



Grumman Road Private Industrial Landfill

Port Wentworth, Georgia

PERMIT #: 025-061D(LI)

Chatham County

2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

The logo for Atlantic Coast Consulting, Inc. (ACC), featuring the letters "ACC" in a white, stylized, cursive font.

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PROFESSIONAL CERTIFICATION

This *2021 Annual 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.

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SUMMARY

This summary of the 2021 Annual Groundwater Monitoring and Corrective Action Report provides the groundwater monitoring and corrective action program status through June 2021 for Georgia Power Company (Georgia Power) Grumman Road Private Industrial Landfill (GRL). This summary was prepared by Atlantic Coast Consulting, Inc. (ACC) on behalf of Georgia Power.

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 received coal combustion residuals (CCR) from Georgia Power – Plant Kraft and operated under Georgia Environmental Protection Division (GA 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.



Grumman Road Private Industrial Landfill

The groundwater monitoring system is comprised of 2 upgradient, 3 sidegradient, and 13 downgradient wells installed from 1997 through 2018 to meet state monitoring requirements. Routine sampling and reporting began after background groundwater conditions were established in accordance with the Solid Waste Permit requirements specified in the Design and Operation (D&O) Plan. The monitoring program has been modified to include Appendix III and IV parameters to meet the requirements of the GA EPD Rules for Solid Waste Management 391-3-4-.10(6)(a) and 40 Code of Federal Regulations (CFR) § 257.95. Background groundwater conditions for Appendix III and IV parameters were established between September 2016 and July 2018.

Based on Site groundwater conditions, Georgia Power submitted a notification for the implementation of assessment monitoring under Rule 391-3-4-.10(6)(a) on November 13, 2019. An Assessment of Corrective Measures (ACM) was initiated on July 9, 2020 based on the requirements of GA EPD Rule 391-3-4-.10(6)(a) which incorporates United States Environmental Protection Agency (USEPA) CCR rule (40 CFR Part 257, Subpart D) by reference. Georgia Power submitted an ACM report on December 4, 2020 pursuant to GA EPD Rule 391-3-4-.10(6)(a) (Anchor 2020). The 2020 ACM supersedes previous documents submitted for the Site under the existing GA EPD Permit No. 025-061D(LI) (SCS 2013; ACC 2017, 2019).

During the 2021 annual reporting period, ACC completed groundwater sampling events in August 2020, September 2020, January 2021, and March 2021. Groundwater samples were submitted to Pace Analytical Services, LLC (Pace) for analysis. Per the CCR rule, groundwater results for September 2020 and March 2021 were evaluated in accordance with the certified statistical methods. That evaluation identified statistically significant values of Appendix III¹ constituents above background and statistically significant levels of Appendix IV² parameters above groundwater protection standards, as described in the table below.

Appendix III Parameter	September 2020	March 2021
Calcium	GWB-4R, GWB-5R, GWC-1, GWC-11, GWC-12, GWC-15, GWC-16, GWC-17, GWC-20, GWC-21	GWB-4R, GWB-5R, GWB-6R, GWC-1, GWC-11, GWC-12, GWC-15, GWC-16, GWC-17, GWC-20, GWC-21
Chloride	None identified.	GWC-17
pH	GWC-12, GWC-15, GWC-17	GWC-12
Sulfate	GWB-4R, GWB-5R, GWB-6R, GWC-11, GWC-12, GWC-16, GWC-17, GWC-20, GWC-21	GWB-5R, GWB-6R, GWC-11, GWC-12, GWC-16, GWC-17, GWC-20, GWC-21
Appendix IV Parameter³	September 2020	March 2021
Arsenic	GWC-15, GWC-16, and GWC-20	GWC-15, GWC-16, and GWC-20
Molybdenum	GWB-4R, GWC-1, GWC-15, GWC-16, GWC-20, and GWC-21	GWB-4R, GWC-1, GWC-15, GWC-16, GWC-20, and GWC-21

Based on review of the statistical results completed for the groundwater monitoring and corrective action program from July 2020 through June 2021, the Site should continue assessment monitoring and groundwater remedy selection. Georgia Power will continue routine groundwater monitoring and reporting at the Site. Reports will be posted to the website and provided to the GA EPD semiannually.

¹ Appendix III: Boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids (TDS).

² Appendix IV: Antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, radium 226+228, selenium, and thallium.

³ An SSL constituent is determined by comparing the confidence intervals developed to either the constituent's maximum contaminant level (MCL), if available, or the calculated background interwell prediction limit.

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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 *2021 Annual Groundwater Monitoring and Corrective Action Report* to document groundwater monitoring activities conducted during the second half of 2020 and first half of 2021 at Georgia Power's 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 (USEPA) Coal Combustion Residuals (CCR) Rule 40 Code of Federal Regulations (CFR) § 257 Subpart D.

To comply with GA EPD's Rule 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. Semiannual reporting is completed pursuant to GA EPD Rule 391-3-4-.10(6)(c). This report documents groundwater activities conducted July 2020 through June 2021.

Georgia Power submitted an Assessment of Corrective Measures (ACM) in December 2020 pursuant to GA EPD Rule 391-3-4-.10(6)(a) (Anchor 2020). The 2020 ACM supersedes previous documents submitted for the Site under the existing GA EPD Permit No. 025-061D(LI) (SCS 2013; ACC 2017, 2019). The ACM was prepared to evaluate potential groundwater corrective measures for the occurrence of arsenic and molybdenum in groundwater at statistically significant levels (SSLs) at GRL.

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 Georgia Power – Plant Kraft and operated under GA 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 GA EPD in a submittal dated November 27, 2019.

Figure 1, Site Map, depicts the location of GRL relative to the surrounding area. Figure 2, Well Location Map, depicts the general configuration of GRL 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 generally at a depth less than 80 feet below ground surface.

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

The sediments immediately underlying the Site are part of the regional surficial aquifer system described previously and consist of variable interbedded sands, silts, and clay comprising a near-surface aquifer system (SCS, 1998). Though complex with subtle distinctions, approximately 50 feet of the near-surface aquifer system (soil) can be divided into four units as described below:

- Upper Sands and Topsoil
- Unit 1 Uppermost Aquifer: Silty Fine Sand
- Unit 2 Low Permeability Zone: Interbedded Sand, Silt, and Clay
- Unit 3 Lower Sand Aquifer: Silty and/or Clayey Fine to Medium Sand

Unit 1 comprises the soil unit monitored at the site and has a thickness ranging from approximately 22 to 28 feet across GRL. Although Units 1 through 3 are classified as the surficial aquifer system, layers of lower permeability may be present in the surficial aquifer system (Clarke, Hacke, and Peck 1990; SCS 1998). Generally, groundwater in the near-surface aquifer system flows from north to south at the GRL but is influenced by topography. Groundwater elevations observed across the site and adjacent landfills suggest that hydraulic communication exists between Units 1, 2, and 3. Unit 2 has a lower permeability than Units 1 and 3 and locally may act as an impediment to downward migration, creating perched water within Unit 1 or impeding migration within the near-surface aquifer system. Unit 2 does not appear to be continuous across the sites such that it creates distinct groundwater flow systems. The geologic and hydrogeologic conditions at GRL were recently described in detail in the ACM Report (Anchor 2020).

1.4 Groundwater Monitoring System

A groundwater monitoring plan was submitted in November 1999 and approved by GA EPD in January 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 GA 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. Pursuant to GA EPD Rule 391-3-4-.10(6)(a) and 40 CFR § 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). Additional existing locations are presented in Table 1B, Delineation Well and Piezometer Summary.

As part of the assessment monitoring program, five vertical delineation wells (MW-23D through MW-27D) were installed in December 2020 and January 2021. Pursuant to GA EPD Rule 391-3-4-.10(6)(a) and 40 CFR § 257.95(g)(1)(iv), the wells, classified as “delineation wells”, will be

sampled in addition to the compliance monitoring wells as part of the ongoing assessment groundwater monitoring program.

2.0 GROUNDWATER MONITORING ACTIVITIES

The following describes monitoring-related activities performed at the Site from July 2020 through June 2021 (the reporting period) and discusses any change in status of the monitoring program.

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. Four non-network wells (GWC-3, GWC-4, GWC-5, and GWC-6) were abandoned on December 14, 2020. These wells were previously determined to be off-property and were replaced by GWB-4R, GWB-5R, and GWB-6R in 2018, with the exception of GWC-3 which was not replaced due to redundancy with GWC-20. Five wells (MW-23D through MW-27D) were installed in December 2020 and January 2021 and incorporated into the assessment monitoring well network. Wells MW-23D through MW-25D were installed to vertically delineate the extent of arsenic and molybdenum at GWC-15, GWC-16, and GWC-20, respectively. Wells MW-26D and MW-27D were installed to vertically delineate the extent of molybdenum at wells GWB-4R and GWC-1. Groundwater monitoring well GWC-16 is clustered with GWC-21, therefore the molybdenum SSL at GWC-21 is also vertically delineated by MW-24D. The March 2021 Well Abandonment and Installation Report is provided in Appendix A.

2.2 Assessment Monitoring Program

Georgia Power has initiated an assessment monitoring program for CCR Appendix IV constituents. A notification for the implementation of assessment monitoring under GA EPD Rule 391-3-4-.10(6) was submitted on November 13, 2019. Statistical analyses of the 2019 groundwater data identified SSLs of arsenic in wells GWC-15, GWC-16, and GWC-20 and molybdenum in wells GWB-4R, GWC-1, GWC-15, GWC-16, GWC-20, and GWC-21. The facility had previously implemented an assessment monitoring program for an Appendix II metal (arsenic) included in its state permit.

Table 2, Groundwater Sampling Event Summary, presents a summary of groundwater sampling events completed at the Site during the reporting period. An initial assessment monitoring event for Appendix IV constituents was completed in August 2020. This was followed by semiannual assessment monitoring events in September 2020 and March 2021. Groundwater samples were collected for the state-specific list of Appendix I/II metals specified in the permit, all Appendix III constituents, and the Appendix IV constituents detected during the August 2020 monitoring event. Following installation of vertical delineation wells MW-23D through MW-27D, samples of select parameters were collected in January 2021. The vertical delineation wells were sampled for the sitewide list of parameters during the March 2021 monitoring event. 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. Samples were collected from each well in the network monitoring system shown on Figure 2.

Details of these events and analytical results are discussed in Section 3, while the statistical results are discussed in Section 4. Results of sampling activities conducted during the reporting period are presented in Appendix B, Laboratory Analytical and Field Sampling Reports.

2.3 Assessment of Corrective Measures

Based on statistical analysis of assessment monitoring results presented in the 2020 Annual Groundwater Monitoring and Corrective Action Report, a Notice of Assessment of Corrective Measures was placed in the operating record on July 9, 2020 for the State CCR Rule. An ACM for arsenic was previously established under GA EPD Rule 391-3-4-.14. An ACM completed by Anchor QEA, LLC in December 2020 (Anchor, 2020) under GA EPD Rule 391-3-4-.10(6)(a) and 40 CFR §257.96 supersedes the previous ACM and incorporates arsenic and an additional Appendix IV consistent, molybdenum. A *Semiannual Remedy Selection and Design Progress Report* (SRSDPR) has been updated to include recent activities and is provided as Appendix C.

2.4 Additional Sampling

Soil samples were collected from each vertical delineation well location to refine the conceptual site model and support the continued evaluation of corrective measures as presented in the ACM Report. Physical soil testing data (i.e., classification, grain size, and hydraulic conductivity) are included in the report provided in Appendix A.

Additional groundwater sampling was completed during the March 2021 sampling event. A suite of geochemical indicator parameters was collected from network monitoring wells contemporaneously with the routine parameters. As summarized in SRSDPR, an active above-ground leachate seep has been observed on aerial imagery on the north side of the Clifton Landfill since approximately 2009. The seepage flows onto the Site near GWA-7. Samples of the leachate seepage were collected on the Site near GWA-7 during the March 2021 sampling event. The laboratory report is included in Appendix B. These data were collected in support of the remedy evaluation and selection process and are discussed in Appendix C.

Additional fieldwork for the ACM was completed in May 2021. Slug tests were completed at 5 locations (GWB-4R, GWB-6R, GWC-13, GWC-15, and GWC-16). Transducers for long-term water level monitoring were installed at 7 locations (GWA-7, GWB-4R, GWB-6R, GWC-13, GWC-15, GWC-16, and GWC-17). Additional groundwater volume for ACM related testing by Anchor QEA, LLC was collected from GWC-15 and GWC-20. This testing is further discussed in Appendix C.

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 delineation wells at GRL. Groundwater elevations recorded during the monitoring events are summarized in Tables 4A, 4B, and 4C, Summary of Groundwater Elevations – August 2020, September 2020, and March 2021, respectively. Groundwater elevation data were used to develop Figure 3, August 2020 Potentiometric Surface Map, Figure 4, September 2020 Potentiometric Surface Map, and Figure 5, March 2021 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 monitoring events are consistent with historical patterns.

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

Specifically:

Equation

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

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; USEPA, 1989; Freeze and Cherry, 1979). Groundwater flow velocities have been calculated and are tabulated on Tables 5A, 5B, and 5C, Groundwater Flow Velocity Calculations – August 2020, September 2020, and March 2021, respectively. The calculated maximum flow velocities are 0.30 feet per day for August 2020, 0.32 feet per day for September 2020, and 0.32 feet per day for March 2021.

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 performed using a peristaltic pump. 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 or Aqua Troll (In-Situ field instruments) was used to monitor and record field water quality parameters (pH, specific conductance, oxidation-reduction potential [ORP], dissolved oxygen [DO], 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 or 0.2 milligrams per liter (mg/L), whichever is greater where DO > 0.5 mg/L. No criterion applies if DO < 0.5 mg/L.
- Turbidity measurements less than 5 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 of Peachtree Corners, Georgia and Greensburg, Pennsylvania following chain-of-custody protocol. Stabilization logs and equipment calibration forms for each well during each monitoring event are included in Appendix B.

3.3 Laboratory Analyses

Mercury was not detected in the initial Appendix IV assessment monitoring event completed in August 2020 and therefore not included in the semiannual assessment monitoring events completed in September 2020 and March 2021. Vertical delineation wells were sampled for Appendix III and select Appendix IV analytes (i.e., arsenic and/or molybdenum) in January 2021 and for the same analytes as the network wells in March 2021. Analytical methods used for

groundwater monitoring parameters are provided in laboratory reports in Appendix B. Analytical data collected in monitoring events during the reporting period are summarized in Tables 6A, 6B, 6C, and 6D, Summary of Groundwater Analytical Data – August 2020, September 2020, January 2021, and March 2021, 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 B.

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 B.

Groundwater quality data in this report were validated in accordance with USEPA guidance (USEPA, 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 digestion 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 USEPA procedures as guidance (USEPA, 2017). The data are considered usable for meeting project objectives and the results are considered valid.

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 practical quantitation 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

The statistical method used at GRL was developed by Groundwater Stats Consulting, LLC (GSC), using methodology presented in *Statistical Analysis of Groundwater Data at RCRA Facilities, Unified Guidance*, March 2009, USEPA 530/ R-09-007 (USEPA, 2009).

Statistical analysis of the reporting period groundwater monitoring data was performed by GSC following the appropriate certified statistical methodology for GRL. Sanitas groundwater statistical software was used to screen the data and perform the statistical analyses. Sanitas is a decision support software package that incorporates the statistical tests required of Subtitle C and D facilities by USEPA regulations.

Appendix I and Appendix III statistical analysis was performed to determine if groundwater has returned to background levels. Appendix II and Appendix IV constituents were evaluated to determine if concentrations statistically exceeded the established GWPS.

A summary of the statistical methodology used at GRL for routine groundwater monitoring is provided in Table 7, Statistical Method Summary. Statistical analysis methods and results are provided in Appendix D, Statistical Analyses, and summarized in the following sections.

4.1 Appendix I and III Statistical Methods

Based on guidance from GA EPD, statistical tests used to evaluate the groundwater monitoring data consist of interwell prediction limits (PLs) combined with a 1-of-2 verification resample plan for each of the Appendix I and III parameters. Interwell PLs are constructed using pooled data from upgradient wells GWA-7 and GWA-8 to establish a background limit for an individual constituent. The most recent sample from each downgradient well is compared to the background limit to determine whether there are statistically significant increases (SSIs). An "initial exceedance" occurs when an Appendix I or III constituent reported in downgradient groundwater compliance monitoring well exceeds the constituent's associated PL. The 1-of-2 resample plan allows for collection of an independent resample. A confirmed exceedance is noted only when the resample verifies the initial exceedance. If the resample result is less than its relevant PL, the initial exceedance is not verified.

4.2 Appendix II and IV Statistical Methods

Appendix II constituents and Appendix IV constituents detected in the initial annual assessment sampling event (August 2020) were sampled during the semiannual assessment sampling event. To statistically compare groundwater data to GWPS, confidence intervals are constructed for each of the detected Appendix II and IV parameters in each downgradient well. Those confidence intervals are compared to the GWPS. Only when the entire confidence interval is above a GWPS is the well/constituent pair considered to exceed its GWPS. If there is an exceedance of the established standard, an SSL exceedance is identified.

USEPA revised the federal CCR Rule on July 30, 2018, updating GWPS for cobalt, lead, lithium, and molybdenum. USEPA's updated GWPS have not yet been incorporated under GA EPD's CCR Rule. The GA EPD CCR Rule GWPS is:

- (1) The federally established MCL.
- (2) Where an MCL has not been established, the background concentration.
- (3) Background levels for constituents where the background level is higher than the MCL.

As described in 40 CFR § 257.95(h)(1-3), the GWPS for cobalt, lead, lithium and molybdenum is:

- (1) The MCL established under 40 CFR §141.62 and 141.66.
- (2) Where an MCL has not been established:
 - (i) Cobalt 0.006 mg/L;
 - (ii) Lead 0.015 mg/L;
 - (iii) Lithium 0.040 mg/L; and
 - (iv) Molybdenum 0.100 mg/L.
- (3) Background levels for constituents where the background level is higher than the MCL or rule-specified GWPS.

Following the above state rule requirements, GWPS have been established for statistical comparison of Appendix II and Appendix IV constituents and are presented in Table 8, Summary of Background Levels and Groundwater Protection Standards.

4.3 Statistical Analyses Results

Based on review of the Appendix I and III statistical analyses presented in Appendix D, constituents have not returned to background levels and assessment monitoring should continue pursuant to GA EPD Rule 391-3-4-.10(6)(a).

4.3.1 September 2020 Appendix I and III Parameters

Statistical analysis of Appendix I data identified SSIs for two groundwater monitoring parameters above site background levels. The SSIs include:

- Arsenic: GWC-15, GWC-16, GWC-20
- Barium: GWC-20

Appendix III SSIs include:

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

4.3.2 September 2020 Appendix II and IV Parameters

Based on a review of the statistical analysis presented in Appendix D, the following parameters were found to statistically exceed the GWPS:

- Arsenic: GWC-15, GWC-16, and GWC-20
- Molybdenum: GWB-4R, GWC-1, GWC-15, GWC-16, GWC-20, and GWC-21

4.3.3 March 2021 Appendix I and III Parameters

Statistical analysis of Appendix I data identified SSIs for two groundwater monitoring parameters above site background levels. The SSIs include:

- Arsenic: GWC-15, GWC-16, GWC-20
- Barium: GWC-20

Appendix III SSIs include:

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

4.3.4 March 2021 Appendix II and IV Parameters

Based on a review of the statistical analysis presented in Appendix D, the following parameters were found to statistically exceed the GWPS:

- Arsenic: GWC-15, GWC-16, and GWC-20
- Molybdenum: GWB-4R, GWC-1, GWC-15, GWC-16, GWC-20, and GWC-21

These results are consistent with those presented in the 2020 Semiannual Groundwater Monitoring and Corrective Action Report (ACC, 2020). An ACM was submitted in December 2020

for arsenic and molybdenum, per GA EPD Rule 391-3-4-.10(6)(a) and 40 CFR §257.96, and potential corrective measures are under evaluation.

4.4 Delineation Data

Wells MW-23D, MW-24D, and MW-25D were installed for vertical delineation of arsenic and molybdenum, and wells MW-26D and MW-27D were installed for vertical delineation of molybdenum in December 2020 and January 2021. The location of these wells is shown on Figure 2.

Results from the January and March 2021 groundwater sampling events indicate that vertical delineation is complete: arsenic and molybdenum concentrations in the vertical delineation wells are below the relevant GWPS. However, the current Appendix IV data set for these wells is limited to less than four independent sampling events which is the required minimum number to construct confidence intervals to statistically evaluate the results with respect to GWPS. Georgia Power will continue to monitor these wells until an adequately sized data set is available to complete statistical analyses. The January and March 2021 delineation results are provided in Appendix B.

Horizontal delineation to the south is dependent on securing access from adjacent property owners. Per GA EPD guidance, where “denial of access prevents the installation of off-site delineation wells, a USEPA approved fate and transport model analysis may be used to delineate the limit of the contaminant plume” (GA EPD 2018). Because off-site access has not been secured, a transport model is being developed to complete horizontal delineation and is described in Appendix C.

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 was established under the state solid waste permit and was recently superseded by an ACM completed under GA EPD Rule 391-3-4-.10(6)(a) and 40 CFR §257.96. The previously identified arsenic concentrations and recent SSLs of molybdenum are currently being addressed by an ACM.

Pursuant to 40 CFR 257.96(b), Georgia Power will continue to monitor the groundwater at the Site in accordance with the assessment monitoring program regulations of 40 CFR 257.95 while ACM efforts are implemented to evaluate SSL concentrations of arsenic and molybdenum. Pursuant to 40 CFR § 257.94(e)(1), Georgia Power will continue assessment monitoring in accordance with 40 CFR § 257.95. Pursuant to 40 CFR § 257.95(g)(1)(iv), the delineation wells will continue to be sampled as part of the ongoing semiannual assessment groundwater monitoring program.

5.1 Assessment of Corrective Measures

An ACM was implemented on July 9, 2020 and submitted to EPD on December 4, 2020. The ACM efforts completed during the reporting period covered by this groundwater monitoring and corrective action report are presented in Appendix C. The SRSDPR summarizes:

- (i) the current conceptual site model applicable to evaluating groundwater corrective measures proposed in the ACM Report (Anchor, 2020).
- (ii) the analytical data obtained during supplemental ACM-specific field investigations.
- (iii) the status of applicable corrective measures evaluation; and

- (iv) the planned activities and anticipated schedule for the following semi-annual reporting period.

Georgia Power will include semiannual progress reports with each future groundwater monitoring and corrective action report.

6.0 CONCLUSIONS AND FUTURE ACTIONS

This 2021 Annual Groundwater Monitoring and Corrective Action Report was prepared to fulfill the requirements of GA EPD Rule 391-3-4-.10(6)(c). Statistical evaluations of the groundwater monitoring data identified the presence of SSLs of arsenic (GWC-15, GWC-16, and GWC-20) and molybdenum (GWB-4R, GWC-1, GWC-15, GWC-16, GWC-20, and GWC-21) above the GWPS. The arsenic and molybdenum SSLs are vertically delineated below the GWPS by MW-23D through MW-27D. Because off-site access has not been secured, a transport model is being developed to complete horizontal delineation and is described in Appendix C.

Georgia Power will continue to monitor groundwater under the assessment monitoring program and evaluate potential corrective measures presented in Appendix C.

The next semiannual assessment sampling event is planned for September 2021. The September 2021 semiannual assessment monitoring event will be a combined event to meet the requirements of GA EPD Rule 391-3-4-.10(6) and 40 C.F.R. §257.95(b) and (d)(1) and will include sampling and analysis of all Appendix III and IV constituents along with the state-specific list of Appendix I/II metals specified in the permit.

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TABLES

Table 1A
Monitoring Network Well Summary
Grumman Road Landfill
Chatham County, Georgia

Well ID	Installation Date (mm/dd/yyyy)	Northing (SD)	Easting (SD)	Top of Casing Elevation (SD)	Bottom Depth (ft BTOC)	Bottom Elevation (SD)	Depth to Top of Screen (ft BTOC)	Top of Screen Elevation (SD)	Hydraulic Location
GWA-7	07/29/1998	780887.99	960553.30	47.10	21.20	25.90	16.20	30.90	Upgradient
GWA-8	07/29/1998	781167.66	960453.78	46.84	20.80	26.04	15.80	31.04	Upgradient
GWB-4R	10/09/2018	779975.87	960770.83	49.58	27.00	22.58	16.76	32.82	Sidegradient
GWB-5R	10/09/2018	780294.37	960686.46	47.82	26.50	21.32	16.51	31.31	Sidegradient
GWB-6R	10/08/2018	780573.41	960610.31	47.40	22.70	24.70	12.69	34.71	Sidegradient
GWC-1	03/10/1997	779574.06	960864.07	50.30	28.20	22.10	21.93	28.37	Downgradient
GWC-2	03/11/1997	779433.81	960353.99	51.84	32.73	19.11	26.73	25.11	Downgradient
GWC-9	07/24/1998	781007.52	959954.35	47.11	27.40	19.71	22.40	24.71	Downgradient
GWC-11	07/23/1998	780352.70	960115.63	49.38	22.60	26.78	17.60	31.78	Downgradient
GWC-12	07/22/1998	780099.06	960175.37	47.48	26.70	20.78	21.70	25.78	Downgradient
GWC-13	07/22/1998	779737.90	960268.64	47.82	23.80	24.02	18.80	29.02	Downgradient
GWC-14	07/22/1998	779112.64	960423.84	50.70	27.00	23.70	22.00	28.70	Downgradient
GWC-15	07/22/1998	778948.31	960660.49	48.12	26.80	21.32	21.80	26.32	Downgradient
GWC-16	07/21/1998	779034.61	960956.85	47.79	28.20	19.59	23.20	24.59	Downgradient
GWC-17	1998	781420.05	960041.65	44.09	23.50	20.59	18.20	25.89	Downgradient
GWC-20	05/07/2010	779294.68	960950.04	50.03	25.59	24.44	20.29	29.74	Downgradient
GWC-21	05/07/2010	779031.11	960941.58	47.94	24.54	23.40	19.24	28.70	Downgradient
GWC-22	05/07/2010	780712.60	960057.05	46.72	19.21	27.51	13.91	32.81	Downgradient

Notes:

1. SD indicates feet relative to Site Datum.
2. ft BTOC indicates feet below top of casing.

**Table 1B
Delineation Well and Piezometer Summary
Grumman Road Landfill
Chatham County, Georgia**

Well ID	Installation Date (mm/dd/yyyy)	Northing (SD)	Easting (SD)	Top of Casing Elevation (SD)	Bottom Depth (ft BTOC)	Bottom Elevation (SD)	Depth to Top of Screen (ft BTOC)	Top of Screen Elevation (SD)	Purpose
GWC-10	07/24/1998	780703.64	960030.15	47.43	20.60	26.79	15.60	31.79	Piezometer
MW-23D	12/17/2020	779280.61	960949.37	50.20	63.30	-13.10	58.00	-7.80	Delineation
MW-24D	01/04/2021	779043.12	960964.95	48.54	66.30	-17.76	61.00	-12.46	Delineation
MW-25D	01/06/2021	778944.95	960648.33	48.33	70.20	-21.87	64.90	-16.57	Delineation
MW-26D	01/10/2021	779994.12	960768.25	49.39	69.90	-20.51	64.60	-15.21	Delineation
MW-27D	01/08/2021	779559.74	960868.15	50.53	72.43	-21.90	67.13	-16.60	Delineation

Notes:

1. SD indicates feet relative to Site Datum.
2. ft BTOC indicates feet below top of casing.

Table 2
Groundwater Sampling Event Summary
Grumman Road Landfill
Chatham County, Georgia

Well	Hydraulic Location	Aug. 17-19, 2020	Sep. 28 - Oct. 1, 2020	Jan. 20-21, 2021	Mar. 10-16, 2021
Purpose of Sampling Event		Initial App. IV Assessment	Assessment	Delineation	Assessment
GWA-7	Upgradient	X	X	--	X
GWA-8	Upgradient	X	X	--	X
GWB-4R	Sidegradient	X	X	--	X
GWB-5R	Sidegradient	X	X	--	X
GWB-6R	Sidegradient	X	X	--	X
GWC-1	Downgradient	X	X	--	X
GWC-2	Downgradient	X	X	--	X
GWC-9	Downgradient	X	X	--	X
GWC-11	Downgradient	X	X	--	X
GWC-12	Downgradient	X	X	--	X
GWC-13	Downgradient	X	X	--	X
GWC-14	Downgradient	X	X	--	X
GWC-15	Downgradient	X	X	--	X
GWC-16	Downgradient	X	X	--	X
GWC-17	Downgradient	X	X	--	X
GWC-20	Downgradient	X	X	--	X
GWC-21	Downgradient	X	X	--	X
GWC-22	Downgradient	X	X	--	X
MW-23D	Delineation	--	--	X	X
MW-24D	Delineation	--	--	X	X
MW-25D	Delineation	--	--	X	X
MW-26D	Delineation	--	--	X	X
MW-27D	Delineation	--	--	X	X

Notes:

1. X indicates sample was collected.
2. Initial Assessment Event included all Appendix IV analytes.
3. September 2020 and March 2021 Assessment Events included Appendix III and Detected Appendix IV analytes.
4. Delineation Event included Appendix III and select Appendix IV analytes.
5. -- = Not sampled.

Table 3
Summary of Groundwater Monitoring Parameters
Grumman Road Landfill
Chatham County, Georgia

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

Table 4A
Summary of Groundwater Elevations
August 2020
Grumman Road Landfill
Chatham County, Georgia

Well ID	TOC Elevation (SD)	Depth to Water (ft BTOC)	Groundwater Elevation (SD)
GWA-7	47.10	6.22	40.88
GWA-8	46.84	7.36	39.48
GWB-4R	49.58	14.97	34.61
GWB-5R	47.82	10.06	37.76
GWB-6R	47.40	7.80	39.60
GWC-1	50.30	19.16	31.14
GWC-2	51.84	19.23	32.61
GWC-9	47.11	8.70	38.41
GWC-11	49.38	12.66	36.72
GWC-12	47.48	12.49	34.99
GWC-13	47.82	13.89	33.93
GWC-14	50.70	19.51	31.19
GWC-15	48.12	19.28	28.84
GWC-16	47.79	20.71	27.08
GWC-17	44.09	6.42	37.67
GWC-20	50.03	21.19	28.84
GWC-21	47.94	20.64	27.30
GWC-22	46.72	8.41	38.31

Notes:

1. ft BTOC indicates feet below top of casing.
2. SD indicates feet relative to Site Datum.
3. Depths to water measured on August 17, 2020.

Table 4B
Summary of Groundwater Elevations
September 2020
Grumman Road Landfill
Chatham County, Georgia

Well ID	TOC Elevation (SD)	Depth to Water (ft BTOC)	Groundwater Elevation (ft MSL)
GWA-7	47.10	5.19	41.91
GWA-8	46.84	6.14	40.70
GWB-4R	49.58	14.11	35.47
GWB-5R	47.82	8.75	39.07
GWB-6R	47.40	6.22	41.18
GWC-1	50.30	18.28	32.02
GWC-2	51.84	18.06	33.78
GWC-9	47.11	7.40	39.71
GWC-11	49.38	11.26	38.12
GWC-12	47.48	11.13	36.35
GWC-13	47.82	12.43	35.39
GWC-14	50.70	18.53	32.17
GWC-15	48.12	18.63	29.49
GWC-16	47.79	19.88	27.91
GWC-17	44.09	4.60	39.49
GWC-20	50.03	20.49	29.54
GWC-21	47.94	19.73	28.21
GWC-22	46.72	7.25	39.47

Notes:

1. ft BTOC indicates feet below top of casing.
2. SD indicates feet relative to Site Datum.
3. Depths to water measured on September 28, 2020.

Table 4C
Summary of Groundwater Elevations
March 2021
Grumman Road Landfill
Chatham County, Georgia

Well ID	TOC Elevation (SD)	Depth to Water (ft BTOC)	Groundwater Elevation (ft MSL)
GWA-7	47.10	5.04	42.06
GWA-8	46.84	6.00	40.84
GWB-4R	49.58	13.85	35.73
GWB-5R	47.82	8.81	39.01
GWB-6R	47.40	5.78	41.62
GWC-1	50.30	18.20	32.10
GWC-2	51.84	17.76	34.08
GWC-9	47.11	6.93	40.18
GWC-11	49.38	10.87	38.51
GWC-12	47.48	10.81	36.67
GWC-13	47.82	12.11	35.71
GWC-14	50.70	18.04	32.66
GWC-15	48.12	18.33	29.79
GWC-16	47.79	19.50	28.29
GWC-17	44.09	4.88	39.21
GWC-20	50.03	20.31	29.72
GWC-21	47.94	19.53	28.41
GWC-22	46.72	6.57	40.15
MW-23D	50.20	22.05	28.15
MW-24D	48.54	22.05	26.49
MW-25D	48.33	19.95	28.38
MW-26D	49.39	18.73	30.66
MW-27D	50.53	20.50	30.03

Notes:

1. ft BTOC indicates feet below top of casing.
2. SD indicates feet relative to Site Datum.
3. Depths to water measured on March 8, 2021.

Table 5A
Groundwater Flow Velocity Calculations
August 2020
Grumman Road Landfill
Chatham County, Georgia

Equation

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

K = hydraulic conductivity
i = 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 _{max} = 12.52/1576 ft/ft = 0.008	hydraulic gradient from GWB-6R to GWC-16
i _{min} = 3.21/737 ft/ft = 0.004	hydraulic gradient from GWA-7 to GWC-17
P _e = 0.20	See note 2.

$$v_{\max} = \frac{(7.60) (0.008)}{0.20} \quad v_{\max} = 0.30 \text{ ft/day}$$

$$v_{\min} = \frac{(7.60) (0.004)}{0.20} \quad v_{\min} = 0.17 \text{ ft/day}$$

Notes

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

Table 5B
Groundwater Flow Velocity Calculations
September 2020
Grumman Road Landfill
Chatham County, Georgia

Equation

$$v = \frac{K (i)}{P_e}$$

where: v = ground water velocity
K = hydraulic conductivity
i = 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 _{max} =	13.27/1576 ft/ft = 0.008	hydraulic gradient from GWB-6R to GWC-16
i _{min} =	2.42/737 ft/ft = 0.003	hydraulic gradient from GWA-7 to GWC-17
P _e =	0.20	See note 2.

$$v_{\max} = \frac{(7.60) (0.008)}{0.20} \quad v_{\max} = 0.32 \text{ ft/day}$$

$$v_{\min} = \frac{(7.60) (0.003)}{0.20} \quad v_{\min} = 0.12 \text{ ft/day}$$

Notes

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

Table 5C
Groundwater Flow Velocity Calculations
March 2021
Grumman Road Landfill
Chatham County, Georgia

Equation

$$v = \frac{K (i)}{P_e}$$

where: v = ground water velocity
K = hydraulic conductivity
i = 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 _{max} =	13.33/1576 ft/ft = 0.008	hydraulic gradient from GWB-6R to GWC-16
i _{min} =	2.85/737 ft/ft = 0.004	hydraulic gradient from GWA-7 to GWC-17
P _e =	0.20	See note 2.

$$v_{\max} = \frac{(7.60) (0.008)}{0.20} \quad v_{\max} = 0.32 \text{ ft/day}$$

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

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
Summary of Groundwater Analytical Data - August 2020
Grumman Road Landfill
Chatham County, Georgia

Substance		Well ID							
		GWA-7 8/19/2020	GWA-8 8/17/2020	GWB-4R 8/19/2020	GWB-5R 8/19/2020	GWB-6R 8/19/2020	GWC-1 8/19/2020	GWC-2 8/18/2020	GWC-9 8/19/2020
Appendix IV	Antimony	<0.0014	<0.00028	<0.00028	<0.00028	<0.00028	0.00061 J	<0.00028	<0.00028
	Arsenic	0.0060 J	<0.00078	0.0033 J	0.0019 J	0.0036 J	0.0070	<0.00078	<0.00078
	Barium	0.10	0.051	0.076	0.10	0.064	0.057	0.050	0.17
	Beryllium	<0.00023	0.00019 J	<0.000046	<0.000046	0.000050 J	<0.000046	0.000051 J	0.00022 J
	Cadmium	<0.00059	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012
	Chromium	0.015 J	0.00082 J	0.0022 J	0.0012 J	0.0037 J	0.0028 J	<0.00055	0.0013 J
	Cobalt	0.0021 J	<0.00038	0.00072 J	<0.00038	<0.00038	<0.00038	<0.00038	0.0011 J
	Fluoride	0.21	0.079 J	0.17	<0.050	<0.050	<0.050	<0.050	0.092 J
	Lead	0.0044 J	<0.000036	0.00048 J	0.000079 J	0.00014 J	<0.000036	<0.000036	0.000096 J
	Lithium	<0.0040	0.0010 J	0.014 J	<0.00081	<0.00081	<0.00081	<0.00081	0.0019 J
	Mercury	<0.000078	<0.000078	<0.000078	<0.000078	<0.000078	<0.000078	<0.000078	<0.000078
	Molybdenum	<0.0034	<0.00069	0.16	<0.00069	0.0010 J	0.061	<0.00069	<0.00069
	Radium	5.45	2.63	3.10	2.49	4.53	1.91	1.09 U	2.34
	Selenium	<0.0078	<0.0016	<0.0016	<0.0016	<0.0016	0.0020 J	<0.0016	<0.0016
Thallium	<0.00072	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	

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. < indicates the substance was not detected above the relevant laboratory method detection limit (MDL).
4. 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. 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.

Table 6A
Summary of Groundwater Analytical Data - August 2020
Grumman Road Landfill
Chatham County, Georgia

Substance		Well ID							
		GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16	GWC-17	GWC-20
		8/18/2020	8/17/2020	8/17/2020	8/18/2020	8/18/2020	8/18/2020	8/18/2020	8/18/2020
Appendix IV	Antimony	0.00064 J	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028
	Arsenic	<0.00078	<0.00078	<0.00078	0.0012 J	0.28	0.045	<0.00078	0.30
	Barium	0.12	0.018	0.024	0.028	0.030	0.32	0.074	0.38
	Beryllium	<0.000046	0.00046 J	<0.000046	<0.000046	<0.000046	0.000068 J	0.0016 J	<0.000046
	Cadmium	0.00058 J	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012
	Chromium	0.0015 J	0.0010 J	0.00077 J	0.00059 J	0.0018 J	0.0012 J	0.0011 J	0.0011 J
	Cobalt	0.00040 J	0.00060 J	<0.00038	<0.00038	<0.00038	<0.00038	0.0025 J	<0.00038
	Fluoride	<0.050	0.19	<0.050	<0.050	<0.050	<0.050	0.51	<0.050
	Lead	0.00035 J	0.000049 J	0.000076 J	<0.000036	0.000090 J	0.00017 J	0.00014 J	<0.000036
	Lithium	<0.00081	0.00091 J	<0.00081	<0.00081	<0.00081	<0.00081	0.0065 J	<0.00081
	Mercury	<0.000078	<0.000078	<0.000078	<0.000078	<0.000078	<0.000078	<0.000078	<0.000078
	Molybdenum	0.00077 J	<0.00069	<0.00069	0.017	0.12	0.15	0.00092 J	0.097
	Radium	6.76	2.25	1.42	0.731 U	1.84	4.24	3.11	6.86
	Selenium	0.0028 J	<0.0016	<0.0016	0.0029 J	0.0022 J	0.0058 J	0.0020 J	<0.0016
Thallium	0.00021 J	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	

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. < indicates the substance was not detected above the relevant laboratory method detection limit (MDL).
4. 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. 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.

Table 6A
Summary of Groundwater Analytical Data - August 2020
Grumman Road Landfill
Chatham County, Georgia

Substance		Well ID	
		GWC-21	GWC-22
		8/18/2020	8/18/2020
Appendix IV	Antimony	<0.00028	0.0022 J
	Arsenic	0.0059	<0.00078
	Barium	0.18	0.085
	Beryllium	<0.000046	0.000076 J
	Cadmium	<0.00012	0.00024 J
	Chromium	0.0012 J	0.00056 J
	Cobalt	<0.00038	<0.00038
	Fluoride	<0.050	<0.050
	Lead	0.00027 J	0.00072 J
	Lithium	<0.00081	<0.00081
	Mercury	<0.000078	<0.000078
	Molybdenum	0.069	<0.00069
	Radium	3.27	7.65
	Selenium	0.013	<0.0016
Thallium	<0.00014	0.00017 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. < indicates the substance was not detected above the relevant laboratory method detection limit (MDL).
4. 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. 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.

Table 6B
Summary of Groundwater Analytical Data - September 2020
Grumman Road Landfill
Chatham County, Georgia

Substance		Well ID							
		GWA-7	GWA-8	GWB-4R	GWB-5R	GWB-6R	GWC-1	GWC-2	GWC-9
		9/28/2020	9/28/2020	10/1/2020	9/30/2020	9/30/2020	9/28/2020	9/29/2020	10/1/2020
APPENDIX III	Boron	4.6	0.15	5.2	4.0	4.2	0.69	0.024 J	0.028 J
	Calcium	3.3	25.6	48.4	70.4	27.5	70.7	0.18 J	5.5
	Chloride	113	13.7	15.7	24.1	53.9	13.8	5.4	16.8
	Fluoride	0.069 J	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	pH	5.86	4.41	5.75	4.99	5.39	5.79	4.60	4.42
	Sulfate	20.0	93.6	178	339	339	71.6	8.6	35.0
	TDS	1450	175	424	652	816	373	33.0	111
APPENDIX IV	Antimony	<0.0014	<0.00028	<0.00028	0.00030 J	0.00059 J	0.00035 J	0.0016 J	<0.00028
	Arsenic	<0.0039	<0.00078	0.0027 J	0.0017 J	0.0040 J	0.0058	<0.00078	<0.00078
	Barium	0.095	0.050	0.077	0.16	0.092	0.051	0.049	0.15
	Beryllium	<0.00023	0.00021 J	<0.000046	0.000065 J	0.000046 J	<0.000046	0.000075 J	0.00020 J
	Cadmium	<0.00059	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012
	Chromium	0.014 J	0.00071 J	0.0020 J	0.0018 J	0.0045 J	0.0024 J	<0.00055	0.0012 J
	Cobalt	<0.0019	<0.00038	0.00050 J	0.00056 J	<0.00038	<0.00038	<0.00038	0.00099 J
	Lead	0.0043 J	<0.000036	0.00026 J	0.0012 J	0.000080 J	0.000043 J	<0.000036	0.000038 J
	Lithium	<0.0040	0.0010 J	0.013 J	<0.00081	<0.00081	<0.00081	<0.00081	0.0019 J
	Molybdenum	<0.0034	<0.00069	0.15	<0.00069	0.00097 J	0.059	<0.00069	<0.00069
	Radium	22.4	2.08	2.60	4.45	6.39	1.29	1.00 U	3.30
	Selenium	0.010 J	<0.0016	<0.0016	<0.0016	0.0023 J	<0.0016	<0.0016	<0.0016
Thallium	<0.00072	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	
See Note 8	Vanadium	0.10	<0.0022	0.0047 J	0.0037 J	0.018	0.0042 J	<0.0022	<0.0022
	Zinc	0.16	0.0092 J	0.0064 J	<0.0022	<0.0022	0.0092 J	0.056	0.025

Notes:

- Results for substances are reported in milligrams per liter (mg/L). Results for pH are reported in standard units (S.U.). Radium results are reported in picocuries per liter (pCi/L).
- Radium data are for Radium 226 & Radium 228 (combined).
- < indicates the substance was not detected above the relevant laboratory method detection limit (MDL).
- 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 and Assessment Monitoring; Appendix IV = parameters included and evaluated during Assessment Monitoring.
- Parameters required by Permit are Appendix I/II parameters included to meet EPD Rule 391-3-4-.14 requirements.

Table 6B
Summary of Groundwater Analytical Data - September 2020
Grumman Road Landfill
Chatham County, Georgia

Substance		Well ID							
		GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16	GWC-17	GWC-20
		9/29/2020	9/29/2020	9/28/2020	9/29/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020
APPENDIX III	Boron	1.2	4.7	0.24	0.053	0.86	8.1	0.86	9.9
	Calcium	123	42.0	2.9	30.8	109	177	53.5	292
	Chloride	143	24.3	4.3	10.6	1.7	39.6	257	34.9
	Fluoride	<0.050	0.16	<0.050	<0.050	<0.050	<0.050	0.15	<0.050
	pH	4.77	3.95	4.76	5.69	6.71	5.47	4.08	6.04
	Sulfate	516	237	25.6	93.5	18.5	736	193	956
	TDS	1100	440	60.0	187	434	1140	752	1860
APPENDIX IV	Antimony	0.00051 J	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028
	Arsenic	<0.00078	<0.00078	<0.00078	<0.00078	0.24	0.044	0.0012 J	0.31
	Barium	0.14	0.018	0.029	0.026	0.034	0.14	0.035	0.35
	Beryllium	<0.000046	0.00043 J	<0.000046	<0.000046	<0.000046	0.000089 J	0.0013 J	<0.000046
	Cadmium	0.00077 J	<0.00012	<0.00012	0.00012 J	<0.00012	<0.00012	<0.00012	<0.00012
	Chromium	0.0011 J	0.00085 J	0.00062 J	<0.00055	0.0016 J	0.00098 J	0.00096 J	0.0013 J
	Cobalt	0.00055 J	0.00057 J	<0.00038	<0.00038	<0.00038	<0.00038	0.0018 J	<0.00038
	Lead	0.00032 J	0.000037 J	0.000064 J	<0.000036	0.000047 J	0.000091 J	0.000060 J	<0.000036
	Lithium	<0.00081	0.00086 J	<0.00081	<0.00081	<0.00081	<0.00081	0.0041 J	<0.00081
	Molybdenum	<0.00069	<0.00069	<0.00069	0.0089 J	0.11	0.15	0.0041 J	0.33
	Radium	8.30	0.845 U	1.28	0.331 U	2.14	2.47	3.09	5.62
	Selenium	0.0024 J	<0.0016	<0.0016	0.0051 J	<0.0016	0.0037 J	<0.0016	<0.0016
Thallium	0.00017 J	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	
See Note 8	Vanadium	0.0023 J	0.0046 J	<0.0022	<0.0022	0.0028 J	0.0028 J	<0.0022	0.0029 J
	Zinc	0.0031 J	0.0074 J	0.016	<0.0022	0.032	0.0051 J	0.0043 J	0.031

Notes:

- Results for substances are reported in milligrams per liter (mg/L). Results for pH are reported in standard units (S.U.). Radium results are reported in picocuries per liter (pCi/L).
- Radium data are for Radium 226 & Radium 228 (combined).
- < indicates the substance was not detected above the relevant laboratory method detection limit (MDL).
- 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 and Assessment Monitoring; Appendix IV = parameters included and evaluated during Assessment Monitoring.
- Parameters required by Permit are Appendix I/II parameters included to meet EPD Rule 391-3-4-.14 requirements.

Table 6B
Summary of Groundwater Analytical Data - September 2020
Grumman Road Landfill
Chatham County, Georgia

Substance		Well ID	
		GWC-21	GWC-22
		9/30/2020	9/30/2020
APPENDIX III	Boron	2.3	0.25
	Calcium	98.4	20.9
	Chloride	23.7	8.5
	Fluoride	<0.050	<0.050
	pH	5.82	4.63
	Sulfate	306	65.5
	TDS	634	113
APPENDIX IV	Antimony	0.00033 J	0.0016 J
	Arsenic	0.0029 J	<0.00078
	Barium	0.19	0.045
	Beryllium	<0.000046	<0.000046
	Cadmium	<0.00012	0.00024 J
	Chromium	0.00067 J	0.00064 J
	Cobalt	<0.00038	<0.00038
	Lead	0.000054 J	0.00023 J
	Lithium	<0.00081	<0.00081
	Molybdenum	0.028	<0.00069
	Radium	3.83	2.79
	Selenium	0.0061 J	<0.0016
Thallium	<0.00014	<0.00014	
See Note 8	Vanadium	0.0029 J	<0.0022
	Zinc	0.0096 J	<0.0022

Notes:

1. Results for substances are reported in milligrams per liter (mg/L). Results for pH are reported in standard units (S.U.). Radium results are reported in picocuries per liter (pCi/L).
2. Radium data are for Radium 226 & Radium 228 (combined).
3. < indicates the substance was not detected above the relevant laboratory method detection limit (MDL).
4. 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 and Assessment Monitoring; Appendix IV = parameters included and evaluated during Assessment Monitoring.
8. Parameters required by Permit are Appendix I/II parameters included to meet EPD Rule 391-3-4-.14 requirements.

Table 6C
Summary of Groundwater Analytical Data - January 2021
Grumman Road Landfill
Chatham County, Georgia

Substance		Well ID				
		MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
		1/21/2021	1/21/2021	1/20/2021	1/20/2021	1/20/2021
APPENDIX III	Boron	0.018 J	0.014 J	0.013 J	0.013 J	0.011 J
	Calcium	4.4	2.8	4.9	4.1	3.0
	Chloride	6.1	6.1	6.1	6.9	6.1
	Fluoride	<0.050	<0.050	0.11	<0.050	<0.050
	pH	5.75	6.13	6.25	5.66	5.68
	Sulfate	5.0	0.79 J	1.6	1.0	0.88 J
	TDS	41	50	58	54	43
APP. IV	Arsenic	<0.00078	<0.00078	<0.00078	--	--
	Molybdenum	<0.00069	0.0014 J	0.0011 J	<0.00069	<0.00069

Notes:

1. Results for substances are reported in milligrams per liter (mg/L). Results for pH are reported in standard units (S.U.).
2. < indicates the substance was not detected above the relevant laboratory method detection limit (MDL).
3. 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.
4. TDS indicates total dissolved solids.
5. Appendix III = indicator parameters evaluated during Detection and Assessment Monitoring; Appendix IV = parameters included and evaluated during Assessment Monitoring.
6. -- indicates parameter not analyzed during sample/analysis.

Table 6D
Summary of Groundwater Analytical Data - March 2021
Grumman Road Landfill
Chatham County, Georgia

Substance		Well ID							
		GWA-7	GWA-8	GWB-4R	GWB-5R	GWB-6R	GWC-1	GWC-2	GWC-9
		3/11/2021	3/12/2021	3/10/2021	3/10/2021	3/10/2021	3/10/2021	3/15/2021	3/10/2021
APPENDIX III	Boron	8.0	0.11	4.9	3.9	6.9	0.63	0.084	0.022 J
	Calcium	2.4	21.4	263	134	55.9	67.2	0.22 J	5.3
	Chloride	96.7	14.1	16.0	25.7	42.4	8.5	6.4	18.3
	Fluoride	<0.050	0.087 J	<0.050	<0.050	<0.050	<0.050	<0.050	0.066 J
	pH	5.85	4.54	5.60	4.73	5.69	5.42	4.56	4.55
	Sulfate	12.0	103	160	572	1160	61.2	10	38.7
	TDS	1220	163	434	1040	2120	329	11.0	89.0
APPENDIX IV	Antimony	<0.0014	<0.00028	<0.00028	<0.00028	0.00029 J	0.00069 J	<0.00028	<0.00028
	Arsenic	0.0047 J	<0.00078	0.0025 J	0.0019 J	0.0054	0.0055	<0.00078	<0.00078
	Barium	0.070	0.052	0.070	0.096	0.027	0.052	0.053	0.15
	Beryllium	0.00028 J	0.00023 J	<0.000046	0.000082 J	<0.000046	<0.000046	0.000073 J	0.00019 J
	Cadmium	<0.00059	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012
	Chromium	0.020 J	0.00074 J	0.0030 J	0.0010 J	0.0060	0.0023 J	0.0011 J	0.0011 J
	Cobalt	0.0023 J	0.00058 J	0.00069 J	0.0057	<0.00038	<0.00038	<0.00038	0.00096 J
	Lead	0.0079	0.000093 J	0.00030 J	0.000052 J	0.000096 J	0.00010 J	0.000041 J	0.00012 J
	Lithium	<0.0040	0.0013 J	0.012 J	<0.00081	<0.00081	<0.00081	<0.00081	0.0018 J
	Molybdenum	<0.0034	<0.00069	0.12	<0.00069	0.0013 J	0.057	<0.00069	<0.00069
	Radium	3.22	2.17	2.11	4.67	4.61	1.70	0.804 U	2.08
	Selenium	<0.0078	<0.0016	0.0021 J	0.0060	0.0049 J	0.0026 J	<0.0016	<0.0016
Thallium	<0.00072	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	
See Note 8	Vanadium	0.14	<0.0022	0.0054 J	0.0026 J	0.027	0.0050 J	<0.0022	<0.0022
	Zinc	0.054	0.0028 J	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022

Notes:

1. Results for substances are reported in milligrams per liter (mg/L). Results for pH are reported in standard units (S.U.). Radium results are reported in picocuries per liter (pCi/L).
2. Radium data are for Radium 226 & Radium 228 (combined).
3. < indicates the substance was not detected above the relevant laboratory method detection limit (MDL).
4. 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 and Assessment Monitoring; Appendix IV = parameters included and evaluated during Assessment Monitoring.
8. Parameters required by Permit are Appendix I/II parameters included to meet EPD Rule 391-3-4-.14 requirements.

Table 6D
Summary of Groundwater Analytical Data - March 2021
Grumman Road Landfill
Chatham County, Georgia

Substance		Well ID							
		GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16	GWC-17	GWC-20
		3/10/2021	3/10/2021	3/15/2021	3/16/2021	3/12/2021	3/16/2021	3/11/2021	3/12/2021
APPENDIX III	Boron	1.8	6.1	0.31	0.080	0.81	10	0.85	15.6
	Calcium	126	53.1	2.4	34.4	101	188	67.0	241
	Chloride	188	48.7	7.6	15.8	2.3	44.9	334	31.9
	Fluoride	<0.050	0.14	<0.050	<0.050	<0.050	<0.050	0.42	<0.050
	pH	4.97	4.08	4.74	5.53	6.21	5.67	5.20	5.86
	Sulfate	687	282	30.6	92.0	21.1	821	244	933
	TDS	1240	566	<10.0	137	353	980	705	1730
APPENDIX IV	Antimony	0.00076 J	0.00030 J	<0.00028	<0.00028	0.0018 J	<0.00028	0.00039 J	0.00065 J
	Arsenic	<0.00078	<0.00078	<0.00078	<0.00078	0.16	0.064	0.00090 J	0.27
	Barium	0.13	0.028	0.034	0.037	0.038	0.16	0.044	0.34
	Beryllium	0.000047 J	0.00054	<0.000046	<0.000046	<0.000046	<0.000046	0.0012	<0.000046
	Cadmium	0.00090	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	0.00018 J
	Chromium	0.0013 J	0.00091 J	<0.00055	<0.00055	0.0031 J	0.0012 J	0.00090 J	0.0014 J
	Cobalt	0.00082 J	0.00071 J	<0.00038	<0.00038	<0.00038	<0.00038	0.0019 J	<0.00038
	Lead	0.00042 J	0.000068 J	0.00013 J	<0.000036	0.000053 J	0.000073 J	0.00019 J	<0.000036
	Lithium	<0.00081	0.00095 J	<0.00081	<0.00081	<0.00081	<0.00081	0.0036 J	<0.00081
	Molybdenum	<0.00069	<0.00069	<0.00069	0.0054 J	0.098	0.31	0.0038 J	0.53
	Radium	7.55	1.77	0.769 U	0.0831 U	0.607 U	2.15	2.77	5.17
	Selenium	0.0044 J	0.0030 J	<0.0016	0.0034 J	0.0064	0.0044 J	0.0016 J	<0.0016
Thallium	0.00022 J	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	
See Note 8	Vanadium	0.0023 J	0.0055 J	<0.0022	<0.0022	0.0037 J	0.0034 J	<0.0022	0.0038 J
	Zinc	<0.0022	<0.0022	0.039	<0.0022	<0.0022	<0.0022	0.0056 J	<0.0022

Notes:

- Results for substances are reported in milligrams per liter (mg/L). Results for pH are reported in standard units (S.U.). Radium results are reported in picocuries per liter (pCi/L).
- Radium data are for Radium 226 & Radium 228 (combined).
- < indicates the substance was not detected above the relevant laboratory method detection limit (MDL).
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- Parameters required by Permit are Appendix I/II parameters included to meet EPD Rule 391-3-4-.14 requirements.

Table 6D
Summary of Groundwater Analytical Data - March 2021
Grumman Road Landfill
Chatham County, Georgia

Substance		Well ID						
		GWC-21	GWC-22	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
		3/16/2021	3/10/2021	3/11/2021	3/11/2021	3/11/2021	3/11/2021	3/11/2021
APPENDIX III	Boron	3.5	0.32	0.030 J	0.019 J	0.017 J	0.015 J	0.014 J
	Calcium	104	18.7	12.4	5.4	4.7	3.1	2.6
	Chloride	25.3	48.2	9.9	6.0	6.4	7.0	6.5
	Fluoride	<0.050	<0.050	<0.050	<0.050	0.12	<0.050	<0.050
	pH	5.74	4.82	5.82	6.47	6.31	6.00	5.12
	Sulfate	343	101	62.4	<0.50	0.52 J	<0.50	<0.50
	TDS	454	210	149	53	57	41	43
APPENDIX IV	Antimony	<0.00028	0.00040 J	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028
	Arsenic	0.0098	<0.00078	<0.00078	<0.00078	0.00092 J	0.0010 J	<0.00078
	Barium	0.18	0.049	0.076	0.047	0.030	0.037	0.031
	Beryllium	<0.000046	<0.000046	<0.000046	<0.000046	0.000084 J	0.00010 J	0.00032 J
	Cadmium	<0.00012	<0.00012	<0.00012	<0.00012	0.00019 J	0.00029 J	0.0015
	Chromium	0.00075 J	<0.00055	<0.00055	0.00069 J	0.0016 J	0.0020 J	0.00073 J
	Cobalt	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038
	Lead	<0.000036	0.00016 J	0.000057 J	0.000094 J	0.000095 J	0.00015 J	0.00022 J
	Lithium	<0.00081	<0.00081	<0.00081	<0.00081	<0.00081	<0.00081	<0.00081
	Molybdenum	0.024	<0.00069	<0.00069	0.0035 J	0.0015 J	<0.00069	<0.00069
	Radium	2.88	2.53	1.55	1.29	0.353 U	0.783 U	1.67
	Selenium	0.0055	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Thallium	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	
See Note 8	Vanadium	0.0030 J	<0.0022	<0.0022	<0.0022	0.0024 J	<0.0022	0.0024 J
	Zinc	<0.0022	<0.0022	0.0067 J	0.0025 J	0.0054 J	0.0080 J	0.0066 J

Notes:

- Results for substances are reported in milligrams per liter (mg/L). Results for pH are reported in standard units (S.U.). Radium results are reported in picocuries per liter (pCi/L).
- Radium data are for Radium 226 & Radium 228 (combined).
- < indicates the substance was not detected above the relevant laboratory method detection limit (MDL).
- 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 and Assessment Monitoring; Appendix IV = parameters included and evaluated during Assessment Monitoring.
- Parameters required by Permit are Appendix I/II parameters included to meet EPD Rule 391-3-4-.14 requirements.

**Table 7
Statistical Method Summary
Grumman Road Landfill
Chatham County, Georgia**

Statistical Method Summary		
Monitoring Well Network	Upgradient Wells	GWA-7 and GWA-8
	Sidegradient Wells	GWB-4R, GWB-5R, and GWB-6R
	Downgradient Wells	GWC-1, GWC-2, 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 statistical limits.

Table 8
Summary of Background Levels and Groundwater Protection Standards
Grumman Road Landfill
Chatham County, Georgia

Constituent	Site Background	MCL	GWPS
Antimony	0.003	0.006	0.006
Arsenic	0.029	0.01	0.029
Barium	0.22	2	2
Beryllium	0.003	0.004	0.004
Cadmium	0.0007	0.005	0.005
Chromium	0.068	0.1	0.1
Cobalt	0.01		0.01
Fluoride	0.49	4	4
Lead	0.013		0.013
Lithium	0.03		0.03
Mercury	0.0002	0.002	0.002
Molybdenum	0.01		0.01
Radium	33.8	5	33.8
Selenium	0.044	0.05	0.05
Thallium	0.001	0.002	0.002
Vanadium	0.43		0.43
Zinc	0.16		0.16

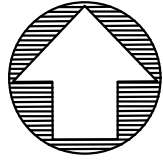

Notes:

1. Site Background = Tolerance limits calculated from pooled upgradient well data through present.
2. MCL = Maximum Contaminant Level, per Georgia EPD Rule 391-3-5-.18(1)(a).
3. GWPS = Groundwater protection standard, per Georgia EPD Rule 391-3-4-.10(6)(a).
4. Units are milligrams per liter (mg/L), except for radium, which are picocuries per liter (pCi/L).
5. The background tolerance limit (TL) used to evaluate GWPS for lithium is equal to the most recent laboratory-specified reporting limit (RL). Per the SAP, and in accordance with the Unified Guidance, a non-parametric limit approach was used because the data set contains greater than 50% non-detect results for this analyte. Under this approach, the TL equals the highest value reported, for which is the laboratory RL. However, the highest laboratory RL in background was 0.05 mg/L. As a result, the GWPS has been modified to be equal to the most recently used RL, which is 0.03 mg/L.
6. GWPS were the same for September 2020 and March 2021 data sets. Site Background was the same for both events except for cadmium which was lowered from 0.0025 mg/L to 0.0007 mg/L.

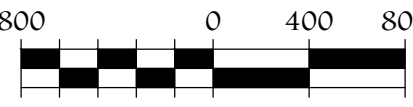
FIGURES



LOCATION IN THE STATE OF GEORGIA (NOT TO SCALE)





ATLANTIC COAST
CONSULTING, INC.




SCALE (IN FEET)

LEGEND:

EXISTING	DESCRIPTION
	PROPERTY BOUNDARY

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

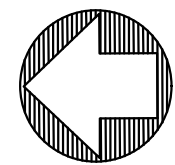
PROJECT



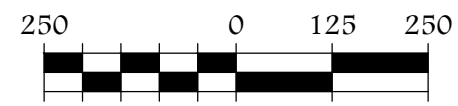
GEORGIA POWER COMPANY
GRUMMAN ROAD PRIVATE INDUSTRIAL LANDFILL

SITE MAP

PROJECT NO. I054-110		July 2021
<u>DRAWN BY:</u>	MM	<u>FIGURE:</u>
<u>CHECKED BY:</u>	EP	1



ATLANTIC COAST
CONSULTING, INC.



SCALE (IN FEET)

LEGEND:

EXISTING	DESCRIPTION
	PROPERTY BOUNDARY
	GROUNDWATER MONITORING NETWORK WELL
	PIEZOMETER
	DELINEATION WELL

- NOTES:
1. PROPERTY BOUNDARY SURVEYED BY GUNNIN LAND SURVEYING ON AUGUST 30, 2018.
 2. WELLS MW-23D, MW-24D, MW-25D, MW-26D, AND MW-27D WERE INSTALLED IN DECEMBER 2020 AND JANUARY 2021.

PROJECT



GEORGIA POWER COMPANY
GRUMMAN ROAD PRIVATE INDUSTRIAL LANDFILL

WELL LOCATION MAP



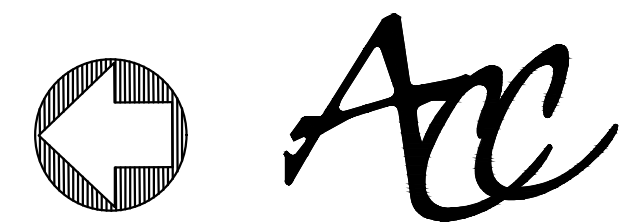
PROJECT NO. I054-110 July 2021

DRAWN BY:	MM	FIGURE:	2
CHECKED BY:	EP		

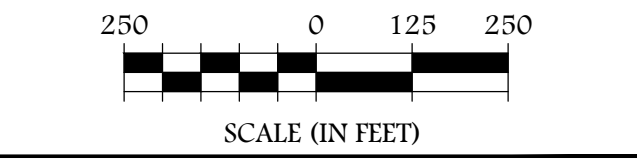
Groundwater Elevations and Well Depths
Grumman Road Landfill August 2020

Monitoring Well ID	Well Depth (ft btoc)	Top of Casing (SD)	Depth to Water (ft btoc)	Groundwater Elevation (SD)
GWA-7	21.20	47.10	6.22	40.88
GWA-8	20.80	7.36	39.48
GWB-4R	27.00	49.58	14.97	34.61
GWB-5R	26.50	47.82	10.06	37.76
GWB-6R	22.70	47.40	7.80	39.60
GWC-1	28.20	50.30	19.16	31.14
GWC-2	32.73	51.84	19.23	32.61
GWC-9	27.40	47.11	8.70	38.41
GWC-11	22.60	49.38	12.66	36.72
GWC-12	26.70	47.48	12.49	34.99
GWC-13	23.80	47.82	13.89	33.93
GWC-14	27.00	50.70	19.51	31.19
GWC-15	26.80	48.12	19.28	28.84
GWC-16	28.20	47.79	20.71	27.08
GWC-17	23.50	44.09	6.42	37.67
GWC-20	25.59	50.03	21.19	28.84
GWC-21	25.54	47.94	20.64	27.30
GWC-22	19.21	46.72	8.41	38.31

Notes:
1. ft btoc - feet below top of casing.
2. SD indicates feet relative to Site Datum.
3. Depths to water measured on August 17, 2020.



ATLANTIC COAST CONSULTING, INC.

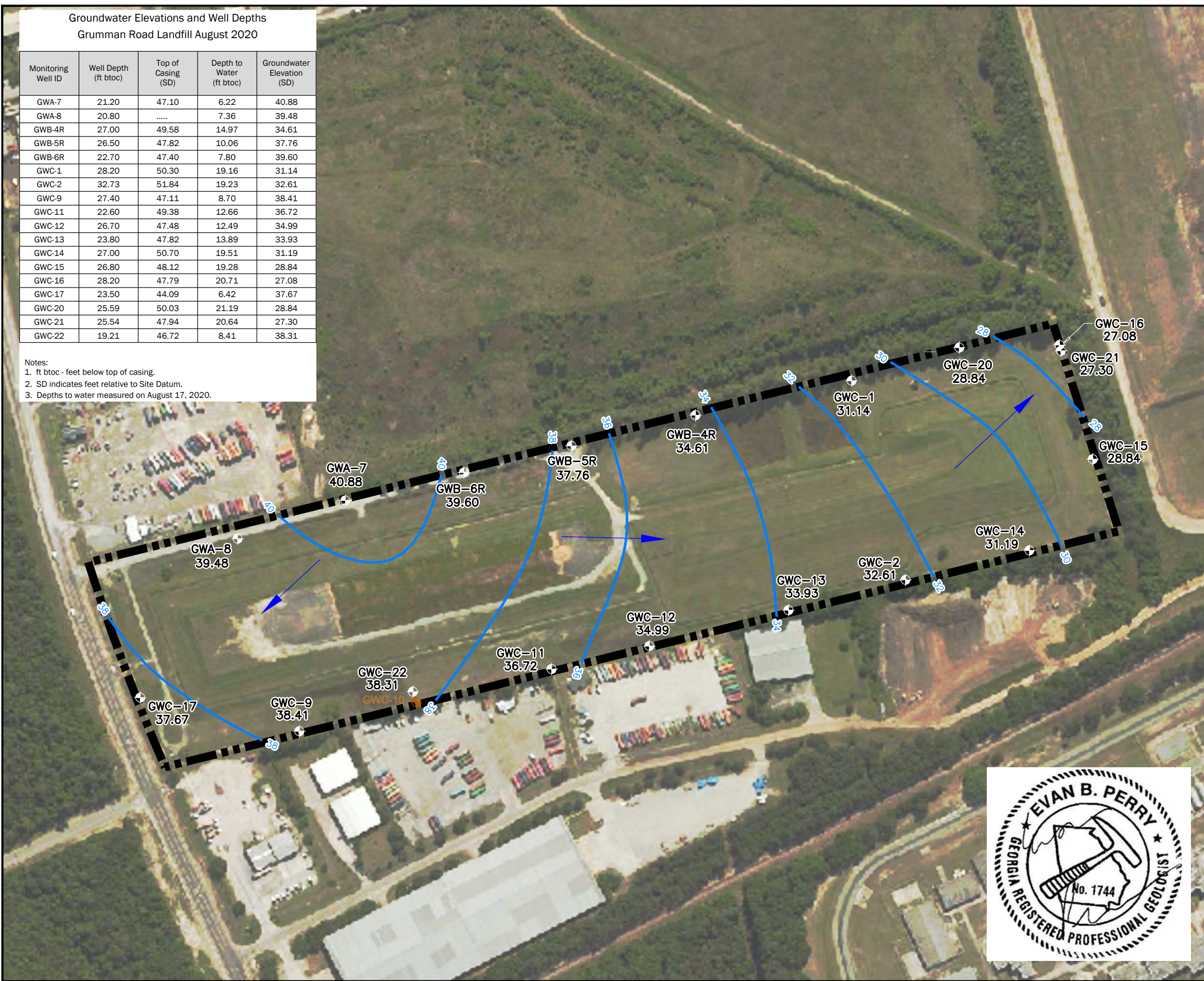


SCALE (IN FEET)

LEGEND:

EXISTING	DESCRIPTION
	PROPERTY BOUNDARY
	GWC-1 32.02 GROUNDWATER MONITORING NETWORK WELL GROUNDWATER ELEVATION
	GWC-10 36 PIEZOMETER
	36 GROUNDWATER ELEVATION CONTOUR
	GROUNDWATER FLOW DIRECTION

NOTES:
1. PROPERTY BOUNDARY SURVEYED BY GUNNIN LAND SURVEYING ON AUGUST 30, 2018.
2. WELLS GWC-3, GWC-4, GWC-5, AND GWC-6 WERE ABANDONED IN DECEMBER 2020.



PROJECT



GEORGIA POWER COMPANY
GRUMMAN ROAD PRIVATE INDUSTRIAL LANDFILL

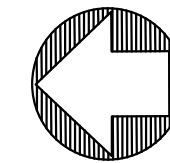
AUGUST 2020 POTENTIOMETRIC
SURFACE MAP

PROJECT NO. I054-110	July 2021
DRAWN BY: JB	FIGURE:
CHECKED BY: MM	3

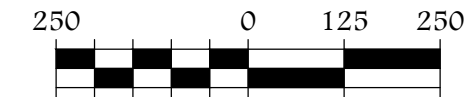
Groundwater Elevations and Well Depths
Grumman Road Landfill September 2020

Monitoring Well ID	Well Depth (ft btoc)	Top of Casing (SD)	Depth to Water (ft btoc)	Groundwater Elevation (SD)
GWA-7	21.20	47.10	41.91
GWA-8	20.80	46.84	6.14	40.70
GWB-4R	27.00	49.58	14.11	35.47
GWB-5R	26.50	47.82	8.75	39.07
GWB-6R	22.70	47.40	6.22	41.18
GWC-1	28.20	50.30	18.28	32.02
GWC-2	32.73	51.84	18.06	33.78
GWC-9	27.40	47.11	7.40	39.71
GWC-11	22.60	49.38	11.26	38.12
GWC-12	26.70	47.48	11.13	36.35
GWC-13	23.80	47.82	12.43	35.39
GWC-14	27.00	50.70	18.53	32.17
GWC-15	26.80	48.12	18.63	29.49
GWC-16	28.20	47.79	19.88	27.91
GWC-17	23.50	44.09	4.60	39.49
GWC-20	25.59	50.03	20.49	29.54
GWC-21	25.54	47.94	19.73	28.21
GWC-22	19.21	46.72	7.25	39.47

- Notes:
 1. ft btoc - feet below top of casing.
 2. SD indicates feet relative to Site Datum.
 3. Depths to water measured on September 28, 2020.



ATLANTIC COAST
CONSULTING, INC.



SCALE (IN FEET)

LEGEND:

EXISTING	DESCRIPTION
	PROPERTY BOUNDARY
	GROUNDWATER MONITORING NETWORK WELL GROUNDWATER ELEVATION
	PIEZOMETER
	GROUNDWATER ELEVATION CONTOUR
	GROUNDWATER FLOW DIRECTION

- NOTES:
 1. PROPERTY BOUNDARY SURVEYED BY GUNNIN LAND SURVEYING ON AUGUST 30, 2018.
 2. WELLS GWC-3, GWC-4, GWC-5, AND GWC-6 WERE ABANDONED IN DECEMBER 2020.

PROJECT



GEORGIA POWER COMPANY
GRUMMAN ROAD PRIVATE INDUSTRIAL LANDFILL

SEPTEMBER 2020 POTENTIOMETRIC
SURFACE MAP

PROJECT NO. I054-110

July 2021

DRAWN BY: JB

FIGURE:

CHECKED BY: MM

4

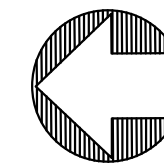


Groundwater Elevations and Well Depths

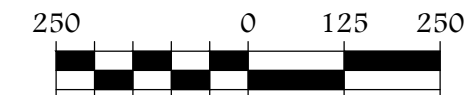
Grumman Road Landfill March 2021

Monitoring Well ID	Well Depth (ft btoc)	Top of Casing (SD)	Depth to Water (ft btoc)	Groundwater Elevation (SD)
GWA-7	21.20	47.10	5.04	42.06
GWA-8	20.80	6.00	40.84
GWB-4R	27.00	49.58	13.85	35.73
GWB-5R	26.50	47.82	8.81	39.01
GWB-6R	22.70	47.40	5.78	41.62
GWC-1	28.20	50.30	18.20	32.10
GWC-2	32.73	51.84	17.76	34.08
GWC-9	27.40	47.11	6.93	40.18
GWC-11	22.60	49.38	10.87	38.51
GWC-12	26.70	47.48	10.81	36.67
GWC-13	23.80	47.82	12.11	35.71
GWC-14	27.00	50.70	18.04	32.66
GWC-15	26.80	48.12	18.33	29.79
GWC-16	28.20	47.79	19.50	28.29
GWC-17	23.50	44.09	4.88	39.21
GWC-20	25.59	50.03	20.31	29.72
GWC-21	25.54	47.94	19.53	28.41
GWC-22	19.21	46.72	6.57	40.15
MW-23D	63.30	50.20	22.05	28.15
MW-24D	66.30	48.54	22.05	26.49
MW-25D	70.20	48.33	19.95	28.38
MW-26D	69.90	49.39	18.73	30.66
MW-27D	72.43	50.53	20.50	30.03

- Notes:
1. ft btoc - feet below top of casing.
 2. SD indicates feet relative to Site Datum.
 3. Depths to water measured on March 8, 2021.



ATLANTIC COAST CONSULTING, INC.



SCALE (IN FEET)

LEGEND:

EXISTING	DESCRIPTION
	PROPERTY BOUNDARY
	GROUNDWATER MONITORING NETWORK WELL GROUNDWATER ELEVATION
	PIEZOMETER
	DELINEATION WELL
	GROUNDWATER ELEVATION CONTOUR
	GROUNDWATER FLOW DIRECTION

- NOTES:
1. PROPERTY BOUNDARY SURVEYED BY GUNNIN LAND SURVEYING ON AUGUST 30, 2018.
 2. VERTICAL DELINEATION WELLS MW-23D, MW-24D, MW-25D, MW-26D, AND MW-27D WERE INSTALLED IN DECEMBER 2020 AND JANUARY 2021.
 3. NON-NETWORK WELLS GWC-3, GWC-4, GWC-5, AND GWC-6 WERE ABANDONED IN DECEMBER 2020.

PROJECT



GEORGIA POWER COMPANY
GRUMMAN ROAD PRIVATE INDUSTRIAL LANDFILL

2021 ANNUAL GROUNDWATER MONITORING AND
CORRECTIVE ACTION REPORT

MARCH 2021 POTENTIOMETRIC
SURFACE MAP

PROJECT NO. I054-110

July 2021

DRAWN BY: RW

FIGURE:

CHECKED BY: MM



APPENDICES

Grumman Road Landfill
Chatham County, Georgia
2021 Annual Groundwater Monitoring and Corrective Action Report

APPENDIX A

Well Abandonment and Installation Report

Grumman Road Landfill
Chatham County, Georgia
2021 Annual Groundwater Monitoring and Corrective Action
Report



Grumman Road Private Industrial Landfill

Port Wentworth, Georgia

PERMIT #: 025-061(LI)

Chatham County

Groundwater Monitoring Well Installation Report

The logo for Atlantic Coast Consulting, Inc., featuring the letters "ACC" in a stylized, white, cursive font.

ATLANTIC COAST
CONSULTING, INC.

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2.0 Drilling and Well Installation	3
2.1 Drilling Method.....	3
2.2 Screened Interval.....	3
2.3 Well Casing and Screens.....	3
2.4 Well Intake Design.....	3
2.5 Filter Pack	4
2.6 Annular Seal.....	4
2.7 Cap and Protective Casing.....	4
3.0 Gamma Logging.....	4
4.0 Well Development.....	5
5.0 Well Abandonment	5
6.0 Soil Testing.....	5
7.0 Survey.....	5
8.0 General References.....	5

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Figure 1 – Grumman Road Well Location Map

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Table 1 – Summary of Well Installation Dates, Coordinates, Elevation Screen Interval and Purpose

Table 2 – Soil Sample Data Summary Table

Appendices

Appendix A – Driller Bond Certificate

Appendix B – Boring and Well Construction Logs

Appendix C – Well Development Forms

Appendix D – Abandonment Logs

Appendix E – Soil Testing Laboratory Reports

Appendix F – Survey Data

Professional Geologist Certification

I, Evan B. Perry, certify that I am a qualified groundwater scientist as demonstrated by a Georgia state registered professional geologist certification. I have sufficient training and experience in groundwater hydrology and related fields to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport. I further certify that the data in this report have been prepared by me or a subordinate working under my direction.



Evan B. Perry, P.G.

Georgia P.G. Registration Number 1744

Date: 2021-03-16

1.0 Introduction

Georgia Power Company (GPC) - Grumman Road Private Industrial Landfill (GRL) is located in Port Wentworth and Chatham County near the Savannah/Hilton Head International Airport. The facility received coal fly ash from GPC - Plant Kraft. The landfill operated under Georgia Environmental Protection Division (EPD) solid waste handling permit number O25-061D(LI) and is comprised of four cells or parcels: Parcel A, B1, B2, and B3. The objective of this report is to document the abandonment of four groundwater wells (GWC-3, GWC-4, GWC-5, and GWC-6) and the installation of five vertical delineation wells (MW-23D, MW-24D, MW-25D, MW-26D, and MW-27D). Figure 1, Grumman Road Well Location Map, depicts the configuration and the location of the monitoring and delineation wells.

2.0 Drilling and Well Installation

The groundwater monitoring system is designed and installed according to accepted industry standards and following guidelines within the Manual for Groundwater Monitoring (GA EPD, 1991). The location and depths of the monitoring wells were selected based on the characterization of site-specific hydrogeologic conditions by a qualified professional engineer and geologist. Installation details and descriptions of procedures are provided in the following sections.

2.1 Drilling Method

Groundwater monitoring wells were installed by Cascade Environmental, LP (Cascade) using roto sonic drilling techniques. The upper 10-feet of material were removed prior to drilling with air knife equipment for utility clearance. Material below 10-feet was logged using continuous split spoon samples. Cascade has current bond on file with the Georgia Water Well Standards Advisory Council. A copy of Cascade's bond is included in Appendix A, Driller Bond Certificate.

2.2 Screened Interval

The wells are screened in unconsolidated silty sand below a relatively low permeability material. The wells are constructed with 5 feet of screen.

2.3 Well Casing and Screens

The wells are constructed of 2-inch diameter ASTM Schedule 40 PVC casing affixed to a pre-packed dual-wall slotted PVC screen. The casing and pre-packed screen arrived pre-cleaned and packaged by the manufacturer. Well construction materials are sufficiently durable to resist chemical and physical degradation and not interfere with the quality of groundwater samples. Casing and screen sections are flush-threaded. Solvent or glue was not used to construct the wells. Wells were constructed in accordance with accepted industry standards and following guidelines within the Manual for Groundwater Monitoring (GA EPD, 1991).

2.4 Well Intake Design

The wells were designed and constructed to: (1) allow sufficient groundwater flow to the well for sampling; (2) minimize the passage of formation materials (turbidity) into the wells; and (3) ensure sufficient structural integrity to prevent collapse of the well. The well is screened using 0.010-inch

slotted PVC pre-packed dual-wall well screen. The well screen is 5 feet nominal length. The pre-packed dual-wall well screens combine a centralized inner well screen, a void for site-specific filter sand pack, and an outer conductor screen in one integrated unit. Based on the nature of deposits, the screen will retain at least 90 percent of the filter pack and 40 percent of the formation.

2.5 Filter Pack

During groundwater well construction, filter sand was slowly washed with potable water into the annular space surrounding the well screen to approximately two feet above the screened interval. Filter sand is approximately 20/40 grade silica sand from Southern Products & Silica Co. Additionally, approximately two feet of finer 30/65 grade silica sand from Standard Sand and Silica Co. was placed above the filter pack.

Filter pack material was placed within the pre-packed dual-wall well screens and in the annular space between the outside of the pre-pack screen and borehole wall to ensure an adequate thickness of filter pack material between the well and the formation. Total Filter pack material placed in the annular space outside of the well screen extended approximately 4 feet above the top of screen. No bridging occurred during filter pack placement.

After placing the filter pack, the wells were pumped to ensure settlement of the filter pack, prior to installing the annular seal. The depth of top of filter pack was measured and recorded in the well construction log provided in Appendix B, Boring and Well Construction Logs.

2.6 Annular Seal

Hydrated sodium bentonite overlies the filter pack. A cement and bentonite grout mix of 94/6 cement/bentonite was used as the annular sealant above the bentonite seal. The grout mixture was placed using the tremie method. A cement apron 4-feet by 4-feet by 4-inches was poured around each well. The pad is mounded slightly outward to direct surface drainage away from the well.

2.7 Cap and Protective Casing

The well risers are fitted with a locking cap and a lockable cover. A one-quarter inch vent hole in the PVC riser pipe provides an avenue for the escape of gas. The protective cap guards the casing from damage and the locking cap serves as a security device to prevent well tampering. Bollards were installed around the four corners of the concrete pad to protect the well.

A weep hole was drilled in the outer protective casing near the bottom above the concrete pad. Pea gravel was placed inside the protective casing between the riser pipe and the outer casing. Wells are clearly marked with the proper well identification number on the stand-up casing.

3.0 Gamma Logging

Prior to well installation gamma logging of each borehole was completed by Atlantic Coast Consulting, Inc. (ACC) using a 2PGA-1000 Poly-Gamma probe manufactured by Mount Sopris Instrument Co., Inc. of Golden, Colorado. Gamma log (counts per second – cps) data are included on the boring logs in Appendix B.

4.0 Well Development

The monitoring wells were developed using a combination of surging and pumping to (1) restore the natural hydraulic conductivity of the formation, and (2) to remove fine-grained sediment to ensure low-turbidity groundwater samples. The wells were alternately surged and purged with a submersible until visually clear of particulates. Turbidity, pH, temperature, and conductivity measurements were made to ensure that each well was fully developed. All equipment and tubing placed in the wells was decontaminated or new. Following development, wells were sampled with a peristaltic pump using low-flow sampling procedures. The development forms and purge logs are included in Appendix C, Well Development Forms.

5.0 Well Abandonment

Four groundwater monitoring wells (GWC-3, GWC-4, GWC-5, and GWC-6) were abandoned during field operations. The groundwater monitoring wells were filled with coated bentonite pellets to the ground surface and hydrated. Placement of bentonite was monitored with a tag line to verify placement and that no bridging occurred. After hydration, the completions were removed and graded to ground surface. The depths to bottom of the well casings and depths to water were measured prior to abandonment. Documentation for the well abandonments is included in Appendix D, Abandonment Logs.

6.0 Soil Testing

Throughout drilling samples were retained for grain size analysis and Atterburg limit testing. Samples were selected to represent the approximate screen mid-points for each delineation well and the adjacent shallow network well. Zones of lower permeability (i.e., apparent clayey zones) were also sampled. Two Shelby Tubes (undisturbed samples) of low permeability material were submitted for hydraulic conductivity testing. Samples were delivered to Timely Engineering Soil Tests, LLC of Tucker, Georgia upon completion of field work. Soil testing data are summarized in Table 2, Soil Sample Data Summary Table. Laboratory reports are provided in Appendix E, Soil Testing Laboratory Reports.

7.0 Survey

The horizontal and vertical location of the newly installed monitoring locations was surveyed by Gunnin Surveying, LLC, under the direction of a Georgia Registered Land Surveyor (RLS). The horizontal location and vertical elevation of the wells were surveyed to a tolerance of the nearest, 0.5 and 0.01-foot, respectively. The elevations were measured on a survey pin embedded in the concrete pad, ground surface, and the top of PVC well casing. The survey for the new monitoring wells was completed on January 20, 2021. Elevations are referenced to the site datum (SD); depth is referenced from the top of casing (TOC) in feet. Well coordinates are provided in Table 1. A site map depicting the surveyed locations is included in Figure 1; a survey data sheet sealed by a Georgia RLS is included in Appendix F, Survey Data.

