		0.0025		0.0025	
1/14/2014	0.0025							
4/3/2014	0.0029							
7/8/2014					0.0011 (J)		0.002 (J)	
7/9/2014	0.002 (J)		<0.01					
10/24/2014	0.0031							
1/13/2015			0.0025		0.0021 (J)		0.0079	
1/14/2015	0.003							
5/10/2015	0.0028							
7/16/2015			<0.01		<0.01		0.0026	
7/17/2015	0.0018 (J)							
10/6/2015	0.0018 (J)							
1/17/2016			<0.01					
1/18/2016	0.0028						0.0025	
1/19/2016					0.0029			
4/26/2016	<0.01							
7/26/2016					<0.01			
7/27/2016			<0.01				0.0021 (J)	
7/28/2016	0.0018 (J)							
10/24/2016	0.0024 (J)							
1/3/2017	0.0035 (J)							
1/4/2017			<0.01		<0.01		0.0025 (J)	
4/3/2017	0.0041 (J)							
4/4/2017			<0.01					
4/5/2017							0.0026 (J)	
4/6/2017					0.004 (J)			
7/10/2017							0.0023 (J)	
7/11/2017	0.0029 (J)				<0.01			
7/12/2017			<0.01					
10/2/2017	0.0026 (J)							
1/9/2018	0.0035 (J)							
1/10/2018			0.0014 (J)					
1/11/2018					0.0018 (J)		0.0031 (J)	
7/9/2018	0.0022 (J)							
7/10/2018			0.0021 (J)					
7/11/2018					<0.01		0.0036 (J)	
1/16/2019		0.0037 (J)		<0.01				
1/17/2019						<0.01		0.0032 (J)
3/25/2019		<0.01						
3/26/2019				<0.01				
3/27/2019						<0.01		0.0031 (J)
10/7/2019		0.0077 (J)						
10/8/2019						0.0061 (J)		
10/9/2019				0.0057 (J)				0.0057 (J)

Prediction Limit

Constituent: Zinc Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-13	GWC-13	GWC-14	GWC-14	GWC-15	GWC-15	GWC-16	GWC-16
9/29/2000	<0.0025		<0.01		<0.01		<0.01	
11/21/2000	<0.0025		<0.01		<0.01		<0.01	
1/20/2001	<0.0025		<0.01		<0.01		<0.01	
3/14/2001	<0.0025		<0.01		<0.01		<0.01	
7/16/2001	<0.0025		<0.01		<0.01		<0.01	
11/1/2001			<0.01		<0.01		<0.01	
4/25/2002	<0.0025		<0.01		<0.01		<0.01	
11/20/2002	0.023		<0.01		<0.01		<0.01	
6/6/2003	<0.0025		<0.01		<0.01			
12/12/2003	<0.0025		<0.01		<0.01		<0.01	
5/26/2004	0.035		<0.01		<0.01		<0.01	
12/7/2004	0.018		<0.01		<0.01		<0.01	
6/21/2005	0.014		<0.01		<0.01		<0.01	
12/12/2005	0.023		0.011				<0.01	
4/4/2006			<0.01				<0.01	
6/27/2006	0.023		0.0045		0.011			
8/30/2006			<0.01				0.0027	
12/4/2006			<0.01		0.0033		<0.01	
2/15/2007			<0.01				0.0032	
6/23/2007	0.036		<0.01		0.0029		0.0058	
9/11/2007			<0.01				0.0033	
12/11/2007	0.011		<0.01		<0.01		<0.01	
3/11/2008			<0.01				<0.01	
6/23/2008	0.0091							
6/24/2008			<0.01		<0.01		<0.01	
11/3/2008			<0.01				0.0025	
12/4/2008	0.0038		<0.01					
12/5/2008					<0.01		<0.01	
3/25/2009			<0.01				0.0025	
7/8/2009	<0.0025		<0.01		<0.01		<0.01	
9/14/2009			<0.01				<0.01	
12/20/2009			<0.01		<0.01		<0.01	
12/21/2009	0.0032							
3/4/2010			<0.01				<0.01	
6/20/2010	<0.0025		<0.01		<0.01			
6/21/2010							<0.01	
9/14/2010			<0.01				<0.01	
1/6/2011	0.004							
1/7/2011			<0.01		<0.01		<0.01	
4/15/2011			<0.01				<0.01	
7/7/2011	0.0037		<0.01		<0.01		<0.01	
9/25/2011			<0.01				0.0028	
1/17/2012	0.0031		<0.01		<0.01			
1/18/2012							0.0029	
4/4/2012			<0.01				<0.01	
7/9/2012	0.003		<0.01		<0.01			
7/10/2012							<0.01	
10/9/2012			<0.01				0.0027	
1/17/2013	<0.0025							
1/18/2013			<0.01		<0.01		<0.01	
4/5/2013			<0.01				<0.01	
7/16/2013	0.0029							

Prediction Limit

Constituent: Zinc Analysis Run 2/17/2020 3:57 PM View: IntraWell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-13	GWC-13	GWC-14	GWC-14	GWC-15	GWC-15	GWC-16	GWC-16
7/17/2013			<0.01		<0.01		<0.01	
10/11/2013			<0.01				<0.01	
1/13/2014	0.0025				0.0025			
1/14/2014			0.0025				0.0025	
4/3/2014			0.0014 (J)				0.0015 (J)	
7/8/2014	0.0018 (J)							
7/9/2014			0.00086 (J)		<0.01		0.0012 (J)	
10/24/2014			0.00083 (J)				0.0013 (J)	
1/13/2015	0.0028				<0.01			
1/14/2015			<0.01				0.0017 (J)	
5/10/2015			<0.01					
5/11/2015							0.0015 (J)	
7/16/2015	0.0018 (J)				<0.01		<0.01	
7/17/2015			<0.01					
10/6/2015			<0.01				<0.01	
1/17/2016			<0.01		<0.01		<0.01	
1/18/2016	0.0017 (J)							
4/26/2016			<0.01				<0.01	
7/26/2016	0.0028 (J)							
7/27/2016			<0.01		<0.01			
7/28/2016							<0.01	
10/25/2016			<0.01		<0.01		<0.01	
1/4/2017							0.0025 (J)	
1/5/2017	0.0021 (J)		<0.01		<0.01			
4/3/2017					<0.01			
4/4/2017			<0.01					
4/5/2017							0.0025 (J)	
4/6/2017	0.0027 (J)							
7/11/2017			<0.01		<0.01			
7/12/2017	0.0043 (J)						0.002 (J)	
10/2/2017			0.0026 (J)		<0.01			
10/3/2017							<0.01	
1/9/2018			0.0018 (J)		<0.01			
1/10/2018	0.0021 (J)						0.0016 (J)	
7/9/2018			<0.01					
7/10/2018					<0.01		0.0031 (J)	
7/11/2018	0.0039 (J)							
1/16/2019		0.047		<0.01				
1/17/2019						<0.01		<0.01
3/26/2019		0.03		<0.01		<0.01		<0.01
10/8/2019		0.053		0.0052 (J)		0.0051 (J)		0.01

Prediction Limit

Constituent: Zinc Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-17	GWC-2	GWC-2	GWC-20	GWC-20	GWC-21	GWC-21
9/29/2000	<0.0025							
11/21/2000	<0.0025							
1/20/2001	<0.0025		<0.01					
3/14/2001	<0.0025		<0.01					
7/16/2001	<0.0025		<0.01					
11/1/2001	<0.0025		<0.01					
4/25/2002	<0.0025		<0.01					
11/20/2002	0.014		<0.01					
6/6/2003	0.012		<0.01					
12/12/2003	<0.0025		<0.01					
5/26/2004	<0.0025		<0.01					
12/7/2004	<0.0025		<0.01					
6/21/2005	<0.0025		<0.01					
12/12/2005	<0.0025		0.012					
6/27/2006	0.0046		<0.01					
12/4/2006	0.0071		<0.01					
6/23/2007	0.005		<0.01					
12/11/2007	0.0033		<0.01					
6/24/2008	0.0037		<0.01					
12/4/2008			<0.01					
12/5/2008	0.0027							
7/8/2009	0.0048		<0.01					
12/20/2009			<0.01					
12/21/2009	0.0032							
6/20/2010			<0.01					
6/21/2010	0.0028				<0.01			
1/6/2011			<0.01					
1/7/2011	0.003				<0.01		<0.01	
7/7/2011					<0.01			
7/8/2011	0.0034						0.0044	
1/17/2012			<0.01					
1/18/2012	0.0049				<0.01		<0.01	
7/9/2012			<0.01					
7/10/2012	0.0039				<0.01		<0.01	
1/17/2013			<0.01					
1/18/2013	0.0043				0.0032		<0.01	
7/17/2013	0.0035		<0.01		<0.01		<0.01	
1/13/2014			0.0025					
1/14/2014	0.0025				0.0025		0.0025	
7/9/2014	0.0033		0.00058 (J)				0.00084 (J)	
7/10/2014					<0.01			
1/12/2015					<0.01			
1/13/2015			0.0024 (J)					
1/14/2015	0.0067						0.0018 (J)	
7/16/2015			<0.01					
7/17/2015							<0.01	
7/18/2015	<0.0025				<0.01			
1/17/2016			<0.01		<0.01		<0.01	
1/18/2016	0.012							
7/27/2016			0.0018 (J)					
7/28/2016					<0.01		<0.01	
7/29/2016	0.0086 (J)							

Prediction Limit

Constituent: Zinc Analysis Run 2/17/2020 3:57 PM View: IntraWell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-17	GWC-2	GWC-2	GWC-20	GWC-20	GWC-21	GWC-21
10/25/2016					<0.01			
1/4/2017					<0.01		<0.01	
1/5/2017	0.016		<0.01					
4/4/2017			0.0015 (J)		<0.01		0.0015 (J)	
4/5/2017	0.0175							
7/11/2017					<0.01			
7/13/2017	0.0126		0.0014 (J)				0.002 (J)	
10/2/2017					<0.01			
1/9/2018							0.0016 (J)	
1/10/2018			<0.01		0.0034 (J)			
1/11/2018	0.012							
7/9/2018					<0.01			
7/10/2018			<0.01				<0.01	
7/11/2018	0.011							
1/16/2019		0.0094 (J)						
1/17/2019								<0.01
1/21/2019				<0.01		<0.01		
3/25/2019						<0.01		
3/26/2019		0.0057 (J)						<0.01
7/30/2019				0.0067 (J)				
10/8/2019								0.0071 (J)
10/9/2019		0.011		0.005 (J)		0.0049 (J)		

Prediction Limit

Constituent: Zinc Analysis Run 2/17/2020 3:57 PM View: Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-22	GWC-22	GWC-9	GWC-9	GWB-4R	GWB-4R	GWB-5R	GWB-5R
9/29/2000			<0.0025		<0.01		0.026	
11/21/2000			<0.0025		<0.01		<0.01	
1/20/2001			<0.0025		0.041		0.031	
3/14/2001			<0.0025		<0.01			
7/16/2001			<0.0025		0.059			
11/1/2001			<0.0025		<0.01			
4/25/2002			<0.0025		<0.01		<0.01	
11/20/2002					0.061			
6/6/2003			<0.0025		0.041			
12/12/2003			<0.0025		0.012		<0.01	
5/26/2004			<0.0025		0.016		0.036	
12/7/2004			<0.0025		<0.01			
6/21/2005			<0.0025		<0.01			
12/12/2005					0.017		<0.01	
6/27/2006					0.11		0.01	
12/4/2006			0.0044		0.086		0.0035	
6/23/2007			0.0041		0.076		0.0032	
12/11/2007			0.0039		0.087		0.0079	
6/23/2008			<0.0025					
6/24/2008					0.062		<0.01	
12/4/2008			0.0039					
12/5/2008					0.014		<0.01	
7/7/2009					0.052		<0.01	
7/8/2009			<0.0025					
12/21/2009			0.004		0.046		<0.01	
6/20/2010			<0.0025				<0.01	
6/21/2010	<0.01				0.045			
1/6/2011							<0.01	
1/7/2011	0.019		0.0032		0.024			
7/7/2011							0.0027	
7/8/2011			0.0025		0.023			
1/17/2012							0.0039	
1/18/2012	0.0051		0.0045		0.011			
7/9/2012							<0.01	
7/10/2012	0.01		<0.0025		0.024			
1/17/2013							<0.01	
1/18/2013	0.0036		0.0029		0.011			
7/16/2013							0.0032	
7/17/2013	0.0025		<0.0025		0.0029			
1/13/2014							0.0025	
1/14/2014	0.0025		0.0025		0.0025			
7/9/2014			0.0016 (J)		0.0051		0.00076 (J)	
7/10/2014	0.024							
1/12/2015					0.0023 (J)			
1/13/2015							0.0036	
1/14/2015	0.0016 (J)		0.0024 (J)					
7/16/2015					0.0021 (J)		<0.01	
7/17/2015			0.0031					
7/18/2015	0.014							
1/18/2016	<0.01		0.0059		0.0092		<0.01	
7/27/2016							0.0015 (J)	
7/28/2016			0.0019 (J)					

Prediction Limit

Constituent: Zinc Analysis Run 2/17/2020 3:57 PM View: IntraWell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-22	GWC-22	GWC-9	GWC-9	GWB-4R	GWB-4R	GWB-5R	GWB-5R
7/29/2016	0.0129				0.003 (J)			
1/3/2017							<0.01	
1/4/2017	0.006 (J)							
1/6/2017			0.0026 (J)		0.0104			
4/4/2017					0.0132			
4/6/2017	0.0031 (J)		0.0047 (J)				0.0023 (J)	
7/11/2017	0.0029 (J)							
7/12/2017			0.003 (J)		0.0046 (J)		<0.01	
1/10/2018							0.0022 (J)	
1/11/2018	0.0106		0.0046 (J)		0.0095 (J)			
7/10/2018							<0.01	
7/11/2018	0.0057 (J)		0.0033 (J)		0.0028 (J)			
1/16/2019						0.0052 (J)		<0.01
1/18/2019		0.0024 (J)		0.0025 (J)				
3/25/2019						0.0078 (J)		
3/26/2019								<0.01
3/27/2019		<0.01		0.0026 (J)				
10/9/2019		0.0079 (J)		0.0054 (J)		0.0064 (J)		0.0081 (J)

Prediction Limit

Constituent: Zinc Analysis Run 2/17/2020 3:57 PM View: IntraWell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-6R	GWB-6R
6/27/2006	0.0071	
12/4/2006	0.0096	
1/7/2011	0.0044	
7/7/2011	0.003	
1/18/2012	0.0048	
7/10/2012	<0.05	
1/18/2013	0.0028	
7/17/2013	<0.05	
1/14/2014	0.0025	
7/9/2014	0.00093 (J)	
1/14/2015	0.0023 (J)	
7/17/2015	<0.05	
1/18/2016	0.0029	
7/28/2016	<0.05	
1/5/2017	<0.05	
4/6/2017	0.0032 (J)	
7/12/2017	0.002 (J)	
1/9/2018	0.0036 (J)	
7/10/2018	0.0055 (J)	
1/16/2019		<0.05
3/26/2019		<0.05
10/9/2019		0.016 (J)

Trend Test Significant Results

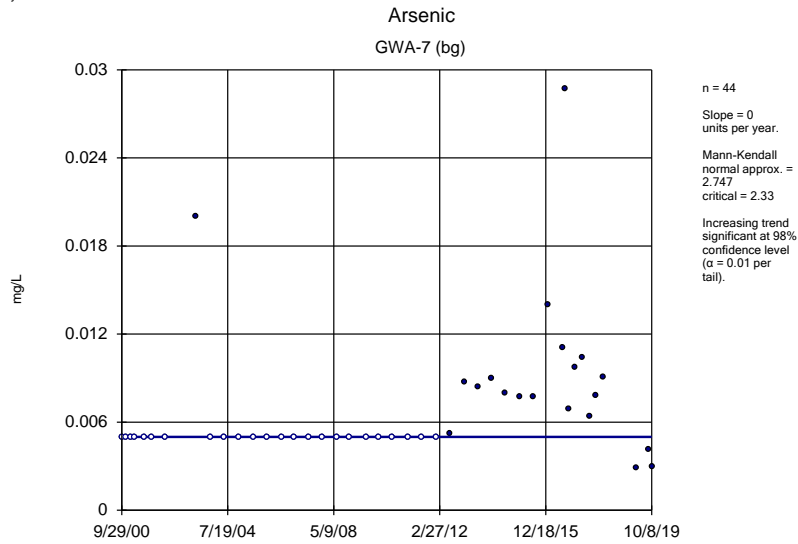
Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2020, 4:20 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	GWA-7 (bg)	0	2.747	2.33	Yes	44	54.55	n/a	0.02	NP
Arsenic (mg/L)	GWA-8 (bg)	0	-3.004	-2.33	Yes	67	92.54	n/a	0.02	NP
Arsenic (mg/L)	GWC-15	0.002248	7.35	2.33	Yes	47	53.19	n/a	0.02	NP
Arsenic (mg/L)	GWC-16	-0.001133	-2.647	-2.33	Yes	66	0	n/a	0.02	NP
Arsenic (mg/L)	GWC-20	0.02308	122	106	Yes	26	3.846	n/a	0.02	NP
Barium (mg/L)	GWA-8 (bg)	-0.002602	-7.539	-2.33	Yes	64	0	n/a	0.02	NP
Barium (mg/L)	GWC-9	0.009158	5.724	2.33	Yes	46	0	n/a	0.02	NP
Zinc (mg/L)	GWA-7 (bg)	0.00143	4.729	2.33	Yes	41	29.27	n/a	0.02	NP
Zinc (mg/L)	GWA-8 (bg)	-0.0002312	-4.488	-2.33	Yes	60	25	n/a	0.02	NP