8.0 General References

Georgia Environmental Protection Division, Georgia Department of Natural Resources. Manual for Groundwater Monitoring, September 1991.

TABLES

Table 1
Summary of Well Installation Dates, Coordinates, Elevation Screen Interval and Purpose

Well	Installation Date (mm/dd/yyyy)	Northing	Easting	Ground Elevation (ft MSL)	Top of Casing Elevation (ft MSL)	Top of Screen Elevation (ft MSL)	Total Depth (ft)	Purpose
MW-23D	12/17/2020	779280.61	960949.37	47.20	50.20	-7.80	60.0	Vertical Delineation for GWC-20
MW-24D	01/05/2021	779043.12	960964.95	45.35	48.54	-11.65	62.0	Vertical Delineation for GWC-16
MW-25D	01/06/2021	778944.95	960648.33	45.38	48.33	-15.22	65.6	Vertical Delineation for GWC-15
MW-26D	01/09/2021	779994.12	960768.25	46.45	49.39	-14.55	66.0	Vertical Delineation for GWB-4R
MW-27D	01/08/2021	779559.74	960868.15	47.75	50.53	-16.25	69.0	Vertical Delineation for GWC-1

Notes:

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



Table 2
Soil Sample Data Summary Table

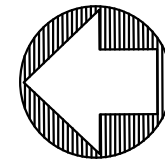
Location	Sample Type	Depth (Ft BGS)	Testing Interval Description	Moisture Content (%)	Hydraulic Conductivity (cm/sec)	USCS Classification		Atterberg Limits				Particle-Size Analysis						
						Material	USCS	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Fine Gravel (%)	Coarse Sand (%)	Medium Sand (%)	Fine Sand (%)	Fines (%)	Clay* [<0.005mm] (%)	Clay* [<0.002mm] (%)
MW-23D	Grab	19-20'	GWC-20 Screen	27.3	--	Brown Silty Sand	SM	NP	NP	NP	NP	0.0	3.2	5.8	70.7	20.3	4.2	2.2
MW-23D	Grab	47-48'	Relatively Coarse Sand above Clay	15.0	--	Gray Silty Sand	SM	NP	NP	NP	NP	1.6	2.4	54.2	27.9	13.9	0.3	-0.6
MW-23D	Grab	49-50'	Relatively Clayey Zone	42.2	--	Gray Silty Sand	SM	NP	NP	NP	NP	0.0	0.4	0.5	70.2	28.8	15.6	9.7
MW-23D	Grab	57-58'	MW-23D Screen	23.1	--	Gray Silty Sand	SM	NP	NP	NP	NP	0.0	0.1	4.5	79.5	15.8	5.0	3.0
MW-24D	Grab	18-19'	GWC-21 Screen	16.1	--	Yellow Silty Sand	SM	NP	NP	NP	NP	0.0	0.5	1.7	63.2	34.6	7.1	2.7
MW-24D	Grab	23-24'	GWC-16 Screen	32.4	--	Yellow Silty Sand	SM	NP	NP	NP	NP	0.0	0.0	0.3	82.9	16.7	8.8	5.4
MW-24D	Grab	48-49'	Relatively Clayey Zone	38.4	--	Gray Silty Sand	SM	NP	NP	NP	NP	0.0	0.3	1.3	71.7	26.7	15.9	11.1
MW-24D	Grab	59-60'	MW-24D Screen	26.0	--	Gray Silty Sand	SM	NP	NP	NP	NP	0.0	0.1	2.6	83.4	14.0	5.0	2.4
MW-25D	Grab	21-22'	GWC-15 Screen	23.2	--	Yellow Silty Sand	SM	NP	NP	NP	NP	0.0	0.0	1.5	81.5	16.9	5.3	3.5
MW-25D	Grab	49-50'	Relatively Clayey Zone	38.4	--	Gray Clayey Sand	SC	27	18	9	2.26	0.0	3.3	3.4	66.0	27.3	13.6	11.7
MW-25D	Grab	63-64'	MW-25D Screen	31.1	--	Gray Silty Sand	SM	31	26	5	1.01	0.0	0.7	3.9	75.1	20.3	7.4	5.5
MW-26D	Grab	19-20'	GWB-4R Screen	23.9	--	Olive Brown Silty Sand	SM	NP	NP	NP	NP	0.0	0.1	2.9	77.6	19.4	5.5	3.6
MW-26D	Shelby Tube	24-26'	Unit 2 Clayey Material	33.5	2.1E-07	Gray Clayey Sand	SC	21	13	8	2.56	0.0	0.2	2.5	57.7	39.7	19.7	17.2
MW-26D	Grab	49-50'	Relatively Clayey Zone	40.0	--	Gray Silty/Clayey Sand	SC-SM	29	22	7	2.57	0.5	0.6	1.2	69.9	27.8	14.2	11.6
MW-26D	Shelby Tube	50-52'	Relatively Clayey Zone	38.5	3.7E-07	Gray Silty Sand	SM	NP	NP	NP	NP	0.0	0.7	2.1	67.2	30.0	14.2	12.2
MW-26D	Grab	64-65'	MW-26D Screen	32.0	--	Gray Silty Sand	SM	25	24	1	7.98	0.0	0.7	6.2	73.3	19.7	8.4	6.2
MW-27D	Grab	20-21'	GWC-1 Screen	25.2	--	Brown Silty Sand	SM	NP	NP	NP	NP	0.0	1.1	3.2	67.1	28.6	3.8	2.0
MW-27D	Grab	55-56'	Relatively Clayey Zone	42.9	--	Gray Silty Sand	SM	27	22	5	4.18	0.0	2.0	1.9	69.4	26.7	13.0	10.3
MW-27D	Grab	66-67'	MW-27D Screen	32.7	--	Gray Clayey Sand	SC	24	13	11	1.79	0.0	0.6	6.2	71.6	21.6	7.6	5.6

Notes:

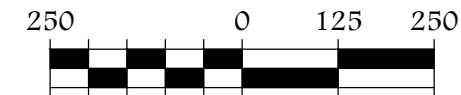
1. Ft BGS = feet below ground surface
2. cm/sec = centimeters per second
3. USCS = Unified Soil Classification System
4. mm = millimeters
5. NP = Non-Plastic

FIGURE

P:\Industrial\054-Southern Company\10-Groundwater Consulting Services\Grumman Road\2-CW Sampling And Reporting\2020\DWG\Plant_Krefr_Grumman Road LF - September 2020.dwg 2021-01-29 MATT MALONE



ATLANTIC COAST
CONSULTING, INC.



SCALE (IN FEET)

LEGEND:

EXISTING	DESCRIPTION
	PROPERTY BOUNDARY
	GROUNDWATER MONITORING NETWORK WELL
	PIEZOMETER
	DELINEATION WELL

NOTES:

1. PROPERTY BOUNDARY SURVEYED BY GUNNIN LAND SURVEYING ON AUGUST 30, 2018.
2. WELLS DENOTED BY AN ASTERISK (GWC-3, GWC-4, GWC-5, AND GWC-6) WERE ABANDONED IN DECEMBER 2020.
3. WELLS MW-23D, MW-24D, MW-25D, MW-26D, AND MW-27D WERE INSTALLED IN DECEMBER 2020 AND JANUARY 2021.

PROJECT



GEORGIA POWER COMPANY
GRUMMAN ROAD PRIVATE INDUSTRIAL LANDFILL

WELL LOCATION MAP

PROJECT NO. I054-110

January 2021

DRAWN BY: MM

FIGURE:

CHECKED BY: EP

1



APPENDICES

APPENDIX A

DRILLER BOND CERTIFICATE

COPY

CONTINUATION
CERTIFICATE

Atlantic Specialty Insurance Company

, Surety upon

a certain Bond No. **800031223**

dated effective June 30, 2017
(MONTH-DAY-YEAR)

on behalf of Michael C. Rice and Cascade Drilling, L.P., any and all employees, officers and partners
(PRINCIPAL)

and in favor of State of Georgia
(OBLIGEE)

does hereby continue said bond in force for the further period

beginning on June 30, 2019
(MONTH-DAY-YEAR)

and ending on June 30, 2021
(MONTH-DAY-YEAR)

Amount of bond Thirty Thousand and Zero/100 (\$30,000.00)

Description of bond Water Well Contractor Performance Bond

Premium: \$1,200.00

PROVIDED: That this continuation certificate does not create a new obligation and is executed upon the express condition and provision that the Surety's liability under said bond and this and all Continuation Certificates issued in connection therewith shall not be cumulative and that the said Surety's aggregate liability under said bond and this and all such Continuation Certificates on account of all defaults committed during the period (regardless of the number of years) said bond had been and shall be in force, shall not in any event exceed the amount of said bond as hereinbefore set forth.

Signed and dated on May 9, 2019
(MONTH-DAY-YEAR)
Atlantic Specialty Insurance Company

By _____
Attorney-in-Fact Elizabeth R. Hahn

Parker, Smith & Feek, Inc.
Agent

2233 112th Ave NE Bellevue, WA 98004
Address of Agent

(425) 709-3600
Telephone Number of Agent

Power of Attorney

KNOW ALL MEN BY THESE PRESENTS, that ATLANTIC SPECIALTY INSURANCE COMPANY, a New York corporation with its principal office in Plymouth, Minnesota, does hereby constitute and appoint: **Deanna M. French, Susan B. Larson, Elizabeth R. Hahn, Jana M. Roy, Scott McGilvray, Mindee L. Rankin, Ronald J. Lange, John R. Claeys, Roger Kaltenbach, Guy Armfield, Scott Fisher, Andrew P. Larsen, Nicholas Fredrickson**, each individually if there be more than one named, its true and lawful Attorney-in-Fact, to make, execute, seal and deliver, for and on its behalf as surety, any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof; provided that no bond or undertaking executed under this authority shall exceed in amount the sum of: **sixty million dollars (\$60,000,000)** and the execution of such bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof in pursuance of these presents, shall be as binding upon said Company as if they had been fully signed by an authorized officer of the Company and sealed with the Company seal. This Power of Attorney is made and executed by authority of the following resolutions adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the

Resolved: That the President, any Senior Vice President or Vice-President (each an "Authorized Officer") may execute for and in behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and affix the seal of the Company thereto; and that the Authorized Officer may appoint and authorize an Attorney-in-Fact to execute on behalf of the Company any and all such instruments and to affix the Company seal thereto; and that the Authorized Officer may at any time remove any such Attorney-in-Fact and revoke all power and authority given to any such Attorney-in-Fact.

Resolved: That the Attorney-in-Fact may be given full power and authority to execute for and in the name and on behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and any such instrument executed by any such Attorney-in-Fact shall be as binding upon the Company as if signed and sealed by an Authorized Officer and, further, the Attorney-in-Fact is hereby authorized to verify any affidavit required to be attached to bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof.

This power of attorney is signed and sealed by facsimile under the authority of the following Resolution adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the signature of an Authorized Officer, the signature of the Secretary or the Assistant Secretary, and the Company seal may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing an Attorney-in-Fact for purposes only of executing and sealing any bond, undertaking, recognizance or other written obligation in the nature thereof, and any such signature and seal where so used, being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

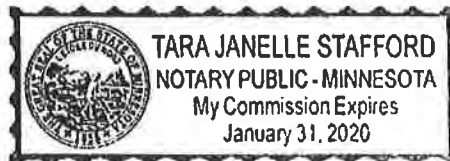
IN WITNESS WHEREOF, ATLANTIC SPECIALTY INSURANCE COMPANY has caused these presents to be signed by an Authorized Officer and the seal of the Company to be affixed this twenty-sixth day of October, 2017.



By 
Paul J. Brehm, Senior Vice President

STATE OF MINNESOTA
HENNEPIN COUNTY

On this twenty-sixth day of October, 2017, before me personally came Paul J. Brehm, Senior Vice President of ATLANTIC SPECIALTY INSURANCE COMPANY, to me personally known to be the individual and officer described in and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, that he is the said officer of the Company aforesaid, and that the seal affixed to the preceding instrument is the seal of said Company and that the said seal and the signature as such officer was duly affixed and subscribed to the said instrument by the authority and at the direction of the Company.



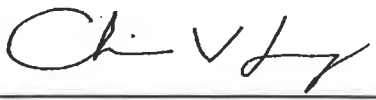

Notary Public

I, the undersigned, Secretary of ATLANTIC SPECIALTY INSURANCE COMPANY, a New York Corporation, do hereby certify that the foregoing power of attorney is in full force and has not been revoked, and the resolutions set forth above are now in force.

Signed and sealed. Dated 9 day of May, 2019

This Power of Attorney expires
October 1, 2019




Christopher V. Jerry, Secretary

APPENDIX B

BORING AND WELL CONSTRUCTIONS LOGS

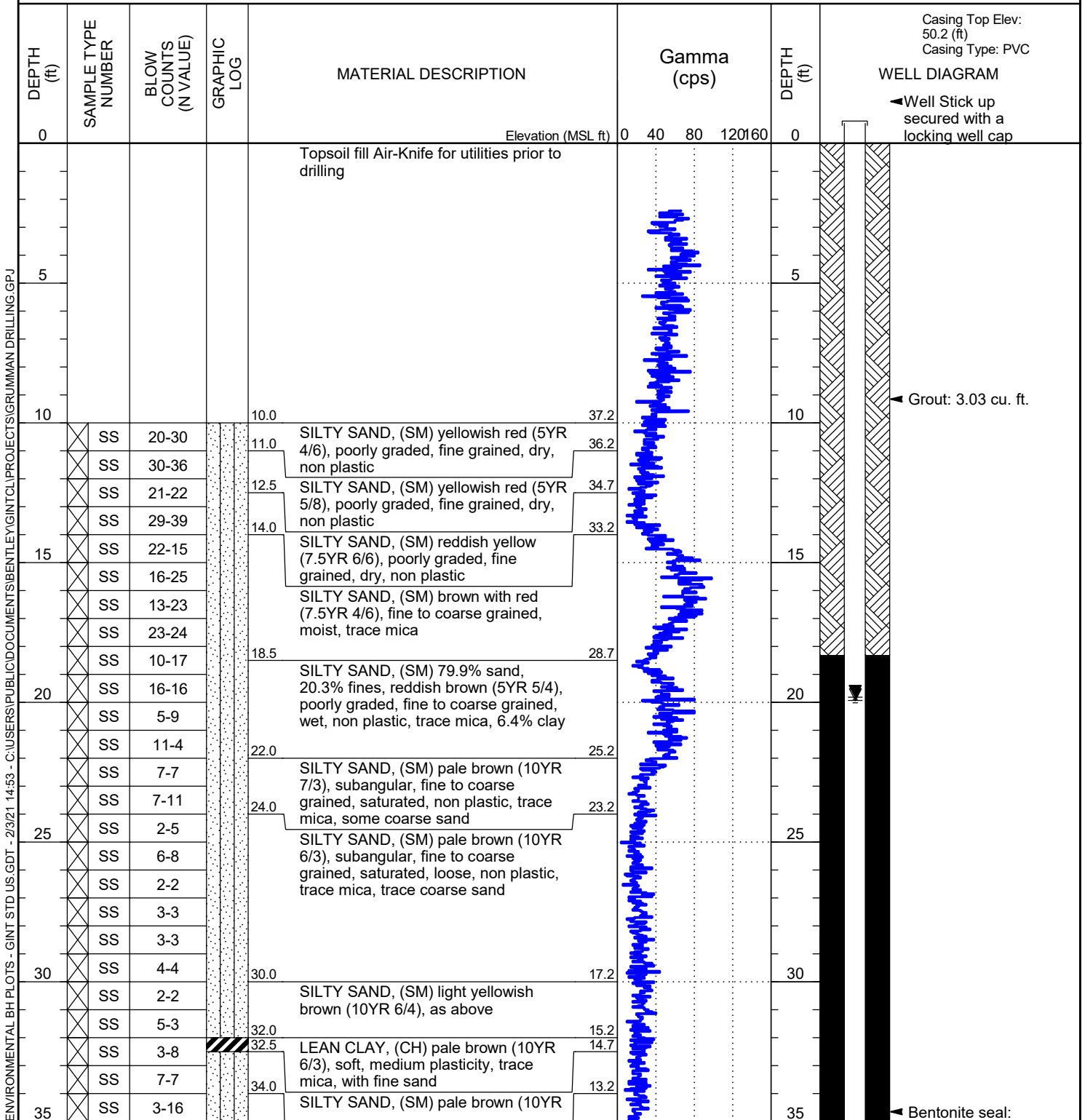


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 1150 North Meadow Parkway, Suite 100
 Roswell, GA 30076
 770-594-5998

BORING NUMBER MW-23D

PAGE 1 OF 2

CLIENT Georgia Power	PROJECT NAME Jordan Berisford
PROJECT NUMBER I054-110	PROJECT LOCATION Grumman Road
DATE STARTED 12/15/20	COMPLETED 12/17/20
DRILLING CONTRACTOR Cascade	GROUND ELEVATION 47.2 ft
DRILLING METHOD Rotasonic	HOLE SIZE 6 inch
LOGGED BY Jordan Berisford	CHECKED BY
NOTES	GROUND WATER LEVELS:
	AT TIME OF DRILLING ---
	AT END OF DRILLING 19.82 ft / Elev 27.38 ft
	AFTER DRILLING 19.93 ft / Elev 27.27 ft



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BORING NUMBER MW-23D

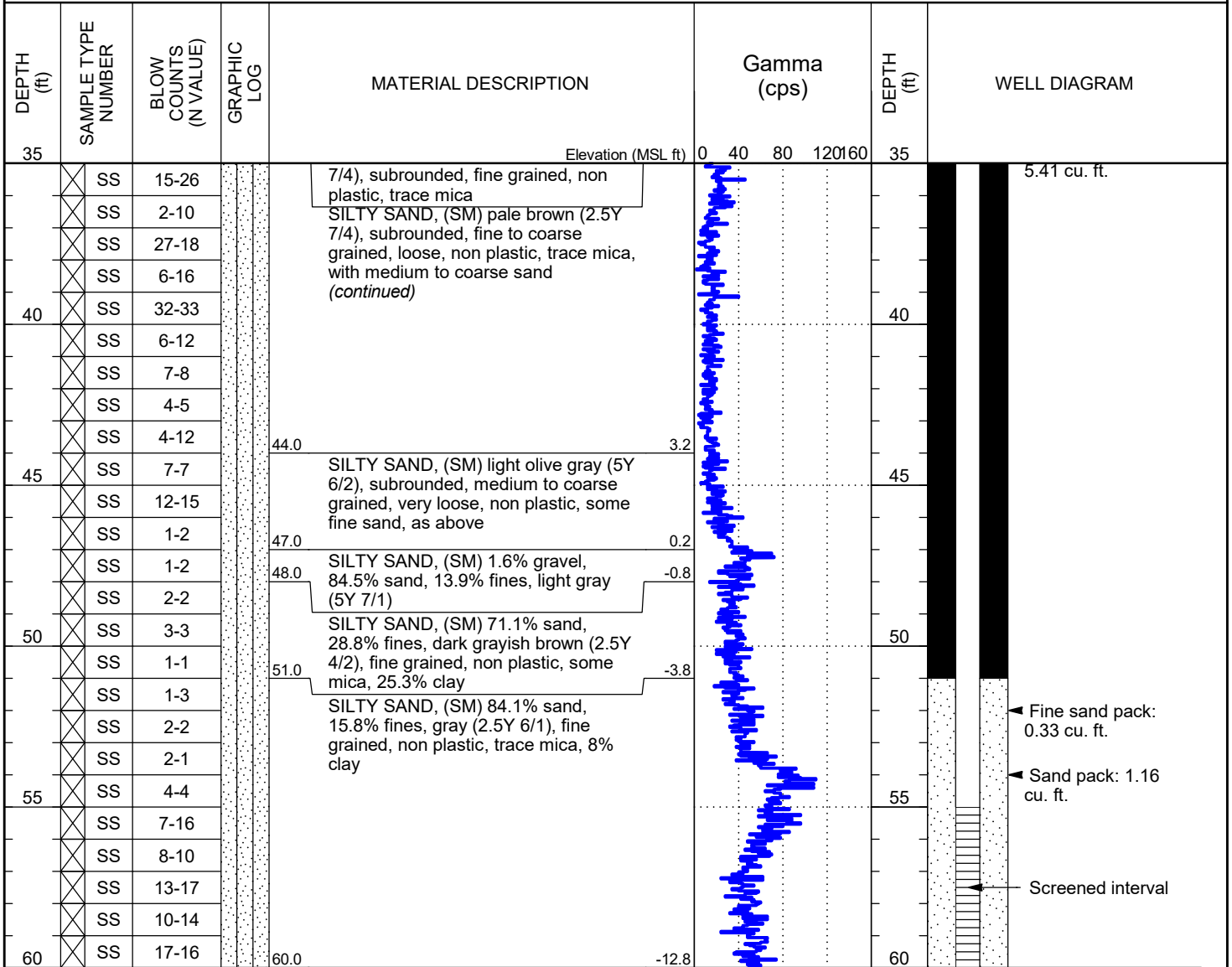
CLIENT Georgia Power

PROJECT NAME Jordan Berisford

PROJECT NUMBER I054-110

PROJECT LOCATION Grumman Road

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Bottom of borehole at 60.0 feet.

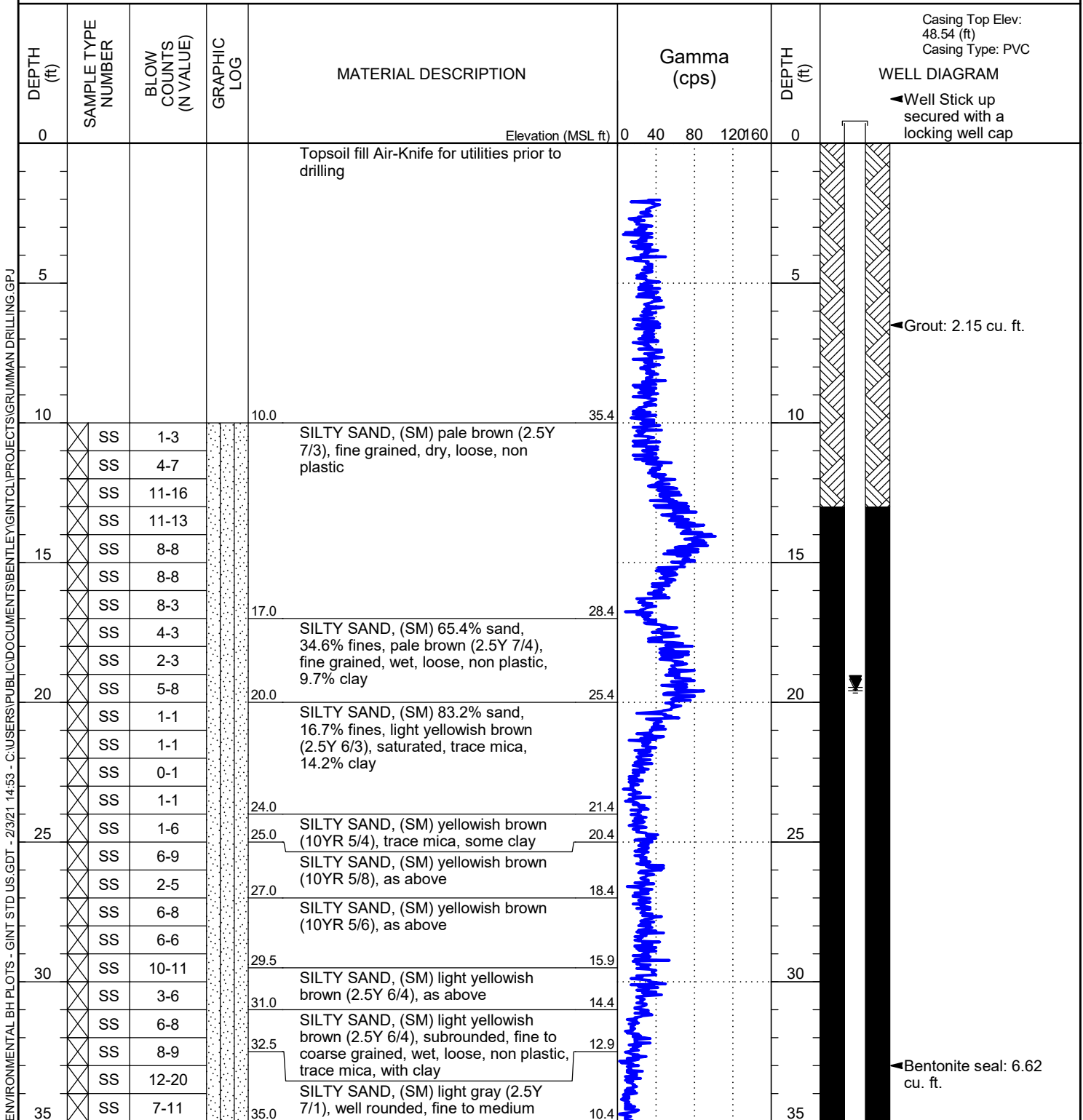


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BORING NUMBER MW-24D

PAGE 1 OF 2

CLIENT Georgia Power	PROJECT NAME Jordan Berisford
PROJECT NUMBER I054-110	PROJECT LOCATION Grumman Road
DATE STARTED 12/17/20	COMPLETED 1/5/21
DRILLING CONTRACTOR Cascade	GROUND ELEVATION 45.35 ft
DRILLING METHOD Rotasonic	HOLE SIZE 6 inch
LOGGED BY Jordan Berisford	CHECKED BY
NOTES	GROUND WATER LEVELS:
	AT TIME OF DRILLING ---
	AT END OF DRILLING 19.47 ft / Elev 25.88 ft
	AFTER DRILLING 19.58 ft / Elev 25.77 ft



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BORING NUMBER MW-24D

CLIENT Georgia Power

PROJECT NAME Jordan Berisford

PROJECT NUMBER 1054-110

PROJECT LOCATION Grumman Road

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DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	GRAPHIC LOG	MATERIAL DESCRIPTION	Elevation (MSL ft)	Gamma (cps)	DEPTH (ft)	WELL DIAGRAM			
35					0	40	80	120	160	35	
	SS	22-23		grained, wet, medium dense, non plastic, trace mica, some clay							
	SS	6-2		SILTY SAND, (SM) light gray (2.5Y 7/1), well rounded, medium to coarse							
	SS	7-9		grained, wet, medium dense, non plastic							
	SS	4-4									
40	SS	8-13			40.0	5.4	40				
	SS	7-10		SILTY SAND, (SM) gray (2.5Y 6/1), as above							
	SS	10-10									
	SS	3-3			42.5	2.9					
	SS	5-8		WELL GRADED SAND, (SM) gray (2.5Y 6/1), well graded, fine to coarse							
	SS	7-10		grained, wet, loose, non plastic, trace clay, with fine to coarse gravel							
45	SS	12-13			46.0	-0.6	45				
	SS	4-3		SILTY SAND, (SM) 73.3% sand, 26.7% fines, dark gray (5Y 4/1), fine							
	SS	2-3		grained, wet, non plastic, trace mica, trace medium to coarse sand, 27% clay							
	SS	3-3									
50	SS	4-5			50.0	-4.7	50				
	SS	2-2		SILTY SAND, (SM) 86.1% sand, 14% fines, gray (2.5Y 6/1), fine grained, wet,							
	SS	1-4		non plastic, some mica, trace clay, 7.4% clay							
	SS	2-3									
	SS	6-6									
55	SS	2-3					55				
	SS	4-6									
	SS	1-3									
	SS	7-9									
	SS	1-3									
60	SS	6-11					60				
	SS	3-2									
	SS	9-15									
					62.0	-16.7					

Bottom of borehole at 62.0 feet.

Fine sand pack: 0.33 cu. ft.
 Sand pack: 1.16 cu. ft.
 Screened interval



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BORING NUMBER MW-25D

PAGE 1 OF 2

CLIENT Georgia Power **PROJECT NAME** Jordan Berisford

PROJECT NUMBER 1054-110 **PROJECT LOCATION** Grumman Road

DATE STARTED 1/5/21 **COMPLETED** 1/6/21 **GROUND ELEVATION** 45.38 ft **HOLE SIZE** 6 inch

DRILLING CONTRACTOR Cascade **GROUND WATER LEVELS:**

DRILLING METHOD Rotosonic **AT TIME OF DRILLING** ---

LOGGED BY Jordan Berisford **CHECKED BY** _____ **AT END OF DRILLING** 18.91 ft / Elev 26.47 ft

NOTES _____ **AFTER DRILLING** 17.95 ft / Elev 27.43 ft

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	GRAPHIC LOG	MATERIAL DESCRIPTION	Gamma (cps)	DEPTH (ft)	WELL DIAGRAM
0				Topsoil fill Air-Knife for utilities prior to drilling		0	Casing Top Elev: 48.33 (ft) Casing Type: PVC Well Stick up secured with a locking well cap
5						5	
10						10	Grout: 3.11 cu. ft.
10.0	SS 4-13			SILTY SAND, (SM) brown (7.5YR 5/8), fine grained, dry, medium dense, non plastic, with silt	35.4	10.0	
12.0	SS 19-22			SILTY SAND, (SM) yellowish red (5YR 5/6), fine grained, dry, medium dense, non plastic, trace mica, with silt	33.4	12.0	
14.0	SS 6-20			SILTY SAND, (SM) brown (7.5YR 4/6), as above	31.4	14.0	
15	SS 24-27					15	
15	SS 1-1					15	
15	SS 2-4					15	
15	SS 8-19					15	
17.0	SS 25-29			SILTY SAND, (SM) pale brown (2.5Y 7/3), as above	28.4	17.0	
18.0	SS 2-3			Drillers lost sample	27.4	18.0	
20	SS 2-4					20	
20	SS 1-4			SILTY SAND, (SC) pale brown (2.5Y 7/3), as above	25.4	20	
20.5					24.9	20.5	
21.0					24.4	21.0	
21.0	SS 6-7			CLAYEY SAND, (SM) pale brown (2.5Y 7/3), fine grained, moist, soft, medium plasticity, trace coarse sand, with silt	21.4	21.0	
24.0	SS 1-2					24.0	
24.0	SS 4-5					24.0	
25	SS 2-2			SILTY SAND, (SM) 83% sand, 16.9% fines, pale brown (2.5Y 7/3), fine grained, wet, loose, non plastic, trace mica, with silt, 8.8% clay		25	
25	SS 4-7					25	
25	SS 1-1					25	
25	SS 2-3			SILTY SAND, (SM) pale brown (2.5Y 7/4), as above		25	
25	SS 2-2					25	
30	SS 2-6					30	
30	SS 5-7			SILTY SAND, (SM) pale brown (2.5Y 7/4), fine grained, loose, non plastic, with clay	15.4	30	
30	SS 7-9					30	
32.0	SS 2-3			SILTY SAND, (SM) light gray (2.5Y 7/1), fine to coarse grained, wet, very loose, non plastic	13.4	32.0	
35	SS 2-3					35	
35	SS 2-2					35	

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BORING NUMBER MW-25D

PAGE 2 OF 2

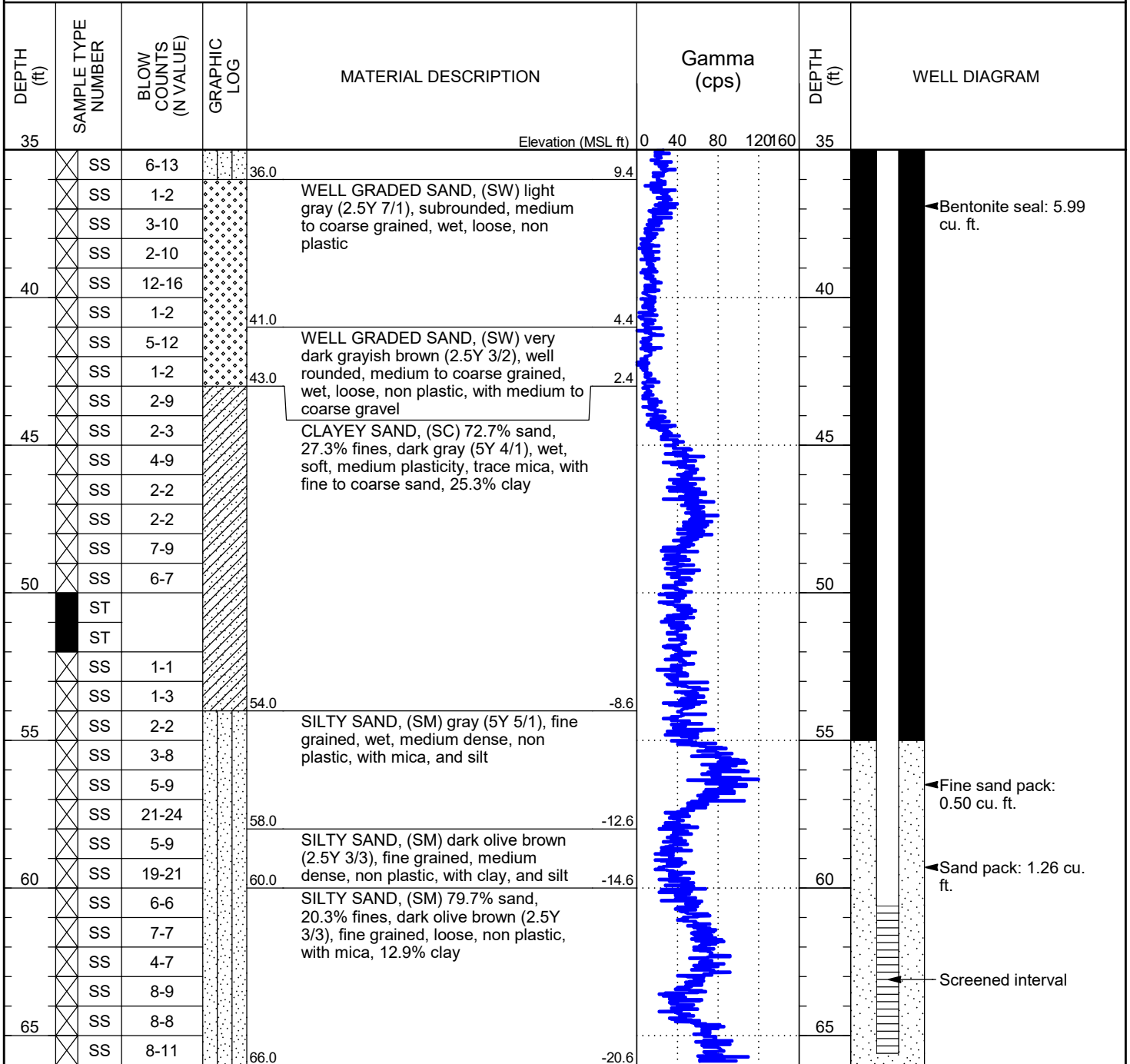
CLIENT Georgia Power

PROJECT NAME Jordan Berisford

PROJECT NUMBER I054-110

PROJECT LOCATION Grumman Road

ENVIRONMENTAL BH PLOTS - GINT STD US.GDT - 2/3/21 14:53 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\CLPROJECTS\GRUMMAN DRILLING.GPJ



Bottom of borehole at 66.0 feet.

Bentonite seal: 5.99 cu. ft.

Fine sand pack: 0.50 cu. ft.

Sand pack: 1.26 cu. ft.

Screened interval

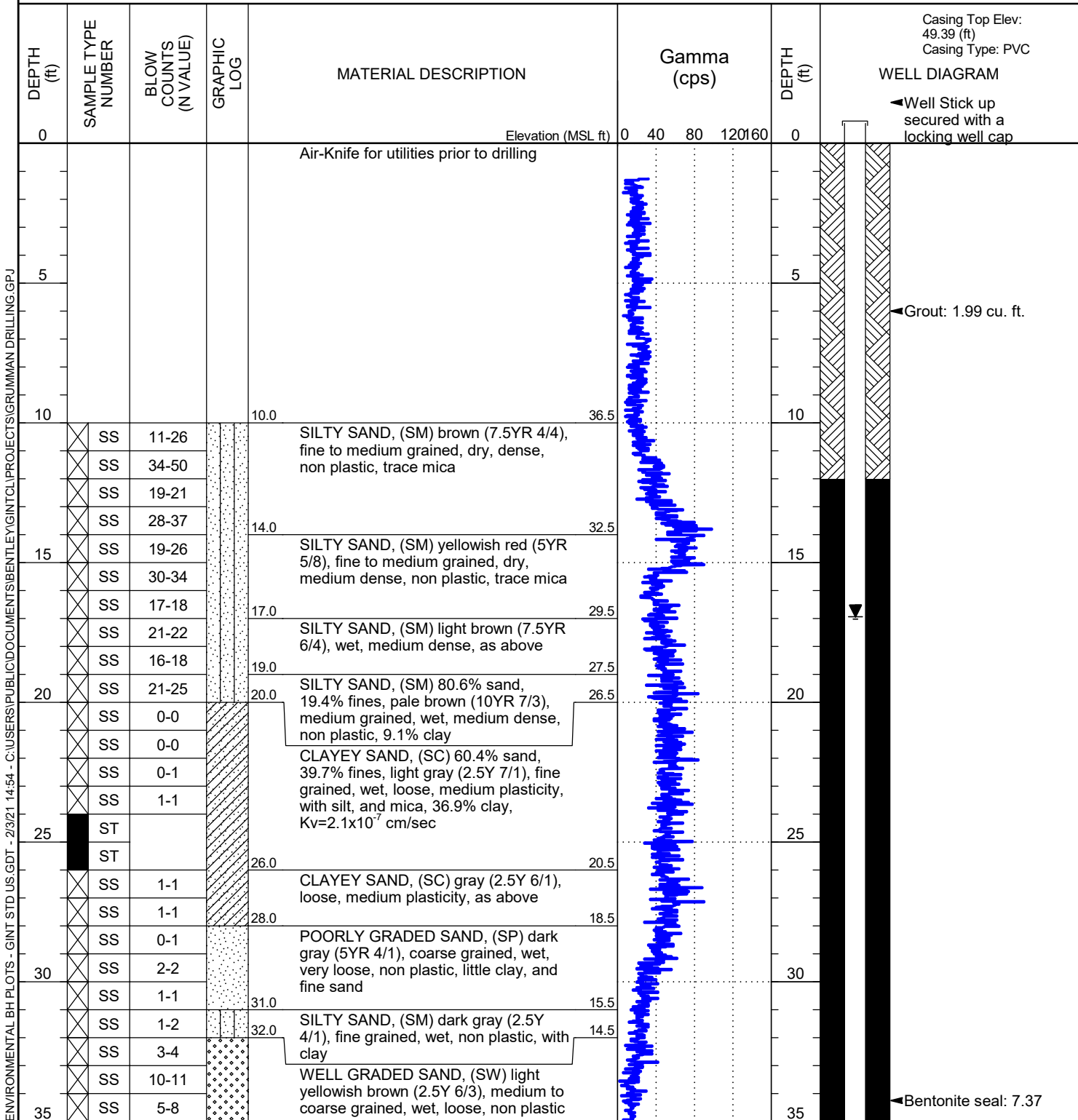


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BORING NUMBER MW-26D

PAGE 1 OF 2

CLIENT Georgia Power	PROJECT NAME Jordan Berisford
PROJECT NUMBER I054-110	PROJECT LOCATION Grumman Road
DATE STARTED 1/8/21	COMPLETED 1/9/21
DRILLING CONTRACTOR Cascade	GROUND ELEVATION 46.45 ft
DRILLING METHOD Rotasonic	HOLE SIZE 6 inch
LOGGED BY Jordan Berisford	CHECKED BY
NOTES	GROUND WATER LEVELS:
	AT TIME OF DRILLING ---
	AT END OF DRILLING 16.94 ft / Elev 29.51 ft
	AFTER DRILLING 16.93 ft / Elev 29.52 ft



(Continued Next Page)



Atlantic Coast Consulting
 1150 North Meadow Parkway, Suite 100
 Roswell, GA 30076
 770-594-5998

BORING NUMBER MW-26D

PAGE 2 OF 2

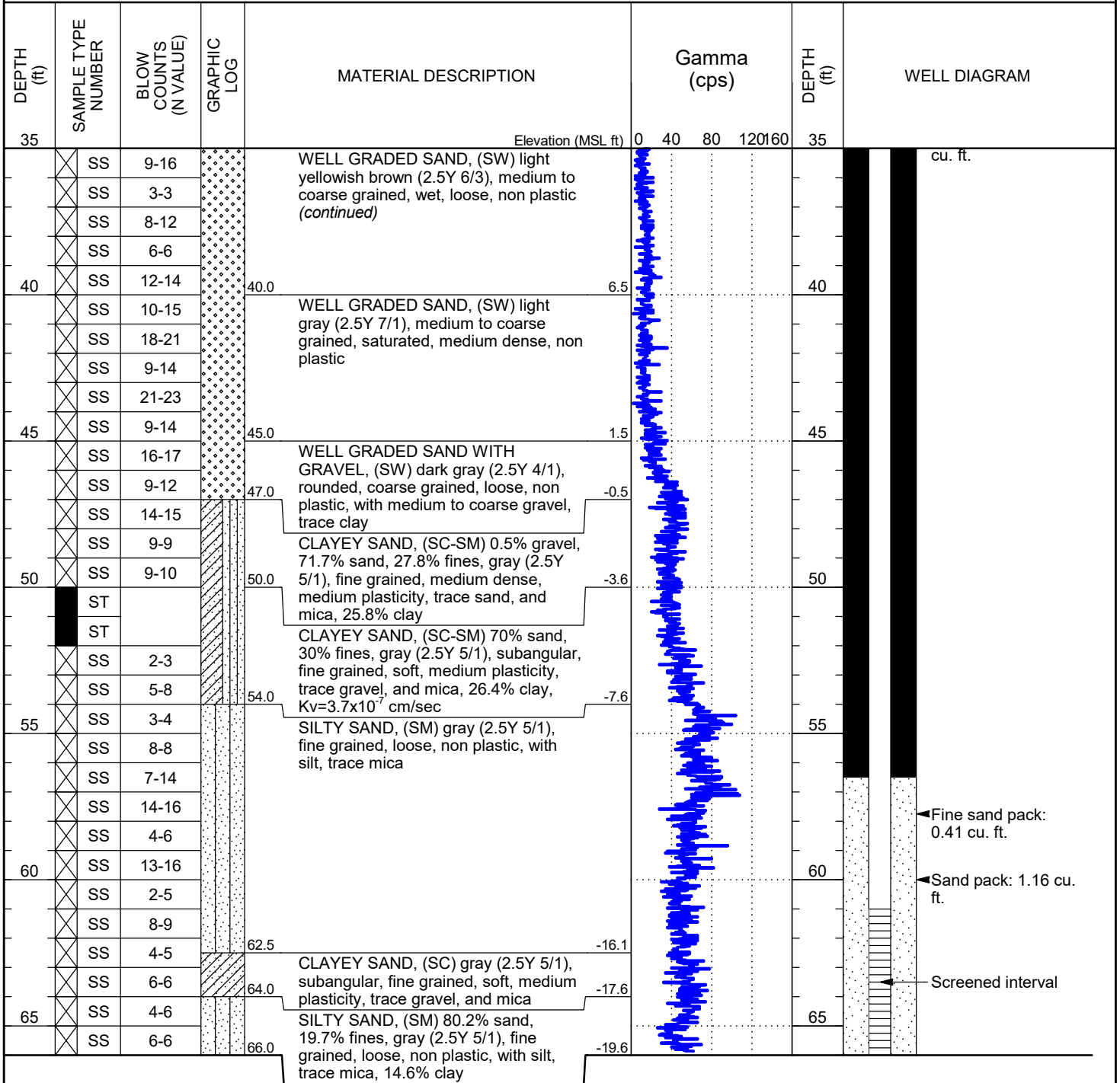
CLIENT Georgia Power

PROJECT NAME Jordan Berisford

PROJECT NUMBER 1054-110

PROJECT LOCATION Grumman Road

ENVIRONMENTAL BH PLOTS - GINT STD US.GDT - 2/3/21 14:54 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\GRUMMAN DRILLING.GPJ



Bottom of borehole at 66.0 feet.

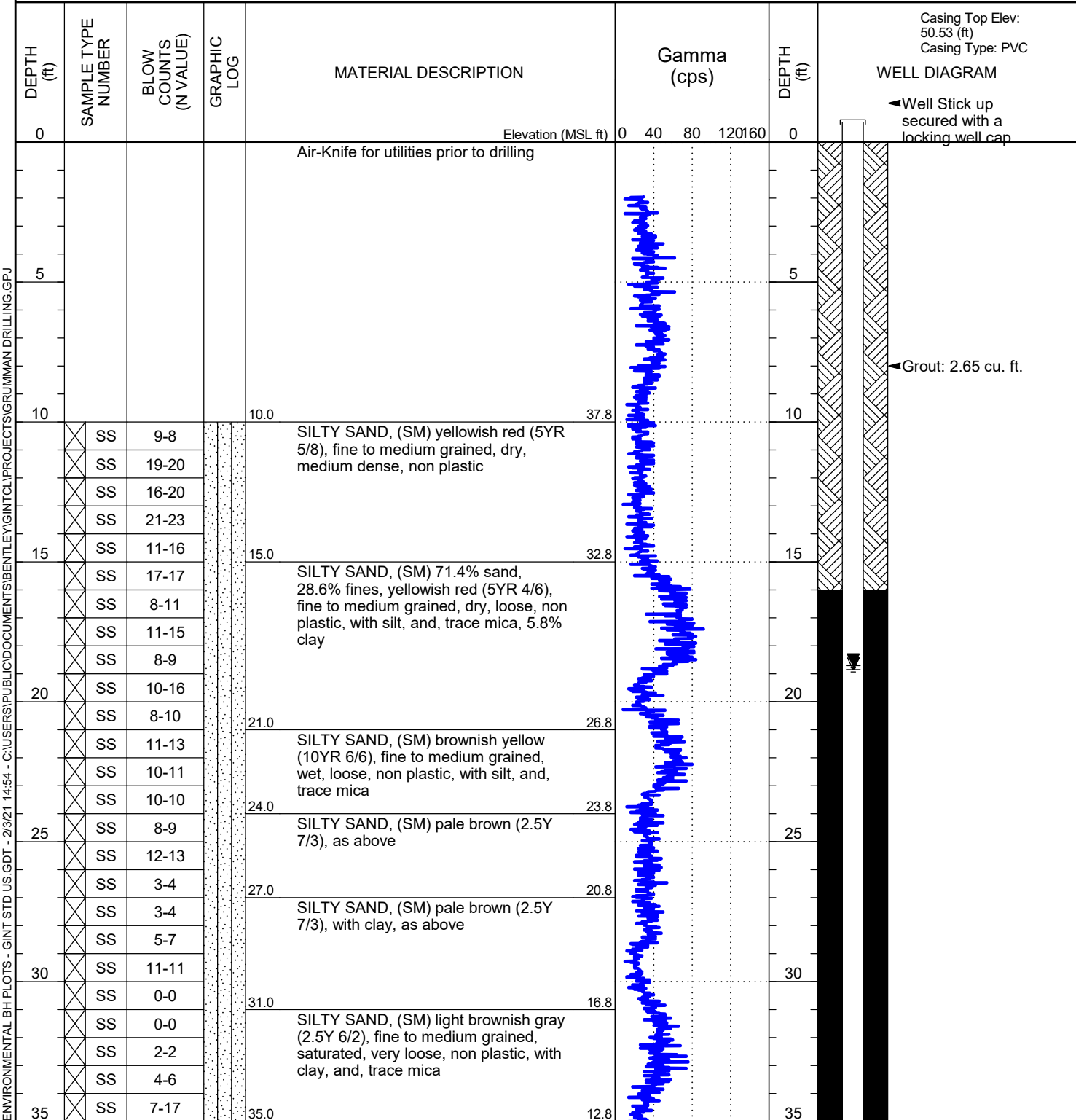
Fine sand pack: 0.41 cu. ft.
 Sand pack: 1.16 cu. ft.
 Screened interval



Atlantic Coast Consulting
 1150 North Meadow Parkway, Suite 100
 Roswell, GA 30076
 770-594-5998

BORING NUMBER MW-27D

CLIENT Georgia Power
PROJECT NAME Jordan Berisford
PROJECT NUMBER I054-110
PROJECT LOCATION Grumman Road
DATE STARTED 1/7/21 **COMPLETED** 1/8/21
GROUND ELEVATION 47.75 ft **HOLE SIZE** 6 inch
DRILLING CONTRACTOR Cascade
GROUND WATER LEVELS:
DRILLING METHOD Rotasonic **AT TIME OF DRILLING** ---
LOGGED BY Jordan Berisford **CHECKED BY** _____
AT END OF DRILLING 18.71 ft / Elev 29.04 ft
AFTER DRILLING 18.85 ft / Elev 28.90 ft



(Continued Next Page)

ENVIRONMENTAL BH PLOTS - GINT STD US.GDT - 2/3/21 14:54 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\CLPROJECTS\GRUMMAN DRILLING.GPJ



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BORING NUMBER MW-27D

PAGE 2 OF 2

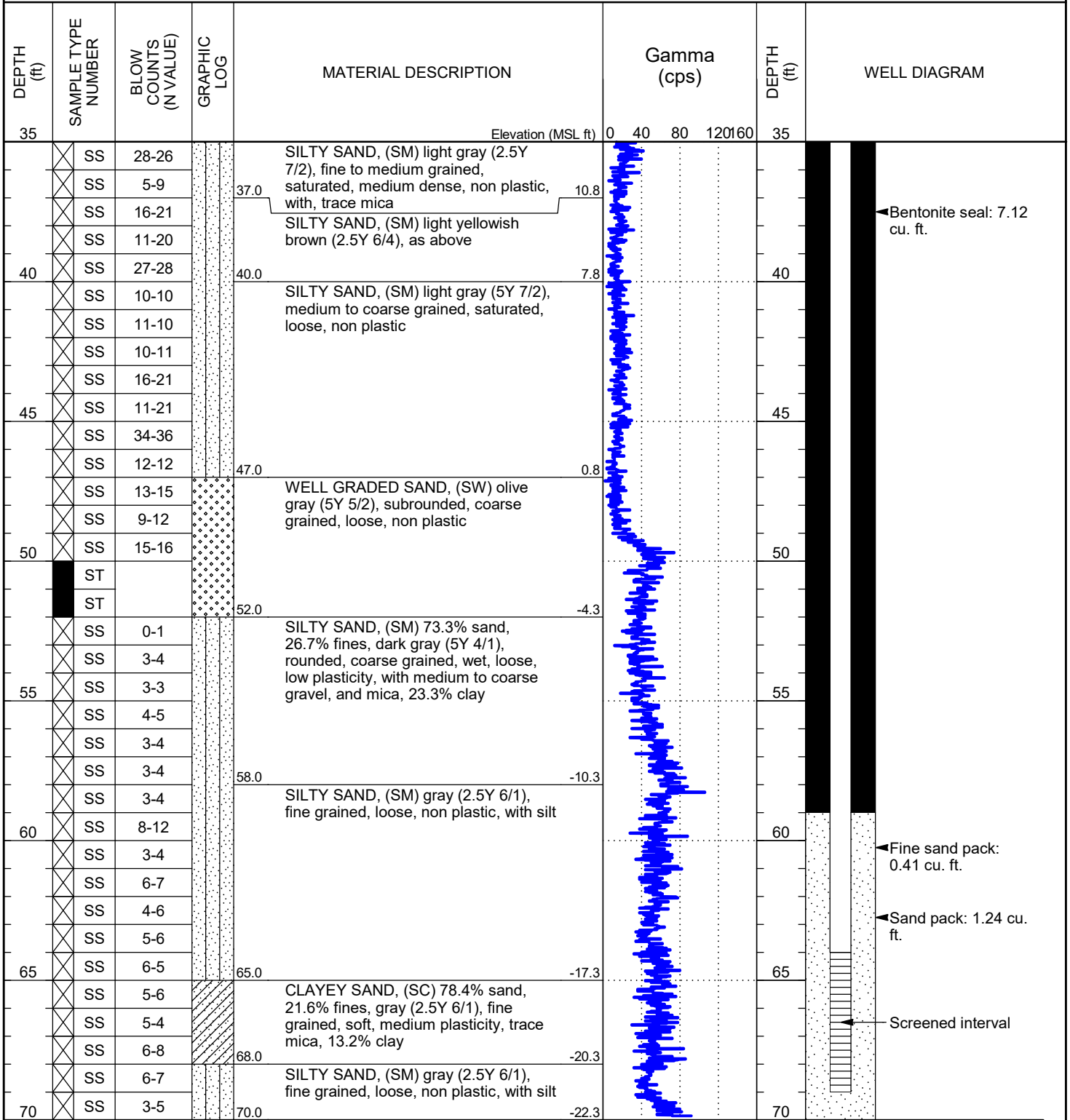
CLIENT Georgia Power

PROJECT NAME Jordan Berisford

PROJECT NUMBER I054-110

PROJECT LOCATION Grumman Road

ENVIRONMENTAL BH PLOTS - GINT STD US.GDT - 2/3/21 14:54 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\GRUMMAN DRILLING.GPJ



Bottom of borehole at 70.0 feet.

APPENDIX C
WELL DEVELOPMENT FORMS

Atlantic Coast Consulting, Inc. Well Development Field Record

Job Name: Grummel Redevelop **Job No.** E059-110 **Well No.** MW-230
Developed By: Jordan Benford **Date of Installation** 12-17-20 Sheet 1 of 1
Started Dev. 1-20-21 1450 **Completed Dev.** 1-20-21 1655
Date / Time Date / Time
W.L. Before Dev. 22.94 / 1-20-21 / 1444 **After Dev.** 35.72 / 1-20-21 / 1703
BTOC / Date / Time BTOC / Date / Time
Well Depth: Before Dev. 63.30 BTOC **After Dev.** 63.30 BTOC Well Dia. _____ In.
Standing Water Column (H) 40.36 (Ft.) **Standing Well Volume** 6.46 Gal.
Screen Length 5 **Drilling Water Loss** _____ Gal.

Date / Time	Volume Removed (gals.)	Field Parameters				DO/UP	Remarks
		Spec. Cond. (umhos/cm)	Temp. (°C)	pH (s.u.)	Turbidity (NTU)		
1625	119.7	65	21.6	5.76	78	0.1 / 63	Surged well w/ Pump
1630	126	66	21.6	5.77	13	0.1 / 56	
1635	132.3	64	21.6	5.76	8.77	0.1 / 52	
1640	138.6	65	21.6	5.74	5.64	0.1 / 47	
1645	144.9	64	21.6	5.75	5.11	0.1 / 44	
1650	151.2	63	21.6	5.75	3.95	0.1 / 40	
1655	157.5	62	21.6	5.74	2.71	0.1 / 36	
Total Volume Removed (gal.)							

Development Method: Surge well w/ surge Blakes before development, during development surge well with pump
400 ml / 5 sec = 4.84 / min = 1.26 gal / min

63.30 DW - 21.01
Z# 1446

Notes: H-well depth (BOTC) - W.L.(BTOC)
 Well volume standing in pipe:
 2" diameter well: 0.17 x H = vol. (gal)
 4" diameter well: 0.66 x H = vol. (gal)

C:\Users\jberisford\Desktop\Forms\Well Development Field Record.doc

Low-Flow Test Report:

Test Date / Time: 1/21/2021 9:05:44 AM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: MW-23D Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 58.3 ft Total Depth: 63.3 ft Initial Depth to Water: 22.92 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 61 ft Estimated Total Volume Pumped: 10 liter Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 15.4 in	Instrument Used: Aqua TROLL 400 Serial Number: 714302
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Test Notes:

Cloudy, 50s, sample time-0945

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
1/21/2021 9:05 AM	00:00	5.79 pH	21.37 °C	68.36 µS/cm	0.13 mg/L		88.8 mV	22.92 ft	250.00 ml/min
1/21/2021 9:10 AM	05:00	5.85 pH	21.54 °C	72.45 µS/cm	0.08 mg/L	25.00 NTU	77.5 mV	23.50 ft	250.00 ml/min
1/21/2021 9:15 AM	10:00	5.84 pH	21.49 °C	68.88 µS/cm	0.07 mg/L	15.00 NTU	70.0 mV	23.80 ft	250.00 ml/min
1/21/2021 9:20 AM	15:00	5.83 pH	21.46 °C	67.25 µS/cm	0.06 mg/L	9.42 NTU	63.0 mV	24.00 ft	250.00 ml/min
1/21/2021 9:25 AM	20:00	5.80 pH	21.46 °C	63.78 µS/cm	0.05 mg/L	5.42 NTU	58.9 mV	24.10 ft	250.00 ml/min
1/21/2021 9:30 AM	25:00	5.77 pH	21.49 °C	61.56 µS/cm	0.04 mg/L	5.03 NTU	55.0 mV	24.20 ft	250.00 ml/min
1/21/2021 9:35 AM	30:00	5.78 pH	21.46 °C	62.41 µS/cm	0.04 mg/L	4.12 NTU	49.0 mV	24.20 ft	250.00 ml/min
1/21/2021 9:40 AM	35:00	5.76 pH	21.50 °C	59.85 µS/cm	0.03 mg/L	3.62 NTU	45.6 mV	24.20 ft	250.00 ml/min
1/21/2021 9:45 AM	40:00	5.75 pH	21.46 °C	60.80 µS/cm	0.03 mg/L	3.68 NTU	42.1 mV	24.20 ft	250.00 ml/min

Samples

Sample ID:	Description:
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Atlantic Coast Consulting, Inc. Well Development Field Record

Job Name: Grumman Road Job No. 2054-110 Well No. MW-240
 Developed By: Z Davis Date of Installation: _____ Sheet 1 of 1
 Started Dev. 1150 1/20/21 Completed Dev. _____
 W.L. Before Dev. 19.65 1/20/21 1115 W.L. After Dev. 45.65 1/20/21 1655
 Well Depth Before Dev.: 65.0 BGS Well Depth After Dev.: 66.30 BGS
 Water Column (H): 45.35 Ft. Well Dia.: 2 In. Well Volume: 7.26 Gal.
 Screen Length: 5 Ft.

Date / Time	Volume Removed (Gal.)	Field Parameters				Remarks
		Specific Cond. (umhos/cm)	Temperature (°C)	pH (S.U.)	Turbidity (NTU)	
1155	6					
1215	12					
1235	16					
1255	24					
1315	30					
1335	36					
1355	42					
1415	48					
1435	54					
1455	60					
1515	66				21.9	
1535	72				16.9	
1555	78				12.2	
1615	84	65.41	22.3	6.24	10.7	
1635	90	75.3	21.6	6.24	11.0	
1655	96	74.2	21.1	6.36	9.64	

Flow rate = 700 ml/min

Well Surged with Surge blocker and purged with intake pump
 pump removed at least 12x well vol

Notes: H = well depth (BTOC) - W.L. (BTOC)
 Well volume in pipe:
 2" diameter well: 0.16 X H = volume in gallons
 4" diameter well: 0.66 X H = voume in gallons

Low-Flow Test Report:

Test Date / Time: 1/21/2021 12:29:32 PM

Project: Grumman Road

Operator Name: Z Davis

Location Name: MW-24D Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 61 ft Total Depth: 66 ft Initial Depth to Water: 29.61 ft	Pump Type: Peri Tubing Type: Poly Pump Intake From TOC: 64.5 ft Estimated Total Volume Pumped: 8000 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.19 ft	Instrument Used: Aqua TROLL 400 Serial Number: 714293
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Test Notes:

Weather Conditions:

Cloudy, 50s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 0.2	+/- 10	+/- 100	+/- 2	
1/21/2021 12:29 PM	00:00	6.14 pH	22.03 °C	67.37 µS/cm	0.10 mg/L	12.70 NTU	54.0 mV	29.61 ft	200.00 ml/min
1/21/2021 12:34 PM	05:00	6.13 pH	21.58 °C	68.66 µS/cm	0.08 mg/L	7.72 NTU	49.8 mV	29.61 ft	200.00 ml/min
1/21/2021 12:39 PM	10:00	6.10 pH	22.09 °C	68.94 µS/cm	0.07 mg/L	6.93 NTU	47.9 mV	29.70 ft	200.00 ml/min
1/21/2021 12:44 PM	15:00	6.11 pH	22.27 °C	71.79 µS/cm	0.03 mg/L	17.30 NTU	46.8 mV	29.80 ft	200.00 ml/min
1/21/2021 12:49 PM	20:00	6.18 pH	22.21 °C	72.48 µS/cm	0.03 mg/L	22.30 NTU	45.1 mV	29.80 ft	200.00 ml/min
1/21/2021 12:54 PM	25:00	6.18 pH	21.95 °C	69.85 µS/cm	0.10 mg/L	25.60 NTU	45.6 mV	29.80 ft	200.00 ml/min
1/21/2021 12:59 PM	30:00	6.16 pH	21.93 °C	67.79 µS/cm	0.03 mg/L	13.90 NTU	45.9 mV	29.80 ft	200.00 ml/min
1/21/2021 1:04 PM	35:00	6.14 pH	22.15 °C	66.32 µS/cm	0.03 mg/L	7.80 NTU	46.3 mV	29.80 ft	200.00 ml/min
1/21/2021 1:09 PM	40:00	6.13 pH	22.09 °C	65.56 µS/cm	0.03 mg/L	4.16 NTU	47.1 mV	29.80 ft	200.00 ml/min

Samples

Sample ID:	Description:
------------	--------------

Atlantic Coast Consulting, Inc. Well Development Field Record

Job Name: Greenway Road Job No. 2054-110 Well No. MW-251
 Developed By: Z Davis Date of Installation: _____ Sheet 1 of 1
 Started Dev. 1240 1/19/21 Completed Dev. 1/20/21 1015
Date / Time Date / Time
 W.L. Before Dev. 20.47 1/19/21 1238 W.L. After Dev. 48.90 1/20/21 1019
BGS / Date / Time BGS / Date / Time
 Well Depth Before Dev.: 69.90 BGS B500 Well Depth After Dev.: 70.70 BGS
Tot BGS
 Water Column (H): 48.93 Ft. Well Dia.: 2 In. Well Volume: 7.83 Gal.
 Screen Length: 5 Ft.

Date / Time	Volume Removed (Gal.)	Field Parameters				Remarks
		Specific Cond. (umhos/cm)	Temperature (°C)	pH (S.U.)	Turbidity (NTU)	
1/19/21 1240	0					
	12					
	18					
	24					
1/19/21 1410	30	244.0	19.69	6.95	10.0	
<hr/>						
1/20/21 0955	36				30.5	
0910	42				27.6	
0930	48	242.0	15.49	7.20	10.5	
0950	54	91.40	14.27	6.57	6.77	
1015	60	90.72	14.78	6.56	4.91	

Well surged with surge blocker and purged with water pump.
 Water pump removed at last ft well volume
 Rate of flow = 3,000 ml/min

Notes: H = well depth (BTOC) - W.L. (BTOC)
 Well volume in pipe:
 2" diameter well: 0.16 X H = volume in gallons
 4" diameter well: 0.66 X H = volume in gallons

Low-Flow Test Report:

Test Date / Time: 1/20/2021 10:25:34 AM

Project: Grumman Road

Operator Name: Z Davis

Location Name: MW-25D Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 65.2 ft Total Depth: 70.2 ft Initial Depth to Water: 20.91 ft	Pump Type: Peri Tubing Type: Poly Pump Intake From TOC: 67.5 ft Estimated Total Volume Pumped: 3750 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 714293
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Test Notes:

Weather Conditions:

Sunny, 60s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 0.2	+/- 5	+/- 100	+/- 1	
1/20/2021 10:25 AM	00:00	6.34 pH	19.33 °C	75.51 µS/cm	0.09 mg/L		35.5 mV	37.90 ft	150.00 ml/min
1/20/2021 10:29 AM	04:25	6.30 pH	19.33 °C	77.11 µS/cm	0.07 mg/L	5.27 NTU	34.7 mV	37.90 ft	150.00 ml/min
1/20/2021 10:30 AM	04:35	6.30 pH	19.40 °C	77.12 µS/cm	0.07 mg/L	4.76 NTU	34.9 mV	37.90 ft	150.00 ml/min
1/20/2021 10:35 AM	09:35	6.26 pH	20.00 °C	76.34 µS/cm	0.06 mg/L	4.71 NTU	37.0 mV	37.90 ft	150.00 ml/min
1/20/2021 10:40 AM	14:35	6.26 pH	20.32 °C	75.80 µS/cm	0.05 mg/L	5.20 NTU	36.8 mV	37.90 ft	150.00 ml/min
1/20/2021 10:45 AM	19:35	6.26 pH	20.43 °C	75.75 µS/cm	0.05 mg/L	5.02 NTU	37.8 mV	37.90 ft	150.00 ml/min
1/20/2021 10:50 AM	24:35	6.25 pH	20.44 °C	75.80 µS/cm	0.05 mg/L	4.93 NTU	39.0 mV	37.90 ft	150.00 ml/min

Samples

Sample ID:	Description:
------------	--------------

Atlantic Coast Consulting, Inc. Well Development Field Record

Job Name: Grumann Drilling

Job No. 5054-110 Well No. MW-260

Developed By: Jordan Bristol

Date of Installation 1-9-21 / ~~1-8-21~~ Sheet 1 of 1

Started Dev. 1-19-21 / ~~1-14-20~~ 1208
Date / Time

Completed Dev. 1-19-21 / 1408
Date / Time

W.L. Before Dev. 14.90 / 1-19-21 / 1152
BTOC / Date / Time

After Dev. 27.21 / 1-19-21 / 1415
BTOC / Date / Time

Well Depth: Before Dev. 64.90 BTOC

After Dev. 64.90 BTOC Well Dia. 2 In.

Standing Water Column (H) 50 (Ft.)

Standing Well Volume 8 Gal.

Screen Length 5'

Drilling Water Loss _____ Gal.

Date / Time	Volume Removed (gals.)	Field Parameters				DO / ORP	Remarks
		Spec. Cond. (umhos/cm)	Temp. (°C)	pH (s.u.)	Turbidity (NTU)		
1-19-21 1335	167.3	45	21.32	5.33	2.47	0.1 / 85	well surged w/ pump
1340	174.5	45	21.3	5.32	2.21	0.1 / 81	
1345	181.6	45	21.3	5.32	2.13	0.1 / 77	
1350	188.7	45	21.3	5.34	1.97	0.1 / 73	
1355	195.9	45	21.3	5.35	2.22	0.1 / 70	
1400	203.1	45	21.3	5.32	2.05	0.1 / 69	
1405	210.2	45	21.3	5.33	1.82	0.1 / 66	
		Total Volume Removed (gal.)					<u>210</u>

Development Method: Surged well with some blower before pumping, surged well with pump partially while pumping
 pre development 1-19-21 @ 1208 450 ml/5 secs => 5.46/min => 1.43 gal/min

GWB-412 - DTW: 14.77 10c

Notes: H-well depth (BOTC) - W.L.(BTOC)
 Well volume standing in pipe:
 2" diameter well: 0.17 x H = vol. (gal)
 4" diameter well: 0.66 x H = vol. (gal)

Low-Flow Test Report:

Test Date / Time: 1/20/2021 9:05:17 AM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: MW-26D Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 64.9 ft Total Depth: 69.9 ft Initial Depth to Water: 19.91 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 67 ft Estimated Total Volume Pumped: 9 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 16.68 in	Instrument Used: Aqua TROLL 400 Serial Number: 714302
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Test Notes:

Sunny, 50s sample time 0950

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
1/20/2021 9:05 AM	00:00	7.92 pH	10.82 °C	2.61 µS/cm	11.30 mg/L		150.1 mV	19.91 ft	200.00 ml/min
1/20/2021 9:07 AM	02:07	8.00 pH	11.65 °C	68.08 µS/cm	8.98 mg/L	17.00 NTU	146.6 mV	20.40 ft	200.00 ml/min
1/20/2021 9:10 AM	04:48	6.04 pH	16.57 °C	55.22 µS/cm	0.80 mg/L	12.00 NTU	115.7 mV	20.80 ft	200.00 ml/min
1/20/2021 9:15 AM	09:48	5.74 pH	18.96 °C	52.24 µS/cm	0.42 mg/L	16.00 NTU	105.8 mV	21.00 ft	200.00 ml/min
1/20/2021 9:20 AM	14:48	5.73 pH	19.12 °C	51.79 µS/cm	0.52 mg/L	17.00 NTU	100.0 mV	21.20 ft	200.00 ml/min
1/20/2021 9:25 AM	19:48	5.68 pH	19.60 °C	50.79 µS/cm	0.31 mg/L	13.00 NTU	101.1 mV	21.30 ft	200.00 ml/min
1/20/2021 9:30 AM	24:48	5.72 pH	18.92 °C	51.01 µS/cm	1.80 mg/L	10.00 NTU	97.0 mV	21.30 ft	200.00 ml/min
1/20/2021 9:35 AM	29:48	5.69 pH	18.96 °C	49.55 µS/cm	0.34 mg/L	9.12 NTU	95.4 mV	21.30 ft	200.00 ml/min
1/20/2021 9:40 AM	34:48	5.69 pH	18.82 °C	49.05 µS/cm	0.28 mg/L	7.33 NTU	94.0 mV	21.30 ft	200.00 ml/min
1/20/2021 9:45 AM	39:48	5.68 pH	18.84 °C	48.94 µS/cm	0.28 mg/L	5.95 NTU	93.9 mV	21.30 ft	200.00 ml/min
1/20/2021 9:50 AM	44:48	5.66 pH	18.90 °C	48.77 µS/cm	0.25 mg/L	3.22 NTU	91.6 mV	21.30 ft	200.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 1/20/2021 1:45:21 PM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: MW-27D Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 67.43 ft Total Depth: 72.43 ft Initial Depth to Water: 25.72 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 70 ft Estimated Total Volume Pumped: 8.75 liter Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 8.16 in	Instrument Used: Aqua TROLL 400 Serial Number: 714302
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Test Notes:

Sunny, sample time-1420 60s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
1/20/2021 1:45 PM	00:00	5.67 pH	21.65 °C	42.23 µS/cm	0.03 mg/L		68.5 mV	25.72 ft	250.00 ml/min
1/20/2021 1:50 PM	05:00	5.67 pH	21.64 °C	42.35 µS/cm	0.03 mg/L	3.85 NTU	65.7 mV	26.00 ft	250.00 ml/min
1/20/2021 1:55 PM	10:00	5.68 pH	21.59 °C	42.39 µS/cm	0.02 mg/L	4.02 NTU	63.3 mV	26.10 ft	250.00 ml/min
1/20/2021 2:00 PM	15:00	5.67 pH	21.59 °C	42.42 µS/cm	0.02 mg/L	3.69 NTU	61.9 mV	26.30 ft	250.00 ml/min
1/20/2021 2:05 PM	20:00	5.68 pH	21.64 °C	42.51 µS/cm	0.02 mg/L	4.84 NTU	59.9 mV	26.30 ft	250.00 ml/min
1/20/2021 2:10 PM	25:00	5.67 pH	21.65 °C	42.42 µS/cm	0.02 mg/L	4.32 NTU	58.2 mV	26.30 ft	250.00 ml/min
1/20/2021 2:15 PM	30:00	5.67 pH	21.65 °C	42.56 µS/cm	0.03 mg/L	3.99 NTU	57.5 mV	26.40 ft	250.00 ml/min
1/20/2021 2:20 PM	35:00	5.68 pH	21.66 °C	42.61 µS/cm	0.03 mg/L	3.85 NTU	55.3 mV	26.40 ft	250.00 ml/min

Samples

Sample ID:	Description:
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APPENDIX D
ABANDONMENT LOGS



Well Abandonment Documentation Form

General Information

Project Name	Grumman Road Well Abandonment	Inspector	Jordan Berisford	Well Id.	GWC-3
Project Number	I054-110	Weather	Sunny	Sheet	1 of 1
Drilling Company	Cascade	Temperature	70s° F	Started	12/14/2020
Client Name	GA Power	Driller	Tommy Ardito	Completed	12/14/2020

Well Construction Information

Well Depth (ft)	22.93'	Screen Type	PVC Sch. 40	Grout Type	Portland
Well Casing Dia.	2" L.F. 17.93'	Slot Size (in.)	0.010"	End Cap/Sump	0.30'
Casing Type	PVC	Pack Type & Size	Sand-1A (20/30)	Protective	
Joint Type	Flush Treaded	Seal Type	Bentonite	Casing	4"x4"
Well Screen Dia.	2" L.F. 5'			Well Pad Size	2.75'x3'x4"

Abandonment Procedures and Volumes

Expected Bentonite Volume	0.44 cu ft.	Actual Bentonite Volume:	0.44 cu ft.
	Note: DTW- 20.36' btoc		DTB: 22.93' btoc

Filled casing to ground surface with bentonite pellets and hydrated with potable water.

Verified placement of bentonite with a weighted tag line to ensure bridging did not occur.

Removed surface completion and graded to ground surface.

Notes:

No obstructions noted.



Well Abandonment Documentation Form

General Information

Project Name	Grumman Road Well Abandonment	Inspector	Jordan Berisford	Well Id.	GWC-4
Project Number	I054-110	Weather	Sunny	Sheet	1 of 1
Drilling Company	Cascade	Temperature	70s° F	Started	12/14/2020
Client Name	GA Power	Driller	Tommy Ardito	Completed	12/14/2020

Well Construction Information

Well Depth (ft)	26.83'	Screen Type	PVC Sch. 40	Grout Type	Portland
Well Casing Dia.	2" L.F. 21.83'	Slot Size (in.)	0.010"	End Cap/Sump	0.30'
Casing Type	PVC	Pack Type & Size	Sand-1A (20/30)	Protective	
Joint Type	Flush Treaded	Seal Type	Bentonite	Casing	4"x4"
Well Screen Dia.	2" L.F. 5'			Well Pad Size	2.83'x3'x4"

Abandonment Procedures and Volumes

Expected Bentonite Volume	0.53 cu ft.	Actual Bentonite Volume:	0.53 cu ft.
	Note: DTW- 14.52' btoc		DTB: 26.83' btoc

Filled casing to ground surface with bentonite pellets and hydrated with potable water.

Verified placement of bentonite with a weighted tag line to ensure bridging did not occur.

Removed surface completion and graded to ground surface.

Notes:

No obstructions noted.



Well Abandonment Documentation Form

General Information

Project Name	Grumman Road Well Abandonment	Inspector	Jordan Berisford	Well Id.	GWC-5
Project Number	I054-110	Weather	Sunny	Sheet	1 of 1
Drilling Company	Cascade	Temperature	70s° F	Started	12/14/2020
Client Name	GA Power	Driller	Tommy Ardito	Completed	12/14/2020

Well Construction Information

Well Depth (ft)	26.91'	Screen Type	PVC Sch. 40	Grout Type	Portland
Well Casing Dia.	2" L.F. 21.91'	Slot Size (in.)	0.010"	End Cap/Sump	0.30'
Casing Type	PVC	Pack Type & Size	Sand-1A (20/30)	Protective	
Joint Type	Flush Treaded	Seal Type	Bentonite	Casing	4"x4"
Well Screen Dia.	2" L.F. 5'			Well Pad Size	3'x3'x4"

Abandonment Procedures and Volumes

Expected Bentonite Volume	0.52 cu ft.	Actual Bentonite Volume:	0.52 cu ft.
	Note: DTW- 10.22' btoc		DTB: 26.91' btoc

Filled casing to ground surface with bentonite pellets and hydrated with potable water.
 Verified placement of bentonite with a weighted tag line to ensure bridging did not occur.
 Removed surface completion and graded to ground surface.

Notes:

No obstructions noted.



Well Abandonment Documentation Form

General Information

Project Name	Grumman Road Well Abandonment	Inspector	Jordan Berisford	Well Id.	GWC-6
Project Number	I054-110	Weather	Sunny	Sheet	1 of 1
Drilling Company	Cascade	Temperature	70s° F	Started	12/14/2020
Client Name	GA Power	Driller	Tommy Ardito	Completed	12/14/2020

Well Construction Information

Well Depth (ft)	22.50'	Screen Type	PVC Sch. 40	Grout Type	Portland
Well Casing Dia.	2" L.F. 17.5'	Slot Size (in.)	0.010"	End Cap/Sump	0.30'
Casing Type	PVC	Pack Type & Size	Sand-1A (20/30)	Protective	
Joint Type	Flush Treaded	Seal Type	Bentonite	Casing	4"x4"
Well Screen Dia.	2" L.F. 5'			Well Pad Size	2.5'x3'x4"

Abandonment Procedures and Volumes

Expected Bentonite Volume	0.42 cu ft.	Actual Bentonite Volume:	0.42 cu ft.
	Note: DTW- 7.80' btoc		DTB: 22.50' btoc

Filled casing to ground surface with bentonite pellets and hydrated with potable water.

Verified placement of bentonite with a weighted tag line to ensure bridging did not occur.

Removed surface completion and graded to ground surface.

Notes:

No obstructions noted.