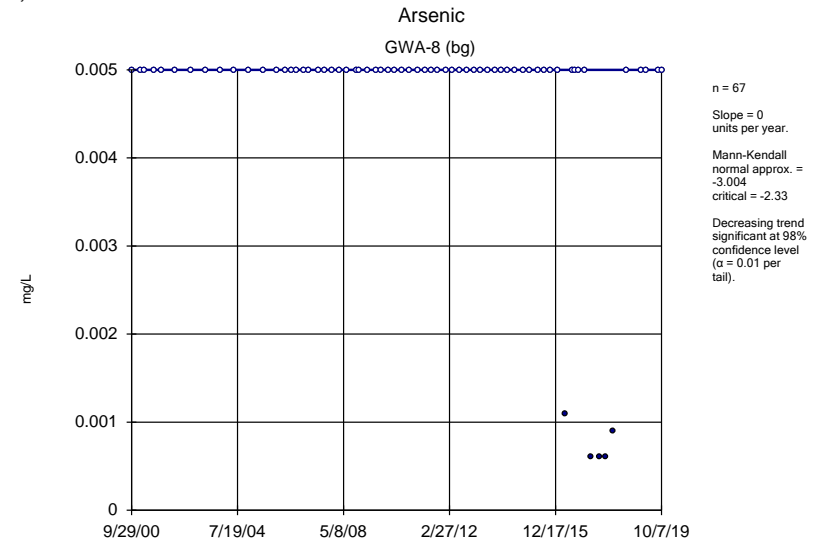
Trend Test All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2020, 4:20 PM

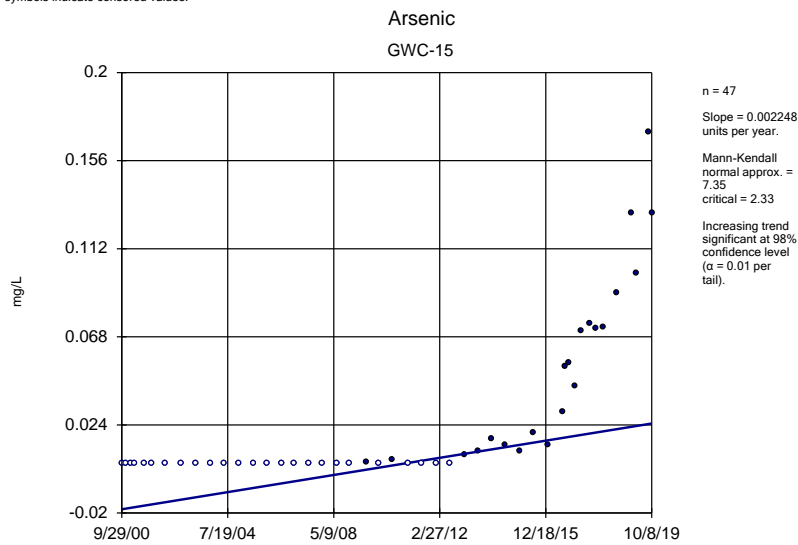
<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	GWA-7 (bg)	0	2.747	2.33	Yes	44	54.55	n/a	0.02	NP
Arsenic (mg/L)	GWA-8 (bg)	0	-3.004	-2.33	Yes	67	92.54	n/a	0.02	NP
Arsenic (mg/L)	GWC-15	0.002248	7.35	2.33	Yes	47	53.19	n/a	0.02	NP
Arsenic (mg/L)	GWC-16	-0.001133	-2.647	-2.33	Yes	66	0	n/a	0.02	NP
Arsenic (mg/L)	GWC-20	0.02308	122	106	Yes	26	3.846	n/a	0.02	NP
Barium (mg/L)	GWA-7 (bg)	-0.00004699	-0.2648	-2.33	No	45	0	n/a	0.02	NP
Barium (mg/L)	GWA-8 (bg)	-0.002602	-7.539	-2.33	Yes	64	0	n/a	0.02	NP
Barium (mg/L)	GWC-16	0.0007044	1.887	2.33	No	63	0	n/a	0.02	NP
Barium (mg/L)	GWC-9	0.009158	5.724	2.33	Yes	46	0	n/a	0.02	NP
Selenium (mg/L)	GWA-7 (bg)	0	0.1494	2.33	No	42	61.9	n/a	0.02	NP
Selenium (mg/L)	GWA-8 (bg)	0	-1.571	-2.33	No	66	96.97	n/a	0.02	NP
Selenium (mg/L)	GWC-15	0	-1.864	-2.33	No	43	83.72	n/a	0.02	NP
Zinc (mg/L)	GWA-7 (bg)	0.00143	4.729	2.33	Yes	41	29.27	n/a	0.02	NP
Zinc (mg/L)	GWA-8 (bg)	-0.0002312	-4.488	-2.33	Yes	60	25	n/a	0.02	NP
Zinc (mg/L)	GWC-13	0	-0.1253	-2.33	No	41	26.83	n/a	0.02	NP



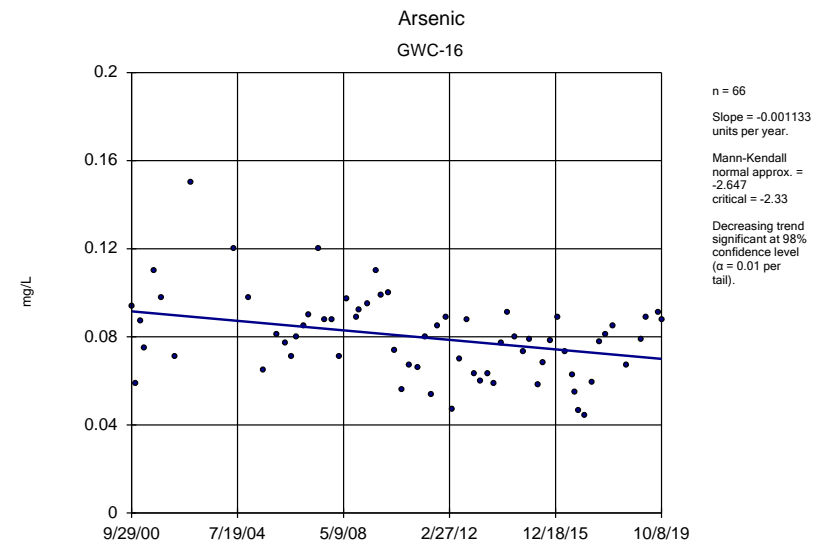
Sen's Slope Estimator Analysis Run 2/17/2020 4:18 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road



Sen's Slope Estimator Analysis Run 2/17/2020 4:18 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

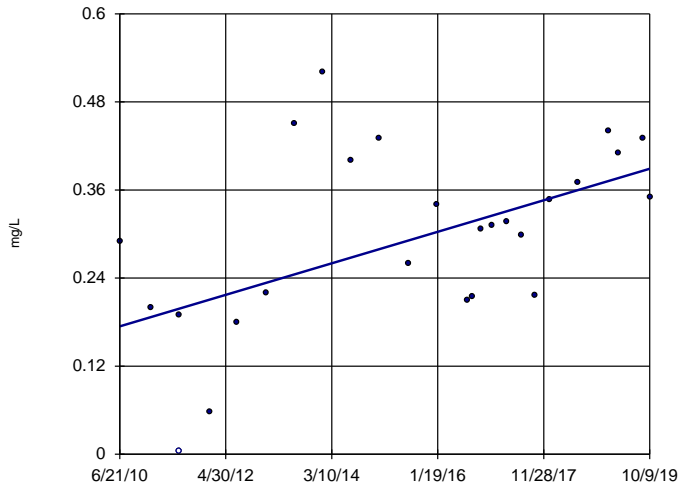


Sen's Slope Estimator Analysis Run 2/17/2020 4:18 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road



Sen's Slope Estimator Analysis Run 2/17/2020 4:18 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

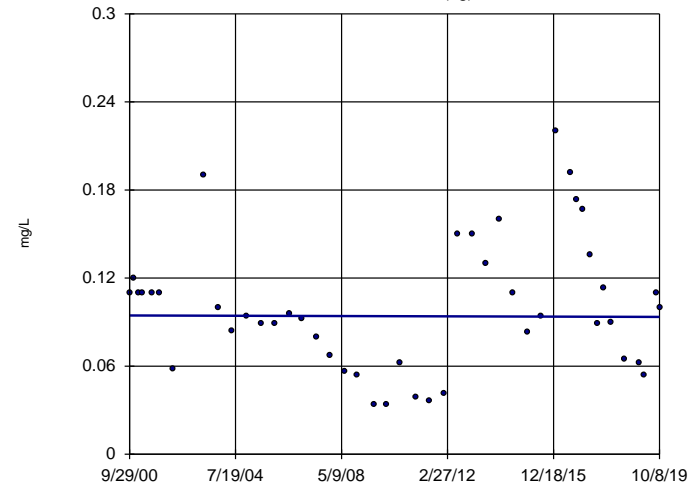
Arsenic GWC-20



n = 26
Slope = 0.02308
units per year.
Mann-Kendall
statistic = 122
critical = 106
Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Sen's Slope Estimator Analysis Run 2/17/2020 4:18 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

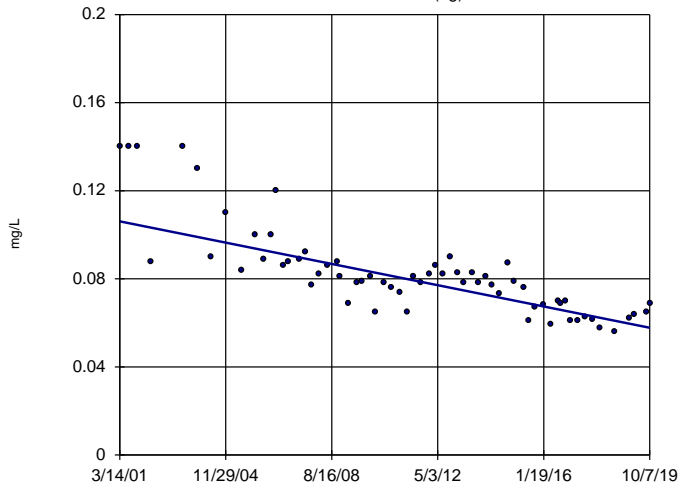
Barium GWA-7 (bg)



n = 45
Slope = -0.00004699
units per year.
Mann-Kendall
normal approx. =
-0.2648
critical = -2.33
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Sen's Slope Estimator Analysis Run 2/17/2020 4:18 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

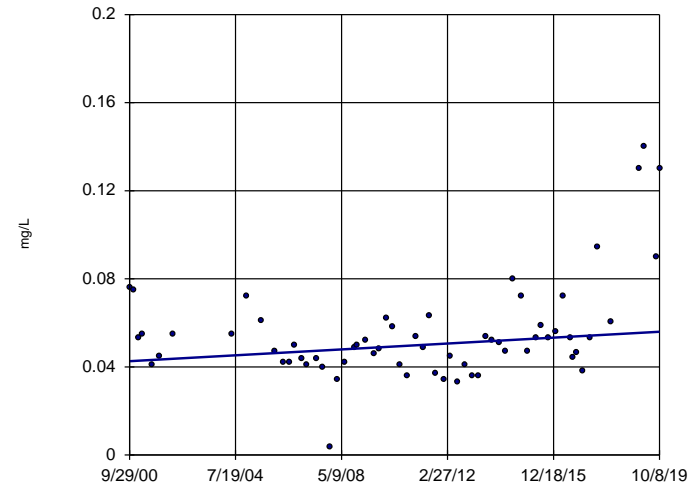
Barium GWA-8 (bg)



n = 64
Slope = -0.002602
units per year.
Mann-Kendall
normal approx. =
-7.539
critical = -2.33
Decreasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

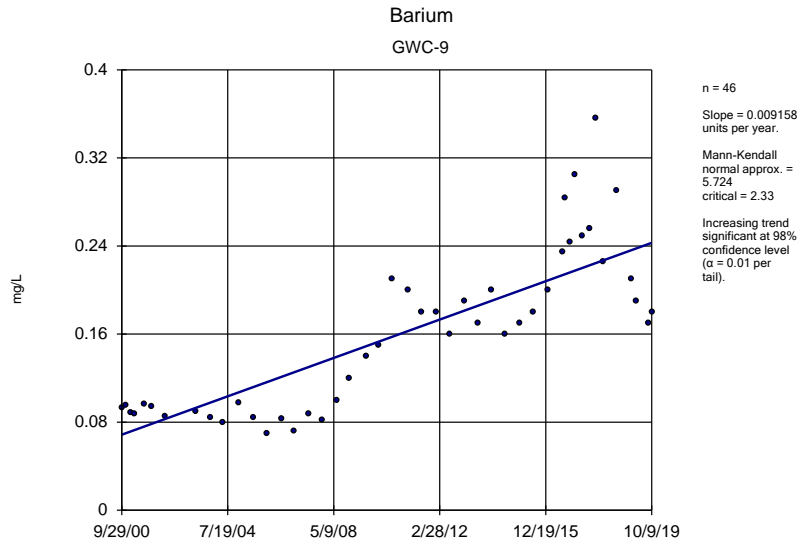
Sen's Slope Estimator Analysis Run 2/17/2020 4:18 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Barium GWC-16

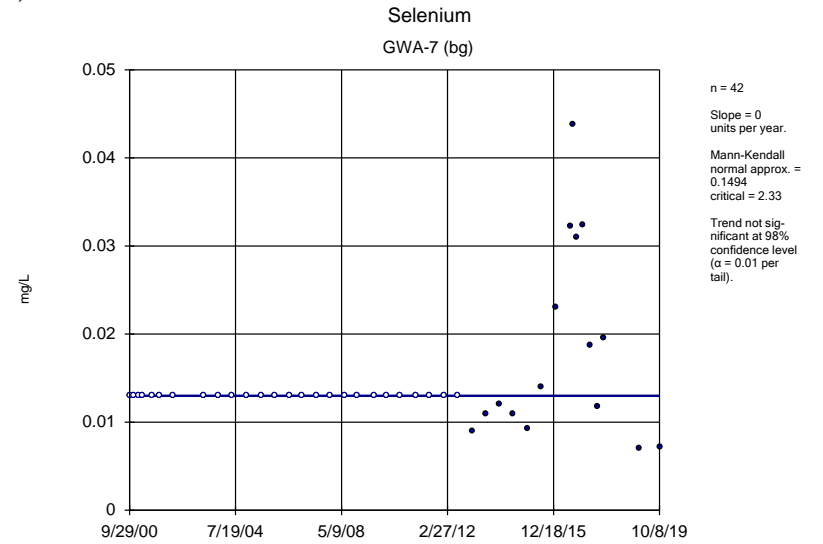


n = 63
Slope = 0.0007044
units per year.
Mann-Kendall
normal approx. =
1.887
critical = 2.33
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

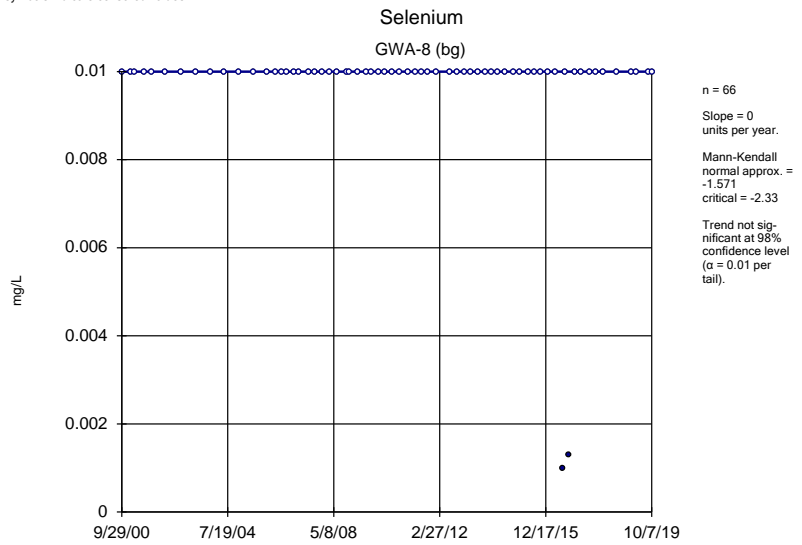
Sen's Slope Estimator Analysis Run 2/17/2020 4:18 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road



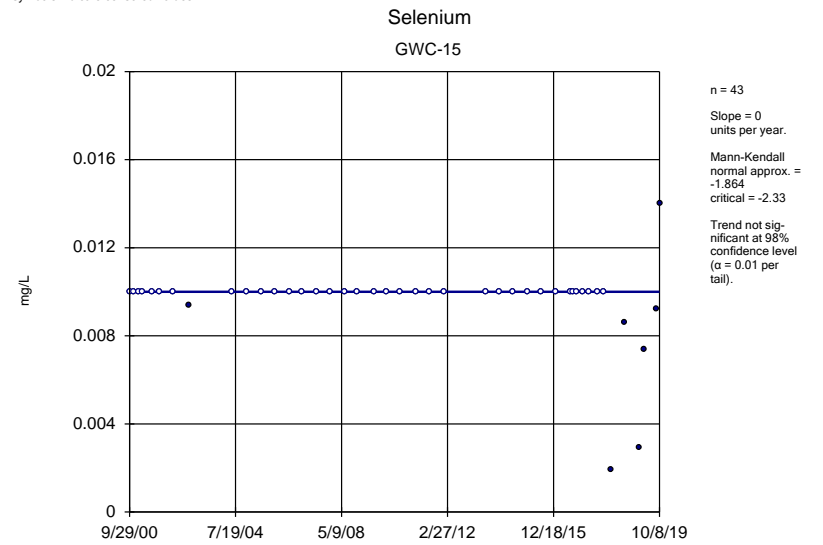
Sen's Slope Estimator Analysis Run 2/17/2020 4:18 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road



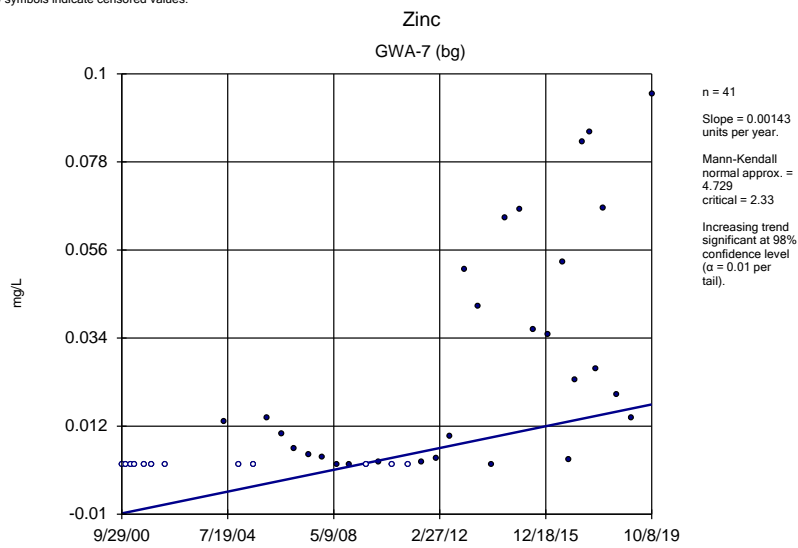
Sen's Slope Estimator Analysis Run 2/17/2020 4:18 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road



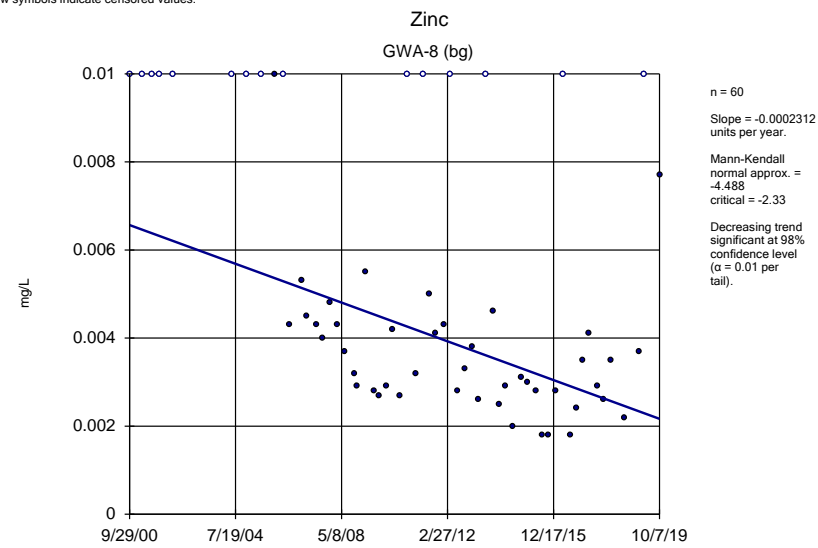
Sen's Slope Estimator Analysis Run 2/17/2020 4:18 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road



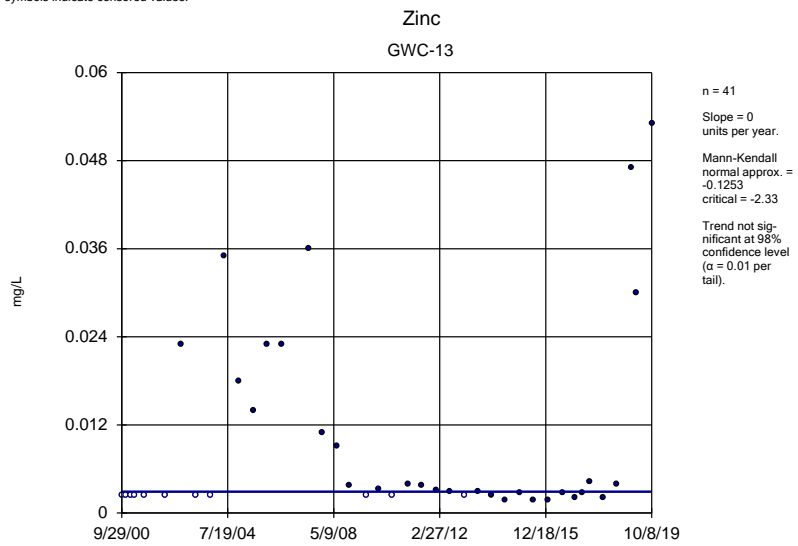
Sen's Slope Estimator Analysis Run 2/17/2020 4:18 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road



Sen's Slope Estimator Analysis Run 2/17/2020 4:18 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road



Sen's Slope Estimator Analysis Run 2/17/2020 4:18 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road



Sen's Slope Estimator Analysis Run 2/17/2020 4:18 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator

Constituent: Arsenic Analysis Run 2/17/2020 4:20 PM View: Trend Test
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-15	GWC-16
9/29/2000	<0.005	<0.005	<0.005	0.094
11/21/2000	<0.005		<0.005	0.059
1/20/2001	<0.005	<0.005	<0.005	0.087
3/14/2001	<0.005	<0.005	<0.005	0.075
7/16/2001	<0.005	<0.005	<0.005	0.11
11/1/2001	<0.005	<0.005	<0.005	0.098
4/25/2002	<0.005	<0.005	<0.005	0.071
11/20/2002		<0.005	<0.005	0.15
6/6/2003	0.02	<0.005	<0.005	
12/12/2003	<0.005	<0.005	<0.005	
5/26/2004	<0.005	<0.005	<0.005	0.12
12/7/2004	<0.005	<0.005	<0.005	0.098
6/21/2005	<0.005	<0.005	<0.005	0.065
12/12/2005	<0.005	<0.005	<0.005	0.081
4/4/2006		<0.005		0.077
6/27/2006	<0.005	<0.005	<0.005	0.071
8/30/2006		<0.005		0.08
12/4/2006	<0.005	<0.005	<0.005	0.085
2/15/2007		<0.005		0.09
6/23/2007	<0.005	<0.005	<0.005	0.12
9/11/2007		<0.005		0.088
12/11/2007	<0.005	<0.005	<0.005	0.088
3/11/2008		<0.005		0.071
6/23/2008	<0.005	<0.005		
6/24/2008			<0.005	0.097
11/3/2008		<0.005		0.089
12/4/2008	<0.005	<0.005		
12/5/2008			<0.005	0.092
3/25/2009		<0.005		0.095
7/7/2009	<0.005	<0.005		
7/8/2009			0.0052	0.11
9/14/2009		<0.005		0.099
12/20/2009	<0.005	<0.005	<0.005	0.1
3/4/2010		<0.005		0.074
6/20/2010	<0.005	<0.005	0.0068	
6/21/2010				0.056
9/14/2010		<0.005		0.067
1/7/2011	<0.005	<0.005	<0.005	0.066
4/15/2011		<0.005		0.08
7/7/2011	<0.005	<0.005	<0.005	0.054
9/25/2011		<0.005		0.085
1/17/2012	<0.005	<0.005	<0.005	
1/18/2012				0.089
4/4/2012		<0.005		0.0473
7/9/2012	0.0052		<0.005	
7/10/2012		<0.005		0.07
10/9/2012		<0.005		0.088
1/18/2013	0.0087	<0.005	0.0089	0.063
4/5/2013		<0.005		0.06
7/17/2013	0.0084	<0.005	0.011	0.063
10/11/2013		<0.005		0.059
1/13/2014	0.009		0.017	

Sen's Slope Estimator

Constituent: Arsenic Analysis Run 2/17/2020 4:20 PM View: Trend Test
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-15	GWC-16
1/14/2014		<0.005		0.077
4/3/2014		<0.005		0.091
7/9/2014	0.008	<0.005	0.014	0.08
10/24/2014		<0.005		0.073
1/13/2015	0.0077		0.011	
1/14/2015		<0.005		0.079
5/10/2015		<0.005		
5/11/2015				0.058
7/16/2015	0.0077		0.02	0.068
7/17/2015		<0.005		
10/6/2015		<0.005		0.078
1/17/2016			0.014	0.089
1/18/2016	0.014	<0.005		
4/26/2016		0.0011 (J)		0.0731
7/27/2016	0.0111		0.0303	
7/28/2016		<0.005		0.0627
8/30/2016		<0.005		
9/1/2016	0.0287		0.0533	0.0551
10/24/2016		<0.005		
10/25/2016	0.0069		0.0551	0.0466
1/3/2017		<0.005		
1/4/2017				0.0444
1/5/2017			0.0437	
1/6/2017	0.0097			
4/3/2017		0.0006 (J)	0.0713	
4/5/2017				0.0591
4/6/2017	0.0104			
7/11/2017		0.0006 (J)	0.0745	
7/12/2017				0.0776
7/13/2017	0.0064			
10/2/2017		0.0006 (J)	0.0723	
10/3/2017				0.0813
10/4/2017	0.0078			
1/9/2018	0.0091 (J)	0.0009 (J)	0.0731	
1/10/2018				0.085
7/9/2018		<0.005		
7/10/2018			0.09	0.067
1/16/2019		<0.005		
1/17/2019			0.13	0.079
3/25/2019	0.0029 (J)	<0.005		
3/26/2019			0.1	0.089
8/26/2019	0.0041 (J)	<0.005		
8/27/2019			0.17	
8/28/2019				0.091
10/7/2019		<0.005		
10/8/2019	0.003 (J)		0.13	0.088

Sen's Slope Estimator

Constituent: Arsenic, Barium Analysis Run 2/17/2020 4:20 PM View: Trend Test

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-20	GWA-7 (bg)	GWA-8 (bg)	GWC-16
9/29/2000		0.11		0.076
11/21/2000		0.12		0.075
1/20/2001		0.11		0.053
3/14/2001		0.11	0.14	0.055
7/16/2001		0.11	0.14	0.041
11/1/2001		0.11	0.14	0.045
4/25/2002		0.058	0.088	0.055
6/6/2003		0.19	0.14	
12/12/2003		0.1	0.13	
5/26/2004		0.084	0.09	0.055
12/7/2004		0.094	0.11	0.072
6/21/2005		0.089	0.084	0.061
12/12/2005		0.089	0.1	0.047
4/4/2006			0.089	0.042
6/27/2006		0.096	0.1	0.042
8/30/2006			0.12	0.05
12/4/2006		0.092	0.086	0.044
2/15/2007			0.088	0.041
6/23/2007		0.08	0.089	0.044
9/11/2007			0.092	0.04
12/11/2007		0.067	0.077	0.0035
3/11/2008			0.082	0.034
6/23/2008		0.056	0.086	
6/24/2008				0.042
11/3/2008			0.088	0.049
12/4/2008		0.054	0.081	
12/5/2008				0.05
3/25/2009			0.069	0.052
7/7/2009		0.034	0.078	
7/8/2009				0.046
9/14/2009			0.079	0.048
12/20/2009		0.034	0.081	0.062
3/4/2010			0.065	0.058
6/20/2010		0.062	0.078	
6/21/2010	0.29			0.041
9/14/2010			0.076	0.036
1/7/2011	0.2	0.039	0.074	0.054
4/15/2011			0.065	0.049
7/7/2011	<0.005	0.036	0.081	0.063
7/8/2011	0.19			
9/25/2011			0.078	0.037
1/17/2012		0.041	0.082	
1/18/2012	0.058			0.034
4/4/2012			0.0861	0.0446
7/9/2012		0.15		
7/10/2012	0.18		0.082	0.033
10/9/2012			0.09	0.041
1/18/2013	0.22	0.15	0.083	0.036
4/5/2013			0.078	0.036
7/17/2013	0.45	0.13	0.083	0.054
10/11/2013			0.078	0.052
1/13/2014		0.16		

Sen's Slope Estimator

Constituent: Arsenic, Barium Analysis Run 2/17/2020 4:20 PM View: Trend Test
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-20	GWA-7 (bg)	GWA-8 (bg)	GWC-16
1/14/2014	0.52		0.081	0.051
4/3/2014			0.077	0.047
7/9/2014		0.11	0.073	0.08
7/10/2014	0.4			
10/24/2014			0.087	0.072
1/12/2015	0.43			
1/13/2015		0.083		
1/14/2015			0.079	0.047
5/10/2015			0.076	
5/11/2015				0.053
7/16/2015		0.094		0.059
7/17/2015			0.061	
7/18/2015	0.26			
10/6/2015			0.067	0.053
1/17/2016	0.34			0.056
1/18/2016		0.22	0.068	
4/26/2016			0.0596	0.0721
7/27/2016		0.192		
7/28/2016	0.209		0.0701	0.0534
8/30/2016			0.0687	
9/1/2016	0.215			0.0445
10/24/2016			0.07	
10/25/2016	0.307	0.173		0.0464
1/3/2017			0.061	
1/4/2017	0.311			0.0379
1/6/2017		0.167		
4/3/2017			0.0612	
4/4/2017	0.317			
4/5/2017				0.0534
4/6/2017		0.136		
7/11/2017	0.299		0.0624	
7/12/2017				0.0944
7/13/2017		0.0891		
10/2/2017	0.216		0.0618	
10/4/2017		0.113		
1/9/2018		0.0901	0.0574	
1/10/2018	0.347			0.0603
7/9/2018	0.37		0.056	
7/11/2018		0.065		
1/16/2019		0.062	0.062	
1/17/2019				0.13
1/21/2019	0.44			
3/25/2019	0.41	0.054	0.064	
3/26/2019				0.14
8/26/2019		0.11	0.065	
8/28/2019	0.43			0.09
10/7/2019			0.069	
10/8/2019		0.1		0.13
10/9/2019	0.35			

Sen's Slope Estimator

Constituent: Barium, Selenium Analysis Run 2/17/2020 4:20 PM View: Trend Test

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWA-7 (bg)	GWA-8 (bg)	GWC-15
9/29/2000	0.093	<0.013	<0.01	<0.01
11/21/2000	0.095	<0.013		<0.01
1/20/2001	0.089	<0.013	<0.01	<0.01
3/14/2001	0.088	<0.013	<0.01	<0.01
7/16/2001	0.096	<0.013	<0.01	<0.01
11/1/2001	0.094	<0.013	<0.01	<0.01
4/25/2002	0.085	<0.013	<0.01	<0.01
11/20/2002			<0.01	0.0094
6/6/2003	0.09	<0.013	<0.01	
12/12/2003	0.084	<0.013	<0.01	
5/26/2004	0.08	<0.013	<0.01	<0.01
12/7/2004	0.098	<0.013	<0.01	<0.01
6/21/2005	0.084	<0.013	<0.01	<0.01
12/12/2005	0.07	<0.013	<0.01	<0.01
4/4/2006			<0.01	
6/27/2006	0.083	<0.013	<0.01	<0.01
8/30/2006			<0.01	
12/4/2006	0.072	<0.013	<0.01	<0.01
2/15/2007			<0.01	
6/23/2007	0.087	<0.013	<0.01	<0.01
9/11/2007			<0.01	
12/11/2007	0.082	<0.013	<0.01	<0.01
3/11/2008			<0.01	
6/23/2008	0.1	<0.013	<0.01	
6/24/2008				<0.01
11/3/2008			<0.01	
12/4/2008	0.12	<0.013	<0.01	
12/5/2008				<0.01
3/25/2009			<0.01	
7/7/2009		<0.013	<0.01	
7/8/2009	0.14			<0.01
9/14/2009			<0.01	
12/20/2009		<0.013	<0.01	<0.01
12/21/2009	0.15			
3/4/2010			<0.01	
6/20/2010	0.21	<0.013	<0.01	<0.01
9/14/2010			<0.01	
1/7/2011	0.2	<0.013	<0.01	<0.01
4/15/2011			<0.01	
7/7/2011		<0.013	<0.01	<0.01
7/8/2011	0.18			
9/25/2011			<0.01	
1/17/2012		<0.013	<0.01	<0.01
1/18/2012	0.18			
7/9/2012		<0.013		
7/10/2012	0.16		<0.01	
10/9/2012			<0.01	
1/18/2013	0.19	0.009	<0.01	
4/5/2013			<0.01	
7/17/2013	0.17	0.011	<0.01	<0.01
10/11/2013			<0.01	
1/13/2014		0.012		<0.01

Sen's Slope Estimator

Constituent: Barium, Selenium Analysis Run 2/17/2020 4:20 PM View: Trend Test
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWA-7 (bg)	GWA-8 (bg)	GWC-15
1/14/2014	0.2		<0.01	
4/3/2014			<0.01	
7/9/2014	0.16	0.011	<0.01	<0.01
10/24/2014			<0.01	
1/13/2015		0.0092		<0.01
1/14/2015	0.17		<0.01	
5/10/2015			<0.01	
7/16/2015		0.014		<0.01
7/17/2015	0.18		<0.01	
10/6/2015			<0.01	
1/17/2016				<0.01
1/18/2016	0.2	0.023	<0.01	
4/26/2016			<0.01	
7/27/2016		0.0323		<0.01
7/28/2016	0.234		0.001 (J)	
8/30/2016			<0.01	
8/31/2016	0.284			
9/1/2016		0.0438		<0.01
10/24/2016			0.0013 (J)	
10/25/2016		0.031		<0.01
10/27/2016	0.244			
1/3/2017			<0.01	
1/5/2017				<0.01
1/6/2017	0.305	0.0324		
4/3/2017			<0.01	<0.01
4/6/2017	0.249	0.0188 (J)		
7/11/2017			<0.01	<0.01
7/12/2017	0.256			
7/13/2017		0.0118		
10/2/2017			<0.01	<0.01
10/4/2017	0.356	0.0195		
1/9/2018			<0.01	0.0019 (J)
1/11/2018	0.226			
7/9/2018			<0.01	
7/10/2018				0.0086 (J)
7/11/2018	0.29			
1/16/2019		0.0071 (J)	<0.01	
1/17/2019				0.0029 (J)
1/18/2019	0.21			
3/25/2019			<0.01	
3/26/2019				0.0074 (J)
3/27/2019	0.19			
8/26/2019			<0.01	
8/27/2019				0.0092 (J)
8/28/2019	0.17			
10/7/2019			<0.01	
10/8/2019		0.0072 (J)		0.014
10/9/2019	0.18			

Sen's Slope Estimator

Constituent: Zinc Analysis Run 2/17/2020 4:20 PM View: Trend Test
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-13
9/29/2000	<0.0025	<0.01	<0.0025
11/21/2000	<0.0025		<0.0025
1/20/2001	<0.0025		<0.0025
3/14/2001	<0.0025	<0.01	<0.0025
7/16/2001	<0.0025	<0.01	<0.0025
11/1/2001	<0.0025	<0.01	
4/25/2002	<0.0025	<0.01	<0.0025
11/20/2002			0.023
6/6/2003			<0.0025
12/12/2003			<0.0025
5/26/2004	0.013	<0.01	0.035
12/7/2004	<0.0025	<0.01	0.018
6/21/2005	<0.0025	<0.01	0.014
12/12/2005	0.014	0.01	0.023
4/4/2006		<0.01	
6/27/2006	0.01	0.0043	0.023
12/4/2006	0.0065	0.0053	
2/15/2007		0.0045	
6/23/2007	0.0049	0.0043	0.036
9/11/2007		0.004	
12/11/2007	0.0043	0.0048	0.011
3/11/2008		0.0043	
6/23/2008	0.0025	0.0037	0.0091
11/3/2008		0.0032	
12/4/2008	0.0025	0.0029	0.0038
3/25/2009		0.0055	
7/7/2009	<0.0025	0.0028	
7/8/2009			<0.0025
9/14/2009		0.0027	
12/20/2009	0.0031	0.0029	
12/21/2009			0.0032
3/4/2010		0.0042	
6/20/2010	<0.0025	0.0027	<0.0025
9/14/2010		<0.01	
1/6/2011			0.004
1/7/2011	<0.0025	0.0032	
4/15/2011		<0.01	
7/7/2011	0.0031	0.005	0.0037
9/25/2011		0.0041	
1/17/2012	0.004	0.0043	0.0031
4/4/2012		<0.01	
7/9/2012	0.0096		0.003
7/10/2012		0.0028	
10/9/2012		0.0033	
1/17/2013			<0.0025
1/18/2013	0.051	0.0038	
4/5/2013		0.0026	
7/16/2013			0.0029
7/17/2013	0.042	<0.01	
10/11/2013		0.0046	
1/13/2014	0.0025		0.0025
1/14/2014		0.0025	