APPENDIX E

SOIL TESTING LABORATORY REPORTS



**TIMELY
ENGINEERING
SOIL
TESTS, LLC**

1874 Forge Street Tucker, GA 30084

Phone: 770-938-8233

Fax: 770-923-8973

Web: www.test-llc.com



**AASHTO
ACCREDITED**

Tested By

TH

Date

01/17/21

Checked By

LB

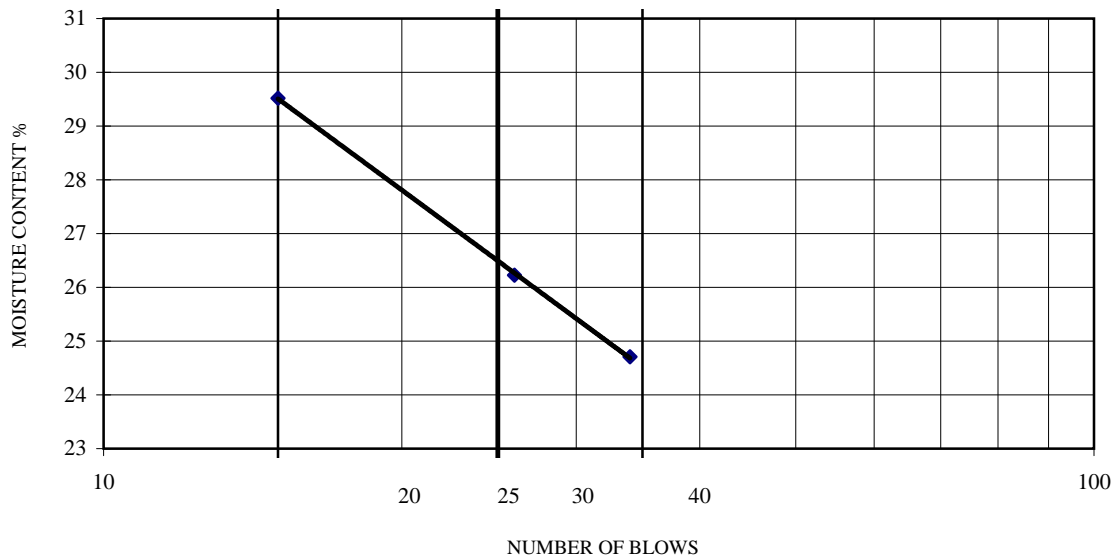
Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37019MW25D	Depth/Elev.	49-50'
Location	MW-25D	Add. Info	-

ASTM D 4318/AASHTO T 88, T 89

Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (Atterberg Limits)

LIQUID LIMIT			
Number of Blows	34	26	15
Mass of Wet Sample & Tare, g	37.38	36.37	40.72
Mass of Dry Sample & Tare, g	34.84	34.18	37.16
Mass of Tare, g	24.56	25.83	25.10
Moisture Content, %	24.71	26.23	29.52

Oven ID #	15/496/610
Balance ID #	139/563
Liquid Limit Device ID #	451/569



PLASTIC LIMIT	
Mass of Wet Sample & Tare, g	40.79
Mass of Dry Sample & Tare, g	38.40
Mass of Tare, g	24.85
Moisture Content, %	17.64

NOTE: MATERIAL PASSING NO. 40 SIEVE WAS USED FOR TEST

NATURAL MOISTURE	
Mass of Wet Sample & Tare, g	398.30
Mass of Dry Sample & Tare, g	315.20
Mass of Tare, g	98.50
Moisture Content, %	38.35

LIQUID LIMIT (LL)	27
PLASTIC LIMIT (PL)	18
PLASTICITY INDEX (PI)	9
LIQUIDITY INDEX (LI)	2.26

DESCRIPTION: Gray Clayey Sand

USCS (ASTM D2487; D2488)

SC

AASHTO (M 145)

NA



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Tested By

IH

Date

01/13/21

Checked By

IB

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37019MW25D	Depth/Elev.	49-50'
Location	MW-25D	Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

<i>As-Received Moisture Content</i>		<i>Moisture Content of Material Used for Hydrometer Analysis</i>	
Mass of Wet Sample & Tare, g	398.30	Mass of Wet Sample & Tare, g	420.50
Mass of Dry Sample & Tare, g	315.20	Mass of Dry Sample & Tare, g	419.60
Mass of Tare, g	98.50	Mass of Tare, g	137.40
Moisture Content, %	38.3	Moisture Content, %	0.3
Mass of Total Sample before separation on #4 sieve & Tare, g	2719.40	Mass of Sample used for hydrometer analysis, g	62.10
Mass of Tare, g	0.00	Dry Mass, g	61.90
Total Mass of Dry Sample, g	2710.75	% of Total Sample passing #4 sieve	100.0

SIEVE ANALYSIS

<i>PORTION OF SAMPLE RETAINED ON #4 SIEVE</i>				<i>PORTION OF SAMPLE PASSING #4 SIEVE (Hydrometer Backsieve)</i>				
Mass of Tare, g	0.00							
Sieve Size	Sample & Tare, g	% RETAINED	%PASSING	Sieve Size	Cumulative Mass retained, g	% PASSING		
12"	COBBLES		0.0	100.0	#10	MEDIUM	2.04	96.7
3"			0.0	100.0	#20	SAND	3.23	94.8
2.5"	COARSE GRAVEL		0.0	100.0	#40		4.12	93.3
2"			0.0	100.0	#60	FINE SAND	4.64	92.5
1.5"			0.0	100.0	#100		13.41	78.3
1"			0.0	100.0	#200	FINES	44.98	27.3
.75"			0.0	100.0	Remarks			
.5"	FINE GRAVEL		0.0	100.0				
.375"			0.0	100.0				
#4	COARSE SAND	0.00	0.0	100.0				

HYDROMETER ANALYSIS

Length of Dispersion Period	1 Minute
Mechanical Dispersion Device ID #	61
Amount of Dispersing Agent (ml)	125.0
Specific Gravity (assumed)	2.700
Specific Gravity (tested)	
Starting time	13:45

PARTICLE-SIZE ANALYSIS

% COBBLES	0.0	% MEDIUM SAND	3.4
% COARSE GRAVEL	0.0	% FINE SAND	66.0
% FINE GRAVEL	0.0	% FINES	27.3
% COARSE SAND	3.3	% TOTAL SAMPLE	100.0
% CLAY(<0.005mm)	13.6	% CLAY(<0.002mm)	11.7

Date	Time	Testing time (min)	Reading	Temp (°C)	K	Composite Correction	Actual Reading	Effective Depth (cm)	a	Particle Diam. (mm)	Percent Passing
01/15/21	13:47	2	21.0	18.5	0.01361	8.0	13.0	14.2	0.99	0.0363	20.8
01/15/21	13:50	5	20.0	18.5	0.01361	8.0	12.0	14.4	0.99	0.0231	19.2
01/15/21	14:00	15	19.0	18.5	0.01361	8.0	11.0	14.6	0.99	0.0134	17.6
01/15/21	14:15	30	18.0	18.5	0.01361	8.0	10.0	14.7	0.99	0.0095	16.0
01/15/21	14:45	60	17.0	18.5	0.01361	8.0	9.0	14.9	0.99	0.0068	14.4
01/15/21	17:55	250	16.0	18.5	0.01361	8.0	8.0	15.1	0.99	0.0033	12.8
01/16/21	13:45	1440	15.0	18.5	0.01361	8.0	7.0	15.2	0.99	0.0014	11.2

Hydrometer 152H ID #	305527
Sieve Shaker ID #	555

Oven ID #	15/496/610
Balance ID#	139/142/700



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Web: www.test-llc.com



Tested By: IH
Date: 01/13/21
Checked By: *IB*

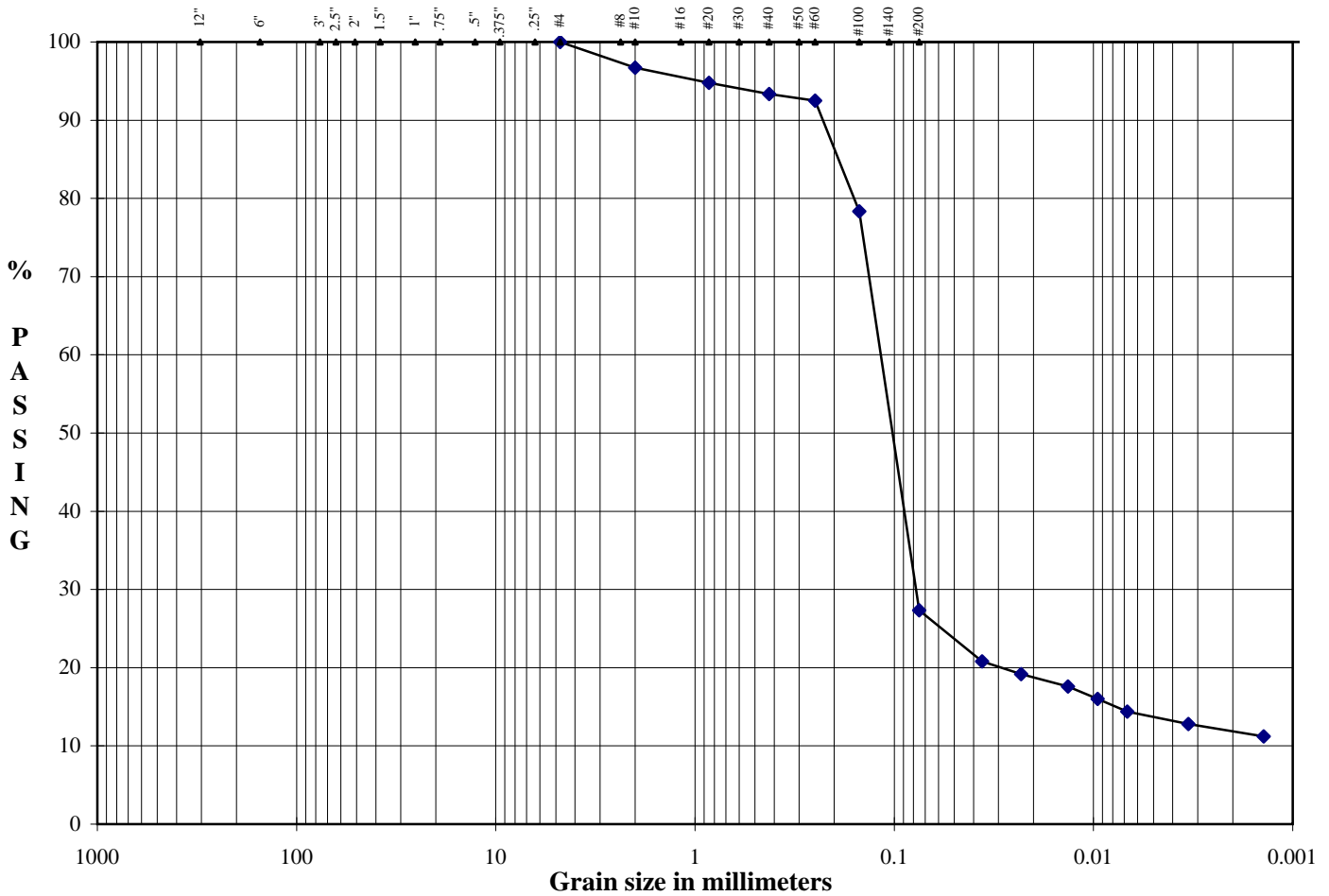
Client Pr. #	-
Pr. Name	Grumman Road Landfill
Sample ID	37019MW25D
Location	MW-25D

Lab. PR. #	2108-04-1
S. Type	Bag
Depth/Elev.	49-50'
Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

Particle-Size Analysis



Boulders	Cobbles	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
		Gravel		Sand			

DESCRIPTION: Gray Clayey Sand

D ₁₀	NA	mm
D ₃₀	NA	mm
D ₆₀	NA	mm
Cu	NA	
Cc	NA	

USCS (ASTM D2487; D2488) SC

Project's Specific % Passing	NA
Project's Specific Particle Size, mm	NA



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TH

Date

01/17/21

Checked By

LB

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37020MW25D	Depth/Elev.	63-64'
Location	MW-25D	Add. Info	-

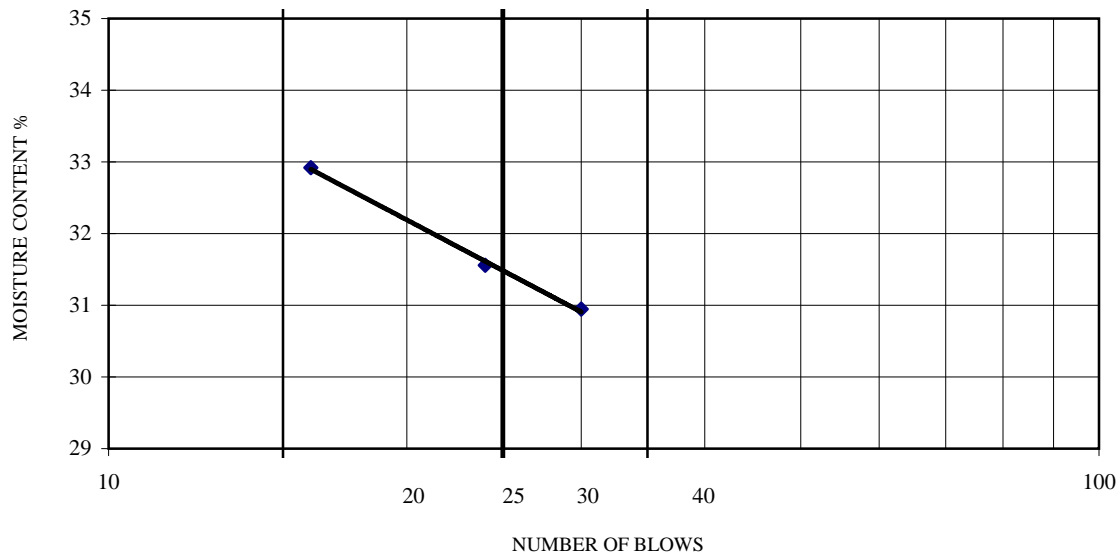
ASTM D 4318/AASHTO T 88, T 89

Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (Atterberg Limits)

LIQUID LIMIT

Number of Blows	30	24	16
Mass of Wet Sample & Tare, g	38.07	39.85	40.17
Mass of Dry Sample & Tare, g	35.22	36.00	36.20
Mass of Tare, g	26.01	23.80	24.14
Moisture Content, %	30.94	31.56	32.92

Oven ID #	15/496/610
Balance ID #	139/563
Liquid Limit Device ID #	451/569



PLASTIC LIMIT

Mass of Wet Sample & Tare, g	41.66	41.68
Mass of Dry Sample & Tare, g	38.18	38.19
Mass of Tare, g	24.81	25.25
Moisture Content, %	26.03	26.97

NOTE: MATERIAL PASSING NO. 40 SIEVE
WAS USED FOR TEST

NATURAL MOISTURE

Mass of Wet Sample & Tare, g	479.80
Mass of Dry Sample & Tare, g	390.00
Mass of Tare, g	101.00
Moisture Content, %	31.07

LIQUID LIMIT (LL)	31
PLASTIC LIMIT (PL)	26
PLASTICITY INDEX (PI)	5
LIQUIDITY INDEX (LI)	1.01

DESCRIPTION Gray Silty Sand

USCS (ASTM D2487; D2488)

SM

AASHTO (M 145)

NA



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Tested By	IH
Date	01/13/21
Checked By	<i>IB</i>

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37020MW25D	Depth/Elev.	63-64'
Location	MW-25D	Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

<i>As-Received Moisture Content</i>		<i>Moisture Content of Material Used for Hydrometer Analysis</i>	
Mass of Wet Sample & Tare, g	479.80	Mass of Wet Sample & Tare, g	384.60
Mass of Dry Sample & Tare, g	390.00	Mass of Dry Sample & Tare, g	347.00
Mass of Tare, g	101.00	Mass of Tare, g	139.00
Moisture Content, %	31.1	Moisture Content, %	18.1

Mass of Total Sample before separation on #4 sieve & Tare, g	3133.40	Mass of Sample used for hydrometer analysis, g	70.00
Mass of Tare, g	0.00	Dry Mass, g	59.28
Total Mass of Dry Sample, g	2653.69	% of Total Sample passing #4 sieve	100.0

SIEVE ANALYSIS

PORTION OF SAMPLE RETAINED ON #4 SIEVE

Mass of Tare, g	0.00		
Sieve Size	Sample & Tare, g	% RETAINED	%PASSING
12"	COBBLES	0.0	100.0
3"		0.0	100.0
2.5"	COARSE GRAVEL	0.0	100.0
2"		0.0	100.0
1.5"		0.0	100.0
1"		0.0	100.0
.75"		0.0	100.0
.5"	FINE GRAVEL	0.0	100.0
.375"		0.0	100.0
#4	COARSE SAND	0.00	100.0

PORTION OF SAMPLE PASSING #4 SIEVE (Hydrometer Backsieve)

Sieve Size	Cumulative Mass retained, g	% PASSING	
#10	MEDIUM SAND	0.40	99.3
#20	SAND	1.80	97.0
#40		2.74	95.4
#60	FINE SAND	3.07	94.8
#100		4.98	91.6
#200	FINES	47.27	20.3

Remarks

HYDROMETER ANALYSIS

Length of Dispersion Period	1 Minute
Mechanical Dispersion Device ID #	61
Amount of Dispersing Agent (ml)	125.0
Specific Gravity (assumed)	2.700
Specific Gravity (tested)	
Starting time	13:47

PARTICLE-SIZE ANALYSIS

% COBBLES	0.0	% MEDIUM SAND	3.9
% COARSE GRAVEL	0.0	% FINE SAND	75.1
% FINE GRAVEL	0.0	% FINES	20.3
% COARSE SAND	0.7	% TOTAL SAMPLE	100.0
% CLAY(<0.005mm)	7.4	% CLAY(<0.002mm)	5.5

Date	Time	Testing time (min)	Reading	Temp (°C)	K	Composite Correction	Actual Reading	Effective Depth (cm)	a	Particle Diam. (mm)	Percent Passing
01/15/21	13:49	2	18.0	18.5	0.01361	8.0	10.0	14.7	0.99	0.0369	16.7
01/15/21	13:52	5	17.0	18.5	0.01361	8.0	9.0	14.9	0.99	0.0235	15.0
01/15/21	14:02	15	16.0	18.5	0.01361	8.0	8.0	15.1	0.99	0.0136	13.4
01/15/21	14:17	30	15.0	18.5	0.01361	8.0	7.0	15.2	0.99	0.0097	11.7
01/15/21	14:47	60	13.0	18.5	0.01361	8.0	5.0	15.6	0.99	0.0069	8.3
01/15/21	17:57	250	12.0	18.5	0.01361	8.0	4.0	15.7	0.99	0.0034	6.7
01/16/21	13:47	1440	11.0	18.5	0.01361	8.0	3.0	15.9	0.99	0.0014	5.0

Hydrometer 152H ID # **305527**
Sieve Shaker ID # **555**

Oven ID # **15/496/610**
Balance ID# **139/142/700**



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Tested By	IH
Date	01/13/21
Checked By	<i>IB</i>

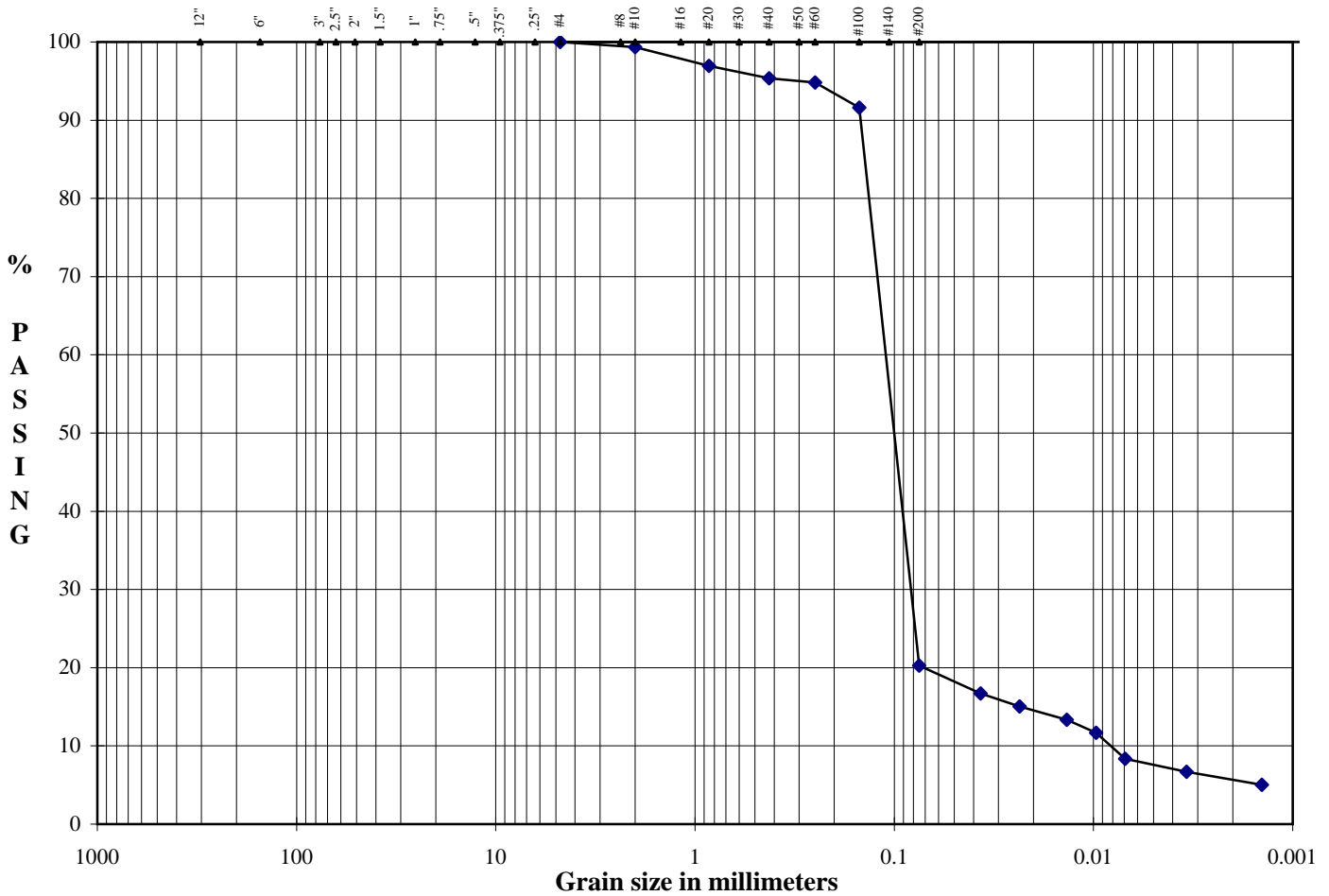
Client Pr. #	-
Pr. Name	Grumman Road Landfill
Sample ID	37020MW25D
Location	MW-25D

Lab. PR. #	2108-04-1
S. Type	Bag
Depth/Elev.	63-64'
Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

Particle-Size Analysis



Boulders	Cobbles	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
		Gravel		Sand			

DESCRIPTION: Gray Silty Sand

D ₁₀	NA	mm
D ₃₀	NA	mm
D ₆₀	NA	mm
Cu	NA	
Cc	NA	

USCS (ASTM D2487; D2488) SM

Project's Specific % Passing	NA
Project's Specific Particle Size, mm	NA



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Tested By

TH

Date

01/17/21

Checked By

LB

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37021MW27D	Depth/Elev.	20-21'
Location	MW-27D	Add. Info	-

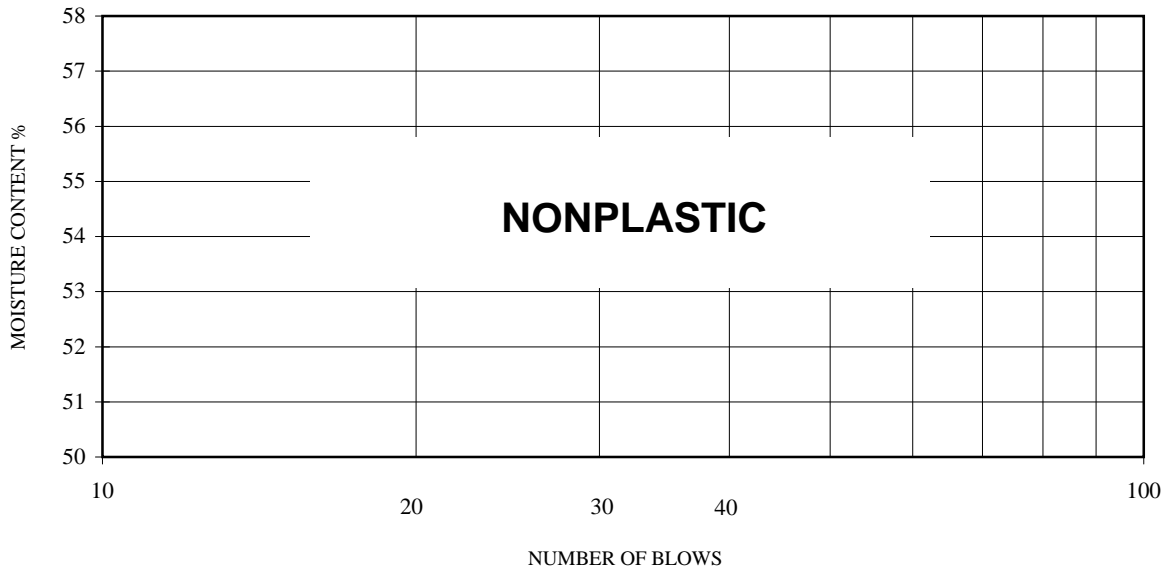
**ASTM D 4318
Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (Atterberg Limits)**

	LIQUID LIMIT	
Number of Blows	9	9
Weight of Wet Sample & Tare, g	37.19	38.46
Weight of Dry Soil & Tare, g	34.12	35.97
Weight of Tare, g	20.40	24.88
Moisture Content, %	22.38	22.45

Liquid Limit Device ID #

56

NOTES: 1. Material appears to be Nonplastic. (Liquid Limit or Plastic Limit test could not be performed.)
2. Material passing No. 40 sieve was used for test.



	PLASTIC LIMIT	
Weight of Wet Soil & Tare, g	39.49	40.54
Weight of Dry Soil & Tare, g	36.77	37.57
Weight of Tare, g	24.88	24.41
Moisture Content, %	22.88	22.57

Oven ID Number

15/496/610

Balance ID Number

139/563

	NATURAL MOISTURE
Weight of Wet Soil & Tare, g	397.20
Weight of Dry Soil & Tare, g	337.80
Weight of Tare, g	101.60
Moisture Content, %	25.15

LIQUID LIMIT (LL)

NP

PLASTIC LIMIT (PL)

NP

PLASTICITY INDEX (PI)

NP

LIQUIDITY INDEX (LI)

-

DESCRIPTION Brown Silty Sand

USCS (ASTM D2487;2488)

SM

AASHTO (M 145)

NA



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Tested By **IH**

Date **01/17/21**

Checked By **IB**

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37021MW27D	Depth/Elev.	20-21'
Location	MW-27D	Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

<i>As-Received Moisture Content</i>		<i>Moisture Content of Material Used for Hydrometer Analysis</i>	
Mass of Wet Sample & Tare, g	397.20	Mass of Wet Sample & Tare, g	427.10
Mass of Dry Sample & Tare, g	337.80	Mass of Dry Sample & Tare, g	401.80
Mass of Tare, g	101.60	Mass of Tare, g	139.40
Moisture Content, %	25.1	Moisture Content, %	9.6

Mass of Total Sample before separation on #4 sieve & Tare, g	3485.70	Mass of Sample used for hydrometer analysis, g	70.00
Mass of Tare, g	0.00	Dry Mass, g	63.84
Total Mass of Dry Sample, g	3179.17	% of Total Sample passing #4 sieve	100.0

SIEVE ANALYSIS

PORTION OF SAMPLE RETAINED ON #4 SIEVE

Mass of Tare, g	0.00		
Sieve Size	Sample & Tare, g	% RETAINED	%PASSING
12"	COBBLES	0.0	100.0
3"		0.0	100.0
2.5"	COARSE GRAVEL	0.0	100.0
2"		0.0	100.0
1.5"		0.0	100.0
1"		0.0	100.0
.75"		0.0	100.0
.5"	FINE GRAVEL	0.0	100.0
.375"		0.0	100.0
#4	COARSE SAND	0.00	100.0

PORTION OF SAMPLE PASSING #4 SIEVE (Hydrometer Backsieve)

Sieve Size	Cumulative Mass retained, g	% PASSING	
#10	MEDIUM SAND	0.69	98.9
#20	SAND	1.60	97.5
#40		2.74	95.7
#60	FINE SAND	3.84	94.0
#100		6.18	90.3
#200	FINES	45.61	28.6

Remarks

HYDROMETER ANALYSIS

Length of Dispersion Period	1 Minute
Mechanical Dispersion Device ID #	61
Amount of Dispersing Agent (ml)	125.0
Specific Gravity (assumed)	2.700
Specific Gravity (tested)	
Starting time	13:49

PARTICLE-SIZE ANALYSIS

% COBBLES	0.0	% MEDIUM SAND	3.2
% COARSE GRAVEL	0.0	% FINE SAND	67.1
% FINE GRAVEL	0.0	% FINES	28.6
% COARSE SAND	1.1	% TOTAL SAMPLE	100.0
% CLAY(<0.005mm)	3.8	% CLAY(<0.002mm)	2.0

Date	Time	Testing time (min)	Reading	Temp (°C)	K	Composite Correction	Actual Reading	Effective Depth (cm)	a	Particle Diam. (mm)	Percent Passing
01/15/21	13:51	2	17.0	18.5	0.01361	8.0	9.0	14.9	0.99	0.0371	14.0
01/15/21	13:54	5	15.0	18.5	0.01361	8.0	7.0	15.2	0.99	0.0237	10.9
01/15/21	14:04	15	13.0	18.5	0.01361	8.0	5.0	15.6	0.99	0.0139	7.8
01/15/21	14:19	30	12.0	18.5	0.01361	8.0	4.0	15.7	0.99	0.0099	6.2
01/15/21	14:49	60	11.0	18.5	0.01361	8.0	3.0	15.9	0.99	0.0070	4.7
01/15/21	17:59	250	10.0	18.5	0.01361	8.0	2.0	16.0	0.99	0.0034	3.1
01/16/21	13:49	1440	9.0	18.5	0.01361	8.0	1.0	16.2	0.99	0.0014	1.6

Hydrometer 152H ID # **305527**
Sieve Shaker ID # **555**

Oven ID # **15/496/610**
Balance ID# **139/142/700**



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Tested By **IH**
Date **01/17/21**
Checked By **IB**

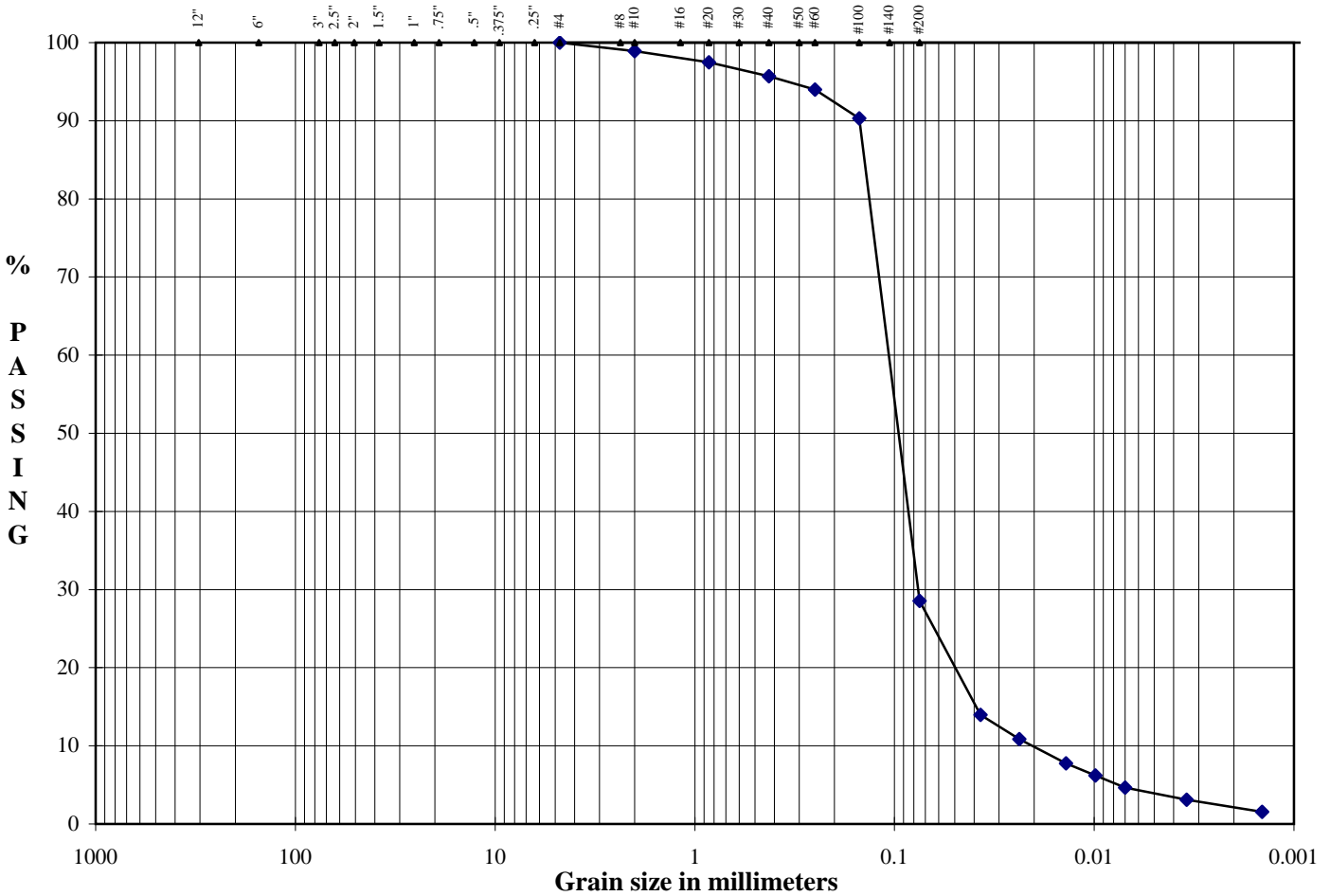
Client Pr. #	-
Pr. Name	Grumman Road Landfill
Sample ID	37021MW27D
Location	MW-27D

Lab. PR. #	2108-04-1
S. Type	Bag
Depth/Elev.	20-21'
Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

Particle-Size Analysis



Boulders	Cobbles	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
		Gravel		Sand			Fines

DESCRIPTION Brown Silty Sand

D ₁₀	NA	mm
D ₃₀	NA	mm
D ₆₀	NA	mm
Cu	NA	
Cc	NA	

USCS (ASTM D2487; D2488) SM

Project's Specific % Passing	NA
Project's Specific Particle Size, mm	NA



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Date

01/17/21

Checked By

TH

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37022MW27D	Depth/Elev.	55-56'
Location	MW-27D	Add. Info	-

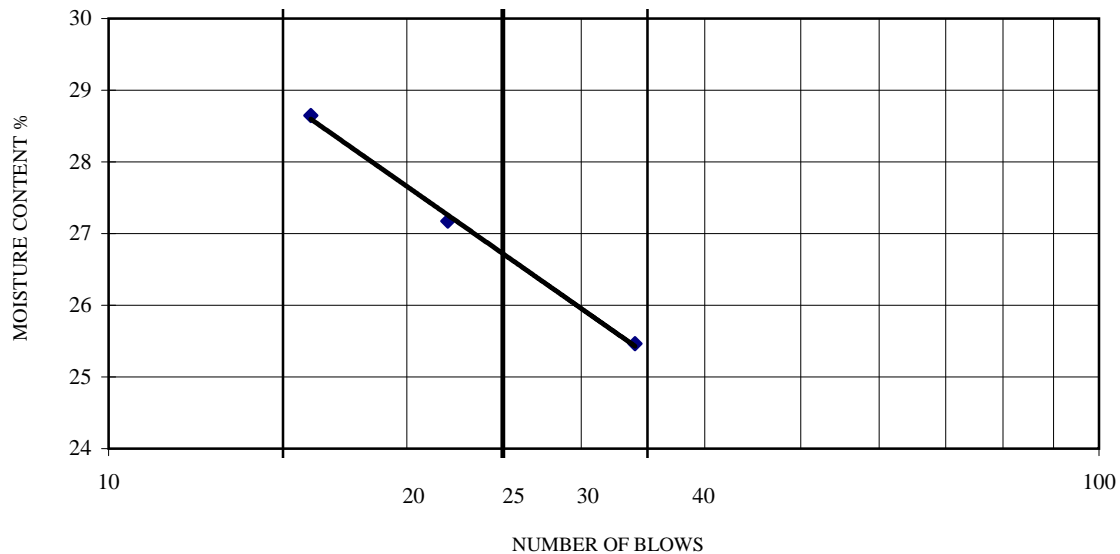
ASTM D 4318/AASHTO T 88, T 89

Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (Atterberg Limits)

LIQUID LIMIT

Number of Blows	34	22	16
Mass of Wet Sample & Tare, g	38.74	40.50	36.20
Mass of Dry Sample & Tare, g	35.60	37.03	33.53
Mass of Tare, g	23.27	24.26	24.21
Moisture Content, %	25.47	27.17	28.65

Oven ID #	15/496/610
Balance ID #	139/563
Liquid Limit Device ID #	451/569



PLASTIC LIMIT

Mass of Wet Sample & Tare, g	39.87	38.39
Mass of Dry Sample & Tare, g	36.56	36.04
Mass of Tare, g	21.21	25.18
Moisture Content, %	21.56	21.64

NOTE: MATERIAL PASSING NO. 40 SIEVE WAS USED FOR TEST

NATURAL MOISTURE

Mass of Wet Sample & Tare, g	469.00
Mass of Dry Sample & Tare, g	355.40
Mass of Tare, g	90.70
Moisture Content, %	42.92

LIQUID LIMIT (LL)	27
PLASTIC LIMIT (PL)	22
PLASTICITY INDEX (PI)	5
LIQUIDITY INDEX (LI)	4.18

DESCRIPTION Gray Silty Sand

USCS (ASTM D2487; D2488)

SM

AASHTO (M 145)

NA



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Tested By	IH
Date	01/13/21
Checked By	<i>IB</i>

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37022MW27D	Depth/Elev.	55-56'
Location	MW-27D	Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

<i>As-Received Moisture Content</i>		<i>Moisture Content of Material Used for Hydrometer Analysis</i>	
Mass of Wet Sample & Tare, g	469.00	Mass of Wet Sample & Tare, g	400.70
Mass of Dry Sample & Tare, g	355.70	Mass of Dry Sample & Tare, g	400.00
Mass of Tare, g	90.70	Mass of Tare, g	136.90
Moisture Content, %	42.8	Moisture Content, %	0.3

Mass of Total Sample before separation on #4 sieve & Tare, g	2050.80	Mass of Sample used for hydrometer analysis, g	61.00
Mass of Tare, g	0.00	Dry Mass, g	60.84
Total Mass of Dry Sample, g	2045.36	% of Total Sample passing #4 sieve	100.0

SIEVE ANALYSIS

PORTION OF SAMPLE RETAINED ON #4 SIEVE

Mass of Tare, g	0.00		
Sieve Size	Sample & Tare, g	% RETAINED	%PASSING
12"	COBBLES	0.0	100.0
3"		0.0	100.0
2.5"	COARSE GRAVEL	0.0	100.0
2"		0.0	100.0
1.5"		0.0	100.0
1"		0.0	100.0
.75"		0.0	100.0
.5"	FINE GRAVEL	0.0	100.0
.375"		0.0	100.0
#4	COARSE SAND	0.00	100.0

PORTION OF SAMPLE PASSING #4 SIEVE (Hydrometer Backsieve)

Sieve Size	Cumulative Mass retained, g	% PASSING	
#10	MEDIUM SAND	1.23	98.0
#20	SAND	1.99	96.7
#40		2.38	96.1
#60	FINE SAND	2.60	95.7
#100		10.41	82.9
#200	FINES	44.59	26.7

Remarks

HYDROMETER ANALYSIS

Length of Dispersion Period	1 Minute
Mechanical Dispersion Device ID #	61
Amount of Dispersing Agent (ml)	125.0
Specific Gravity (assumed)	2.700
Specific Gravity (tested)	
Starting time	13:51

PARTICLE-SIZE ANALYSIS

% COBBLES	0.0	% MEDIUM SAND	1.9
% COARSE GRAVEL	0.0	% FINE SAND	69.4
% FINE GRAVEL	0.0	% FINES	26.7
% COARSE SAND	2.0	% TOTAL SAMPLE	100.0
% CLAY(<0.005mm)	13.0	% CLAY(<0.002mm)	10.3

Date	Time	Testing time (min)	Reading	Temp (°C)	K	Composite Correction	Actual Reading	Effective Depth (cm)	a	Particle Diam. (mm)	Percent Passing
01/15/21	13:53	2	21.0	18.5	0.01361	8.0	13.0	14.2	0.99	0.0363	21.2
01/15/21	13:56	5	20.5	18.5	0.01361	8.0	12.5	14.3	0.99	0.0230	20.3
01/15/21	14:06	15	19.5	18.5	0.01361	8.0	11.5	14.5	0.99	0.0134	18.7
01/15/21	14:21	30	18.5	18.5	0.01361	8.0	10.5	14.6	0.99	0.0095	17.1
01/15/21	14:51	60	17.0	18.5	0.01361	8.0	9.0	14.9	0.99	0.0068	14.6
01/15/21	18:01	250	15.0	18.5	0.01361	8.0	7.0	15.2	0.99	0.0034	11.4
01/16/21	13:51	1440	14.0	18.5	0.01361	8.0	6.0	15.4	0.99	0.0014	9.8

Hydrometer 152H ID # 305527
Sieve Shaker ID # 555

Oven ID # 15/496/610
Balance ID# 139/142/700



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Tested By: IH
Date: 01/13/21
Checked By: *IB*

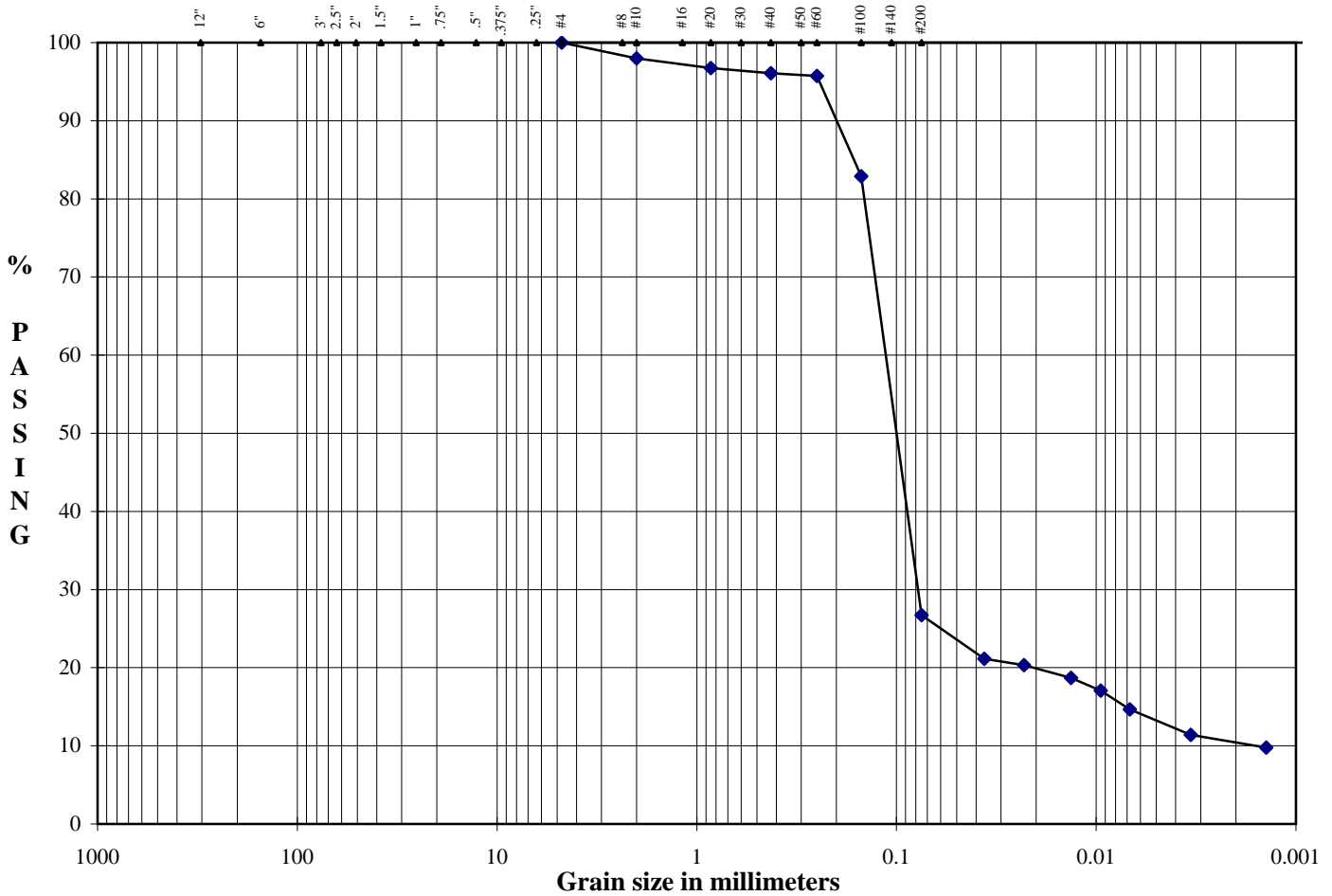
Client Pr. #	-
Pr. Name	Grumman Road Landfill
Sample ID	37022MW27D
Location	MW-27D

Lab. PR. #	2108-04-1
S. Type	Bag
Depth/Elev.	55-56'
Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

Particle-Size Analysis



Boulders	Cobbles	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
		Gravel		Sand			

DESCRIPTION: Gray Silty Sand

D ₁₀	NA	mm
D ₃₀	NA	mm
D ₆₀	NA	mm
Cu	NA	
Cc	NA	

USCS (ASTM D2487; D2488) SM

Project's Specific % Passing	NA
Project's Specific Particle Size, mm	NA



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Date

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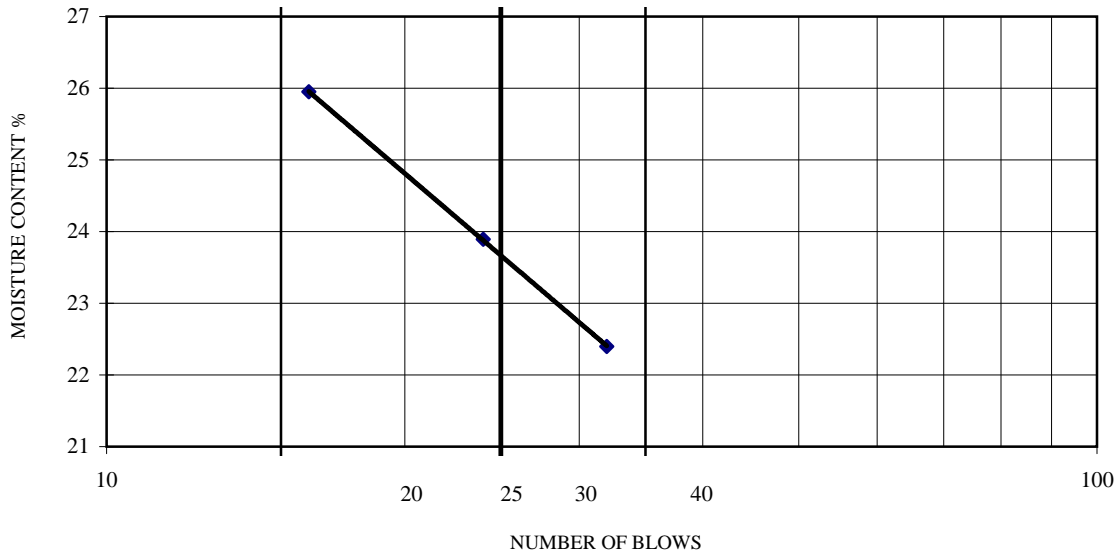
Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37023MW27D	Depth/Elev.	66-67'
Location	MW-27D	Add. Info	-

ASTM D 4318/AASHTO T 88, T 89

Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (Atterberg Limits)

	LIQUID LIMIT		
Number of Blows	32	24	16
Mass of Wet Sample & Tare, g	37.28	38.48	39.55
Mass of Dry Sample & Tare, g	35.00	35.68	37.09
Mass of Tare, g	24.82	23.96	27.61
Moisture Content, %	22.40	23.89	25.95

Oven ID #	15/496/610
Balance ID #	139/563
Liquid Limit Device ID #	451/569



	PLASTIC LIMIT	
Mass of Wet Sample & Tare, g	40.10	39.51
Mass of Dry Sample & Tare, g	38.50	37.83
Mass of Tare, g	26.71	25.30
Moisture Content, %	13.57	13.41

NOTE: MATERIAL PASSING NO. 40 SIEVE WAS USED FOR TEST

	NATURAL MOISTURE	
Mass of Wet Sample & Tare, g	387.30	
Mass of Dry Sample & Tare, g	314.20	
Mass of Tare, g	90.80	
Moisture Content, %	32.72	

LIQUID LIMIT (LL)	24
PLASTIC LIMIT (PL)	13
PLASTICITY INDEX (PI)	11
LIQUIDITY INDEX (LI)	1.79

DESCRIPTION: Gray Clayey Sand

USCS (ASTM D2487; D2488)

SC

AASHTO (M 145)

NA



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Tested By	IH
Date	01/13/21
Checked By	<i>IB</i>

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37023MW27D	Depth/Elev.	66-67'
Location	MW-27D	Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

<i>As-Received Moisture Content</i>		<i>Moisture Content of Material Used for Hydrometer Analysis</i>	
Mass of Wet Sample & Tare, g	387.30	Mass of Wet Sample & Tare, g	375.60
Mass of Dry Sample & Tare, g	314.20	Mass of Dry Sample & Tare, g	338.00
Mass of Tare, g	90.80	Mass of Tare, g	139.30
Moisture Content, %	32.7	Moisture Content, %	18.9

Mass of Total Sample before separation on #4 sieve & Tare, g	3299.50	Mass of Sample used for hydrometer analysis, g	69.40
Mass of Tare, g	0.00	Dry Mass, g	58.36
Total Mass of Dry Sample, g	2774.48	% of Total Sample passing #4 sieve	100.0

SIEVE ANALYSIS

PORTION OF SAMPLE RETAINED ON #4 SIEVE

PORTION OF SAMPLE PASSING #4 SIEVE (Hydrometer Backsieve)

Mass of Tare, g 0.00

Sieve Size	Sample & Tare, g	% RETAINED	%PASSING
12"	COBBLES	0.0	100.0
3"		0.0	100.0
2.5"	COARSE GRAVEL	0.0	100.0
2"		0.0	100.0
1.5"		0.0	100.0
1"		0.0	100.0
.75"		0.0	100.0
.5"	FINE GRAVEL	0.0	100.0
.375"		0.0	100.0
#4	COARSE SAND	0.00	100.0

Sieve Size	Cumulative Mass retained, g	% PASSING	
#10	MEDIUM SAND	0.36	99.4
#20		2.43	95.8
#40		3.97	93.2
#60	FINE SAND	4.37	92.5
#100		6.76	88.4
#200	FINES	45.73	21.6

Remarks

HYDROMETER ANALYSIS

PARTICLE-SIZE ANALYSIS

Length of Dispersion Period	1 Minute
Mechanical Dispersion Device ID #	61
Amount of Dispersing Agent (ml)	125.0
Specific Gravity (assumed)	2.700
Specific Gravity (tested)	
Starting time	13:53

% COBBLES	0.0	% MEDIUM SAND	6.2
% COARSE GRAVEL	0.0	% FINE SAND	71.6
% FINE GRAVEL	0.0	% FINES	21.6
% COARSE SAND	0.6	% TOTAL SAMPLE	100.0
% CLAY(<0.005mm)	7.6	% CLAY(<0.002mm)	5.6

Date	Time	Testing time (min)	Reading	Temp (°C)	K	Composite Correction	Actual Reading	Effective Depth (cm)	a	Particle Diam. (mm)	Percent Passing
01/15/21	13:55	2	17.0	18.5	0.01361	8.0	9.0	14.9	0.99	0.0371	15.3
01/15/21	13:58	5	16.0	18.5	0.01361	8.0	8.0	15.1	0.99	0.0236	13.6
01/15/21	14:08	15	15.0	18.5	0.01361	8.0	7.0	15.2	0.99	0.0137	11.9
01/15/21	14:23	30	14.0	18.5	0.01361	8.0	6.0	15.4	0.99	0.0097	10.2
01/15/21	14:53	60	13.0	18.5	0.01361	8.0	5.0	15.6	0.99	0.0069	8.5
01/15/21	18:03	250	12.0	18.5	0.01361	8.0	4.0	15.7	0.99	0.0034	6.8
01/16/21	13:53	1440	11.0	18.5	0.01361	8.0	3.0	15.9	0.99	0.0014	5.1

Hydrometer 152H ID #	305527
Sieve Shaker ID #	555

Oven ID #	15/496/610
Balance ID#	139/142/700



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Tested By: IH
Date: 01/13/21
Checked By: *IB*

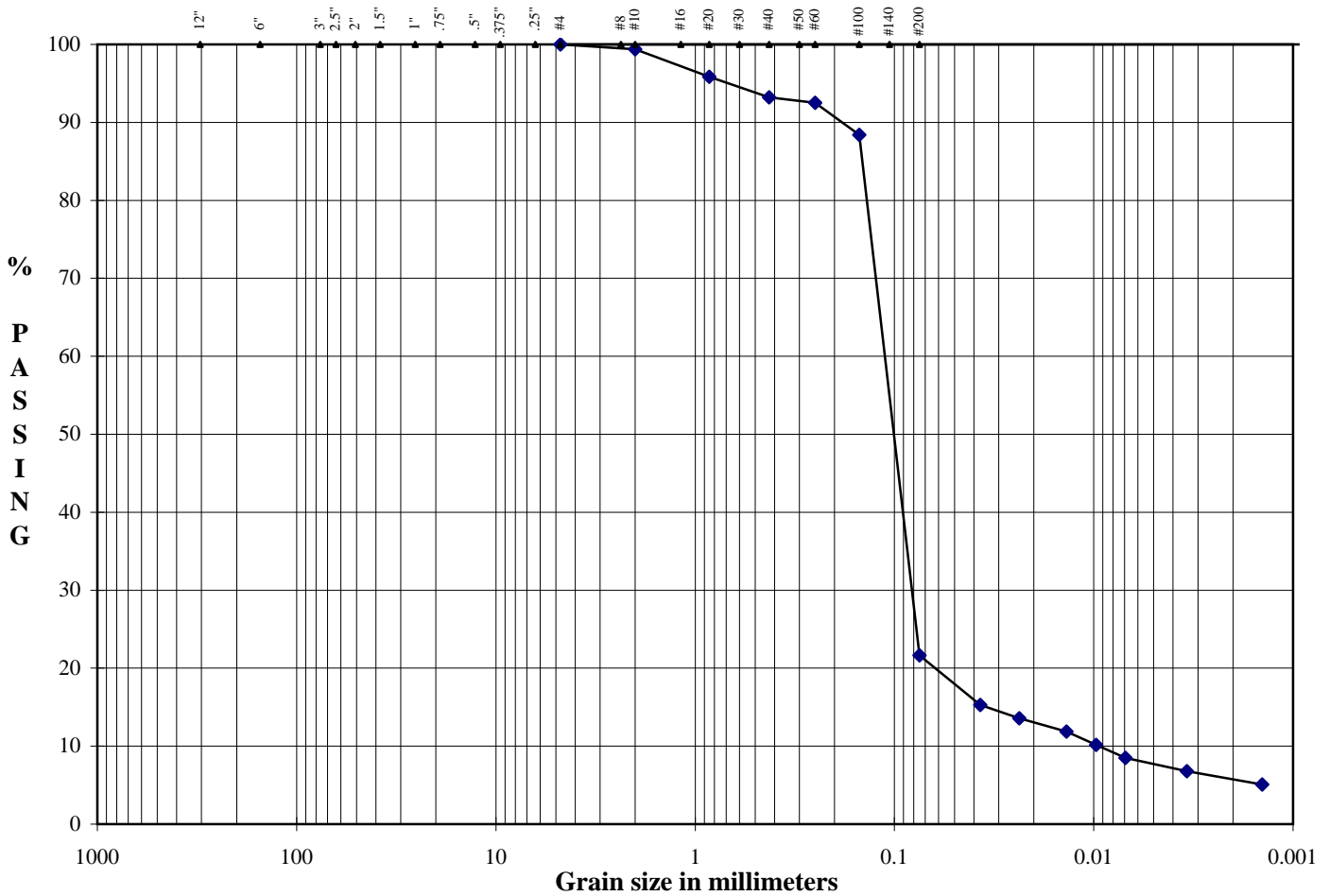
Client Pr. #	-
Pr. Name	Grumman Road Landfill
Sample ID	37023MW27D
Location	MW-27D

Lab. PR. #	2108-04-1
S. Type	Bag
Depth/Elev.	66-67'
Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

Particle-Size Analysis



Boulders	Cobbles	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
		Gravel		Sand			

DESCRIPTION: Gray Clayey Sand

D ₁₀	NA	mm
D ₃₀	NA	mm
D ₆₀	NA	mm
Cu	NA	
Cc	NA	

USCS (ASTM D2487; D2488) SC

Project's Specific % Passing	NA
Project's Specific Particle Size, mm	NA



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Tested By

TH

Date

01/17/21

Checked By

LB

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37024MW26D	Depth/Elev.	19-20'
Location	MW-26D	Add. Info	-

**ASTM D 4318
Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (Atterberg Limits)**

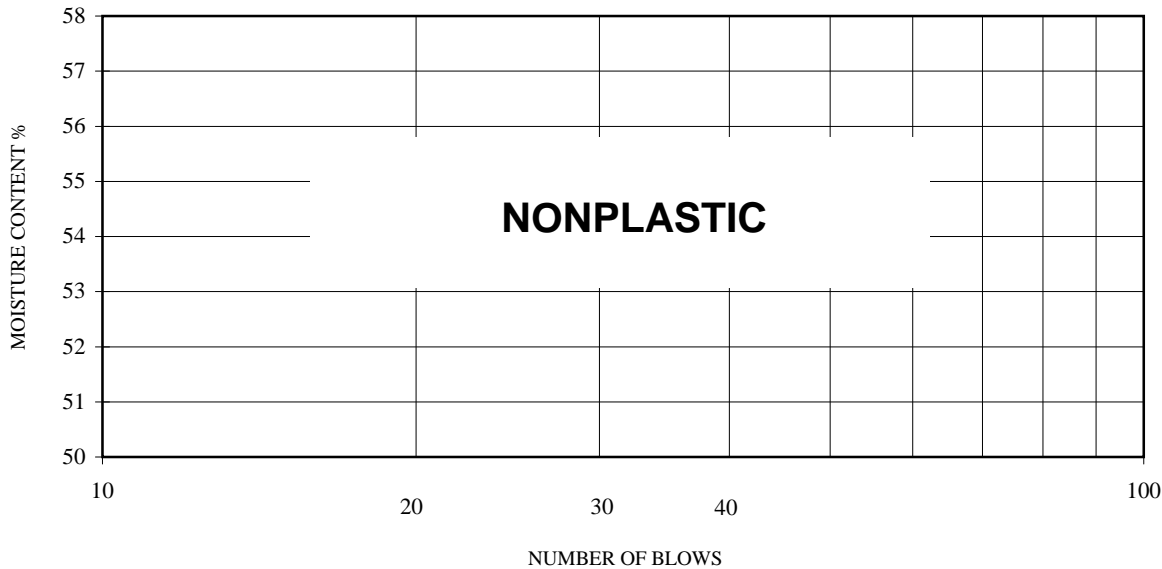
Number of Blows
Weight of Wet Sample & Tare, g
Weight of Dry Soil & Tare, g
Weight of Tare, g
Moisture Content, %

LIQUID LIMIT	
9	9
37.25	38.49
35.15	36.20
24.60	24.66
19.91	19.84

Liquid Limit Device ID #

56

NOTES: 1. Material appears to be Nonplastic. (Liquid Limit or Plastic Limit test could not be performed.)
2. Material passing No. 40 sieve was used for test.



Weight of Wet Soil & Tare, g
Weight of Dry Soil & Tare, g
Weight of Tare, g
Moisture Content, %

PLASTIC LIMIT	
40.49	40.75
37.60	38.04
23.33	24.71
20.25	20.33

Oven ID Number

15/496/610

Balance ID Number

139/563

Weight of Wet Soil & Tare, g
Weight of Dry Soil & Tare, g
Weight of Tare, g
Moisture Content, %

NATURAL MOISTURE	
465.70	
395.40	
101.70	
23.94	

LIQUID LIMIT (LL)

NP

PLASTIC LIMIT (PL)

NP

PLASTICITY INDEX (PI)

NP

LIQUIDITY INDEX (LI)

-

DESCRIPTION

Olive Brown Silty Sand

USCS (ASTM D2487;2488)

SM

AASHTO (M 145)

NA



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Tested By **IH**

Date **01/13/21**

Checked By **IB**

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37024MW26D	Depth/Elev.	19-20'
Location	MW-26D	Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

<i>As-Received Moisture Content</i>		<i>Moisture Content of Material Used for Hydrometer Analysis</i>	
Mass of Wet Sample & Tare, g	465.70	Mass of Wet Sample & Tare, g	415.20
Mass of Dry Sample & Tare, g	395.40	Mass of Dry Sample & Tare, g	384.50
Mass of Tare, g	101.70	Mass of Tare, g	141.20
Moisture Content, %	23.9	Moisture Content, %	12.6
Mass of Total Sample before separation on #4 sieve & Tare, g	4283.10	Mass of Sample used for hydrometer analysis, g	70.00
Mass of Tare, g	0.00	Dry Mass, g	62.16
Total Mass of Dry Sample, g	3803.21	% of Total Sample passing #4 sieve	100.0

SIEVE ANALYSIS

<i>PORTION OF SAMPLE RETAINED ON #4 SIEVE</i>				<i>PORTION OF SAMPLE PASSING #4 SIEVE (Hydrometer Backsieve)</i>				
Mass of Tare, g	0.00							
Sieve Size	Sample & Tare, g	% RETAINED	%PASSING	Sieve Size	Cumulative Mass retained, g	% PASSING		
12"	COBBLES		0.0	100.0	#10	MEDIUM	0.07	99.9
3"			0.0	100.0	#20	SAND	0.72	98.8
2.5"	COARSE GRAVEL		0.0	100.0	#40		1.85	97.0
2"			0.0	100.0	#60	FINE SAND	3.00	95.2
1.5"			0.0	100.0	#100		12.04	80.6
1"			0.0	100.0	#200	FINES	50.10	19.4
.75"			0.0	100.0	Remarks			
.5"	FINE GRAVEL		0.0	100.0				
.375"			0.0	100.0				
#4	COARSE SAND	0.00	0.0	100.0				

HYDROMETER ANALYSIS				PARTICLE-SIZE ANALYSIS			
Length of Dispersion Period	1 Minute			% COBBLES	0.0	% MEDIUM SAND	2.9
Mechanical Dispersion Device ID #	61			% COARSE GRAVEL	0.0	% FINE SAND	77.6
Amount of Dispersing Agent (ml)	125.0			% FINE GRAVEL	0.0	% FINES	19.4
Specific Gravity (assumed)	2.700			% COARSE SAND	0.1	% TOTAL SAMPLE	100.0
Specific Gravity (tested)				% CLAY(<0.005mm)	5.5	% CLAY(<0.002mm)	3.6
Starting time	13:55						

Date	Time	Testing time (min)	Reading	Temp (°C)	K	Composite Correction	Actual Reading	Effective Depth (cm)	a	Particle Diam. (mm)	Percent Passing
01/15/21	13:57	2	16.0	18.5	0.01361	8.0	8.0	15.1	0.99	0.0373	12.7
01/15/21	14:00	5	15.0	18.5	0.01361	8.0	7.0	15.2	0.99	0.0237	11.1
01/15/21	14:10	15	14.0	18.5	0.01361	8.0	6.0	15.4	0.99	0.0138	9.6
01/15/21	14:25	30	13.0	18.5	0.01361	8.0	5.0	15.6	0.99	0.0098	8.0
01/15/21	14:55	60	12.0	18.5	0.01361	8.0	4.0	15.7	0.99	0.0070	6.4
01/15/21	18:05	250	11.0	18.5	0.01361	8.0	3.0	15.9	0.99	0.0034	4.8
01/16/21	13:55	1440	10.0	18.5	0.01361	8.0	2.0	16.0	0.99	0.0014	3.2

Hydrometer 152H ID # **305527**
Sieve Shaker ID # **555**

Oven ID # **15/496/610**
Balance ID# **139/142/700**



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Tested By	IH
Date	01/13/21
Checked By	<i>IB</i>

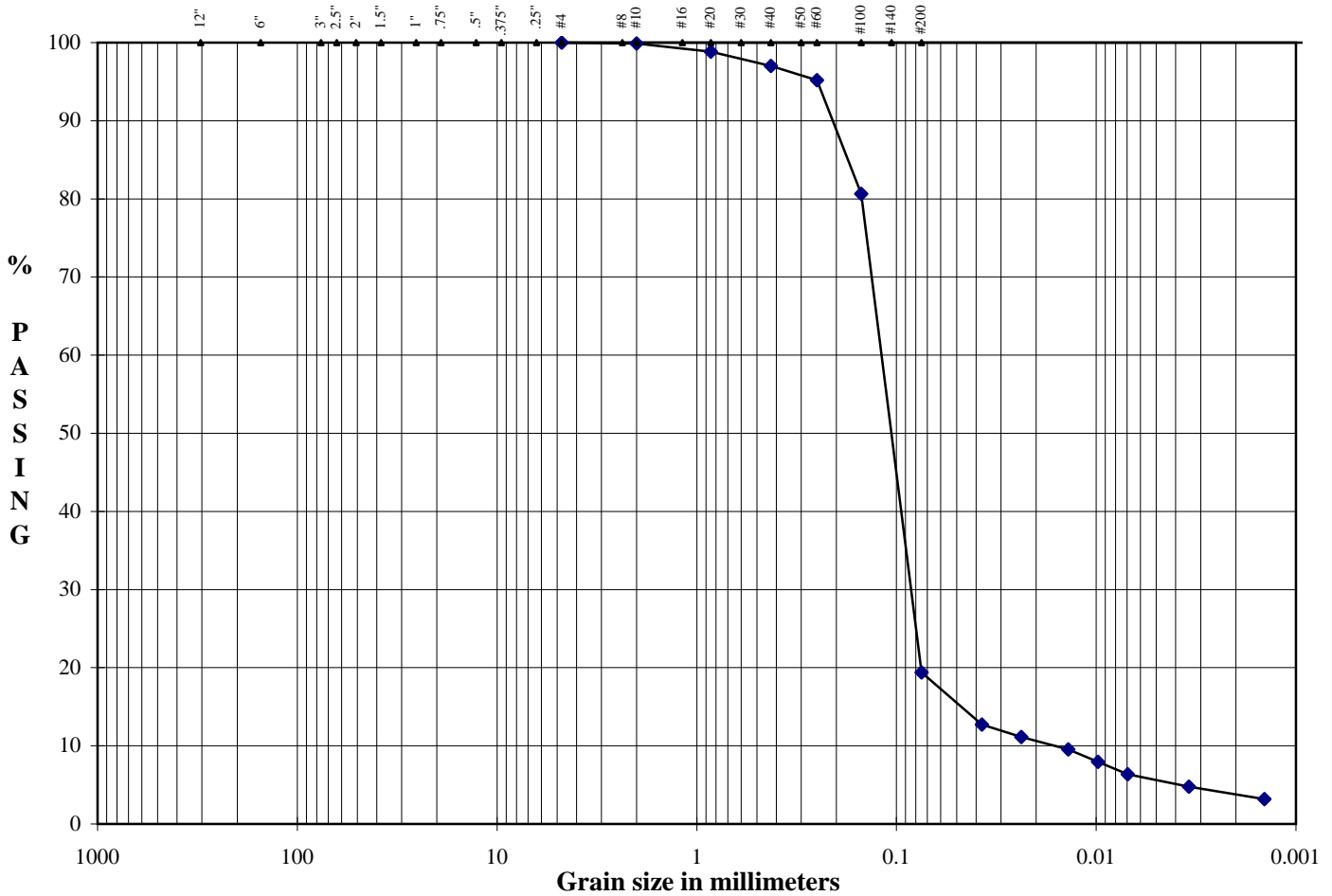
Client Pr. #	-
Pr. Name	Grumman Road Landfill
Sample ID	37024MW26D
Location	MW-26D

Lab. PR. #	2108-04-1
S. Type	Bag
Depth/Elev.	19-20'
Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

Particle-Size Analysis



Boulders	Cobbles	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
		Gravel		Sand			Fines

DESCRIPTION: Olive Brown Silty Sand

D ₁₀	NA	mm
D ₃₀	NA	mm
D ₆₀	NA	mm
Cu	NA	
Cc	NA	

USCS (ASTM D2487; D2488) SM

Project's Specific % Passing	NA
Project's Specific Particle Size, mm	NA



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Date

01/17/21

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TH

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37025MW26D	Depth/Elev.	49-50'
Location	MW-26D	Add. Info	-

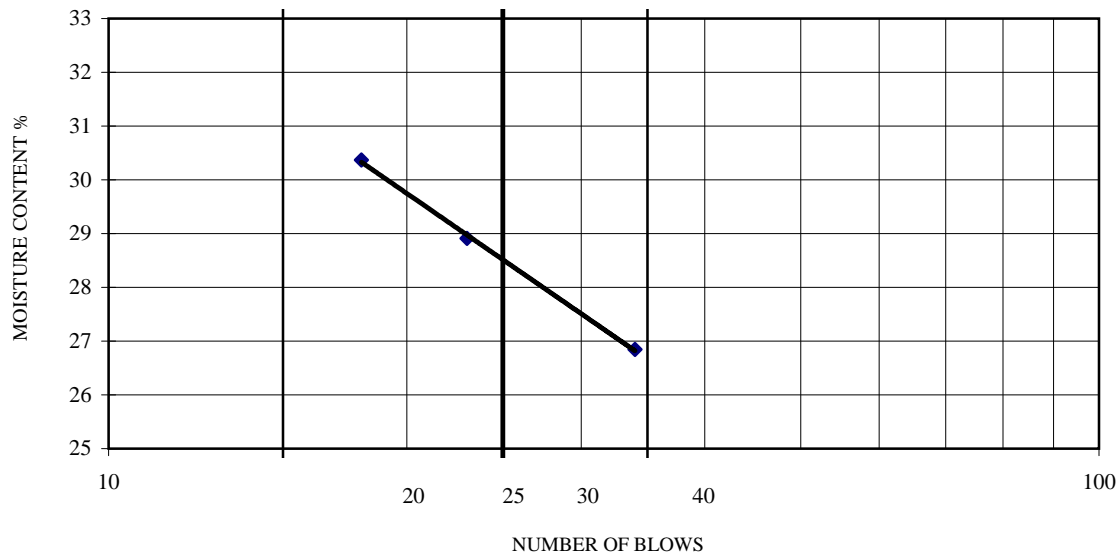
ASTM D 4318/AASHTO T 88, T 89

Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (Atterberg Limits)

LIQUID LIMIT

Number of Blows	34	23	18
Mass of Wet Sample & Tare, g	37.44	40.60	40.19
Mass of Dry Sample & Tare, g	34.53	37.68	36.50
Mass of Tare, g	23.69	27.58	24.35
Moisture Content, %	26.85	28.91	30.37

Oven ID #	15/496/610
Balance ID #	139/563
Liquid Limit Device ID #	451/569



PLASTIC LIMIT

Mass of Wet Sample & Tare, g	41.10	41.26
Mass of Dry Sample & Tare, g	38.40	38.20
Mass of Tare, g	26.23	24.41
Moisture Content, %	22.19	22.19

NOTE: MATERIAL PASSING NO. 40 SIEVE
WAS USED FOR TEST

NATURAL MOISTURE

Mass of Wet Sample & Tare, g	418.40
Mass of Dry Sample & Tare, g	327.80
Mass of Tare, g	101.40
Moisture Content, %	40.02

LIQUID LIMIT (LL)	29
PLASTIC LIMIT (PL)	22
PLASTICITY INDEX (PI)	7
LIQUIDITY INDEX (LI)	2.57

DESCRIPTION: Gray Silty, Clayey Sand

USCS (ASTM D2487; D2488)

SC-SM

AASHTO (M 145)

NA



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Tested By	IH
Date	01/13/21
Checked By	<i>IB</i>

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37025MW26D	Depth/Elev.	49-50'
Location	MW-26D	Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

<i>As-Received Moisture Content</i>		<i>Moisture Content of Material Used for Hydrometer Analysis</i>	
Mass of Wet Sample & Tare, g	418.40	Mass of Wet Sample & Tare, g	337.10
Mass of Dry Sample & Tare, g	327.80	Mass of Dry Sample & Tare, g	312.90
Mass of Tare, g	101.40	Mass of Tare, g	102.80
Moisture Content, %	40.0	Moisture Content, %	11.5

Mass of Total Sample before separation on #4 sieve & Tare, g	2420.10	Mass of Sample used for hydrometer analysis, g	69.50
Mass of Tare, g	0.00	Dry Mass, g	62.32
Total Mass of Dry Sample, g	2170.14	% of Total Sample passing #4 sieve	99.5

SIEVE ANALYSIS

PORTION OF SAMPLE RETAINED ON #4 SIEVE

Mass of Tare, g	0.00		
Sieve Size	Sample & Tare, g	% RETAINED	%PASSING
12"	COBBLES	0.0	100.0
3"		0.0	100.0
2.5"	COARSE GRAVEL	0.0	100.0
2"		0.0	100.0
1.5"		0.0	100.0
1"		0.0	100.0
.75"		0.0	100.0
.5"	FINE GRAVEL	0.00	0.0
.375"		3.00	0.1
#4	COARSE SAND	11.30	0.5

PORTION OF SAMPLE PASSING #4 SIEVE (Hydrometer Backsieve)

Sieve Size	Cumulative Mass retained, g	% PASSING
#10	MEDIUM SAND	0.38
#20		0.84
#40		1.13
#60	FINE SAND	1.47
#100		9.97
#200	FINES	44.89

Remarks

HYDROMETER ANALYSIS

Length of Dispersion Period	1 Minute
Mechanical Dispersion Device ID #	61
Amount of Dispersing Agent (ml)	125.0
Specific Gravity (assumed)	2.700
Specific Gravity (tested)	
Starting time	13:57

PARTICLE-SIZE ANALYSIS

% COBBLES	0.0	% MEDIUM SAND	1.2
% COARSE GRAVEL	0.0	% FINE SAND	69.9
% FINE GRAVEL	0.5	% FINES	27.8
% COARSE SAND	0.6	% TOTAL SAMPLE	100.0
% CLAY(<0.005mm)	14.2	% CLAY(<0.002mm)	11.6

Date	Time	Testing time (min)	Reading	Temp (°C)	K	Composite Correction	Actual Reading	Effective Depth (cm)	a	Particle Diam. (mm)	Percent Passing
01/15/21	13:59	2	23.0	18.5	0.01361	8.0	15.0	13.9	0.99	0.0359	23.7
01/15/21	14:02	5	22.0	18.5	0.01361	8.0	14.0	14.1	0.99	0.0228	22.1
01/15/21	14:12	15	21.0	18.5	0.01361	8.0	13.0	14.2	0.99	0.0133	20.5
01/15/21	14:27	30	20.0	18.5	0.01361	8.0	12.0	14.4	0.99	0.0094	19.0
01/15/21	14:57	60	18.0	18.5	0.01361	8.0	10.0	14.7	0.99	0.0067	15.8
01/15/21	18:07	250	16.0	18.5	0.01361	8.0	8.0	15.1	0.99	0.0033	12.6
01/16/21	13:57	1440	15.0	18.5	0.01361	8.0	7.0	15.2	0.99	0.0014	11.1

Hydrometer 152H ID # 305527
Sieve Shaker ID # 555

Oven ID # 15/496/610
Balance ID# 139/142/700



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Tested By: IH
Date: 01/13/21
Checked By: *IB*

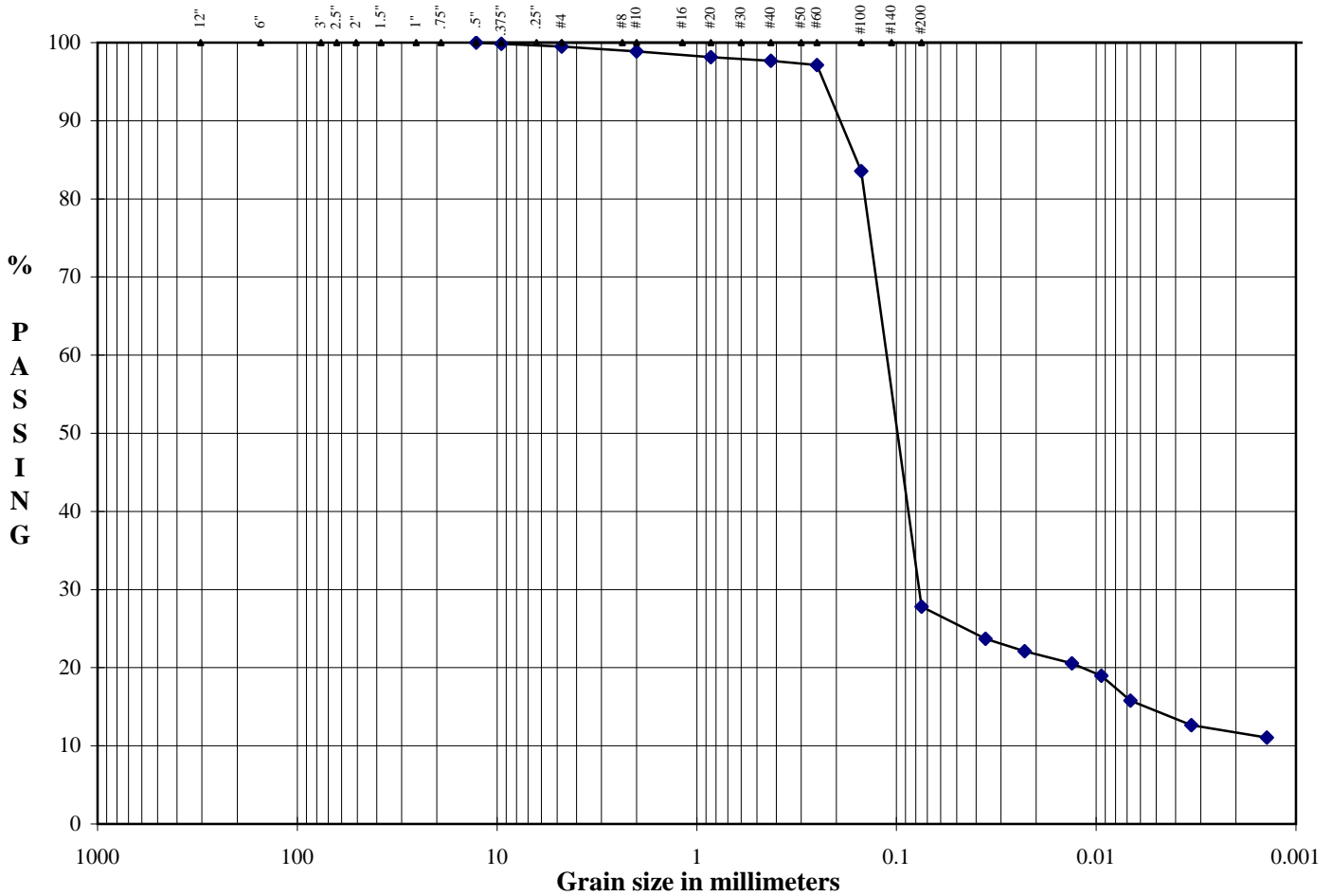
Client Pr. #	-
Pr. Name	Grumman Road Landfill
Sample ID	37025MW26D
Location	MW-26D

Lab. PR. #	2108-04-1
S. Type	Bag
Depth/Elev.	49-50'
Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

Particle-Size Analysis



Boulders	Cobbles	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
		Gravel		Sand			Fines

DESCRIPTION: Gray Silty, Clayey Sand

D ₁₀	NA	mm
D ₃₀	NA	mm
D ₆₀	NA	mm
Cu	NA	
Cc	NA	

USCS (ASTM D2487; D2488) **SC-SM**

Project's Specific % Passing	NA
Project's Specific Particle Size, mm	NA



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Date

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LB

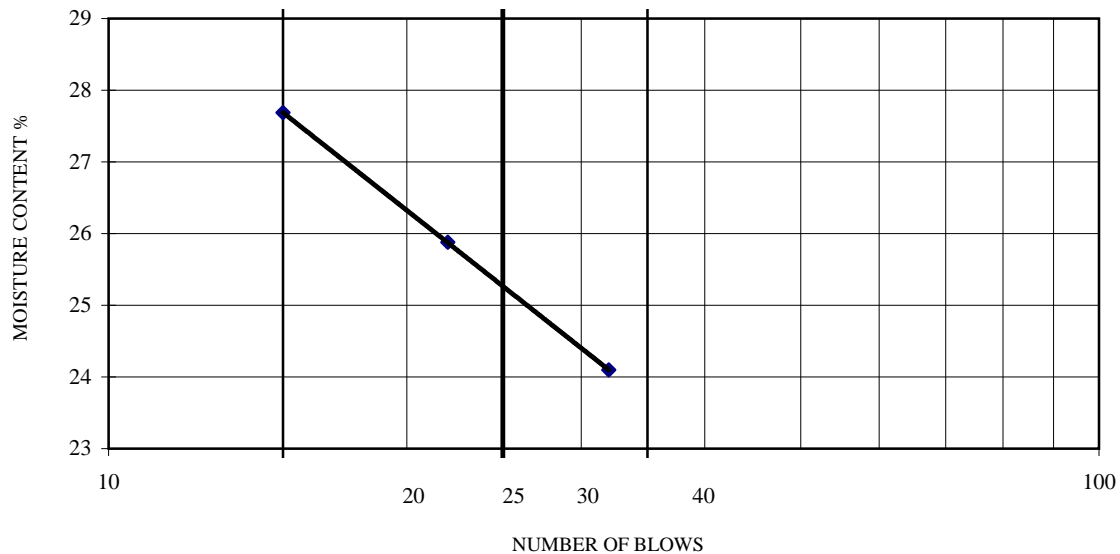
Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37026MW26D	Depth/Elev.	64-65'
Location	MW-26D	Add. Info	-

ASTM D 4318/AASHTO T 88, T 89

Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (Atterberg Limits)

	LIQUID LIMIT		
Number of Blows	32	22	15
Mass of Wet Sample & Tare, g	37.20	39.03	39.06
Mass of Dry Sample & Tare, g	35.40	36.45	36.87
Mass of Tare, g	27.93	26.48	28.96
Moisture Content, %	24.10	25.88	27.69

Oven ID #	15/496/610
Balance ID #	139/563
Liquid Limit Device ID #	451/569



	PLASTIC LIMIT	
Mass of Wet Sample & Tare, g	41.10	39.79
Mass of Dry Sample & Tare, g	38.69	37.55
Mass of Tare, g	28.66	28.22
Moisture Content, %	24.03	24.01

NOTE: MATERIAL PASSING NO. 40 SIEVE WAS USED FOR TEST

	NATURAL MOISTURE	
Mass of Wet Sample & Tare, g	410.50	
Mass of Dry Sample & Tare, g	334.00	
Mass of Tare, g	94.80	
Moisture Content, %	31.98	

LIQUID LIMIT (LL)	25
PLASTIC LIMIT (PL)	24
PLASTICITY INDEX (PI)	1
LIQUIDITY INDEX (LI)	7.98

DESCRIPTION: Gray Silty Sand

USCS (ASTM D2487; D2488)

SM

AASHTO (M 145)

NA



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Tested By	IH
Date	01/13/21
Checked By	<i>IB</i>

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37026MW26D	Depth/Elev.	64-65'
Location	MW-26D	Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

<i>As-Received Moisture Content</i>		<i>Moisture Content of Material Used for Hydrometer Analysis</i>	
Mass of Wet Sample & Tare, g	410.50	Mass of Wet Sample & Tare, g	400.90
Mass of Dry Sample & Tare, g	334.00	Mass of Dry Sample & Tare, g	367.00
Mass of Tare, g	94.80	Mass of Tare, g	139.60
Moisture Content, %	32.0	Moisture Content, %	14.9

Mass of Total Sample before separation on #4 sieve & Tare, g	3255.00	Mass of Sample used for hydrometer analysis, g	70.10
Mass of Tare, g	0.00	Dry Mass, g	61.01
Total Mass of Dry Sample, g	2832.71	% of Total Sample passing #4 sieve	100.0

SIEVE ANALYSIS

<i>PORTION OF SAMPLE RETAINED ON #4 SIEVE</i>				<i>PORTION OF SAMPLE PASSING #4 SIEVE (Hydrometer Backsieve)</i>				
Mass of Tare, g	0.00							
Sieve Size	Sample & Tare, g	% RETAINED	%PASSING	Sieve Size	Cumulative Mass retained, g	% PASSING		
12"	COBBLES		0.0	100.0	#10	MEDIUM	0.45	99.3
3"			0.0	100.0	#20	SAND	2.71	95.6
2.5"	COARSE GRAVEL		0.0	100.0	#40		4.25	93.0
2"			0.0	100.0	#60	FINE SAND	4.63	92.4
1.5"			0.0	100.0	#100		7.78	87.2
1"			0.0	100.0	#200	FINES	48.98	19.7
.75"			0.0	100.0	Remarks			
.5"	FINE GRAVEL		0.0	100.0				
.375"			0.0	100.0				
#4	COARSE SAND	0.00	0.0	100.0				

HYDROMETER ANALYSIS				PARTICLE-SIZE ANALYSIS			
Length of Dispersion Period	1 Minute			% COBBLES	0.0	% MEDIUM SAND	6.2
Mechanical Dispersion Device ID #	61			% COARSE GRAVEL	0.0	% FINE SAND	73.3
Amount of Dispersing Agent (ml)	125.0			% FINE GRAVEL	0.0	% FINES	19.7
Specific Gravity (assumed)	2.700			% COARSE SAND	0.7	% TOTAL SAMPLE	100.0
Specific Gravity (tested)				% CLAY(<0.005mm)	8.4	% CLAY(<0.002mm)	6.2
Starting time	13:59						

Date	Time	Testing time (min)	Reading	Temp (°C)	K	Composite Correction	Actual Reading	Effective Depth (cm)	a	Particle Diam. (mm)	Percent Passing
01/15/21	14:01	2	18.0	18.5	0.01361	8.0	10.0	14.7	0.99	0.0369	16.2
01/15/21	14:04	5	17.0	18.5	0.01361	8.0	9.0	14.9	0.99	0.0235	14.6
01/15/21	14:14	15	16.0	18.5	0.01361	8.0	8.0	15.1	0.99	0.0136	13.0
01/15/21	14:29	30	15.0	18.5	0.01361	8.0	7.0	15.2	0.99	0.0097	11.4
01/15/21	14:59	60	14.0	18.5	0.01361	8.0	6.0	15.4	0.99	0.0069	9.7
01/15/21	18:09	250	12.5	18.5	0.01361	8.0	4.5	15.6	0.99	0.0034	7.3
01/16/21	13:59	1440	11.5	18.5	0.01361	8.0	3.5	15.8	0.99	0.0014	5.7

Hydrometer 152H ID # 305527
Sieve Shaker ID # 555

Oven ID # 15/496/610
Balance ID# 139/142/700



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Tested By IH

Date 01/13/21

Checked By *IB*

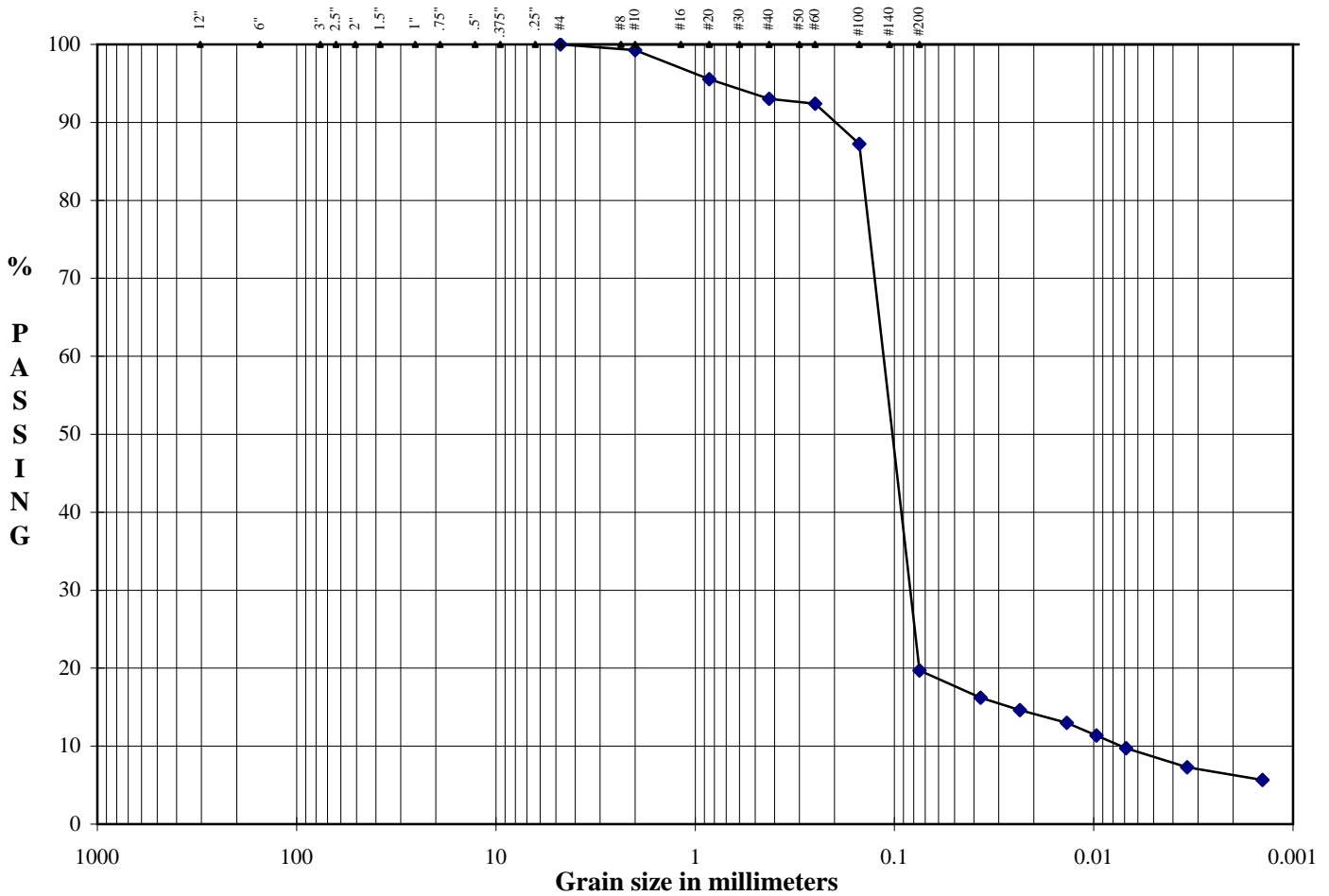
Client Pr. #	-
Pr. Name	Grumman Road Landfill
Sample ID	37026MW26D
Location	MW-26D

Lab. PR. #	2108-04-1
S. Type	Bag
Depth/Elev.	64-65'
Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

Particle-Size Analysis



Boulders	Cobbles	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
		Gravel		Sand			

DESCRIPTION: Gray Silty Sand

D ₁₀	NA	mm
D ₃₀	NA	mm
D ₆₀	NA	mm
Cu	NA	
Cc	NA	

USCS (ASTM D2487; D2488) SM

Project's Specific % Passing	NA
Project's Specific Particle Size, mm	NA



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Date

01/17/21

Checked By

LB

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	UD
Sample ID	37027MW26D	Depth/Elev.	24-26'
Location	MW-26D	Add. Info	-

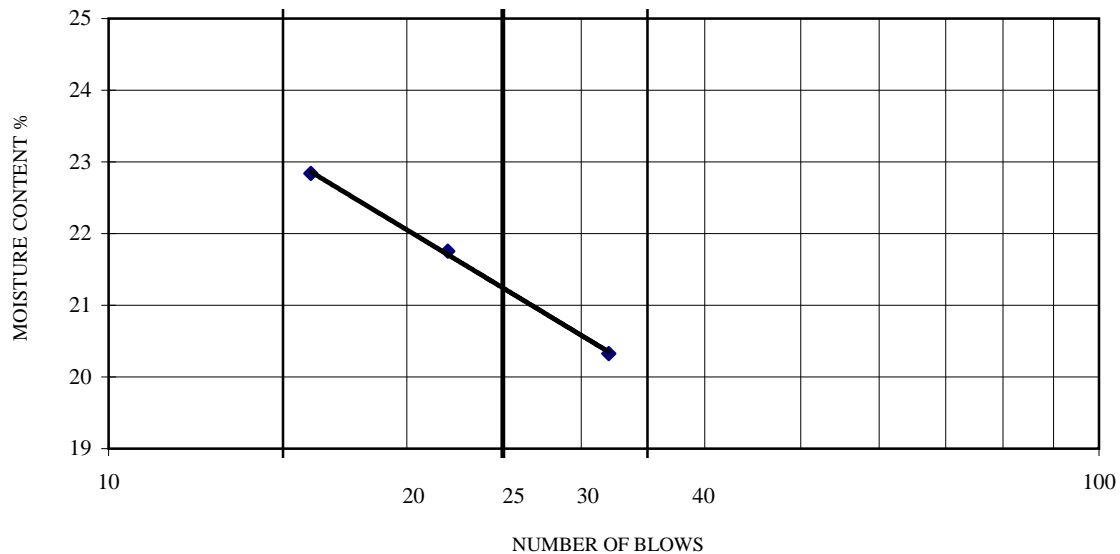
ASTM D 4318/AASHTO T 88, T 89

Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (Atterberg Limits)