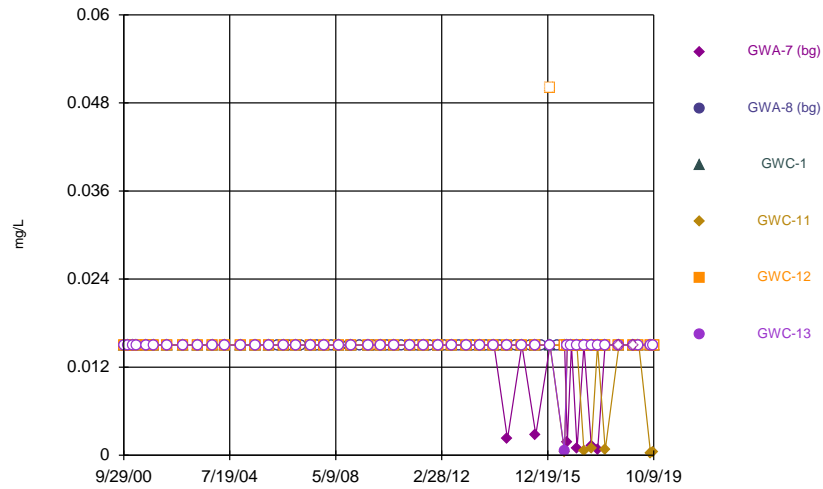
Sen's Slope Estimator

Constituent: Zinc Analysis Run 2/17/2020 4:20 PM View: Trend Test
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-13
4/3/2014		0.0029	
7/8/2014			0.0018 (J)
7/9/2014	0.064	0.002 (J)	
10/24/2014		0.0031	
1/13/2015	0.066		0.0028
1/14/2015		0.003	
5/10/2015		0.0028	
7/16/2015	0.036		0.0018 (J)
7/17/2015		0.0018 (J)	
10/6/2015		0.0018 (J)	
1/18/2016	0.035	0.0028	0.0017 (J)
4/26/2016		<0.01	
7/26/2016			0.0028 (J)
7/27/2016	0.0529		
7/28/2016		0.0018 (J)	
10/24/2016		0.0024 (J)	
10/25/2016	0.0035 (J)		
1/3/2017		0.0035 (J)	
1/5/2017			0.0021 (J)
1/6/2017	0.0235		
4/3/2017		0.0041 (J)	
4/6/2017	0.0829		0.0027 (J)
7/11/2017		0.0029 (J)	
7/12/2017			0.0043 (J)
7/13/2017	0.0853		
10/2/2017		0.0026 (J)	
10/4/2017	0.0263		
1/9/2018	0.0665	0.0035 (J)	
1/10/2018			0.0021 (J)
7/9/2018		0.0022 (J)	
7/11/2018	0.02 (J)		0.0039 (J)
1/16/2019	0.014 (J)	0.0037 (J)	0.047
3/25/2019		<0.01	
3/26/2019			0.03
10/7/2019		0.0077 (J)	
10/8/2019	0.095		0.053

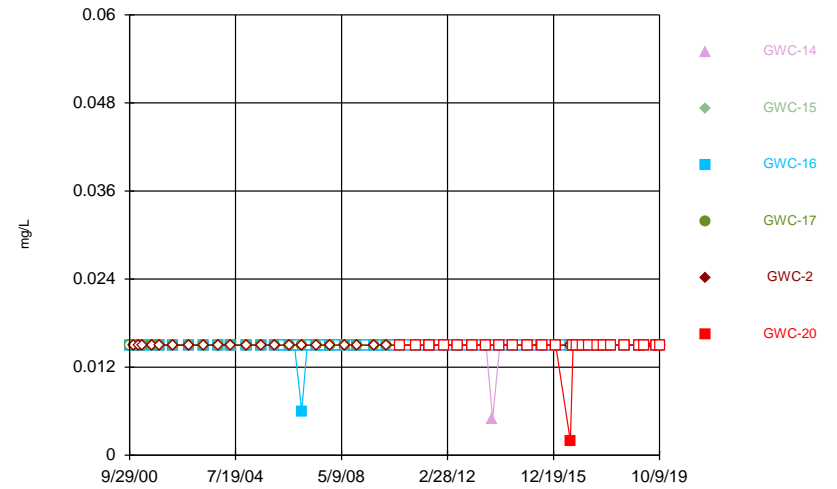
Time Trend Plots

Antimony



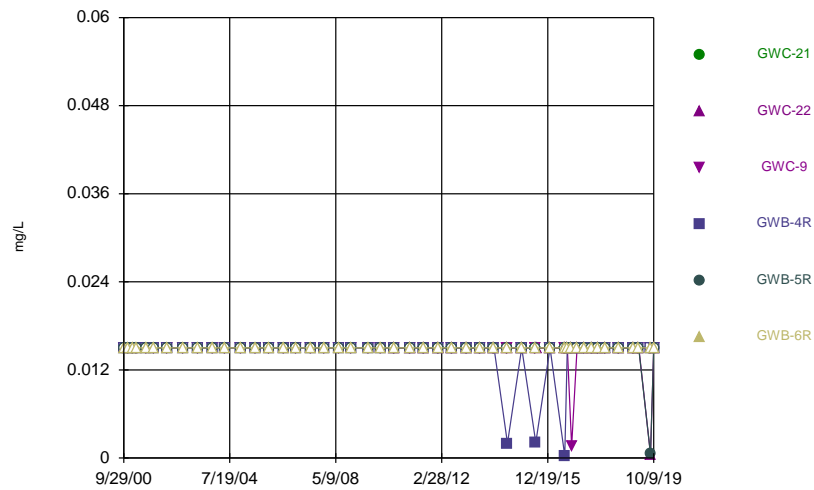
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Antimony



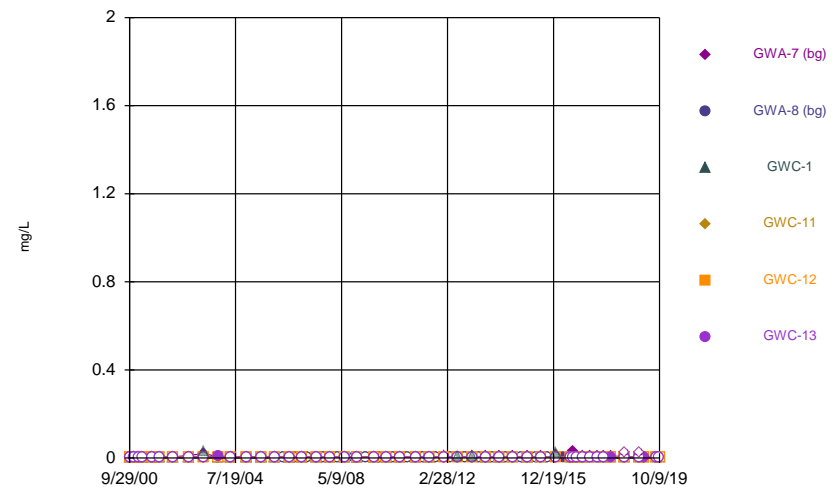
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Antimony



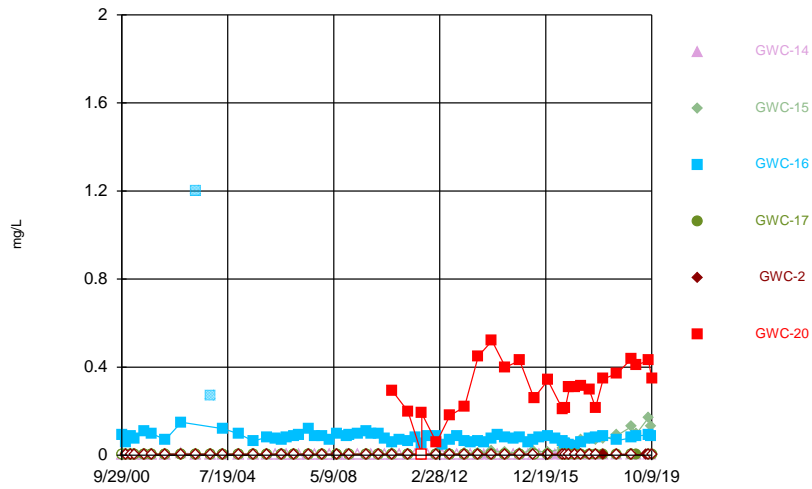
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Arsenic



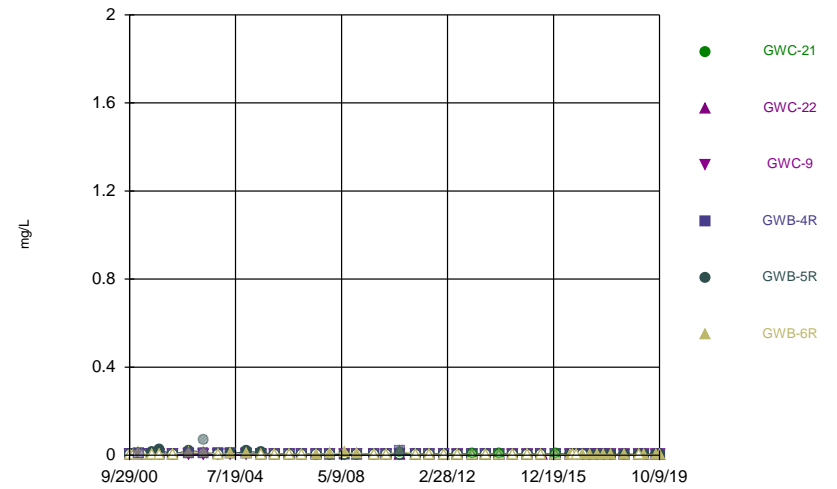
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Arsenic



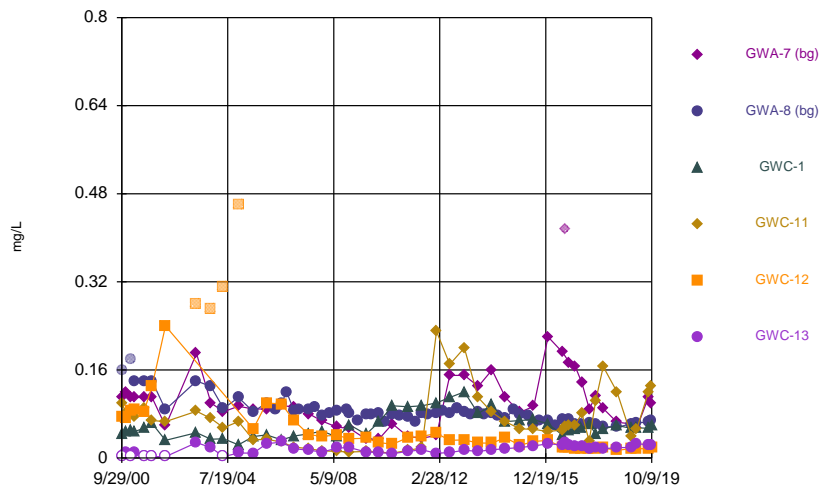
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Arsenic



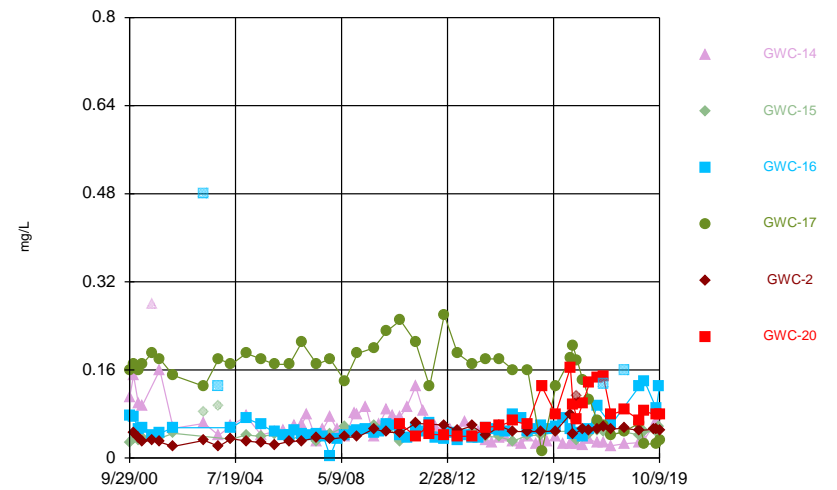
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Barium



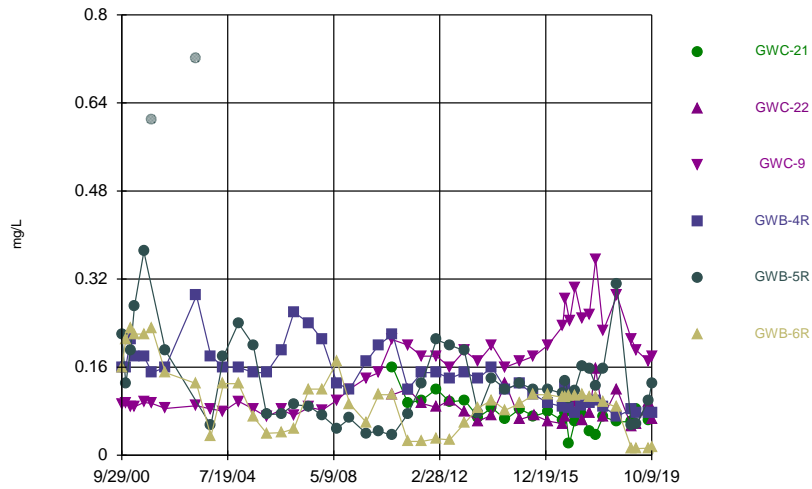
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Barium



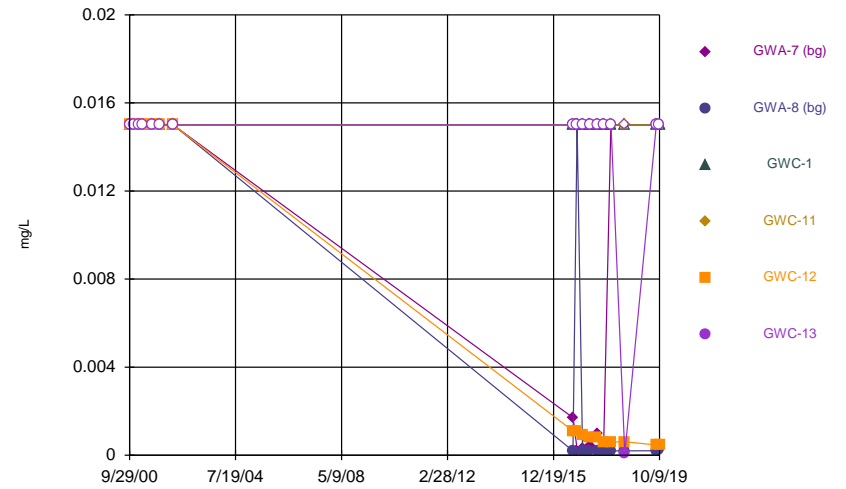
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Barium



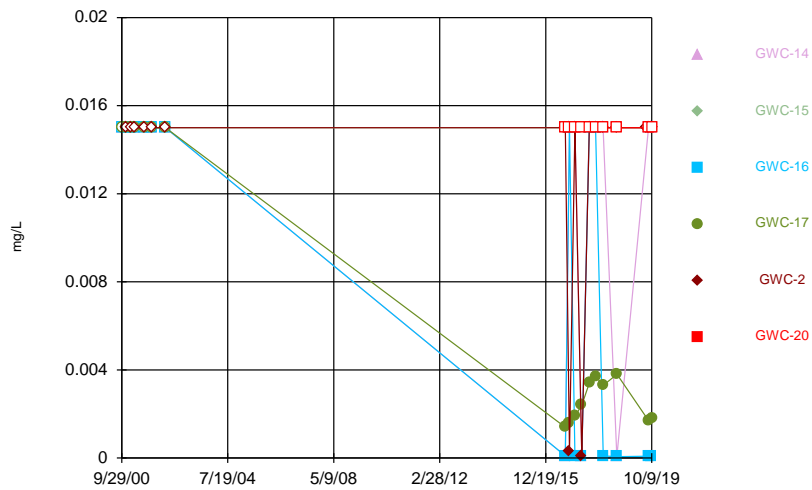
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Beryllium



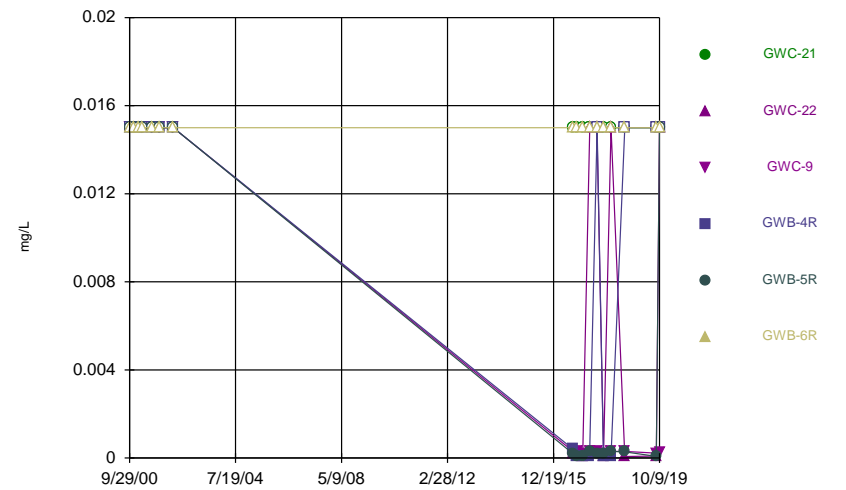
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Beryllium