LIQUID LIMIT

Number of Blows	32	22	16
Mass of Wet Sample & Tare, g	37.61	39.13	36.35
Mass of Dry Sample & Tare, g	35.62	36.55	34.00
Mass of Tare, g	25.83	24.69	23.71
Moisture Content, %	20.33	21.75	22.84

Oven ID #	15/496/610
Balance ID #	139/563
Liquid Limit Device ID #	451/569



PLASTIC LIMIT

Mass of Wet Sample & Tare, g	36.87	39.62
Mass of Dry Sample & Tare, g	35.50	38.12
Mass of Tare, g	24.74	26.45
Moisture Content, %	12.73	12.85

NOTE: MATERIAL PASSING NO. 40 SIEVE
WAS USED FOR TEST

NATURAL MOISTURE

Mass of Wet Sample & Tare, g	298.60
Mass of Dry Sample & Tare, g	246.40
Mass of Tare, g	90.50
Moisture Content, %	33.48

LIQUID LIMIT (LL)	21
PLASTIC LIMIT (PL)	13
PLASTICITY INDEX (PI)	8
LIQUIDITY INDEX (LI)	2.56

DESCRIPTION Gray Clayey Sand

USCS (ASTM D2487; D2488)

SC

AASHTO (M 145)

NA



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Tested By	IH
Date	01/13/21
Checked By	<i>IB</i>

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	UD
Sample ID	37027MW26D	Depth/Elev.	24-26'
Location	MW-26D	Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

<i>As-Received Moisture Content</i>		<i>Moisture Content of Material Used for Hydrometer Analysis</i>	
Mass of Wet Sample & Tare, g	298.60	Mass of Wet Sample & Tare, g	396.90
Mass of Dry Sample & Tare, g	246.40	Mass of Dry Sample & Tare, g	395.60
Mass of Tare, g	90.50	Mass of Tare, g	138.30
Moisture Content, %	33.5	Moisture Content, %	0.5

Mass of Total Sample before separation on #4 sieve & Tare, g	1016.90	Mass of Sample used for hydrometer analysis, g	60.70
Mass of Tare, g	0.00	Dry Mass, g	60.39
Total Mass of Dry Sample, g	1011.79	% of Total Sample passing #4 sieve	100.0

SIEVE ANALYSIS

PORTION OF SAMPLE RETAINED ON #4 SIEVE

Mass of Tare, g	0.00		
Sieve Size	Sample & Tare, g	% RETAINED	%PASSING
12"	COBBLES	0.0	100.0
3"		0.0	100.0
2.5"	COARSE GRAVEL	0.0	100.0
2"		0.0	100.0
1.5"		0.0	100.0
1"		0.0	100.0
.75"		0.0	100.0
.5"	FINE GRAVEL	0.0	100.0
.375"		0.0	100.0
#4	COARSE SAND	0.00	100.0

PORTION OF SAMPLE PASSING #4 SIEVE (Hydrometer Backsieve)

Sieve Size	Cumulative Mass retained, g	% PASSING	
#10	MEDIUM SAND	0.11	99.8
#20	SAND	0.75	98.8
#40		1.61	97.3
#60	FINE SAND	2.42	96.0
#100		5.29	91.2
#200	FINES	36.43	39.7

Remarks

HYDROMETER ANALYSIS

Length of Dispersion Period	1 Minute
Mechanical Dispersion Device ID #	61
Amount of Dispersing Agent (ml)	125.0
Specific Gravity (assumed)	2.700
Specific Gravity (tested)	
Starting time	14:01

PARTICLE-SIZE ANALYSIS

% COBBLES	0.0	% MEDIUM SAND	2.5
% COARSE GRAVEL	0.0	% FINE SAND	57.7
% FINE GRAVEL	0.0	% FINES	39.7
% COARSE SAND	0.2	% TOTAL SAMPLE	100.0
% CLAY(<0.005mm)	19.7	% CLAY(<0.002mm)	17.2

Date	Time	Testing time (min)	Reading	Temp (°C)	K	Composite Correction	Actual Reading	Effective Depth (cm)	a	Particle Diam. (mm)	Percent Passing
01/15/21	14:03	2	27.0	18.5	0.01361	8.0	19.0	13.2	0.99	0.0350	31.1
01/15/21	14:06	5	25.0	18.5	0.01361	8.0	17.0	13.6	0.99	0.0224	27.9
01/15/21	14:16	15	23.0	18.5	0.01361	8.0	15.0	13.9	0.99	0.0131	24.6
01/15/21	14:31	30	22.0	18.5	0.01361	8.0	14.0	14.1	0.99	0.0093	22.9
01/15/21	15:01	60	20.5	18.5	0.01361	8.0	12.5	14.3	0.99	0.0066	20.5
01/15/21	18:11	250	19.5	18.5	0.01361	8.0	11.5	14.5	0.99	0.0033	18.9
01/16/21	14:01	1440	18.0	18.5	0.01361	8.0	10.0	14.7	0.99	0.0014	16.4

Hydrometer 152H ID # 305527
Sieve Shaker ID # 555

Oven ID # 15/496/610
Balance ID# 139/142/700



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Tested By: IH
Date: 01/13/21
Checked By: *IB*

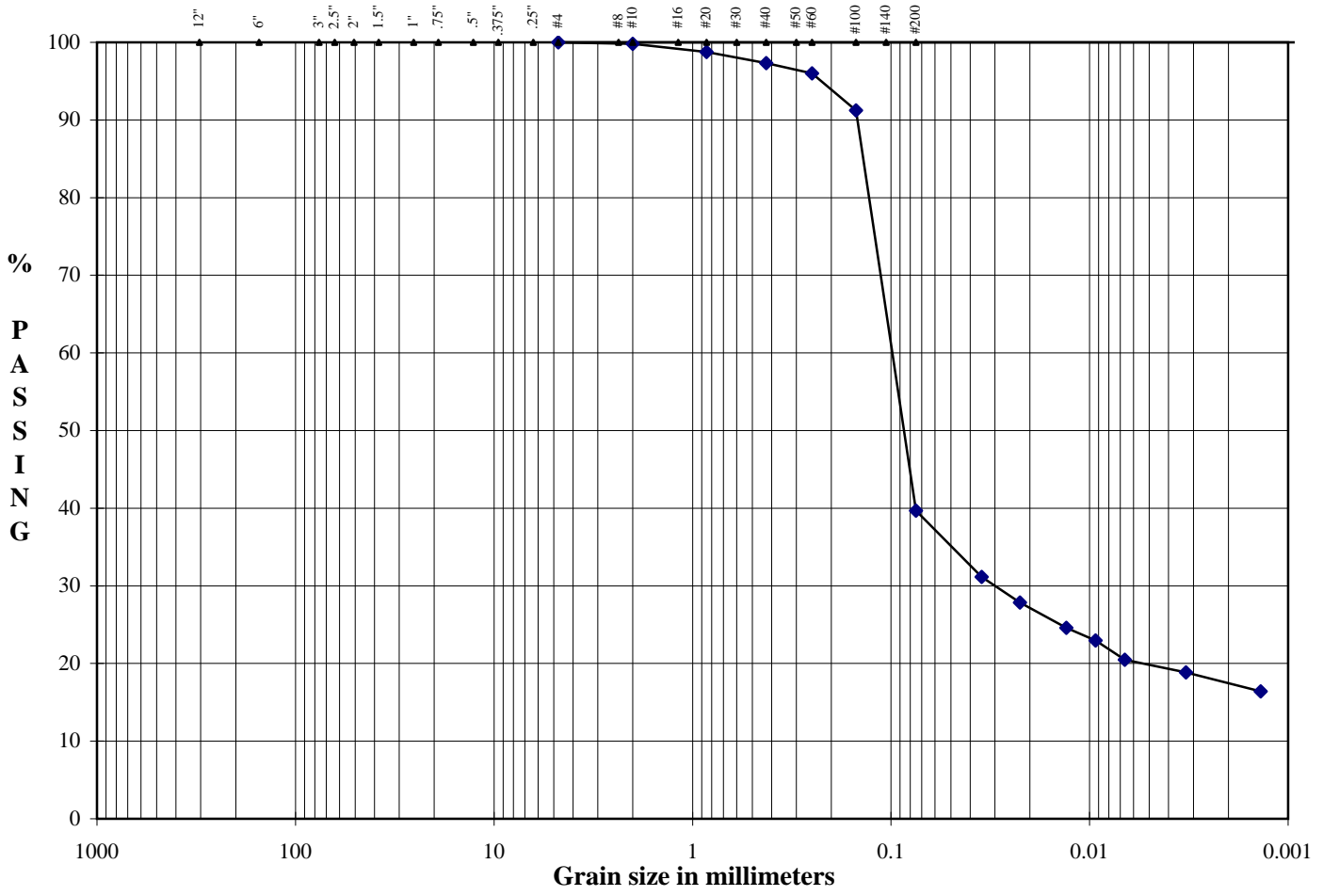
Client Pr. #	-
Pr. Name	Grumman Road Landfill
Sample ID	37027MW26D
Location	MW-26D

Lab. PR. #	2108-04-1
S. Type	UD
Depth/Elev.	24-26'
Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

Particle-Size Analysis



Boulders	Cobbles	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
		Gravel		Sand			Fines

DESCRIPTION: Gray Clayey Sand

D ₁₀	NA	mm
D ₃₀	NA	mm
D ₆₀	NA	mm
Cu	NA	
Cc	NA	

USCS (ASTM D2487; D2488) SC

Project's Specific % Passing	NA
Project's Specific Particle Size, mm	NA



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Web: www.test-llc.com



Tested By: EB
Date: 01/15/21
Checked By: *EB*

Client Pr. #	-
Pr. Name	Grumman Road Landfill
Sample ID	37027MW26D
Location	MW-26D

Lab. PR. #	2108-04-1
S. Type	UD
Depth/Elev.	24-26'
Add. Info	-

**ASTM D 5084; Standard Test Method for Measurement of Hydraulic Conductivity of Saturated Porous
Materials Using a Flexible Wall Permeameter (Method D, Constant Rate of Flow)**

Initial Sample Data (Before Test)				Test Data				Final Data (After Test)			
Height	3.113 in	7.91 cm	Speed	12	Average Height of Sample	2.821 in	7.17 cm	Dry Density	96.9 pcf		
Diameter	2.865 in	7.28 cm	Board Number	3	Average Diameter of Sample	2.871 in	7.29 cm	Vol. of Voids	127.10 cm ³		
Area	6.45 in ²	41.59 cm ²	Cell Number	54	Area	6.47 in ²	41.77 cm ²	Vol. of Solids	172.17 cm ³		
Volume	328.87 cm ³	0.0116 ft ³	Flow Pump Number	4B	Volume	299.27 cm ³	0.0106 ft ³	Void Ratio	0.74		
Mass	606.70 g	1.34 lb	Flow Pump Rate*	5.60E-05 cm ³ /sec	Mass	597.30 g	1.32 lb	Saturation	104.2 %		
Specific Gravity	2.700 (Assumed)		B - Value	0.95	Moisture Content						
Dry Density	88.2 pcf		Cell Pressure	85.0 psi	Mass of wet sample & tare	678.40 g					
Moisture Content				Back Pressure	80.0 psi	Mass of dry sample & tare	546.00 g				
Mass of wet sample & tare	606.70 g		Confining (Effective) Pressure	5.0 psi	Mass of tare	81.30 g					
Mass of dry sample & tare	464.70 g		Max Head	48.53 cm	% Moisture	28.5					
Mass of tare	0.00 g		Min Head	47.83 cm							
% Moisture	30.6		Maximum Gradient	6.77							
			Minimum Gradient	6.68							

TIME FUNCTION			Δ t (sec)	READING DP, (psi)	Head (cm)	Gradient	Temp. T _x (°C)	PERMEABILITY (cm/sec)		
DATE	HOUR	MIN						@ T _x	R _T	@ 20 °C
01/15/21	8	5	-	0.69	48.53	6.77	18.5	-	-	-
01/15/21	8	10	300	0.68	47.83	6.68	18.5	1.99E-07	1.038	2.07E-07
01/15/21	8	15	300	0.69	48.53	6.77	18.5	1.99E-07	1.038	2.07E-07
01/15/21	8	20	300	0.68	47.83	6.68	18.5	1.99E-07	1.038	2.07E-07
01/15/21	8	25	300	0.69	48.53	6.77	18.5	1.99E-07	1.038	2.07E-07
01/15/21	8	30	300	0.68	47.83	6.68	18.5	1.99E-07	1.038	2.07E-07
01/15/21	8	35	300	0.69	48.53	6.77	18.5	1.99E-07	1.038	2.07E-07

Note: Deaired Water Used for Permeability Test.

DESCRIPTION	USCS
Gray Clayey Sand	(ASTM D2487;2488)
	SC

REMARKS

Reported Average Hydraulic Conductivity*				2.1E-07	cm/sec
Flow pump ID #	1043	Balance ID #	142/598	Differential Pressure Meter ID #	1045/1049
Thermometer ID #	409/985	Oven ID #	495/758	Board Pressure Meter ID #	1041
Syringe ID #	1046			Pore Pressure Meter ID #	26/27

*Constant Rate of Flow System (Flow Pump with Calibrated Syringe for Inflow and Calibrated Graduated Pipette for outflow) is capable to maintain a constant rate of inflow & outflow through the fully saturated sample with accuracy +/-5%. Flow Pump Rate issued for calculations of HC (ASTM STP 977) results at steady Differential Pressure (DP) Readings at the range of +/-5%. Permeation was stopped after HC versus Time (see table above) showed no significant upward or downward trend.



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Tested By

TH

Date

01/17/21

Checked By

LB

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	UD
Sample ID	37028MW26D	Depth/Elev.	50-52'
Location	MW-26D	Add. Info	-

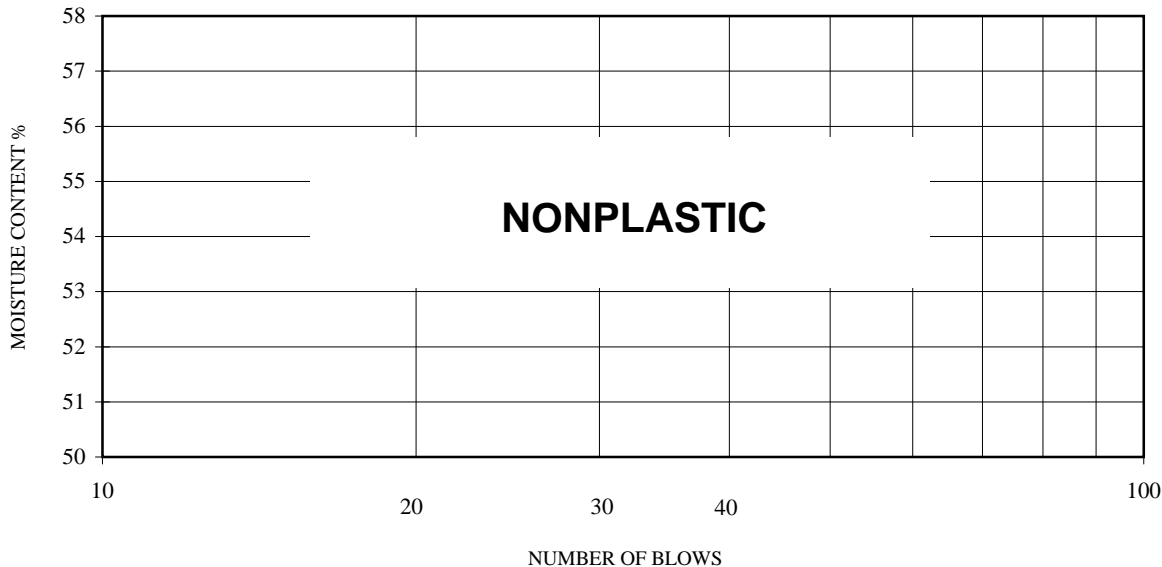
**ASTM D 4318
Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (Atterberg Limits)**

	LIQUID LIMIT	
	10	10
Number of Blows	10	10
Weight of Wet Sample & Tare, g	37.30	38.85
Weight of Dry Soil & Tare, g	34.88	36.22
Weight of Tare, g	25.49	25.86
Moisture Content, %	25.77	25.39

Liquid Limit Device ID #

56

NOTES: 1. Material appears to be Nonplastic. (Liquid Limit or Plastic Limit test could not be performed.)
2. Material passing No. 40 sieve was used for test.



	PLASTIC LIMIT	
	37.47	39.80
Weight of Wet Soil & Tare, g	37.47	39.80
Weight of Dry Soil & Tare, g	34.81	36.71
Weight of Tare, g	24.52	24.86
Moisture Content, %	25.85	26.08

Oven ID Number

15/496/610

Balance ID Number

139/563

	NATURAL MOISTURE
Weight of Wet Soil & Tare, g	267.20
Weight of Dry Soil & Tare, g	220.30
Weight of Tare, g	98.50
Moisture Content, %	38.51

LIQUID LIMIT (LL)

NP

PLASTIC LIMIT (PL)

NP

PLASTICITY INDEX (PI)

NP

LIQUIDITY INDEX (LI)

-

DESCRIPTION Gray Silty Sand

USCS (ASTM D2487;2488)

SM

AASHTO (M 145)

NA



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Tested By	IH
Date	01/14/21
Checked By	<i>IB</i>

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	UD
Sample ID	37028MW26D	Depth/Elev.	50-52'
Location	MW-26D	Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

<i>As-Received Moisture Content</i>		<i>Moisture Content of Material Used for Hydrometer Analysis</i>	
Mass of Wet Sample & Tare, g	267.20	Mass of Wet Sample & Tare, g	275.10
Mass of Dry Sample & Tare, g	220.30	Mass of Dry Sample & Tare, g	271.40
Mass of Tare, g	98.50	Mass of Tare, g	63.80
Moisture Content, %	38.5	Moisture Content, %	1.8

Mass of Total Sample before separation on #4 sieve & Tare, g	1091.40	Mass of Sample used for hydrometer analysis, g	60.40
Mass of Tare, g	0.00	Dry Mass, g	59.34
Total Mass of Dry Sample, g	1072.29	% of Total Sample passing #4 sieve	100.0

SIEVE ANALYSIS

PORTION OF SAMPLE RETAINED ON #4 SIEVE

Mass of Tare, g	0.00		
Sieve Size	Sample & Tare, g	% RETAINED	%PASSING
12"	COBBLES	0.0	100.0
3"		0.0	100.0
2.5"	COARSE GRAVEL	0.0	100.0
2"		0.0	100.0
1.5"		0.0	100.0
1"		0.0	100.0
.75"		0.0	100.0
.5"	FINE GRAVEL	0.0	100.0
.375"		0.0	100.0
#4	COARSE SAND	0.00	100.0

PORTION OF SAMPLE PASSING #4 SIEVE (Hydrometer Backsieve)

Sieve Size	Cumulative Mass retained, g	% PASSING	
#10	MEDIUM SAND	0.42	99.3
#20	SAND	1.45	97.6
#40		1.66	97.2
#60	FINE SAND	1.82	96.9
#100		9.12	84.6
#200	FINES	41.51	30.0

Remarks

HYDROMETER ANALYSIS

Length of Dispersion Period	1 Minute
Mechanical Dispersion Device ID #	61
Amount of Dispersing Agent (ml)	125.0
Specific Gravity (assumed)	2.700
Specific Gravity (tested)	
Starting time	14:03

PARTICLE-SIZE ANALYSIS

% COBBLES	0.0	% MEDIUM SAND	2.1
% COARSE GRAVEL	0.0	% FINE SAND	67.2
% FINE GRAVEL	0.0	% FINES	30.0
% COARSE SAND	0.7	% TOTAL SAMPLE	100.0
% CLAY(<0.005mm)	14.2	% CLAY(<0.002mm)	12.2

Date	Time	Testing time (min)	Reading	Temp (°C)	K	Composite Correction	Actual Reading	Effective Depth (cm)	a	Particle Diam. (mm)	Percent Passing
01/15/21	14:05	2	21.0	18.5	0.01361	8.0	13.0	14.2	0.99	0.0363	21.7
01/15/21	14:08	5	20.0	18.5	0.01361	8.0	12.0	14.4	0.99	0.0231	20.0
01/15/21	14:18	15	19.0	18.5	0.01361	8.0	11.0	14.6	0.99	0.0134	18.4
01/15/21	14:33	30	18.0	18.5	0.01361	8.0	10.0	14.7	0.99	0.0095	16.7
01/15/21	15:03	60	17.0	18.5	0.01361	8.0	9.0	14.9	0.99	0.0068	15.0
01/15/21	18:13	250	16.0	18.5	0.01361	8.0	8.0	15.1	0.99	0.0033	13.3
01/16/21	14:03	1440	15.0	18.5	0.01361	8.0	7.0	15.2	0.99	0.0014	11.7

Hydrometer 152H ID # 305527
Sieve Shaker ID # 555

Oven ID # 15/496/610
Balance ID# 139/142/700



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Tested By: IH
Date: 01/14/21
Checked By: *IB*

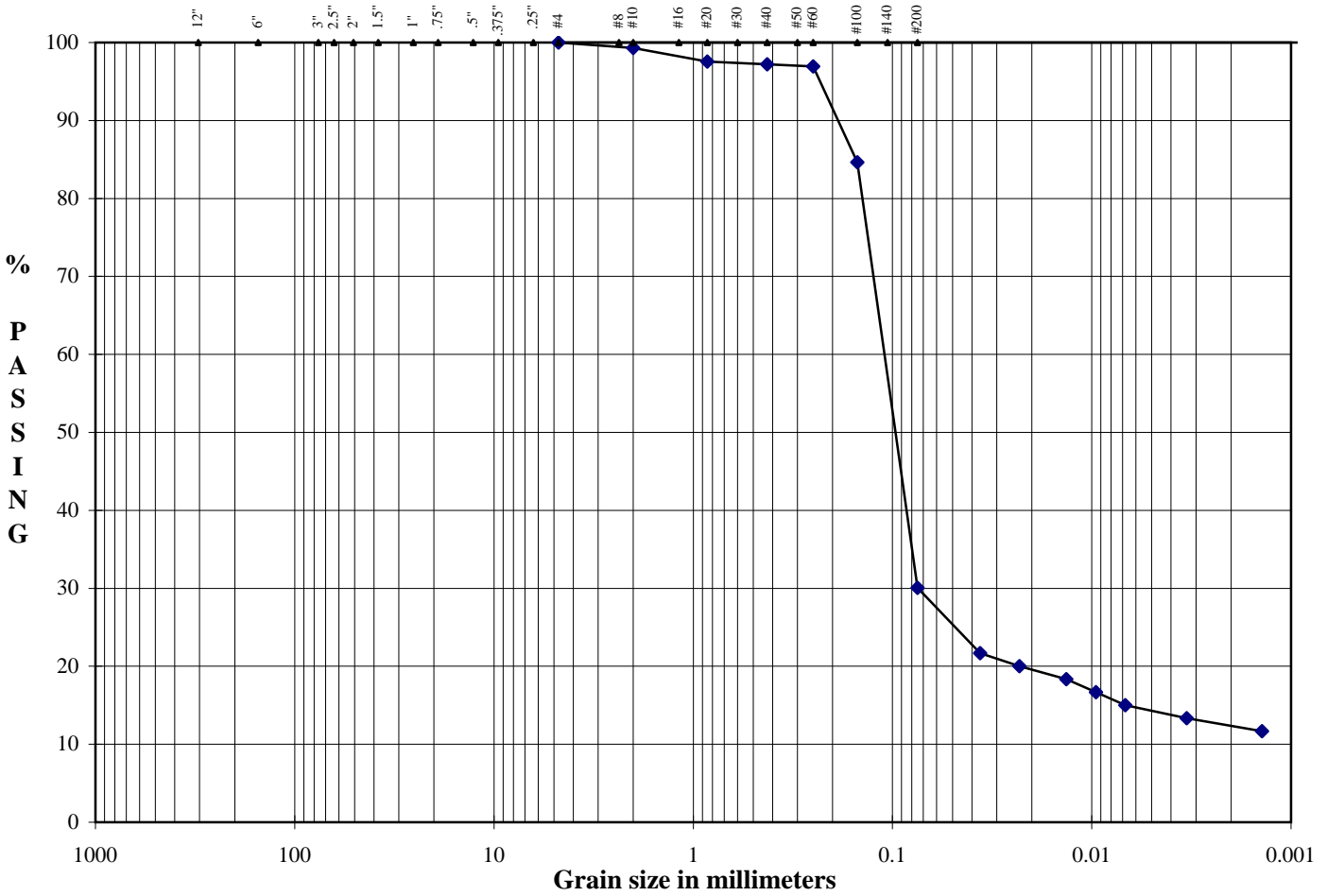
Client Pr. #	-
Pr. Name	Grumman Road Landfill
Sample ID	37028MW26D
Location	MW-26D

Lab. PR. #	2108-04-1
S. Type	UD
Depth/Elev.	50-52'
Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

Particle-Size Analysis



Boulders	Cobbles	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
		Gravel		Sand			

DESCRIPTION: Gray Silty Sand

D ₁₀	NA	mm
D ₃₀	NA	mm
D ₆₀	NA	mm
Cu	NA	
Cc	NA	

USCS (ASTM D2487; D2488) SM

Project's Specific % Passing	NA
Project's Specific Particle Size, mm	NA



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Tested By: EB
Date: 01/15/21
Checked By: *EB*

Client Pr. #	-
Pr. Name	Grumman Road Landfill
Sample ID	37028MW26D
Location	MW-26D

Lab. PR. #	2108-04-1
S. Type	UD
Depth/Elev.	50-52'
Add. Info	-

ASTM D 5084; Standard Test Method for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter (Method D, Constant Rate of Flow)

Initial Sample Data (Before Test)				Test Data				Final Data (After Test)			
Height	3.029 in	7.69 cm	Speed	12	Average Height of Sample	3.019 in	7.67 cm	Dry Density	82.3 pcf		
Diameter	2.854 in	7.25 cm	Board Number	11	Average Diameter of Sample	2.838 in	7.21 cm	Vol. of Voids	160.11 cm ³		
Area	6.40 in ²	41.27 cm ²	Cell Number	9	Area	6.33 in ²	40.81 cm ²	Vol. of Solids	152.84 cm ³		
Volume	317.54 cm ³	0.0112 ft ³	Flow Pump Number	4A	Volume	312.95 cm ³	0.0111 ft ³	Void Ratio	1.05		
Mass	573.80 g	1.27 lb	Flow Pump Rate*	5.60E-05 cm ³ /sec	Mass	571.10 g	1.26 lb	Saturation	98.9 %		
Specific Gravity	2.700 (Assumed)		B - Value	0.95	Moisture Content Mass of wet sample & tare: 638.00 g Mass of dry sample & tare: 479.60 g Mass of tare: 67.00 g % Moisture: 38.4						
Dry Density	81.1 pcf		Cell Pressure	95.0 psi							
Moisture Content			Back Pressure	80.0 psi							
Mass of wet sample & tare	573.80 g		Confining (Effective) Pressure	15.0 psi							
Mass of dry sample & tare	412.60 g		Max Head	30.25 cm							
Mass of tare	0.00 g		Min Head	29.54 cm							
% Moisture	39.1		Maximum Gradient	3.94							
			Minimum Gradient	3.85							

TIME FUNCTION			Δ t (sec)	READING DP, (psi)	Head (cm)	Gradient	Temp. T _x (°C)	PERMEABILITY (cm/sec)		
DATE	HOUR	MIN						@ T _x	R _T	@ 20 °C
01/15/21	8	5	-	0.43	30.25	3.94	18.5	-	-	-
01/15/21	8	10	300	0.42	29.54	3.85	18.5	3.52E-07	1.038	3.65E-07
01/15/21	8	15	300	0.43	30.25	3.94	18.5	3.52E-07	1.038	3.65E-07
01/15/21	8	20	300	0.42	29.54	3.85	18.5	3.52E-07	1.038	3.65E-07
01/15/21	8	25	300	0.43	30.25	3.94	18.5	3.52E-07	1.038	3.65E-07
01/15/21	8	30	300	0.42	29.54	3.85	18.5	3.52E-07	1.038	3.65E-07
01/15/21	8	35	300	0.43	30.25	3.94	18.5	3.52E-07	1.038	3.65E-07

Note: Deaired Water Used for Permeability Test.

DESCRIPTION	USCS
Gray Silty Sand	(ASTM D2487;2488)
	SM

REMARKS

Reported Average Hydraulic Conductivity*				3.7E-07 cm/sec	
Flow pump ID #	1043	Balance ID #	142/598	Differential Pressure Meter ID #	1044/1048
Thermometer ID #	409/985	Oven ID #	495/758	Board Pressure Meter ID #	776
Syringe ID #	1047			Pore Pressure Meter ID #	26/27

*Constant Rate of Flow System (Flow Pump with Calibrated Syringe for Inflow and Calibrated Graduated Pipette for outflow) is capable to maintain a constant rate of inflow & outflow through the fully saturated sample with accuracy +/-5%. Flow Pump Rate issued for calculations of HC (ASTM STP 977) results at steady Differential Pressure (DP) Readings at the range of +/-5%. Permeation was stopped after HC versus Time (see table above) showed no significant upward or downward trend.



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Tested By

TH

Date

01/17/21

Checked By

LB

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37029MW23D	Depth/Elev.	19-20'
Location	MW-23D	Add. Info	-

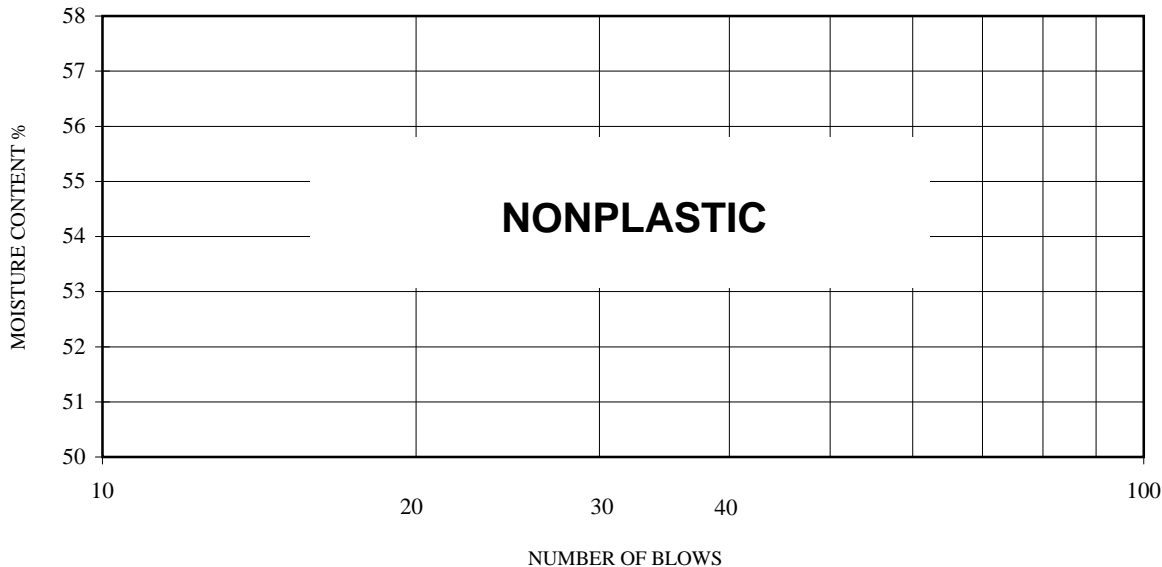
**ASTM D 4318
Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (Atterberg Limits)**

	LIQUID LIMIT	
	10	10
Number of Blows	10	10
Weight of Wet Sample & Tare, g	38.98	38.37
Weight of Dry Soil & Tare, g	36.30	35.78
Weight of Tare, g	24.97	24.79
Moisture Content, %	23.65	23.57

Liquid Limit Device ID #

56

NOTES: 1. Material appears to be Nonplastic. (Liquid Limit or Plastic Limit test could not be performed.)
2. Material passing No. 40 sieve was used for test.



	PLASTIC LIMIT	
	39.77	40.47
Weight of Wet Soil & Tare, g	39.77	40.47
Weight of Dry Soil & Tare, g	37.10	37.64
Weight of Tare, g	25.83	25.68
Moisture Content, %	23.69	23.66

Oven ID Number

15/496/610

Balance ID Number

139/563

	NATURAL MOISTURE	
	416.70	347.60
Weight of Wet Soil & Tare, g	416.70	347.60
Weight of Dry Soil & Tare, g	347.60	94.20
Weight of Tare, g	94.20	27.27
Moisture Content, %	27.27	

LIQUID LIMIT (LL)

NP

PLASTIC LIMIT (PL)

NP

PLASTICITY INDEX (PI)

NP

LIQUIDITY INDEX (LI)

-

DESCRIPTION Brown Silty Sand

USCS (ASTM D2487;2488)

SM

AASHTO (M 145)

NA



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**AASHTO
ACCREDITED**

Tested By	IH
Date	01/13/21
Checked By	<i>IB</i>

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37029MW23D	Depth/Elev.	19-20'
Location	MW-23D	Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

<i>As-Received Moisture Content</i>		<i>Moisture Content of Material Used for Hydrometer Analysis</i>	
Mass of Wet Sample & Tare, g	416.70	Mass of Wet Sample & Tare, g	381.00
Mass of Dry Sample & Tare, g	347.60	Mass of Dry Sample & Tare, g	330.50
Mass of Tare, g	94.20	Mass of Tare, g	101.60
Moisture Content, %	27.3	Moisture Content, %	22.1

Mass of Total Sample before separation on #4 sieve & Tare, g	3415.60	Mass of Sample used for hydrometer analysis, g	70.30
Mass of Tare, g	0.00	Dry Mass, g	57.59
Total Mass of Dry Sample, g	2798.25	% of Total Sample passing #4 sieve	100.0

SIEVE ANALYSIS

PORTION OF SAMPLE RETAINED ON #4 SIEVE

PORTION OF SAMPLE PASSING #4 SIEVE (Hydrometer Backsieve)

Mass of Tare, g	0.00		
Sieve Size	Sample & Tare, g	% RETAINED	%PASSING
12"	COBBLES	0.0	100.0
3"		0.0	100.0
2.5"	COARSE GRAVEL	0.0	100.0
2"		0.0	100.0
1.5"		0.0	100.0
1"		0.0	100.0
.75"		0.0	100.0
.5"	FINE GRAVEL	0.0	100.0
.375"		0.0	100.0
#4	COARSE SAND	0.00	100.0

Sieve Size	Cumulative Mass retained, g	% PASSING	
#10	MEDIUM SAND	1.83	96.8
#20	SAND	3.54	93.9
#40		5.15	91.1
#60	FINE SAND	6.37	88.9
#100		9.29	83.9
#200	FINES	45.89	20.3

Remarks

HYDROMETER ANALYSIS

PARTICLE-SIZE ANALYSIS

Length of Dispersion Period	1 Minute
Mechanical Dispersion Device ID #	61
Amount of Dispersing Agent (ml)	125.0
Specific Gravity (assumed)	2.700
Specific Gravity (tested)	
Starting time	14:05

% COBBLES	0.0	% MEDIUM SAND	5.8
% COARSE GRAVEL	0.0	% FINE SAND	70.7
% FINE GRAVEL	0.0	% FINES	20.3
% COARSE SAND	3.2	% TOTAL SAMPLE	100.0
% CLAY(<0.005mm)	4.2	% CLAY(<0.002mm)	2.2

Date	Time	Testing time (min)	Reading	Temp (°C)	K	Composite Correction	Actual Reading	Effective Depth (cm)	a	Particle Diam. (mm)	Percent Passing
01/15/21	14:07	2	15.0	18.5	0.01361	8.0	7.0	15.2	0.99	0.0375	12.0
01/15/21	14:10	5	14.0	18.5	0.01361	8.0	6.0	15.4	0.99	0.0239	10.3
01/15/21	14:20	15	13.0	18.5	0.01361	8.0	5.0	15.6	0.99	0.0139	8.6
01/15/21	14:35	30	12.0	18.5	0.01361	8.0	4.0	15.7	0.99	0.0099	6.9
01/15/21	15:05	60	11.0	18.5	0.01361	8.0	3.0	15.9	0.99	0.0070	5.2
01/15/21	18:15	250	10.0	18.5	0.01361	8.0	2.0	16.0	0.99	0.0034	3.4
01/16/21	14:05	1440	9.0	18.5	0.01361	8.0	1.0	16.2	0.99	0.0014	1.7

Hydrometer 152H ID # 305527
Sieve Shaker ID # 555

Oven ID # 15/496/610
Balance ID# 139/142/700



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Tested By: IH
Date: 01/13/21
Checked By: *IB*

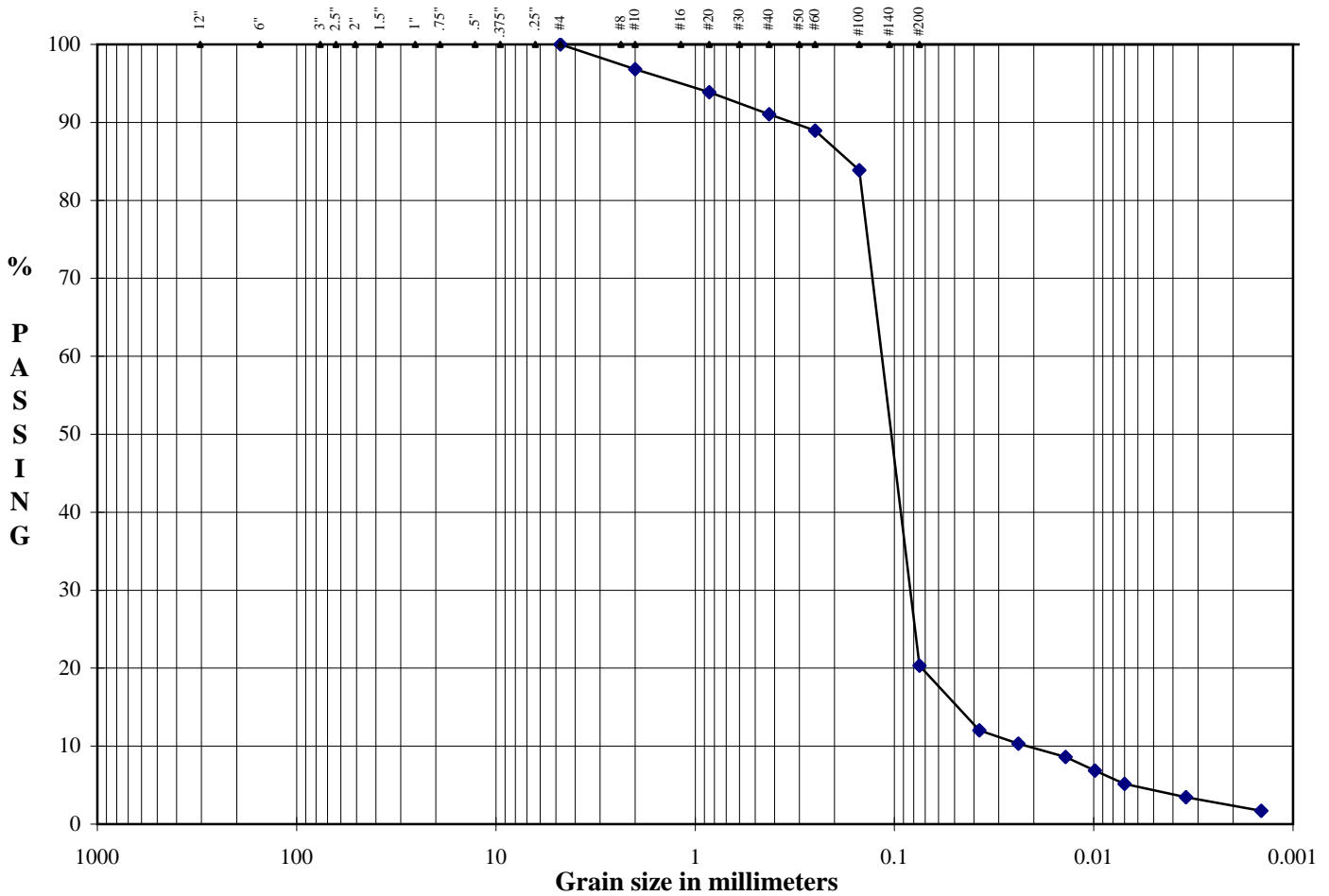
Client Pr. #	-
Pr. Name	Grumman Road Landfill
Sample ID	37029MW23D
Location	MW-23D

Lab. PR. #	2108-04-1
S. Type	Bag
Depth/Elev.	19-20'
Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

Particle-Size Analysis



Boulders	Cobbles	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
		Gravel		Sand			

DESCRIPTION

Brown Silty Sand

D ₁₀	NA	mm
D ₃₀	NA	mm
D ₆₀	NA	mm
Cu	NA	
Cc	NA	

USCS (ASTM D2487; D2488)

SM

Project's Specific % Passing: NA

Project's Specific Particle Size, mm: NA



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Tested By

TH

Date

01/17/21

Checked By

LB

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37030MW23D	Depth/Elev.	47-48'
Location	MW-23D	Add. Info	-

**ASTM D 4318
Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (Atterberg Limits)**

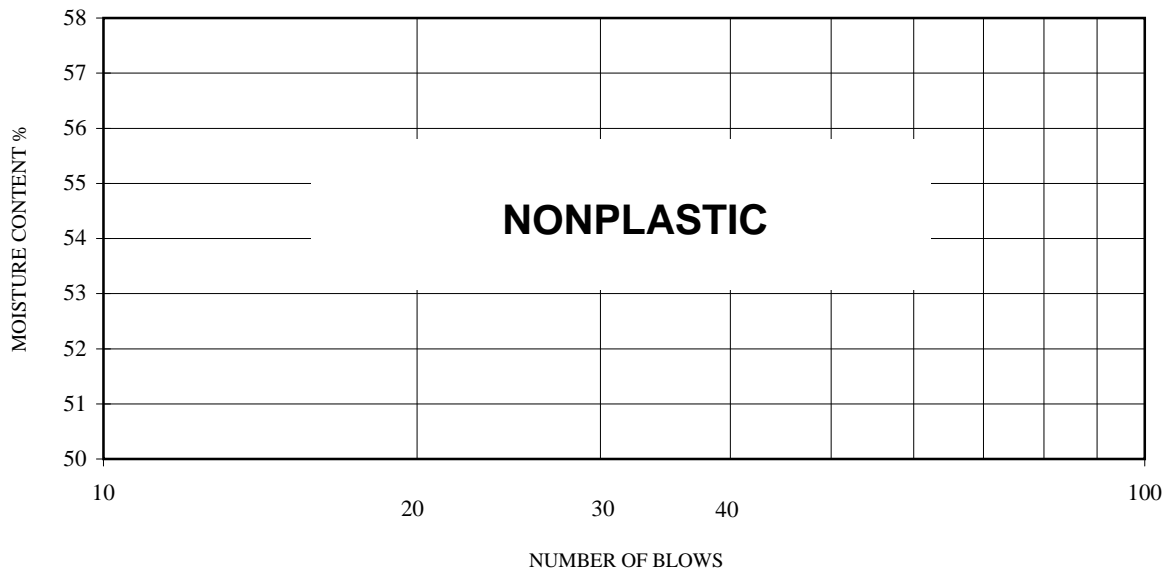
Number of Blows
Weight of Wet Sample & Tare, g
Weight of Dry Soil & Tare, g
Weight of Tare, g
Moisture Content, %

LIQUID LIMIT	
8	8
40.17	39.92
38.73	37.84
27.64	21.84
12.98	13.00

Liquid Limit Device ID #

56

NOTES: 1. Material appears to be Nonplastic. (Liquid Limit or Plastic Limit test could not be performed.)
2. Material passing No. 40 sieve was used for test.



Weight of Wet Soil & Tare, g
Weight of Dry Soil & Tare, g
Weight of Tare, g
Moisture Content, %

PLASTIC LIMIT	
39.01	39.67
37.30	38.38
23.90	28.20
12.76	12.67

Oven ID Number

15/496/610

Balance ID Number

139/563

Weight of Wet Soil & Tare, g
Weight of Dry Soil & Tare, g
Weight of Tare, g
Moisture Content, %

NATURAL MOISTURE	
486.20	
436.50	
105.80	
15.03	

LIQUID LIMIT (LL)

NP

PLASTIC LIMIT (PL)

NP

PLASTICITY INDEX (PI)

NP

LIQUIDITY INDEX (LI)

-

DESCRIPTION

Gray Silty Sand

USCS (ASTM D2487;2488)

SM

AASHTO (M 145)

NA



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Tested By	IH
Date	01/13/21
Checked By	<i>IB</i>

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37030MW23D	Depth/Elev.	47-48'
Location	MW-23D	Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

<i>As-Received Moisture Content</i>		<i>Moisture Content of Material Used for Hydrometer Analysis</i>	
Mass of Wet Sample & Tare, g	486.20	Mass of Wet Sample & Tare, g	455.10
Mass of Dry Sample & Tare, g	436.50	Mass of Dry Sample & Tare, g	426.70
Mass of Tare, g	105.80	Mass of Tare, g	136.90
Moisture Content, %	15.0	Moisture Content, %	9.8

Mass of Total Sample before separation on #4 sieve & Tare, g	4346.00	Mass of Sample used for hydrometer analysis, g	69.00
Mass of Tare, g	0.00	Dry Mass, g	62.84
Total Mass of Dry Sample, g	3958.11	% of Total Sample passing #4 sieve	98.4

SIEVE ANALYSIS

PORTION OF SAMPLE RETAINED ON #4 SIEVE

Mass of Tare, g	0.00		
Sieve Size	Sample & Tare, g	% RETAINED	%PASSING
12"	COBBLES	0.0	100.0
3"		0.0	100.0
2.5"	COARSE GRAVEL	0.0	100.0
2"		0.0	100.0
1.5"		0.0	100.0
1"		0.0	100.0
.75"		0.00	100.0
.5"	FINE GRAVEL	11.30	99.7
.375"		26.20	99.3
#4	COARSE SAND	61.40	98.4

PORTION OF SAMPLE PASSING #4 SIEVE (Hydrometer Backsieve)

Sieve Size	Cumulative Mass retained, g	% PASSING	
#10	MEDIUM SAND	1.56	96.0
#20	SAND	17.57	70.9
#40		36.16	41.8
#60	FINE SAND	49.45	21.0
#100		52.00	17.0
#200	FINES	54.00	13.9

Remarks

HYDROMETER ANALYSIS

Length of Dispersion Period	1 Minute
Mechanical Dispersion Device ID #	61
Amount of Dispersing Agent (ml)	125.0
Specific Gravity (assumed)	2.700
Specific Gravity (tested)	
Starting time	14:07

PARTICLE-SIZE ANALYSIS

% COBBLES	0.0	% MEDIUM SAND	54.2
% COARSE GRAVEL	0.0	% FINE SAND	27.9
% FINE GRAVEL	1.6	% FINES	13.9
% COARSE SAND	2.4	% TOTAL SAMPLE	100.0
% CLAY(<0.005mm)	0.3	% CLAY(<0.002mm)	-0.6

Date	Time	Testing time (min)	Reading	Temp (°C)	K	Composite Correction	Actual Reading	Effective Depth (cm)	a	Particle Diam. (mm)	Percent Passing
01/15/21	14:09	2	11.0	18.5	0.01361	8.0	3.0	15.9	0.99	0.0384	4.7
01/15/21	14:12	5	10.0	18.5	0.01361	8.0	2.0	16.0	0.99	0.0244	3.1
01/15/21	14:22	15	9.5	18.5	0.01361	8.0	1.5	16.1	0.99	0.0141	2.3
01/15/21	14:37	30	9.0	18.5	0.01361	8.0	1.0	16.2	0.99	0.0100	1.6
01/15/21	15:07	60	8.5	18.5	0.01361	8.0	0.5	16.3	0.99	0.0071	0.8
01/15/21	18:17	250	8.0	18.5	0.01361	8.0	0.0	16.4	0.99	0.0035	0.0
01/16/21	14:07	1440	7.5	18.5	0.01361	8.0	-0.5	16.5	0.99	0.0015	-0.8

Hydrometer 152H ID # 305527
Sieve Shaker ID # 555

Oven ID # 15/496/610
Balance ID# 139/142/700



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Tested By	IH
Date	01/13/21
Checked By	<i>IB</i>

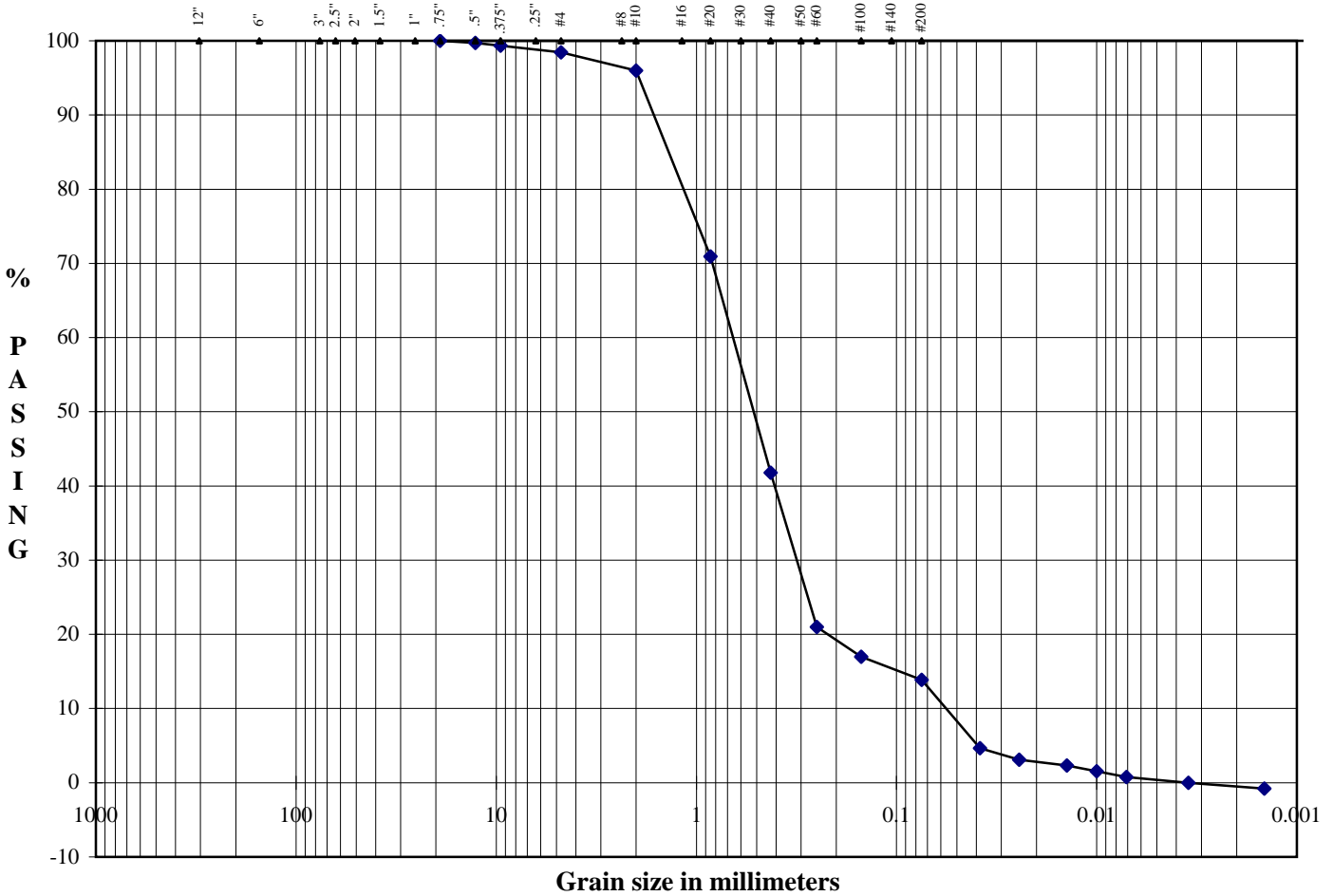
Client Pr. #	-
Pr. Name	Grumman Road Landfill
Sample ID	37030MW23D
Location	MW-23D

Lab. PR. #	2108-04-1
S. Type	Bag
Depth/Elev.	47-48'
Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

Particle-Size Analysis



Boulders	Cobbles	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
		Gravel		Sand			
							Fines

DESCRIPTION: Gray Silty Sand

D ₁₀	NA	mm
D ₃₀	NA	mm
D ₆₀	NA	mm
Cu	NA	
Cc	NA	

USCS (ASTM D2487; D2488) SM

Project's Specific % Passing	NA
Project's Specific Particle Size, mm	NA



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Tested By

EB

Date

01/18/21

Checked By

EB

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37031MW23D	Depth/Elev.	49-50'
Location	MW-23D	Add. Info	-

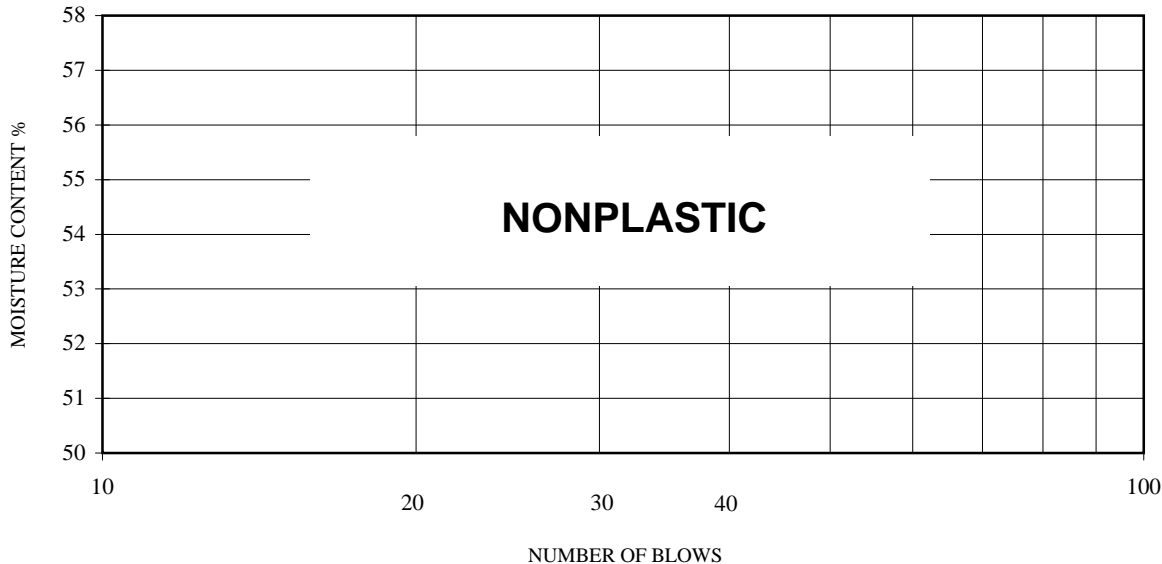
**ASTM D 4318
Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (Atterberg Limits)**

	LIQUID LIMIT	
Number of Blows	10	10
Weight of Wet Sample & Tare, g	37.85	41.89
Weight of Dry Soil & Tare, g	35.10	39.16
Weight of Tare, g	24.74	28.67
Moisture Content, %	26.54	26.02

Liquid Limit Device ID #

56

NOTES: 1. Material appears to be Nonplastic. (Liquid Limit or Plastic Limit test could not be performed.)
2. Material passing No. 40 sieve was used for test.



	PLASTIC LIMIT	
Weight of Wet Soil & Tare, g	39.60	45.71
Weight of Dry Soil & Tare, g	36.55	41.50
Weight of Tare, g	25.01	25.54
Moisture Content, %	26.43	26.38

Oven ID Number

15/496/610

Balance ID Number

139/563

	NATURAL MOISTURE
Weight of Wet Soil & Tare, g	465.80
Weight of Dry Soil & Tare, g	352.90
Weight of Tare, g	85.30
Moisture Content, %	42.19

LIQUID LIMIT (LL)

NP

PLASTIC LIMIT (PL)

NP

PLASTICITY INDEX (PI)

NP

LIQUIDITY INDEX (LI)

-

DESCRIPTION Gray Silty Sand

USCS (ASTM D2487;2488)

SM

AASHTO (M 145)

NA



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Tested By	IH
Date	01/13/21
Checked By	<i>IB</i>

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37031MW23D	Depth/Elev.	49-50'
Location	MW-23D	Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

<i>As-Received Moisture Content</i>		<i>Moisture Content of Material Used for Hydrometer Analysis</i>	
Mass of Wet Sample & Tare, g	465.80	Mass of Wet Sample & Tare, g	392.20
Mass of Dry Sample & Tare, g	352.90	Mass of Dry Sample & Tare, g	391.30
Mass of Tare, g	85.30	Mass of Tare, g	139.20
Moisture Content, %	42.2	Moisture Content, %	0.4
Mass of Total Sample before separation on #4 sieve & Tare, g	2587.70	Mass of Sample used for hydrometer analysis, g	62.00
Mass of Tare, g	0.00	Dry Mass, g	61.78
Total Mass of Dry Sample, g	2578.49	% of Total Sample passing #4 sieve	100.0

SIEVE ANALYSIS

<i>PORTION OF SAMPLE RETAINED ON #4 SIEVE</i>				<i>PORTION OF SAMPLE PASSING #4 SIEVE (Hydrometer Backsieve)</i>				
Mass of Tare, g	0.00							
Sieve Size	Sample & Tare, g	% RETAINED	% PASSING	Sieve Size	Cumulative Mass retained, g	% PASSING		
12"	COBBLES		0.0	100.0	#10	MEDIUM	0.27	99.6
3"			0.0	100.0	#20	SAND	0.40	99.4
2.5"	COARSE GRAVEL		0.0	100.0	#40		0.56	99.1
2"			0.0	100.0	#60	FINE SAND	0.87	98.6
1.5"			0.0	100.0	#100		9.80	84.1
1"			0.0	100.0	#200	FINES	43.96	28.8
.75"			0.0	100.0	Remarks			
.5"	FINE GRAVEL		0.0	100.0				
.375"			0.0	100.0				
#4	COARSE SAND	0.00	0.0	100.0				

HYDROMETER ANALYSIS				PARTICLE-SIZE ANALYSIS			
Length of Dispersion Period	1 Minute			% COBBLES	0.0	% MEDIUM SAND	0.5
Mechanical Dispersion Device ID #	61			% COARSE GRAVEL	0.0	% FINE SAND	70.2
Amount of Dispersing Agent (ml)	125.0			% FINE GRAVEL	0.0	% FINES	28.8
Specific Gravity (assumed)	2.700			% COARSE SAND	0.4	% TOTAL SAMPLE	100.0
Specific Gravity (tested)				% CLAY(<0.005mm)	15.6	% CLAY(<0.002mm)	9.7
Starting time	13:00						

Date	Time	Testing time (min)	Reading	Temp (°C)	K	Composite Correction	Actual Reading	Effective Depth (cm)	a	Particle Diam. (mm)	Percent Passing
01/17/21	13:02	2	23.0	18.5	0.01361	8.0	15.0	13.9	0.99	0.0359	24.0
01/17/21	13:05	5	22.0	18.5	0.01361	8.0	14.0	14.1	0.99	0.0228	22.4
01/17/21	13:15	15	21.0	18.5	0.01361	8.0	13.0	14.2	0.99	0.0133	20.8
01/17/21	13:30	30	20.0	18.5	0.01361	8.0	12.0	14.4	0.99	0.0094	19.2
01/17/21	14:00	60	19.0	18.5	0.01361	8.0	11.0	14.6	0.99	0.0067	17.6
01/17/21	17:10	250	16.5	18.5	0.01361	8.0	8.5	15.0	0.99	0.0033	13.6
01/18/21	13:00	1440	13.0	18.5	0.01361	8.0	5.0	15.6	0.99	0.0014	8.0

Hydrometer 152H ID # 305527
Sieve Shaker ID # 555

Oven ID # 15/496/610
Balance ID# 139/142/700



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Tested By: IH
Date: 01/13/21
Checked By: *IB*

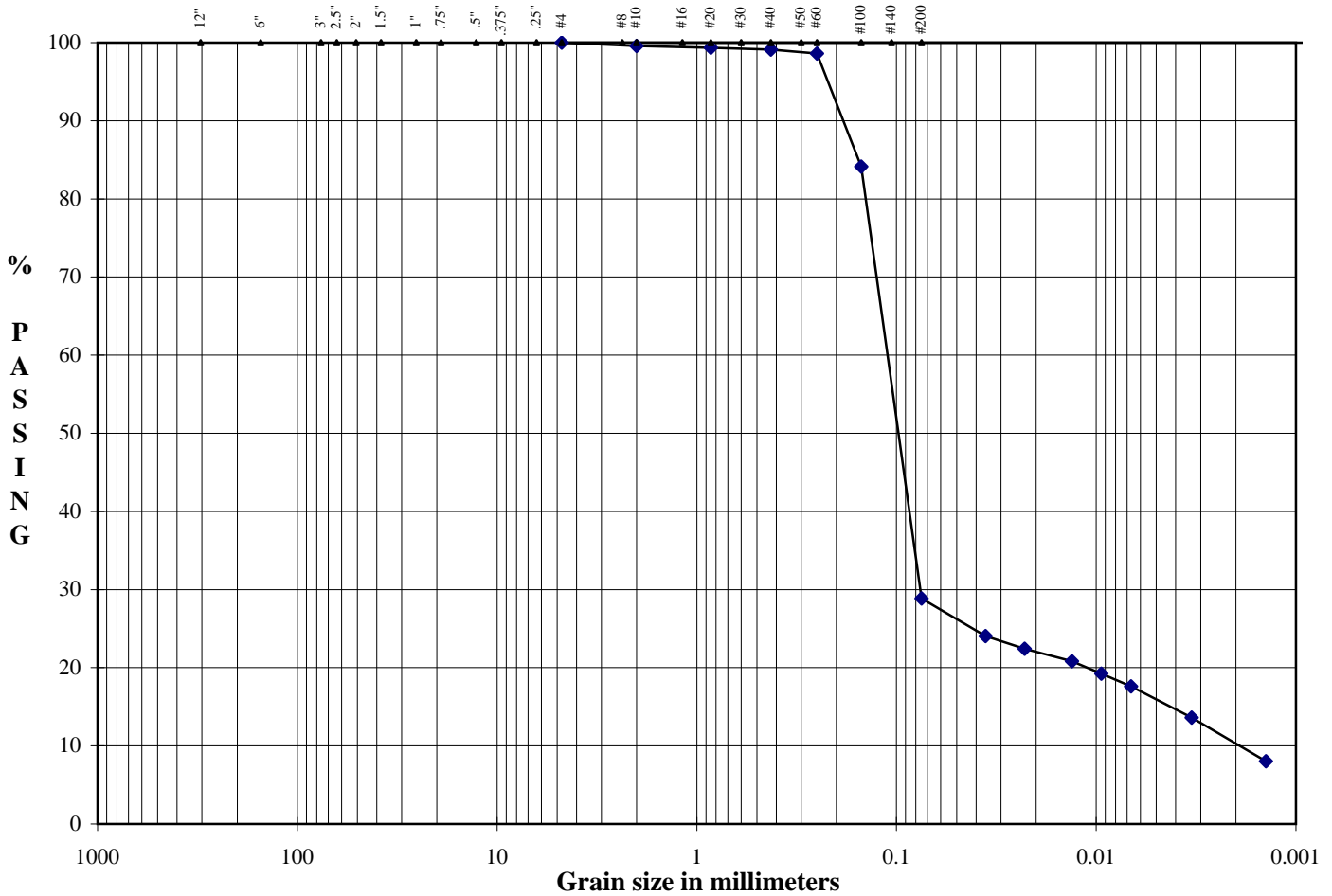
Client Pr. #	-
Pr. Name	Grumman Road Landfill
Sample ID	37031MW23D
Location	MW-23D

Lab. PR. #	2108-04-1
S. Type	Bag
Depth/Elev.	49-50'
Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

Particle-Size Analysis



Boulders	Cobbles	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
		Gravel		Sand			

DESCRIPTION: Gray Silty Sand

D ₁₀	NA	mm
D ₃₀	NA	mm
D ₆₀	NA	mm
Cu	NA	
Cc	NA	

USCS (ASTM D2487; D2488) SM

Project's Specific % Passing	NA
Project's Specific Particle Size, mm	NA



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Tested By

EB

Date

01/18/21

Checked By

EB

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37032MW23D	Depth/Elev.	57-58'
Location	MW-23D	Add. Info	-

**ASTM D 4318
Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (Atterberg Limits)**

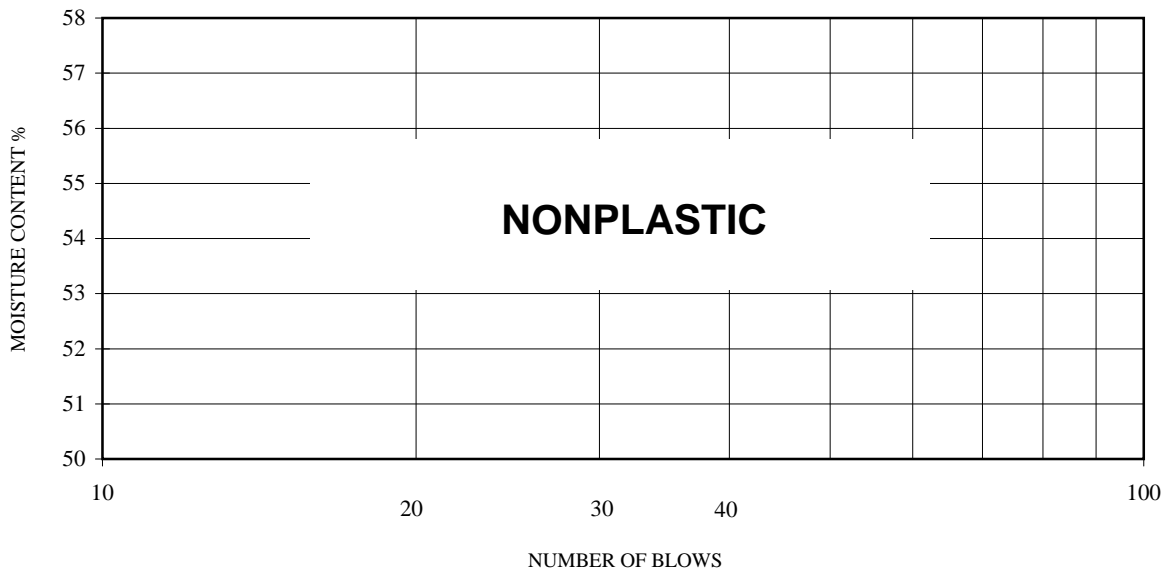
Number of Blows
Weight of Wet Sample & Tare, g
Weight of Dry Soil & Tare, g
Weight of Tare, g
Moisture Content, %

LIQUID LIMIT	
8	8
45.13	41.62
42.50	39.60
23.96	25.38
14.19	14.21

Liquid Limit Device ID #

56

NOTES: 1. Material appears to be Nonplastic. (Liquid Limit or Plastic Limit test could not be performed.)
2. Material passing No. 40 sieve was used for test.



Weight of Wet Soil & Tare, g
Weight of Dry Soil & Tare, g
Weight of Tare, g
Moisture Content, %

PLASTIC LIMIT	
42.03	44.81
39.90	42.25
25.08	24.14
14.37	14.14

Oven ID Number

15/496/610

Balance ID Number

139/563

Weight of Wet Soil & Tare, g
Weight of Dry Soil & Tare, g
Weight of Tare, g
Moisture Content, %

NATURAL MOISTURE	
400.30	
342.60	
92.80	
23.10	

LIQUID LIMIT (LL)

NP

PLASTIC LIMIT (PL)

NP

PLASTICITY INDEX (PI)

NP

LIQUIDITY INDEX (LI)

-

DESCRIPTION

Gray Silty Sand

USCS (ASTM D2487;2488)

SM

AASHTO (M 145)

NA



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Tested By **IH**

Date **01/13/21**

Checked By **IB**

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37032MW23D	Depth/Elev.	57-58'
Location	MW-23D	Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

<i>As-Received Moisture Content</i>		<i>Moisture Content of Material Used for Hydrometer Analysis</i>	
Mass of Wet Sample & Tare, g	400.30	Mass of Wet Sample & Tare, g	505.80
Mass of Dry Sample & Tare, g	342.60	Mass of Dry Sample & Tare, g	442.70
Mass of Tare, g	92.80	Mass of Tare, g	139.10
Moisture Content, %	23.1	Moisture Content, %	20.8

Mass of Total Sample before separation on #4 sieve & Tare, g	4972.90	Mass of Sample used for hydrometer analysis, g	71.00
Mass of Tare, g	0.00	Dry Mass, g	58.78
Total Mass of Dry Sample, g	4117.19	% of Total Sample passing #4 sieve	100.0

SIEVE ANALYSIS

PORTION OF SAMPLE RETAINED ON #4 SIEVE

Mass of Tare, g	0.00		
Sieve Size	Sample & Tare, g	% RETAINED	%PASSING
12"	COBBLES	0.0	100.0
3"		0.0	100.0
2.5"	COARSE GRAVEL	0.0	100.0
2"		0.0	100.0
1.5"		0.0	100.0
1"		0.0	100.0
.75"		0.0	100.0
.5"	FINE GRAVEL	0.0	100.0
.375"		0.0	100.0
#4	COARSE SAND	0.00	100.0

PORTION OF SAMPLE PASSING #4 SIEVE (Hydrometer Backsieve)

Sieve Size	Cumulative Mass retained, g	% PASSING	
#10	MEDIUM SAND	0.07	99.9
#20		0.76	98.7
#40		2.73	95.4
#60	FINE SAND	3.09	94.7
#100		6.50	88.9
#200	FINES	49.49	15.8

Remarks

HYDROMETER ANALYSIS

Length of Dispersion Period	1 Minute
Mechanical Dispersion Device ID #	61
Amount of Dispersing Agent (ml)	125.0
Specific Gravity (assumed)	2.700
Specific Gravity (tested)	
Starting time	13:02

PARTICLE-SIZE ANALYSIS

% COBBLES	0.0	% MEDIUM SAND	4.5
% COARSE GRAVEL	0.0	% FINE SAND	79.5
% FINE GRAVEL	0.0	% FINES	15.8
% COARSE SAND	0.1	% TOTAL SAMPLE	100.0
% CLAY(<0.005mm)	5.0	% CLAY(<0.002mm)	3.0

Date	Time	Testing time (min)	Reading	Temp (°C)	K	Composite Correction	Actual Reading	Effective Depth (cm)	a	Particle Diam. (mm)	Percent Passing
01/17/21	13:04	2	15.0	18.5	0.01361	8.0	7.0	15.2	0.99	0.0375	11.8
01/17/21	13:07	5	14.5	18.5	0.01361	8.0	6.5	15.3	0.99	0.0238	10.9
01/17/21	13:17	15	14.0	18.5	0.01361	8.0	6.0	15.4	0.99	0.0138	10.1
01/17/21	13:32	30	13.5	18.5	0.01361	8.0	5.5	15.5	0.99	0.0098	9.3
01/17/21	14:02	60	11.5	18.5	0.01361	8.0	3.5	15.8	0.99	0.0070	5.9
01/17/21	17:12	250	10.5	18.5	0.01361	8.0	2.5	16.0	0.99	0.0034	4.2
01/18/21	13:02	1440	9.5	18.5	0.01361	8.0	1.5	16.1	0.99	0.0014	2.5

Hydrometer 152H ID #	305527
Sieve Shaker ID #	555

Oven ID #	15/496/610
Balance ID#	139/142/700



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Tested By	IH
Date	01/13/21
Checked By	<i>IB</i>

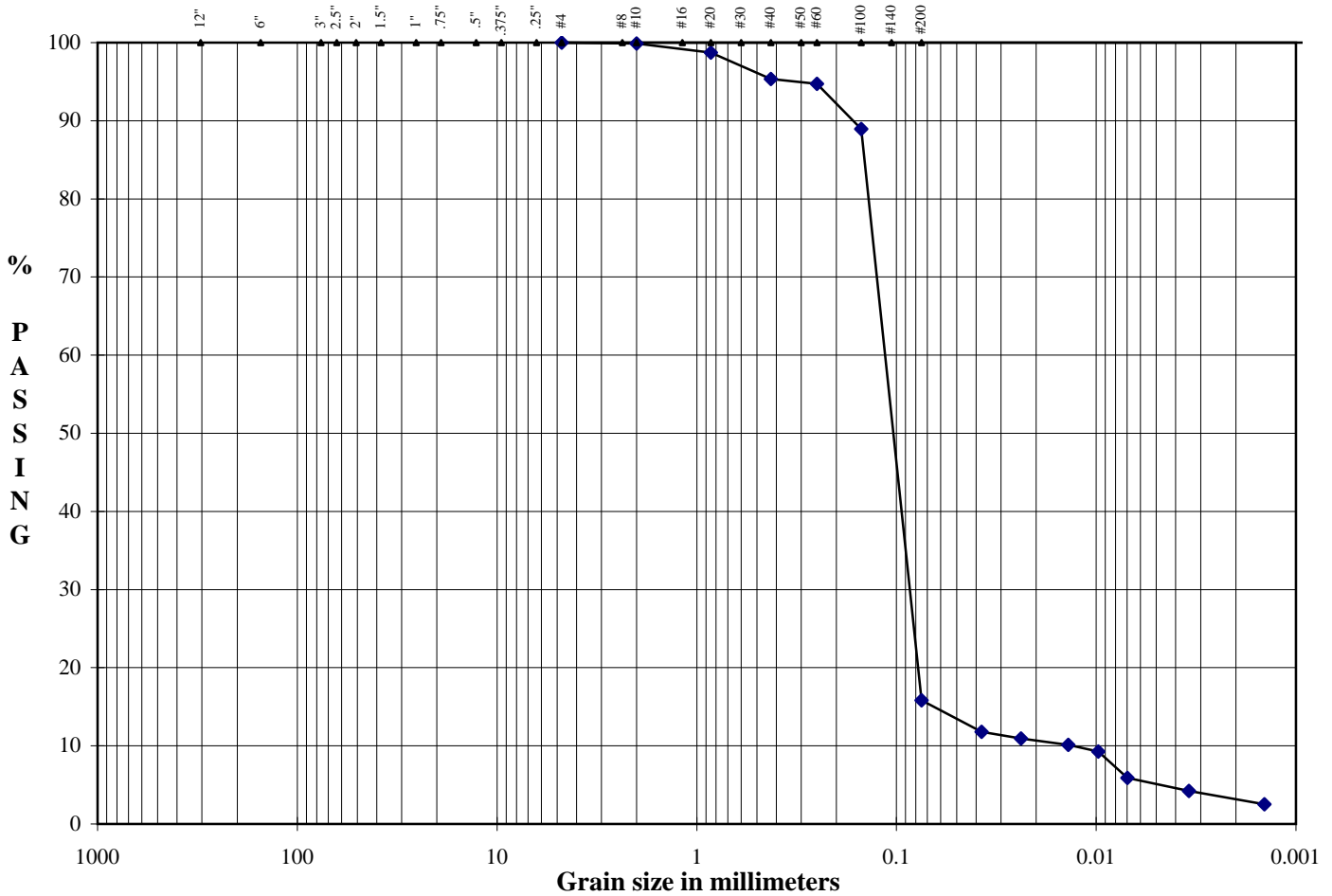
Client Pr. #	-
Pr. Name	Grumman Road Landfill
Sample ID	37032MW23D
Location	MW-23D

Lab. PR. #	2108-04-1
S. Type	Bag
Depth/Elev.	57-58'
Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

Particle-Size Analysis



Boulders	Cobbles	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
		Gravel		Sand			

DESCRIPTION: Gray Silty Sand

D ₁₀	NA	mm
D ₃₀	NA	mm
D ₆₀	NA	mm
Cu	NA	
Cc	NA	

USCS (ASTM D2487; D2488) SM

Project's Specific % Passing	NA
Project's Specific Particle Size, mm	NA



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Tested By

EB

Date

01/18/21

Checked By

EB

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37033MW24D	Depth/Elev.	18-19'
Location	MW-24D	Add. Info	-

**ASTM D 4318
Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (Atterberg Limits)**

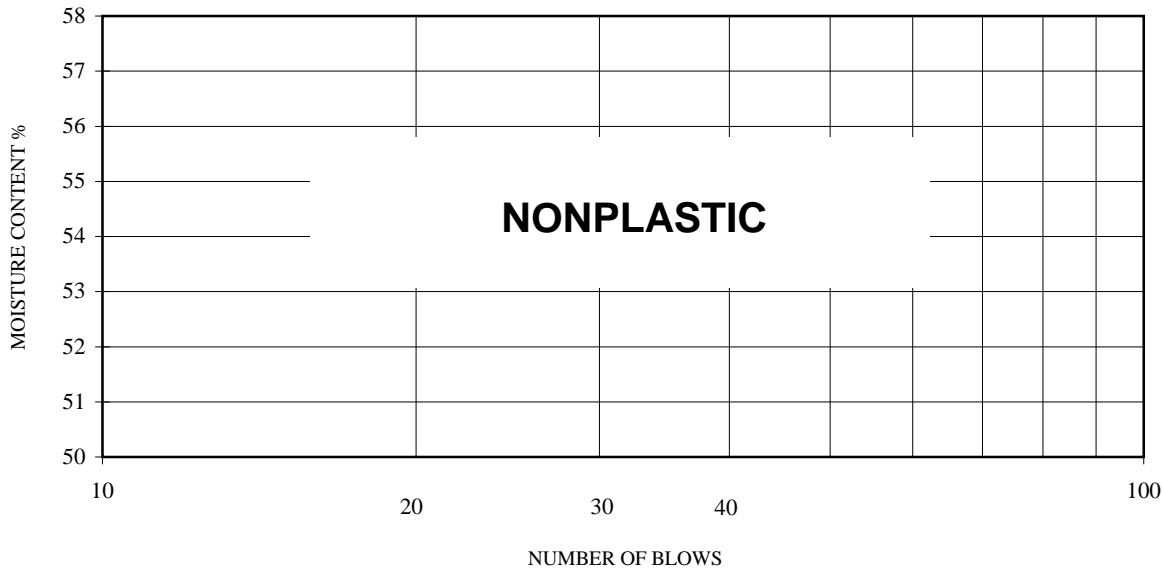
Number of Blows
Weight of Wet Sample & Tare, g
Weight of Dry Soil & Tare, g
Weight of Tare, g
Moisture Content, %

LIQUID LIMIT	
5	5
44.01	48.23
39.60	43.89
22.84	27.28
26.31	26.13

Liquid Limit Device ID #

56

NOTES: 1. Material appears to be Nonplastic. (Liquid Limit or Plastic Limit test could not be performed.)
2. Material passing No. 40 sieve was used for test.



Weight of Wet Soil & Tare, g
Weight of Dry Soil & Tare, g
Weight of Tare, g
Moisture Content, %

PLASTIC LIMIT	
44.12	51.16
39.73	45.45
23.02	23.43
26.27	25.93

Oven ID Number

15/496/610

Balance ID Number

139/563

Weight of Wet Soil & Tare, g
Weight of Dry Soil & Tare, g
Weight of Tare, g
Moisture Content, %

NATURAL MOISTURE	
428.30	
384.00	
108.30	
16.07	

LIQUID LIMIT (LL)

NP

PLASTIC LIMIT (PL)

NP

PLASTICITY INDEX (PI)

NP

LIQUIDITY INDEX (LI)

-

DESCRIPTION

Yellow Silty Sand

USCS (ASTM D2487;2488)

SM

AASHTO (M 145)

NA



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Web: www.test-llc.com



Tested By

IH

Date

01/13/21

Checked By

IB

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37033MW24D	Depth/Elev.	18-19'
Location	MW-24D	Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

<i>As-Received Moisture Content</i>		<i>Moisture Content of Material Used for Hydrometer Analysis</i>	
Mass of Wet Sample & Tare, g	428.30	Mass of Wet Sample & Tare, g	382.90
Mass of Dry Sample & Tare, g	384.00	Mass of Dry Sample & Tare, g	353.70
Mass of Tare, g	108.30	Mass of Tare, g	138.50
Moisture Content, %	16.1	Moisture Content, %	13.6

Mass of Total Sample before separation on #4 sieve & Tare, g	3725.40	Mass of Sample used for hydrometer analysis, g	70.00
Mass of Tare, g	0.00	Dry Mass, g	61.64
Total Mass of Dry Sample, g	3280.30	% of Total Sample passing #4 sieve	100.0

SIEVE ANALYSIS

PORION OF SAMPLE RETAINED ON #4 SIEVE

Mass of Tare, g	0.00		
Sieve Size	Sample & Tare, g	% RETAINED	%PASSING
12"	COBBLES	0.0	100.0
3"		0.0	100.0
2.5"	COARSE GRAVEL	0.0	100.0
2"		0.0	100.0
1.5"		0.0	100.0
1"		0.0	100.0
.75"		0.0	100.0
.5"	FINE GRAVEL	0.0	100.0
.375"		0.0	100.0
#4	COARSE SAND	0.00	100.0

PORION OF SAMPLE PASSING #4 SIEVE (Hydrometer Backsieve)

Sieve Size	Cumulative Mass retained, g	% PASSING	
#10	MEDIUM SAND	0.32	99.5
#20	SAND	0.77	98.8
#40		1.36	97.8
#60	FINE SAND	1.85	97.0
#100		3.66	94.1
#200	FINES	40.32	34.6

Remarks

HYDROMETER ANALYSIS

Length of Dispersion Period	1 Minute
Mechanical Dispersion Device ID #	61
Amount of Dispersing Agent (ml)	125.0
Specific Gravity (assumed)	2.700
Specific Gravity (tested)	
Starting time	13:04

PARTICLE-SIZE ANALYSIS

% COBBLES	0.0	% MEDIUM SAND	1.7
% COARSE GRAVEL	0.0	% FINE SAND	63.2
% FINE GRAVEL	0.0	% FINES	34.6
% COARSE SAND	0.5	% TOTAL SAMPLE	100.0
% CLAY(<0.005mm)	7.1	% CLAY(<0.002mm)	2.7

Date	Time	Testing time (min)	Reading	Temp (°C)	K	Composite Correction	Actual Reading	Effective Depth (cm)	a	Particle Diam. (mm)	Percent Passing
01/17/21	13:06	2	19.5	18.5	0.01361	8.0	11.5	14.5	0.99	0.0366	18.5
01/17/21	13:09	5	18.0	18.5	0.01361	8.0	10.0	14.7	0.99	0.0234	16.1
01/17/21	13:19	15	16.0	18.5	0.01361	8.0	8.0	15.1	0.99	0.0136	12.8
01/17/21	13:34	30	15.0	18.5	0.01361	8.0	7.0	15.2	0.99	0.0097	11.2
01/17/21	14:04	60	13.5	18.5	0.01361	8.0	5.5	15.5	0.99	0.0069	8.8
01/17/21	17:14	250	11.5	18.5	0.01361	8.0	3.5	15.8	0.99	0.0034	5.6
01/18/21	13:04	1440	9.0	18.5	0.01361	8.0	1.0	16.2	0.99	0.0014	1.6

Hydrometer 152H ID #	305527
Sieve Shaker ID #	555

Oven ID #	15/496/610
Balance ID#	139/142/700



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Tested By	IH
Date	01/13/21
Checked By	<i>IB</i>

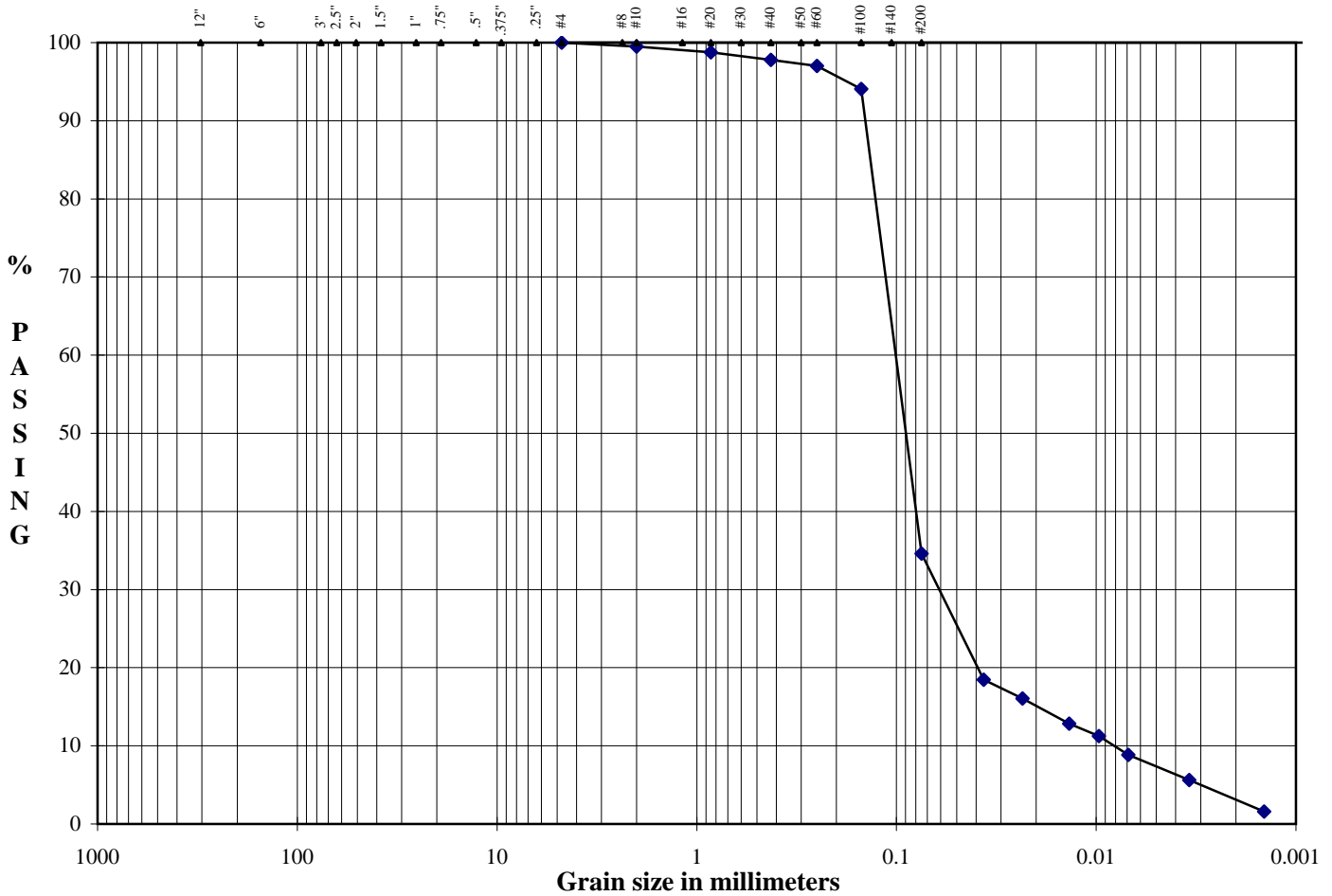
Client Pr. #	-
Pr. Name	Grumman Road Landfill
Sample ID	37033MW24D
Location	MW-24D

Lab. PR. #	2108-04-1
S. Type	Bag
Depth/Elev.	18-19'
Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

Particle-Size Analysis



Boulders	Cobbles	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
		Gravel		Sand			

DESCRIPTION: Yellow Silty Sand

D ₁₀	NA	mm
D ₃₀	NA	mm
D ₆₀	NA	mm
Cu	NA	
Cc	NA	

USCS (ASTM D2487; D2488) SM

Project's Specific % Passing	NA
Project's Specific Particle Size, mm	NA



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Tested By

EB

Date

01/18/21

Checked By

EB

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37034MW24D	Depth/Elev.	23-24'
Location	MW-24D	Add. Info	-

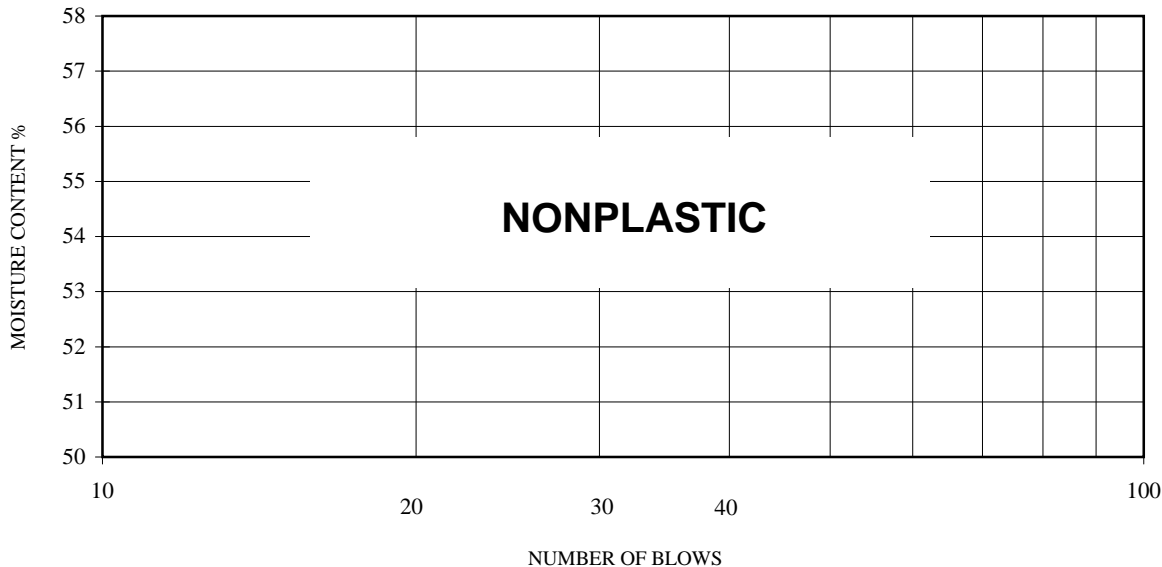
**ASTM D 4318
Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (Atterberg Limits)**

	LIQUID LIMIT	
Number of Blows	6	6
Weight of Wet Sample & Tare, g	38.34	40.56
Weight of Dry Soil & Tare, g	36.28	37.93
Weight of Tare, g	24.86	23.68
Moisture Content, %	18.04	18.46

Liquid Limit Device ID #

56

NOTES: 1. Material appears to be Nonplastic. (Liquid Limit or Plastic Limit test could not be performed.)
2. Material passing No. 40 sieve was used for test.



	PLASTIC LIMIT	
Weight of Wet Soil & Tare, g	41.52	37.20
Weight of Dry Soil & Tare, g	38.30	35.10
Weight of Tare, g	21.04	23.58
Moisture Content, %	18.66	18.23

Oven ID Number

15/496/610

Balance ID Number

139/563

	NATURAL MOISTURE
Weight of Wet Soil & Tare, g	418.50
Weight of Dry Soil & Tare, g	337.90
Weight of Tare, g	89.20
Moisture Content, %	32.41

LIQUID LIMIT (LL)

NP

PLASTIC LIMIT (PL)

NP

PLASTICITY INDEX (PI)

NP

LIQUIDITY INDEX (LI)

-

DESCRIPTION: Yellow Silty Sand

USCS (ASTM D2487;2488)

SM

AASHTO (M 145)

NA



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**AASHTO
ACCREDITED**

Tested By **IH**

Date **01/13/21**

Checked By **IB**

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37034MW24D	Depth/Elev.	23-24'
Location	MW-24D	Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

<i>As-Received Moisture Content</i>		<i>Moisture Content of Material Used for Hydrometer Analysis</i>	
Mass of Wet Sample & Tare, g	418.50	Mass of Wet Sample & Tare, g	557.60
Mass of Dry Sample & Tare, g	337.90	Mass of Dry Sample & Tare, g	471.70
Mass of Tare, g	89.20	Mass of Tare, g	139.10
Moisture Content, %	32.4	Moisture Content, %	25.8

Mass of Total Sample before separation on #4 sieve & Tare, g	5273.00	Mass of Sample used for hydrometer analysis, g	70.40
Mass of Tare, g	0.00	Dry Mass, g	55.95
Total Mass of Dry Sample, g	4190.68	% of Total Sample passing #4 sieve	100.0

SIEVE ANALYSIS

PORTION OF SAMPLE RETAINED ON #4 SIEVE

PORTION OF SAMPLE PASSING #4 SIEVE (Hydrometer Backsieve)

Mass of Tare, g **0.00**

Sieve Size	Sample & Tare, g	% RETAINED	% PASSING
12"	COBBLES	0.0	100.0
3"		0.0	100.0
2.5"	COARSE GRAVEL	0.0	100.0
2"		0.0	100.0
1.5"		0.0	100.0
1"		0.0	100.0
.75"		0.0	100.0
.5"	FINE GRAVEL	0.0	100.0
.375"		0.0	100.0
#4	COARSE SAND	0.00	100.0

Sieve Size	Cumulative		
	Mass retained, g	% PASSING	
#10	MEDIUM SAND	0.00	100.0
#20	SAND	0.05	99.9
#40		0.19	99.7
#60	FINE SAND	0.55	99.0
#100		10.34	81.5
#200	FINES	46.58	16.7

Remarks

HYDROMETER ANALYSIS

PARTICLE-SIZE ANALYSIS

Length of Dispersion Period	1 Minute
Mechanical Dispersion Device ID #	61
Amount of Dispersing Agent (ml)	125.0
Specific Gravity (assumed)	2.700
Specific Gravity (tested)	
Starting time	13:06

% COBBLES	0.0	% MEDIUM SAND	0.3
% COARSE GRAVEL	0.0	% FINE SAND	82.9
% FINE GRAVEL	0.0	% FINES	16.7
% COARSE SAND	0.0	% TOTAL SAMPLE	100.0
% CLAY(<0.005mm)	8.8	% CLAY(<0.002mm)	5.4

Date	Time	Testing time (min)	Reading	Temp (°C)	K	Composite Correction	Actual Reading	Effective Depth (cm)	a	Particle Diam. (mm)	Percent Passing
01/17/21	13:08	2	15.5	18.5	0.01361	8.0	7.5	15.1	0.99	0.0374	13.3
01/17/21	13:11	5	15.0	18.5	0.01361	8.0	7.0	15.2	0.99	0.0237	12.4
01/17/21	13:21	15	14.5	18.5	0.01361	8.0	6.5	15.3	0.99	0.0137	11.5
01/17/21	13:36	30	14.0	18.5	0.01361	8.0	6.0	15.4	0.99	0.0097	10.6
01/17/21	14:06	60	13.5	18.5	0.01361	8.0	5.5	15.5	0.99	0.0069	9.7
01/17/21	17:16	250	12.5	18.5	0.01361	8.0	4.5	15.6	0.99	0.0034	8.0
01/18/21	13:06	1440	10.5	18.5	0.01361	8.0	2.5	16.0	0.99	0.0014	4.4

Hydrometer 152H ID #	305527
Sieve Shaker ID #	555

Oven ID #	15/496/610
Balance ID#	139/142/700



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Tested By	IH
Date	01/13/21
Checked By	<i>IB</i>

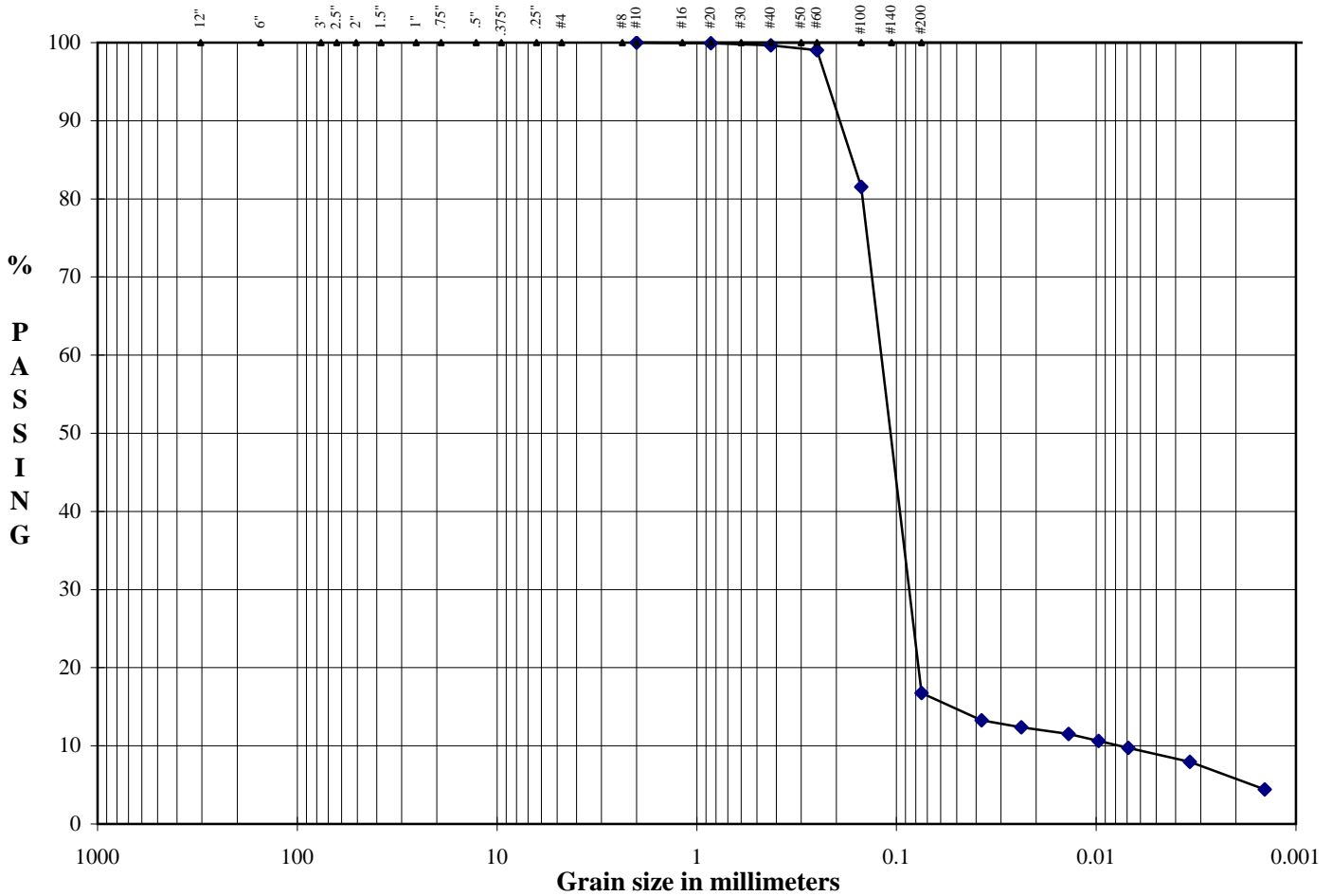
Client Pr. #	-
Pr. Name	Grumman Road Landfill
Sample ID	37034MW24D
Location	MW-24D

Lab. PR. #	2108-04-1
S. Type	Bag
Depth/Elev.	23-24'
Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

Particle-Size Analysis



Boulders	Cobbles	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
		Gravel		Sand			

DESCRIPTION: Yellow Silty Sand

D ₁₀	NA	mm
D ₃₀	NA	mm
D ₆₀	NA	mm
Cu	NA	
Cc	NA	

USCS (ASTM D2487; D2488) SM

Project's Specific % Passing	NA
Project's Specific Particle Size, mm	NA



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Tested By

EB

Date

01/18/21

Checked By

EB

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37035MW24D	Depth/Elev.	48-49'
Location	MW-24D	Add. Info	-

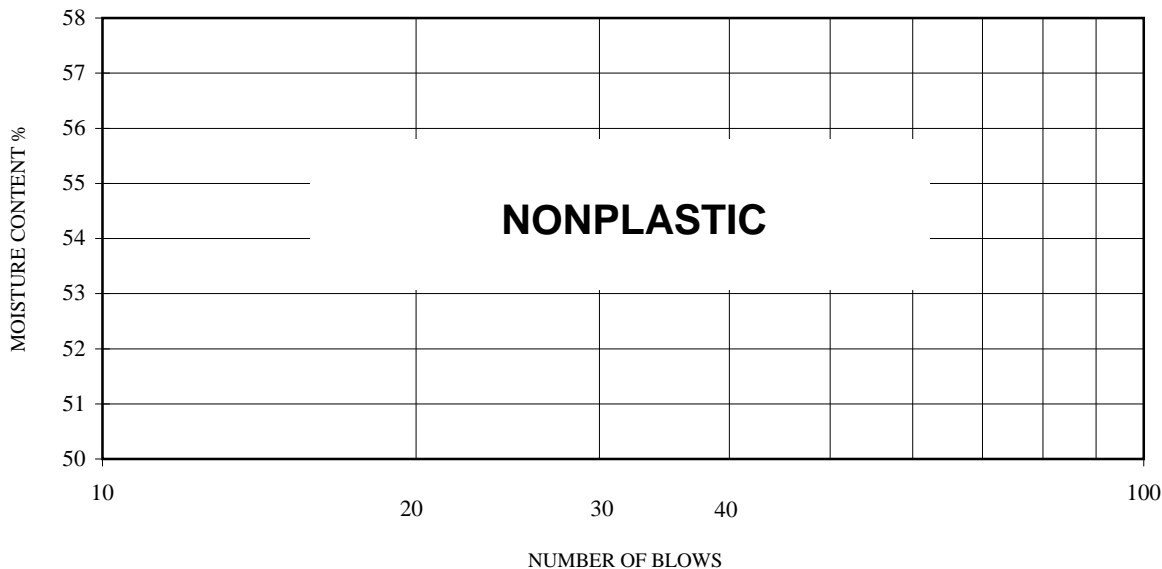
**ASTM D 4318
Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (Atterberg Limits)**

	LIQUID LIMIT	
Number of Blows	7	7
Weight of Wet Sample & Tare, g	41.99	45.34
Weight of Dry Soil & Tare, g	39.55	42.70
Weight of Tare, g	23.08	25.21
Moisture Content, %	14.81	15.09

Liquid Limit Device ID #

56

NOTES: 1. Material appears to be Nonplastic. (Liquid Limit or Plastic Limit test could not be performed.)
2. Material passing No. 40 sieve was used for test.



	PLASTIC LIMIT	
Weight of Wet Soil & Tare, g	39.58	42.53
Weight of Dry Soil & Tare, g	37.80	40.52
Weight of Tare, g	25.57	26.71
Moisture Content, %	14.55	14.55

Oven ID Number

15/496/610

Balance ID Number

139/563

	NATURAL MOISTURE
Weight of Wet Soil & Tare, g	399.50
Weight of Dry Soil & Tare, g	316.50
Weight of Tare, g	100.40
Moisture Content, %	38.41

LIQUID LIMIT (LL)

NP

PLASTIC LIMIT (PL)

NP

PLASTICITY INDEX (PI)

NP

LIQUIDITY INDEX (LI)

-

DESCRIPTION: Gray Silty Sand

USCS (ASTM D2487;2488)

SM

AASHTO (M 145)

NA



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Tested By

IH

Date

01/13/21

Checked By

IB

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37035MW24D	Depth/Elev.	48-49'
Location	MW-24D	Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

<i>As-Received Moisture Content</i>		<i>Moisture Content of Material Used for Hydrometer Analysis</i>	
Mass of Wet Sample & Tare, g	399.50	Mass of Wet Sample & Tare, g	373.90
Mass of Dry Sample & Tare, g	316.50	Mass of Dry Sample & Tare, g	372.20
Mass of Tare, g	100.40	Mass of Tare, g	101.50
Moisture Content, %	38.4	Moisture Content, %	0.6

Mass of Total Sample before separation on #4 sieve & Tare, g	2340.00	Mass of Sample used for hydrometer analysis, g	61.00
Mass of Tare, g	0.00	Dry Mass, g	60.62
Total Mass of Dry Sample, g	2325.40	% of Total Sample passing #4 sieve	100.0

SIEVE ANALYSIS

PORTION OF SAMPLE RETAINED ON #4 SIEVE

Mass of Tare, g	0.00		
Sieve Size	Sample & Tare, g	% RETAINED	%PASSING
12"	COBBLES	0.0	100.0
3"		0.0	100.0
2.5"	COARSE GRAVEL	0.0	100.0
2"		0.0	100.0
1.5"		0.0	100.0
1"		0.0	100.0
.75"		0.0	100.0
.5"	FINE GRAVEL	0.0	100.0
.375"		0.0	100.0
#4	COARSE SAND	0.00	100.0

PORTION OF SAMPLE PASSING #4 SIEVE (Hydrometer Backsieve)

Sieve Size	Cumulative Mass retained, g	% PASSING	
#10	MEDIUM SAND	0.16	99.7
#20	SAND	0.42	99.3
#40		0.96	98.4
#60	FINE SAND	1.31	97.8
#100		9.21	84.8
#200	FINES	44.41	26.7

Remarks

HYDROMETER ANALYSIS

Length of Dispersion Period	1 Minute
Mechanical Dispersion Device ID #	61
Amount of Dispersing Agent (ml)	125.0
Specific Gravity (assumed)	2.700
Specific Gravity (tested)	
Starting time	13:08

PARTICLE-SIZE ANALYSIS

% COBBLES	0.0	% MEDIUM SAND	1.3
% COARSE GRAVEL	0.0	% FINE SAND	71.7
% FINE GRAVEL	0.0	% FINES	26.7
% COARSE SAND	0.3	% TOTAL SAMPLE	100.0
% CLAY(<0.005mm)	15.9	% CLAY(<0.002mm)	11.1

Date	Time	Testing time (min)	Reading	Temp (°C)	K	Composite Correction	Actual Reading	Effective Depth (cm)	a	Particle Diam. (mm)	Percent Passing
01/17/21	13:10	2	22.0	18.5	0.01361	8.0	14.0	14.1	0.99	0.0361	22.9
01/17/21	13:13	5	21.0	18.5	0.01361	8.0	13.0	14.2	0.99	0.0230	21.2
01/17/21	13:23	15	20.0	18.5	0.01361	8.0	12.0	14.4	0.99	0.0133	19.6
01/17/21	13:38	30	19.5	18.5	0.01361	8.0	11.5	14.5	0.99	0.0095	18.8
01/17/21	14:08	60	19.0	18.5	0.01361	8.0	11.0	14.6	0.99	0.0067	18.0
01/17/21	17:18	250	16.5	18.5	0.01361	8.0	8.5	15.0	0.99	0.0033	13.9
01/18/21	13:08	1440	14.0	18.5	0.01361	8.0	6.0	15.4	0.99	0.0014	9.8

Hydrometer 152H ID #	305527
Sieve Shaker ID #	555

Oven ID #	15/496/610
Balance ID#	139/142/700



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Web: www.test-llc.com



Tested By: IH
Date: 01/13/21
Checked By: *IB*

Client Pr. #	-
Pr. Name	Grumman Road Landfill
Sample ID	37035MW24D
Location	MW-24D

Lab. PR. #	2108-04-1
S. Type	Bag
Depth/Elev.	48-49'
Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

Particle-Size Analysis



Boulders	Cobbles	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
		Gravel		Sand			

DESCRIPTION: Gray Silty Sand

D ₁₀	NA	mm
D ₃₀	NA	mm
D ₆₀	NA	mm
Cu	NA	
Cc	NA	

USCS (ASTM D2487; D2488) SM

Project's Specific % Passing	NA
Project's Specific Particle Size, mm	NA



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Tested By

EB

Date

01/18/21

Checked By

EB

Client Pr. #	-
Pr. Name	Grumman Road Landfill
Sample ID	37036MW24D
Location	MW-24D

Lab. PR. #	2108-04-1
S. Type	Bag
Depth/Elev.	59-60'
Add. Info	-

ASTM D 4318

Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (Atterberg Limits)

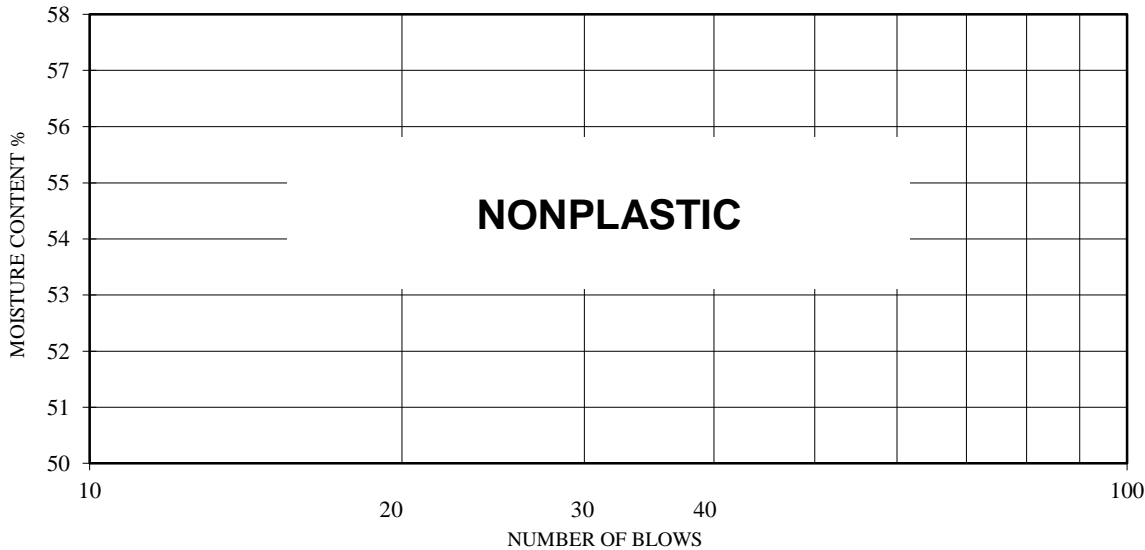
Number of Blows
Weight of Wet Sample & Tare, g
Weight of Dry Soil & Tare, g
Weight of Tare, g
Moisture Content, %

LIQUID LIMIT	
8	8
43.03	44.45
39.42	40.48
24.72	23.96
24.56	24.03

Liquid Limit Device ID #

56

NOTES: 1. Material appears to be Nonplastic. (Liquid Limit or Plastic Limit test could not be performed.)
2. Material passing No. 40 sieve was used for test.



Weight of Wet Soil & Tare, g
Weight of Dry Soil & Tare, g
Weight of Tare, g
Moisture Content, %

PLASTIC LIMIT	
40.44	49.05
37.00	44.85
22.75	27.47
24.14	24.17

Oven ID Number

15/496/610

Balance ID Number

139/563

Weight of Wet Soil & Tare, g
Weight of Dry Soil & Tare, g
Weight of Tare, g
Moisture Content, %

NATURAL MOISTURE

405.10
340.00
89.20
25.96

LIQUID LIMIT (LL)

NP

PLASTIC LIMIT (PL)

NP

PLASTICITY INDEX (PI)

NP

LIQUIDITY INDEX (LI)

-

DESCRIPTION

Gray Silty Sand

USCS (ASTM D2487;2488)

SM

AASHTO (M 145)

NA



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Tested By

IH

Date

01/13/21

Checked By

IB

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37036MW24D	Depth/Elev.	59-60'
Location	MW-24D	Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

<i>As-Received Moisture Content</i>		<i>Moisture Content of Material Used for Hydrometer Analysis</i>	
Mass of Wet Sample & Tare, g	405.10	Mass of Wet Sample & Tare, g	435.60
Mass of Dry Sample & Tare, g	340.00	Mass of Dry Sample & Tare, g	383.70
Mass of Tare, g	89.20	Mass of Tare, g	137.10
Moisture Content, %	26.0	Moisture Content, %	21.0
Mass of Total Sample before separation on #4 sieve & Tare, g	4078.60	Mass of Sample used for hydrometer analysis, g	70.00
Mass of Tare, g	0.00	Dry Mass, g	57.83
Total Mass of Dry Sample, g	3369.46	% of Total Sample passing #4 sieve	100.0

SIEVE ANALYSIS

<i>PORTION OF SAMPLE RETAINED ON #4 SIEVE</i>				<i>PORTION OF SAMPLE PASSING #4 SIEVE (Hydrometer Backsieve)</i>				
Mass of Tare, g	0.00							
Sieve Size	Sample & Tare, g	% RETAINED	% PASSING	Sieve Size	Cumulative Mass retained, g	% PASSING		
12"	COBBLES		0.0	100.0	#10	MEDIUM	0.04	99.9
3"			0.0	100.0	#20	SAND	0.47	99.2
2.5"	COARSE GRAVEL		0.0	100.0	#40		1.54	97.3
2"			0.0	100.0	#60	FINE SAND	1.81	96.9
1.5"			0.0	100.0	#100		4.62	92.0
1"			0.0	100.0	#200	FINES	49.76	14.0
.75"			0.0	100.0	Remarks			
.5"	FINE GRAVEL		0.0	100.0				
.375"			0.0	100.0				
#4	COARSE SAND	0.00	0.0	100.0				

HYDROMETER ANALYSIS				PARTICLE-SIZE ANALYSIS			
Length of Dispersion Period	1 Minute			% COBBLES	0.0	% MEDIUM SAND	2.6
Mechanical Dispersion Device ID #	61			% COARSE GRAVEL	0.0	% FINE SAND	83.4
Amount of Dispersing Agent (ml)	125.0			% FINE GRAVEL	0.0	% FINES	14.0
Specific Gravity (assumed)	2.700			% COARSE SAND	0.1	% TOTAL SAMPLE	100.0
Specific Gravity (tested)				% CLAY(<0.005mm)	5.0	% CLAY(<0.002mm)	2.4
Starting time	13:10						

Date	Time	Testing time (min)	Reading	Temp (°C)	K	Composite Correction	Actual Reading	Effective Depth (cm)	a	Particle Diam. (mm)	Percent Passing
01/17/21	13:12	2	14.0	18.5	0.01361	8.0	6.0	15.4	0.99	0.0377	10.3
01/17/21	13:15	5	13.0	18.5	0.01361	8.0	5.0	15.6	0.99	0.0240	8.6
01/17/21	13:25	15	12.5	18.5	0.01361	8.0	4.5	15.6	0.99	0.0139	7.7
01/17/21	13:40	30	12.0	18.5	0.01361	8.0	4.0	15.7	0.99	0.0099	6.8
01/17/21	14:10	60	11.5	18.5	0.01361	8.0	3.5	15.8	0.99	0.0070	6.0
01/17/21	17:20	250	10.5	18.5	0.01361	8.0	2.5	16.0	0.99	0.0034	4.3
01/18/21	13:10	1440	9.0	18.5	0.01361	8.0	1.0	16.2	0.99	0.0014	1.7

Hydrometer 152H ID # 305527
Sieve Shaker ID # 555

Oven ID # 15/496/610
Balance ID# 139/142/700



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SOIL
TESTS, LLC

1874 Forge Street Tucker, GA 30084

Phone: 770-938-8233

Fax: 770-923-8973

Web: www.test-llc.com



Tested By **IH**

Date **01/13/21**

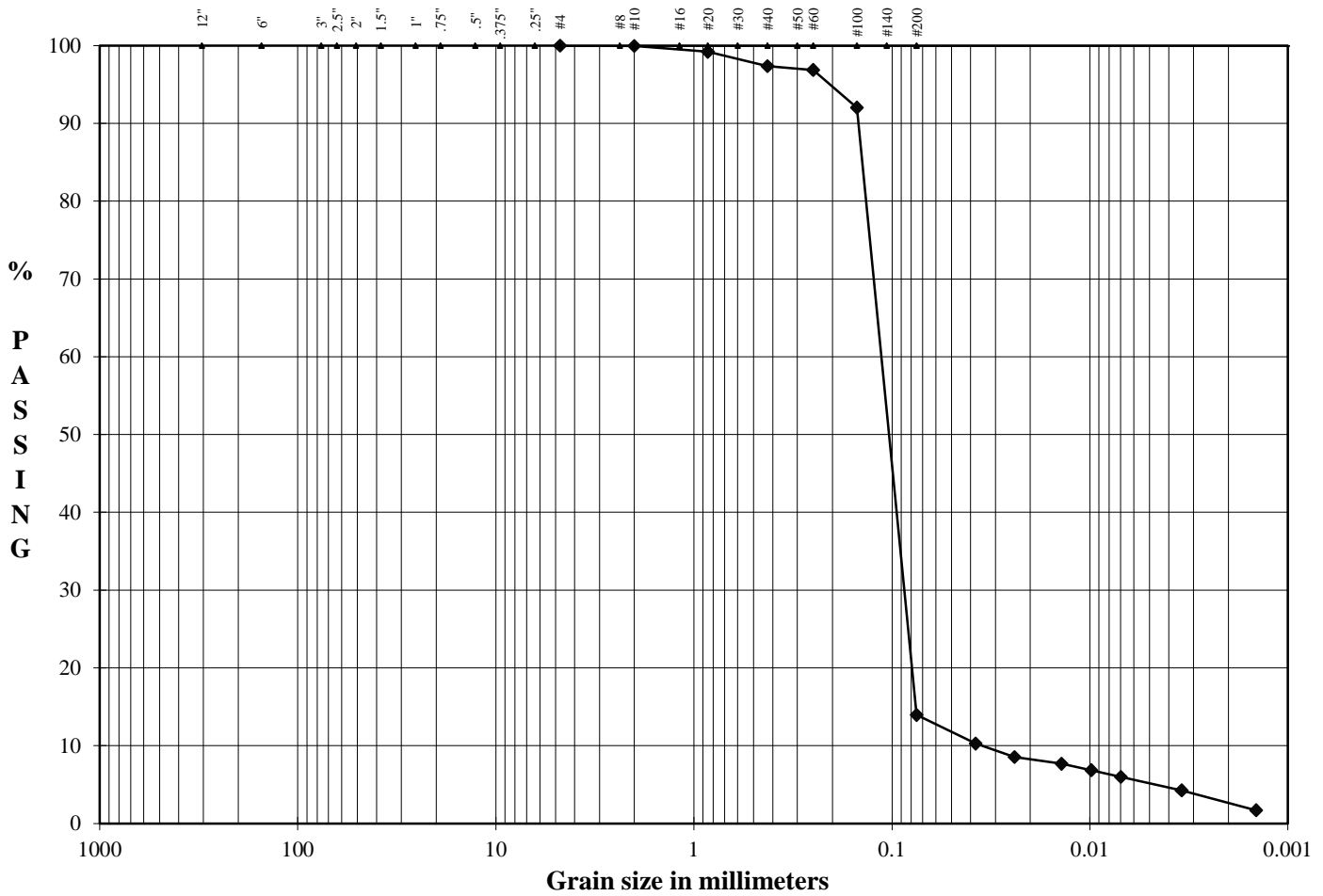
Checked By **IB**

Client Pr. #	-
Pr. Name	Grumman Road Landfill
Sample ID	37036MW24D
Location	MW-24D

Lab. PR. #	2108-04-1
S. Type	Bag
Depth/Elev.	59-60'
Add. Info	-

ASTM D 422/AASHTO T 88
Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

Particle-Size Analysis



Boulders	Cobbles	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
		Gravel		Sand			Fines

DESCRIPTION: Gray Silty Sand

D ₁₀	NA	mm
D ₃₀	NA	mm
D ₆₀	NA	mm
Cu	NA	
Cc	NA	

USCS (ASTM D2487; D2488) SM

Project's Specific % Passing	NA
Project's Specific Particle Size, mm	NA



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Web: www.test-llc.com



Tested By

EB

Date

01/18/21

Checked By

EB

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37037MW25D	Depth/Elev.	21-22'
Location	MW-25D	Add. Info	-

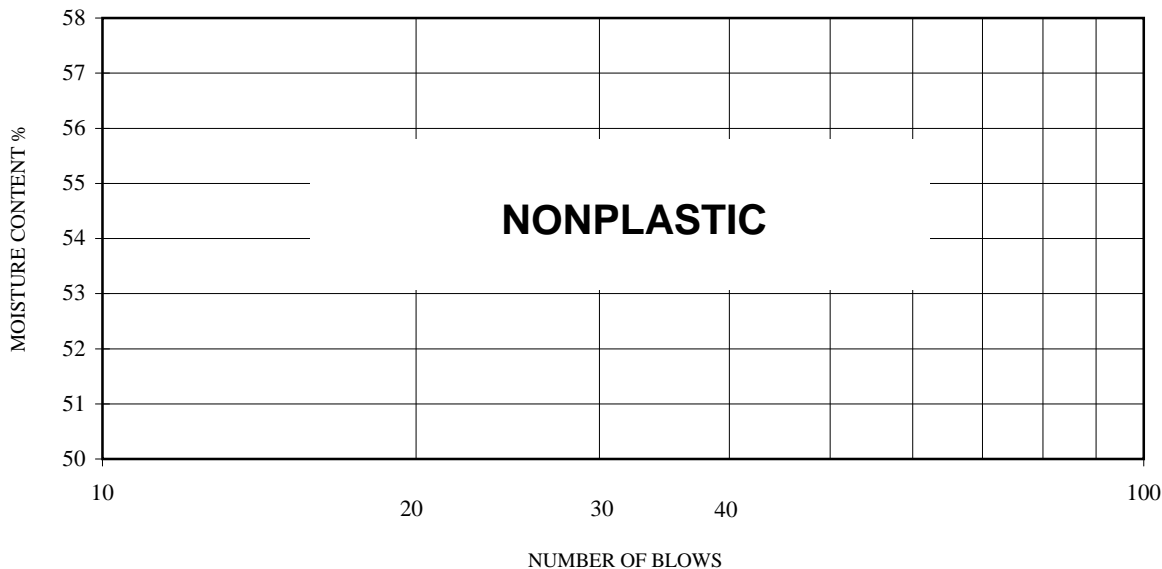
**ASTM D 4318
Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (Atterberg Limits)**

	LIQUID LIMIT	
Number of Blows	8	8
Weight of Wet Sample & Tare, g	45.64	44.78
Weight of Dry Soil & Tare, g	42.44	41.82
Weight of Tare, g	25.96	26.79
Moisture Content, %	19.42	19.69

Liquid Limit Device ID #

56

NOTES: 1. Material appears to be Nonplastic. (Liquid Limit or Plastic Limit test could not be performed.)
2. Material passing No. 40 sieve was used for test.



	PLASTIC LIMIT	
Weight of Wet Soil & Tare, g	45.77	45.56
Weight of Dry Soil & Tare, g	42.35	42.32
Weight of Tare, g	25.11	25.95
Moisture Content, %	19.84	19.79

Oven ID Number

15/496/610

Balance ID Number

139/563

	NATURAL MOISTURE
Weight of Wet Soil & Tare, g	456.20
Weight of Dry Soil & Tare, g	389.70
Weight of Tare, g	102.70
Moisture Content, %	23.17

LIQUID LIMIT (LL)

NP

PLASTIC LIMIT (PL)

NP

PLASTICITY INDEX (PI)

NP

LIQUIDITY INDEX (LI)

-

DESCRIPTION: Yellow Silty Sand

USCS (ASTM D2487;2488)

SM

AASHTO (M 145)

NA



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Fax: 770-923-8973

Web: www.test-llc.com



Tested By	IH
Date	01/13/21
Checked By	<i>IB</i>

Client Pr. #	-	Lab. PR. #	2108-04-1
Pr. Name	Grumman Road Landfill	S. Type	Bag
Sample ID	37037MW25D	Depth/Elev.	21-22'
Location	MW-25D	Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

<i>As-Received Moisture Content</i>		<i>Moisture Content of Material Used for Hydrometer Analysis</i>	
Mass of Wet Sample & Tare, g	456.20	Mass of Wet Sample & Tare, g	405.10
Mass of Dry Sample & Tare, g	389.70	Mass of Dry Sample & Tare, g	379.00
Mass of Tare, g	102.70	Mass of Tare, g	140.80
Moisture Content, %	23.2	Moisture Content, %	11.0
Mass of Total Sample before separation on #4 sieve & Tare, g	3972.10	Mass of Sample used for hydrometer analysis, g	71.00
Mass of Tare, g	0.00	Dry Mass, g	63.99
Total Mass of Dry Sample, g	3579.85	% of Total Sample passing #4 sieve	100.0

SIEVE ANALYSIS

<i>PORTION OF SAMPLE RETAINED ON #4 SIEVE</i>				<i>PORTION OF SAMPLE PASSING #4 SIEVE (Hydrometer Backsieve)</i>				
Mass of Tare, g	0.00							
Sieve Size	Sample & Tare, g	% RETAINED	%PASSING	Sieve Size	Cumulative Mass retained, g	% PASSING		
12"	COBBLES		0.0	100.0	#10	MEDIUM	0.00	100.0
3"			0.0	100.0		SAND	0.23	99.6
2.5"	COARSE GRAVEL		0.0	100.0	#40		0.99	98.5
2"			0.0	100.0	#60	FINE SAND	1.99	96.9
1.5"			0.0	100.0	#100		13.60	78.7
1"			0.0	100.0	#200	FINES	53.15	16.9
.75"			0.0	100.0	Remarks			
.5"	FINE GRAVEL		0.0	100.0				
.375"			0.0	100.0				
#4	COARSE SAND	0.00	0.0	100.0				

HYDROMETER ANALYSIS

Length of Dispersion Period	1 Minute
Mechanical Dispersion Device ID #	61
Amount of Dispersing Agent (ml)	125.0
Specific Gravity (assumed)	2.700
Specific Gravity (tested)	
Starting time	13:12

PARTICLE-SIZE ANALYSIS

% COBBLES	0.0	% MEDIUM SAND	1.5
% COARSE GRAVEL	0.0	% FINE SAND	81.5
% FINE GRAVEL	0.0	% FINES	16.9
% COARSE SAND	0.0	% TOTAL SAMPLE	100.0
% CLAY(<0.005mm)	5.3	% CLAY(<0.002mm)	3.5

Date	Time	Testing time (min)	Reading	Temp (°C)	K	Composite Correction	Actual Reading	Effective Depth (cm)	a	Particle Diam. (mm)	Percent Passing
01/17/21	13:14	2	15.5	18.5	0.01361	8.0	7.5	15.1	0.99	0.0374	11.6
01/17/21	13:17	5	15.0	18.5	0.01361	8.0	7.0	15.2	0.99	0.0237	10.8
01/17/21	13:27	15	14.0	18.5	0.01361	8.0	6.0	15.4	0.99	0.0138	9.3
01/17/21	13:42	30	13.0	18.5	0.01361	8.0	5.0	15.6	0.99	0.0098	7.7
01/17/21	14:12	60	12.0	18.5	0.01361	8.0	4.0	15.7	0.99	0.0070	6.2
01/17/21	17:22	250	11.0	18.5	0.01361	8.0	3.0	15.9	0.99	0.0034	4.6
01/18/21	13:12	1440	10.0	18.5	0.01361	8.0	2.0	16.0	0.99	0.0014	3.1

Hydrometer 152H ID # 305527
Sieve Shaker ID # 555

Oven ID # 15/496/610
Balance ID# 139/142/700



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Web: www.test-llc.com



Tested By: IH
Date: 01/13/21
Checked By: *IB*

Client Pr. #	-
Pr. Name	Grumman Road Landfill
Sample ID	37037MW25D
Location	MW-25D

Lab. PR. #	2108-04-1
S. Type	Bag
Depth/Elev.	21-22'
Add. Info	-

ASTM D 422/AASHTO T 88

Standard Test Method for Particle-Size Analysis of Soils (with Hydrometer Analysis)

Particle-Size Analysis



Boulders	Cobbles	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
		Gravel		Sand			

DESCRIPTION

Yellow Silty Sand

D ₁₀	NA	mm
D ₃₀	NA	mm
D ₆₀	NA	mm
Cu	NA	
Cc	NA	

USCS (ASTM D2487; D2488)

SM

Project's Specific % Passing: NA

Project's Specific Particle Size, mm: NA

APPENDIX F
SURVEY DATA

107 Mountain Brook Dr., Ste. 104
Canton, GA 30115



www.gunninsurvey.com
678.880.7502

DATE: January 26, 2021

TO: Atlantic Coastal Consulting, Inc
1150 Northmeadow Parkway
Suite 100
Roswell, GA 30076

ATTN: Evan Perry of Atlantic Coastal Consulting

SUBJECT: Grumman Road Landfill: 5 Wells

The following data has been established on the new wells using existing site datum. Wells were surveyed to the following tolerances: 0.01' vertical and 0.5' horizontal via conventional survey methods and level loops. Each well was cross-checked for horizontal and vertical accuracy. Date of Survey: 1/20/2021.

WELL ID	NORTHING	EASTING	ELEVATION	ELEVATION	ELEVATION
	NAIL	NAIL	NAIL	TOP OF CASE	TOP OF PVC
MW-23D	779280.61	960949.37	47.20	50.40	50.20
MW-24D	779043.12	960964.95	45.35	48.67	48.54
MW-25D	778944.95	960648.33	45.38	48.47	48.33
MW-26D	779994.12	960768.25	46.45	49.56	49.39
MW-27D	779559.74	960868.15	47.75	50.71	50.53

Sincerely yours,

Gunnin Land Surveying, LLC.



Jesse R. Gunnin, L.S. Principal Surveyor



APPENDIX B

Laboratory Analytical and Field Sampling Reports

**Grumman Road Landfill
Chatham County, Georgia**

2021 Annual Groundwater Monitoring and Corrective Action Report

September 22, 2020

Joju Abraham
Georgia Power-CCR
2480 Maner Road
Atlanta, GA 30339

RE: Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 19, 2020 and August 20, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA
- Pace Analytical Services - Greensburg

Revision 1 - This report replaces the September 11, 2020 report. This project was revised on September 21, 2020 to reflect correction of Client Sample ID. (Greensburg, PA)

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

Sincerely,



Kevin Herring
kevin.herring@pacelabs.com
1(704)875-9092
HORIZON Database Administrator

Enclosures

cc: Owens Fuquea, ACC
Kristen Jurinko
Matt Malone, Atlantic Coast Consulting
Betsy McDaniel, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting

Ms. Lauren Petty, Southern Co. Services



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

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

Pace Analytical Services Charlotte

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
Louisiana/NELAP Certification # LA170028
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

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

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, 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: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92491455001	DUP-1	Water	08/17/20 00:00	08/19/20 12:45
92491455002	EB-1-8-18-20	Water	08/18/20 00:00	08/19/20 12:45
92491455003	GWA-8	Water	08/17/20 14:59	08/19/20 12:45
92491455004	GWC-13	Water	08/17/20 16:16	08/19/20 12:45
92491455005	GWC-12	Water	08/17/20 17:25	08/19/20 12:45
92491455006	GWC-16	Water	08/18/20 09:32	08/19/20 12:45
92491455007	GWC-21	Water	08/18/20 10:58	08/19/20 12:45
92491455008	GWC-15	Water	08/18/20 12:56	08/19/20 12:45
92491455009	GWC-14	Water	08/18/20 14:24	08/19/20 12:45
92491455010	GWC-2	Water	08/18/20 15:23	08/19/20 12:45
92491455011	GWC-17	Water	08/18/20 14:50	08/19/20 12:45
92491455012	GWC-20	Water	08/18/20 16:36	08/19/20 12:45
92491455013	GWC-11	Water	08/18/20 10:45	08/19/20 12:45
92491455014	GWC-22	Water	08/18/20 14:30	08/19/20 12:45
92491455015	EB-2-8-18-20	Water	08/18/20 16:50	08/19/20 12:45
92491455016	DUP-2	Water	08/18/20 00:00	08/19/20 12:45
92491455017	FB-1-8-19-20	Water	08/19/20 10:30	08/20/20 12:20
92491455018	FB-2-8-19-20	Water	08/19/20 09:00	08/20/20 12:20
92491455019	GWC-1	Water	08/19/20 09:35	08/20/20 12:20
92491455020	GWC-9	Water	08/19/20 09:20	08/20/20 12:20
92491455021	GWB-5R	Water	08/19/20 11:58	08/20/20 12:20
92491455022	GWA-7	Water	08/19/20 10:30	08/20/20 12:20
92491455023	GWB-4R	Water	08/19/20 11:45	08/20/20 12:20
92491455024	GWB-6R	Water	08/19/20 14:00	08/20/20 12:20

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92491455001	DUP-1	EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
92491455002	EB-1-8-18-20	EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
92491455003	GWA-8	EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
92491455004	GWC-13	EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
92491455005	GWC-12	EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
92491455006	GWC-16	EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
92491455007	GWC-21	EPA 6020B	CW1	12	PASI-GA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92491455008	GWC-15	EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92491455009	GWC-14	EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
92491455010	GWC-2	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CW1	12	PASI-GA
92491455011	GWC-17	EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92491455012	GWC-20	EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
92491455013	GWC-11	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
92491455013	GWC-11	EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory		
92491455014	GWC-22	EPA 9315	LAL	1	PASI-PA		
		EPA 9320	VAL	1	PASI-PA		
		Total Radium Calculation	JAL	1	PASI-PA		
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A		
		EPA 6020B	CW1	12	PASI-GA		
		EPA 7470A	VB	1	PASI-GA		
		EPA 9315	LAL	1	PASI-PA		
		EPA 9320	VAL	1	PASI-PA		
		Total Radium Calculation	JAL	1	PASI-PA		
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A		
92491455015	EB-2-8-18-20	EPA 6020B	CW1	12	PASI-GA		
		EPA 7470A	VB	1	PASI-GA		
		EPA 9315	LAL	1	PASI-PA		
		EPA 9320	VAL	1	PASI-PA		
		Total Radium Calculation	JAL	1	PASI-PA		
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A		
		92491455016	DUP-2	EPA 6020B	CW1	12	PASI-GA
				EPA 7470A	VB	1	PASI-GA
				EPA 9315	LAL	1	PASI-PA
				EPA 9320	VAL	1	PASI-PA
Total Radium Calculation	JAL			1	PASI-PA		
EPA 300.0 Rev 2.1 1993	CDC			1	PASI-A		
92491455017	FB-1-8-19-20			EPA 6020B	CW1	12	PASI-GA
				EPA 7470A	VB	1	PASI-GA
				EPA 9315	LAL	1	PASI-PA
				EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA		
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A		
		92491455018	FB-2-8-19-20	EPA 6020B	CW1	12	PASI-GA
				EPA 7470A	VB	1	PASI-GA
				EPA 9315	LAL	1	PASI-PA
				EPA 9320	VAL	1	PASI-PA
Total Radium Calculation	JAL			1	PASI-PA		
EPA 300.0 Rev 2.1 1993	CDC			1	PASI-A		
92491455019	GWC-1			EPA 6020B	CW1	12	PASI-GA
				EPA 7470A	VB	1	PASI-GA
				EPA 9315	LAL	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92491455020	GWC-9	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92491455021	GWB-5R	Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92491455022	GWA-7	EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	BRJ	1	PASI-A
92491455023	GWB-4R	EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	BRJ	1	PASI-A
		92491455024	GWB-6R	EPA 6020B	CW1
EPA 7470A	VB			1	PASI-GA
EPA 9315	LAL			1	PASI-PA
EPA 9320	VAL			1	PASI-PA
Total Radium Calculation	JAL			1	PASI-PA
EPA 300.0 Rev 2.1 1993	BRJ			1	PASI-A

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

PASI-PA = Pace Analytical Services - Greensburg

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92491455001	DUP-1					
EPA 6020B	Barium	0.023	mg/L	0.010	08/21/20 18:57	
EPA 6020B	Lead	0.000073J	mg/L	0.0050	08/21/20 18:57	
EPA 9315	Radium-226	0.475 ± 0.356 (0.629) C:87% T:NA	pCi/L		09/02/20 07:43	
EPA 9320	Radium-228	0.401 ± 0.482 (1.01) C:62% T:77%	pCi/L		09/09/20 13:44	
Total Radium Calculation	Total Radium	0.876 ± 0.838 (1.64)	pCi/L		09/10/20 13:24	
92491455002	EB-1-8-18-20					
EPA 9315	Radium-226	0.181 ± 0.115 (0.185) C:86% T:NA	pCi/L		09/02/20 18:01	
EPA 9320	Radium-228	0.645 ± 0.510 (1.01) C:65% T:81%	pCi/L		09/09/20 13:10	
Total Radium Calculation	Total Radium	0.826 ± 0.625 (1.20)	pCi/L		09/10/20 13:24	
92491455003	GWA-8					
	pH	4.23	Std. Units		08/20/20 17:18	
EPA 6020B	Barium	0.051	mg/L	0.010	08/21/20 19:08	
EPA 6020B	Beryllium	0.00019J	mg/L	0.0030	08/21/20 19:08	
EPA 6020B	Chromium	0.00082J	mg/L	0.010	08/21/20 19:08	
EPA 6020B	Lithium	0.0010J	mg/L	0.030	08/21/20 19:08	
EPA 9315	Radium-226	1.64 ± 0.340 (0.198) C:81% T:NA	pCi/L		09/02/20 18:01	
EPA 9320	Radium-228	0.987 ± 0.488 (0.830) C:63% T:79%	pCi/L		09/09/20 12:06	
Total Radium Calculation	Total Radium	2.63 ± 0.828 (1.03)	pCi/L		09/10/20 13:24	
EPA 300.0 Rev 2.1 1993	Fluoride	0.079J	mg/L	0.10	08/20/20 22:47	
92491455004	GWC-13					
	pH	4.65	Std. Units		08/20/20 17:18	
EPA 6020B	Barium	0.024	mg/L	0.010	08/21/20 19:14	
EPA 6020B	Chromium	0.00077J	mg/L	0.010	08/21/20 19:14	
EPA 6020B	Lead	0.000076J	mg/L	0.0050	08/21/20 19:14	

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92491455004	GWC-13					
EPA 9315	Radium-226	0.429 ± 0.150 (0.162) C:83% T:NA	pCi/L		09/02/20 18:01	
EPA 9320	Radium-228	0.986 ± 0.510 (0.897) C:68% T:80%	pCi/L		09/09/20 15:09	
Total Radium Calculation	Total Radium	1.42 ± 0.660 (1.06)	pCi/L		09/10/20 13:24	
92491455005	GWC-12					
	pH	3.94	Std. Units		08/20/20 17:18	
EPA 6020B	Barium	0.018	mg/L	0.010	08/21/20 19:20	
EPA 6020B	Beryllium	0.00046J	mg/L	0.0030	08/21/20 19:20	
EPA 6020B	Chromium	0.0010J	mg/L	0.010	08/21/20 19:20	
EPA 6020B	Cobalt	0.00060J	mg/L	0.0050	08/21/20 19:20	
EPA 6020B	Lead	0.000049J	mg/L	0.0050	08/21/20 19:20	
EPA 6020B	Lithium	0.00091J	mg/L	0.030	08/21/20 19:20	
EPA 9315	Radium-226	0.630 ± 0.176 (0.152) C:88% T:NA	pCi/L		09/02/20 18:00	
EPA 9320	Radium-228	1.62 ± 0.620 (0.917) C:70% T:70%	pCi/L		09/09/20 15:09	
Total Radium Calculation	Total Radium	2.25 ± 0.796 (1.07)	pCi/L		09/10/20 13:24	
EPA 300.0 Rev 2.1 1993	Fluoride	0.19	mg/L	0.10	08/20/20 23:14	
92491455006	GWC-16					
	pH	5.52	Std. Units		08/20/20 17:18	
EPA 6020B	Arsenic	0.045	mg/L	0.0050	08/21/20 19:25	
EPA 6020B	Barium	0.32	mg/L	0.010	08/21/20 19:25	
EPA 6020B	Beryllium	0.000068J	mg/L	0.0030	08/21/20 19:25	
EPA 6020B	Chromium	0.0012J	mg/L	0.010	08/21/20 19:25	
EPA 6020B	Lead	0.00017J	mg/L	0.0050	08/21/20 19:25	
EPA 6020B	Molybdenum	0.15	mg/L	0.010	08/21/20 19:25	
EPA 6020B	Selenium	0.0058J	mg/L	0.010	08/21/20 19:25	
EPA 9315	Radium-226	2.61 ± 0.460 (0.136) C:101% T:NA	pCi/L		09/02/20 18:00	

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92491455006	GWC-16					
EPA 9320	Radium-228	1.63 ± 0.625 (0.970) C:69% T:82%	pCi/L		09/09/20 15:09	
Total Radium Calculation	Total Radium	4.24 ± 1.09 (1.11)	pCi/L		09/10/20 13:24	
92491455007	GWC-21					
	pH	5.82	Std. Units		08/20/20 17:18	
EPA 6020B	Arsenic	0.0059	mg/L	0.0050	08/21/20 19:31	
EPA 6020B	Barium	0.18	mg/L	0.010	08/21/20 19:31	
EPA 6020B	Chromium	0.0012J	mg/L	0.010	08/21/20 19:31	
EPA 6020B	Lead	0.00027J	mg/L	0.0050	08/21/20 19:31	
EPA 6020B	Molybdenum	0.069	mg/L	0.010	08/21/20 19:31	
EPA 6020B	Selenium	0.013	mg/L	0.010	08/21/20 19:31	
EPA 9315	Radium-226	1.89 ± 0.372 (0.243) C:96% T:NA	pCi/L		09/02/20 18:00	
EPA 9320	Radium-228	1.38 ± 0.583 (0.956) C:69% T:81%	pCi/L		09/09/20 15:09	
Total Radium Calculation	Total Radium	3.27 ± 0.955 (1.20)	pCi/L		09/10/20 13:24	
92491455008	GWC-15					
	pH	6.39	Std. Units		08/20/20 17:18	
EPA 6020B	Arsenic	0.28	mg/L	0.0050	08/21/20 19:48	
EPA 6020B	Barium	0.030	mg/L	0.010	08/21/20 19:48	
EPA 6020B	Chromium	0.0018J	mg/L	0.010	08/21/20 19:48	
EPA 6020B	Lead	0.000090J	mg/L	0.0050	08/21/20 19:48	
EPA 6020B	Molybdenum	0.12	mg/L	0.010	08/21/20 19:48	
EPA 6020B	Selenium	0.0022J	mg/L	0.010	08/21/20 19:48	
EPA 9315	Radium-226	0.285 ± 0.129 (0.182) C:94% T:NA	pCi/L		09/02/20 18:00	
EPA 9320	Radium-228	1.55 ± 0.588 (0.892) C:66% T:87%	pCi/L		09/09/20 15:10	
Total Radium Calculation	Total Radium	1.84 ± 0.717 (1.07)	pCi/L		09/10/20 13:24	
92491455009	GWC-14					
	pH	5.56	Std. Units		08/20/20 17:18	
EPA 6020B	Arsenic	0.0012J	mg/L	0.0050	08/21/20 19:54	

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92491455009	GWC-14					
EPA 6020B	Barium	0.028	mg/L	0.010	08/21/20 19:54	
EPA 6020B	Chromium	0.00059J	mg/L	0.010	08/21/20 19:54	
EPA 6020B	Molybdenum	0.017	mg/L	0.010	08/21/20 19:54	
EPA 6020B	Selenium	0.0029J	mg/L	0.010	08/21/20 19:54	
EPA 9315	Radium-226	0.388 ± 0.152 (0.201)	pCi/L		09/02/20 18:01	
EPA 9320	Radium-228	C:84% T:NA 0.343 ± 0.564 (1.23)	pCi/L		09/09/20 15:10	
Total Radium Calculation	Total Radium	C:69% T:66% 0.731 ± 0.716 (1.43)	pCi/L		09/10/20 13:24	
92491455010	GWC-2					
	pH	4.60	Std. Units		08/20/20 17:18	
EPA 6020B	Barium	0.050	mg/L	0.010	08/21/20 20:00	
EPA 6020B	Beryllium	0.000051J	mg/L	0.0030	08/21/20 20:00	
EPA 9315	Radium-226	0.377 ± 0.150 (0.200)	pCi/L		09/02/20 18:01	
EPA 9320	Radium-228	C:86% T:NA 0.709 ± 0.486 (0.941)	pCi/L		09/09/20 15:10	
Total Radium Calculation	Total Radium	C:71% T:79% 1.09 ± 0.636 (1.14)	pCi/L		09/10/20 13:24	
92491455011	GWC-17					
	pH	4.31	Std. Units		08/20/20 17:18	
EPA 6020B	Barium	0.074	mg/L	0.010	08/21/20 20:05	
EPA 6020B	Beryllium	0.0016J	mg/L	0.0030	08/21/20 20:05	
EPA 6020B	Chromium	0.0011J	mg/L	0.010	08/21/20 20:05	
EPA 6020B	Cobalt	0.0025J	mg/L	0.0050	08/21/20 20:05	
EPA 6020B	Lead	0.00014J	mg/L	0.0050	08/21/20 20:05	
EPA 6020B	Lithium	0.0065J	mg/L	0.030	08/21/20 20:05	
EPA 6020B	Molybdenum	0.00092J	mg/L	0.010	08/21/20 20:05	
EPA 6020B	Selenium	0.0020J	mg/L	0.010	08/21/20 20:05	
EPA 9315	Radium-226	1.97 ± 0.377 (0.171)	pCi/L		09/02/20 18:01	
EPA 9320	Radium-228	C:93% T:NA 1.14 ± 0.669 (1.24)	pCi/L		09/09/20 15:10	
		C:71% T:60%				

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92491455011	GWC-17					
Total Radium Calculation	Total Radium	3.11 ± 1.05 (1.41)	pCi/L		09/10/20 13:24	
EPA 300.0 Rev 2.1 1993	Fluoride	0.51	mg/L	0.10	08/21/20 01:02	
92491455012	GWC-20					
	pH	5.89	Std. Units		08/20/20 17:18	
EPA 6020B	Arsenic	0.30	mg/L	0.0050	08/21/20 20:11	
EPA 6020B	Barium	0.38	mg/L	0.010	08/21/20 20:11	
EPA 6020B	Chromium	0.0011J	mg/L	0.010	08/21/20 20:11	
EPA 6020B	Molybdenum	0.097	mg/L	0.010	08/21/20 20:11	
EPA 9315	Radium-226	3.09 ± 0.537 (0.138)	pCi/L		09/02/20 18:01	
EPA 9320	Radium-228	C:97% T:NA 3.77 ± 0.976 (0.980)	pCi/L		09/09/20 15:10	
		C:69% T:77%				
Total Radium Calculation	Total Radium	6.86 ± 1.51 (1.12)	pCi/L		09/10/20 13:24	
92491455013	GWC-11					
	pH	4.41	Std. Units		08/20/20 17:18	
EPA 6020B	Antimony	0.00064J	mg/L	0.0030	08/25/20 16:20	
EPA 6020B	Barium	0.12	mg/L	0.010	08/25/20 16:20	
EPA 6020B	Cadmium	0.00058J	mg/L	0.0025	08/25/20 16:20	
EPA 6020B	Chromium	0.0015J	mg/L	0.010	08/25/20 16:20	
EPA 6020B	Cobalt	0.00040J	mg/L	0.0050	08/25/20 16:20	
EPA 6020B	Lead	0.00035J	mg/L	0.0050	08/26/20 16:32	
EPA 6020B	Molybdenum	0.00077J	mg/L	0.010	08/25/20 16:20	
EPA 6020B	Selenium	0.0028J	mg/L	0.010	08/25/20 16:20	
EPA 6020B	Thallium	0.00021J	mg/L	0.0010	08/26/20 16:32	
EPA 9315	Radium-226	3.22 ± 0.562 (0.179)	pCi/L		09/02/20 17:59	
EPA 9320	Radium-228	C:89% T:NA 3.54 ± 1.00 (1.17)	pCi/L		09/09/20 15:10	
		C:58% T:80%				
Total Radium Calculation	Total Radium	6.76 ± 1.56 (1.35)	pCi/L		09/10/20 13:24	
92491455014	GWC-22					
	pH	4.52	Std. Units		08/20/20 17:18	
EPA 6020B	Antimony	0.0022J	mg/L	0.0030	08/25/20 16:43	
EPA 6020B	Barium	0.085	mg/L	0.010	08/25/20 16:43	
EPA 6020B	Beryllium	0.000076J	mg/L	0.0030	08/25/20 16:43	
EPA 6020B	Cadmium	0.00024J	mg/L	0.0025	08/25/20 16:43	
EPA 6020B	Chromium	0.00056J	mg/L	0.010	08/25/20 16:43	
EPA 6020B	Lead	0.00072J	mg/L	0.0050	08/26/20 16:49	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92491455014	GWC-22					
EPA 6020B	Thallium	0.00017J	mg/L	0.0010	08/26/20 16:49	
EPA 9315	Radium-226	4.29 ± 0.717 (0.153) C:87% T:NA	pCi/L		09/02/20 17:59	
EPA 9320	Radium-228	3.36 ± 0.984 (1.23) C:68% T:68%	pCi/L		09/09/20 15:10	
Total Radium Calculation	Total Radium	7.65 ± 1.70 (1.38)	pCi/L		09/10/20 13:24	
92491455015	EB-2-8-18-20					
EPA 6020B	Antimony	0.00059J	mg/L	0.0030	08/25/20 16:48	
EPA 9315	Radium-226	0.0983 ± 0.0893 (0.156) C:82% T:NA	pCi/L		09/02/20 17:59	
EPA 9320	Radium-228	-0.000828 ± 0.364 (0.850) C:64% T:88%	pCi/L		09/09/20 15:10	
Total Radium Calculation	Total Radium	0.0983 ± 0.453 (1.01)	pCi/L		09/10/20 13:24	
92491455016	DUP-2					
EPA 6020B	Antimony	0.00062J	mg/L	0.0030	08/25/20 16:54	
EPA 6020B	Barium	0.083	mg/L	0.010	08/25/20 16:54	
EPA 6020B	Beryllium	0.000063J	mg/L	0.0030	08/25/20 16:54	
EPA 6020B	Cadmium	0.00019J	mg/L	0.0025	08/25/20 16:54	
EPA 6020B	Chromium	0.00070J	mg/L	0.010	08/25/20 16:54	
EPA 6020B	Lead	0.00066J	mg/L	0.0050	08/26/20 17:00	
EPA 9315	Radium-226	4.34 ± 0.723 (0.166) C:90% T:NA	pCi/L		09/02/20 17:59	
EPA 9320	Radium-228	5.03 ± 1.20 (0.992) C:68% T:75%	pCi/L		09/09/20 15:10	
Total Radium Calculation	Total Radium	9.37 ± 1.92 (1.16)	pCi/L		09/10/20 13:24	
92491455017	FB-1-8-19-20					
EPA 6020B	Antimony	0.0019J	mg/L	0.0030	08/27/20 15:43	
EPA 9315	Radium-226	0.0591 ± 0.0951 (0.185) C:94% T:NA	pCi/L		09/03/20 16:47	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92491455017	FB-1-8-19-20					
EPA 9320	Radium-228	0.0611 ± 0.357 (0.819) C:66% T:80%	pCi/L		09/09/20 12:02	
Total Radium Calculation	Total Radium	0.120 ± 0.452 (1.00)	pCi/L		09/10/20 15:11	
92491455018	FB-2-8-19-20					
EPA 6020B	Antimony	0.00060J	mg/L	0.0030	08/27/20 15:48	
EPA 9315	Radium-226	-0.0223 ± 0.145 (0.305) C:87% T:NA	pCi/L		09/03/20 16:47	
EPA 9320	Radium-228	0.820 ± 0.441 (0.761) C:62% T:78%	pCi/L		09/09/20 12:02	
Total Radium Calculation	Total Radium	0.820 ± 0.586 (1.07)	pCi/L		09/10/20 15:11	
92491455019	GWC-1					
	pH	5.73	Std. Units		08/20/20 17:18	
EPA 6020B	Antimony	0.00061J	mg/L	0.0030	08/27/20 15:54	
EPA 6020B	Arsenic	0.0070	mg/L	0.0050	08/27/20 15:54	
EPA 6020B	Barium	0.057	mg/L	0.010	08/27/20 15:54	
EPA 6020B	Chromium	0.0028J	mg/L	0.010	08/27/20 15:54	
EPA 6020B	Molybdenum	0.061	mg/L	0.010	08/27/20 15:54	
EPA 6020B	Selenium	0.0020J	mg/L	0.010	08/27/20 15:54	
EPA 9315	Radium-226	1.08 ± 0.260 (0.235) C:87% T:NA	pCi/L		09/03/20 16:47	
EPA 9320	Radium-228	0.830 ± 0.488 (0.892) C:63% T:77%	pCi/L		09/09/20 12:02	
Total Radium Calculation	Total Radium	1.91 ± 0.748 (1.13)	pCi/L		09/10/20 15:11	
92491455020	GWC-9					
	pH	4.58	Std. Units		08/20/20 17:18	
EPA 6020B	Barium	0.17	mg/L	0.010	08/27/20 16:00	
EPA 6020B	Beryllium	0.00022J	mg/L	0.0030	08/27/20 16:00	
EPA 6020B	Chromium	0.0013J	mg/L	0.010	08/27/20 16:00	
EPA 6020B	Cobalt	0.0011J	mg/L	0.0050	08/27/20 16:00	
EPA 6020B	Lead	0.000096J	mg/L	0.0050	08/27/20 16:00	
EPA 6020B	Lithium	0.0019J	mg/L	0.030	08/27/20 16:00	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92491455020	GWC-9					
EPA 9315	Radium-226	1.20 ± 0.267 (0.192)	pCi/L		09/03/20 16:47	
EPA 9320	Radium-228	C:90% T:NA 1.14 ± 0.521 (0.849)	pCi/L		09/09/20 15:08	
Total Radium Calculation	Total Radium	C:59% T:83% 2.34 ± 0.788 (1.04)	pCi/L		09/10/20 15:11	
EPA 300.0 Rev 2.1 1993	Fluoride	0.092J	mg/L	0.10	08/21/20 23:45	
92491455021	GWB-5R					
	pH	5.14	Std. Units		08/20/20 17:18	
EPA 6020B	Arsenic	0.0019J	mg/L	0.0050	08/27/20 16:25	
EPA 6020B	Barium	0.10	mg/L	0.010	08/27/20 16:25	
EPA 6020B	Chromium	0.0012J	mg/L	0.010	08/27/20 16:25	
EPA 6020B	Lead	0.000079J	mg/L	0.0050	08/27/20 16:25	
EPA 9315	Radium-226	1.97 ± 0.388 (0.210)	pCi/L		09/03/20 16:47	
EPA 9320	Radium-228	C:82% T:NA 0.521 ± 0.444 (0.882)	pCi/L		09/09/20 15:08	
Total Radium Calculation	Total Radium	C:65% T:73% 2.49 ± 0.832 (1.09)	pCi/L		09/10/20 15:11	
92491455022	GWA-7					
	pH	5.81	Std. Units		08/20/20 17:18	
EPA 6020B	Arsenic	0.0060J	mg/L	0.025	08/27/20 16:30	D3
EPA 6020B	Barium	0.10	mg/L	0.050	08/27/20 16:30	
EPA 6020B	Chromium	0.015J	mg/L	0.050	08/27/20 16:30	D3
EPA 6020B	Cobalt	0.0021J	mg/L	0.025	08/27/20 16:30	D3
EPA 6020B	Lead	0.0044J	mg/L	0.025	08/27/20 16:30	D3
EPA 9315	Radium-226	4.22 ± 1.13 (0.672)	pCi/L		09/10/20 15:09	
EPA 9320	Radium-228	C:90% T:NA 1.23 ± 0.583 (0.978)	pCi/L		09/09/20 15:08	
Total Radium Calculation	Total Radium	C:66% T:89% 5.45 ± 1.71 (1.65)	pCi/L		09/11/20 13:22	
EPA 300.0 Rev 2.1 1993	Fluoride	0.21	mg/L	0.10	08/22/20 23:51	
92491455023	GWB-4R					
	pH	5.70	Std. Units		08/20/20 17:18	

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92491455023	GWB-4R					
EPA 6020B	Arsenic	0.0033J	mg/L	0.0050	08/27/20 16:36	
EPA 6020B	Barium	0.076	mg/L	0.010	08/27/20 16:36	
EPA 6020B	Chromium	0.0022J	mg/L	0.010	08/27/20 16:36	
EPA 6020B	Cobalt	0.00072J	mg/L	0.0050	08/27/20 16:36	
EPA 6020B	Lead	0.00048J	mg/L	0.0050	08/27/20 16:36	
EPA 6020B	Lithium	0.014J	mg/L	0.030	08/27/20 16:36	
EPA 6020B	Molybdenum	0.16	mg/L	0.010	08/27/20 16:36	
EPA 9315	Radium-226	1.89 ± 0.368 (0.222)	pCi/L		09/03/20 18:44	
EPA 9320	Radium-228	C:94% T:NA 1.21 ± 0.552 (0.915) C:67% T:77%	pCi/L		09/09/20 15:08	
Total Radium Calculation	Total Radium	3.10 ± 0.920 (1.14)	pCi/L		09/10/20 15:11	
EPA 300.0 Rev 2.1 1993	Fluoride	0.17	mg/L	0.10	08/23/20 00:06	
92491455024	GWB-6R					
	pH	5.21	Std. Units		08/20/20 17:18	
EPA 6020B	Arsenic	0.0036J	mg/L	0.0050	08/27/20 16:42	
EPA 6020B	Barium	0.064	mg/L	0.010	08/27/20 16:42	
EPA 6020B	Beryllium	0.000050J	mg/L	0.0030	08/27/20 16:42	
EPA 6020B	Chromium	0.0037J	mg/L	0.010	08/27/20 16:42	
EPA 6020B	Lead	0.00014J	mg/L	0.0050	08/27/20 16:42	
EPA 6020B	Molybdenum	0.0010J	mg/L	0.010	08/27/20 16:42	
EPA 9315	Radium-226	3.78 ± 0.640 (0.184)	pCi/L		09/03/20 18:45	
EPA 9320	Radium-228	C:88% T:NA 0.754 ± 0.462 (0.836) C:61% T:79%	pCi/L		09/09/20 15:08	
Total Radium Calculation	Total Radium	4.53 ± 1.10 (1.02)	pCi/L		09/10/20 15:11	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Sample: DUP-1 Lab ID: 92491455001 Collected: 08/17/20 00:00 Received: 08/19/20 12:45 Matrix: Water										
Parameters	Results	Units	Report Limit		MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS										
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA										
Antimony	ND	mg/L	0.0030	0.00028	1	08/20/20 14:56	08/21/20 18:57	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	08/20/20 14:56	08/21/20 18:57	7440-38-2		
Barium	0.023	mg/L	0.010	0.00071	1	08/20/20 14:56	08/21/20 18:57	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	08/20/20 14:56	08/21/20 18:57	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00012	1	08/20/20 14:56	08/21/20 18:57	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	08/20/20 14:56	08/21/20 18:57	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	08/20/20 14:56	08/21/20 18:57	7440-48-4		
Lead	0.000073J	mg/L	0.0050	0.000036	1	08/20/20 14:56	08/21/20 18:57	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	08/20/20 14:56	08/21/20 18:57	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	08/20/20 14:56	08/21/20 18:57	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	08/20/20 14:56	08/21/20 18:57	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	08/20/20 14:56	08/21/20 18:57	7440-28-0		
7470 Mercury										
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA										
Mercury	ND	mg/L	0.00020	0.000078	1	08/21/20 08:05	08/21/20 13:08	7439-97-6		
300.0 IC Anions 28 Days										
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville										
Fluoride	ND	mg/L	0.10	0.050	1		08/20/20 21:54	16984-48-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Sample: EB-1-8-18-20 Lab ID: 92491455002 Collected: 08/18/20 00:00 Received: 08/19/20 12:45 Matrix: Water										
Parameters	Results	Units	Report Limit		MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS										
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA										
Antimony	ND	mg/L	0.0030	0.00028	1	08/20/20 14:56	08/21/20 19:02	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	08/20/20 14:56	08/21/20 19:02	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	08/20/20 14:56	08/21/20 19:02	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	08/20/20 14:56	08/21/20 19:02	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00012	1	08/20/20 14:56	08/21/20 19:02	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	08/20/20 14:56	08/21/20 19:02	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	08/20/20 14:56	08/21/20 19:02	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	08/20/20 14:56	08/21/20 19:02	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	08/20/20 14:56	08/21/20 19:02	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	08/20/20 14:56	08/21/20 19:02	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	08/20/20 14:56	08/21/20 19:02	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	08/20/20 14:56	08/21/20 19:02	7440-28-0		
7470 Mercury										
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA										
Mercury	ND	mg/L	0.00020	0.000078	1	08/21/20 08:05	08/21/20 13:10	7439-97-6		
300.0 IC Anions 28 Days										
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville										
Fluoride	ND	mg/L	0.10	0.050	1		08/20/20 22:07	16984-48-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWA-8 **Lab ID: 92491455003** Collected: 08/17/20 14:59 Received: 08/19/20 12:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

pH	4.23	Std. Units			1		08/20/20 17:18		
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6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00028	1	08/20/20 14:56	08/21/20 19:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/20/20 14:56	08/21/20 19:08	7440-38-2	
Barium	0.051	mg/L	0.010	0.00071	1	08/20/20 14:56	08/21/20 19:08	7440-39-3	
Beryllium	0.00019J	mg/L	0.0030	0.000046	1	08/20/20 14:56	08/21/20 19:08	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/20/20 14:56	08/21/20 19:08	7440-43-9	
Chromium	0.00082J	mg/L	0.010	0.00055	1	08/20/20 14:56	08/21/20 19:08	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/20/20 14:56	08/21/20 19:08	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	08/20/20 14:56	08/21/20 19:08	7439-92-1	
Lithium	0.0010J	mg/L	0.030	0.00081	1	08/20/20 14:56	08/21/20 19:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/20/20 14:56	08/21/20 19:08	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/20/20 14:56	08/21/20 19:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/20/20 14:56	08/21/20 19:08	7440-28-0	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.000078	1	08/21/20 08:05	08/21/20 13:13	7439-97-6	
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Fluoride	0.079J	mg/L	0.10	0.050	1		08/20/20 22:47	16984-48-8	
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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Sample: GWC-13		Lab ID: 92491455004		Collected: 08/17/20 16:16	Received: 08/19/20 12:45	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	4.65	Std. Units			1		08/20/20 17:18		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/20/20 14:56	08/21/20 19:14	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/20/20 14:56	08/21/20 19:14	7440-38-2	
Barium	0.024	mg/L	0.010	0.00071	1	08/20/20 14:56	08/21/20 19:14	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/20/20 14:56	08/21/20 19:14	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/20/20 14:56	08/21/20 19:14	7440-43-9	
Chromium	0.00077J	mg/L	0.010	0.00055	1	08/20/20 14:56	08/21/20 19:14	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/20/20 14:56	08/21/20 19:14	7440-48-4	
Lead	0.000076J	mg/L	0.0050	0.000036	1	08/20/20 14:56	08/21/20 19:14	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	08/20/20 14:56	08/21/20 19:14	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/20/20 14:56	08/21/20 19:14	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/20/20 14:56	08/21/20 19:14	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/20/20 14:56	08/21/20 19:14	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/21/20 08:05	08/21/20 13:15	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/20/20 23:01	16984-48-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Sample: GWC-12		Lab ID: 92491455005		Collected: 08/17/20 17:25		Received: 08/19/20 12:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	3.94	Std. Units			1		08/20/20 17:18		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/20/20 14:56	08/21/20 19:20	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/20/20 14:56	08/21/20 19:20	7440-38-2	
Barium	0.018	mg/L	0.010	0.00071	1	08/20/20 14:56	08/21/20 19:20	7440-39-3	
Beryllium	0.00046J	mg/L	0.0030	0.000046	1	08/20/20 14:56	08/21/20 19:20	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/20/20 14:56	08/21/20 19:20	7440-43-9	
Chromium	0.0010J	mg/L	0.010	0.00055	1	08/20/20 14:56	08/21/20 19:20	7440-47-3	
Cobalt	0.00060J	mg/L	0.0050	0.00038	1	08/20/20 14:56	08/21/20 19:20	7440-48-4	
Lead	0.000049J	mg/L	0.0050	0.000036	1	08/20/20 14:56	08/21/20 19:20	7439-92-1	
Lithium	0.00091J	mg/L	0.030	0.00081	1	08/20/20 14:56	08/21/20 19:20	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/20/20 14:56	08/21/20 19:20	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/20/20 14:56	08/21/20 19:20	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/20/20 14:56	08/21/20 19:20	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/21/20 08:05	08/21/20 13:17	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.19	mg/L	0.10	0.050	1		08/20/20 23:14	16984-48-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWC-16		Lab ID: 92491455006		Collected: 08/18/20 09:32		Received: 08/19/20 12:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.52	Std. Units			1		08/20/20 17:18		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/20/20 14:56	08/21/20 19:25	7440-36-0	
Arsenic	0.045	mg/L	0.0050	0.00078	1	08/20/20 14:56	08/21/20 19:25	7440-38-2	
Barium	0.32	mg/L	0.010	0.00071	1	08/20/20 14:56	08/21/20 19:25	7440-39-3	
Beryllium	0.000068J	mg/L	0.0030	0.000046	1	08/20/20 14:56	08/21/20 19:25	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/20/20 14:56	08/21/20 19:25	7440-43-9	
Chromium	0.0012J	mg/L	0.010	0.00055	1	08/20/20 14:56	08/21/20 19:25	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/20/20 14:56	08/21/20 19:25	7440-48-4	
Lead	0.00017J	mg/L	0.0050	0.000036	1	08/20/20 14:56	08/21/20 19:25	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	08/20/20 14:56	08/21/20 19:25	7439-93-2	
Molybdenum	0.15	mg/L	0.010	0.00069	1	08/20/20 14:56	08/21/20 19:25	7439-98-7	
Selenium	0.0058J	mg/L	0.010	0.0016	1	08/20/20 14:56	08/21/20 19:25	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/20/20 14:56	08/21/20 19:25	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/21/20 08:05	08/21/20 13:25	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/20/20 23:28	16984-48-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Sample: GWC-21		Lab ID: 92491455007		Collected: 08/18/20 10:58		Received: 08/19/20 12:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.82	Std. Units			1		08/20/20 17:18		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/20/20 14:56	08/21/20 19:31	7440-36-0	
Arsenic	0.0059	mg/L	0.0050	0.00078	1	08/20/20 14:56	08/21/20 19:31	7440-38-2	
Barium	0.18	mg/L	0.010	0.00071	1	08/20/20 14:56	08/21/20 19:31	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/20/20 14:56	08/21/20 19:31	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/20/20 14:56	08/21/20 19:31	7440-43-9	
Chromium	0.0012J	mg/L	0.010	0.00055	1	08/20/20 14:56	08/21/20 19:31	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/20/20 14:56	08/21/20 19:31	7440-48-4	
Lead	0.00027J	mg/L	0.0050	0.000036	1	08/20/20 14:56	08/21/20 19:31	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	08/20/20 14:56	08/21/20 19:31	7439-93-2	
Molybdenum	0.069	mg/L	0.010	0.00069	1	08/20/20 14:56	08/21/20 19:31	7439-98-7	
Selenium	0.013	mg/L	0.010	0.0016	1	08/20/20 14:56	08/21/20 19:31	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/20/20 14:56	08/21/20 19:31	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/21/20 08:05	08/21/20 13:27	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/20/20 23:41	16984-48-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Sample: GWC-15		Lab ID: 92491455008		Collected: 08/18/20 12:56	Received: 08/19/20 12:45	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.39	Std. Units			1		08/20/20 17:18		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/20/20 14:56	08/21/20 19:48	7440-36-0	
Arsenic	0.28	mg/L	0.0050	0.00078	1	08/20/20 14:56	08/21/20 19:48	7440-38-2	
Barium	0.030	mg/L	0.010	0.00071	1	08/20/20 14:56	08/21/20 19:48	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/20/20 14:56	08/21/20 19:48	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/20/20 14:56	08/21/20 19:48	7440-43-9	
Chromium	0.0018J	mg/L	0.010	0.00055	1	08/20/20 14:56	08/21/20 19:48	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/20/20 14:56	08/21/20 19:48	7440-48-4	
Lead	0.000090J	mg/L	0.0050	0.000036	1	08/20/20 14:56	08/21/20 19:48	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	08/20/20 14:56	08/21/20 19:48	7439-93-2	
Molybdenum	0.12	mg/L	0.010	0.00069	1	08/20/20 14:56	08/21/20 19:48	7439-98-7	
Selenium	0.0022J	mg/L	0.010	0.0016	1	08/20/20 14:56	08/21/20 19:48	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/20/20 14:56	08/21/20 19:48	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/21/20 08:05	08/21/20 13:29	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/20/20 23:55	16984-48-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Sample: GWC-14		Lab ID: 92491455009		Collected: 08/18/20 14:24		Received: 08/19/20 12:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.56	Std. Units			1		08/20/20 17:18		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/20/20 14:56	08/21/20 19:54	7440-36-0	
Arsenic	0.0012J	mg/L	0.0050	0.00078	1	08/20/20 14:56	08/21/20 19:54	7440-38-2	
Barium	0.028	mg/L	0.010	0.00071	1	08/20/20 14:56	08/21/20 19:54	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/20/20 14:56	08/21/20 19:54	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/20/20 14:56	08/21/20 19:54	7440-43-9	
Chromium	0.00059J	mg/L	0.010	0.00055	1	08/20/20 14:56	08/21/20 19:54	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/20/20 14:56	08/21/20 19:54	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	08/20/20 14:56	08/21/20 19:54	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	08/20/20 14:56	08/21/20 19:54	7439-93-2	
Molybdenum	0.017	mg/L	0.010	0.00069	1	08/20/20 14:56	08/21/20 19:54	7439-98-7	
Selenium	0.0029J	mg/L	0.010	0.0016	1	08/20/20 14:56	08/21/20 19:54	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/20/20 14:56	08/21/20 19:54	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/21/20 08:05	08/21/20 13:32	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/21/20 00:35	16984-48-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Sample: GWC-2		Lab ID: 92491455010		Collected: 08/18/20 15:23		Received: 08/19/20 12:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	4.60	Std. Units			1		08/20/20 17:18		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/20/20 14:56	08/21/20 20:00	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/20/20 14:56	08/21/20 20:00	7440-38-2	
Barium	0.050	mg/L	0.010	0.00071	1	08/20/20 14:56	08/21/20 20:00	7440-39-3	
Beryllium	0.000051J	mg/L	0.0030	0.000046	1	08/20/20 14:56	08/21/20 20:00	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/20/20 14:56	08/21/20 20:00	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	08/20/20 14:56	08/21/20 20:00	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/20/20 14:56	08/21/20 20:00	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	08/20/20 14:56	08/21/20 20:00	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	08/20/20 14:56	08/21/20 20:00	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/20/20 14:56	08/21/20 20:00	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/20/20 14:56	08/21/20 20:00	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/20/20 14:56	08/21/20 20:00	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/21/20 08:05	08/21/20 13:34	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/21/20 00:49	16984-48-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Sample: GWC-17		Lab ID: 92491455011		Collected: 08/18/20 14:50		Received: 08/19/20 12:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	4.31	Std. Units			1		08/20/20 17:18		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/20/20 14:56	08/21/20 20:05	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/20/20 14:56	08/21/20 20:05	7440-38-2	
Barium	0.074	mg/L	0.010	0.00071	1	08/20/20 14:56	08/21/20 20:05	7440-39-3	
Beryllium	0.0016J	mg/L	0.0030	0.000046	1	08/20/20 14:56	08/21/20 20:05	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/20/20 14:56	08/21/20 20:05	7440-43-9	
Chromium	0.0011J	mg/L	0.010	0.00055	1	08/20/20 14:56	08/21/20 20:05	7440-47-3	
Cobalt	0.0025J	mg/L	0.0050	0.00038	1	08/20/20 14:56	08/21/20 20:05	7440-48-4	
Lead	0.00014J	mg/L	0.0050	0.000036	1	08/20/20 14:56	08/21/20 20:05	7439-92-1	
Lithium	0.0065J	mg/L	0.030	0.00081	1	08/20/20 14:56	08/21/20 20:05	7439-93-2	
Molybdenum	0.00092J	mg/L	0.010	0.00069	1	08/20/20 14:56	08/21/20 20:05	7439-98-7	
Selenium	0.0020J	mg/L	0.010	0.0016	1	08/20/20 14:56	08/21/20 20:05	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/20/20 14:56	08/21/20 20:05	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/21/20 08:05	08/21/20 13:36	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.51	mg/L	0.10	0.050	1		08/21/20 01:02	16984-48-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Sample: GWC-20		Lab ID: 92491455012		Collected: 08/18/20 16:36	Received: 08/19/20 12:45	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.89	Std. Units			1		08/20/20 17:18		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/20/20 14:56	08/21/20 20:11	7440-36-0	
Arsenic	0.30	mg/L	0.0050	0.00078	1	08/20/20 14:56	08/21/20 20:11	7440-38-2	
Barium	0.38	mg/L	0.010	0.00071	1	08/20/20 14:56	08/21/20 20:11	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/20/20 14:56	08/21/20 20:11	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/20/20 14:56	08/21/20 20:11	7440-43-9	
Chromium	0.0011J	mg/L	0.010	0.00055	1	08/20/20 14:56	08/21/20 20:11	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/20/20 14:56	08/21/20 20:11	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	08/20/20 14:56	08/21/20 20:11	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	08/20/20 14:56	08/21/20 20:11	7439-93-2	
Molybdenum	0.097	mg/L	0.010	0.00069	1	08/20/20 14:56	08/21/20 20:11	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/20/20 14:56	08/21/20 20:11	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/20/20 14:56	08/21/20 20:11	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/21/20 08:05	08/21/20 13:39	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/21/20 01:43	16984-48-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Sample: GWC-11		Lab ID: 92491455013		Collected: 08/18/20 10:45		Received: 08/19/20 12:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	4.41	Std. Units			1		08/20/20 17:18		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00064J	mg/L	0.0030	0.00028	1	08/24/20 15:05	08/25/20 16:20	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/24/20 15:05	08/25/20 16:20	7440-38-2	
Barium	0.12	mg/L	0.010	0.00071	1	08/24/20 15:05	08/25/20 16:20	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/24/20 15:05	08/25/20 16:20	7440-41-7	
Cadmium	0.00058J	mg/L	0.0025	0.00012	1	08/24/20 15:05	08/25/20 16:20	7440-43-9	
Chromium	0.0015J	mg/L	0.010	0.00055	1	08/24/20 15:05	08/25/20 16:20	7440-47-3	
Cobalt	0.00040J	mg/L	0.0050	0.00038	1	08/24/20 15:05	08/25/20 16:20	7440-48-4	
Lead	0.00035J	mg/L	0.0050	0.000036	1	08/24/20 15:05	08/26/20 16:32	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	08/24/20 15:05	08/25/20 16:20	7439-93-2	
Molybdenum	0.00077J	mg/L	0.010	0.00069	1	08/24/20 15:05	08/25/20 16:20	7439-98-7	
Selenium	0.0028J	mg/L	0.010	0.0016	1	08/24/20 15:05	08/25/20 16:20	7782-49-2	
Thallium	0.00021J	mg/L	0.0010	0.00014	1	08/24/20 15:05	08/26/20 16:32	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 08:38	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/21/20 02:23	16984-48-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Sample: GWC-22		Lab ID: 92491455014		Collected: 08/18/20 14:30	Received: 08/19/20 12:45	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	4.52	Std. Units			1		08/20/20 17:18		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0022J	mg/L	0.0030	0.00028	1	08/24/20 15:05	08/25/20 16:43	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/24/20 15:05	08/25/20 16:43	7440-38-2	
Barium	0.085	mg/L	0.010	0.00071	1	08/24/20 15:05	08/25/20 16:43	7440-39-3	
Beryllium	0.000076J	mg/L	0.0030	0.000046	1	08/24/20 15:05	08/25/20 16:43	7440-41-7	
Cadmium	0.00024J	mg/L	0.0025	0.00012	1	08/24/20 15:05	08/25/20 16:43	7440-43-9	
Chromium	0.00056J	mg/L	0.010	0.00055	1	08/24/20 15:05	08/25/20 16:43	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/24/20 15:05	08/25/20 16:43	7440-48-4	
Lead	0.00072J	mg/L	0.0050	0.000036	1	08/24/20 15:05	08/26/20 16:49	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	08/24/20 15:05	08/25/20 16:43	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/24/20 15:05	08/25/20 16:43	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/24/20 15:05	08/25/20 16:43	7782-49-2	
Thallium	0.00017J	mg/L	0.0010	0.00014	1	08/24/20 15:05	08/26/20 16:49	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 08:40	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/21/20 02:37	16984-48-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Sample: EB-2-8-18-20 Lab ID: 92491455015 Collected: 08/18/20 16:50 Received: 08/19/20 12:45 Matrix: Water										
Parameters	Results	Units	Report Limit		MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS										
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA										
Antimony	0.00059J	mg/L	0.0030	0.00028	1	08/24/20 15:05	08/25/20 16:48	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	08/24/20 15:05	08/25/20 16:48	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	08/24/20 15:05	08/25/20 16:48	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	08/24/20 15:05	08/25/20 16:48	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00012	1	08/24/20 15:05	08/25/20 16:48	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	08/24/20 15:05	08/25/20 16:48	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	08/24/20 15:05	08/25/20 16:48	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	08/24/20 15:05	08/26/20 16:55	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	08/24/20 15:05	08/25/20 16:48	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	08/24/20 15:05	08/25/20 16:48	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	08/24/20 15:05	08/25/20 16:48	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	08/24/20 15:05	08/26/20 16:55	7440-28-0		
7470 Mercury										
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA										
Mercury	ND	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 08:47	7439-97-6		
300.0 IC Anions 28 Days										
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville										
Fluoride	ND	mg/L	0.10	0.050	1		08/21/20 03:17	16984-48-8		