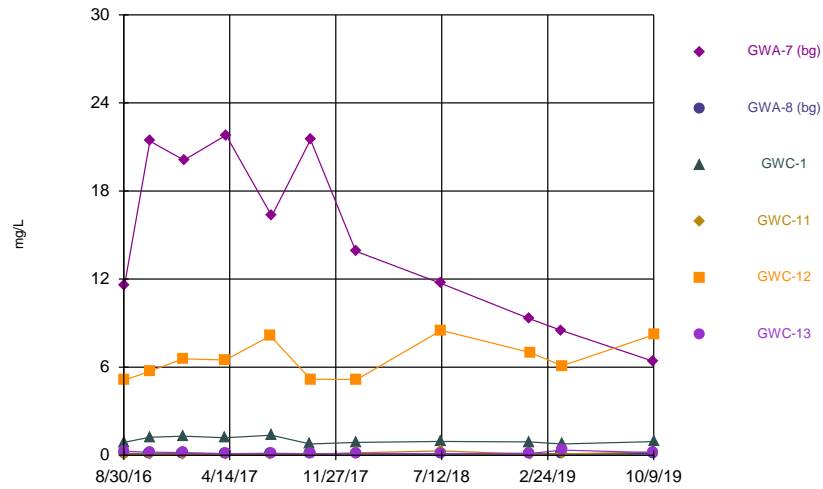
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Beryllium



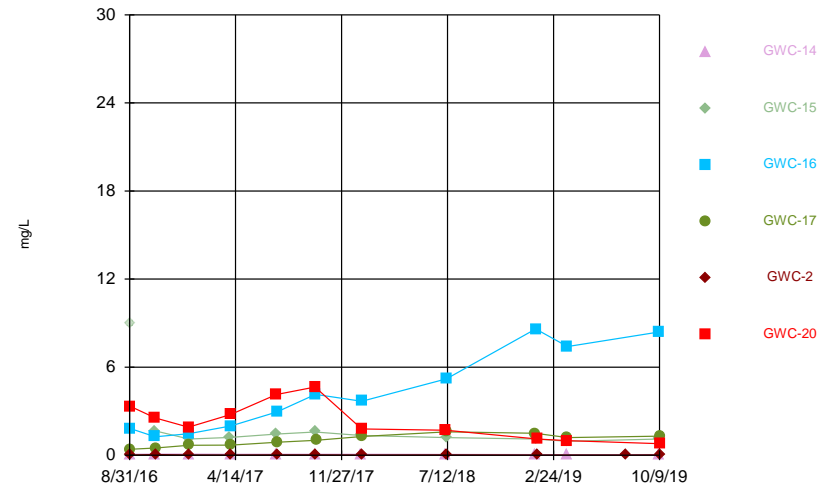
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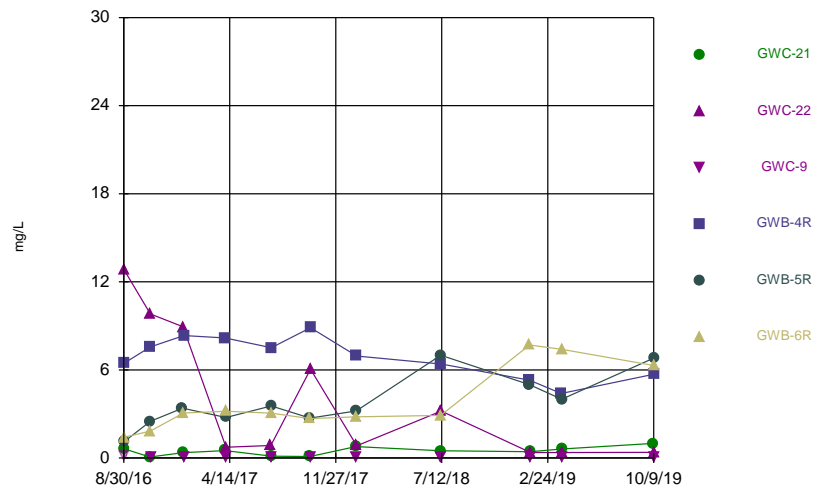
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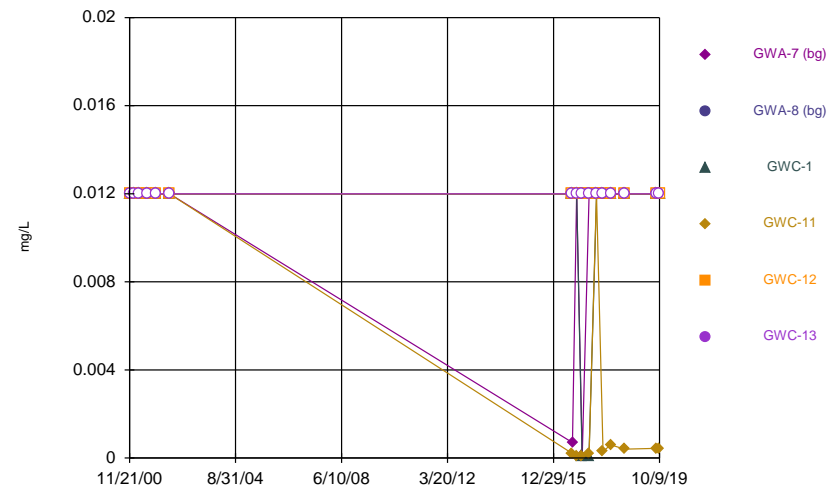
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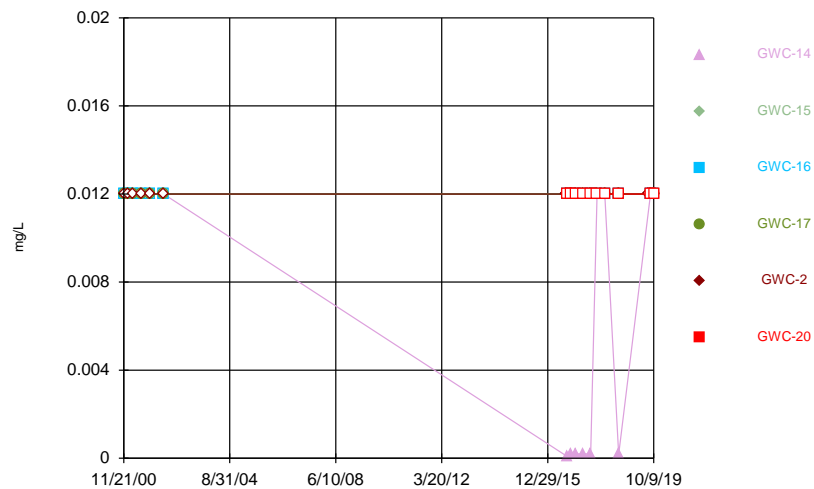
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Cadmium



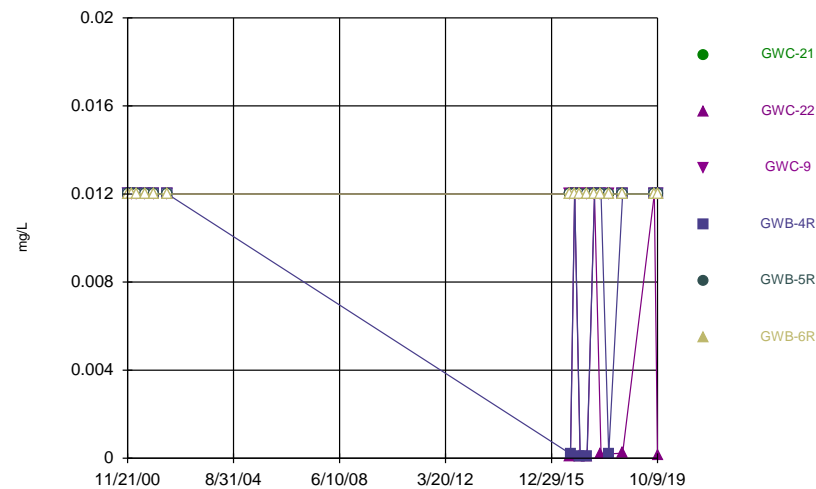
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Cadmium



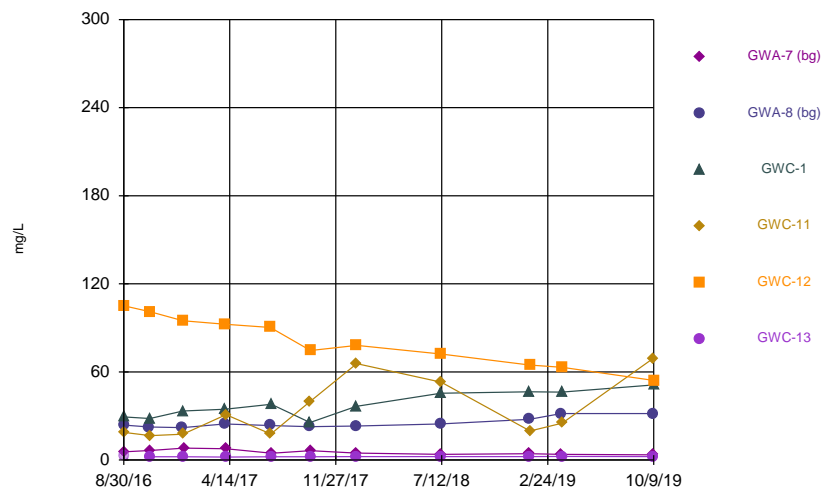
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Cadmium



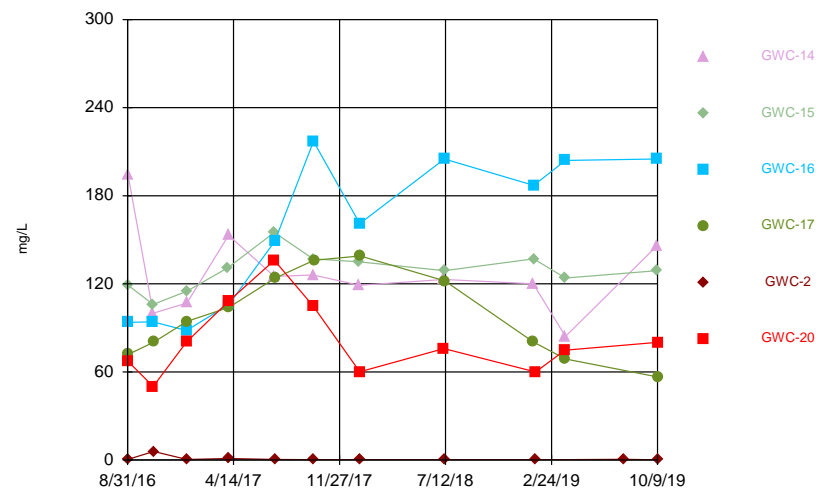
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Calcium



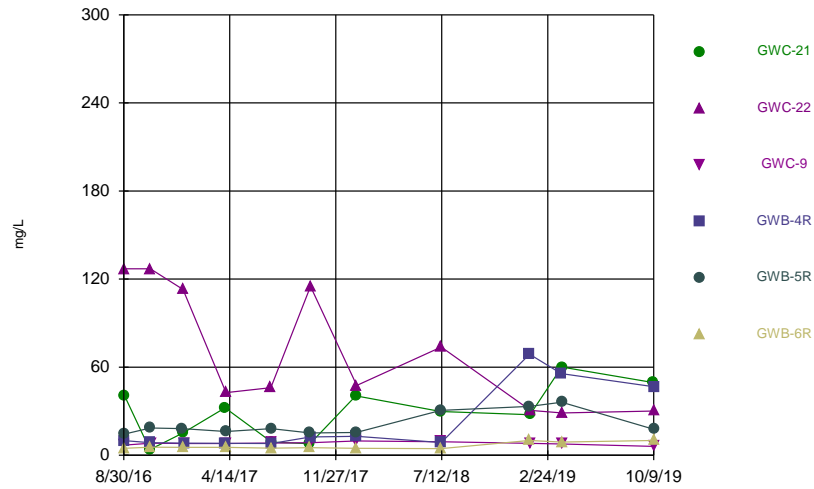
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Calcium



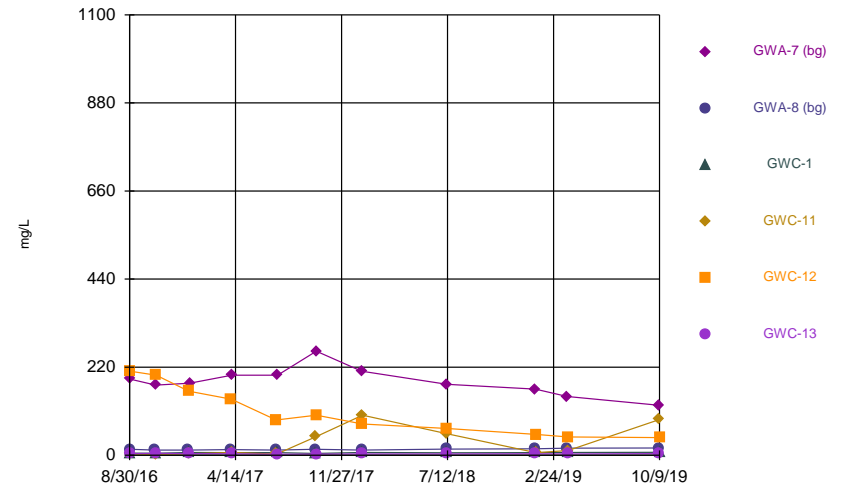
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Calcium



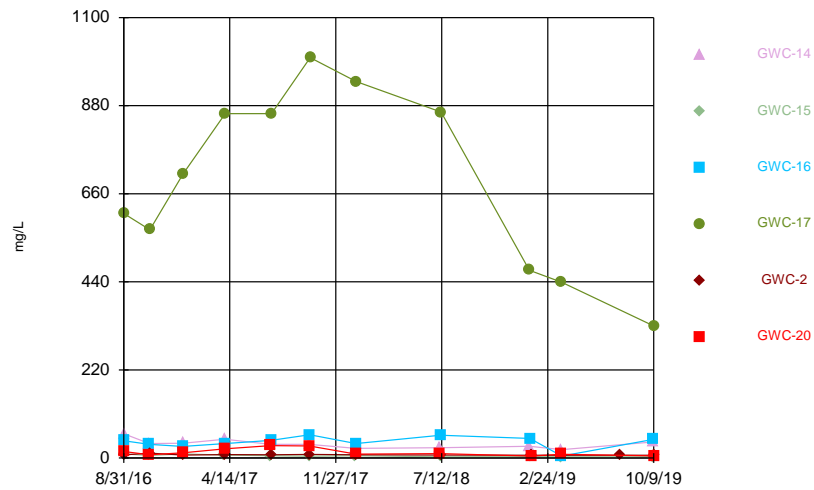
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Chloride



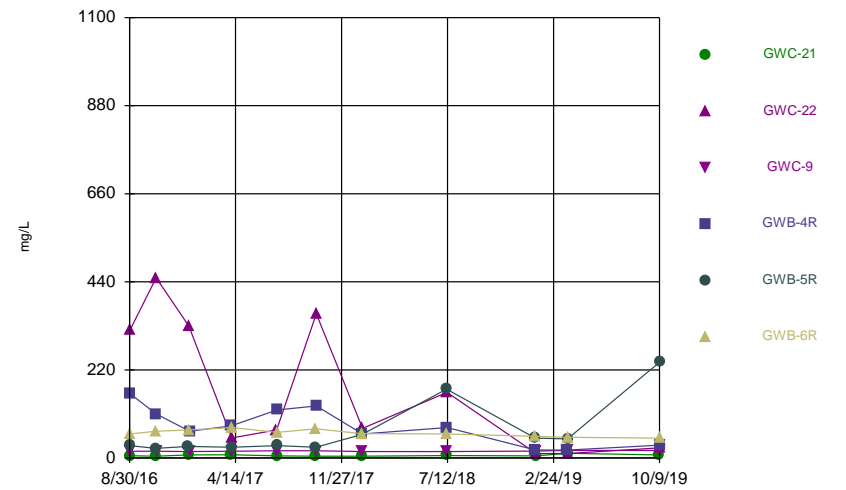
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Chloride



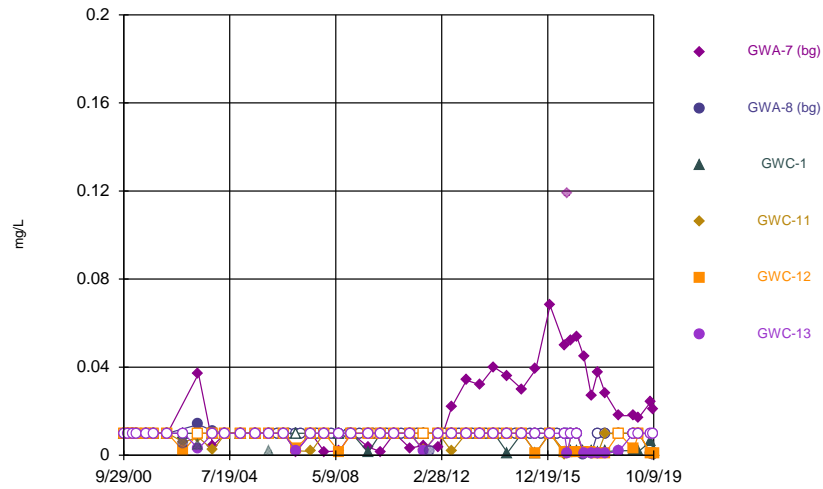
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Chloride