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: DUP-2		Lab ID: 92491455016		Collected: 08/18/20 00:00	Received: 08/19/20 12:45	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	0.00062J	mg/L	0.0030	0.00028	1	08/24/20 15:05	08/25/20 16:54	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	08/24/20 15:05	08/25/20 16:54	7440-38-2		
Barium	0.083	mg/L	0.010	0.00071	1	08/24/20 15:05	08/25/20 16:54	7440-39-3		
Beryllium	0.000063J	mg/L	0.0030	0.000046	1	08/24/20 15:05	08/25/20 16:54	7440-41-7		
Cadmium	0.00019J	mg/L	0.0025	0.00012	1	08/24/20 15:05	08/25/20 16:54	7440-43-9		
Chromium	0.00070J	mg/L	0.010	0.00055	1	08/24/20 15:05	08/25/20 16:54	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	08/24/20 15:05	08/25/20 16:54	7440-48-4		
Lead	0.00066J	mg/L	0.0050	0.000036	1	08/24/20 15:05	08/26/20 17:00	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	08/24/20 15:05	08/25/20 16:54	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	08/24/20 15:05	08/25/20 16:54	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	08/24/20 15:05	08/25/20 16:54	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	08/24/20 15:05	08/26/20 17:00	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 08:50	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	ND	mg/L	0.10	0.050	1		08/21/20 03:31	16984-48-8		

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Sample: FB-1-8-19-20 Lab ID: 92491455017 Collected: 08/19/20 10:30 Received: 08/20/20 12:20 Matrix: Water										
Parameters	Results	Units	Report Limit		MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS										
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA										
Antimony	0.0019J	mg/L	0.0030	0.00028	1	08/24/20 15:10	08/27/20 15:43	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	08/24/20 15:10	08/27/20 15:43	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	08/24/20 15:10	08/27/20 15:43	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	08/24/20 15:10	08/27/20 15:43	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00012	1	08/24/20 15:10	08/27/20 15:43	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	08/24/20 15:10	08/27/20 15:43	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	08/24/20 15:10	08/27/20 15:43	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	08/24/20 15:10	08/27/20 15:43	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	08/24/20 15:10	08/27/20 15:43	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	08/24/20 15:10	08/27/20 15:43	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	08/24/20 15:10	08/27/20 15:43	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	08/24/20 15:10	08/27/20 15:43	7440-28-0		
7470 Mercury										
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA										
Mercury	ND	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 09:02	7439-97-6		
300.0 IC Anions 28 Days										
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville										
Fluoride	ND	mg/L	0.10	0.050	1		08/21/20 23:05	16984-48-8		

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: FB-2-8-19-20 Lab ID: 92491455018 Collected: 08/19/20 09:00 Received: 08/20/20 12:20 Matrix: Water										
Parameters	Results	Units	Report Limit		MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS										
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA										
Antimony	0.00060J	mg/L	0.0030	0.00028	1	08/24/20 15:10	08/27/20 15:48	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	08/24/20 15:10	08/27/20 15:48	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	08/24/20 15:10	08/27/20 15:48	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	08/24/20 15:10	08/27/20 15:48	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00012	1	08/24/20 15:10	08/27/20 15:48	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	08/24/20 15:10	08/27/20 15:48	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	08/24/20 15:10	08/27/20 15:48	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	08/24/20 15:10	08/27/20 15:48	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	08/24/20 15:10	08/27/20 15:48	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	08/24/20 15:10	08/27/20 15:48	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	08/24/20 15:10	08/27/20 15:48	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	08/24/20 15:10	08/27/20 15:48	7440-28-0		
7470 Mercury										
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA										
Mercury	ND	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 09:04	7439-97-6		
300.0 IC Anions 28 Days										
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville										
Fluoride	ND	mg/L	0.10	0.050	1		08/21/20 23:18	16984-48-8		

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Sample: GWC-1		Lab ID: 92491455019		Collected: 08/19/20 09:35		Received: 08/20/20 12:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.73	Std. Units			1		08/20/20 17:18		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00061J	mg/L	0.0030	0.00028	1	08/24/20 15:10	08/27/20 15:54	7440-36-0	
Arsenic	0.0070	mg/L	0.0050	0.00078	1	08/24/20 15:10	08/27/20 15:54	7440-38-2	
Barium	0.057	mg/L	0.010	0.00071	1	08/24/20 15:10	08/27/20 15:54	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/24/20 15:10	08/27/20 15:54	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/24/20 15:10	08/27/20 15:54	7440-43-9	
Chromium	0.0028J	mg/L	0.010	0.00055	1	08/24/20 15:10	08/27/20 15:54	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/24/20 15:10	08/27/20 15:54	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	08/24/20 15:10	08/27/20 15:54	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	08/24/20 15:10	08/27/20 15:54	7439-93-2	
Molybdenum	0.061	mg/L	0.010	0.00069	1	08/24/20 15:10	08/27/20 15:54	7439-98-7	
Selenium	0.0020J	mg/L	0.010	0.0016	1	08/24/20 15:10	08/27/20 15:54	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/24/20 15:10	08/27/20 15:54	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 09:06	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/21/20 23:32	16984-48-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWC-9 **Lab ID: 92491455020** Collected: 08/19/20 09:20 Received: 08/20/20 12:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

pH	4.58	Std. Units			1		08/20/20 17:18		
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6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00028	1	08/24/20 15:10	08/27/20 16:00	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/24/20 15:10	08/27/20 16:00	7440-38-2	
Barium	0.17	mg/L	0.010	0.00071	1	08/24/20 15:10	08/27/20 16:00	7440-39-3	
Beryllium	0.00022J	mg/L	0.0030	0.000046	1	08/24/20 15:10	08/27/20 16:00	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/24/20 15:10	08/27/20 16:00	7440-43-9	
Chromium	0.0013J	mg/L	0.010	0.00055	1	08/24/20 15:10	08/27/20 16:00	7440-47-3	
Cobalt	0.0011J	mg/L	0.0050	0.00038	1	08/24/20 15:10	08/27/20 16:00	7440-48-4	
Lead	0.000096J	mg/L	0.0050	0.000036	1	08/24/20 15:10	08/27/20 16:00	7439-92-1	
Lithium	0.0019J	mg/L	0.030	0.00081	1	08/24/20 15:10	08/27/20 16:00	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/24/20 15:10	08/27/20 16:00	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/24/20 15:10	08/27/20 16:00	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/24/20 15:10	08/27/20 16:00	7440-28-0	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 09:09	7439-97-6	
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Fluoride	0.092J	mg/L	0.10	0.050	1		08/21/20 23:45	16984-48-8	
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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Sample: GWB-5R		Lab ID: 92491455021		Collected: 08/19/20 11:58	Received: 08/20/20 12:20	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.14	Std. Units			1		08/20/20 17:18		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/24/20 15:10	08/27/20 16:25	7440-36-0	
Arsenic	0.0019J	mg/L	0.0050	0.00078	1	08/24/20 15:10	08/27/20 16:25	7440-38-2	
Barium	0.10	mg/L	0.010	0.00071	1	08/24/20 15:10	08/27/20 16:25	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/24/20 15:10	08/27/20 16:25	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/24/20 15:10	08/27/20 16:25	7440-43-9	
Chromium	0.0012J	mg/L	0.010	0.00055	1	08/24/20 15:10	08/27/20 16:25	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/24/20 15:10	08/27/20 16:25	7440-48-4	
Lead	0.000079J	mg/L	0.0050	0.000036	1	08/24/20 15:10	08/27/20 16:25	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	08/24/20 15:10	08/27/20 16:25	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/24/20 15:10	08/27/20 16:25	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/24/20 15:10	08/27/20 16:25	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/24/20 15:10	08/27/20 16:25	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 09:16	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/21/20 23:59	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWA-7 **Lab ID: 92491455022** Collected: 08/19/20 10:30 Received: 08/20/20 12:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

pH	5.81	Std. Units			1		08/20/20 17:18		
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6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.015	0.0014	5	08/24/20 15:10	08/27/20 16:30	7440-36-0	D3
Arsenic	0.0060J	mg/L	0.025	0.0039	5	08/24/20 15:10	08/27/20 16:30	7440-38-2	D3
Barium	0.10	mg/L	0.050	0.0036	5	08/24/20 15:10	08/27/20 16:30	7440-39-3	
Beryllium	ND	mg/L	0.015	0.00023	5	08/24/20 15:10	08/27/20 16:30	7440-41-7	D3
Cadmium	ND	mg/L	0.012	0.00059	5	08/24/20 15:10	08/27/20 16:30	7440-43-9	D3
Chromium	0.015J	mg/L	0.050	0.0028	5	08/24/20 15:10	08/27/20 16:30	7440-47-3	D3
Cobalt	0.0021J	mg/L	0.025	0.0019	5	08/24/20 15:10	08/27/20 16:30	7440-48-4	D3
Lead	0.0044J	mg/L	0.025	0.00018	5	08/24/20 15:10	08/27/20 16:30	7439-92-1	D3
Lithium	ND	mg/L	0.15	0.0040	5	08/24/20 15:10	08/27/20 16:30	7439-93-2	D3
Molybdenum	ND	mg/L	0.050	0.0034	5	08/24/20 15:10	08/27/20 16:30	7439-98-7	D3
Selenium	ND	mg/L	0.050	0.0078	5	08/24/20 15:10	08/27/20 16:30	7782-49-2	D3
Thallium	ND	mg/L	0.0050	0.00072	5	08/24/20 15:10	08/27/20 16:30	7440-28-0	D3

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 09:18	7439-97-6	
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Fluoride	0.21	mg/L	0.10	0.050	1		08/22/20 23:51	16984-48-8	
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Sample: GWB-4R		Lab ID: 92491455023		Collected: 08/19/20 11:45		Received: 08/20/20 12:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.70	Std. Units			1		08/20/20 17:18		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/24/20 15:10	08/27/20 16:36	7440-36-0	
Arsenic	0.0033J	mg/L	0.0050	0.00078	1	08/24/20 15:10	08/27/20 16:36	7440-38-2	
Barium	0.076	mg/L	0.010	0.00071	1	08/24/20 15:10	08/27/20 16:36	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/24/20 15:10	08/27/20 16:36	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/24/20 15:10	08/27/20 16:36	7440-43-9	
Chromium	0.0022J	mg/L	0.010	0.00055	1	08/24/20 15:10	08/27/20 16:36	7440-47-3	
Cobalt	0.00072J	mg/L	0.0050	0.00038	1	08/24/20 15:10	08/27/20 16:36	7440-48-4	
Lead	0.00048J	mg/L	0.0050	0.000036	1	08/24/20 15:10	08/27/20 16:36	7439-92-1	
Lithium	0.014J	mg/L	0.030	0.00081	1	08/24/20 15:10	08/27/20 16:36	7439-93-2	
Molybdenum	0.16	mg/L	0.010	0.00069	1	08/24/20 15:10	08/27/20 16:36	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/24/20 15:10	08/27/20 16:36	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/24/20 15:10	08/27/20 16:36	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 09:20	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.17	mg/L	0.10	0.050	1		08/23/20 00:06	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWB-6R **Lab ID: 92491455024** Collected: 08/19/20 14:00 Received: 08/20/20 12:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

pH	5.21	Std. Units			1		08/20/20 17:18		
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6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00028	1	08/24/20 15:10	08/27/20 16:42	7440-36-0	
Arsenic	0.0036J	mg/L	0.0050	0.00078	1	08/24/20 15:10	08/27/20 16:42	7440-38-2	
Barium	0.064	mg/L	0.010	0.00071	1	08/24/20 15:10	08/27/20 16:42	7440-39-3	
Beryllium	0.000050J	mg/L	0.0030	0.000046	1	08/24/20 15:10	08/27/20 16:42	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/24/20 15:10	08/27/20 16:42	7440-43-9	
Chromium	0.0037J	mg/L	0.010	0.00055	1	08/24/20 15:10	08/27/20 16:42	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/24/20 15:10	08/27/20 16:42	7440-48-4	
Lead	0.00014J	mg/L	0.0050	0.000036	1	08/24/20 15:10	08/27/20 16:42	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	08/24/20 15:10	08/27/20 16:42	7439-93-2	
Molybdenum	0.0010J	mg/L	0.010	0.00069	1	08/24/20 15:10	08/27/20 16:42	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/24/20 15:10	08/27/20 16:42	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/24/20 15:10	08/27/20 16:42	7440-28-0	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 09:23	7439-97-6	
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Fluoride	ND	mg/L	0.10	0.050	1		08/23/20 00:21	16984-48-8	
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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

QC Batch: 561324 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92491455001, 92491455002, 92491455003, 92491455004, 92491455005, 92491455006, 92491455007, 92491455008, 92491455009, 92491455010, 92491455011, 92491455012

METHOD BLANK: 2977587 Matrix: Water
Associated Lab Samples: 92491455001, 92491455002, 92491455003, 92491455004, 92491455005, 92491455006, 92491455007, 92491455008, 92491455009, 92491455010, 92491455011, 92491455012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	08/21/20 17:31	
Arsenic	mg/L	ND	0.0050	0.00078	08/21/20 17:31	
Barium	mg/L	ND	0.010	0.00071	08/21/20 17:31	
Beryllium	mg/L	ND	0.0030	0.000046	08/21/20 17:31	
Cadmium	mg/L	ND	0.0025	0.00012	08/21/20 17:31	
Chromium	mg/L	ND	0.010	0.00055	08/21/20 17:31	
Cobalt	mg/L	ND	0.0050	0.00038	08/21/20 17:31	
Lead	mg/L	ND	0.0050	0.000036	08/21/20 17:31	
Lithium	mg/L	ND	0.030	0.00081	08/21/20 17:31	
Molybdenum	mg/L	ND	0.010	0.00069	08/21/20 17:31	
Selenium	mg/L	ND	0.010	0.0016	08/21/20 17:31	
Thallium	mg/L	ND	0.0010	0.00014	08/21/20 17:31	

LABORATORY CONTROL SAMPLE: 2977588

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	103	80-120	
Arsenic	mg/L	0.1	0.094	94	80-120	
Barium	mg/L	0.1	0.096	96	80-120	
Beryllium	mg/L	0.1	0.097	97	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.097	97	80-120	
Lithium	mg/L	0.1	0.10	100	80-120	
Molybdenum	mg/L	0.1	0.096	96	80-120	
Selenium	mg/L	0.1	0.095	95	80-120	
Thallium	mg/L	0.1	0.096	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2977589 2977590

Parameter	Units	92491389001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Spike Conc.	MSD Spike Conc.	MS Result						
Antimony	mg/L	ND	0.1	0.1	0.1	0.11	106	105	75-125	1	20	
Arsenic	mg/L	ND	0.1	0.1	0.094	0.095	94	95	75-125	2	20	
Barium	mg/L	0.022	0.1	0.1	0.13	0.12	108	96	75-125	9	20	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Parameter	Units	2977589		2977590		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		92491389001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Beryllium	mg/L	ND	0.1	0.1	0.095	0.097	95	97	75-125	2	20		
Cadmium	mg/L	ND	0.1	0.1	0.097	0.10	97	100	75-125	3	20		
Chromium	mg/L	0.0069J	0.1	0.1	0.11	0.11	102	101	75-125	1	20		
Cobalt	mg/L	0.00048J	0.1	0.1	0.10	0.099	99	99	75-125	1	20		
Lead	mg/L	ND	0.1	0.1	0.098	0.099	98	99	75-125	1	20		
Lithium	mg/L	0.00095J	0.1	0.1	0.098	0.098	97	97	75-125	0	20		
Molybdenum	mg/L	0.0015J	0.1	0.1	0.10	0.10	99	101	75-125	2	20		
Selenium	mg/L	ND	0.1	0.1	0.095	0.091	94	90	75-125	4	20		
Thallium	mg/L	ND	0.1	0.1	0.096	0.097	96	97	75-125	1	20		

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

QC Batch:	561963	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3005A	Analysis Description:	6020 MET
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92491455013, 92491455014, 92491455015, 92491455016

METHOD BLANK: 2980652 Matrix: Water

Associated Lab Samples: 92491455013, 92491455014, 92491455015, 92491455016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	08/25/20 16:08	
Arsenic	mg/L	ND	0.0050	0.00078	08/25/20 16:08	
Barium	mg/L	ND	0.010	0.00071	08/25/20 16:08	
Beryllium	mg/L	ND	0.0030	0.000046	08/25/20 16:08	
Cadmium	mg/L	ND	0.0025	0.00012	08/25/20 16:08	
Chromium	mg/L	ND	0.010	0.00055	08/25/20 16:08	
Cobalt	mg/L	ND	0.0050	0.00038	08/25/20 16:08	
Lead	mg/L	ND	0.0050	0.000036	08/26/20 16:20	
Lithium	mg/L	ND	0.030	0.00081	08/25/20 16:08	
Molybdenum	mg/L	ND	0.010	0.00069	08/25/20 16:08	
Selenium	mg/L	ND	0.010	0.0016	08/25/20 16:08	
Thallium	mg/L	ND	0.0010	0.00014	08/26/20 16:20	

LABORATORY CONTROL SAMPLE: 2980653

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	100	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Barium	mg/L	0.1	0.097	97	80-120	
Beryllium	mg/L	0.1	0.098	98	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.098	98	80-120	
Lead	mg/L	0.1	0.10	100	80-120	
Lithium	mg/L	0.1	0.098	98	80-120	
Molybdenum	mg/L	0.1	0.097	97	80-120	
Selenium	mg/L	0.1	0.098	98	80-120	
Thallium	mg/L	0.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2980654 2980655

Parameter	Units	2980654		2980655		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	0.00064J	0.1	0.1	0.10	0.10	101	99	75-125	2	20
Arsenic	mg/L	ND	0.1	0.1	0.099	0.099	99	99	75-125	0	20
Barium	mg/L	0.12	0.1	0.1	0.24	0.23	115	114	75-125	0	20
Beryllium	mg/L	ND	0.1	0.1	0.098	0.099	98	99	75-125	0	20

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Parameter	Units	2980654		2980655		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		92491455013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Cadmium	mg/L	0.00058J	0.1	0.1	0.096	0.096	95	95	75-125	0	20		
Chromium	mg/L	0.0015J	0.1	0.1	0.10	0.10	100	100	75-125	0	20		
Cobalt	mg/L	0.00040J	0.1	0.1	0.10	0.10	99	99	75-125	0	20		
Lead	mg/L	0.00035J	0.1	0.1	0.094	0.093	94	93	75-125	1	20		
Lithium	mg/L	ND	0.1	0.1	0.096	0.098	96	97	75-125	1	20		
Molybdenum	mg/L	0.00077J	0.1	0.1	0.10	0.10	102	99	75-125	2	20		
Selenium	mg/L	0.0028J	0.1	0.1	0.10	0.10	99	99	75-125	0	20		
Thallium	mg/L	0.00021J	0.1	0.1	0.094	0.093	94	93	75-125	1	20		

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

QC Batch:	561964	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3005A	Analysis Description:	6020 MET
Associated Lab Samples:		Laboratory:	Pace Analytical Services - Peachtree Corners, GA
92491455017, 92491455018, 92491455019, 92491455020, 92491455021, 92491455022, 92491455023, 92491455024			

METHOD BLANK:	2980659	Matrix:	Water
Associated Lab Samples: 92491455017, 92491455018, 92491455019, 92491455020, 92491455021, 92491455022, 92491455023, 92491455024			

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	08/27/20 15:08	
Arsenic	mg/L	ND	0.0050	0.00078	08/27/20 15:08	
Barium	mg/L	ND	0.010	0.00071	08/27/20 15:08	
Beryllium	mg/L	ND	0.0030	0.000046	08/27/20 15:08	
Cadmium	mg/L	ND	0.0025	0.00012	08/27/20 15:08	
Chromium	mg/L	ND	0.010	0.00055	08/27/20 15:08	
Cobalt	mg/L	ND	0.0050	0.00038	08/27/20 15:08	
Lead	mg/L	ND	0.0050	0.000036	08/27/20 15:08	
Lithium	mg/L	ND	0.030	0.00081	08/27/20 15:08	
Molybdenum	mg/L	ND	0.010	0.00069	08/27/20 15:08	
Selenium	mg/L	ND	0.010	0.0016	08/27/20 15:08	
Thallium	mg/L	ND	0.0010	0.00014	08/27/20 15:08	

LABORATORY CONTROL SAMPLE: 2980660

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	101	80-120	
Arsenic	mg/L	0.1	0.097	97	80-120	
Barium	mg/L	0.1	0.099	99	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.10	100	80-120	
Lead	mg/L	0.1	0.10	100	80-120	
Lithium	mg/L	0.1	0.10	101	80-120	
Molybdenum	mg/L	0.1	0.099	99	80-120	
Selenium	mg/L	0.1	0.096	96	80-120	
Thallium	mg/L	0.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2980661 2980662

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		292491663009	Spike Conc.	Spike Conc.	Result								
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	103	102	75-125	1	20		
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	1	20		
Barium	mg/L	0.047	0.1	0.1	0.14	0.14	98	97	75-125	0	20		

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2980661		2980662		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		92491663009 Result	MS Spike Conc.	MSD Spike Conc.									
Beryllium	mg/L	ND	0.1	0.1	0.097	0.096	97	96	75-125	1	20		
Cadmium	mg/L	ND	0.1	0.1	0.10	0.098	100	98	75-125	2	20		
Chromium	mg/L	0.012	0.1	0.1	0.12	0.11	106	102	75-125	4	20		
Cobalt	mg/L	ND	0.1	0.1	0.10	0.10	103	102	75-125	1	20		
Lead	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125	0	20		
Lithium	mg/L	0.0010J	0.1	0.1	0.10	0.099	98	98	75-125	0	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	103	100	75-125	2	20		
Selenium	mg/L	0.0030J	0.1	0.1	0.10	0.10	99	102	75-125	3	20		
Thallium	mg/L	ND	0.1	0.1	0.10	0.10	101	102	75-125	1	20		

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

QC Batch:	561377	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92491455001, 92491455002, 92491455003, 92491455004, 92491455005, 92491455006, 92491455007, 92491455008, 92491455009, 92491455010, 92491455011, 92491455012

METHOD BLANK: 2977870 Matrix: Water
Associated Lab Samples: 92491455001, 92491455002, 92491455003, 92491455004, 92491455005, 92491455006, 92491455007, 92491455008, 92491455009, 92491455010, 92491455011, 92491455012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.000078	08/21/20 12:32	

LABORATORY CONTROL SAMPLE: 2977871

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0027	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2977872 2977873

Parameter	Units	92491389001 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	0.0026	0.0026	104	106	75-125	2	20	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

QC Batch:	561894	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92491455013, 92491455014, 92491455015, 92491455016, 92491455017, 92491455018, 92491455019, 92491455020, 92491455021, 92491455022, 92491455023, 92491455024

METHOD BLANK: 2980088 Matrix: Water

Associated Lab Samples: 92491455013, 92491455014, 92491455015, 92491455016, 92491455017, 92491455018, 92491455019, 92491455020, 92491455021, 92491455022, 92491455023, 92491455024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.000078	08/25/20 08:19	

LABORATORY CONTROL SAMPLE: 2980089

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0026	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2980090 2980091

Parameter	Units	92491616002 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Mercury	mg/L	ND	0.0025	0.0023	0.0025	0.0026	90	102	75-125	12	20	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

QC Batch: 561236 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
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92491455001, 92491455002, 92491455003, 92491455004, 92491455005, 92491455006, 92491455007, 92491455008, 92491455009, 92491455010, 92491455011

METHOD BLANK: 2977010 Matrix: Water
Associated Lab Samples: 92491455001, 92491455002, 92491455003, 92491455004, 92491455005, 92491455006, 92491455007, 92491455008, 92491455009, 92491455010, 92491455011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	08/20/20 16:29	

LABORATORY CONTROL SAMPLE: 2977011

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.4	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2977012 2977013

Parameter	Units	92490037006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	0.055J	2.5	2.5	2.7	2.4	107	94	90-110	12	10	R1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2977014 2977015

Parameter	Units	92491455002 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	2.4	2.3	95	92	90-110	4	10	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

QC Batch: 561238 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
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92491455012, 92491455013, 92491455014, 92491455015, 92491455016

METHOD BLANK: 2977016 Matrix: Water
Associated Lab Samples: 92491455012, 92491455013, 92491455014, 92491455015, 92491455016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	08/21/20 01:16	

LABORATORY CONTROL SAMPLE: 2977017

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.7	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2977018 2977019

Parameter	Units	92491455012		2977018		2977019		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result					
Fluoride	mg/L	ND	2.5	2.5	2.5	2.5	98	99	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2977020 2977021

Parameter	Units	92490037060		2977020		2977021		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result					
Fluoride	mg/L	ND	2.5	2.5	2.5	2.5	97	100	90-110	3	10	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

QC Batch: 561506 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
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92491455017, 92491455018, 92491455019, 92491455020, 92491455021

METHOD BLANK: 2978310 Matrix: Water
Associated Lab Samples: 92491455017, 92491455018, 92491455019, 92491455020, 92491455021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	08/21/20 17:28	

LABORATORY CONTROL SAMPLE: 2978311

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: 2978312 2978313

Parameter	Units	2978312		2978313		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92491393004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Fluoride	mg/L	0.17	2.5	2.5	3.0	3.0	112	112	90-110	0	10 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2978314 2978315

Parameter	Units	2978314		2978315		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92491663005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Fluoride	mg/L	0.060J	2.5	2.5	2.7	2.7	105	106	90-110	1	10

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

QC Batch: 561764 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
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92491455022, 92491455023, 92491455024

METHOD BLANK: 2979652 Matrix: Water
Associated Lab Samples: 92491455022, 92491455023, 92491455024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	08/22/20 16:53	

LABORATORY CONTROL SAMPLE: 2979653

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.7	108	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2979654 2979655

Parameter	Units	92491912001		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.										
Fluoride	mg/L	ND	2.5	2.5	2.7	2.7	106	108	90-110	2	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2979656 2979657

Parameter	Units	92491692001		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.										
Fluoride	mg/L	ND	2.5	2.5	2.7	2.7	107	109	90-110	2	10		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: DUP-1 **Lab ID: 92491455001** Collected: 08/17/20 00:00 Received: 08/19/20 12:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.475 ± 0.356 (0.629) C:87% T:NA	pCi/L	09/02/20 07:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.401 ± 0.482 (1.01) C:62% T:77%	pCi/L	09/09/20 13:44	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.876 ± 0.838 (1.64)	pCi/L	09/10/20 13:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: EB-1-8-18-20 **Lab ID: 92491455002** Collected: 08/18/20 00:00 Received: 08/19/20 12:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.181 ± 0.115 (0.185) C:86% T:NA	pCi/L	09/02/20 18:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.645 ± 0.510 (1.01) C:65% T:81%	pCi/L	09/09/20 13:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.826 ± 0.625 (1.20)	pCi/L	09/10/20 13:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWA-8 **Lab ID: 92491455003** Collected: 08/17/20 14:59 Received: 08/19/20 12:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	1.64 ± 0.340 (0.198) C:81% T:NA	pCi/L	09/02/20 18:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.987 ± 0.488 (0.830) C:63% T:79%	pCi/L	09/09/20 12:06	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	2.63 ± 0.828 (1.03)	pCi/L	09/10/20 13:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWC-13 **Lab ID: 92491455004** Collected: 08/17/20 16:16 Received: 08/19/20 12:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.429 ± 0.150 (0.162) C:83% T:NA	pCi/L	09/02/20 18:01	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.986 ± 0.510 (0.897) C:68% T:80%	pCi/L	09/09/20 15:09	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.42 ± 0.660 (1.06)	pCi/L	09/10/20 13:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWC-12 **Lab ID: 92491455005** Collected: 08/17/20 17:25 Received: 08/19/20 12:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.630 ± 0.176 (0.152) C:88% T:NA	pCi/L	09/02/20 18:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.62 ± 0.620 (0.917) C:70% T:70%	pCi/L	09/09/20 15:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	2.25 ± 0.796 (1.07)	pCi/L	09/10/20 13:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWC-16 **Lab ID: 92491455006** Collected: 08/18/20 09:32 Received: 08/19/20 12:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	2.61 ± 0.460 (0.136) C:101% T:NA	pCi/L	09/02/20 18:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.63 ± 0.625 (0.970) C:69% T:82%	pCi/L	09/09/20 15:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	4.24 ± 1.09 (1.11)	pCi/L	09/10/20 13:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWC-21 **Lab ID: 92491455007** Collected: 08/18/20 10:58 Received: 08/19/20 12:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	1.89 ± 0.372 (0.243) C:96% T:NA	pCi/L	09/02/20 18:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.38 ± 0.583 (0.956) C:69% T:81%	pCi/L	09/09/20 15:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	3.27 ± 0.955 (1.20)	pCi/L	09/10/20 13:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWC-15 **Lab ID: 92491455008** Collected: 08/18/20 12:56 Received: 08/19/20 12:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.285 ± 0.129 (0.182) C:94% T:NA	pCi/L	09/02/20 18:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.55 ± 0.588 (0.892) C:66% T:87%	pCi/L	09/09/20 15:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.84 ± 0.717 (1.07)	pCi/L	09/10/20 13:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWC-14 **Lab ID: 92491455009** Collected: 08/18/20 14:24 Received: 08/19/20 12:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.388 ± 0.152 (0.201) C:84% T:NA	pCi/L	09/02/20 18:01	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.343 ± 0.564 (1.23) C:69% T:66%	pCi/L	09/09/20 15:10	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.731 ± 0.716 (1.43)	pCi/L	09/10/20 13:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWC-2 **Lab ID: 92491455010** Collected: 08/18/20 15:23 Received: 08/19/20 12:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.377 ± 0.150 (0.200) C:86% T:NA	pCi/L	09/02/20 18:01	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.709 ± 0.486 (0.941) C:71% T:79%	pCi/L	09/09/20 15:10	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.09 ± 0.636 (1.14)	pCi/L	09/10/20 13:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWC-17 **Lab ID: 92491455011** Collected: 08/18/20 14:50 Received: 08/19/20 12:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	1.97 ± 0.377 (0.171) C:93% T:NA	pCi/L	09/02/20 18:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.14 ± 0.669 (1.24) C:71% T:60%	pCi/L	09/09/20 15:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	3.11 ± 1.05 (1.41)	pCi/L	09/10/20 13:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWC-20 **Lab ID: 92491455012** Collected: 08/18/20 16:36 Received: 08/19/20 12:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	3.09 ± 0.537 (0.138) C:97% T:NA	pCi/L	09/02/20 18:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	3.77 ± 0.976 (0.980) C:69% T:77%	pCi/L	09/09/20 15:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	6.86 ± 1.51 (1.12)	pCi/L	09/10/20 13:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWC-11 **Lab ID: 92491455013** Collected: 08/18/20 10:45 Received: 08/19/20 12:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	3.22 ± 0.562 (0.179) C:89% T:NA	pCi/L	09/02/20 17:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	3.54 ± 1.00 (1.17) C:58% T:80%	pCi/L	09/09/20 15:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	6.76 ± 1.56 (1.35)	pCi/L	09/10/20 13:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWC-22 **Lab ID: 92491455014** Collected: 08/18/20 14:30 Received: 08/19/20 12:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	4.29 ± 0.717 (0.153) C:87% T:NA	pCi/L	09/02/20 17:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	3.36 ± 0.984 (1.23) C:68% T:68%	pCi/L	09/09/20 15:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	7.65 ± 1.70 (1.38)	pCi/L	09/10/20 13:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EB-2-8-18-20 Lab ID: 92491455015 Collected: 08/18/20 16:50 Received: 08/19/20 12:45 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0983 ± 0.0893 (0.156) C:82% T:NA	pCi/L	09/02/20 17:59	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.000828 ± 0.364 (0.850) C:64% T:88%	pCi/L	09/09/20 15:10	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.0983 ± 0.453 (1.01)	pCi/L	09/10/20 13:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: DUP-2 **Lab ID: 92491455016** Collected: 08/18/20 00:00 Received: 08/19/20 12:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	4.34 ± 0.723 (0.166) C:90% T:NA	pCi/L	09/02/20 17:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	5.03 ± 1.20 (0.992) C:68% T:75%	pCi/L	09/09/20 15:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	9.37 ± 1.92 (1.16)	pCi/L	09/10/20 13:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: FB-1-8-19-20 **Lab ID: 92491455017** Collected: 08/19/20 10:30 Received: 08/20/20 12:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.0591 ± 0.0951 (0.185) C:94% T:NA	pCi/L	09/03/20 16:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.0611 ± 0.357 (0.819) C:66% T:80%	pCi/L	09/09/20 12:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.120 ± 0.452 (1.00)	pCi/L	09/10/20 15:11	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: FB-2-8-19-20 **Lab ID: 92491455018** Collected: 08/19/20 09:00 Received: 08/20/20 12:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	-0.0223 ± 0.145 (0.305) C:87% T:NA	pCi/L	09/03/20 16:47	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.820 ± 0.441 (0.761) C:62% T:78%	pCi/L	09/09/20 12:02	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.820 ± 0.586 (1.07)	pCi/L	09/10/20 15:11	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWC-1 **Lab ID: 92491455019** Collected: 08/19/20 09:35 Received: 08/20/20 12:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	1.08 ± 0.260 (0.235) C:87% T:NA	pCi/L	09/03/20 16:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.830 ± 0.488 (0.892) C:63% T:77%	pCi/L	09/09/20 12:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.91 ± 0.748 (1.13)	pCi/L	09/10/20 15:11	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWC-9 **Lab ID: 92491455020** Collected: 08/19/20 09:20 Received: 08/20/20 12:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	1.20 ± 0.267 (0.192) C:90% T:NA	pCi/L	09/03/20 16:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.14 ± 0.521 (0.849) C:59% T:83%	pCi/L	09/09/20 15:08	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	2.34 ± 0.788 (1.04)	pCi/L	09/10/20 15:11	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWB-5R **Lab ID: 92491455021** Collected: 08/19/20 11:58 Received: 08/20/20 12:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	1.97 ± 0.388 (0.210) C:82% T:NA	pCi/L	09/03/20 16:47	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.521 ± 0.444 (0.882) C:65% T:73%	pCi/L	09/09/20 15:08	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	2.49 ± 0.832 (1.09)	pCi/L	09/10/20 15:11	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWA-7 **Lab ID: 92491455022** Collected: 08/19/20 10:30 Received: 08/20/20 12:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	4.22 ± 1.13 (0.672) C:90% T:NA	pCi/L	09/10/20 15:09	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.23 ± 0.583 (0.978) C:66% T:89%	pCi/L	09/09/20 15:08	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	5.45 ± 1.71 (1.65)	pCi/L	09/11/20 13:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWB-4R **Lab ID: 92491455023** Collected: 08/19/20 11:45 Received: 08/20/20 12:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	1.89 ± 0.368 (0.222) C:94% T:NA	pCi/L	09/03/20 18:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.21 ± 0.552 (0.915) C:67% T:77%	pCi/L	09/09/20 15:08	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	3.10 ± 0.920 (1.14)	pCi/L	09/10/20 15:11	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Sample: GWB-6R **Lab ID: 92491455024** Collected: 08/19/20 14:00 Received: 08/20/20 12:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	3.78 ± 0.640 (0.184) C:88% T:NA	pCi/L	09/03/20 18:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.754 ± 0.462 (0.836) C:61% T:79%	pCi/L	09/09/20 15:08	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	4.53 ± 1.10 (1.02)	pCi/L	09/10/20 15:11	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

QC Batch:	411435	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92491455001, 92491455002, 92491455003

METHOD BLANK: 1990342 Matrix: Water

Associated Lab Samples: 92491455001, 92491455002, 92491455003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.664 ± 0.374 (0.672) C:70% T:89%	pCi/L	09/09/20 12:03	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

QC Batch:	411439	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg
Associated Lab Samples:	92491455017, 92491455018, 92491455019, 92491455020, 92491455021, 92491455022, 92491455023, 92491455024		

METHOD BLANK:	1990347	Matrix:	Water
Associated Lab Samples:	92491455017, 92491455018, 92491455019, 92491455020, 92491455021, 92491455022, 92491455023, 92491455024		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.274 ± 0.326 (0.685) C:63% T:88%	pCi/L	09/09/20 12:01	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

QC Batch:	411373	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92491455001

METHOD BLANK:	1989993	Matrix:	Water
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Associated Lab Samples: 92491455001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0671 ± 0.195 (0.481) C:88% T:NA	pCi/L	09/02/20 07:31	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

QC Batch: 411436

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92491455004, 92491455005, 92491455006, 92491455007, 92491455008, 92491455009, 92491455010, 92491455011, 92491455012, 92491455013, 92491455014, 92491455015, 92491455016

METHOD BLANK: 1990343

Matrix: Water

Associated Lab Samples: 92491455004, 92491455005, 92491455006, 92491455007, 92491455008, 92491455009, 92491455010, 92491455011, 92491455012, 92491455013, 92491455014, 92491455015, 92491455016

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.245 ± 0.335 (0.716) C:71% T:90%	pCi/L	09/09/20 15:09	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

QC Batch: 411375

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92491455017, 92491455018, 92491455019, 92491455020, 92491455021, 92491455022, 92491455023, 92491455024

METHOD BLANK: 1989998

Matrix: Water

Associated Lab Samples: 92491455017, 92491455018, 92491455019, 92491455020, 92491455021, 92491455022, 92491455023, 92491455024

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.135 ± 0.115 (0.203) C:91% T:NA	pCi/L	09/03/20 16:47	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

QC Batch: 411374

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92491455002, 92491455003, 92491455004, 92491455005, 92491455006, 92491455007, 92491455008, 92491455009, 92491455010, 92491455011, 92491455012, 92491455013, 92491455014, 92491455015, 92491455016

METHOD BLANK: 1989996

Matrix: Water

Associated Lab Samples: 92491455002, 92491455003, 92491455004, 92491455005, 92491455006, 92491455007, 92491455008, 92491455009, 92491455010, 92491455011, 92491455012, 92491455013, 92491455014, 92491455015, 92491455016

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.241 ± 0.165 (0.285) C:87% T:NA	pCi/L	09/02/20 18:01	

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QUALIFIERS

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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.

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.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92491455003	GWA-8				
92491455004	GWC-13				
92491455005	GWC-12				
92491455006	GWC-16				
92491455007	GWC-21				
92491455008	GWC-15				
92491455009	GWC-14				
92491455010	GWC-2				
92491455011	GWC-17				
92491455012	GWC-20				
92491455013	GWC-11				
92491455014	GWC-22				
92491455019	GWC-1				
92491455020	GWC-9				
92491455021	GWB-5R				
92491455022	GWA-7				
92491455023	GWB-4R				
92491455024	GWB-6R				
92491455001	DUP-1	EPA 3005A	561324	EPA 6020B	561396
92491455002	EB-1-8-18-20	EPA 3005A	561324	EPA 6020B	561396
92491455003	GWA-8	EPA 3005A	561324	EPA 6020B	561396
92491455004	GWC-13	EPA 3005A	561324	EPA 6020B	561396
92491455005	GWC-12	EPA 3005A	561324	EPA 6020B	561396
92491455006	GWC-16	EPA 3005A	561324	EPA 6020B	561396
92491455007	GWC-21	EPA 3005A	561324	EPA 6020B	561396
92491455008	GWC-15	EPA 3005A	561324	EPA 6020B	561396
92491455009	GWC-14	EPA 3005A	561324	EPA 6020B	561396
92491455010	GWC-2	EPA 3005A	561324	EPA 6020B	561396
92491455011	GWC-17	EPA 3005A	561324	EPA 6020B	561396
92491455012	GWC-20	EPA 3005A	561324	EPA 6020B	561396
92491455013	GWC-11	EPA 3005A	561963	EPA 6020B	562039
92491455014	GWC-22	EPA 3005A	561963	EPA 6020B	562039
92491455015	EB-2-8-18-20	EPA 3005A	561963	EPA 6020B	562039
92491455016	DUP-2	EPA 3005A	561963	EPA 6020B	562039
92491455017	FB-1-8-19-20	EPA 3005A	561964	EPA 6020B	562041
92491455018	FB-2-8-19-20	EPA 3005A	561964	EPA 6020B	562041
92491455019	GWC-1	EPA 3005A	561964	EPA 6020B	562041
92491455020	GWC-9	EPA 3005A	561964	EPA 6020B	562041
92491455021	GWB-5R	EPA 3005A	561964	EPA 6020B	562041
92491455022	GWA-7	EPA 3005A	561964	EPA 6020B	562041
92491455023	GWB-4R	EPA 3005A	561964	EPA 6020B	562041
92491455024	GWB-6R	EPA 3005A	561964	EPA 6020B	562041
92491455001	DUP-1	EPA 7470A	561377	EPA 7470A	561555
92491455002	EB-1-8-18-20	EPA 7470A	561377	EPA 7470A	561555
92491455003	GWA-8	EPA 7470A	561377	EPA 7470A	561555
92491455004	GWC-13	EPA 7470A	561377	EPA 7470A	561555
92491455005	GWC-12	EPA 7470A	561377	EPA 7470A	561555

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92491455006	GWC-16	EPA 7470A	561377	EPA 7470A	561555
92491455007	GWC-21	EPA 7470A	561377	EPA 7470A	561555
92491455008	GWC-15	EPA 7470A	561377	EPA 7470A	561555
92491455009	GWC-14	EPA 7470A	561377	EPA 7470A	561555
92491455010	GWC-2	EPA 7470A	561377	EPA 7470A	561555
92491455011	GWC-17	EPA 7470A	561377	EPA 7470A	561555
92491455012	GWC-20	EPA 7470A	561377	EPA 7470A	561555
92491455013	GWC-11	EPA 7470A	561894	EPA 7470A	562048
92491455014	GWC-22	EPA 7470A	561894	EPA 7470A	562048
92491455015	EB-2-8-18-20	EPA 7470A	561894	EPA 7470A	562048
92491455016	DUP-2	EPA 7470A	561894	EPA 7470A	562048
92491455017	FB-1-8-19-20	EPA 7470A	561894	EPA 7470A	562048
92491455018	FB-2-8-19-20	EPA 7470A	561894	EPA 7470A	562048
92491455019	GWC-1	EPA 7470A	561894	EPA 7470A	562048
92491455020	GWC-9	EPA 7470A	561894	EPA 7470A	562048
92491455021	GWB-5R	EPA 7470A	561894	EPA 7470A	562048
92491455022	GWA-7	EPA 7470A	561894	EPA 7470A	562048
92491455023	GWB-4R	EPA 7470A	561894	EPA 7470A	562048
92491455024	GWB-6R	EPA 7470A	561894	EPA 7470A	562048
92491455001	DUP-1	EPA 9315	411373		
92491455002	EB-1-8-18-20	EPA 9315	411374		
92491455003	GWA-8	EPA 9315	411374		
92491455004	GWC-13	EPA 9315	411374		
92491455005	GWC-12	EPA 9315	411374		
92491455006	GWC-16	EPA 9315	411374		
92491455007	GWC-21	EPA 9315	411374		
92491455008	GWC-15	EPA 9315	411374		
92491455009	GWC-14	EPA 9315	411374		
92491455010	GWC-2	EPA 9315	411374		
92491455011	GWC-17	EPA 9315	411374		
92491455012	GWC-20	EPA 9315	411374		
92491455013	GWC-11	EPA 9315	411374		
92491455014	GWC-22	EPA 9315	411374		
92491455015	EB-2-8-18-20	EPA 9315	411374		
92491455016	DUP-2	EPA 9315	411374		
92491455017	FB-1-8-19-20	EPA 9315	411375		
92491455018	FB-2-8-19-20	EPA 9315	411375		
92491455019	GWC-1	EPA 9315	411375		
92491455020	GWC-9	EPA 9315	411375		
92491455021	GWB-5R	EPA 9315	411375		
92491455022	GWA-7	EPA 9315	411375		
92491455023	GWB-4R	EPA 9315	411375		
92491455024	GWB-6R	EPA 9315	411375		
92491455001	DUP-1	EPA 9320	411435		
92491455002	EB-1-8-18-20	EPA 9320	411435		
92491455003	GWA-8	EPA 9320	411435		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GRUMMAN ROAD SCAN EVENT 2020
Pace Project No.: 92491455

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92491455004	GWC-13	EPA 9320	411436		
92491455005	GWC-12	EPA 9320	411436		
92491455006	GWC-16	EPA 9320	411436		
92491455007	GWC-21	EPA 9320	411436		
92491455008	GWC-15	EPA 9320	411436		
92491455009	GWC-14	EPA 9320	411436		
92491455010	GWC-2	EPA 9320	411436		
92491455011	GWC-17	EPA 9320	411436		
92491455012	GWC-20	EPA 9320	411436		
92491455013	GWC-11	EPA 9320	411436		
92491455014	GWC-22	EPA 9320	411436		
92491455015	EB-2-8-18-20	EPA 9320	411436		
92491455016	DUP-2	EPA 9320	411436		
92491455017	FB-1-8-19-20	EPA 9320	411439		
92491455018	FB-2-8-19-20	EPA 9320	411439		
92491455019	GWC-1	EPA 9320	411439		
92491455020	GWC-9	EPA 9320	411439		
92491455021	GWB-5R	EPA 9320	411439		
92491455022	GWA-7	EPA 9320	411439		
92491455023	GWB-4R	EPA 9320	411439		
92491455024	GWB-6R	EPA 9320	411439		
92491455001	DUP-1	Total Radium Calculation	413343		
92491455002	EB-1-8-18-20	Total Radium Calculation	413343		
92491455003	GWA-8	Total Radium Calculation	413343		
92491455004	GWC-13	Total Radium Calculation	413343		
92491455005	GWC-12	Total Radium Calculation	413343		
92491455006	GWC-16	Total Radium Calculation	413343		
92491455007	GWC-21	Total Radium Calculation	413343		
92491455008	GWC-15	Total Radium Calculation	413343		
92491455009	GWC-14	Total Radium Calculation	413343		
92491455010	GWC-2	Total Radium Calculation	413343		
92491455011	GWC-17	Total Radium Calculation	413343		
92491455012	GWC-20	Total Radium Calculation	413343		
92491455013	GWC-11	Total Radium Calculation	413343		
92491455014	GWC-22	Total Radium Calculation	413343		
92491455015	EB-2-8-18-20	Total Radium Calculation	413343		
92491455016	DUP-2	Total Radium Calculation	413343		
92491455017	FB-1-8-19-20	Total Radium Calculation	413382		
92491455018	FB-2-8-19-20	Total Radium Calculation	413382		
92491455019	GWC-1	Total Radium Calculation	413382		
92491455020	GWC-9	Total Radium Calculation	413382		
92491455021	GWB-5R	Total Radium Calculation	413382		
92491455022	GWA-7	Total Radium Calculation	413546		
92491455023	GWB-4R	Total Radium Calculation	413382		
92491455024	GWB-6R	Total Radium Calculation	413382		
92491455001	DUP-1	EPA 300.0 Rev 2.1 1993	561236		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GRUMMAN ROAD SCAN EVENT 2020

Pace Project No.: 92491455

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92491455002	EB-1-8-18-20	EPA 300.0 Rev 2.1 1993	561236		
92491455003	GWA-8	EPA 300.0 Rev 2.1 1993	561236		
92491455004	GWC-13	EPA 300.0 Rev 2.1 1993	561236		
92491455005	GWC-12	EPA 300.0 Rev 2.1 1993	561236		
92491455006	GWC-16	EPA 300.0 Rev 2.1 1993	561236		
92491455007	GWC-21	EPA 300.0 Rev 2.1 1993	561236		
92491455008	GWC-15	EPA 300.0 Rev 2.1 1993	561236		
92491455009	GWC-14	EPA 300.0 Rev 2.1 1993	561236		
92491455010	GWC-2	EPA 300.0 Rev 2.1 1993	561236		
92491455011	GWC-17	EPA 300.0 Rev 2.1 1993	561236		
92491455012	GWC-20	EPA 300.0 Rev 2.1 1993	561238		
92491455013	GWC-11	EPA 300.0 Rev 2.1 1993	561238		
92491455014	GWC-22	EPA 300.0 Rev 2.1 1993	561238		
92491455015	EB-2-8-18-20	EPA 300.0 Rev 2.1 1993	561238		
92491455016	DUP-2	EPA 300.0 Rev 2.1 1993	561238		
92491455017	FB-1-8-19-20	EPA 300.0 Rev 2.1 1993	561506		
92491455018	FB-2-8-19-20	EPA 300.0 Rev 2.1 1993	561506		
92491455019	GWC-1	EPA 300.0 Rev 2.1 1993	561506		
92491455020	GWC-9	EPA 300.0 Rev 2.1 1993	561506		
92491455021	GWB-5R	EPA 300.0 Rev 2.1 1993	561506		
92491455022	GWA-7	EPA 300.0 Rev 2.1 1993	561764		
92491455023	GWB-4R	EPA 300.0 Rev 2.1 1993	561764		
92491455024	GWB-6R	EPA 300.0 Rev 2.1 1993	561764		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 92491455

Client Name: GA POWER



Courier: Fed Ex UPS USPS Client Commercial Pace Other
Tracking #: 819120

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

Packing Material: Bubble Wrap Bubble Bags None Other ZIPLOC

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

Cooler Temperature 20/37/13 Biological Tissue is Frozen: Yes No
Temp should be above freezing to 6°C Comments:

Proj. Due Date:
Proj. Name:

Date and Initials of person examining contents: KRW 8/19/20

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: -Includes date/time/ID/Analysis Matrix: W	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.	DUPL, EB-1, GWC-16, GWC-21, metals container w/o label. DUPL impres. also w/o label.	
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, D&G, WI-DRO (water)	<input type="checkbox"/> Yes <input 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)



CHAIN-OF-CUSTODY / Analytical Request Document

Section A
 Required Client Information:
 Company: GA Power
 Address: Atlanta, GA

Section B
 Required Project Information:
 Report To: SCS Contacts
 Copy To: ACC Contacts
 Email To: SCS Contacts
 Phone: SCS Contacts
 Requested Due Date/TIME: 10 Day

Section C
 Invoice Information:
 Attention: Southern Co.
 Company Name:
 Address:
 Reference:
 Price Prepared: Kevin Herring
 Price Order #: 2926-1

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER
 Site Location: GA
 STATE: GA

Section D
 Required Client Information
 Valid Matrix Codes
 MATRIX CODE (see valid codes to left)
 SAMPLE TYPE (G=GRAB C=COMP)
 COLLECTED: COMPOSITE
 PRESERVATIVES: Unpreserved, H₂SO₄, HNO₃, HCl, NaOH, Na₂S₂O₃, Methanol, Other
 ANALYSIS TEST: Fluoride 300.0, App. IV Metals 6020/7470, RAD 226/228

ITEM #	MATRIX CODE	SAMPLE TYPE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES	ANALYSIS TEST	RESIDUAL CHLORINE (Y/N)	PH
			DATE	TIME						
1	DUP-1	W G	8/17/20			4				
2	Field of 8-18-20 EB-1-8-18-20	W G	8/18/20			4				
3	GWA-8	W G	8/17/20	1454		4				
4	GWA-12	W G	8/17/20	1616		4				
5	GWA-12	W G	8/17/20	1725		4				
6	GWA-12	W G	8/17/20	1832		4				
7	GWA-21	W G	8/18/20	0558		4				
8	GWC-15	W G	8/18/20	1256		4				
9	GWA-14	W G	8/18/20	1474		4				
10	GWC-2	W G	8/18/20	1593		4				
11	GWC-17	W G	8/18/20	1450		4				
12	GWC-20	W G	8/15/20	1530		4				

ADDITIONAL COMMENTS
 Please note when the last sample for the event has been taken.

RECEIVED BY / AFFILIATION
 DATE: 8-18-20
 TIME: 0915
 ACCEPTED BY / AFFILIATION: [Signature]
 DATE: 8-19-20
 TIME: 0915

PH
 PH = NA
 PH = NA
 PH = 4.23
 PH = 4.65
 PH = 3.94
 PH = 5.52
 PH = 5.82
 PH = 6.39
 PH = 5.50
 PH = 4.60
 PH = 4.31
 PH = 5.89

RESIDUAL CHLORINE (Y/N)
 Residual Chlorine (Y/N)

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: [Signature]
 SIGNATURE of SAMPLER: [Signature]

DATE SIGNED (MM/DD/YY): 8-19-20

Temp in °C
 Received on ice (Y/N)
 Custody Sealed Cooler (Y/N)
 Samples Intact (Y/N)

Important Note: By signing this form you are accepting Face's NET 30 day payment terms and agreeing to take charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-Feb-2007



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company: GA Power Address: Atlanta, GA	Section B Required Project Information: Report To: SCS Contacts Comp To: ACC Contacts
Section C Invoice Information: Attention: Southern Co. Company Name: Address:	Regulatory Agency: <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER State: GA

Section D Required Client Information: Valid Matrix Codes: MATRIX CODE (see valid codes to left) SAMPLE TYPE (G=GRAB C=COMP) COLLECTED (COMPOSITE / COMPOSITE) DATE / TIME / DATE / TIME SAMPLE TEMP AT COLLECTION # OF CONTAINERS Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other Analysis Test Fluoride 300.0 App. IV Metals 6020/7470 RAD 226/228	Purchase Order No.: Project Name: Gunman Road - Scan Event 2020 Project Number: Requested Analysis Filtered (Y/N) Requested Dur Data/FAT: 10 Day Requested Analysis Filtered (Y/N)
---	---

ITEM #	Valid Matrix Codes	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES					Analysis Test	Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH=	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
				DATE	TIME			DATE	TIME	H ₂ SO ₄	HNO ₃	HCl									
1	GW-C-11			8-18-20	1645		4														
2	GW-C-22			8-18-20	1430		4														
3	ES-2-2-18-20			8-18-20	1650		4														
4	Dep-2						4														
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS

PLEASE NOTE: when the last sample for the event has been taken.

PREVIOUS DAY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
<i>[Signature]</i>	8-18-20	0815	<i>[Signature]</i>	8-18-20	0815	

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: J. BEERS ROAD SIGNATURE of SAMPLER: <i>[Signature]</i>	DATE Signed (MM/DD/YY): 08/18/20
---	----------------------------------

Important Note: By signing this form you are accepting Face's NET 30 day payment terms and agreeing to file charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-Feb-2007



Sample Condition Upon Receipt

WO#: 92491455

Client Name: GA Power

PM: KLH1

Due Date: 09/02/20

CLIENT: GA-GA Power

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: _____

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

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used 233 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 21°C Biological Tissue is Frozen: Yes No

Temp should be above freezing to 8°C

Proj. Due Date: Proj. Name:

Date and Initials of person examining contents: 8/20/20 [Signature]

Table with 16 rows of checklist items including Chain of Custody, Sample Labels, and Trip Blank Present. Includes checkboxes for Yes/No/N/A and handwritten notes.

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)



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company: GA Power Address: Atlanta, GA	Section B Required Project Information: Report To: SCS Contacts Copy To: ACC Contacts	Section C Invoice Information: Attention: Southern Co. Company Name: Address: Site Code: Sales Order: Sales Project Manager: Kevin Herring Sales Profile #: 2926-1
Section D Requested Client Information: Valid Matrix Codes: MATRIX CODES DOMESTIC WATER DW WASTE WATER WW WASTE WATER WWT SOLID WASTE SW AIR WWT AIR WWT OTHER OT TISSUE TS	Requested Due Date/TIME: 10 Day	Email To: SCS Contacts Phone: Fax Project Name: Gwinnett Road - Scan Event 2020 Project Number:
Section D Requested Client Information: SAMPLE ID (A-Z, 0-9 /,) Sample IDs MUST BE UNIQUE	Requested Analysis Filtered (Y/N)	REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>

ITEM #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Y/N	Fluoride 300.0	App. IV Metals 6020/7470	RAD 228/228	Residual Chlorine (Y/N)	pH
			COMPOSITE	DATE					TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃							
1	FB-1-3-19-20	W G	8-14-20	1030	8-14-20	0900	4	<input checked="" type="checkbox"/>													pH = 4.8	
2	FB-2-8-19-20	W G	8-14-20	0900	8-14-20	0900	4	<input checked="" type="checkbox"/>													pH = 4.8	
3	GWC-1	W G	8-14-20	0935	8-14-20	0920	4	<input checked="" type="checkbox"/>													pH = 5.23	
4	GWC-9	W G	8-14-20	0920	8-14-20	1158	4	<input checked="" type="checkbox"/>													pH = 4.58	
5	GWB-SR	W G	8-14-20	1158	8-14-20	1030	4	<input checked="" type="checkbox"/>													pH = 5.14	
6	GWA-7	W G	8-14-20	1030	8-14-20	1145	4	<input checked="" type="checkbox"/>													pH = 5.81	
7	GWB-4R	W G	8-14-20	1145	8-14-20	1400	4	<input checked="" type="checkbox"/>													pH = 5.20	
8	GWB-6R	W G	8-14-20	1400	8-14-20	1400	4	<input checked="" type="checkbox"/>													pH = 5.21	
9	GWA-7	W G																				
10																						
11																						
12																						

ADDITIONAL COMMENTS: Please code when the 3rd sample for the event has been taken 8/14/20	RELINQUISHED BY / AFFILIATION: ACC 8/16/20	DATE	TIME	ACCEPTED BY / AFFILIATION: Kevin Herring	DATE	TIME
---	---	------	------	---	------	------

SAMPLER NAME AND SIGNATURE		Temp In °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER: Kevin Herring					
SIGNATURE of SAMPLER: Kevin Herring					
	DATE Signed: 08/14/20				
	INITIALS: KH				

Important Note: By signing this form you are accepting Face's NET 30 day payment terms and agreeing to title charges of 1.5% per month for any invoice not paid within 30 days.

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 9/3/2020
Worklist: 55839
Matrix: DW

Method Blank Assessment	
MB Sample ID	1989998
MB concentration:	0.135
MB Counting Uncertainty:	0.113
MB MDC:	0.203
MB Numerical Performance Indicator:	2.34
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	9/4/2020
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.045
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.502
Target Conc. (pCi/L, g, F):	4.785
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	4.098
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.782
Numerical Performance Indicator:	-1.72
Percent Recovery:	85.64%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	92491393012
Duplicate Sample I.D.:	92491393012DUP
Sample Result (pCi/L, g, F):	0.684
Sample Result Counting Uncertainty (pCi/L, g, F):	0.375
Sample Duplicate Result (pCi/L, g, F):	0.377
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.254
Are sample and/or duplicate results below RL?	See Below #
Duplicate Numerical Performance Indicator:	(1.32) <i>CL</i>
Duplicate RPD:	57.84%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***
% RPD Limit:	25%

*** Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

***Data must be rechecked due to unacceptable precision. *NIA*
AM 9/4/2020

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
MS Spike Uncertainty (calculated):	
MSD Spike Uncertainty (calculated):	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	
MS/MSD Upper % Recovery Limits:	
MS/MSD Lower % Recovery Limits:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	
% RPD Limit:	

AM 9/4/2020

Over...

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: LAL
Date: 9/3/2020
Worklist: 55839
Matrix: DW

Method Blank Assessment	
MB Sample ID	1988998
MB concentration:	0.135
MB Counting Uncertainty:	0.113
MB MDC:	0.203
MB Numerical Performance Indicator:	2.34
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	N
LCSD55839	LCSD55839
Count Date:	9/4/2020
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.045
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.502
Target Conc. (pCi/L, g, F):	4.785
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	4.098
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.782
Numerical Performance Indicator:	-1.72
Percent Recovery:	85.64%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	92491663008
Duplicate Sample I.D.:	92491663008DUP
Sample Result (pCi/L, g, F):	0.467
Sample Result Counting Uncertainty (pCi/L, g, F):	0.143
Sample Duplicate Result (pCi/L, g, F):	0.359
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.256
Are sample and/or duplicate results below RL?	See Below #
Duplicate Numerical Performance Indicator:	0.728
Duplicate RPD:	26.34%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail
% RPD Limit:	25%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

***Batch must be re-prepped due to unacceptable precision: N/A

UAM 9/14/2020

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.: MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): Spike Volume Used in MSD (mL): MS Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): MSD Aliquot (L, g, F): MSD Target Conc. (pCi/L, g, F): MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated): Sample Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Result: Matrix Spike Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): MS Numerical Performance Indicator: MSD Numerical Performance Indicator: MS Percent Recovery: MSD Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D. Sample MS I.D. Sample MSD I.D. Matrix Spike Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): Duplicate Numerical Performance Indicator: (Based on the Percent Recoveries) MS/MSD Duplicate RPD: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPD: % RPD Limit:

UAM 9/14/2020
Total Alpha Radium (R104-3 11Feb2019).xls
TAR_55839_W.xls

Quality Control Sample Performance Assessment



Analyst **Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226
Analyst: LAL
Date: 9/1/2020
Worklist: 55837
Matrix: DW

Method Blank Assessment	
MB Sample ID	1969993
MB Concentration:	0.067
M/B Counting Uncertainty:	0.195
MB MDC:	0.481
MB Numerical Performance Indicator:	0.67
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	9/2/2020
Spike I.D.:	LCS55837
Decay Corrected Spike Concentration (pCi/mL):	19-033
Volume Used (mL):	24.045
Aliquot Volume (L, g, F):	0.10
Target Conc. (pCi/L, g, F):	0.508
Uncertainty (Calculated):	4.738
Result (pCi/L, g, F):	0.057
Numerical Performance Indicator:	5.286
Percent Recovery:	0.868
Status vs Numerical Indicator:	1.24
Status vs Recovery:	111.59%
Upper % Recovery Limits:	N/A
Lower % Recovery Limits:	Pass
	125%
	75%

Duplicate Sample Assessment	
Sample I.D.:	92490963004
Duplicate Sample I.D.:	92490963004DUP
Sample Result (pCi/L, g, F):	0.116
Sample Duplicate Result (pCi/L, g, F):	0.301
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.448
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.277
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	-1.591
Duplicate RPD:	117.70%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***
% RPD Limit:	25%

*** Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

*** Batch number is prepended to unacceptable precision.

N/A
LAM 9/2/2020

Sample Matrix Spike Control Assessment	
Sample Collection Date:	MS/MSD 1
Sample I.D.:	MS/MSD 2
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
MS Spike Uncertainty (calculated):	
MSD Spike Uncertainty (calculated):	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	
MS/MSD Upper % Recovery Limits:	
MS/MSD Lower % Recovery Limits:	

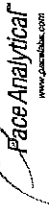
Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	Sample MS I.D.
Sample MS I.D.:	Sample MSD I.D.
Sample MSD I.D.:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Result:
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	Duplicate Numerical Performance Indicator:
Duplicate Numerical Performance Indicator:	(Based on the Percent Recoveries) MS/MSD Duplicate RPD:
MS/MSD Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs RPD:
MS/MSD Duplicate Status vs RPD:	% RPD Limit:

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LAM 9/2/2020

Quality Control Sample Performance Assessment

Analyst **Must Manually Enter All Fields Highlighted in Yellow.**



Test: Ra-226
Analyst: LAL
Date: 9/1/2020
Worklist: 55837
Matrix: DW

Method Blank Assessment

MB Sample ID: 1989993
MB Concentration: 0.067
MB Counting Uncertainty: 0.195
MB MDC: 0.481
MB Numerical Performance Indicator: 0.67
MB Status vs Numerical Indicator: N/A
MB Status vs MDC: Pass

Laboratory Control Sample Assessment

LCSID (Y or N)?	Y
LCS45837	LCS45837
Count Date:	9/2/2020
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.045
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.501
Target Conc. (pCi/L, g, F):	4.738
Uncertainty (Calculated):	0.057
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	5.286
Numerical Performance Indicator:	0.868
Percent Recovery:	1.24
Status vs Numerical Indicator:	111.58%
Status vs Recovery:	N/A
Upper % Recovery Limits:	Pass
Lower % Recovery Limits:	125%
	75%

Duplicate Sample Assessment

Sample I.D.:	LCS55637
Duplicate Sample I.D.:	LCSD55637
Sample Result (pCi/L, g, F):	5.286
Sample Result Counting Uncertainty (pCi/L, g, F):	0.868
Sample Duplicate Result (pCi/L, g, F):	4.329
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.605
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	1.584
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	21.13%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

MS/MSD 1	MS/MSD 2
<p>Sample Matrix Spike Control Assessment</p> <p>Sample Collection Date:</p> <p>Sample I.D.:</p> <p>Sample MS I.D.:</p> <p>Sample MSD I.D.:</p> <p>Spike I.D.:</p> <p>MSMSD Decay Corrected Spike Concentration (pCi/mL):</p> <p>Spike Volume Used in MS (mL):</p> <p>Spike Volume Used in MSD (mL):</p> <p>MS Aliquot (L, g, F):</p> <p>MS Target Conc. (pCi/L, g, F):</p> <p>MSD Aliquot (L, g, F):</p> <p>MSD Target Conc. (pCi/L, g, F):</p> <p>MS Spike Uncertainty (calculated):</p> <p>MSD Spike Uncertainty (calculated):</p> <p>Sample Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Result:</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):</p> <p>MS Numerical Performance Indicator:</p> <p>MSD Numerical Performance Indicator:</p> <p>MS Percent Recovery:</p> <p>MSD Percent Recovery:</p> <p>MS Status vs Numerical Indicator:</p> <p>MSD Status vs Numerical Indicator:</p> <p>MS Status vs Recovery:</p> <p>MSD Status vs Recovery:</p> <p>MS/MSD Upper % Recovery Limits:</p> <p>MS/MSD Lower % Recovery Limits:</p>	<p>Matrix Spike/Matrix Spike Duplicate Sample Assessment</p> <p>Sample I.D.:</p> <p>Sample MS I.D.:</p> <p>Sample MSD I.D.:</p> <p>Sample Matrix Spike Result:</p> <p>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):</p> <p>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):</p> <p>Duplicate Numerical Performance Indicator:</p> <p>(Based on the Percent Recoveries) MS/MSD Duplicate RPD:</p> <p>MS/MSD Duplicate Status vs Numerical Indicator:</p> <p>MS/MSD Duplicate Status vs RPD:</p> <p>% RPD Limit:</p>

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

0.0011111111111111

LAM 9/2/2020

Quality Control Sample Performance Assessment



Analyst: Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 9/2/2020
Worklist: 55838
Matrix: DW

Method Blank Assessment	
MB Sample ID	1989996
MB Concentration:	0.241
MB Counting Uncertainty:	0.161
MB MDC:	0.285
MB Numerical Performance Indicator:	2.94
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCSD55838	LCSD55838
Count Date:	9/2/2020	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.045	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.501	
Target Conc. (pCi/L, g, F):	4.798	
Uncertainty (Calculated):	0.058	
Result (pCi/L, g, F):	4.336	
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	0.343	
Numerical Performance Indicator:	-2.60	
Percent Recovery:	90.37%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	92491663005
Duplicate Sample I.D.:	92491663005DUP
Sample Result (pCi/L, g, F):	0.117
Sample Result Counting Uncertainty (pCi/L, g, F):	0.110
Sample Duplicate Result (pCi/L, g, F):	0.098
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.087
Ave sample and/or duplicate results below RL?	See Below #
Duplicate Numerical Performance Indicator:	0.253
Duplicate RPD:	16.83%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
<p>Sample Collection Date:</p> <p>Sample I.D.:</p> <p>Sample MS I.D.:</p> <p>Sample MSD I.D.:</p> <p>Spike I.D.:</p> <p>MS/MSD Decay Corrected Spike Concentration (pCi/mL):</p> <p>Spike Volume Used in MS (mL):</p> <p>Spike Volume Used in MSD (mL):</p> <p>MS Aliquot (L, g, F):</p> <p>MS Target Conc. (pCi/L, g, F):</p> <p>MSD Aliquot (L, g, F):</p> <p>MSD Target Conc. (pCi/L, g, F):</p> <p>MS Spike Uncertainty (calculated):</p> <p>MSD Spike Uncertainty (calculated):</p> <p>Sample Result:</p> <p>Sample Result Counting Uncertainty (pCi/L, g, F):</p> <p>Matrix Spike Result:</p> <p>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):</p> <p>MS Numerical Performance Indicator:</p> <p>MSD Numerical Performance Indicator:</p> <p>MS Percent Recovery:</p> <p>MSD Percent Recovery:</p> <p>MS Status vs Numerical Indicator:</p> <p>MSD Status vs Numerical Indicator:</p> <p>MS Status vs Recovery:</p> <p>MSD Status vs Recovery:</p> <p>MS/MSD Upper % Recovery Limits:</p> <p>MS/MSD Lower % Recovery Limits:</p>		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
<p>Sample I.D.:</p> <p>Sample MS I.D.:</p> <p>Sample MSD I.D.:</p> <p>Sample Matrix Spike Result:</p> <p>Sample Matrix Spike Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):</p> <p>Duplicate Numerical Performance Indicator:</p> <p>Duplicate Numerical Performance Indicator (Based on the Percent Recoveries):</p> <p>MS/MSD Duplicate Status vs Numerical Indicator:</p> <p>MS/MSD Duplicate Status vs RPD:</p> <p>% RPD Limit:</p>

Jan 9/3/2020

Qua. 9.20

Quality Control Sample Performance Assessment



Analyst **Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226
Analyst: LAL
Date: 9/2/2020
Worklist: 55638
Matrix: DW

Method Blank Assessment	
MB Sample ID	1989996
MB concentration:	0.241
M/B Counting Uncertainty:	0.161
MB MDC:	0.285
MB Numerical Performance Indicator:	2.94
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS/D (Y or N)?	Y
Decay Corrected Spike Concentration (pCi/mL):		LCS55838	LCS55838
Count Date:	9/2/2020		
Spike I.D.:	19-033		19-033
Volume Used (mL):	24.045		24.045
Aliquot Volume (L, g, F):	0.10		0.10
Target Conc. (pCi/L, g, F):	0.501		0.509
Uncertainty (Calculated):	4.798		4.720
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.058		0.057
Numerical Performance Indicator:	4.783		4.783
Percent Recovery:	0.343		0.364
Status vs Numerical Indicator:	-2.60		0.34
Upper % Recovery Limits:	90.37%		101.35%
Lower % Recovery Limits:	N/A		N/A
	Pass		Pass
	125%		125%
	75%		75%

Duplicate Sample Assessment	
Sample I.D.:	LCS55838
Duplicate Sample I.D.:	LCS55838
Sample Result (pCi/L, g, F):	4.336
Sample Duplicate Result (pCi/L, g, F):	0.343
Ave sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-1.753
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	11.46%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

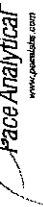
Comments:

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
<p>Sample Collection Date:</p> <p>Sample I.D.:</p> <p>Sample MS I.D.:</p> <p>Sample MSD I.D.:</p> <p>Spike I.D.:</p> <p>MS/MSD Decay Corrected Spike Concentration (pCi/mL):</p> <p>Spike Volume Used in MS (mL):</p> <p>Spike Volume Used in MSD (mL):</p> <p>MS Aliquot (L, g, F):</p> <p>MS Target Conc.(pCi/L, g, F):</p> <p>MSD Aliquot (L, g, F):</p> <p>MSD Target Conc. (pCi/L, g, F):</p> <p>MS Spike Uncertainty (calculated):</p> <p>MSD Spike Uncertainty (calculated):</p> <p>Sample Result:</p> <p>Sample Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Result:</p> <p>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):</p> <p>MS Numerical Performance Indicator:</p> <p>MSD Numerical Performance Indicator:</p> <p>MS Percent Recovery:</p> <p>MSD Percent Recovery:</p> <p>MS Status vs Numerical Indicator:</p> <p>MSD Status vs Numerical Indicator:</p> <p>MS Status vs Recovery:</p> <p>MSD Status vs Recovery:</p> <p>MS/MSD Upper % Recovery Limits:</p> <p>MS/MSD Lower % Recovery Limits:</p>		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
<p>Sample I.D.:</p> <p>Sample MS I.D.:</p> <p>Sample MSD I.D.:</p> <p>Matrix Spike Result:</p> <p>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):</p> <p>Duplicate Numerical Performance Indicator:</p> <p>(Based on the Percent Recoveries) MS/MSD Duplicate RPD:</p> <p>MS/MSD Duplicate Status vs Numerical Indicator:</p> <p>MS/MSD Duplicate Status vs RPD:</p> <p>% RPD Limit:</p>

Jan 9/13/2020
Cue 9.3.20

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 9/2/2020
Worklist: 55851
Matrix: WT

Method Blank Assessment	
MB Sample ID	1990342
MB concentration:	0.664
MB 2 Sigma CSU:	0.374
MB MDC:	0.672
MB Numerical Performance Indicator:	3.48
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS/D (Y or N)?	
	LCS55851	YCS55851
Count Date:	9/9/2020	9/9/2020
Spike I.D.:	20-030	20-030
Decay Corrected Spike Concentration (pCi/mL):	38.472	38.472
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.812	0.803
Target Conc. (pCi/L, g, F):	4.737	4.789
Uncertainty (Calculated):	0.232	0.235
Result (pCi/L, g, F):	5.598	4.322
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.288	1.030
Numerical Performance Indicator:	1.29	-0.87
Percent Recovery:	118.17%	90.24%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below:
Sample I.D.:	LCS55851
Duplicate Sample I.D.:	LCS55851
Sample Result (pCi/L, g, F):	5.598
Sample Duplicate Result (pCi/L, g, F):	1.288
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	4.322
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.030
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	1.516
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	26.80%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.:		
Sample MS I.D.:		
Sample MSD I.D.:		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):		
MS Target Conc. (pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):		
MSD Spike Uncertainty (calculated):		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
MS Numerical Performance Indicator:		
MS Numerical Performance Indicator:		
MS Percent Recovery:		
MSD Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:		
MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D.:
Sample MS I.D.:
Sample MSD I.D.:
Sample Matrix Spike Result:
Sample Matrix Spike Duplicate Result:
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):
Duplicate Numerical Performance Indicator:
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:
MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs RPD:
% RPD Limit:

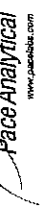
Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

*if the lowest activity sample in this batch is greater than ten times the blank value, the blank is acceptable; otherwise this batch must be re-prepped.

On 9.10.20

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 9/2/2020
Worklist: 55852
Matrix: W/T

Method Blank Assessment	
MB Sample ID	1990343
MB concentration:	0.245
M/B 2 Sigma CSU:	0.335
MB MDC:	0.715
MB Numerical Performance Indicator:	1.43
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	
	LCS55852	Y
Count Date:	9/9/2020	LCS55852
Spike I.D.:	20-030	9/9/2020
Decay Corrected Spike Concentration (pCi/mL):	38.470	20-030
Volume Used (mL):	0.10	38.470
Aliquot Volume (L, g, F):	0.801	0.10
Target Conc. (pCi/L, g, F):	4.804	4.799
Uncertainty (Calculated):	0.235	5.838
Result (pCi/L, g, F):	4.151	1.360
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.079	1.47
Numerical Performance Indicator:	-1.16	121.64%
Percent Recovery:	86.42%	N/A
Status vs Numerical Indicator:	N/A	Pass
Status vs Recovery:	Pass	135%
Upper % Recovery Limits:	135%	60%
Lower % Recovery Limits:	60%	

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	LCS55852
Duplicate Sample I.D.:	LCS55852
Sample Result (pCi/L, g, F):	4.151
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.079
Sample Duplicate Result (pCi/L, g, F):	5.838
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.360
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-1.903
Duplicate (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	33.85%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): Spike Volume Used in MSD (mL): MS Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): MSD Aliquot (L, g, F): MSD Target Conc. (pCi/L, g, F): MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated):		
Sample Result: Sample Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Result: Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): MS Numerical Performance Indicator: MSD Numerical Performance Indicator: MS Percent Recovery: MSD Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D. Sample MS I.D. Sample MSD I.D. Sample Matrix Spike Result: Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): Duplicate Numerical Performance Indicator: (Based on the Percent Recoveries) MS/MSD Duplicate RPD: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPD: % RPD Limit:

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

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Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.