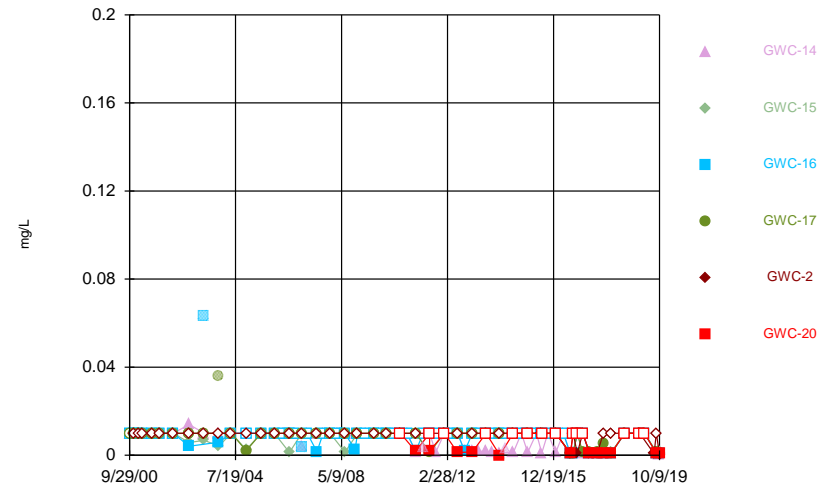
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Chromium



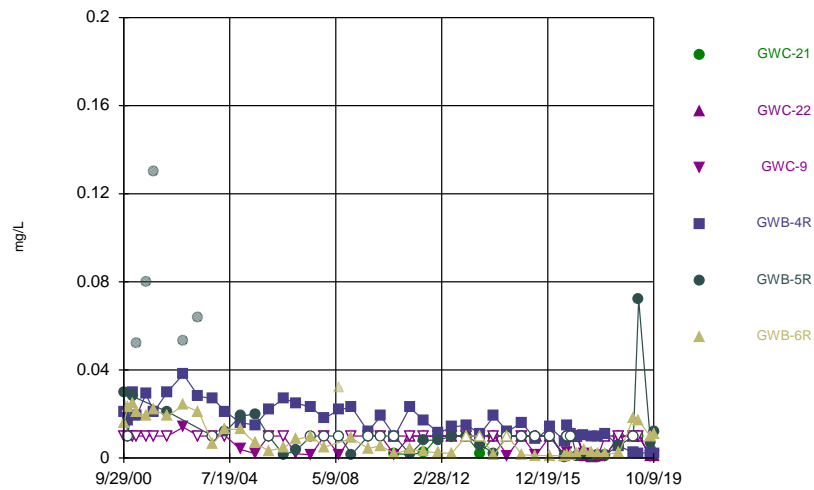
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Chromium



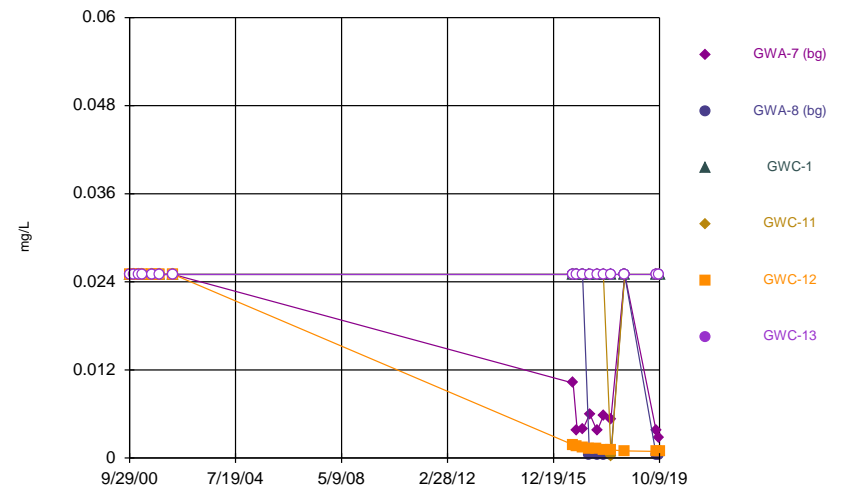
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Chromium



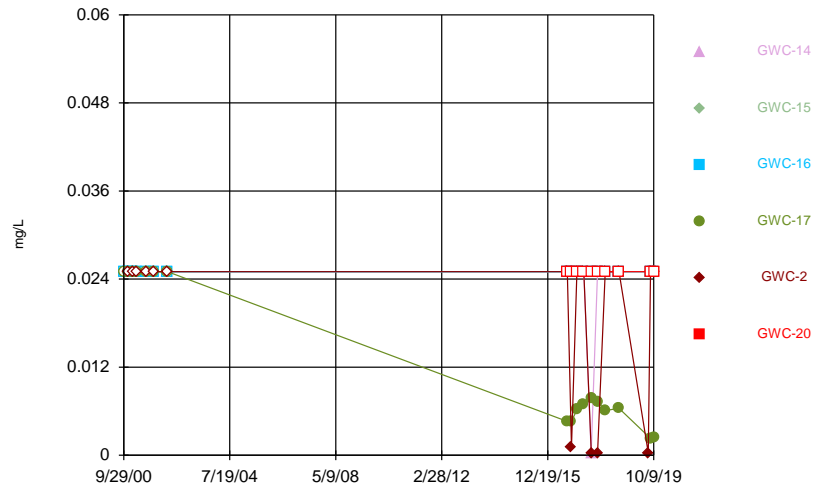
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Cobalt



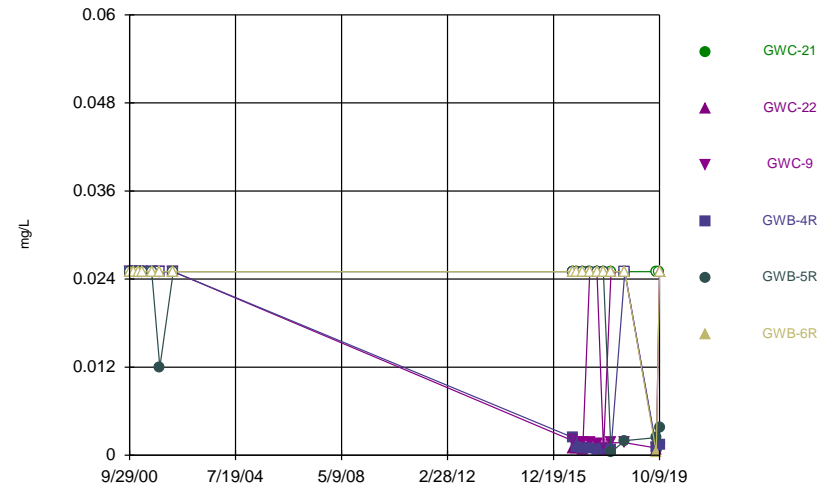
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Cobalt



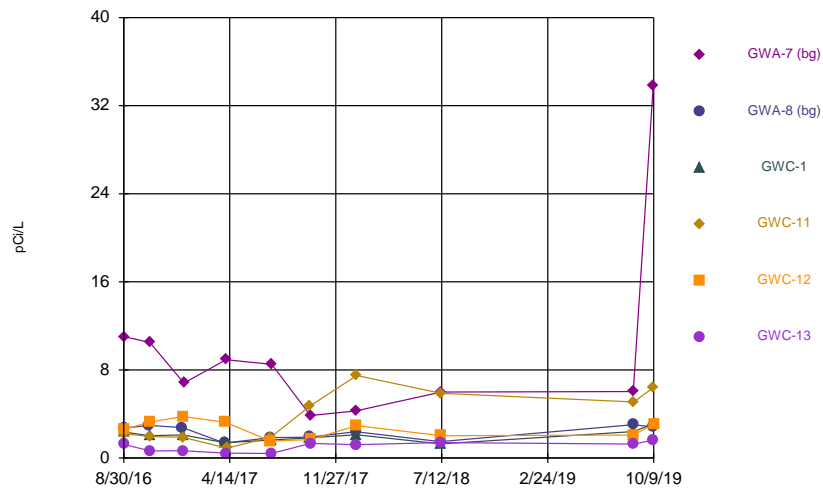
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Cobalt



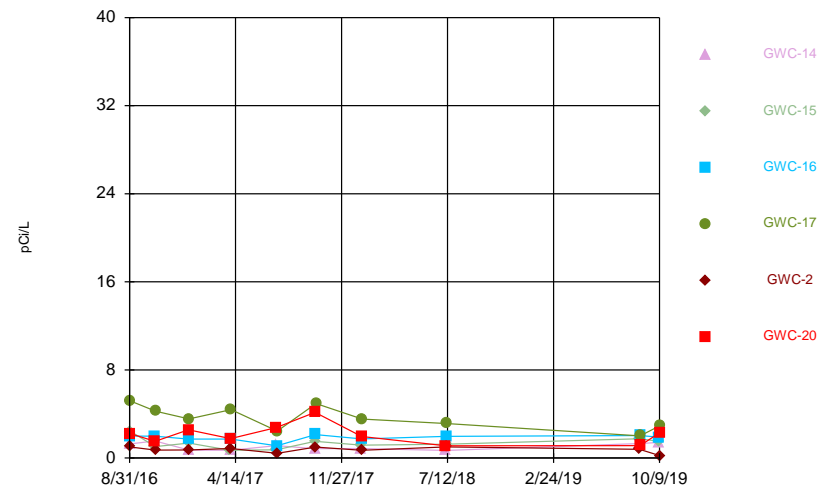
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Combined Radium 226 + 228



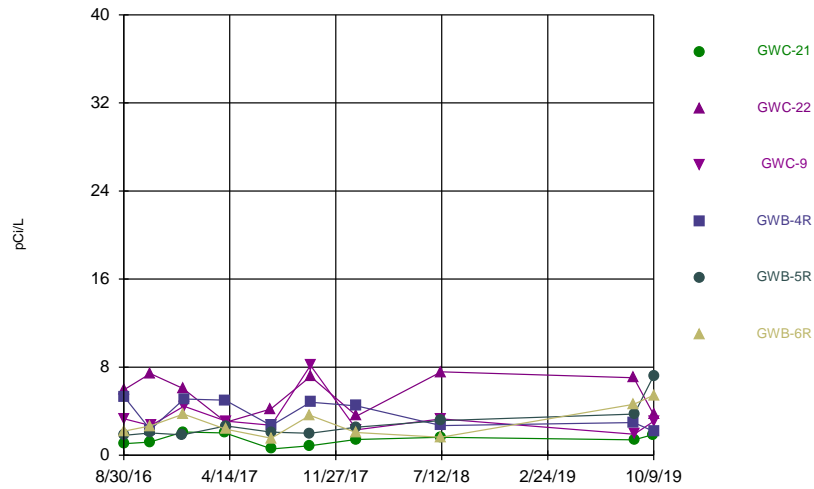
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Combined Radium 226 + 228



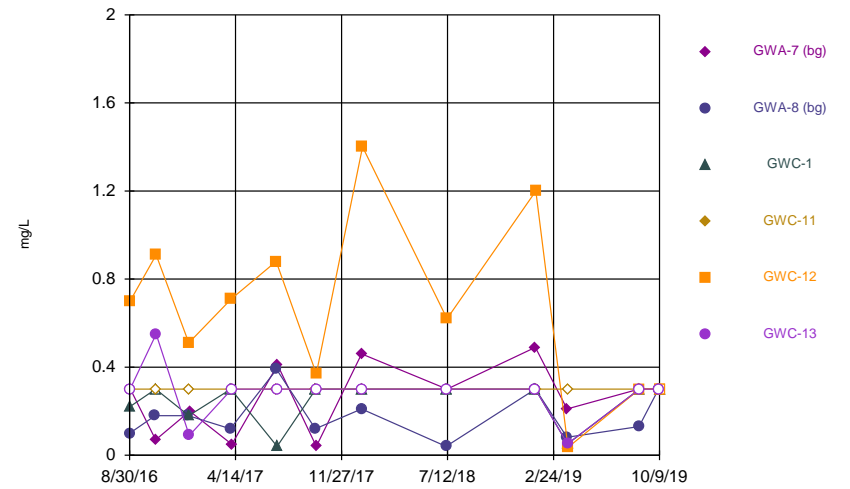
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Combined Radium 226 + 228



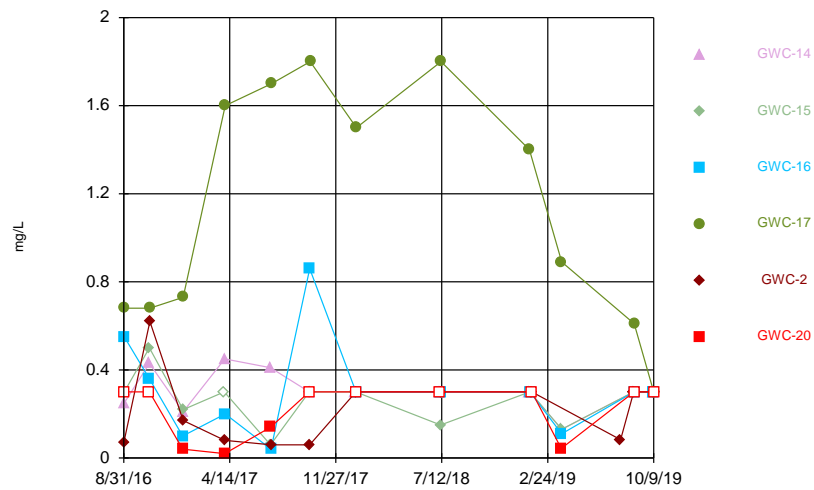
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Fluoride



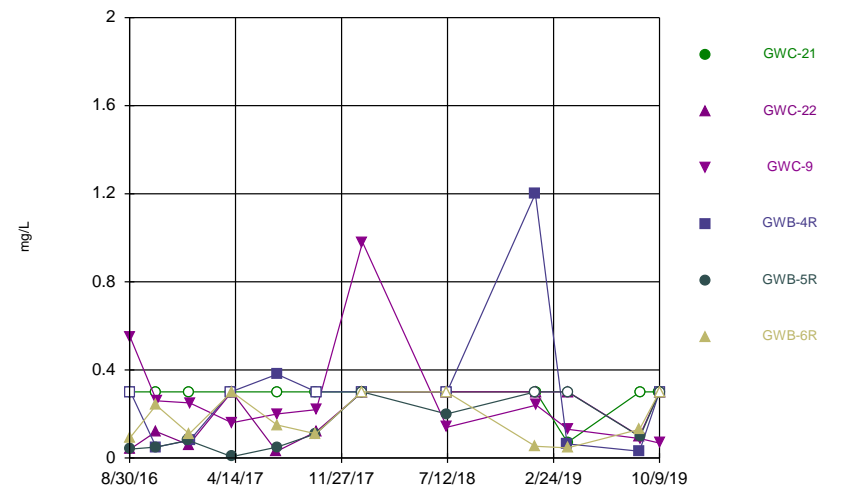
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Fluoride



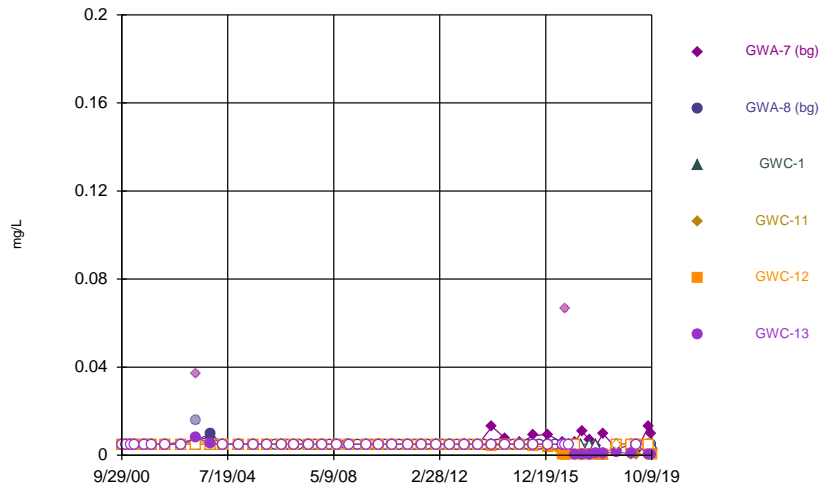
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Fluoride



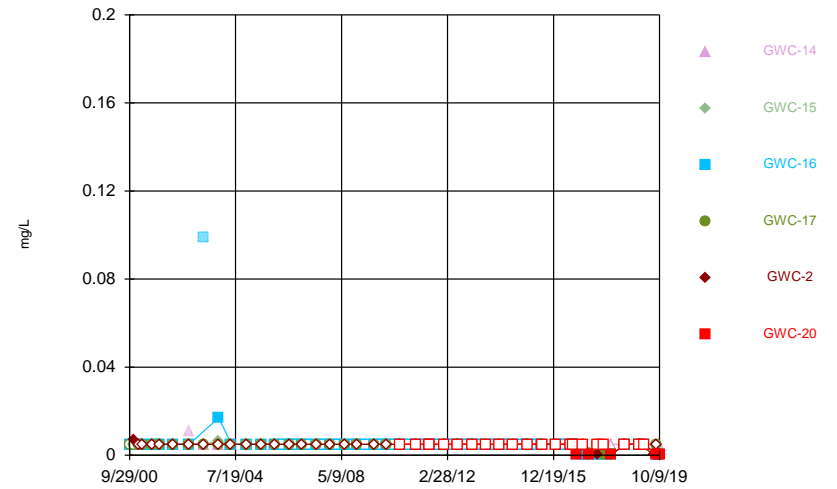
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Lead



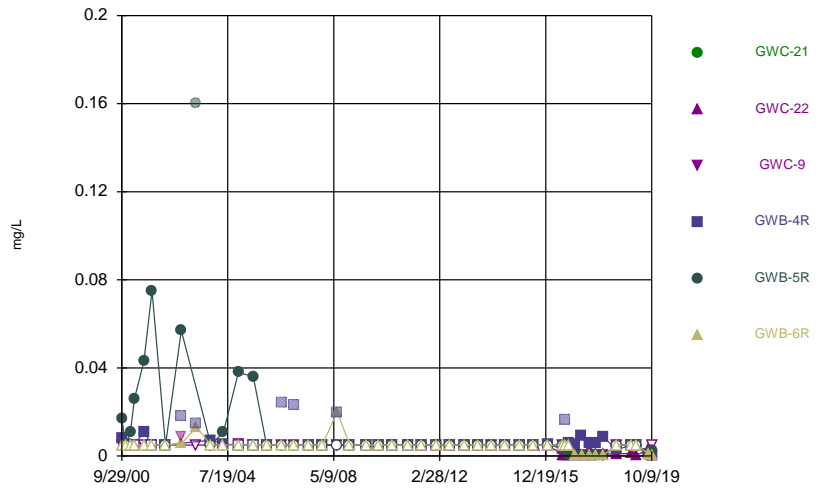
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Lead