Test: Ra-228
Analyst: VAL
Date: 9/2/2020
Worklist: 55853
Matrix: WT

Method Blank Assessment	
MB Sample ID	1990347
MB concentration:	0.274
MB 2 Sigma CSU:	0.326
MB MDC:	0.685
MB Numerical Performance Indicator:	1.65
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS#	Y or N?
Count Date:	9/9/2020	LCS#55853	Y
Spike I.D.:	20-030	LCS#55853	
Decay Corrected Spike Concentration (pCi/mL):	38.472		
Volume Used (mL):	0.10		
Aliquot Volume (L, g, F):	0.810		
Target Conc. (pCi/L, g, F):	4.748		
Uncertainty (Calculated):	0.233		
Result (pCi/L, g, F):	4.963		
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.118		
Numerical Performance Indicator:	0.37		
Percent Recovery:	104.53%		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	Pass		
Upper % Recovery Limits:	135%		
Lower % Recovery Limits:	60%		

Duplicate Sample Assessment		LCS#	Y or N?
Sample I.D.:	LCS#55853	LCS#55853	
Duplicate Sample I.D.:	LCS#55853		
Sample Result (pCi/L, g, F):	4.963		
Sample Duplicate Result (pCi/L, g, F):	1.118		
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	5.603		
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.205		
Are sample and/or duplicate results below RL?	NO		
Duplicate Numerical Performance Indicator:	-0.762		
Duplicate Numerical Performance Indicator:	12.36%		
Duplicate Status vs Numerical Indicator:	Pass		
Duplicate Status vs RPD:	Pass		
% RPD Limit:	36%		

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

9-10-20
TJ

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
<p>Sample Collection Date:</p> <p>Sample I.D.:</p> <p>Sample MS I.D.:</p> <p>Sample MSD I.D.:</p> <p>Spike I.D.:</p> <p>MS/MSD Decay Corrected Spike Concentration (pCi/mL):</p> <p>Spike Volume Used in MS (mL):</p> <p>Spike Volume Used in MSD (mL):</p> <p>MS Aliquot (L, g, F):</p> <p>MS Target Conc. (pCi/L, g, F):</p> <p>MSD Aliquot (L, g, F):</p> <p>MSD Target Conc. (pCi/L, g, F):</p> <p>MS Spike Uncertainty (calculated):</p> <p>MSD Spike Uncertainty (calculated):</p> <p>Sample Result:</p> <p>Sample Result 2 Sigma CSU (pCi/L, g, F):</p> <p>Sample Matrix Spike Result:</p> <p>Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):</p> <p>MS Numerical Performance Indicator:</p> <p>MSD Numerical Performance Indicator:</p> <p>MS Percent Recovery:</p> <p>MSD Percent Recovery:</p> <p>MS Status vs Numerical Indicator:</p> <p>MSD Status vs Numerical Indicator:</p> <p>MS Status vs Recovery:</p> <p>MSD Status vs Recovery:</p> <p>MS/MSD Upper % Recovery Limits:</p> <p>MS/MSD Lower % Recovery Limits:</p>		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
<p>Sample I.D.:</p> <p>Sample MS I.D.:</p> <p>Sample MSD I.D.:</p> <p>Sample Matrix Spike Result:</p> <p>Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):</p> <p>Duplicate Numerical Performance Indicator:</p> <p>Duplicate Numerical Performance Indicator:</p> <p>(Based on the Percent Recoveries): MS/MSD Duplicate RPD:</p> <p>MS/MSD Duplicate Status vs Numerical Indicator:</p> <p>MS/MSD Duplicate Status vs RPD:</p> <p>% RPD Limit:</p>

9/2/2020/01/10
TJ

August 27, 2020

Joju Abraham
Georgia Power-CCR
2480 Maner Road
Atlanta, GA 30339

RE: Project: GRUMMAN ROAD - SCAN EVENT 2020
Pace Project No.: 92491818

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on August 20, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

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

Sincerely,



Kevin Herring
kevin.herring@pacelabs.com
1(704)875-9092
HORIZON Database Administrator

Enclosures

cc: Owens Fuquea, ACC
Kristen Jurinko
Matt Malone, Atlantic Coast Consulting
Betsy McDaniel, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Ms. Lauren Petty, Southern Co. Services



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: GRUMMAN ROAD - SCAN EVENT 2020

Pace Project No.: 92491818

Pace Analytical Services Charlotte

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

Louisiana/NELAP Certification # LA170028

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Virginia/VELAP Certification #: 460221

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, 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: GRUMMAN ROAD - SCAN EVENT 2020

Pace Project No.: 92491818

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92491818001	GWA-7	Water	08/19/20 10:30	08/20/20 12:20
92491818002	GWB-5R	Water	08/19/20 11:58	08/20/20 12:20

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD - SCAN EVENT 2020

Pace Project No.: 92491818

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92491818001	GWA-7	EPA 6020B	CW1	12
		EPA 7470A	VB	1
92491818002	GWB-5R	EPA 6020B	CW1	12
		EPA 7470A	VB	1

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD - SCAN EVENT 2020

Pace Project No.: 92491818

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92491818001	GWA-7					
	pH	5.81	Std. Units		08/20/20 16:59	
EPA 6020B	Antimony, Dissolved	0.00044J	mg/L	0.0030	08/24/20 18:04	
EPA 6020B	Arsenic, Dissolved	0.0024J	mg/L	0.0050	08/24/20 18:04	
EPA 6020B	Barium, Dissolved	0.082	mg/L	0.010	08/24/20 18:04	
EPA 6020B	Beryllium, Dissolved	0.00011J	mg/L	0.0030	08/24/20 18:04	
EPA 6020B	Chromium, Dissolved	0.010	mg/L	0.010	08/24/20 18:04	
EPA 6020B	Cobalt, Dissolved	0.0017J	mg/L	0.0050	08/24/20 18:04	
EPA 6020B	Lead, Dissolved	0.00015J	mg/L	0.0050	08/24/20 18:04	
EPA 6020B	Molybdenum, Dissolved	0.00070J	mg/L	0.010	08/24/20 18:04	
EPA 6020B	Selenium, Dissolved	0.0074J	mg/L	0.010	08/24/20 18:04	
92491818002	GWB-5R					
	pH	5.14	Std. Units		08/20/20 17:00	
EPA 6020B	Arsenic, Dissolved	0.0019J	mg/L	0.0050	08/24/20 18:10	
EPA 6020B	Barium, Dissolved	0.098	mg/L	0.010	08/24/20 18:10	
EPA 6020B	Beryllium, Dissolved	0.000058J	mg/L	0.0030	08/24/20 18:10	
EPA 6020B	Chromium, Dissolved	0.0029J	mg/L	0.010	08/24/20 18:10	
EPA 6020B	Lead, Dissolved	0.00089J	mg/L	0.0050	08/24/20 18:10	
EPA 7470A	Mercury, Dissolved	0.00011J	mg/L	0.00020	08/27/20 10:03	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD - SCAN EVENT 2020
Pace Project No.: 92491818

Sample: GWA-7		Lab ID: 92491818001		Collected: 08/19/20 10:30		Received: 08/20/20 12:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.81	Std. Units			1		08/20/20 16:59		
6020 MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony, Dissolved	0.00044J	mg/L	0.0030	0.00028	1	08/24/20 12:49	08/24/20 18:04	7440-36-0	
Arsenic, Dissolved	0.0024J	mg/L	0.0050	0.00078	1	08/24/20 12:49	08/24/20 18:04	7440-38-2	
Barium, Dissolved	0.082	mg/L	0.010	0.00071	1	08/24/20 12:49	08/24/20 18:04	7440-39-3	
Beryllium, Dissolved	0.00011J	mg/L	0.0030	0.000046	1	08/24/20 12:49	08/24/20 18:04	7440-41-7	
Cadmium, Dissolved	ND	mg/L	0.0025	0.00012	1	08/24/20 12:49	08/24/20 18:04	7440-43-9	
Chromium, Dissolved	0.010	mg/L	0.010	0.00055	1	08/24/20 12:49	08/24/20 18:04	7440-47-3	
Cobalt, Dissolved	0.0017J	mg/L	0.0050	0.00038	1	08/24/20 12:49	08/24/20 18:04	7440-48-4	
Lead, Dissolved	0.00015J	mg/L	0.0050	0.000036	1	08/24/20 12:49	08/24/20 18:04	7439-92-1	
Lithium, Dissolved	ND	mg/L	0.030	0.00081	1	08/24/20 12:49	08/24/20 18:04	7439-93-2	
Molybdenum, Dissolved	0.00070J	mg/L	0.010	0.00069	1	08/24/20 12:49	08/24/20 18:04	7439-98-7	
Selenium, Dissolved	0.0074J	mg/L	0.010	0.0016	1	08/24/20 12:49	08/24/20 18:04	7782-49-2	
Thallium, Dissolved	ND	mg/L	0.0010	0.00014	1	08/24/20 12:49	08/24/20 18:04	7440-28-0	
7470 Mercury, Dissolved									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury, Dissolved	ND	mg/L	0.00020	0.000078	1	08/26/20 12:00	08/27/20 09:53	7439-97-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD - SCAN EVENT 2020

Pace Project No.: 92491818

Sample: GWB-5R		Lab ID: 92491818002		Collected: 08/19/20 11:58		Received: 08/20/20 12:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.14	Std. Units			1		08/20/20 17:00		
6020 MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony, Dissolved	ND	mg/L	0.0030	0.00028	1	08/24/20 12:49	08/24/20 18:10	7440-36-0	
Arsenic, Dissolved	0.0019J	mg/L	0.0050	0.00078	1	08/24/20 12:49	08/24/20 18:10	7440-38-2	
Barium, Dissolved	0.098	mg/L	0.010	0.00071	1	08/24/20 12:49	08/24/20 18:10	7440-39-3	
Beryllium, Dissolved	0.000058J	mg/L	0.0030	0.000046	1	08/24/20 12:49	08/24/20 18:10	7440-41-7	
Cadmium, Dissolved	ND	mg/L	0.0025	0.00012	1	08/24/20 12:49	08/24/20 18:10	7440-43-9	
Chromium, Dissolved	0.0029J	mg/L	0.010	0.00055	1	08/24/20 12:49	08/24/20 18:10	7440-47-3	
Cobalt, Dissolved	ND	mg/L	0.0050	0.00038	1	08/24/20 12:49	08/24/20 18:10	7440-48-4	
Lead, Dissolved	0.00089J	mg/L	0.0050	0.000036	1	08/24/20 12:49	08/24/20 18:10	7439-92-1	
Lithium, Dissolved	ND	mg/L	0.030	0.00081	1	08/24/20 12:49	08/24/20 18:10	7439-93-2	
Molybdenum, Dissolved	ND	mg/L	0.010	0.00069	1	08/24/20 12:49	08/24/20 18:10	7439-98-7	
Selenium, Dissolved	ND	mg/L	0.010	0.0016	1	08/24/20 12:49	08/24/20 18:10	7782-49-2	
Thallium, Dissolved	ND	mg/L	0.0010	0.00014	1	08/24/20 12:49	08/24/20 18:10	7440-28-0	
7470 Mercury, Dissolved									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury, Dissolved	0.00011J	mg/L	0.00020	0.000078	1	08/26/20 12:00	08/27/20 10:03	7439-97-6	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD - SCAN EVENT 2020
Pace Project No.: 92491818

QC Batch: 561952 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92491818001, 92491818002

METHOD BLANK: 2980579 Matrix: Water
Associated Lab Samples: 92491818001, 92491818002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	mg/L	ND	0.0030	0.00028	08/24/20 17:24	
Arsenic, Dissolved	mg/L	ND	0.0050	0.00078	08/24/20 17:24	
Barium, Dissolved	mg/L	ND	0.010	0.00071	08/24/20 17:24	
Beryllium, Dissolved	mg/L	ND	0.0030	0.000046	08/24/20 17:24	
Cadmium, Dissolved	mg/L	ND	0.0025	0.00012	08/24/20 17:24	
Chromium, Dissolved	mg/L	ND	0.010	0.00055	08/24/20 17:24	
Cobalt, Dissolved	mg/L	ND	0.0050	0.00038	08/24/20 17:24	
Lead, Dissolved	mg/L	ND	0.0050	0.000036	08/24/20 17:24	
Lithium, Dissolved	mg/L	ND	0.030	0.00081	08/24/20 17:24	
Molybdenum, Dissolved	mg/L	ND	0.010	0.00069	08/24/20 17:24	
Selenium, Dissolved	mg/L	ND	0.010	0.0016	08/24/20 17:24	
Thallium, Dissolved	mg/L	ND	0.0010	0.00014	08/24/20 17:24	

METHOD BLANK: 2980581 Matrix: Water
Associated Lab Samples: 92491818001, 92491818002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	mg/L	ND	0.0030	0.00028	08/24/20 17:30	
Arsenic, Dissolved	mg/L	ND	0.0050	0.00078	08/24/20 17:30	
Barium, Dissolved	mg/L	ND	0.010	0.00071	08/24/20 17:30	
Beryllium, Dissolved	mg/L	ND	0.0030	0.000046	08/24/20 17:30	
Cadmium, Dissolved	mg/L	ND	0.0025	0.00012	08/24/20 17:30	
Chromium, Dissolved	mg/L	ND	0.010	0.00055	08/24/20 17:30	
Cobalt, Dissolved	mg/L	ND	0.0050	0.00038	08/24/20 17:30	
Lead, Dissolved	mg/L	ND	0.0050	0.000036	08/24/20 17:30	
Lithium, Dissolved	mg/L	ND	0.030	0.00081	08/24/20 17:30	
Molybdenum, Dissolved	mg/L	ND	0.010	0.00069	08/24/20 17:30	
Selenium, Dissolved	mg/L	ND	0.010	0.0016	08/24/20 17:30	
Thallium, Dissolved	mg/L	ND	0.0010	0.00014	08/24/20 17:30	

LABORATORY CONTROL SAMPLE: 2980580

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	mg/L	0.1	0.10	103	80-120	
Arsenic, Dissolved	mg/L	0.1	0.098	98	80-120	
Barium, Dissolved	mg/L	0.1	0.096	96	80-120	
Beryllium, Dissolved	mg/L	0.1	0.099	99	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD - SCAN EVENT 2020
Pace Project No.: 92491818

LABORATORY CONTROL SAMPLE: 2980580

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium, Dissolved	mg/L	0.1	0.10	100	80-120	
Chromium, Dissolved	mg/L	0.1	0.10	101	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	0.10	100	80-120	
Molybdenum, Dissolved	mg/L	0.1	0.097	97	80-120	
Selenium, Dissolved	mg/L	0.1	0.097	97	80-120	
Thallium, Dissolved	mg/L	0.1	0.099	99	80-120	

LABORATORY CONTROL SAMPLE: 2980582

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	mg/L	0.1	0.085	85	80-120	
Arsenic, Dissolved	mg/L	0.1	0.10	100	80-120	
Barium, Dissolved	mg/L	0.1	0.097	97	80-120	
Beryllium, Dissolved	mg/L	0.1	0.094	94	80-120	
Cadmium, Dissolved	mg/L	0.1	0.10	103	80-120	
Chromium, Dissolved	mg/L	0.1	0.082	82	80-120	
Cobalt, Dissolved	mg/L	0.1	0.097	97	80-120	
Lead, Dissolved	mg/L	0.1	0.088	88	80-120	
Lithium, Dissolved	mg/L	0.1	0.096	96	80-120	
Molybdenum, Dissolved	mg/L	0.1	0.087	87	80-120	
Selenium, Dissolved	mg/L	0.1	0.10	104	80-120	
Thallium, Dissolved	mg/L	0.1	0.097	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2980616 2980617

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92491818002 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
Antimony, Dissolved	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	1	20	
Arsenic, Dissolved	mg/L	0.0019J	0.1	0.1	0.099	0.099	97	97	75-125	0	20	
Barium, Dissolved	mg/L	0.098	0.1	0.1	0.21	0.21	109	110	75-125	0	20	
Beryllium, Dissolved	mg/L	0.000058J	0.1	0.1	0.095	0.093	95	93	75-125	1	20	
Cadmium, Dissolved	mg/L	ND	0.1	0.1	0.099	0.097	99	97	75-125	2	20	
Chromium, Dissolved	mg/L	0.0029J	0.1	0.1	0.10	0.10	99	100	75-125	1	20	
Cobalt, Dissolved	mg/L	ND	0.1	0.1	0.099	0.097	98	97	75-125	2	20	
Lead, Dissolved	mg/L	0.00089J	0.1	0.1	0.10	0.099	99	99	75-125	1	20	
Lithium, Dissolved	mg/L	ND	0.1	0.1	0.097	0.095	96	94	75-125	2	20	
Molybdenum, Dissolved	mg/L	ND	0.1	0.1	0.099	0.099	98	98	75-125	0	20	
Selenium, Dissolved	mg/L	ND	0.1	0.1	0.090	0.091	88	89	75-125	1	20	
Thallium, Dissolved	mg/L	ND	0.1	0.1	0.099	0.098	99	98	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD - SCAN EVENT 2020

Pace Project No.: 92491818

QC Batch: 562439	Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A	Analysis Description: 7470 Mercury Dissolved
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92491818001, 92491818002

METHOD BLANK: 2982838 Matrix: Water

Associated Lab Samples: 92491818001, 92491818002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	mg/L	ND	0.00020	0.000078	08/27/20 09:48	

LABORATORY CONTROL SAMPLE: 2982839

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	mg/L	0.0025	0.0025	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2982840 2982841

Parameter	Units	2982840		2982841		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury, Dissolved	mg/L	ND	0.0025	0.0025	0.0023	99	91	75-125	8	20	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: GRUMMAN ROAD - SCAN EVENT 2020

Pace Project No.: 92491818

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GRUMMAN ROAD - SCAN EVENT 2020

Pace Project No.: 92491818

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92491818001	GWA-7				
92491818002	GWB-5R				
92491818001	GWA-7	EPA 3005A	561952	EPA 6020B	561968
92491818002	GWB-5R	EPA 3005A	561952	EPA 6020B	561968
92491818001	GWA-7	EPA 7470A	562439	EPA 7470A	562584
92491818002	GWB-5R	EPA 7470A	562439	EPA 7470A	562584

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: GA Power

WO#: **92491818**

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



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

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used 233 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 2.1°C Biological Tissue is Frozen: Yes No

Date and initials of person examining contents: SPH/oa

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)



Document Name:
Bottle Identification Form (BIF)
Document No:
F-CAR-CS-043-Rev.00

Document issued: March 14, 2019
Page 1 of 1
Issuing Authority:
Pace Carolinas Quality Office

WO#: 92491818

PM: KLH1 Due Date: 09/03/20
CLIENT: GA-GA Power

Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project #

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg
Bottom half of box is to list number of bottle

Matrix	Item#	BP4U-125 mL Plastic Unpreserved (N/A) (C-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (C-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (C-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (C-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(C-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-VPH/Gas kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP9A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG8U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	
	1																											
	2																											
	3																											
	4																											
	5																											
	6																											
	7																											
	8																											
	9																											
	10																											
	11																											
	12																											

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot

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 C
Out of hold, incorrect preservative, out of temp, incorrect containers.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information. Company: GA Power, Address: Atlanta, GA

Section B Required Project Information. Report To: SCS Contacts, Copy To: ACC Contacts

Section C Invoice Information. Attention: Southern Co., Company Name: Southern Co., Address: [Redacted]

REGULATORY AGENCY: NPDES, GROUND WATER, DRINKING WATER, UST, RCRA, OTHER. Site Location: GA. Requested Analysis Filtered (Y/N): [Blank]

Table with columns: ITEM #, Section D Required Client Information (SAMPLE ID: GWA-7, GWS-B1Z), Valid Matrix Codes, MATRIX CODE, SAMPLE TYPE, COLLECTED (DATE, TIME), PRESERVED, Analysis Test, Residual Chlorine (Y/N), pH=, and SAMPLE CONDITIONS.

ADDITIONAL COMMENTS: Relinquished by Affiliation: ACC, Date: 8/14/20, Time: 1226. Accepted by Affiliation: K. Williams, Date: 8/19/20, Time: 1226.

SAMPLER NAME AND SIGNATURE: Jordan Bristol, O. Fugere. PRINT Name of SAMPLER: Jordan Bristol, O. Fugere. SIGNATURE of SAMPLER: [Signature]. DATE Signed (MM/DD/YYYY): 08/19/20.

LEVEL 2A LABORATORY DATA VALIDATIONS

Grumman Road

Scan Event

August 2020

Georgia Power Company – Grumman Road

Quality Control Review of Analytical Data – August 2020

This narrative presents results of the Quality Control (QC) data review performed on analytical data submitted by Pace Analytical Services, Asheville, Atlanta, Charlotte, and Pittsburgh for groundwater samples collected at Grumman Road between August 17, 2020 and August 19, 2020. 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.

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), 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.

Field Precision: Field goals for precision were met, with the exceptions of Antimony on GWC-22 (92491455014) and Radium-228 on GWC-13 (92491455004) and GWC-22 (92491455014) 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. 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

U: 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.

- Samples GWC-22 (92491455014) and DUP-2 (92491455016) were qualified as estimated (J) for Antimony and Radium-228 as the field RPDs (relative percent differences) exceeded QC criteria (112.06% and 39.81%, respectively, above limit of 20).
- Samples GWC-13 (92491455004) and DUP-1 (92491455001) were qualified as estimated (J) for Radium-228 as the field RPD exceeded QC criteria (84.35% above limit of 20).
- Certain Radium results in SDG 92491455 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 17, 2020 and August 19, 2020 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 2020

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)
491455	DUP-1	8/17/2020	92491455001	GW	FD (GWC-13)	X	X		X
491455	EB-1-8-18-20	8/18/2020	92491455002	WQ	EB	X	X		X
491455	GWA-8	8/17/2020	92491455003	GW		X	X		X
491455	GWC-13	8/17/2020	92491455004	GW		X	X		X
491455	GWC-12	8/17/2020	92491455005	GW		X	X		X
491455	GWC-16	8/18/2020	92491455006	GW		X	X		X
491455	GWC-21	8/18/2020	92491455007	GW		X	X		X
491455	GWC-15	8/18/2020	92491455008	GW		X	X		X
491455	GWC-14	8/18/2020	92491455009	GW		X	X		X
491455	GWC-2	8/18/2020	92491455010	GW		X	X		X
491455	GWC-17	8/18/2020	92491455011	GW		X	X		X
491455	GWC-20	8/18/2020	92491455012	GW		X	X		X
491455	GWC-11	8/18/2020	92491455013	GW		X	X		X
491455	GWC-22	8/18/2020	92491455014	GW		X	X		X
491455	EB-2-8-18-20	8/18/2020	92491455015	WQ	EB	X	X		X
491455	DUP-2	8/18/2020	92491455016	GW	FD (GWC-22)	X	X		X
491455	FB-1-8-19-20	8/19/2020	92491455017	WQ	FB	X	X		X
491455	FB-2-8-19-20	8/19/2020	92491455018	WQ	FB	X	X		X
491455	GWC-1	8/19/2020	92491455019	GW		X	X		X
491455	GWC-9	8/19/2020	92491455020	GW		X	X		X
491455	GWB-5R	8/19/2020	92491455021	GW		X	X		X
491455	GWA-7	8/19/2020	92491455022	GW		X	X		X
491455	GWB-4R	8/19/2020	92491455023	GW		X	X		X
491455	GWB-6R	8/19/2020	92491455024	GW		X	X		X
491818	GWA-7	8/19/2020	92491818001	GW		X			
491818	GWB-5R	8/19/2020	92491818002	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 2020

SDG	Field Identification	Constituent	New RL	New MDL or MDC	Qualifier	Reason
491455	GWC-22	Antimony			J	RPD exceeds field goal
491455	DUP-2	Antimony			J	RPD exceeds field goal
491455	GWC-13	Radium-228			J	RPD exceeds field goal
491455	DUP-1	Radium-228			J	RPD exceeds field goal
491455	GWC-22	Radium-228			J	RPD exceeds field goal
491455	DUP-2	Radium-228			J	RPD exceeds field goal
491455	GWA-8	Radium-228		0.830	ND	Blank detection
491455	GWC-13	Radium-228		0.897	ND	Blank detection
491455	GWC-12	Radium-228		0.917	ND	Blank detection
491455	GWC-16	Radium-228		0.970	ND	Blank detection
491455	GWC-21	Radium-228		0.956	ND	Blank detection
491455	GWC-15	Radium-228		0.892	ND	Blank detection
491455	GWC-14	Radium-228		1.23	ND	Blank detection
491455	GWC-2	Radium-228		0.941	ND	Blank detection
491455	GWC-17	Radium-228		1.24	ND	Blank detection
491455	GWC-20	Radium-228		0.980	ND	Blank detection
491455	GWC-11	Radium-228		1.17	ND	Blank detection
491455	GWC-22	Radium-228		1.23	ND	Blank detection
491455	GWC-1	Radium-226		0.235	ND	Blank detection
491455	GWC-1	Radium-228		0.892	ND	Blank detection
491455	GWC-9	Radium-228		0.849	ND	Blank detection
491455	GWB-5R	Radium-226		0.210	ND	Blank detection
491455	GWB-5R	Radium-228		0.882	ND	Blank detection
491455	GWA-7	Radium-226		0.672	ND	Blank detection
491455	GWA-7	Radium-228		0.978	ND	Blank detection
491455	GWB-4R	Radium-226		0.222	ND	Blank detection
491455	GWB-4R	Radium-228		0.915	ND	Blank detection
491455	GWB-6R	Radium-228		0.836	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

Low-Flow Test Report:

Test Date / Time: 8/19/2020 10:05:24 AM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: GWA-7 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 16.1 ft Total Depth: 21.1 ft Initial Depth to Water: 6.26 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 18 ft Estimated Total Volume Pumped: 6.75 liter Flow Cell Volume: 90 ml Final Flow Rate: 225 ml/min Final Draw Down: 4.1 in	Instrument Used: Aqua TROLL 400 Serial Number: 714302
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Test Notes:

Sunny 80s

, sample time 1035. Field filtered metals

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
8/19/2020 10:05 AM	00:00	5.78 pH	27.75 °C	1,658.9 µS/cm	0.11 mg/L		102.1 mV	6.26 ft	225.00 ml/min
8/19/2020 10:10 AM	05:00	5.77 pH	26.28 °C	1,720.5 µS/cm	0.06 mg/L	21.00 NTU	81.2 mV	6.60 ft	225.00 ml/min
8/19/2020 10:15 AM	10:00	5.81 pH	26.47 °C	1,598.1 µS/cm	0.04 mg/L	69.00 NTU	72.9 mV	6.60 ft	225.00 ml/min
8/19/2020 10:20 AM	15:00	5.81 pH	26.87 °C	1,607.9 µS/cm	0.03 mg/L	155.00 NTU	69.1 mV	6.60 ft	225.00 ml/min
8/19/2020 10:25 AM	20:00	5.81 pH	26.94 °C	1,597.0 µS/cm	0.03 mg/L	186.00 NTU	65.1 mV	6.60 ft	225.00 ml/min
8/19/2020 10:30 AM	25:00	5.81 pH	26.96 °C	1,596.5 µS/cm	0.02 mg/L	199.00 NTU	61.5 mV	6.60 ft	225.00 ml/min
8/19/2020 10:35 AM	30:00	5.81 pH	26.97 °C	1,610.4 µS/cm	0.03 mg/L	210.00 NTU	57.6 mV	6.60 ft	225.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/17/2020 2:30:08 PM

Project: 2020 Scan

Operator Name: O. Fuquea

Location Name: GWA-8 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 15.9 ft Total Depth: 20.9 ft Initial Depth to Water: 7.36 ft	Pump Type: Peri Tubing Type: Poly Pump Intake From TOC: 18.4 ft Estimated Total Volume Pumped: 9 liter Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 19 in	Instrument Used: Aqua TROLL 400 Serial Number: 714344
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Test Notes:

Weather Conditions:

91F clear.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
8/17/2020 2:30 PM	00:00	5.10 pH	26.03 °C	235.19 µS/cm	0.17 mg/L		98.3 mV	7.36 ft	250.00 ml/min
8/17/2020 2:35 PM	05:00	4.70 pH	25.32 °C	257.40 µS/cm	0.13 mg/L	2.99 NTU	96.0 mV	9.80 ft	250.00 ml/min
8/17/2020 2:40 PM	10:00	4.43 pH	25.70 °C	285.14 µS/cm	0.14 mg/L	2.63 NTU	93.6 mV	9.30 ft	250.00 ml/min
8/17/2020 2:45 PM	15:00	4.31 pH	25.59 °C	304.72 µS/cm	0.13 mg/L	2.47 NTU	88.3 mV	9.10 ft	250.00 ml/min
8/17/2020 2:50 PM	20:00	4.27 pH	25.37 °C	310.66 µS/cm	0.11 mg/L	2.10 NTU	87.6 mV	9.10 ft	250.00 ml/min
8/17/2020 2:55 PM	25:00	4.23 pH	25.48 °C	312.85 µS/cm	0.11 mg/L	1.97 NTU	84.9 mV	9.10 ft	250.00 ml/min
8/17/2020 3:00 PM	30:00	4.23 pH	25.55 °C	315.43 µS/cm	0.10 mg/L	0.79 NTU	83.3 mV	9.10 ft	250.00 ml/min

Samples

Sample ID:	Description:
GWA-8	Collected at 1459.

Product Name: Low-Flow System

Date: 2020-08-19 11:49:08

Project Information:

Operator Name Zack Davis
Company Name Atlantic Coast Consulting
Project Name Grumman Road
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 601533
Turbidity Make/Model HACH2100Q

Pump Information:

Pump Model/Type Peristaltic
Tubing Type poly
Tubing Diameter 0.17 in
Tubing Length 23.0 ft

Pump placement from TOC 21 ft

Well Information:

Well ID GWB-4R
Well diameter 2 in
Well Total Depth 23.3 ft
Screen Length 5 ft
Depth to Water 14.99 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.1926587 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.1 in
Total Volume Pumped 36 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C +/- 100%	pH +/- 0.1	SpCond μ S/cm +/- 5%	Turb NTU +/- 10	DTW ft	RDO mg/L +/- 0.1%	ORP mV +/- 100%
Stabilization									
Last 5	11:25:13	8099.93	23.63	5.70	646.21	7.42	15.40	0.20	68.40
Last 5	11:30:13	8399.93	23.64	5.70	647.44	7.50	15.40	0.19	67.79
Last 5	11:35:13	8699.93	23.72	5.70	646.75	7.87	15.40	0.18	67.44
Last 5	11:40:13	8999.93	23.88	5.70	646.21	8.52	15.40	0.17	67.13
Last 5	11:45:13	9299.88	23.97	5.70	644.24	7.25	15.40	0.15	67.23
Variance 0			0.08	-0.00	-0.69			-0.01	-0.35
Variance 1			0.16	0.00	-0.54			-0.01	-0.31
Variance 2			0.09	0.00	-1.97			-0.02	0.10

Notes

Sunny 80s, Collected at 1145.

Grab Samples

Low-Flow Test Report:

Test Date / Time: 8/19/2020 10:07:17 AM

Project: Grumman Road

Operator Name: O. Fuquea

Location Name: GWB-5R Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 21.5 ft Total Depth: 26.5 ft Initial Depth to Water: 10.39 ft	Pump Type: Peri Tubing Type: Poly Pump Intake From TOC: 24 ft Estimated Total Volume Pumped: 36 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 1 in	Instrument Used: Aqua TROLL 400 Serial Number: 714344
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
8/19/2020 10:07 AM	00:00	5.12 pH	24.06 °C	511.18 µS/cm	0.42 mg/L		88.7 mV	10.40 ft	200.00 ml/min
8/19/2020 10:07 AM	00:20	5.12 pH	24.06 °C	506.51 µS/cm	0.36 mg/L	25.00 NTU	89.6 mV	10.50 ft	200.00 ml/min
8/19/2020 10:12 AM	05:20	5.18 pH	24.01 °C	539.34 µS/cm	0.15 mg/L	22.30 NTU	76.3 mV	10.50 ft	200.00 ml/min
8/19/2020 10:17 AM	10:20	5.14 pH	23.92 °C	522.01 µS/cm	0.11 mg/L	23.60 NTU	69.8 mV	10.50 ft	200.00 ml/min
8/19/2020 10:22 AM	15:20	5.14 pH	23.97 °C	497.45 µS/cm	0.11 mg/L	18.50 NTU	65.1 mV	10.60 ft	200.00 ml/min
8/19/2020 10:27 AM	20:20	5.15 pH	24.04 °C	526.07 µS/cm	0.10 mg/L	18.80 NTU	61.3 mV	10.60 ft	200.00 ml/min
8/19/2020 10:32 AM	25:20	5.15 pH	23.98 °C	502.85 µS/cm	0.09 mg/L	23.80 NTU	58.3 mV	10.60 ft	200.00 ml/min
8/19/2020 10:37 AM	30:20	5.15 pH	23.99 °C	512.14 µS/cm	0.09 mg/L	21.00 NTU	55.8 mV	10.60 ft	200.00 ml/min
8/19/2020 10:42 AM	35:20	5.14 pH	23.88 °C	496.63 µS/cm	0.08 mg/L	21.30 NTU	52.3 mV	10.60 ft	200.00 ml/min
8/19/2020 10:47 AM	40:20	5.16 pH	23.84 °C	499.88 µS/cm	0.08 mg/L	21.40 NTU	49.8 mV	10.60 ft	200.00 ml/min
8/19/2020 10:53 AM	46:24	5.15 pH	23.89 °C	538.95 µS/cm	0.08 mg/L	30.10 NTU	49.3 mV	10.60 ft	200.00 ml/min
8/19/2020 10:58 AM	51:24	5.15 pH	23.95 °C	526.63 µS/cm	0.07 mg/L	32.10 NTU	47.3 mV	10.60 ft	200.00 ml/min
8/19/2020 11:03 AM	56:24	5.14 pH	23.97 °C	519.69 µS/cm	0.07 mg/L	32.00 NTU	45.6 mV	10.60 ft	200.00 ml/min
8/19/2020 11:08 AM	01:01:24	5.15 pH	23.96 °C	505.10 µS/cm	0.07 mg/L	36.70 NTU	44.2 mV	10.60 ft	200.00 ml/min
8/19/2020 11:13 AM	01:06:24	5.14 pH	23.91 °C	515.49 µS/cm	0.07 mg/L	35.10 NTU	42.9 mV	10.60 ft	200.00 ml/min

8/19/2020 11:18 AM	01:11:24	5.14 pH	23.96 °C	520.17 µS/cm	0.07 mg/L	36.40 NTU	41.3 mV	10.60 ft	200.00 ml/min
8/19/2020 11:23 AM	01:16:24	5.15 pH	23.97 °C	513.97 µS/cm	0.06 mg/L	34.80 NTU	40.3 mV	10.60 ft	200.00 ml/min
8/19/2020 11:28 AM	01:21:24	5.14 pH	24.01 °C	506.27 µS/cm	0.06 mg/L	34.60 NTU	39.2 mV	10.60 ft	200.00 ml/min
8/19/2020 11:33 AM	01:26:24	5.14 pH	24.07 °C	503.85 µS/cm	0.06 mg/L	38.20 NTU	36.3 mV	10.60 ft	200.00 ml/min
8/19/2020 11:38 AM	01:31:24	5.14 pH	24.03 °C	506.77 µS/cm	0.06 mg/L	42.90 NTU	37.2 mV	10.60 ft	200.00 ml/min
8/19/2020 11:43 AM	01:36:24	5.14 pH	24.15 °C	503.36 µS/cm	0.06 mg/L	44.50 NTU	34.4 mV	10.60 ft	200.00 ml/min
8/19/2020 11:48 AM	01:41:24	5.15 pH	24.24 °C	509.68 µS/cm	0.05 mg/L	38.00 NTU	35.5 mV	10.60 ft	200.00 ml/min
8/19/2020 11:53 AM	01:46:24	5.13 pH	24.33 °C	511.71 µS/cm	0.05 mg/L	37.50 NTU	35.0 mV	10.60 ft	200.00 ml/min
8/19/2020 11:58 AM	01:51:24	5.13 pH	24.28 °C	514.32 µS/cm	0.05 mg/L	39.60 NTU	35.0 mV	10.60 ft	200.00 ml/min

Samples

Sample ID:	Description:
GWB-5R	Collected at 1158.

Low-Flow Test Report:

Test Date / Time: 8/19/2020 11:20:16 AM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: GWB-6R Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 17.7 ft Total Depth: 22.7 ft Initial Depth to Water: 7.81 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 20 ft Estimated Total Volume Pumped: 32 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 2.3 in	Instrument Used: Aqua TROLL 400 Serial Number: 714302
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Test Notes:

Sunny, sample time-1400

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
8/19/2020 11:20 AM	00:00	6.27 pH	37.54 °C	1.74 µS/cm	5.69 mg/L		117.6 mV	7.81 ft	200.00 ml/min
8/19/2020 11:25 AM	05:00	5.19 pH	28.02 °C	638.69 µS/cm	0.46 mg/L	15.00 NTU	67.4 mV	8.00 ft	200.00 ml/min
8/19/2020 11:30 AM	10:00	5.18 pH	26.87 °C	650.44 µS/cm	0.26 mg/L	11.00 NTU	69.8 mV	8.00 ft	200.00 ml/min
8/19/2020 11:35 AM	15:00	5.19 pH	27.10 °C	650.87 µS/cm	0.19 mg/L	10.00 NTU	72.4 mV	8.00 ft	200.00 ml/min
8/19/2020 11:40 AM	20:00	5.18 pH	27.17 °C	648.81 µS/cm	0.19 mg/L	13.00 NTU	74.9 mV	8.00 ft	200.00 ml/min
8/19/2020 11:45 AM	25:00	5.19 pH	27.20 °C	645.87 µS/cm	0.12 mg/L	13.00 NTU	77.1 mV	8.00 ft	200.00 ml/min
8/19/2020 11:50 AM	30:00	5.19 pH	27.35 °C	647.15 µS/cm	0.10 mg/L	11.00 NTU	79.0 mV	8.00 ft	200.00 ml/min
8/19/2020 11:55 AM	35:00	5.18 pH	27.38 °C	646.67 µS/cm	0.10 mg/L	14.00 NTU	81.3 mV	8.00 ft	200.00 ml/min
8/19/2020 12:00 PM	40:00	5.19 pH	27.74 °C	648.69 µS/cm	0.10 mg/L	11.00 NTU	83.0 mV	8.00 ft	200.00 ml/min
8/19/2020 12:05 PM	45:00	5.19 pH	28.07 °C	645.70 µS/cm	0.10 mg/L	14.00 NTU	84.4 mV	8.00 ft	200.00 ml/min
8/19/2020 12:10 PM	50:00	5.19 pH	28.12 °C	647.03 µS/cm	0.10 mg/L	13.00 NTU	86.2 mV	8.00 ft	200.00 ml/min
8/19/2020 12:15 PM	55:00	5.21 pH	28.06 °C	641.88 µS/cm	0.09 mg/L	11.00 NTU	88.0 mV	8.00 ft	200.00 ml/min
8/19/2020 12:20 PM	01:00:00	5.21 pH	27.93 °C	642.58 µS/cm	0.09 mg/L	12.00 NTU	89.6 mV	8.00 ft	200.00 ml/min
8/19/2020 12:25 PM	01:05:00	5.21 pH	27.99 °C	644.10 µS/cm	0.09 mg/L	10.00 NTU	91.0 mV	8.00 ft	200.00 ml/min
8/19/2020 12:30 PM	01:10:00	5.21 pH	27.91 °C	643.08 µS/cm	0.09 mg/L	11.00 NTU	92.4 mV	8.00 ft	200.00 ml/min

8/19/2020 12:35 PM	01:15:00	5.21 pH	27.85 °C	646.26 µS/cm	0.10 mg/L	10.00 NTU	93.4 mV	8.00 ft	200.00 ml/min
8/19/2020 12:40 PM	01:20:00	5.21 pH	28.03 °C	647.87 µS/cm	0.09 mg/L	9.72 NTU	94.4 mV	8.00 ft	200.00 ml/min
8/19/2020 12:45 PM	01:25:00	5.21 pH	28.31 °C	649.50 µS/cm	0.09 mg/L	9.25 NTU	95.1 mV	8.00 ft	200.00 ml/min
8/19/2020 12:50 PM	01:30:00	5.22 pH	28.44 °C	650.97 µS/cm	0.08 mg/L	8.91 NTU	96.3 mV	8.00 ft	200.00 ml/min
8/19/2020 12:55 PM	01:35:00	5.21 pH	28.49 °C	650.37 µS/cm	0.08 mg/L	8.49 NTU	96.8 mV	8.00 ft	200.00 ml/min
8/19/2020 1:00 PM	01:40:00	5.21 pH	27.80 °C	644.91 µS/cm	0.09 mg/L	8.55 NTU	96.9 mV	8.00 ft	200.00 ml/min
8/19/2020 1:05 PM	01:45:00	5.21 pH	27.46 °C	655.86 µS/cm	0.10 mg/L	8.21 NTU	96.7 mV	8.00 ft	200.00 ml/min
8/19/2020 1:10 PM	01:50:00	5.21 pH	27.52 °C	653.64 µS/cm	0.09 mg/L	7.99 NTU	96.8 mV	8.00 ft	200.00 ml/min
8/19/2020 1:15 PM	01:55:00	5.20 pH	27.38 °C	658.25 µS/cm	0.09 mg/L	7.46 NTU	96.3 mV	8.00 ft	200.00 ml/min
8/19/2020 1:20 PM	02:00:00	5.21 pH	27.56 °C	658.74 µS/cm	0.08 mg/L	7.78 NTU	96.0 mV	8.00 ft	200.00 ml/min
8/19/2020 1:25 PM	02:05:00	5.21 pH	26.93 °C	664.18 µS/cm	0.10 mg/L	6.14 NTU	95.4 mV	8.00 ft	200.00 ml/min
8/19/2020 1:30 PM	02:10:00	5.19 pH	26.85 °C	667.24 µS/cm	0.10 mg/L	6.66 NTU	95.2 mV	8.00 ft	200.00 ml/min
8/19/2020 1:35 PM	02:15:00	5.19 pH	26.69 °C	673.55 µS/cm	0.10 mg/L	6.12 NTU	94.6 mV	8.00 ft	200.00 ml/min
8/19/2020 1:40 PM	02:20:00	5.19 pH	26.77 °C	678.25 µS/cm	0.10 mg/L	5.82 NTU	93.9 mV	8.00 ft	200.00 ml/min
8/19/2020 1:45 PM	02:25:00	5.20 pH	26.93 °C	678.35 µS/cm	0.11 mg/L	5.51 NTU	93.2 mV	8.00 ft	200.00 ml/min
8/19/2020 1:50 PM	02:30:00	5.20 pH	26.63 °C	683.59 µS/cm	0.11 mg/L	5.22 NTU	92.0 mV	8.00 ft	200.00 ml/min
8/19/2020 1:55 PM	02:35:00	5.19 pH	26.81 °C	688.37 µS/cm	0.10 mg/L	5.02 NTU	91.2 mV	8.00 ft	200.00 ml/min
8/19/2020 2:00 PM	02:40:00	5.21 pH	27.68 °C	687.67 µS/cm	0.07 mg/L	4.58 NTU	90.9 mV	8.00 ft	200.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/19/2020 9:05:54 AM

Project: Grumman Road

Operator Name: O. Fuquea

Location Name: GWC-1 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 23.1 ft Total Depth: 28.1 ft Initial Depth to Water: 19.23 ft	Pump Type: Peri Tubing Type: Poly Pump Intake From TOC: 25.6 ft Estimated Total Volume Pumped: 9 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 714344
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
8/19/2020 9:05 AM	00:00	5.21 pH	22.84 °C	302.78 µS/cm	0.25 mg/L		110.2 mV	19.23 ft	200.00 ml/min
8/19/2020 9:10 AM	05:00	5.60 pH	22.62 °C	433.59 µS/cm	0.16 mg/L	0.66 NTU	112.3 mV	19.23 ft	200.00 ml/min
8/19/2020 9:15 AM	10:00	5.69 pH	22.53 °C	455.81 µS/cm	0.13 mg/L	0.67 NTU	112.7 mV	19.23 ft	200.00 ml/min
8/19/2020 9:20 AM	15:00	5.71 pH	22.44 °C	459.31 µS/cm	0.11 mg/L	0.68 NTU	112.8 mV	19.23 ft	200.00 ml/min
8/19/2020 9:25 AM	20:00	5.72 pH	22.40 °C	461.25 µS/cm	0.11 mg/L	0.58 NTU	112.9 mV	19.23 ft	200.00 ml/min
8/19/2020 9:30 AM	25:00	5.72 pH	22.38 °C	459.89 µS/cm	0.10 mg/L	0.68 NTU	112.8 mV	19.23 ft	200.00 ml/min
8/19/2020 9:35 AM	30:00	5.73 pH	22.39 °C	462.54 µS/cm	0.09 mg/L	0.56 NTU	112.7 mV	19.23 ft	200.00 ml/min

Samples

Sample ID:	Description:
GWC-1	Collected at 0935

Low-Flow Test Report:

Test Date / Time: 8/18/2020 2:52:39 PM

Project: Grumman Road

Operator Name: O. Fuquea

Location Name: GWC 2 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 26.4 ft Total Depth: 31.4 ft Initial Depth to Water: 19.21 ft	Pump Type: Peri Tubing Type: Poly Pump Intake From TOC: 28.9 ft Estimated Total Volume Pumped: 6126.667 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.09 ft	Instrument Used: Aqua TROLL 400 Serial Number: 714344
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Test Notes:

Weather Conditions:

92F clear

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
8/18/2020 2:52 PM	00:00	4.81 pH	24.60 °C	54.05 µS/cm	0.73 mg/L		71.4 mV	19.21 ft	200.00 ml/min
8/18/2020 2:53 PM	00:38	4.74 pH	24.35 °C	53.74 µS/cm	0.51 mg/L		73.5 mV	19.21 ft	200.00 ml/min
8/18/2020 2:58 PM	05:38	4.60 pH	23.52 °C	53.62 µS/cm	0.16 mg/L	2.89 NTU	81.0 mV	19.21 ft	200.00 ml/min
8/18/2020 3:03 PM	10:38	4.60 pH	23.11 °C	53.24 µS/cm	0.11 mg/L	2.03 NTU	82.9 mV	19.21 ft	200.00 ml/min
8/18/2020 3:08 PM	15:38	4.61 pH	23.16 °C	53.00 µS/cm	0.10 mg/L	1.56 NTU	80.2 mV	19.21 ft	200.00 ml/min
8/18/2020 3:13 PM	20:38	4.61 pH	23.07 °C	52.86 µS/cm	0.09 mg/L	0.51 NTU	79.0 mV	19.30 ft	200.00 ml/min
8/18/2020 3:18 PM	25:38	4.59 pH	23.02 °C	53.21 µS/cm	0.08 mg/L	0.50 NTU	90.2 mV	19.30 ft	200.00 ml/min
8/18/2020 3:23 PM	30:38	4.60 pH	22.99 °C	53.00 µS/cm	0.08 mg/L	1.48 NTU	79.2 mV	19.30 ft	200.00 ml/min

Samples

Sample ID:	Description:
GWC-2	Collected at 1523.

Low-Flow Test Report:

Test Date / Time: 8/18/2020 3:50:30 PM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: GWC-9 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 20.7 ft Total Depth: 25.7 ft Initial Depth to Water: 8.73 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 23 ft Estimated Total Volume Pumped: 7800 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 15.87 ft	Instrument Used: Aqua TROLL 400 Serial Number: 714302
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Test Notes:

Purged well dry

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
8/18/2020 3:50 PM	00:00	4.89 pH	34.25 °C	155.31 µS/cm	2.45 mg/L	3.33 NTU	117.9 mV	8.73 ft	130.00 ml/min
8/18/2020 3:55 PM	05:00	4.78 pH	25.78 °C	173.54 µS/cm	0.34 mg/L	4.49 NTU	109.6 mV	9.60 ft	130.00 ml/min
8/18/2020 4:00 PM	10:00	4.74 pH	25.41 °C	175.30 µS/cm	0.28 mg/L	4.96 NTU	104.6 mV	10.60 ft	130.00 ml/min
8/18/2020 4:05 PM	15:00	4.69 pH	25.34 °C	175.68 µS/cm	0.25 mg/L	5.21 NTU	102.0 mV	12.80 ft	130.00 ml/min
8/18/2020 4:10 PM	20:00	4.69 pH	24.35 °C	173.71 µS/cm	0.17 mg/L	11.00 NTU	100.2 mV	14.50 ft	130.00 ml/min
8/18/2020 4:15 PM	25:00	4.69 pH	23.88 °C	175.21 µS/cm	0.17 mg/L	14.00 NTU	98.7 mV	16.20 ft	130.00 ml/min
8/18/2020 4:20 PM	30:00	4.71 pH	23.83 °C	173.06 µS/cm	0.17 mg/L	15.00 NTU	96.4 mV	17.50 ft	130.00 ml/min
8/18/2020 4:25 PM	35:00	4.72 pH	24.13 °C	175.92 µS/cm	0.19 mg/L	13.00 NTU	94.4 mV	18.90 ft	130.00 ml/min
8/18/2020 4:30 PM	40:00	4.74 pH	24.19 °C	175.11 µS/cm	0.19 mg/L	9.53 NTU	93.0 mV	20.00 ft	130.00 ml/min
8/18/2020 4:35 PM	45:00	4.75 pH	23.49 °C	174.42 µS/cm	0.16 mg/L	8.49 NTU	92.6 mV	21.20 ft	130.00 ml/min
8/18/2020 4:40 PM	50:00	4.76 pH	23.33 °C	174.33 µS/cm	0.17 mg/L	13.00 NTU	92.1 mV	22.50 ft	130.00 ml/min
8/18/2020 4:45 PM	55:00	4.76 pH	23.16 °C	173.38 µS/cm	0.23 mg/L	12.00 NTU	91.7 mV	23.80 ft	130.00 ml/min
8/18/2020 4:50 PM	01:00:00	4.76 pH	22.80 °C	168.93 µS/cm	0.74 mg/L	11.00 NTU	92.5 mV	24.60 ft	130.00 ml/min

Samples

Low-Flow Test Report:

Test Date / Time: 8/19/2020 9:00:23 AM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: GWC-9 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 20.7 ft Total Depth: 25.7 ft Initial Depth to Water: 9.63 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 23 ft Estimated Total Volume Pumped: 2.6 liter Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 4.44 in	Instrument Used: Aqua TROLL 400 Serial Number: 714302
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Test Notes:

Sunny, sample time 0920

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
8/19/2020 9:00 AM	00:00	8.21 pH	25.44 °C	2.39 µS/cm	8.24 mg/L		183.5 mV	9.63 ft	130.00 ml/min
8/19/2020 9:05 AM	05:00	4.55 pH	24.28 °C	168.57 µS/cm	1.24 mg/L	6.51 NTU	86.2 mV	10.3 ft	130.00 ml/min
8/19/2020 9:10 AM	10:00	4.56 pH	24.60 °C	167.87 µS/cm	0.81 mg/L	4.05 NTU	85.1 mV	10.9 ft	130.00 ml/min
8/19/2020 9:15 AM	15:00	4.58 pH	24.28 °C	166.87 µS/cm	0.53 mg/L	4.44 NTU	83.3 mV	11.40ft	130.00 ml/min
8/19/2020 9:20 AM	20:00	4.58 pH	24.17 °C	167.21 µS/cm	0.39 mg/L	3.45 NTU	83.5 mV	11.8 ft	130.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/18/2020 9:15:38 AM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: GWC-11 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 17.55 ft Total Depth: 22.55 ft Initial Depth to Water: 12.64 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 20 ft Estimated Total Volume Pumped: 11.7 liter Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 35.5 in	Instrument Used: Aqua TROLL 400 Serial Number: 714302
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Test Notes:

Sunny, sample time-1045

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
8/18/2020 9:15 AM	00:00	8.46 pH	28.04 °C	12.83 µS/cm	7.91 mg/L		257.0 mV	12.64 ft	130.00 ml/min
8/18/2020 9:20 AM	05:00	5.02 pH	26.23 °C	146.42 µS/cm	0.85 mg/L	12.00 NTU	96.9 mV	13.40 ft	130.00 ml/min
8/18/2020 9:25 AM	10:00	5.01 pH	26.19 °C	138.76 µS/cm	0.73 mg/L	2.14 NTU	88.8 mV	13.80 ft	130.00 ml/min
8/18/2020 9:30 AM	15:00	5.01 pH	27.10 °C	137.77 µS/cm	0.68 mg/L	2.11 NTU	84.1 mV	14.40 ft	130.00 ml/min
8/18/2020 9:35 AM	20:00	5.01 pH	26.51 °C	139.35 µS/cm	0.50 mg/L	2.07 NTU	84.0 mV	14.90 ft	130.00 ml/min
8/18/2020 9:40 AM	25:00	4.99 pH	26.23 °C	152.95 µS/cm	0.58 mg/L	1.97 NTU	86.0 mV	15.20 ft	130.00 ml/min
8/18/2020 9:45 AM	30:00	4.94 pH	26.39 °C	202.76 µS/cm	0.42 mg/L	2.05 NTU	89.5 mV	15.30 ft	130.00 ml/min
8/18/2020 9:50 AM	35:00	4.90 pH	25.86 °C	362.61 µS/cm	0.40 mg/L	1.99 NTU	97.1 mV	15.30 ft	130.00 ml/min
8/18/2020 9:55 AM	40:00	4.86 pH	25.64 °C	548.27 µS/cm	0.46 mg/L	1.87 NTU	101.8 mV	15.30 ft	130.00 ml/min
8/18/2020 10:00 AM	45:00	4.85 pH	25.69 °C	626.83 µS/cm	0.44 mg/L	2.08 NTU	103.9 mV	15.40 ft	130.00 ml/min
8/18/2020 10:05 AM	50:00	4.85 pH	25.76 °C	694.91 µS/cm	0.38 mg/L	5.43 NTU	104.0 mV	15.50 ft	130.00 ml/min
8/18/2020 10:10 AM	55:00	4.85 pH	25.59 °C	733.26 µS/cm	0.44 mg/L	10.00 NTU	106.2 mV	15.60 ft	130.00 ml/min
8/18/2020 10:15 AM	01:00:00	4.82 pH	25.87 °C	861.13 µS/cm	0.46 mg/L	9.51 NTU	108.9 mV	15.60 ft	130.00 ml/min
8/18/2020 10:20 AM	01:05:00	4.82 pH	25.87 °C	945.67 µS/cm	0.31 mg/L	9.22 NTU	110.5 mV	15.60 ft	130.00 ml/min
8/18/2020 10:25 AM	01:10:00	4.82 pH	26.30 °C	988.83 µS/cm	0.31 mg/L	8.97 NTU	110.5 mV	15.60 ft	130.00 ml/min

8/18/2020 10:30 AM	01:15:00	4.83 pH	27.04 °C	1,056.8 µS/cm	0.31 mg/L	7.92 NTU	112.4 mV	15.60 ft	130.00 ml/min
8/18/2020 10:35 AM	01:20:00	4.82 pH	26.70 °C	1,109.6 µS/cm	0.35 mg/L	6.55 NTU	112.3 mV	15.60 ft	130.00 ml/min
8/18/2020 10:40 AM	01:25:00	4.83 pH	26.87 °C	1,124.8 µS/cm	0.29 mg/L	4.95 NTU	114.3 mV	15.60 ft	130.00 ml/min
8/18/2020 10:45 AM	01:30:00	4.84 pH	26.33 °C	1,078.5 µS/cm	0.35 mg/L	4.41 NTU	113.2 mV	15.60 ft	130.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 5/27/2020 2:56:36 PM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: GWC-12 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 21.7 ft Total Depth: 26.7 ft Initial Depth to Water: 12.45 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 23 ft Estimated Total Volume Pumped: 6 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 6.6 in	Instrument Used: Aqua TROLL 400 Serial Number: 714302
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Test Notes:

Cloudy, sample time-1725

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
5/27/2020 2:56 PM	00:00	7.57 pH	38.00 °C	6.84 µS/cm	6.83 mg/L		290.7 mV	12.45 ft	200.00 ml/min
5/27/2020 3:00 PM	03:48	3.97 pH	26.96 °C	481.66 µS/cm	0.43 mg/L	2.22 NTU	95.6 mV	12.80 ft	200.00 ml/min
8/17/2020 4:57 PM	02:00:57	3.97 pH	25.51 °C	496.52 µS/cm	0.29 mg/L	2.45 NTU	93.1 mV	13.00 ft	200.00 ml/min
8/17/2020 5:00 PM	02:03:27	3.96 pH	24.87 °C	489.56 µS/cm	0.23 mg/L	2.15 NTU	91.0 mV	13.00 ft	200.00 ml/min
8/17/2020 5:05 PM	02:08:27	3.96 pH	24.41 °C	493.45 µS/cm	0.19 mg/L	2.08 NTU	88.5 mV	13.00 ft	200.00 ml/min
8/17/2020 5:10 PM	02:13:27	3.95 pH	24.44 °C	489.64 µS/cm	0.19 mg/L	2.19 NTU	87.1 mV	13.00 ft	200.00 ml/min
8/17/2020 5:15 PM	02:18:27	3.95 pH	24.28 °C	473.38 µS/cm	0.17 mg/L	1.55 NTU	86.5 mV	13.00 ft	200.00 ml/min
8/17/2020 5:20 PM	02:23:27	3.94 pH	24.19 °C	483.61 µS/cm	0.17 mg/L	0.95 NTU	86.6 mV	13.00 ft	200.00 ml/min
8/17/2020 5:25 PM	02:28:27	3.94 pH	24.12 °C	475.85 µS/cm	0.16 mg/L	0.86 NTU	86.2 mV	13.00 ft	200.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/17/2020 3:41:32 PM

Project: Grumman Road

Operator Name: O. Fuquea

Location Name: GWC-13 Well Diameter: 2 in Screen Length: 5 ft Top of Screen: 19.1 ft Total Depth: 24.1 ft Initial Depth to Water: 13.91 ft	Pump Type: Peri Tubing Type: Poly Pump Intake From TOC: 22 ft Estimated Total Volume Pumped: 8750 ml Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 0.59 ft	Instrument Used: Aqua TROLL 400 Serial Number: 714344
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Test Notes:

Weather Conditions:

91F clear

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
8/17/2020 3:41 PM	00:00	4.68 pH	26.28 °C	127.93 µS/cm	0.25 mg/L		134.3 mV	13.91 ft	250.00 ml/min
8/17/2020 3:46 PM	05:00	4.66 pH	24.40 °C	109.20 µS/cm	0.16 mg/L	9.43 NTU	124.6 mV	14.40 ft	250.00 ml/min
8/17/2020 3:51 PM	10:00	4.66 pH	24.15 °C	97.77 µS/cm	0.14 mg/L	6.56 NTU	115.7 mV	14.40 ft	250.00 ml/min
8/17/2020 3:56 PM	15:00	4.66 pH	23.54 °C	94.21 µS/cm	0.13 mg/L	2.89 NTU	110.8 mV	14.50 ft	250.00 ml/min
8/17/2020 4:01 PM	20:00	4.65 pH	23.27 °C	91.28 µS/cm	0.13 mg/L	2.18 NTU	110.6 mV	14.50 ft	250.00 ml/min
8/17/2020 4:06 PM	25:00	4.65 pH	23.35 °C	88.18 µS/cm	0.12 mg/L	2.01 NTU	103.0 mV	14.50 ft	250.00 ml/min
8/17/2020 4:11 PM	30:00	4.65 pH	23.51 °C	85.75 µS/cm	0.12 mg/L	1.42 NTU	99.1 mV	14.50 ft	250.00 ml/min
8/17/2020 4:16 PM	35:00	4.65 pH	23.58 °C	85.52 µS/cm	0.13 mg/L	1.09 NTU	96.1 mV	14.50 ft	250.00 ml/min

Samples

Sample ID:	Description:
GWC-13	Collect at 1616

Low-Flow Test Report:

Test Date / Time: 8/18/2020 1:34:30 PM

Project: Grumman Road

Operator Name: O. Fuquea

Location Name: GWC-14 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 22 ft Total Depth: 27 ft Initial Depth to Water: 19.51 ft	Pump Type: Peri Tubing Type: Poly Pump Intake From TOC: 24.5 ft Estimated Total Volume Pumped: 10000 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.49 ft	Instrument Used: Aqua TROLL 400 Serial Number: 714344
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Test Notes:

Weather Conditions:

91F cloudy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
8/18/2020 1:34 PM	00:00	6.28 pH	24.96 °C	315.50 µS/cm	0.93 mg/L		65.6 mV	19.51 ft	200.00 ml/min
8/18/2020 1:39 PM	05:00	5.76 pH	22.39 °C	327.80 µS/cm	0.59 mg/L	85.30 NTU	74.7 mV	19.90 ft	200.00 ml/min
8/18/2020 1:44 PM	10:00	5.69 pH	21.99 °C	329.72 µS/cm	0.78 mg/L	47.60 NTU	78.2 mV	19.90 ft	200.00 ml/min
8/18/2020 1:49 PM	15:00	5.69 pH	21.90 °C	336.95 µS/cm	0.64 mg/L	25.40 NTU	78.2 mV	20.00 ft	200.00 ml/min
8/18/2020 1:54 PM	20:00	5.69 pH	21.74 °C	339.25 µS/cm	0.57 mg/L	21.50 NTU	81.5 mV	20.00 ft	200.00 ml/min
8/18/2020 1:59 PM	25:00	5.68 pH	21.72 °C	344.44 µS/cm	0.52 mg/L	20.70 NTU	80.4 mV	20.00 ft	200.00 ml/min
8/18/2020 2:04 PM	30:00	5.65 pH	21.59 °C	350.04 µS/cm	0.46 mg/L	42.70 NTU	83.3 mV	20.00 ft	200.00 ml/min
8/18/2020 2:09 PM	35:00	5.61 pH	21.59 °C	356.76 µS/cm	0.47 mg/L	38.10 NTU	80.8 mV	20.00 ft	200.00 ml/min
8/18/2020 2:14 PM	40:00	5.60 pH	21.53 °C	359.83 µS/cm	0.42 mg/L	16.60 NTU	82.9 mV	20.00 ft	200.00 ml/min
8/18/2020 2:19 PM	45:00	5.57 pH	21.56 °C	368.27 µS/cm	0.44 mg/L	6.98 NTU	80.2 mV	20.00 ft	200.00 ml/min
8/18/2020 2:24 PM	50:00	5.56 pH	21.42 °C	367.45 µS/cm	0.44 mg/L	4.71 NTU	82.1 mV	20.00 ft	200.00 ml/min

Samples

Sample ID:	Description:
GWC-14	Collected at 1424

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 8/18/2020 12:27:02 PM

Project: Grumman Road

Operator Name: O. Fuquea

Location Name: GWC-15 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 21.8 ft Total Depth: 26.8 ft Initial Depth to Water: 19.32 ft	Pump Type: Peri Tubing Type: Poly Pump Intake From TOC: 24.0 ft Estimated Total Volume Pumped: 4425 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.28 ft	Instrument Used: Aqua TROLL 400 Serial Number: 714344
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Test Notes:

Weather Conditions:

89F cloudy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
8/18/2020 12:27 PM	00:00	6.39 pH	25.05 °C	584.39 µS/cm	0.47 mg/L		80.2 mV	19.32 ft	150.00 ml/min
8/18/2020 12:31 PM	04:30	6.41 pH	24.27 °C	604.42 µS/cm	0.24 mg/L	5.87 NTU	72.4 mV	19.60 ft	150.00 ml/min
8/18/2020 12:36 PM	09:30	6.41 pH	24.01 °C	597.33 µS/cm	0.17 mg/L	4.41 NTU	70.2 mV	19.60 ft	150.00 ml/min
8/18/2020 12:41 PM	14:30	6.41 pH	23.65 °C	602.36 µS/cm	0.11 mg/L	4.47 NTU	69.3 mV	19.60 ft	150.00 ml/min
8/18/2020 12:46 PM	19:30	6.40 pH	23.61 °C	604.37 µS/cm	0.10 mg/L	5.47 NTU	67.4 mV	19.60 ft	150.00 ml/min
8/18/2020 12:51 PM	24:30	6.40 pH	23.61 °C	598.71 µS/cm	0.10 mg/L	5.62 NTU	66.1 mV	19.60 ft	150.00 ml/min
8/18/2020 12:56 PM	29:30	6.39 pH	23.59 °C	603.22 µS/cm	0.09 mg/L	4.32 NTU	65.0 mV	19.60 ft	150.00 ml/min

Samples

Sample ID:	Description:
GWC-15	Collected at 1256.

Low-Flow Test Report:

Test Date / Time: 8/18/2020 9:07:24 AM

Project: Grumman Road

Operator Name: O. Fuquea

Location Name: GWC-16 Well Diameter: 2 in Casing Type: pvc Screen Length: 5 ft Top of Screen: 23.2 ft Total Depth: 28.2 ft Initial Depth to Water: 20.9 ft	Pump Type: Peri Tubing Type: Poly Pump Intake From TOC: 25 ft Estimated Total Volume Pumped: 13 liter Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.1 ft	Instrument Used: Aqua TROLL 400 Serial Number: 714344
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Test Notes:

Weather Conditions:
80F OVERCAST

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
8/18/2020 9:07 AM	00:00	5.46 pH	23.51 °C	2,122.2 µS/cm	0.28 mg/L		124.6 mV	20.90 ft	150.00 ml/min
8/18/2020 9:12 AM	05:00	5.46 pH	23.35 °C	2,064.6 µS/cm	0.31 mg/L	11.90 NTU	113.2 mV	21.00 ft	150.00 ml/min
8/18/2020 9:17 AM	10:00	5.50 pH	23.42 °C	2,022.5 µS/cm	0.37 mg/L	11.40 NTU	115.3 mV	21.00 ft	150.00 ml/min
8/18/2020 9:22 AM	15:00	5.51 pH	23.41 °C	2,037.2 µS/cm	0.38 mg/L	7.80 NTU	103.8 mV	21.00 ft	150.00 ml/min
8/18/2020 9:27 AM	20:00	5.51 pH	23.52 °C	2,038.4 µS/cm	0.39 mg/L	6.21 NTU	100.7 mV	21.00 ft	150.00 ml/min
8/18/2020 9:32 AM	25:00	5.52 pH	23.43 °C	2,046.7 µS/cm	0.39 mg/L	4.54 NTU	103.0 mV	21.00 ft	150.00 ml/min

Samples

Sample ID:	Description:
GWC-16	Collected at 0932

Product Name: Low-Flow System

Date: 2020-08-18 14:49:20

Project Information:

Operator Name Zack Davis
Company Name Atlantic Coast Consulting
Project Name Grumman Road
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 601533
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peristaltic Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 20.98 ft

Pump placement from TOC 20 ft

Well Information:

Well ID GWC-17
Well diameter 2 in
Well Total Depth 22.98 ft
Screen Length 5 ft
Depth to Water 7.70 ft

Pumping Information:

Final Pumping Rate 185 mL/min
Total System Volume 0.1836426 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 5.55 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C +/- 100%	pH +/- 0.1	SpCond μ S/cm +/- 5%	Turb NTU +/- 10	DTW ft	RDO mg/L +/- 10%	ORP mV +/- 100%
Stabilization									
Last 5	14:18:59	899.97	25.19	4.28	1613.22	2.67	9.00	0.11	142.76
Last 5	14:28:59	1499.97	25.32	4.30	1597.85	2.14	9.10	0.11	139.50
Last 5	14:33:59	1799.97	25.48	4.30	1600.38	1.68	9.10	0.09	137.37
Last 5	14:38:59	2099.97	25.78	4.31	1595.96	1.50	9.10	0.08	137.50
Last 5	14:43:59	2399.97	25.69	4.32	1589.99	2.11	9.10	0.08	138.37
Variance 0			0.16	-0.00	2.53			-0.03	-2.13
Variance 1			0.30	0.01	-4.43			-0.00	0.13
Variance 2			-0.09	0.01	-5.96			-0.01	0.87

Notes Sampled at 1450, sunny 80s

Grab Samples

Low-Flow Test Report:

Test Date / Time: 8/18/2020 3:56:44 PM

Project: Grumman Road

Operator Name: O. Fuquea

Location Name: GWC-20 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 19.9 ft Total Depth: 24.9 ft Initial Depth to Water: 21.31 ft	Pump Type: Peri Tubing Type: Poly Pump Intake From TOC: 22.9 ft Estimated Total Volume Pumped: 10 liter Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.29 ft	Instrument Used: Aqua TROLL 400 Serial Number: 714344
--	---	--

Test Notes:

Weather Conditions:

92F clear

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
8/18/2020 3:56 PM	00:00	5.90 pH	26.51 °C	2,074.2 µS/cm	0.35 mg/L		91.1 mV	21.31 ft	150.00 ml/min
8/18/2020 4:01 PM	05:00	5.89 pH	24.78 °C	2,091.1 µS/cm	0.19 mg/L	0.89 NTU	79.1 mV	21.60 ft	150.00 ml/min
8/18/2020 4:06 PM	10:00	5.90 pH	24.51 °C	2,067.9 µS/cm	0.16 mg/L	0.76 NTU	73.4 mV	21.60 ft	150.00 ml/min
8/18/2020 4:11 PM	15:00	5.90 pH	23.96 °C	2,070.4 µS/cm	0.15 mg/L	0.74 NTU	68.8 mV	21.60 ft	150.00 ml/min
8/18/2020 4:16 PM	20:00	5.90 pH	23.72 °C	2,057.9 µS/cm	0.15 mg/L	0.60 NTU	65.1 mV	21.60 ft	150.00 ml/min
8/18/2020 4:21 PM	25:00	5.89 pH	23.52 °C	2,049.7 µS/cm	0.13 mg/L	0.63 NTU	61.7 mV	21.60 ft	150.00 ml/min
8/18/2020 4:26 PM	30:00	5.89 pH	23.88 °C	2,073.5 µS/cm	0.13 mg/L	0.77 NTU	57.5 mV	21.60 ft	150.00 ml/min
8/18/2020 4:31 PM	35:00	5.90 pH	23.73 °C	2,046.7 µS/cm	0.14 mg/L	0.60 NTU	55.4 mV	21.60 ft	150.00 ml/min
8/18/2020 4:36 PM	40:00	5.89 pH	23.40 °C	2,050.5 µS/cm	0.12 mg/L	0.83 NTU	51.7 mV	21.60 ft	150.00 ml/min

Samples

Sample ID:	Description:
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GWC-20

Collected at 1636

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 8/18/2020 10:03:22 AM

Project: Grumman Road

Operator Name: O. Fuquea

Location Name: GWC-21 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 18.8 ft Total Depth: 23.8 ft Initial Depth to Water: 20.6 ft	Pump Type: Peri Tubing Type: Poly Pump Intake From TOC: 23.2 ft Estimated Total Volume Pumped: 13 liter Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 714344
---	--	--

Test Notes:

Weather Conditions:

84 Cloudy.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
8/18/2020 10:03 AM	00:00	5.09 pH	24.24 °C	106.65 µS/cm	4.65 mg/L		85.3 mV	20.6 ft	150.00 ml/min
8/18/2020 10:08 AM	05:00	5.05 pH	24.05 °C	109.68 µS/cm	3.99 mg/L	29.70 NTU	90.6 mV	20.6 ft	150.00 ml/min
8/18/2020 10:13 AM	10:00	5.12 pH	24.02 °C	121.61 µS/cm	3.55 mg/L	29.00 NTU	94.3 mV	20.6 ft	150.00 ml/min
8/18/2020 10:18 AM	15:00	5.35 pH	23.89 °C	169.30 µS/cm	2.84 mg/L	34.10 NTU	97.3 mV	20.6 ft	150.00 ml/min
8/18/2020 10:23 AM	20:00	5.57 pH	24.03 °C	280.73 µS/cm	2.05 mg/L	33.80 NTU	109.7 mV	20.6 ft	150.00 ml/min
8/18/2020 10:28 AM	25:00	5.70 pH	24.24 °C	434.95 µS/cm	1.79 mg/L	12.20 NTU	112.4 mV	20.6 ft	150.00 ml/min
8/18/2020 10:33 AM	30:00	5.76 pH	24.10 °C	553.67 µS/cm	1.61 mg/L	12.50 NTU	114.5 mV	20.6 ft	150.00 ml/min
8/18/2020 10:38 AM	35:00	5.78 pH	24.17 °C	653.06 µS/cm	1.64 mg/L	2.88 NTU	103.6 mV	20.6 ft	150.00 ml/min
8/18/2020 10:43 AM	40:00	5.80 pH	24.23 °C	711.65 µS/cm	1.58 mg/L	2.94 NTU	111.4 mV	20.6 ft	150.00 ml/min
8/18/2020 10:48 AM	45:00	5.81 pH	24.19 °C	766.93 µS/cm	1.51 mg/L	1.47 NTU	101.6 mV	20.6 ft	150.00 ml/min
8/18/2020 10:53 AM	50:00	5.82 pH	24.23 °C	780.09 µS/cm	1.49 mg/L	1.38 NTU	107.3 mV	20.6 ft	150.00 ml/min
8/18/2020 10:58 AM	55:00	5.82 pH	24.37 °C	781.02 µS/cm	1.46 mg/L	1.44 NTU	98.5 mV	20.6 ft	150.00 ml/min

Samples

Sample ID:	Description:
GWC-21	Collected at 1058.

Low-Flow Test Report:

Test Date / Time: 8/18/2020 12:20:54 PM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: GWC-22 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 13.3 ft Total Depth: 18.6 ft Initial Depth to Water: 8.42 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 16 ft Estimated Total Volume Pumped: 21.45 liter Flow Cell Volume: 90 ml Final Flow Rate: 165 ml/min Final Draw Down: 2.16 in	Instrument Used: Aqua TROLL 400 Serial Number: 714302
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Test Notes:

Sunny, sample time-1430, DUP-2 here

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
8/18/2020 12:20 PM	00:00	4.93 pH	40.60 °C	178.28 µS/cm	5.36 mg/L		86.5 mV	8.42 ft	165.00 ml/min
8/18/2020 12:25 PM	05:00	4.70 pH	30.54 °C	153.75 µS/cm	0.59 mg/L	25.00 NTU	90.6 mV	8.50 ft	165.00 ml/min
8/18/2020 12:30 PM	10:00	4.65 pH	29.93 °C	181.95 µS/cm	0.35 mg/L	22.00 NTU	94.8 mV	8.60 ft	165.00 ml/min
8/18/2020 12:35 PM	15:00	4.64 pH	29.23 °C	201.81 µS/cm	0.27 mg/L	25.00 NTU	97.0 mV	8.60 ft	165.00 ml/min
8/18/2020 12:40 PM	20:00	4.63 pH	28.69 °C	218.92 µS/cm	0.23 mg/L	27.00 NTU	99.2 mV	8.60 ft	165.00 ml/min
8/18/2020 12:45 PM	25:00	4.62 pH	29.00 °C	218.09 µS/cm	0.22 mg/L	17.00 NTU	99.2 mV	8.60 ft	165.00 ml/min
8/18/2020 12:50 PM	30:00	4.82 pH	29.71 °C	120.95 µS/cm	0.42 mg/L	10.00 NTU	92.4 mV	8.60 ft	165.00 ml/min
8/18/2020 12:55 PM	35:00	4.66 pH	29.85 °C	166.68 µS/cm	0.32 mg/L	10.00 NTU	99.7 mV	8.60 ft	165.00 ml/min
8/18/2020 1:00 PM	40:00	4.64 pH	29.48 °C	216.15 µS/cm	0.21 mg/L	15.00 NTU	102.9 mV	8.60 ft	165.00 ml/min
8/18/2020 1:05 PM	45:00	4.63 pH	29.89 °C	221.10 µS/cm	0.19 mg/L	14.00 NTU	103.4 mV	8.60 ft	165.00 ml/min
8/18/2020 1:10 PM	50:00	4.63 pH	29.47 °C	228.81 µS/cm	0.19 mg/L	13.00 NTU	105.4 mV	8.60 ft	165.00 ml/min
8/18/2020 1:15 PM	55:00	4.63 pH	29.85 °C	237.45 µS/cm	0.17 mg/L	11.00 NTU	108.8 mV	8.60 ft	165.00 ml/min
8/18/2020 1:20 PM	01:00:00	4.62 pH	29.76 °C	257.88 µS/cm	0.17 mg/L	9.70 NTU	110.9 mV	8.60 ft	165.00 ml/min
8/18/2020 1:25 PM	01:05:00	4.61 pH	29.76 °C	298.84 µS/cm	0.18 mg/L	6.69 NTU	115.8 mV	8.60 ft	165.00 ml/min
8/18/2020 1:30 PM	01:10:00	4.61 pH	30.19 °C	379.31 µS/cm	0.17 mg/L	4.87 NTU	122.1 mV	8.60 ft	165.00 ml/min

8/18/2020 1:35 PM	01:15:00	4.61 pH	29.52 °C	476.46 µS/cm	0.18 mg/L	4.44 NTU	125.8 mV	8.60 ft	165.00 ml/min
8/18/2020 1:40 PM	01:20:00	4.60 pH	29.96 °C	564.87 µS/cm	0.17 mg/L	3.91 NTU	130.6 mV	8.60 ft	165.00 ml/min
8/18/2020 1:45 PM	01:25:00	4.57 pH	29.38 °C	624.67 µS/cm	0.17 mg/L	2.22 NTU	136.1 mV	8.60 ft	165.00 ml/min
8/18/2020 1:50 PM	01:30:00	4.58 pH	29.11 °C	693.79 µS/cm	0.16 mg/L	1.85 NTU	137.8 mV	8.60 ft	165.00 ml/min
8/18/2020 1:55 PM	01:35:00	4.57 pH	28.98 °C	752.00 µS/cm	0.16 mg/L	1.94 NTU	143.2 mV	8.60 ft	165.00 ml/min
8/18/2020 2:00 PM	01:40:00	4.57 pH	28.71 °C	816.64 µS/cm	0.15 mg/L	1.38 NTU	144.6 mV	8.60 ft	165.00 ml/min
8/18/2020 2:05 PM	01:45:00	4.55 pH	28.63 °C	872.93 µS/cm	0.15 mg/L	1.53 NTU	147.5 mV	8.60 ft	165.00 ml/min
8/18/2020 2:10 PM	01:50:00	4.55 pH	29.76 °C	918.91 µS/cm	0.15 mg/L	2.00 NTU	153.1 mV	8.60 ft	165.00 ml/min
8/18/2020 2:15 PM	01:55:00	4.55 pH	29.28 °C	959.18 µS/cm	0.15 mg/L	1.28 NTU	153.6 mV	8.60 ft	165.00 ml/min
8/18/2020 2:20 PM	02:00:00	4.53 pH	29.90 °C	998.49 µS/cm	0.16 mg/L	1.79 NTU	156.3 mV	8.60 ft	165.00 ml/min
8/18/2020 2:25 PM	02:05:00	4.53 pH	30.57 °C	1,028.6 µS/cm	0.18 mg/L	2.22 NTU	162.2 mV	8.60 ft	165.00 ml/min
8/18/2020 2:30 PM	02:10:00	4.52 pH	31.57 °C	1,047.1 µS/cm	0.26 mg/L	2.49 NTU	164.9 mV	8.60 ft	165.00 ml/min

Samples

Sample ID:	Description:
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Daily Instrument Calibration Log

SITE: Grumman Rd
TECHNICIAN: OFUCWEA

WATER LEVEL: Solast MID
WATER LEVEL S/N: 322814

INSTRUMENT S/N: 714344
INSTRUMENT TYPE: Smartroll 322814 HOVA Troll
CAL. SOLUTIONS:
ID: COND. LOT #: 06E438 EXP. DATE: 5/21
ID: pH4 LOT #: 06D046 EXP. DATE: 4/22
ID: pH7 LOT #: 96K721 EXP. DATE: 11/21
ID: pH10 LOT #: 96K48 EXP. DATE: 12/21
ID: ORP LOT #: 06D570 EXP. DATE: 1/21
ID: _____ LOT #: _____ EXP. DATE: _____
ID: _____ LOT #: _____ EXP. DATE: _____

Calibration Date: 8-17-20
RDO: 100% sat. = 96.98%
PH: 4.00 = 4.34 7.00 = 7.10 10.00 = 9.97
CONDUCTIVITY: 1449.8
ORP (mV) 243

Calibration Date: 8-18-20
RDO: 100% sat. = 111.07%
PH: 4.00 = 4.00 7.00 = 7.14 10.00 = 9.98
CONDUCTIVITY: 1440.1
ORP (mV) 225.5

Calibration Date: 8-19-20
RDO: 100% sat. = 95.56
PH: 4.00 = 4.03 7.00 = 6.92 10.00 = 9.69 98
CONDUCTIVITY: 1424.6
ORP (mV) 232.5

Calibration Date: _____
RDO: 100% sat. = _____
PH: 4.00 = _____ 7.00 = _____ 10.00 = _____
CONDUCTIVITY: _____
ORP (mV) _____

Calibration Date: _____
RDO: 100% sat. = _____
PH: 4.00 = _____ 7.00 = _____ 10.00 = _____
CONDUCTIVITY: _____
ORP (mV) _____



Daily Instrument Calibration Log

SITE: Grumman Rd.
 TECHNICIAN: G. FUQUEA

INSTRUMENT S/N: 17120C063431
 INSTRUMENT TYPE: _____

CAL. SOLUTION: 0 NTU - LOT # NA EXP. DATE: New DI water
 10 NTU - LOT # EXP. DATE:
 20 NTU - LOT # EXP. DATE:

* LOT # NOT READABLE

Calibration Date: 8-17-20

Calibration Solution	Instrument Reading	
0.0	0.0	NTU
10.0	9.9	NTU
20.0	19.7	NTU

Calibration Date: 8-18-20

Calibration Solution	Instrument Reading	
0.0	0.1	NTU
10.0	9.91	NTU
20.0	20.0	NTU

Calibration Date: 8-19-20

Calibration Solution	Instrument Reading	
0.0	0.02	NTU
10.0	9.94	NTU
20.0	20.06	NTU

Calibration Date: _____

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date: _____

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date: _____

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU



Daily Instrument Calibration Log

SITE: Grumman Rd
TECHNICIAN: J. Benson

WATER LEVEL: Sol. 5.1
WATER LEVEL S/N: 207304

INSTRUMENT S/N: 714302
INSTRUMENT TYPE: Smartroll
CAL. SOLUTIONS/ID: pH 4 LOT #: 962804 EXP. DATE: 12/21
ID: pH 7 LOT #: 962721 EXP. DATE: 11/21
ID: pH 10 LOT #: 962648 EXP. DATE: 12/21
ID: 0.2N LOT #: 962592 EXP. DATE: 9/20
ID: 0.2N LOT #: 062438 EXP. DATE: 5/21
ID: LOT #: EXP. DATE:
ID: LOT #: EXP. DATE:

Calibration Date: 8/17/20
RDO: 100% sat. = 96.53
PH: 4.00 = 4.01 7.00 = 7.01 10.00 = 9.92
CONDUCTIVITY: 1464
ORP (mV) 228.1

Calibration Date: 8/18/20
RDO: 100% sat. = 104.28
PH: 4.00 = 4.10 7.00 = 7.13 10.00 = 10.00
CONDUCTIVITY: 1031
ORP (mV) 229.3

Calibration Date: 8/19/20
RDO: 100% sat. = 100.41
PH: 4.00 = 3.98 7.00 = 6.98 10.00 = 10.00
CONDUCTIVITY: 1419
ORP (mV) 232.6

Calibration Date:
RDO: 100% sat. =
PH: 4.00 = 7.00 = 10.00 =
CONDUCTIVITY:
ORP (mV)

Calibration Date:
RDO: 100% sat. =
PH: 4.00 = 7.00 = 10.00 =
CONDUCTIVITY:
ORP (mV)



Daily Instrument Calibration Log

SITE: Grumman Rd.
TECHNICIAN: *W. Bersted*

INSTRUMENT S/N: *... 44967*
INSTRUMENT TYPE: *HACH 2100 Q*
CAL. SOLUTION: 0 NTU - LOT # NA EXP. DATE: New DI water
10 NTU - LOT # *A0136* EXP. DATE: *8/21*
20 NTU - LOT # *A0134* EXP. DATE: *8/21*

Calibration Date: *8/17/20*

Calibration Solution	Instrument Reading	
0.0	<i>0.23</i>	NTU
10.0	<i>9.98</i>	NTU
20.0	<i>19.9</i>	NTU

Calibration Date: *8/18*

Calibration Solution	Instrument Reading	
0.0	<i>0.24</i>	NTU
10.0	<i>10.3</i>	NTU
20.0	<i>24.3</i>	NTU

Calibration Date: *8/19*

Calibration Solution	Instrument Reading	
0.0	<i>0.42</i>	NTU
10.0	<i>10.5</i>	NTU
20.0	<i>20.9</i>	NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU



Daily Instrument Calibration Log

SITE: Grumman Rd
TECHNICIAN: ZDus

WATER LEVEL: Solinst
WATER LEVEL S/N: 337343

INSTRUMENT S/N: _____
INSTRUMENT TYPE: Smartroll
CAL. SOLUTIONS/ S: ID: pH 4.0 LOT #: 06D046 EXP. DATE: 04/22
ID: pH 7.0 LOT #: 964721 EXP. DATE: _____
ID: pH 10.0 LOT #: 964646 EXP. DATE: 12/21
ID: Cond LOT #: 064358 EXP. DATE: 5/21
ID: ORP LOT #: 06D570 EXP. DATE: 1/21
ID: _____ LOT #: _____ EXP. DATE: _____
ID: _____ LOT #: _____ EXP. DATE: _____

Calibration Date: 6/17/20
RDO: 100% sat. = 7.91 at 96.8%
PH: 4.00 = 4.80 7.00 = 7.01 10.00 = 10.78
CONDUCTIVITY: 1413 = 1413
ORP (mV) 240 = 187.8

Calibration Date: 8/14/20
RDO: 100% sat. = 92.2 % 7.84 mg/L
PH: 4.00 = 4.79 7.00 = 7.65 10.00 = 10.63
CONDUCTIVITY: 1413 = 1455
ORP (mV) 240 = 192.7

Calibration Date: 8/19/20
RDO: 100% sat. = 7.86 mg/L at 92.0%
PH: 4.00 = 4.79 4.90 7.00 = 7.65 10.00 = 10.55
CONDUCTIVITY: 1413 = 1342
ORP (mV) 240 =

Calibration Date: _____
RDO: 100% sat. = _____
PH: 4.00 = _____ 7.00 = _____ 10.00 = _____
CONDUCTIVITY: _____
ORP (mV) _____

Calibration Date: _____
RDO: 100% sat. = _____
PH: 4.00 = _____ 7.00 = _____ 10.00 = _____
CONDUCTIVITY: _____
ORP (mV) _____