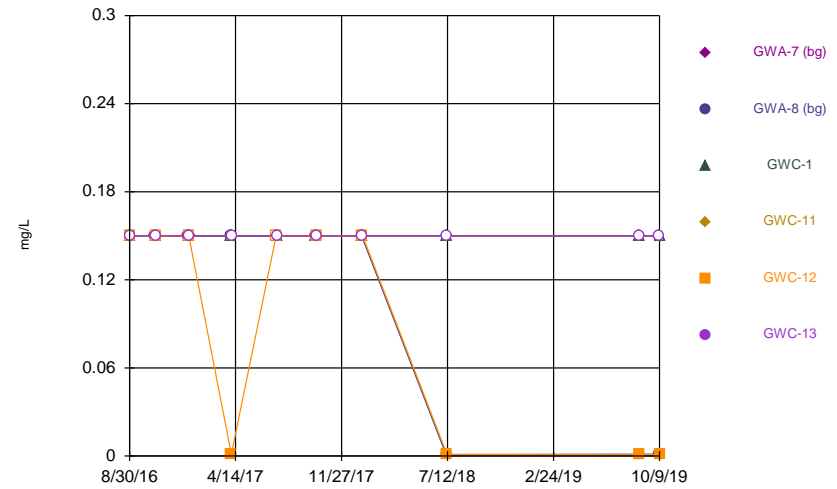
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Lead



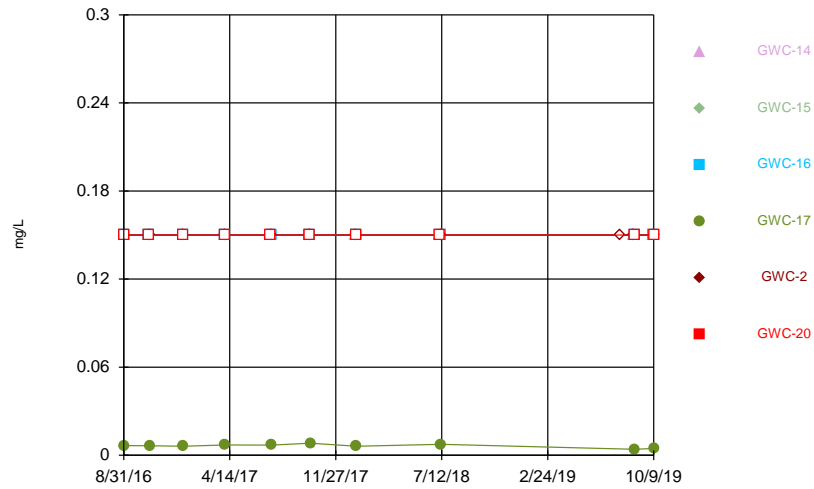
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Lithium



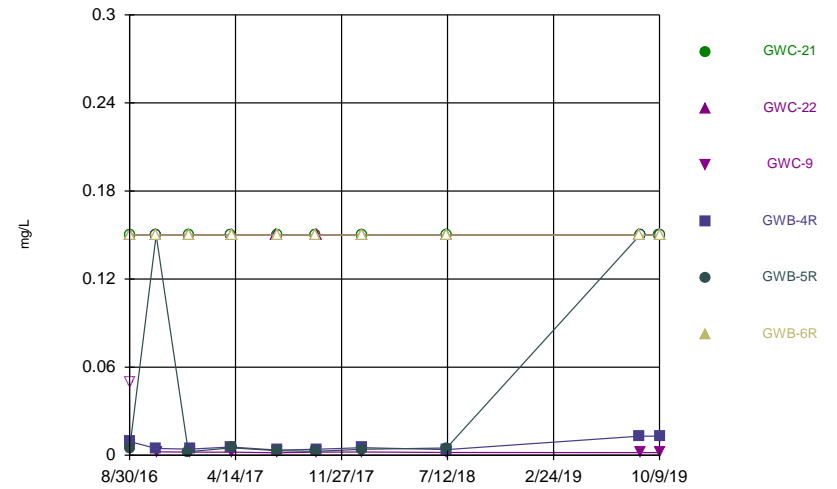
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Lithium



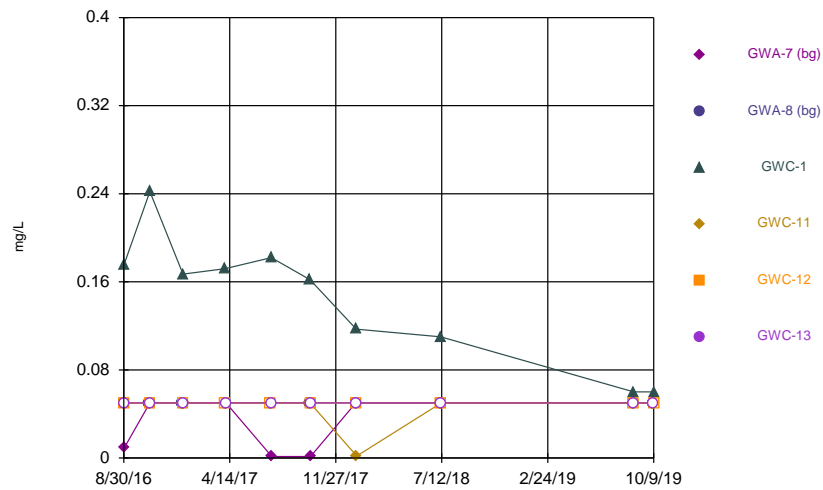
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Lithium



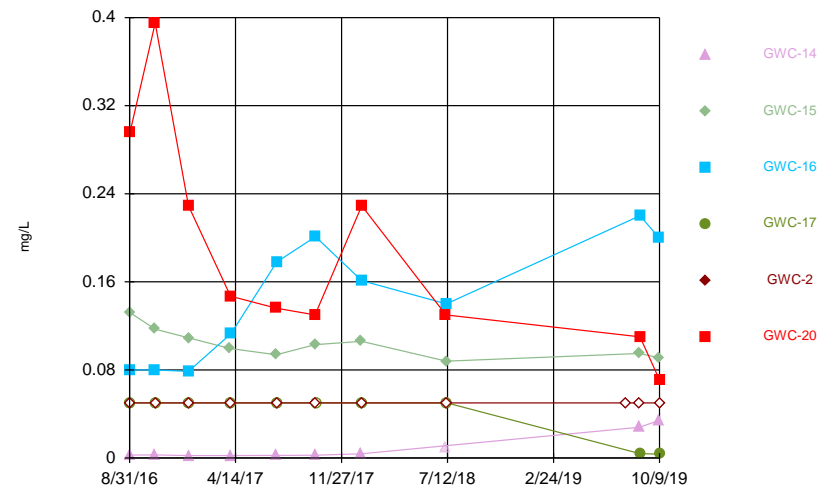
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Molybdenum



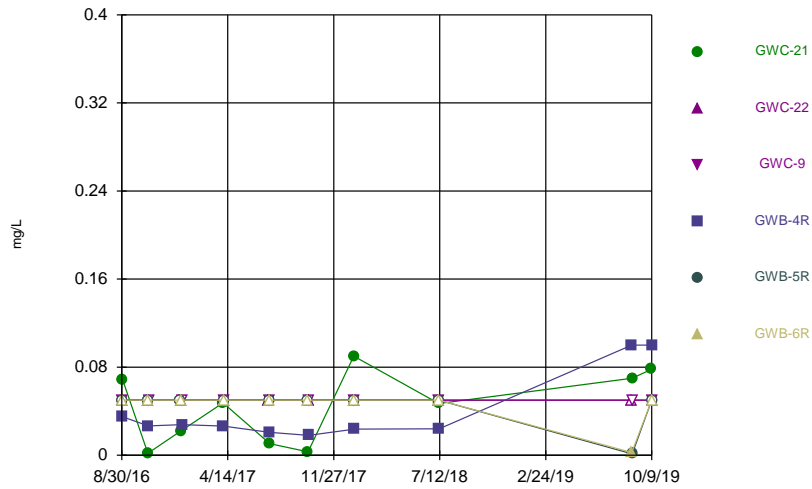
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Molybdenum



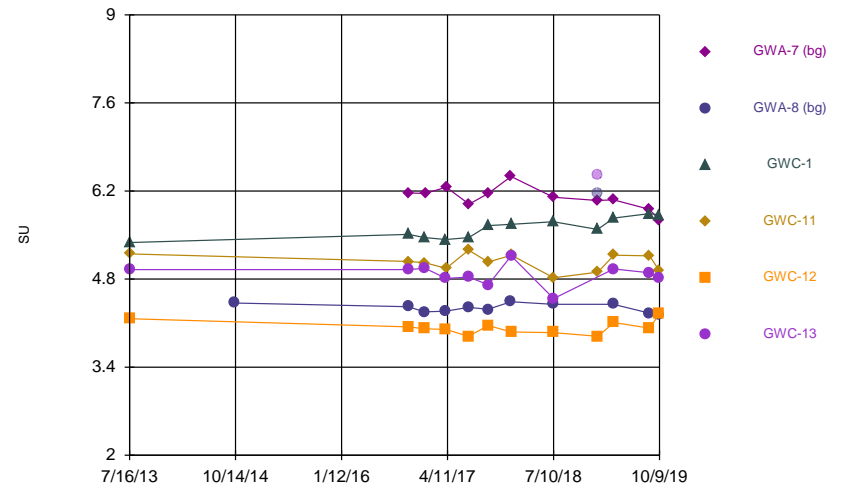
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Molybdenum



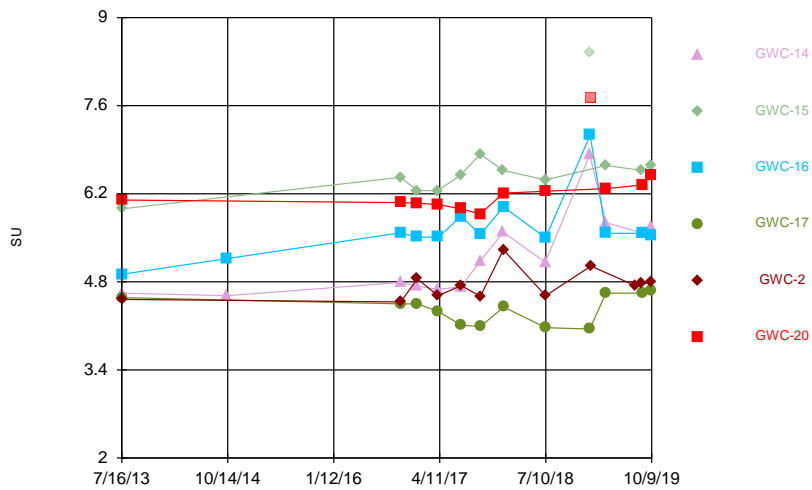
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pH



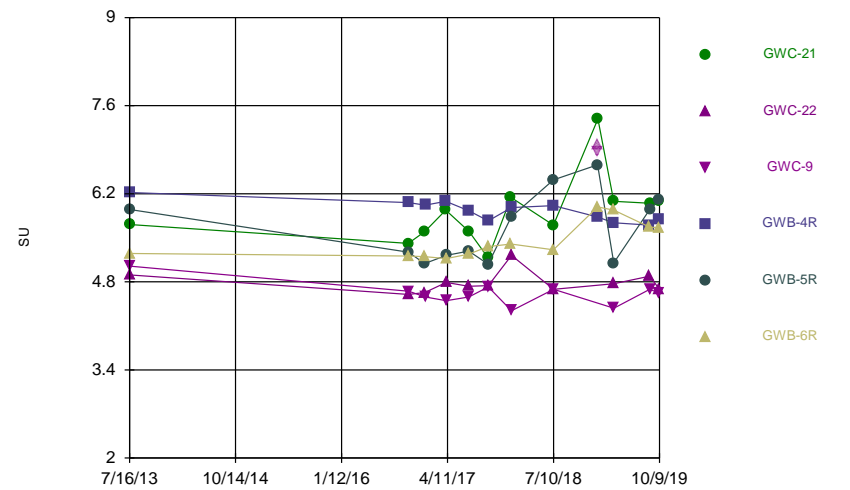
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pH



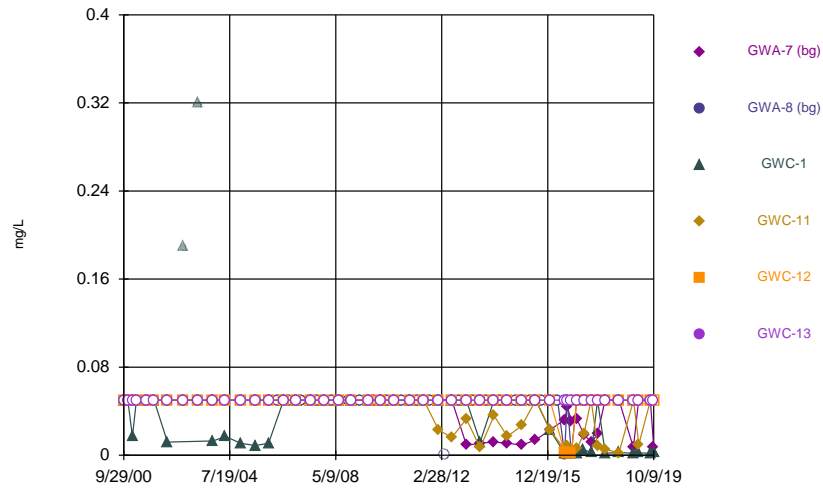
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pH



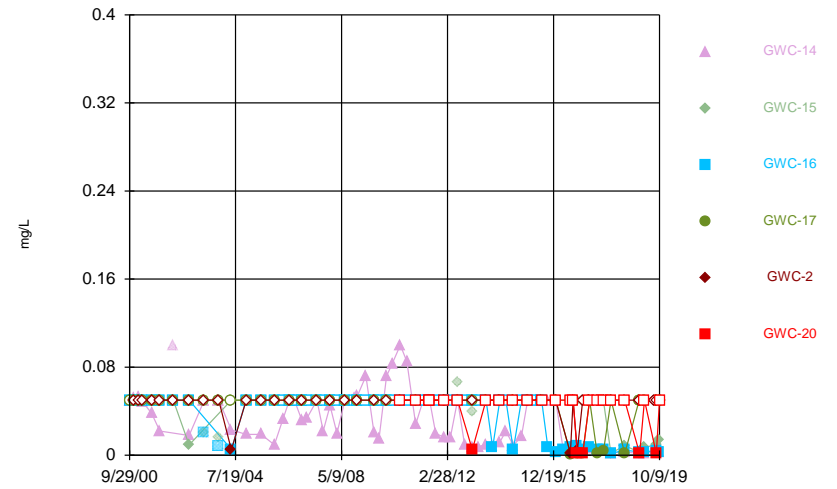
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Selenium



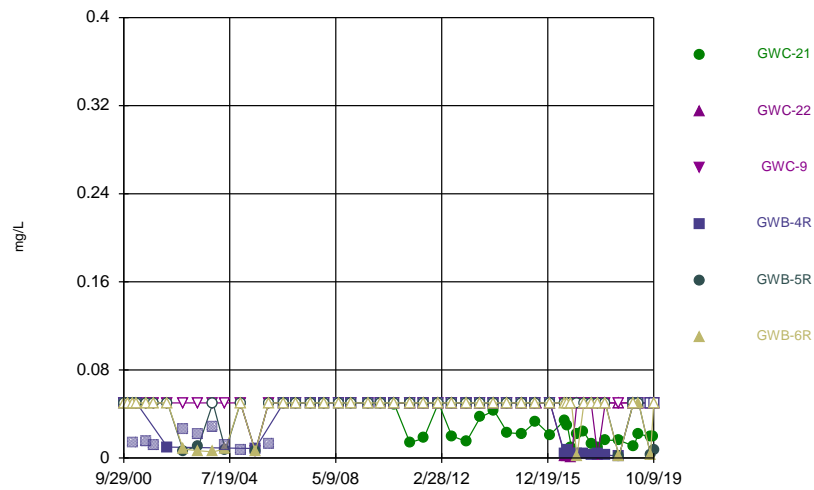
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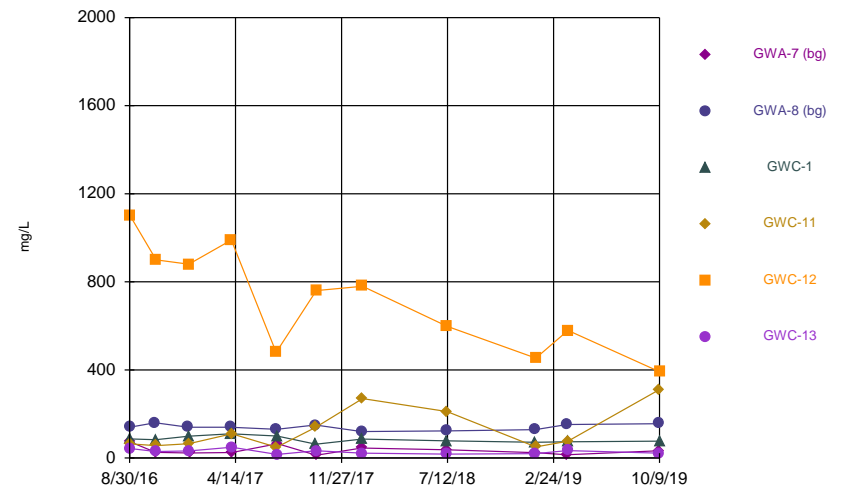
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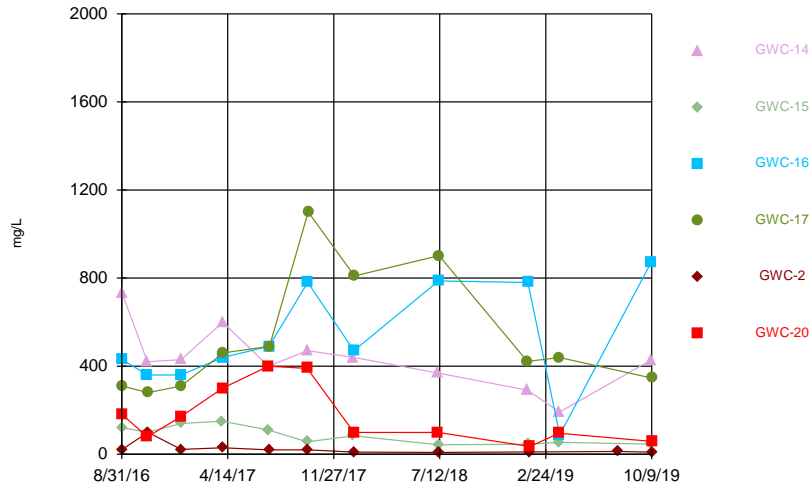
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Sulfate



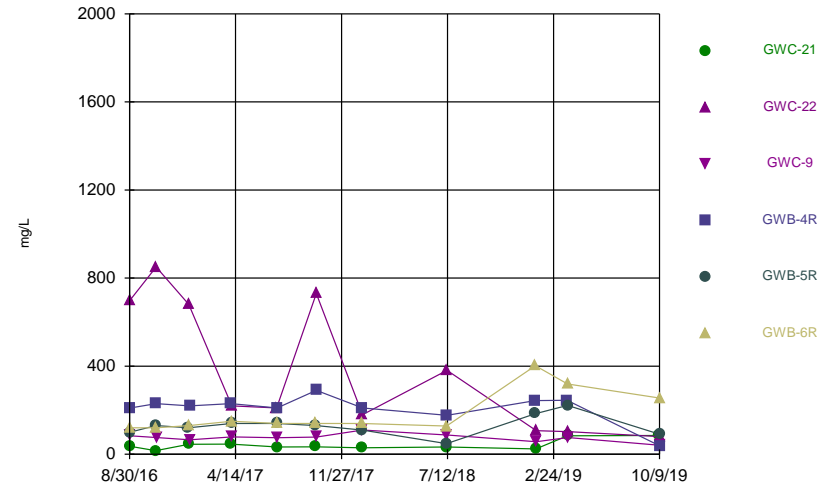
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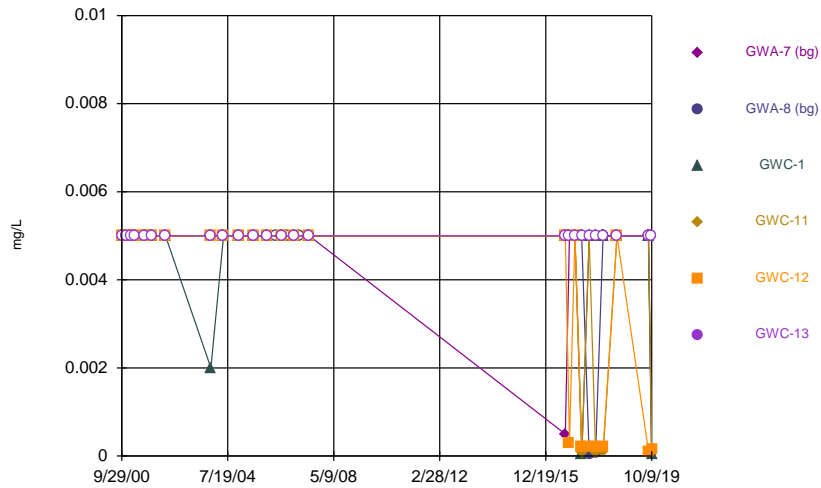
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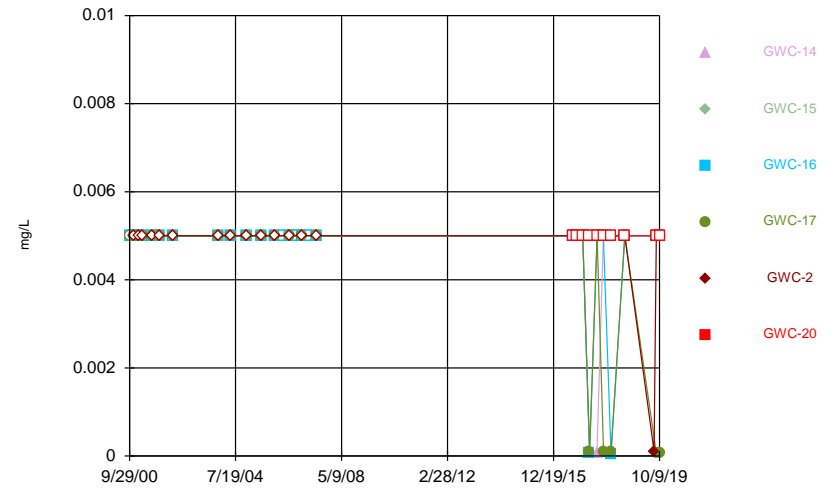
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Thallium



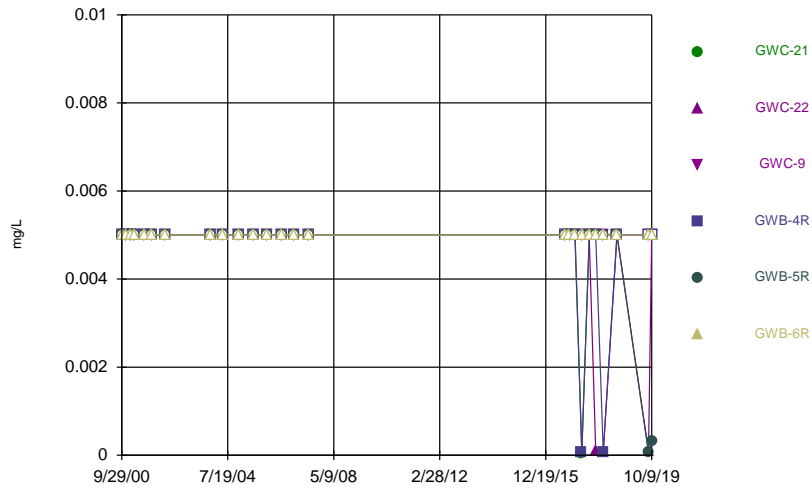
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Thallium



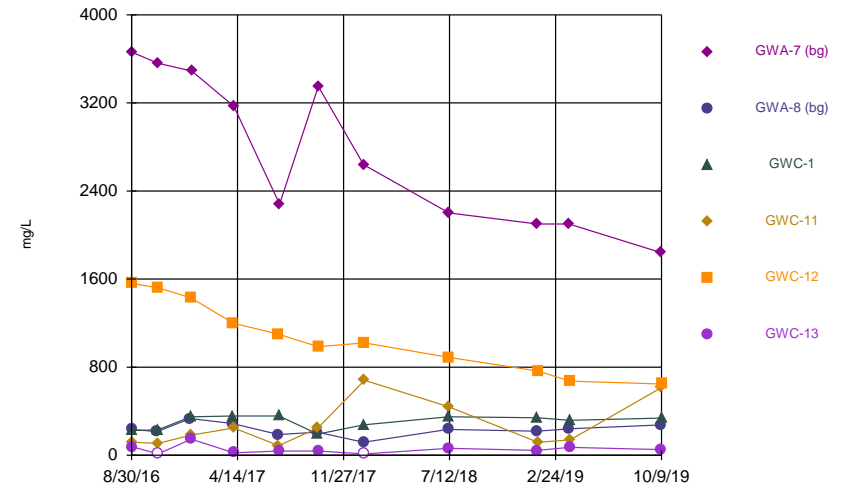
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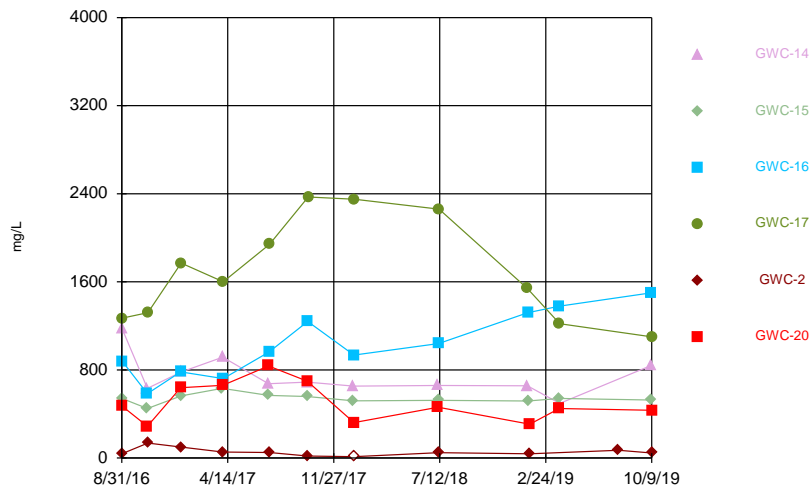
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Total Dissolved Solids



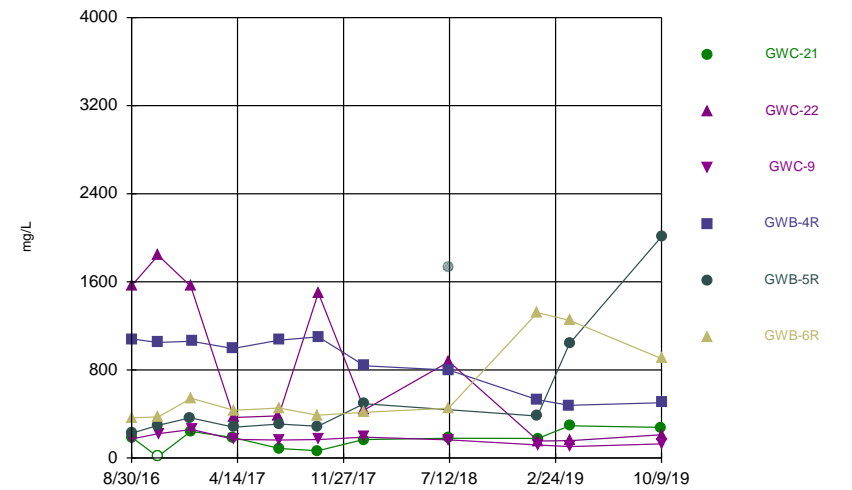
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Total Dissolved Solids



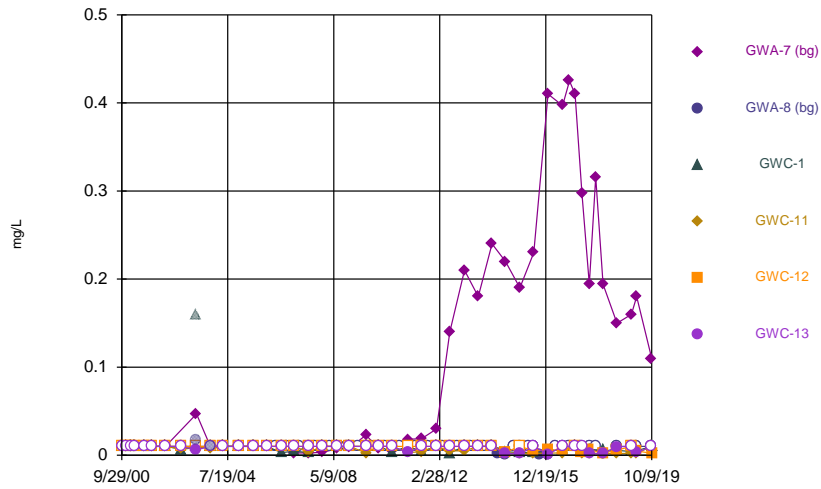
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Total Dissolved Solids



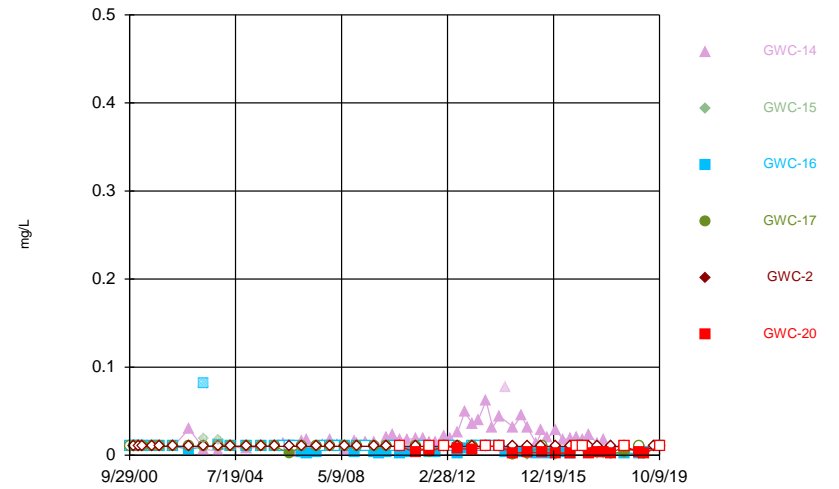
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Vanadium



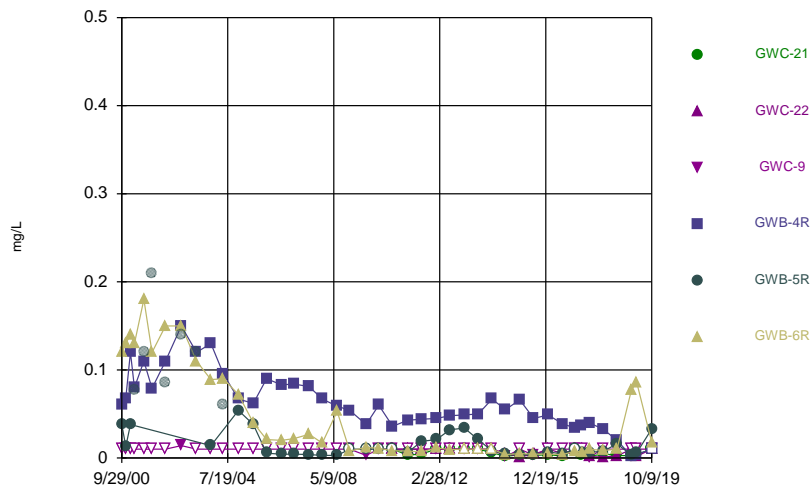
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Vanadium



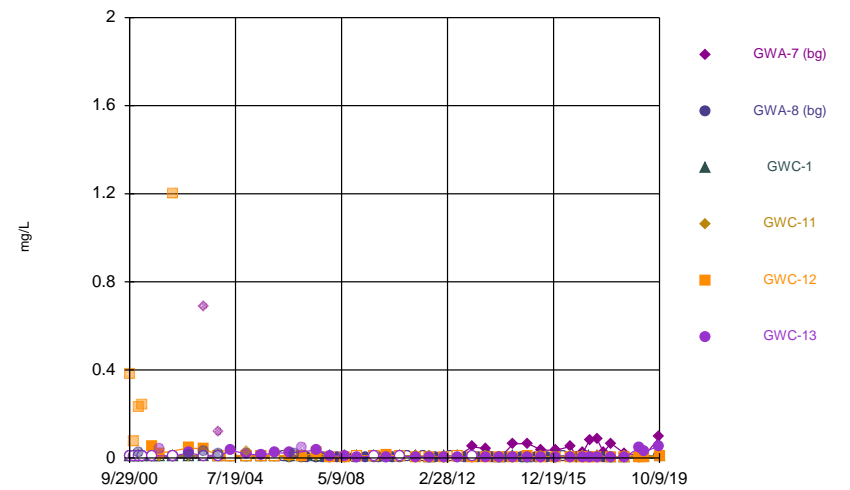
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Vanadium



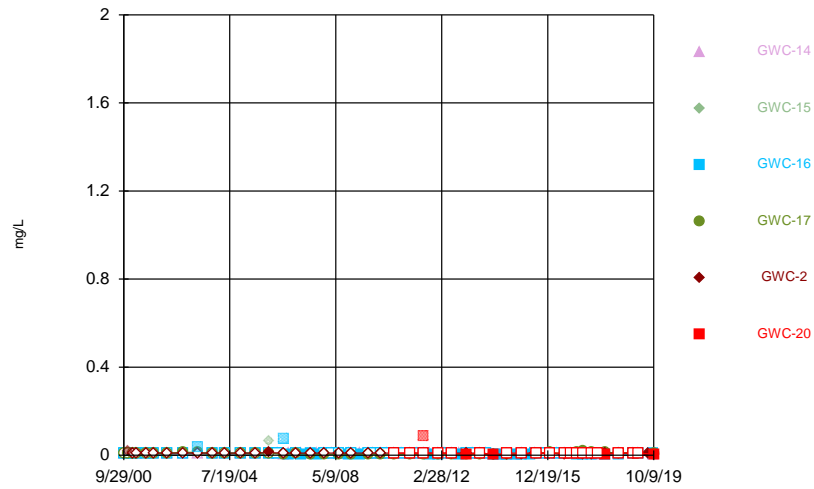
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Zinc



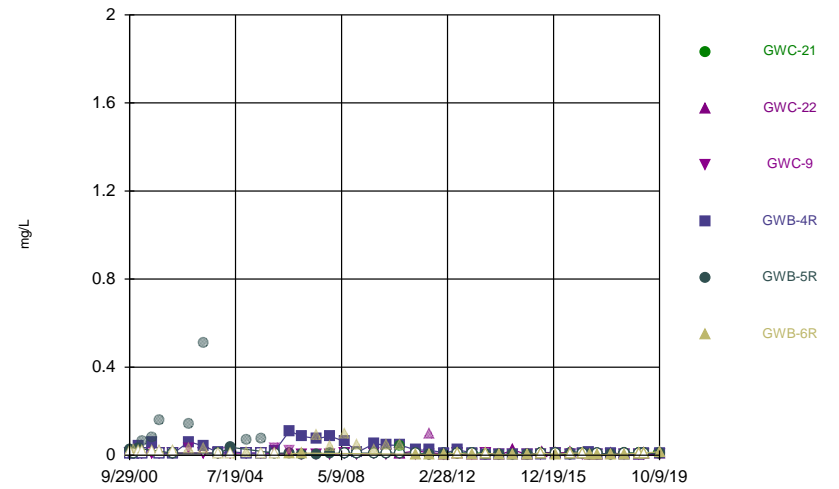
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Zinc



Time Series Analysis Run 12/18/2019 4:07 PM View: Time Series
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Zinc



Time Series Analysis Run 12/18/2019 4:07 PM View: Time Series
Grumman Road Landfill Client: Southern Company Data: Grumman Road



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