Daily Instrument Calibration Log

SITE: Grumman Rd.
 TECHNICIAN: Z Davis

INSTRUMENT S/N: 171200063767
 INSTRUMENT TYPE: HACH 2100 G
 CAL. SOLUTION: 0 NTU - LOT # NA EXP. DATE: New DI water
 10 NTU - LOT # A0136 EXP. DATE: 8/21
 20 NTU - LOT # A0139 EXP. DATE: 8/21

Calibration Date: 8/17/20

Calibration Solution	Instrument Reading	
0.0	0.12	NTU
10.0	9.71	NTU
20.0	20.9	NTU

Calibration Date: 8/18/20

Calibration Solution	Instrument Reading	
0.0	0.12	NTU
10.0	9.84	NTU
20.0	23.2	NTU

Calibration Date: 8/19/20

Calibration Solution	Instrument Reading	
0.0	0.16	NTU
10.0	9.81	NTU
20.0	20.7	NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

October 19, 2020

Joju Abraham
Georgia Power-CCR
2480 Maner Road
Atlanta, GA 30339

RE: Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between September 30, 2020 and October 02, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

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

Sincerely,



Tyler Forney for
Kevin Herring
kevin.herring@pacelabs.com
1(704)875-9092
HORIZON Database Administrator

Enclosures

cc: Owens Fuquea, ACC
Kristen Jurinko
Matt Malone, Atlantic Coast Consulting
Betsy McDaniel, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Ms. Lauren Petty, Southern Co. Services



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

Pace Analytical Services Charlotte

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078
Louisiana/NELAP Certification # LA170028
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

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

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, 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: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92498084001	GWA-7	Water	09/28/20 15:20	09/30/20 11:47
92498084002	GWC-13	Water	09/28/20 16:40	09/30/20 11:47
92498084003	GWA-8	Water	09/28/20 16:04	09/30/20 11:47
92498084004	GWC-1	Water	09/28/20 17:08	09/30/20 11:47
92498084005	FB-1-9-28-20	Water	09/28/20 16:55	09/30/20 11:47
92498084006	GWC-12	Water	09/29/20 09:35	09/30/20 11:47
92498084007	GWC-11	Water	09/29/20 12:20	09/30/20 11:47
92498084008	GWC-14	Water	09/29/20 14:42	09/30/20 11:47
92498084009	GWC-2	Water	09/29/20 15:05	09/30/20 11:47
92498084010	EB-1-9-29-20	Water	09/29/20 16:20	09/30/20 11:47
92498084011	DUP-1	Water	09/29/20 00:00	09/30/20 11:47
92498084012	GWC-21	Water	09/30/20 10:49	10/02/20 12:22
92498084013	GWC-15	Water	09/30/20 12:30	10/02/20 12:22
92498084014	GWC-16	Water	09/30/20 14:00	10/02/20 12:22
92498084015	GWC-20	Water	09/30/20 16:31	10/02/20 12:22
92498084016	GWB-4R	Water	10/01/20 08:50	10/02/20 12:22
92498084017	EB-2-9-30-20	Water	09/30/20 14:30	10/02/20 12:22
92498084018	DUP-2	Water	09/30/20 00:00	10/02/20 12:22
92498084019	GWC-17	Water	09/30/20 12:00	10/02/20 12:22
92498084020	GWC-22	Water	09/30/20 14:05	10/02/20 12:22
92498084021	GWB-6R	Water	09/30/20 15:35	10/02/20 12:22
92498084022	GWB-5R	Water	09/30/20 17:30	10/02/20 12:22
92498084023	FB-2-9-30-20	Water	09/30/20 15:25	10/02/20 12:22
92498084024	GWC-9	Water	10/01/20 08:21	10/02/20 12:22

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92498084001	GWA-7	EPA 6010D	DRB	1
		EPA 6020B	KH	15
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92498084002	GWC-13	EPA 6010D	DRB	1
		EPA 6020B	KH	15
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92498084003	GWA-8	EPA 6010D	DRB	1
		EPA 6020B	KH	15
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92498084004	GWC-1	EPA 6010D	DRB	1
		EPA 6020B	KH	15
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92498084005	FB-1-9-28-20	EPA 6010D	DRB	1
		EPA 6020B	KH	15
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92498084006	GWC-12	EPA 6010D	DRB	1
		EPA 6020B	KH	15
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92498084007	GWC-11	EPA 6010D	DRB	1
		EPA 6020B	KH	15
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92498084008	GWC-14	EPA 6010D	DRB	1
		EPA 6020B	CW1	15
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92498084009	GWC-2	EPA 6010D	DRB	1
		EPA 6020B	CW1	15
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92498084010	EB-1-9-29-20	EPA 6010D	DRB	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92498084011	DUP-1	EPA 6020B	CW1	15
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	15
92498084012	GWC-21	SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	15
		SM 2450C-2011	AW1	1
92498084013	GWC-15	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	15
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92498084014	GWC-16	EPA 6010D	DRB	1
		EPA 6020B	CW1	15
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
92498084015	GWC-20	EPA 6020B	CW1	15
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	15
92498084016	GWB-4R	SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	15
		SM 2450C-2011	AW1	1
92498084017	EB-2-9-30-20	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	15
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92498084018	DUP-2	EPA 6010D	DRB	1
		EPA 6020B	CW1	15
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
92498084019	GWC-17	EPA 6020B	CW1	15

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92498084020	GWC-22	SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	15
92498084021	GWB-6R	SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	15
92498084022	GWB-5R	SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	15
92498084023	FB-2-9-30-20	SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	15
92498084024	GWC-9	SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	15

PASI-A = Pace Analytical Services - Asheville
PASI-C = Pace Analytical Services - Charlotte
PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92498084001	GWA-7					
	Performed by	CUSTOME			10/12/20 16:37	
		R				
	pH	5.86	Std. Units		10/12/20 16:37	
EPA 6010D	Calcium	3.3	mg/L	1.0	10/05/20 22:02	
EPA 6020B	Barium	0.095	mg/L	0.050	10/06/20 19:16	
EPA 6020B	Boron	4.6	mg/L	0.20	10/06/20 19:16	
EPA 6020B	Chromium	0.014J	mg/L	0.050	10/06/20 19:16	D3
EPA 6020B	Lead	0.0043J	mg/L	0.025	10/06/20 19:16	D3
EPA 6020B	Selenium	0.010J	mg/L	0.050	10/06/20 19:16	D3
EPA 6020B	Vanadium	0.10	mg/L	0.050	10/06/20 19:16	
EPA 6020B	Zinc	0.16	mg/L	0.050	10/06/20 19:16	
SM 2450C-2011	Total Dissolved Solids	1450	mg/L	50.0	10/02/20 17:27	
EPA 300.0 Rev 2.1 1993	Chloride	113	mg/L	2.0	10/02/20 06:40	
EPA 300.0 Rev 2.1 1993	Fluoride	0.069J	mg/L	0.10	10/01/20 21:43	
EPA 300.0 Rev 2.1 1993	Sulfate	20.0	mg/L	1.0	10/01/20 21:43	
92498084002	GWC-13					
	Performed by	CUSTOME			10/12/20 16:37	
		R				
	pH	4.76	Std. Units		10/12/20 16:37	
EPA 6010D	Calcium	2.9	mg/L	1.0	10/05/20 22:07	
EPA 6020B	Barium	0.029	mg/L	0.010	10/06/20 19:22	
EPA 6020B	Boron	0.24	mg/L	0.040	10/06/20 19:22	
EPA 6020B	Chromium	0.00062J	mg/L	0.010	10/06/20 19:22	
EPA 6020B	Lead	0.000064J	mg/L	0.0050	10/06/20 19:22	
EPA 6020B	Zinc	0.016	mg/L	0.010	10/06/20 19:22	
SM 2450C-2011	Total Dissolved Solids	60.0	mg/L	10.0	10/02/20 17:27	
EPA 300.0 Rev 2.1 1993	Chloride	4.3	mg/L	1.0	10/01/20 21:58	
EPA 300.0 Rev 2.1 1993	Sulfate	25.6	mg/L	1.0	10/01/20 21:58	
92498084003	GWA-8					
	Performed by	CUSTOME			10/12/20 16:37	
		R				
	pH	4.41	Std. Units		10/12/20 16:37	
EPA 6010D	Calcium	25.6	mg/L	1.0	10/05/20 22:11	
EPA 6020B	Barium	0.050	mg/L	0.010	10/06/20 19:39	
EPA 6020B	Beryllium	0.00021J	mg/L	0.0030	10/06/20 19:39	
EPA 6020B	Boron	0.15	mg/L	0.040	10/06/20 19:39	
EPA 6020B	Chromium	0.00071J	mg/L	0.010	10/06/20 19:39	
EPA 6020B	Lithium	0.0010J	mg/L	0.030	10/06/20 19:39	
EPA 6020B	Zinc	0.0092J	mg/L	0.010	10/06/20 19:39	
SM 2450C-2011	Total Dissolved Solids	175	mg/L	10.0	10/02/20 17:27	
EPA 300.0 Rev 2.1 1993	Chloride	13.7	mg/L	1.0	10/01/20 22:12	
EPA 300.0 Rev 2.1 1993	Sulfate	93.6	mg/L	2.0	10/02/20 06:55	
92498084004	GWC-1					
	Performed by	CUSTOME			10/12/20 16:37	
		R				
	pH	5.79	Std. Units		10/12/20 16:37	
EPA 6010D	Calcium	70.7	mg/L	1.0	10/05/20 22:24	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92498084004	GWC-1					
EPA 6020B	Antimony	0.00035J	mg/L	0.0030	10/06/20 19:45	
EPA 6020B	Arsenic	0.0058	mg/L	0.0050	10/06/20 19:45	
EPA 6020B	Barium	0.051	mg/L	0.010	10/06/20 19:45	
EPA 6020B	Boron	0.69	mg/L	0.040	10/06/20 19:45	
EPA 6020B	Chromium	0.0024J	mg/L	0.010	10/06/20 19:45	
EPA 6020B	Lead	0.000043J	mg/L	0.0050	10/06/20 19:45	
EPA 6020B	Molybdenum	0.059	mg/L	0.010	10/06/20 19:45	
EPA 6020B	Vanadium	0.0042J	mg/L	0.010	10/06/20 19:45	
EPA 6020B	Zinc	0.0092J	mg/L	0.010	10/06/20 19:45	
SM 2450C-2011	Total Dissolved Solids	373	mg/L	10.0	10/02/20 17:27	
EPA 300.0 Rev 2.1 1993	Chloride	13.8	mg/L	1.0	10/01/20 22:27	
EPA 300.0 Rev 2.1 1993	Sulfate	71.6	mg/L	1.0	10/01/20 22:27	
92498084006	GWC-12					
	Performed by	CUSTOMER			10/12/20 16:37	
	pH	3.95	Std. Units		10/12/20 16:37	
EPA 6010D	Calcium	42.0	mg/L	1.0	10/05/20 22:33	
EPA 6020B	Barium	0.018	mg/L	0.010	10/06/20 19:56	
EPA 6020B	Beryllium	0.00043J	mg/L	0.0030	10/06/20 19:56	
EPA 6020B	Boron	4.7	mg/L	0.040	10/06/20 19:56	
EPA 6020B	Chromium	0.00085J	mg/L	0.010	10/06/20 19:56	
EPA 6020B	Cobalt	0.00057J	mg/L	0.0050	10/06/20 19:56	
EPA 6020B	Lead	0.000037J	mg/L	0.0050	10/06/20 19:56	
EPA 6020B	Lithium	0.00086J	mg/L	0.030	10/06/20 19:56	
EPA 6020B	Vanadium	0.0046J	mg/L	0.010	10/06/20 19:56	
EPA 6020B	Zinc	0.0074J	mg/L	0.010	10/06/20 19:56	
SM 2450C-2011	Total Dissolved Solids	440	mg/L	10.0	10/02/20 17:28	
EPA 300.0 Rev 2.1 1993	Chloride	24.3	mg/L	1.0	10/01/20 22:56	
EPA 300.0 Rev 2.1 1993	Fluoride	0.16	mg/L	0.10	10/01/20 22:56	
EPA 300.0 Rev 2.1 1993	Sulfate	237	mg/L	5.0	10/02/20 07:09	
92498084007	GWC-11					
	Performed by	CUSTOMER			10/12/20 16:37	
	pH	4.77	Std. Units		10/12/20 16:37	
EPA 6010D	Calcium	123	mg/L	1.0	10/05/20 22:37	
EPA 6020B	Antimony	0.00051J	mg/L	0.0030	10/06/20 20:02	
EPA 6020B	Barium	0.14	mg/L	0.010	10/06/20 20:02	
EPA 6020B	Boron	1.2	mg/L	0.040	10/06/20 20:02	
EPA 6020B	Cadmium	0.00077J	mg/L	0.0025	10/06/20 20:02	
EPA 6020B	Chromium	0.0011J	mg/L	0.010	10/06/20 20:02	
EPA 6020B	Cobalt	0.00055J	mg/L	0.0050	10/06/20 20:02	
EPA 6020B	Lead	0.00032J	mg/L	0.0050	10/06/20 20:02	
EPA 6020B	Selenium	0.0024J	mg/L	0.010	10/06/20 20:02	
EPA 6020B	Thallium	0.00017J	mg/L	0.0010	10/06/20 20:02	
EPA 6020B	Vanadium	0.0023J	mg/L	0.010	10/06/20 20:02	
EPA 6020B	Zinc	0.0031J	mg/L	0.010	10/06/20 20:02	
SM 2450C-2011	Total Dissolved Solids	1100	mg/L	50.0	10/02/20 17:28	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92498084007	GWC-11					
EPA 300.0 Rev 2.1 1993	Chloride	143	mg/L	11.0	10/02/20 07:23	
EPA 300.0 Rev 2.1 1993	Sulfate	516	mg/L	11.0	10/02/20 07:23	
92498084008	GWC-14					
	Performed by	CUSTOME			10/12/20 16:37	
		R				
	pH	5.69	Std. Units		10/12/20 16:37	
EPA 6010D	Calcium	30.8	mg/L	1.0	10/05/20 22:41	
EPA 6020B	Barium	0.026	mg/L	0.010	10/05/20 18:40	
EPA 6020B	Boron	0.053	mg/L	0.040	10/07/20 10:37	
EPA 6020B	Cadmium	0.00012J	mg/L	0.0025	10/05/20 18:40	
EPA 6020B	Molybdenum	0.0089J	mg/L	0.010	10/05/20 18:40	
EPA 6020B	Selenium	0.0051J	mg/L	0.010	10/05/20 18:40	
SM 2450C-2011	Total Dissolved Solids	187	mg/L	10.0	10/02/20 17:28	
EPA 300.0 Rev 2.1 1993	Chloride	10.6	mg/L	1.0	10/01/20 23:25	
EPA 300.0 Rev 2.1 1993	Sulfate	93.5	mg/L	1.0	10/01/20 23:25	M1
92498084009	GWC-2					
	Performed by	CUSTOME			10/12/20 16:37	
		R				
	pH	4.60	Std. Units		10/12/20 16:37	
EPA 6010D	Calcium	0.18J	mg/L	1.0	10/05/20 22:46	
EPA 6020B	Antimony	0.0016J	mg/L	0.0030	10/05/20 19:03	
EPA 6020B	Barium	0.049	mg/L	0.010	10/05/20 19:03	
EPA 6020B	Beryllium	0.000075J	mg/L	0.0030	10/05/20 19:03	
EPA 6020B	Boron	0.024J	mg/L	0.040	10/05/20 19:03	
EPA 6020B	Zinc	0.056	mg/L	0.010	10/05/20 19:03	
SM 2450C-2011	Total Dissolved Solids	33.0	mg/L	10.0	10/02/20 17:28	
EPA 300.0 Rev 2.1 1993	Chloride	5.4	mg/L	1.0	10/02/20 00:37	
EPA 300.0 Rev 2.1 1993	Sulfate	8.6	mg/L	1.0	10/02/20 00:37	
92498084010	EB-1-9-29-20					
EPA 6020B	Antimony	0.00049J	mg/L	0.0030	10/05/20 19:09	
EPA 300.0 Rev 2.1 1993	Sulfate	1.6	mg/L	1.0	10/02/20 00:51	
92498084011	DUP-1					
EPA 6010D	Calcium	43.1	mg/L	1.0	10/05/20 22:55	
EPA 6020B	Barium	0.017	mg/L	0.010	10/05/20 19:14	
EPA 6020B	Beryllium	0.00040J	mg/L	0.0030	10/05/20 19:14	
EPA 6020B	Boron	4.6	mg/L	0.20	10/07/20 12:11	
EPA 6020B	Chromium	0.00090J	mg/L	0.010	10/05/20 19:14	
EPA 6020B	Cobalt	0.00056J	mg/L	0.0050	10/05/20 19:14	
EPA 6020B	Lead	0.000040J	mg/L	0.0050	10/05/20 19:14	
EPA 6020B	Lithium	0.00088J	mg/L	0.030	10/05/20 19:14	
EPA 6020B	Vanadium	0.0049J	mg/L	0.010	10/05/20 19:14	
SM 2450C-2011	Total Dissolved Solids	434	mg/L	10.0	10/02/20 17:28	
EPA 300.0 Rev 2.1 1993	Chloride	24.4	mg/L	1.0	10/02/20 01:06	
EPA 300.0 Rev 2.1 1993	Fluoride	0.16	mg/L	0.10	10/02/20 01:06	
EPA 300.0 Rev 2.1 1993	Sulfate	241	mg/L	5.0	10/02/20 08:06	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92498084012	GWC-21					
	Performed by	CUSTOME			10/12/20 16:37	
		R				
	pH	5.82	Std. Units		10/12/20 16:37	
EPA 6010D	Calcium	98.4	mg/L	1.0	10/08/20 01:13	
EPA 6020B	Antimony	0.00033J	mg/L	0.0030	10/07/20 17:11	B
EPA 6020B	Arsenic	0.0029J	mg/L	0.0050	10/07/20 17:11	
EPA 6020B	Barium	0.19	mg/L	0.010	10/07/20 17:11	
EPA 6020B	Boron	2.3	mg/L	0.040	10/07/20 17:11	
EPA 6020B	Chromium	0.00067J	mg/L	0.010	10/07/20 17:11	
EPA 6020B	Lead	0.000054J	mg/L	0.0050	10/07/20 17:11	
EPA 6020B	Molybdenum	0.028	mg/L	0.010	10/07/20 17:11	
EPA 6020B	Selenium	0.0061J	mg/L	0.010	10/07/20 17:11	
EPA 6020B	Vanadium	0.0029J	mg/L	0.010	10/07/20 17:11	
EPA 6020B	Zinc	0.0096J	mg/L	0.010	10/07/20 17:11	
SM 2450C-2011	Total Dissolved Solids	634	mg/L	20.0	10/03/20 16:26	
EPA 300.0 Rev 2.1 1993	Chloride	23.7	mg/L	1.0	10/06/20 22:58	
EPA 300.0 Rev 2.1 1993	Sulfate	306	mg/L	7.0	10/07/20 09:18	
92498084013	GWC-15					
	Performed by	CUSTOME			10/12/20 16:37	
		R				
	pH	6.71	Std. Units		10/12/20 16:37	
EPA 6010D	Calcium	109	mg/L	1.0	10/08/20 01:17	
EPA 6020B	Arsenic	0.24	mg/L	0.0050	10/07/20 17:17	
EPA 6020B	Barium	0.034	mg/L	0.010	10/07/20 17:17	
EPA 6020B	Boron	0.86	mg/L	0.040	10/07/20 17:17	
EPA 6020B	Chromium	0.0016J	mg/L	0.010	10/07/20 17:17	
EPA 6020B	Lead	0.000047J	mg/L	0.0050	10/07/20 17:17	
EPA 6020B	Molybdenum	0.11	mg/L	0.010	10/07/20 17:17	
EPA 6020B	Vanadium	0.0028J	mg/L	0.010	10/07/20 17:17	
EPA 6020B	Zinc	0.032	mg/L	0.010	10/07/20 17:17	
SM 2450C-2011	Total Dissolved Solids	434	mg/L	10.0	10/03/20 16:26	
EPA 300.0 Rev 2.1 1993	Chloride	1.7	mg/L	1.0	10/06/20 23:41	
EPA 300.0 Rev 2.1 1993	Sulfate	18.5	mg/L	1.0	10/06/20 23:41	
92498084014	GWC-16					
	Performed by	CUSTOME			10/12/20 16:37	
		R				
	pH	5.47	Std. Units		10/12/20 16:37	
EPA 6010D	Calcium	177	mg/L	1.0	10/08/20 01:31	
EPA 6020B	Arsenic	0.044	mg/L	0.0050	10/07/20 17:22	
EPA 6020B	Barium	0.14	mg/L	0.010	10/07/20 17:22	
EPA 6020B	Beryllium	0.000089J	mg/L	0.0030	10/07/20 17:22	
EPA 6020B	Boron	8.1	mg/L	0.040	10/07/20 17:22	
EPA 6020B	Chromium	0.00098J	mg/L	0.010	10/07/20 17:22	
EPA 6020B	Lead	0.000091J	mg/L	0.0050	10/07/20 17:22	
EPA 6020B	Molybdenum	0.15	mg/L	0.010	10/07/20 17:22	
EPA 6020B	Selenium	0.0037J	mg/L	0.010	10/07/20 17:22	
EPA 6020B	Vanadium	0.0028J	mg/L	0.010	10/07/20 17:22	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92498084014	GWC-16					
EPA 6020B	Zinc	0.0051J	mg/L	0.010	10/07/20 17:22	
SM 2450C-2011	Total Dissolved Solids	1140	mg/L	50.0	10/03/20 16:26	
EPA 300.0 Rev 2.1 1993	Chloride	39.6	mg/L	1.0	10/07/20 00:24	
EPA 300.0 Rev 2.1 1993	Sulfate	736	mg/L	16.0	10/07/20 09:32	
92498084015	GWC-20					
	Performed by	CUSTOME			10/12/20 16:37	
		R				
	pH	6.04	Std. Units		10/12/20 16:37	
EPA 6010D	Calcium	292	mg/L	1.0	10/08/20 01:35	
EPA 6020B	Arsenic	0.31	mg/L	0.0050	10/07/20 17:28	
EPA 6020B	Barium	0.35	mg/L	0.010	10/07/20 17:28	
EPA 6020B	Boron	9.9	mg/L	0.040	10/07/20 17:28	
EPA 6020B	Chromium	0.0013J	mg/L	0.010	10/07/20 17:28	
EPA 6020B	Molybdenum	0.33	mg/L	0.010	10/07/20 17:28	
EPA 6020B	Vanadium	0.0029J	mg/L	0.010	10/07/20 17:28	
EPA 6020B	Zinc	0.031	mg/L	0.010	10/07/20 17:28	
SM 2450C-2011	Total Dissolved Solids	1860	mg/L	50.0	10/03/20 16:26	
EPA 300.0 Rev 2.1 1993	Chloride	34.9	mg/L	1.0	10/07/20 00:39	
EPA 300.0 Rev 2.1 1993	Sulfate	956	mg/L	20.0	10/07/20 09:47	
92498084016	GWB-4R					
	Performed by	CUSTOME			10/12/20 16:37	
		R				
	pH	5.75	Std. Units		10/12/20 16:37	
EPA 6010D	Calcium	48.4	mg/L	1.0	10/08/20 01:40	
EPA 6020B	Arsenic	0.0027J	mg/L	0.0050	10/07/20 17:34	
EPA 6020B	Barium	0.077	mg/L	0.010	10/07/20 17:34	
EPA 6020B	Boron	5.2	mg/L	0.040	10/07/20 17:34	
EPA 6020B	Chromium	0.0020J	mg/L	0.010	10/07/20 17:34	
EPA 6020B	Cobalt	0.00050J	mg/L	0.0050	10/07/20 17:34	
EPA 6020B	Lead	0.00026J	mg/L	0.0050	10/07/20 17:34	
EPA 6020B	Lithium	0.013J	mg/L	0.030	10/07/20 17:34	
EPA 6020B	Molybdenum	0.15	mg/L	0.010	10/07/20 17:34	
EPA 6020B	Vanadium	0.0047J	mg/L	0.010	10/07/20 17:34	
EPA 6020B	Zinc	0.0064J	mg/L	0.010	10/07/20 17:34	
SM 2450C-2011	Total Dissolved Solids	424	mg/L	10.0	10/03/20 16:28	
EPA 300.0 Rev 2.1 1993	Chloride	15.7	mg/L	1.0	10/07/20 00:53	
EPA 300.0 Rev 2.1 1993	Sulfate	178	mg/L	4.0	10/07/20 10:01	
92498084017	EB-2-9-30-20					
EPA 6010D	Calcium	0.30J	mg/L	1.0	10/08/20 01:44	
EPA 6020B	Boron	0.061	mg/L	0.040	10/07/20 17:39	
EPA 6020B	Zinc	0.0027J	mg/L	0.010	10/07/20 17:39	
92498084018	DUP-2					
EPA 6010D	Calcium	294	mg/L	1.0	10/08/20 01:49	
EPA 6020B	Arsenic	0.29	mg/L	0.0050	10/07/20 17:45	
EPA 6020B	Barium	0.33	mg/L	0.010	10/07/20 17:45	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SEMI ANNUAL
 Pace Project No.: 92498084

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92498084018	DUP-2					
EPA 6020B	Boron	9.8	mg/L	0.040	10/07/20 17:45	
EPA 6020B	Chromium	0.0013J	mg/L	0.010	10/07/20 17:45	
EPA 6020B	Molybdenum	0.31	mg/L	0.010	10/07/20 17:45	
EPA 6020B	Vanadium	0.0030J	mg/L	0.010	10/07/20 17:45	
EPA 6020B	Zinc	0.0062J	mg/L	0.010	10/07/20 17:45	
SM 2450C-2011	Total Dissolved Solids	1720	mg/L	50.0	10/03/20 16:27	
EPA 300.0 Rev 2.1 1993	Chloride	35.4	mg/L	1.0	10/07/20 01:22	
EPA 300.0 Rev 2.1 1993	Fluoride	0.32	mg/L	0.10	10/07/20 01:22	
EPA 300.0 Rev 2.1 1993	Sulfate	969	mg/L	20.0	10/07/20 10:15	
92498084019	GWC-17					
	Performed by	CUSTOMER			10/12/20 16:37	
	pH	4.08	Std. Units		10/12/20 16:37	
EPA 6010D	Calcium	53.5	mg/L	1.0	10/08/20 01:53	
EPA 6020B	Arsenic	0.0012J	mg/L	0.0050	10/07/20 17:51	
EPA 6020B	Barium	0.035	mg/L	0.010	10/07/20 17:51	
EPA 6020B	Beryllium	0.0013J	mg/L	0.0030	10/07/20 17:51	
EPA 6020B	Boron	0.86	mg/L	0.040	10/07/20 17:51	
EPA 6020B	Chromium	0.00096J	mg/L	0.010	10/07/20 17:51	
EPA 6020B	Cobalt	0.0018J	mg/L	0.0050	10/07/20 17:51	
EPA 6020B	Lead	0.000060J	mg/L	0.0050	10/07/20 17:51	
EPA 6020B	Lithium	0.0041J	mg/L	0.030	10/07/20 17:51	
EPA 6020B	Molybdenum	0.0041J	mg/L	0.010	10/07/20 17:51	
EPA 6020B	Zinc	0.0043J	mg/L	0.010	10/07/20 17:51	
SM 2450C-2011	Total Dissolved Solids	752	mg/L	20.0	10/03/20 16:27	
EPA 300.0 Rev 2.1 1993	Chloride	257	mg/L	6.0	10/07/20 10:29	
EPA 300.0 Rev 2.1 1993	Fluoride	0.15	mg/L	0.10	10/07/20 01:37	
EPA 300.0 Rev 2.1 1993	Sulfate	193	mg/L	6.0	10/07/20 10:29	
92498084020	GWC-22					
	Performed by	CUSTOMER			10/12/20 16:37	
	pH	4.63	Std. Units		10/12/20 16:37	
EPA 6010D	Calcium	20.9	mg/L	1.0	10/08/20 01:58	
EPA 6020B	Antimony	0.0016J	mg/L	0.0030	10/07/20 18:14	B
EPA 6020B	Barium	0.045	mg/L	0.010	10/07/20 18:14	
EPA 6020B	Boron	0.25	mg/L	0.040	10/07/20 18:14	
EPA 6020B	Cadmium	0.00024J	mg/L	0.0025	10/07/20 18:14	
EPA 6020B	Chromium	0.00064J	mg/L	0.010	10/07/20 18:14	
EPA 6020B	Lead	0.00023J	mg/L	0.0050	10/07/20 18:14	
SM 2450C-2011	Total Dissolved Solids	113	mg/L	10.0	10/03/20 16:27	
EPA 300.0 Rev 2.1 1993	Chloride	8.5	mg/L	1.0	10/07/20 01:51	
EPA 300.0 Rev 2.1 1993	Sulfate	65.5	mg/L	1.0	10/07/20 01:51	
92498084021	GWB-6R					
	Performed by	CUSTOMER			10/12/20 16:37	
	pH	5.39	Std. Units		10/12/20 16:37	

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92498084021	GWB-6R					
EPA 6010D	Calcium	27.5	mg/L	1.0	10/08/20 02:02	
EPA 6020B	Antimony	0.00059J	mg/L	0.0030	10/07/20 18:20	B
EPA 6020B	Arsenic	0.0040J	mg/L	0.0050	10/07/20 18:20	
EPA 6020B	Barium	0.092	mg/L	0.010	10/07/20 18:20	
EPA 6020B	Beryllium	0.000046J	mg/L	0.0030	10/07/20 18:20	
EPA 6020B	Boron	4.2	mg/L	0.040	10/07/20 18:20	
EPA 6020B	Chromium	0.0045J	mg/L	0.010	10/07/20 18:20	
EPA 6020B	Lead	0.000080J	mg/L	0.0050	10/07/20 18:20	
EPA 6020B	Molybdenum	0.00097J	mg/L	0.010	10/07/20 18:20	
EPA 6020B	Selenium	0.0023J	mg/L	0.010	10/07/20 18:20	
EPA 6020B	Vanadium	0.018	mg/L	0.010	10/07/20 18:20	
SM 2450C-2011	Total Dissolved Solids	816	mg/L	20.0	10/03/20 16:27	
EPA 300.0 Rev 2.1 1993	Chloride	53.9	mg/L	1.0	10/07/20 02:35	
EPA 300.0 Rev 2.1 1993	Sulfate	339	mg/L	7.0	10/07/20 10:43	
92498084022	GWB-5R					
	Performed by	CUSTOMER			10/12/20 16:37	
	pH	4.99	Std. Units		10/12/20 16:37	
EPA 6010D	Calcium	70.4	mg/L	1.0	10/08/20 02:07	
EPA 6020B	Antimony	0.00030J	mg/L	0.0030	10/07/20 18:25	B
EPA 6020B	Arsenic	0.0017J	mg/L	0.0050	10/07/20 18:25	
EPA 6020B	Barium	0.16	mg/L	0.010	10/07/20 18:25	
EPA 6020B	Beryllium	0.000065J	mg/L	0.0030	10/07/20 18:25	
EPA 6020B	Boron	4.0	mg/L	0.040	10/07/20 18:25	
EPA 6020B	Chromium	0.0018J	mg/L	0.010	10/07/20 18:25	
EPA 6020B	Cobalt	0.00056J	mg/L	0.0050	10/07/20 18:25	
EPA 6020B	Lead	0.0012J	mg/L	0.0050	10/07/20 18:25	
EPA 6020B	Vanadium	0.0037J	mg/L	0.010	10/07/20 18:25	
SM 2450C-2011	Total Dissolved Solids	652	mg/L	20.0	10/03/20 16:27	
EPA 300.0 Rev 2.1 1993	Chloride	24.1	mg/L	1.0	10/07/20 02:49	
EPA 300.0 Rev 2.1 1993	Sulfate	339	mg/L	7.0	10/07/20 11:26	
92498084023	FB-2-9-30-20					
EPA 6020B	Boron	0.030J	mg/L	0.040	10/07/20 18:31	
92498084024	GWC-9					
	Performed by	CUSTOMER			10/12/20 16:37	
	pH	4.42	Std. Units		10/12/20 16:37	
EPA 6010D	Calcium	5.5	mg/L	1.0	10/08/20 02:29	
EPA 6020B	Barium	0.15	mg/L	0.010	10/07/20 18:37	
EPA 6020B	Beryllium	0.00020J	mg/L	0.0030	10/07/20 18:37	
EPA 6020B	Boron	0.028J	mg/L	0.040	10/07/20 18:37	
EPA 6020B	Chromium	0.0012J	mg/L	0.010	10/07/20 18:37	
EPA 6020B	Cobalt	0.00099J	mg/L	0.0050	10/07/20 18:37	
EPA 6020B	Lead	0.000038J	mg/L	0.0050	10/07/20 18:37	
EPA 6020B	Lithium	0.0019J	mg/L	0.030	10/07/20 18:37	
EPA 6020B	Zinc	0.025	mg/L	0.010	10/07/20 18:37	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92498084024	GWC-9					
SM 2450C-2011	Total Dissolved Solids	111	mg/L	10.0	10/03/20 16:28	
EPA 300.0 Rev 2.1 1993	Chloride	16.8	mg/L	1.0	10/07/20 04:16	
EPA 300.0 Rev 2.1 1993	Sulfate	35.0	mg/L	1.0	10/07/20 04:16	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

Sample: GWA-7 Lab ID: 92498084001 Collected: 09/28/20 15:20 Received: 09/30/20 11:47 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/12/20 16:37		
pH	5.86	Std. Units			1		10/12/20 16:37		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	3.3	mg/L	1.0	0.070	1	10/01/20 18:53	10/05/20 22:02	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.015	0.0014	5	10/02/20 15:00	10/06/20 19:16	7440-36-0	D3
Arsenic	ND	mg/L	0.025	0.0039	5	10/02/20 15:00	10/06/20 19:16	7440-38-2	D3
Barium	0.095	mg/L	0.050	0.0036	5	10/02/20 15:00	10/06/20 19:16	7440-39-3	
Beryllium	ND	mg/L	0.015	0.00023	5	10/02/20 15:00	10/06/20 19:16	7440-41-7	D3
Boron	4.6	mg/L	0.20	0.026	5	10/02/20 15:00	10/06/20 19:16	7440-42-8	
Cadmium	ND	mg/L	0.012	0.00059	5	10/02/20 15:00	10/06/20 19:16	7440-43-9	D3
Chromium	0.014J	mg/L	0.050	0.0028	5	10/02/20 15:00	10/06/20 19:16	7440-47-3	D3
Cobalt	ND	mg/L	0.025	0.0019	5	10/02/20 15:00	10/06/20 19:16	7440-48-4	D3
Lead	0.0043J	mg/L	0.025	0.00018	5	10/02/20 15:00	10/06/20 19:16	7439-92-1	D3
Lithium	ND	mg/L	0.15	0.0040	5	10/02/20 15:00	10/06/20 19:16	7439-93-2	D3
Molybdenum	ND	mg/L	0.050	0.0034	5	10/02/20 15:00	10/06/20 19:16	7439-98-7	D3
Selenium	0.010J	mg/L	0.050	0.0078	5	10/02/20 15:00	10/06/20 19:16	7782-49-2	D3
Thallium	ND	mg/L	0.0050	0.00072	5	10/02/20 15:00	10/06/20 19:16	7440-28-0	D3
Vanadium	0.10	mg/L	0.050	0.011	5	10/02/20 15:00	10/06/20 19:16	7440-62-2	
Zinc	0.16	mg/L	0.050	0.011	5	10/02/20 15:00	10/06/20 19:16	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	1450	mg/L	50.0	50.0	1		10/02/20 17:27		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	113	mg/L	2.0	1.2	2		10/02/20 06:40	16887-00-6	
Fluoride	0.069J	mg/L	0.10	0.050	1		10/01/20 21:43	16984-48-8	
Sulfate	20.0	mg/L	1.0	0.50	1		10/01/20 21:43	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

Sample: GWC-13		Lab ID: 92498084002		Collected: 09/28/20 16:40		Received: 09/30/20 11:47		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/12/20 16:37		
pH	4.76	Std. Units			1		10/12/20 16:37		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	2.9	mg/L	1.0	0.070	1	10/01/20 18:53	10/05/20 22:07	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	10/02/20 15:00	10/06/20 19:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/06/20 19:22	7440-38-2	
Barium	0.029	mg/L	0.010	0.00071	1	10/02/20 15:00	10/06/20 19:22	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/06/20 19:22	7440-41-7	
Boron	0.24	mg/L	0.040	0.0052	1	10/02/20 15:00	10/06/20 19:22	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/06/20 19:22	7440-43-9	
Chromium	0.00062J	mg/L	0.010	0.00055	1	10/02/20 15:00	10/06/20 19:22	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/06/20 19:22	7440-48-4	
Lead	0.000064J	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/06/20 19:22	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/02/20 15:00	10/06/20 19:22	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	10/02/20 15:00	10/06/20 19:22	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/02/20 15:00	10/06/20 19:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/06/20 19:22	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0022	1	10/02/20 15:00	10/06/20 19:22	7440-62-2	
Zinc	0.016	mg/L	0.010	0.0022	1	10/02/20 15:00	10/06/20 19:22	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	60.0	mg/L	10.0	10.0	1		10/02/20 17:27		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	4.3	mg/L	1.0	0.60	1		10/01/20 21:58	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/01/20 21:58	16984-48-8	
Sulfate	25.6	mg/L	1.0	0.50	1		10/01/20 21:58	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

Sample: GWA-8	Lab ID: 92498084003	Collected: 09/28/20 16:04		Received: 09/30/20 11:47		Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/12/20 16:37		
pH	4.41	Std. Units			1		10/12/20 16:37		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	25.6	mg/L	1.0	0.070	1	10/01/20 18:53	10/05/20 22:11	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	10/02/20 15:00	10/06/20 19:39	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/06/20 19:39	7440-38-2	
Barium	0.050	mg/L	0.010	0.00071	1	10/02/20 15:00	10/06/20 19:39	7440-39-3	
Beryllium	0.00021J	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/06/20 19:39	7440-41-7	
Boron	0.15	mg/L	0.040	0.0052	1	10/02/20 15:00	10/06/20 19:39	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/06/20 19:39	7440-43-9	
Chromium	0.00071J	mg/L	0.010	0.00055	1	10/02/20 15:00	10/06/20 19:39	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/06/20 19:39	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/06/20 19:39	7439-92-1	
Lithium	0.0010J	mg/L	0.030	0.00081	1	10/02/20 15:00	10/06/20 19:39	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	10/02/20 15:00	10/06/20 19:39	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/02/20 15:00	10/06/20 19:39	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/06/20 19:39	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0022	1	10/02/20 15:00	10/06/20 19:39	7440-62-2	
Zinc	0.0092J	mg/L	0.010	0.0022	1	10/02/20 15:00	10/06/20 19:39	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	175	mg/L	10.0	10.0	1		10/02/20 17:27		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	13.7	mg/L	1.0	0.60	1		10/01/20 22:12	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/01/20 22:12	16984-48-8	
Sulfate	93.6	mg/L	2.0	1.0	2		10/02/20 06:55	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

Sample: GWC-1		Lab ID: 92498084004		Collected: 09/28/20 17:08		Received: 09/30/20 11:47		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/12/20 16:37		
pH	5.79	Std. Units			1		10/12/20 16:37		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	70.7	mg/L	1.0	0.070	1	10/01/20 18:53	10/05/20 22:24	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00035J	mg/L	0.0030	0.00028	1	10/02/20 15:00	10/06/20 19:45	7440-36-0	
Arsenic	0.0058	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/06/20 19:45	7440-38-2	
Barium	0.051	mg/L	0.010	0.00071	1	10/02/20 15:00	10/06/20 19:45	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/06/20 19:45	7440-41-7	
Boron	0.69	mg/L	0.040	0.0052	1	10/02/20 15:00	10/06/20 19:45	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/06/20 19:45	7440-43-9	
Chromium	0.0024J	mg/L	0.010	0.00055	1	10/02/20 15:00	10/06/20 19:45	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/06/20 19:45	7440-48-4	
Lead	0.000043J	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/06/20 19:45	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/02/20 15:00	10/06/20 19:45	7439-93-2	
Molybdenum	0.059	mg/L	0.010	0.00069	1	10/02/20 15:00	10/06/20 19:45	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/02/20 15:00	10/06/20 19:45	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/06/20 19:45	7440-28-0	
Vanadium	0.0042J	mg/L	0.010	0.0022	1	10/02/20 15:00	10/06/20 19:45	7440-62-2	
Zinc	0.0092J	mg/L	0.010	0.0022	1	10/02/20 15:00	10/06/20 19:45	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	373	mg/L	10.0	10.0	1		10/02/20 17:27		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	13.8	mg/L	1.0	0.60	1		10/01/20 22:27	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/01/20 22:27	16984-48-8	
Sulfate	71.6	mg/L	1.0	0.50	1		10/01/20 22:27	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

Sample: FB-1-9-28-20		Lab ID: 92498084005		Collected: 09/28/20 16:55	Received: 09/30/20 11:47	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.070	1	10/01/20 18:53	10/05/20 22:28	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	10/02/20 15:00	10/06/20 19:51	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/06/20 19:51	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	10/02/20 15:00	10/06/20 19:51	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/06/20 19:51	7440-41-7		
Boron	ND	mg/L	0.040	0.0052	1	10/02/20 15:00	10/06/20 19:51	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/06/20 19:51	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	10/02/20 15:00	10/06/20 19:51	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/06/20 19:51	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/06/20 19:51	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	10/02/20 15:00	10/06/20 19:51	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	10/02/20 15:00	10/06/20 19:51	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	10/02/20 15:00	10/06/20 19:51	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/06/20 19:51	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0022	1	10/02/20 15:00	10/06/20 19:51	7440-62-2		
Zinc	ND	mg/L	0.010	0.0022	1	10/02/20 15:00	10/06/20 19:51	7440-66-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		10/02/20 17:27			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		10/01/20 22:41	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		10/01/20 22:41	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		10/01/20 22:41	14808-79-8		

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

Sample: GWC-12		Lab ID: 92498084006		Collected: 09/29/20 09:35		Received: 09/30/20 11:47		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/12/20 16:37		
pH	3.95	Std. Units			1		10/12/20 16:37		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	42.0	mg/L	1.0	0.070	1	10/01/20 18:53	10/05/20 22:33	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	10/02/20 15:00	10/06/20 19:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/06/20 19:56	7440-38-2	
Barium	0.018	mg/L	0.010	0.00071	1	10/02/20 15:00	10/06/20 19:56	7440-39-3	
Beryllium	0.00043J	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/06/20 19:56	7440-41-7	
Boron	4.7	mg/L	0.040	0.0052	1	10/02/20 15:00	10/06/20 19:56	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/06/20 19:56	7440-43-9	
Chromium	0.00085J	mg/L	0.010	0.00055	1	10/02/20 15:00	10/06/20 19:56	7440-47-3	
Cobalt	0.00057J	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/06/20 19:56	7440-48-4	
Lead	0.000037J	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/06/20 19:56	7439-92-1	
Lithium	0.00086J	mg/L	0.030	0.00081	1	10/02/20 15:00	10/06/20 19:56	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	10/02/20 15:00	10/06/20 19:56	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/02/20 15:00	10/06/20 19:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/06/20 19:56	7440-28-0	
Vanadium	0.0046J	mg/L	0.010	0.0022	1	10/02/20 15:00	10/06/20 19:56	7440-62-2	
Zinc	0.0074J	mg/L	0.010	0.0022	1	10/02/20 15:00	10/06/20 19:56	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	440	mg/L	10.0	10.0	1		10/02/20 17:28		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	24.3	mg/L	1.0	0.60	1		10/01/20 22:56	16887-00-6	
Fluoride	0.16	mg/L	0.10	0.050	1		10/01/20 22:56	16984-48-8	
Sulfate	237	mg/L	5.0	2.5	5		10/02/20 07:09	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

Sample: GWC-11		Lab ID: 92498084007		Collected: 09/29/20 12:20		Received: 09/30/20 11:47		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/12/20 16:37		
pH	4.77	Std. Units			1		10/12/20 16:37		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	123	mg/L	1.0	0.070	1	10/01/20 18:53	10/05/20 22:37	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00051J	mg/L	0.0030	0.00028	1	10/02/20 15:00	10/06/20 20:02	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/06/20 20:02	7440-38-2	
Barium	0.14	mg/L	0.010	0.00071	1	10/02/20 15:00	10/06/20 20:02	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/06/20 20:02	7440-41-7	
Boron	1.2	mg/L	0.040	0.0052	1	10/02/20 15:00	10/06/20 20:02	7440-42-8	
Cadmium	0.00077J	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/06/20 20:02	7440-43-9	
Chromium	0.0011J	mg/L	0.010	0.00055	1	10/02/20 15:00	10/06/20 20:02	7440-47-3	
Cobalt	0.00055J	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/06/20 20:02	7440-48-4	
Lead	0.00032J	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/06/20 20:02	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/02/20 15:00	10/06/20 20:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	10/02/20 15:00	10/06/20 20:02	7439-98-7	
Selenium	0.0024J	mg/L	0.010	0.0016	1	10/02/20 15:00	10/06/20 20:02	7782-49-2	
Thallium	0.00017J	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/06/20 20:02	7440-28-0	
Vanadium	0.0023J	mg/L	0.010	0.0022	1	10/02/20 15:00	10/06/20 20:02	7440-62-2	
Zinc	0.0031J	mg/L	0.010	0.0022	1	10/02/20 15:00	10/06/20 20:02	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	1100	mg/L	50.0	50.0	1		10/02/20 17:28		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	143	mg/L	11.0	6.6	11		10/02/20 07:23	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/01/20 23:10	16984-48-8	
Sulfate	516	mg/L	11.0	5.5	11		10/02/20 07:23	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

Sample: GWC-14	Lab ID: 92498084008	Collected: 09/29/20 14:42	Received: 09/30/20 11:47	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/12/20 16:37		
pH	5.69	Std. Units			1		10/12/20 16:37		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	30.8	mg/L	1.0	0.070	1	10/01/20 18:53	10/05/20 22:41	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	10/02/20 15:00	10/05/20 18:40	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/05/20 18:40	7440-38-2	
Barium	0.026	mg/L	0.010	0.00071	1	10/02/20 15:00	10/05/20 18:40	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/05/20 18:40	7440-41-7	
Boron	0.053	mg/L	0.040	0.0052	1	10/02/20 15:00	10/07/20 10:37	7440-42-8	
Cadmium	0.00012J	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/05/20 18:40	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	10/02/20 15:00	10/05/20 18:40	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/05/20 18:40	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/05/20 18:40	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/02/20 15:00	10/05/20 18:40	7439-93-2	
Molybdenum	0.0089J	mg/L	0.010	0.00069	1	10/02/20 15:00	10/05/20 18:40	7439-98-7	
Selenium	0.0051J	mg/L	0.010	0.0016	1	10/02/20 15:00	10/05/20 18:40	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/05/20 18:40	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0022	1	10/02/20 15:00	10/05/20 18:40	7440-62-2	
Zinc	ND	mg/L	0.010	0.0022	1	10/02/20 15:00	10/05/20 18:40	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	187	mg/L	10.0	10.0	1		10/02/20 17:28		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	10.6	mg/L	1.0	0.60	1		10/01/20 23:25	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/01/20 23:25	16984-48-8	
Sulfate	93.5	mg/L	1.0	0.50	1		10/01/20 23:25	14808-79-8	M1

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

Sample: GWC-2		Lab ID: 92498084009		Collected: 09/29/20 15:05	Received: 09/30/20 11:47	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/12/20 16:37		
pH	4.60	Std. Units			1		10/12/20 16:37		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	0.18J	mg/L	1.0	0.070	1	10/01/20 18:53	10/05/20 22:46	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0016J	mg/L	0.0030	0.00028	1	10/02/20 15:00	10/05/20 19:03	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/05/20 19:03	7440-38-2	
Barium	0.049	mg/L	0.010	0.00071	1	10/02/20 15:00	10/05/20 19:03	7440-39-3	
Beryllium	0.000075J	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/05/20 19:03	7440-41-7	
Boron	0.024J	mg/L	0.040	0.0052	1	10/02/20 15:00	10/05/20 19:03	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/05/20 19:03	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	10/02/20 15:00	10/05/20 19:03	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/05/20 19:03	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/05/20 19:03	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/02/20 15:00	10/05/20 19:03	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	10/02/20 15:00	10/05/20 19:03	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/02/20 15:00	10/05/20 19:03	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/05/20 19:03	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0022	1	10/02/20 15:00	10/05/20 19:03	7440-62-2	
Zinc	0.056	mg/L	0.010	0.0022	1	10/02/20 15:00	10/05/20 19:03	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	33.0	mg/L	10.0	10.0	1		10/02/20 17:28		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	5.4	mg/L	1.0	0.60	1		10/02/20 00:37	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/02/20 00:37	16984-48-8	
Sulfate	8.6	mg/L	1.0	0.50	1		10/02/20 00:37	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

Sample: EB-1-9-29-20		Lab ID: 92498084010		Collected: 09/29/20 16:20		Received: 09/30/20 11:47		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.070	1	10/01/20 18:53	10/05/20 22:50	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	0.00049J	mg/L	0.0030	0.00028	1	10/02/20 15:00	10/05/20 19:09	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/05/20 19:09	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	10/02/20 15:00	10/05/20 19:09	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/05/20 19:09	7440-41-7		
Boron	ND	mg/L	0.040	0.0052	1	10/02/20 15:00	10/05/20 19:09	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/05/20 19:09	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	10/02/20 15:00	10/05/20 19:09	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/05/20 19:09	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/05/20 19:09	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	10/02/20 15:00	10/05/20 19:09	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	10/02/20 15:00	10/05/20 19:09	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	10/02/20 15:00	10/05/20 19:09	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/05/20 19:09	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0022	1	10/02/20 15:00	10/05/20 19:09	7440-62-2		
Zinc	ND	mg/L	0.010	0.0022	1	10/02/20 15:00	10/05/20 19:09	7440-66-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		10/02/20 17:28			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		10/02/20 00:51	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		10/02/20 00:51	16984-48-8		
Sulfate	1.6	mg/L	1.0	0.50	1		10/02/20 00:51	14808-79-8		

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

Sample: DUP-1		Lab ID: 92498084011		Collected: 09/29/20 00:00	Received: 09/30/20 11:47	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	43.1	mg/L	1.0	0.070	1	10/01/20 18:53	10/05/20 22:55	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	10/02/20 15:00	10/05/20 19:14	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/05/20 19:14	7440-38-2		
Barium	0.017	mg/L	0.010	0.00071	1	10/02/20 15:00	10/05/20 19:14	7440-39-3		
Beryllium	0.00040J	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/05/20 19:14	7440-41-7		
Boron	4.6	mg/L	0.20	0.026	5	10/02/20 15:00	10/07/20 12:11	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/05/20 19:14	7440-43-9		
Chromium	0.00090J	mg/L	0.010	0.00055	1	10/02/20 15:00	10/05/20 19:14	7440-47-3		
Cobalt	0.00056J	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/05/20 19:14	7440-48-4		
Lead	0.000040J	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/05/20 19:14	7439-92-1		
Lithium	0.00088J	mg/L	0.030	0.00081	1	10/02/20 15:00	10/05/20 19:14	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	10/02/20 15:00	10/05/20 19:14	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	10/02/20 15:00	10/05/20 19:14	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/05/20 19:14	7440-28-0		
Vanadium	0.0049J	mg/L	0.010	0.0022	1	10/02/20 15:00	10/05/20 19:14	7440-62-2		
Zinc	ND	mg/L	0.010	0.0022	1	10/02/20 15:00	10/05/20 19:14	7440-66-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	434	mg/L	10.0	10.0	1		10/02/20 17:28			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	24.4	mg/L	1.0	0.60	1		10/02/20 01:06	16887-00-6		
Fluoride	0.16	mg/L	0.10	0.050	1		10/02/20 01:06	16984-48-8		
Sulfate	241	mg/L	5.0	2.5	5		10/02/20 08:06	14808-79-8		

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

Sample: GWC-21		Lab ID: 92498084012		Collected: 09/30/20 10:49		Received: 10/02/20 12:22		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/12/20 16:37		
pH	5.82	Std. Units			1		10/12/20 16:37		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	98.4	mg/L	1.0	0.070	1	10/05/20 17:12	10/08/20 01:13	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00033J	mg/L	0.0030	0.00028	1	10/05/20 17:15	10/07/20 17:11	7440-36-0	B
Arsenic	0.0029J	mg/L	0.0050	0.00078	1	10/05/20 17:15	10/07/20 17:11	7440-38-2	
Barium	0.19	mg/L	0.010	0.00071	1	10/05/20 17:15	10/07/20 17:11	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/05/20 17:15	10/07/20 17:11	7440-41-7	
Boron	2.3	mg/L	0.040	0.0052	1	10/05/20 17:15	10/07/20 17:11	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/05/20 17:15	10/07/20 17:11	7440-43-9	
Chromium	0.00067J	mg/L	0.010	0.00055	1	10/05/20 17:15	10/07/20 17:11	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/05/20 17:15	10/07/20 17:11	7440-48-4	
Lead	0.000054J	mg/L	0.0050	0.000036	1	10/05/20 17:15	10/07/20 17:11	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/05/20 17:15	10/07/20 17:11	7439-93-2	
Molybdenum	0.028	mg/L	0.010	0.00069	1	10/05/20 17:15	10/07/20 17:11	7439-98-7	
Selenium	0.0061J	mg/L	0.010	0.0016	1	10/05/20 17:15	10/07/20 17:11	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/05/20 17:15	10/07/20 17:11	7440-28-0	
Vanadium	0.0029J	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 17:11	7440-62-2	
Zinc	0.0096J	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 17:11	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	634	mg/L	20.0	20.0	1		10/03/20 16:26		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	23.7	mg/L	1.0	0.60	1		10/06/20 22:58	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/06/20 22:58	16984-48-8	
Sulfate	306	mg/L	7.0	3.5	7		10/07/20 09:18	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

Sample: GWC-15		Lab ID: 92498084013		Collected: 09/30/20 12:30		Received: 10/02/20 12:22		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/12/20 16:37		
pH	6.71	Std. Units			1		10/12/20 16:37		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	109	mg/L	1.0	0.070	1	10/05/20 17:12	10/08/20 01:17	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	10/05/20 17:15	10/07/20 17:17	7440-36-0	
Arsenic	0.24	mg/L	0.0050	0.00078	1	10/05/20 17:15	10/07/20 17:17	7440-38-2	
Barium	0.034	mg/L	0.010	0.00071	1	10/05/20 17:15	10/07/20 17:17	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/05/20 17:15	10/07/20 17:17	7440-41-7	
Boron	0.86	mg/L	0.040	0.0052	1	10/05/20 17:15	10/07/20 17:17	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/05/20 17:15	10/07/20 17:17	7440-43-9	
Chromium	0.0016J	mg/L	0.010	0.00055	1	10/05/20 17:15	10/07/20 17:17	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/05/20 17:15	10/07/20 17:17	7440-48-4	
Lead	0.000047J	mg/L	0.0050	0.000036	1	10/05/20 17:15	10/07/20 17:17	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/05/20 17:15	10/07/20 17:17	7439-93-2	
Molybdenum	0.11	mg/L	0.010	0.00069	1	10/05/20 17:15	10/07/20 17:17	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/05/20 17:15	10/07/20 17:17	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/05/20 17:15	10/07/20 17:17	7440-28-0	
Vanadium	0.0028J	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 17:17	7440-62-2	
Zinc	0.032	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 17:17	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	434	mg/L	10.0	10.0	1		10/03/20 16:26		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	1.7	mg/L	1.0	0.60	1		10/06/20 23:41	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/06/20 23:41	16984-48-8	
Sulfate	18.5	mg/L	1.0	0.50	1		10/06/20 23:41	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

Sample: GWC-16		Lab ID: 92498084014		Collected: 09/30/20 14:00		Received: 10/02/20 12:22		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/12/20 16:37		
pH	5.47	Std. Units			1		10/12/20 16:37		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	177	mg/L	1.0	0.070	1	10/05/20 17:12	10/08/20 01:31	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	10/05/20 17:15	10/07/20 17:22	7440-36-0	
Arsenic	0.044	mg/L	0.0050	0.00078	1	10/05/20 17:15	10/07/20 17:22	7440-38-2	
Barium	0.14	mg/L	0.010	0.00071	1	10/05/20 17:15	10/07/20 17:22	7440-39-3	
Beryllium	0.000089J	mg/L	0.0030	0.000046	1	10/05/20 17:15	10/07/20 17:22	7440-41-7	
Boron	8.1	mg/L	0.040	0.0052	1	10/05/20 17:15	10/07/20 17:22	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/05/20 17:15	10/07/20 17:22	7440-43-9	
Chromium	0.00098J	mg/L	0.010	0.00055	1	10/05/20 17:15	10/07/20 17:22	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/05/20 17:15	10/07/20 17:22	7440-48-4	
Lead	0.000091J	mg/L	0.0050	0.000036	1	10/05/20 17:15	10/07/20 17:22	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/05/20 17:15	10/07/20 17:22	7439-93-2	
Molybdenum	0.15	mg/L	0.010	0.00069	1	10/05/20 17:15	10/07/20 17:22	7439-98-7	
Selenium	0.0037J	mg/L	0.010	0.0016	1	10/05/20 17:15	10/07/20 17:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/05/20 17:15	10/07/20 17:22	7440-28-0	
Vanadium	0.0028J	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 17:22	7440-62-2	
Zinc	0.0051J	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 17:22	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	1140	mg/L	50.0	50.0	1		10/03/20 16:26		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	39.6	mg/L	1.0	0.60	1		10/07/20 00:24	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/07/20 00:24	16984-48-8	
Sulfate	736	mg/L	16.0	8.0	16		10/07/20 09:32	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

Sample: GWC-20		Lab ID: 92498084015		Collected: 09/30/20 16:31		Received: 10/02/20 12:22		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/12/20 16:37		
pH	6.04	Std. Units			1		10/12/20 16:37		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	292	mg/L	1.0	0.070	1	10/05/20 17:12	10/08/20 01:35	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	10/05/20 17:15	10/07/20 17:28	7440-36-0	
Arsenic	0.31	mg/L	0.0050	0.00078	1	10/05/20 17:15	10/07/20 17:28	7440-38-2	
Barium	0.35	mg/L	0.010	0.00071	1	10/05/20 17:15	10/07/20 17:28	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/05/20 17:15	10/07/20 17:28	7440-41-7	
Boron	9.9	mg/L	0.040	0.0052	1	10/05/20 17:15	10/07/20 17:28	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/05/20 17:15	10/07/20 17:28	7440-43-9	
Chromium	0.0013J	mg/L	0.010	0.00055	1	10/05/20 17:15	10/07/20 17:28	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/05/20 17:15	10/07/20 17:28	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	10/05/20 17:15	10/07/20 17:28	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/05/20 17:15	10/07/20 17:28	7439-93-2	
Molybdenum	0.33	mg/L	0.010	0.00069	1	10/05/20 17:15	10/07/20 17:28	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/05/20 17:15	10/07/20 17:28	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/05/20 17:15	10/07/20 17:28	7440-28-0	
Vanadium	0.0029J	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 17:28	7440-62-2	
Zinc	0.031	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 17:28	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	1860	mg/L	50.0	50.0	1		10/03/20 16:26		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	34.9	mg/L	1.0	0.60	1		10/07/20 00:39	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/07/20 00:39	16984-48-8	
Sulfate	956	mg/L	20.0	10.0	20		10/07/20 09:47	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

Sample: GWB-4R Lab ID: 92498084016 Collected: 10/01/20 08:50 Received: 10/02/20 12:22 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/12/20 16:37		
pH	5.75	Std. Units			1		10/12/20 16:37		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	48.4	mg/L	1.0	0.070	1	10/05/20 17:12	10/08/20 01:40	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	10/05/20 17:15	10/07/20 17:34	7440-36-0	
Arsenic	0.0027J	mg/L	0.0050	0.00078	1	10/05/20 17:15	10/07/20 17:34	7440-38-2	
Barium	0.077	mg/L	0.010	0.00071	1	10/05/20 17:15	10/07/20 17:34	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/05/20 17:15	10/07/20 17:34	7440-41-7	
Boron	5.2	mg/L	0.040	0.0052	1	10/05/20 17:15	10/07/20 17:34	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/05/20 17:15	10/07/20 17:34	7440-43-9	
Chromium	0.0020J	mg/L	0.010	0.00055	1	10/05/20 17:15	10/07/20 17:34	7440-47-3	
Cobalt	0.00050J	mg/L	0.0050	0.00038	1	10/05/20 17:15	10/07/20 17:34	7440-48-4	
Lead	0.00026J	mg/L	0.0050	0.000036	1	10/05/20 17:15	10/07/20 17:34	7439-92-1	
Lithium	0.013J	mg/L	0.030	0.00081	1	10/05/20 17:15	10/07/20 17:34	7439-93-2	
Molybdenum	0.15	mg/L	0.010	0.00069	1	10/05/20 17:15	10/07/20 17:34	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/05/20 17:15	10/07/20 17:34	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/05/20 17:15	10/07/20 17:34	7440-28-0	
Vanadium	0.0047J	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 17:34	7440-62-2	
Zinc	0.0064J	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 17:34	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	424	mg/L	10.0	10.0	1		10/03/20 16:28		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	15.7	mg/L	1.0	0.60	1		10/07/20 00:53	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/07/20 00:53	16984-48-8	
Sulfate	178	mg/L	4.0	2.0	4		10/07/20 10:01	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

Sample: EB-2-9-30-20		Lab ID: 92498084017		Collected: 09/30/20 14:30	Received: 10/02/20 12:22	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Calcium	0.30J	mg/L	1.0	0.070	1	10/05/20 17:12	10/08/20 01:44	7440-70-2	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00028	1	10/05/20 17:15	10/07/20 17:39	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	10/05/20 17:15	10/07/20 17:39	7440-38-2	
Barium	ND	mg/L	0.010	0.00071	1	10/05/20 17:15	10/07/20 17:39	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/05/20 17:15	10/07/20 17:39	7440-41-7	
Boron	0.061	mg/L	0.040	0.0052	1	10/05/20 17:15	10/07/20 17:39	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/05/20 17:15	10/07/20 17:39	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	10/05/20 17:15	10/07/20 17:39	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/05/20 17:15	10/07/20 17:39	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	10/05/20 17:15	10/07/20 17:39	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/05/20 17:15	10/07/20 17:39	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	10/05/20 17:15	10/07/20 17:39	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/05/20 17:15	10/07/20 17:39	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/05/20 17:15	10/07/20 17:39	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 17:39	7440-62-2	
Zinc	0.0027J	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 17:39	7440-66-6	
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		10/03/20 16:26		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		10/07/20 01:08	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/07/20 01:08	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		10/07/20 01:08	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

Sample: DUP-2		Lab ID: 92498084018		Collected: 09/30/20 00:00		Received: 10/02/20 12:22		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	294	mg/L	1.0	0.070	1	10/05/20 17:12	10/08/20 01:49	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	10/05/20 17:15	10/07/20 17:45	7440-36-0		
Arsenic	0.29	mg/L	0.0050	0.00078	1	10/05/20 17:15	10/07/20 17:45	7440-38-2		
Barium	0.33	mg/L	0.010	0.00071	1	10/05/20 17:15	10/07/20 17:45	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	10/05/20 17:15	10/07/20 17:45	7440-41-7		
Boron	9.8	mg/L	0.040	0.0052	1	10/05/20 17:15	10/07/20 17:45	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	10/05/20 17:15	10/07/20 17:45	7440-43-9		
Chromium	0.0013J	mg/L	0.010	0.00055	1	10/05/20 17:15	10/07/20 17:45	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	10/05/20 17:15	10/07/20 17:45	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	10/05/20 17:15	10/07/20 17:45	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	10/05/20 17:15	10/07/20 17:45	7439-93-2		
Molybdenum	0.31	mg/L	0.010	0.00069	1	10/05/20 17:15	10/07/20 17:45	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	10/05/20 17:15	10/07/20 17:45	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	10/05/20 17:15	10/07/20 17:45	7440-28-0		
Vanadium	0.0030J	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 17:45	7440-62-2		
Zinc	0.0062J	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 17:45	7440-66-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	1720	mg/L	50.0	50.0	1		10/03/20 16:27			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	35.4	mg/L	1.0	0.60	1		10/07/20 01:22	16887-00-6		
Fluoride	0.32	mg/L	0.10	0.050	1		10/07/20 01:22	16984-48-8		
Sulfate	969	mg/L	20.0	10.0	20		10/07/20 10:15	14808-79-8		

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

Sample: GWC-17 Lab ID: 92498084019 Collected: 09/30/20 12:00 Received: 10/02/20 12:22 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/12/20 16:37		
pH	4.08	Std. Units			1		10/12/20 16:37		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	53.5	mg/L	1.0	0.070	1	10/05/20 17:12	10/08/20 01:53	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	10/05/20 17:15	10/07/20 17:51	7440-36-0	
Arsenic	0.0012J	mg/L	0.0050	0.00078	1	10/05/20 17:15	10/07/20 17:51	7440-38-2	
Barium	0.035	mg/L	0.010	0.00071	1	10/05/20 17:15	10/07/20 17:51	7440-39-3	
Beryllium	0.0013J	mg/L	0.0030	0.000046	1	10/05/20 17:15	10/07/20 17:51	7440-41-7	
Boron	0.86	mg/L	0.040	0.0052	1	10/05/20 17:15	10/07/20 17:51	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/05/20 17:15	10/07/20 17:51	7440-43-9	
Chromium	0.00096J	mg/L	0.010	0.00055	1	10/05/20 17:15	10/07/20 17:51	7440-47-3	
Cobalt	0.0018J	mg/L	0.0050	0.00038	1	10/05/20 17:15	10/07/20 17:51	7440-48-4	
Lead	0.000060J	mg/L	0.0050	0.000036	1	10/05/20 17:15	10/07/20 17:51	7439-92-1	
Lithium	0.0041J	mg/L	0.030	0.00081	1	10/05/20 17:15	10/07/20 17:51	7439-93-2	
Molybdenum	0.0041J	mg/L	0.010	0.00069	1	10/05/20 17:15	10/07/20 17:51	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/05/20 17:15	10/07/20 17:51	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/05/20 17:15	10/07/20 17:51	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 17:51	7440-62-2	
Zinc	0.0043J	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 17:51	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	752	mg/L	20.0	20.0	1		10/03/20 16:27		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	257	mg/L	6.0	3.6	6		10/07/20 10:29	16887-00-6	
Fluoride	0.15	mg/L	0.10	0.050	1		10/07/20 01:37	16984-48-8	
Sulfate	193	mg/L	6.0	3.0	6		10/07/20 10:29	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

Sample: GWC-22		Lab ID: 92498084020		Collected: 09/30/20 14:05		Received: 10/02/20 12:22		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/12/20 16:37		
pH	4.63	Std. Units			1		10/12/20 16:37		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	20.9	mg/L	1.0	0.070	1	10/05/20 17:12	10/08/20 01:58	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0016J	mg/L	0.0030	0.00028	1	10/05/20 17:15	10/07/20 18:14	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	10/05/20 17:15	10/07/20 18:14	7440-38-2	
Barium	0.045	mg/L	0.010	0.00071	1	10/05/20 17:15	10/07/20 18:14	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/05/20 17:15	10/07/20 18:14	7440-41-7	
Boron	0.25	mg/L	0.040	0.0052	1	10/05/20 17:15	10/07/20 18:14	7440-42-8	
Cadmium	0.00024J	mg/L	0.0025	0.00012	1	10/05/20 17:15	10/07/20 18:14	7440-43-9	
Chromium	0.00064J	mg/L	0.010	0.00055	1	10/05/20 17:15	10/07/20 18:14	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/05/20 17:15	10/07/20 18:14	7440-48-4	
Lead	0.00023J	mg/L	0.0050	0.000036	1	10/05/20 17:15	10/07/20 18:14	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/05/20 17:15	10/07/20 18:14	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	10/05/20 17:15	10/07/20 18:14	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/05/20 17:15	10/07/20 18:14	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/05/20 17:15	10/07/20 18:14	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 18:14	7440-62-2	
Zinc	ND	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 18:14	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	113	mg/L	10.0	10.0	1		10/03/20 16:27		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	8.5	mg/L	1.0	0.60	1		10/07/20 01:51	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/07/20 01:51	16984-48-8	
Sulfate	65.5	mg/L	1.0	0.50	1		10/07/20 01:51	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

Sample: GWB-6R		Lab ID: 92498084021		Collected: 09/30/20 15:35		Received: 10/02/20 12:22		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/12/20 16:37		
pH	5.39	Std. Units			1		10/12/20 16:37		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	27.5	mg/L	1.0	0.070	1	10/05/20 17:12	10/08/20 02:02	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00059J	mg/L	0.0030	0.00028	1	10/05/20 17:15	10/07/20 18:20	7440-36-0	B
Arsenic	0.0040J	mg/L	0.0050	0.00078	1	10/05/20 17:15	10/07/20 18:20	7440-38-2	
Barium	0.092	mg/L	0.010	0.00071	1	10/05/20 17:15	10/07/20 18:20	7440-39-3	
Beryllium	0.000046J	mg/L	0.0030	0.000046	1	10/05/20 17:15	10/07/20 18:20	7440-41-7	
Boron	4.2	mg/L	0.040	0.0052	1	10/05/20 17:15	10/07/20 18:20	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/05/20 17:15	10/07/20 18:20	7440-43-9	
Chromium	0.0045J	mg/L	0.010	0.00055	1	10/05/20 17:15	10/07/20 18:20	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/05/20 17:15	10/07/20 18:20	7440-48-4	
Lead	0.000080J	mg/L	0.0050	0.000036	1	10/05/20 17:15	10/07/20 18:20	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/05/20 17:15	10/07/20 18:20	7439-93-2	
Molybdenum	0.00097J	mg/L	0.010	0.00069	1	10/05/20 17:15	10/07/20 18:20	7439-98-7	
Selenium	0.0023J	mg/L	0.010	0.0016	1	10/05/20 17:15	10/07/20 18:20	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/05/20 17:15	10/07/20 18:20	7440-28-0	
Vanadium	0.018	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 18:20	7440-62-2	
Zinc	ND	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 18:20	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	816	mg/L	20.0	20.0	1		10/03/20 16:27		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	53.9	mg/L	1.0	0.60	1		10/07/20 02:35	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/07/20 02:35	16984-48-8	
Sulfate	339	mg/L	7.0	3.5	7		10/07/20 10:43	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

Sample: GWB-5R		Lab ID: 92498084022		Collected: 09/30/20 17:30		Received: 10/02/20 12:22		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/12/20 16:37		
pH	4.99	Std. Units			1		10/12/20 16:37		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	70.4	mg/L	1.0	0.070	1	10/05/20 17:12	10/08/20 02:07	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00030J	mg/L	0.0030	0.00028	1	10/05/20 17:15	10/07/20 18:25	7440-36-0	B
Arsenic	0.0017J	mg/L	0.0050	0.00078	1	10/05/20 17:15	10/07/20 18:25	7440-38-2	
Barium	0.16	mg/L	0.010	0.00071	1	10/05/20 17:15	10/07/20 18:25	7440-39-3	
Beryllium	0.000065J	mg/L	0.0030	0.000046	1	10/05/20 17:15	10/07/20 18:25	7440-41-7	
Boron	4.0	mg/L	0.040	0.0052	1	10/05/20 17:15	10/07/20 18:25	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/05/20 17:15	10/07/20 18:25	7440-43-9	
Chromium	0.0018J	mg/L	0.010	0.00055	1	10/05/20 17:15	10/07/20 18:25	7440-47-3	
Cobalt	0.00056J	mg/L	0.0050	0.00038	1	10/05/20 17:15	10/07/20 18:25	7440-48-4	
Lead	0.0012J	mg/L	0.0050	0.000036	1	10/05/20 17:15	10/07/20 18:25	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/05/20 17:15	10/07/20 18:25	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	10/05/20 17:15	10/07/20 18:25	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/05/20 17:15	10/07/20 18:25	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/05/20 17:15	10/07/20 18:25	7440-28-0	
Vanadium	0.0037J	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 18:25	7440-62-2	
Zinc	ND	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 18:25	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	652	mg/L	20.0	20.0	1		10/03/20 16:27		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	24.1	mg/L	1.0	0.60	1		10/07/20 02:49	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/07/20 02:49	16984-48-8	
Sulfate	339	mg/L	7.0	3.5	7		10/07/20 11:26	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

Sample: FB-2-9-30-20		Lab ID: 92498084023		Collected: 09/30/20 15:25	Received: 10/02/20 12:22	Matrix: Water			
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Calcium	ND	mg/L	1.0	0.070	1	10/05/20 17:12	10/08/20 02:11	7440-70-2	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00028	1	10/05/20 17:15	10/07/20 18:31	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	10/05/20 17:15	10/07/20 18:31	7440-38-2	
Barium	ND	mg/L	0.010	0.00071	1	10/05/20 17:15	10/07/20 18:31	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/05/20 17:15	10/07/20 18:31	7440-41-7	
Boron	0.030J	mg/L	0.040	0.0052	1	10/05/20 17:15	10/07/20 18:31	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/05/20 17:15	10/07/20 18:31	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	10/05/20 17:15	10/07/20 18:31	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/05/20 17:15	10/07/20 18:31	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	10/05/20 17:15	10/07/20 18:31	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	10/05/20 17:15	10/07/20 18:31	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	10/05/20 17:15	10/07/20 18:31	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/05/20 17:15	10/07/20 18:31	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/05/20 17:15	10/07/20 18:31	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 18:31	7440-62-2	
Zinc	ND	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 18:31	7440-66-6	
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		10/03/20 16:27		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		10/07/20 03:32	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/07/20 03:32	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		10/07/20 03:32	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

Sample: GWC-9		Lab ID: 92498084024		Collected: 10/01/20 08:21		Received: 10/02/20 12:22		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/12/20 16:37		
pH	4.42	Std. Units			1		10/12/20 16:37		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	5.5	mg/L	1.0	0.070	1	10/05/20 17:12	10/08/20 02:29	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	10/05/20 17:15	10/07/20 18:37	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	10/05/20 17:15	10/07/20 18:37	7440-38-2	
Barium	0.15	mg/L	0.010	0.00071	1	10/05/20 17:15	10/07/20 18:37	7440-39-3	
Beryllium	0.00020J	mg/L	0.0030	0.000046	1	10/05/20 17:15	10/07/20 18:37	7440-41-7	
Boron	0.028J	mg/L	0.040	0.0052	1	10/05/20 17:15	10/07/20 18:37	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/05/20 17:15	10/07/20 18:37	7440-43-9	
Chromium	0.0012J	mg/L	0.010	0.00055	1	10/05/20 17:15	10/07/20 18:37	7440-47-3	
Cobalt	0.00099J	mg/L	0.0050	0.00038	1	10/05/20 17:15	10/07/20 18:37	7440-48-4	
Lead	0.000038J	mg/L	0.0050	0.000036	1	10/05/20 17:15	10/07/20 18:37	7439-92-1	
Lithium	0.0019J	mg/L	0.030	0.00081	1	10/05/20 17:15	10/07/20 18:37	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	10/05/20 17:15	10/07/20 18:37	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/05/20 17:15	10/07/20 18:37	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/05/20 17:15	10/07/20 18:37	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 18:37	7440-62-2	
Zinc	0.025	mg/L	0.010	0.0022	1	10/05/20 17:15	10/07/20 18:37	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	111	mg/L	10.0	10.0	1		10/03/20 16:28		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	16.8	mg/L	1.0	0.60	1		10/07/20 04:16	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/07/20 04:16	16984-48-8	
Sulfate	35.0	mg/L	1.0	0.50	1		10/07/20 04:16	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

QC Batch: 570380

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92498084001, 92498084002, 92498084003, 92498084004, 92498084005, 92498084006, 92498084007, 92498084008, 92498084009, 92498084010, 92498084011

METHOD BLANK: 3021700

Matrix: Water

Associated Lab Samples: 92498084001, 92498084002, 92498084003, 92498084004, 92498084005, 92498084006, 92498084007, 92498084008, 92498084009, 92498084010, 92498084011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	10/05/20 20:52	

LABORATORY CONTROL SAMPLE: 3021701

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3021764 3021765

Parameter	Units	92497532027 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	50.1	1	1	52.4	50.7	224	54	75-125	3	20	M1

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

QC Batch: 571010

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92498084012, 92498084013, 92498084014, 92498084015, 92498084016, 92498084017, 92498084018, 92498084019, 92498084020, 92498084021, 92498084022, 92498084023, 92498084024

METHOD BLANK: 3024605

Matrix: Water

Associated Lab Samples: 92498084012, 92498084013, 92498084014, 92498084015, 92498084016, 92498084017, 92498084018, 92498084019, 92498084020, 92498084021, 92498084022, 92498084023, 92498084024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	10/08/20 00:10	

LABORATORY CONTROL SAMPLE: 3024606

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3024607 3024608

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		92498544001 Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Calcium	mg/L	162	1	1	165	163	305	111	75-125	1	20	M1	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

QC Batch: 570626 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92498084001, 92498084002, 92498084003, 92498084004, 92498084005, 92498084006, 92498084007

METHOD BLANK: 3022872 Matrix: Water
Associated Lab Samples: 92498084001, 92498084002, 92498084003, 92498084004, 92498084005, 92498084006, 92498084007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	10/06/20 17:21	
Arsenic	mg/L	ND	0.0050	0.00078	10/06/20 17:21	
Barium	mg/L	ND	0.010	0.00071	10/06/20 17:21	
Beryllium	mg/L	ND	0.0030	0.000046	10/06/20 17:21	
Boron	mg/L	ND	0.040	0.0052	10/06/20 17:21	
Cadmium	mg/L	ND	0.0025	0.00012	10/06/20 17:21	
Chromium	mg/L	ND	0.010	0.00055	10/06/20 17:21	
Cobalt	mg/L	ND	0.0050	0.00038	10/06/20 17:21	
Lead	mg/L	ND	0.0050	0.000036	10/06/20 17:21	
Lithium	mg/L	ND	0.030	0.00081	10/06/20 17:21	
Molybdenum	mg/L	ND	0.010	0.00069	10/06/20 17:21	
Selenium	mg/L	ND	0.010	0.0016	10/06/20 17:21	
Thallium	mg/L	ND	0.0010	0.00014	10/06/20 17:21	
Vanadium	mg/L	ND	0.010	0.0022	10/06/20 17:21	
Zinc	mg/L	ND	0.010	0.0022	10/06/20 17:21	

LABORATORY CONTROL SAMPLE: 3022873

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.12	116	80-120	
Arsenic	mg/L	0.1	0.097	97	80-120	
Barium	mg/L	0.1	0.10	101	80-120	
Beryllium	mg/L	0.1	0.10	100	80-120	
Boron	mg/L	1	0.99	99	80-120	
Cadmium	mg/L	0.1	0.096	96	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.098	98	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	100	80-120	
Selenium	mg/L	0.1	0.094	94	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	
Vanadium	mg/L	0.1	0.099	99	80-120	
Zinc	mg/L	0.1	0.096	96	80-120	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

Parameter	Units	3022874		3022875		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		92496914020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Antimony	mg/L	ND	0.1	0.1	0.12	0.12	115	116	75-125	0	20	
Arsenic	mg/L	ND	0.1	0.1	0.097	0.098	97	98	75-125	2	20	
Barium	mg/L	0.15	0.1	0.1	0.25	0.25	102	99	75-125	1	20	
Beryllium	mg/L	0.00010J	0.1	0.1	0.095	0.096	95	96	75-125	1	20	
Boron	mg/L	0.17	1	1	1.1	1.1	94	95	75-125	1	20	
Cadmium	mg/L	ND	0.1	0.1	0.095	0.097	95	97	75-125	2	20	
Chromium	mg/L	0.00063J	0.1	0.1	0.10	0.10	100	100	75-125	0	20	
Cobalt	mg/L	ND	0.1	0.1	0.097	0.099	97	98	75-125	1	20	
Lead	mg/L	0.00014J	0.1	0.1	0.094	0.096	94	96	75-125	2	20	
Lithium	mg/L	0.019J	0.1	0.1	0.11	0.11	92	96	75-125	3	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	99	100	75-125	1	20	
Selenium	mg/L	ND	0.1	0.1	0.093	0.095	93	95	75-125	3	20	
Thallium	mg/L	ND	0.1	0.1	0.096	0.097	96	97	75-125	1	20	
Vanadium	mg/L	ND	0.1	0.1	0.10	0.10	101	102	75-125	1	20	
Zinc	mg/L	0.0033J	0.1	0.1	0.095	0.096	91	92	75-125	1	20	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

QC Batch: 570627 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92498084008, 92498084009, 92498084010, 92498084011

METHOD BLANK: 3022878 Matrix: Water
Associated Lab Samples: 92498084008, 92498084009, 92498084010, 92498084011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	10/05/20 18:29	
Arsenic	mg/L	ND	0.0050	0.00078	10/05/20 18:29	
Barium	mg/L	ND	0.010	0.00071	10/05/20 18:29	
Beryllium	mg/L	ND	0.0030	0.000046	10/05/20 18:29	
Boron	mg/L	ND	0.040	0.0052	10/05/20 18:29	
Cadmium	mg/L	ND	0.0025	0.00012	10/05/20 18:29	
Chromium	mg/L	ND	0.010	0.00055	10/05/20 18:29	
Cobalt	mg/L	ND	0.0050	0.00038	10/05/20 18:29	
Lead	mg/L	ND	0.0050	0.000036	10/05/20 18:29	
Lithium	mg/L	ND	0.030	0.00081	10/05/20 18:29	
Molybdenum	mg/L	ND	0.010	0.00069	10/05/20 18:29	
Selenium	mg/L	ND	0.010	0.0016	10/05/20 18:29	
Thallium	mg/L	ND	0.0010	0.00014	10/05/20 18:29	
Vanadium	mg/L	ND	0.010	0.0022	10/05/20 18:29	
Zinc	mg/L	ND	0.010	0.0022	10/05/20 18:29	

LABORATORY CONTROL SAMPLE: 3022879

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	100	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Barium	mg/L	0.1	0.096	96	80-120	
Beryllium	mg/L	0.1	0.10	100	80-120	
Boron	mg/L	1	1.0	101	80-120	
Cadmium	mg/L	0.1	0.096	96	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Lead	mg/L	0.1	0.097	97	80-120	
Lithium	mg/L	0.1	0.10	102	80-120	
Molybdenum	mg/L	0.1	0.10	100	80-120	
Selenium	mg/L	0.1	0.10	101	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	
Vanadium	mg/L	0.1	0.10	100	80-120	
Zinc	mg/L	0.1	0.10	100	80-120	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

Parameter	Units	3022880		3022881		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		92498084008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Antimony	mg/L	ND	0.1	0.1	0.10	0.095	102	95	75-125	7	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.095	100	95	75-125	6	20	
Barium	mg/L	0.026	0.1	0.1	0.13	0.12	101	91	75-125	9	20	
Beryllium	mg/L	ND	0.1	0.1	0.099	0.096	99	96	75-125	4	20	
Boron	mg/L	0.053	1	1	1.1	1.1	105	103	75-125	2	20	
Cadmium	mg/L	0.00012J	0.1	0.1	0.10	0.094	99	94	75-125	6	20	
Chromium	mg/L	ND	0.1	0.1	0.10	0.096	103	95	75-125	8	20	
Cobalt	mg/L	ND	0.1	0.1	0.10	0.093	100	93	75-125	7	20	
Lead	mg/L	ND	0.1	0.1	0.099	0.094	99	94	75-125	5	20	
Lithium	mg/L	ND	0.1	0.1	0.10	0.096	100	96	75-125	4	20	
Molybdenum	mg/L	0.0089J	0.1	0.1	0.11	0.10	100	93	75-125	7	20	
Selenium	mg/L	0.0051J	0.1	0.1	0.11	0.099	101	94	75-125	6	20	
Thallium	mg/L	ND	0.1	0.1	0.10	0.094	100	93	75-125	6	20	
Vanadium	mg/L	ND	0.1	0.1	0.11	0.099	104	97	75-125	6	20	
Zinc	mg/L	ND	0.1	0.1	0.099	0.093	99	92	75-125	7	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

QC Batch: 571011 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92498084012, 92498084013, 92498084014, 92498084015, 92498084016, 92498084017, 92498084018, 92498084019, 92498084020, 92498084021, 92498084022, 92498084023, 92498084024

METHOD BLANK: 3024610 Matrix: Water
Associated Lab Samples: 92498084012, 92498084013, 92498084014, 92498084015, 92498084016, 92498084017, 92498084018, 92498084019, 92498084020, 92498084021, 92498084022, 92498084023, 92498084024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00045J	0.0030	0.00028	10/07/20 15:45	
Arsenic	mg/L	ND	0.0050	0.00078	10/07/20 15:45	
Barium	mg/L	ND	0.010	0.00071	10/07/20 15:45	
Beryllium	mg/L	ND	0.0030	0.000046	10/07/20 15:45	
Boron	mg/L	ND	0.040	0.0052	10/07/20 15:45	
Cadmium	mg/L	ND	0.0025	0.00012	10/07/20 15:45	
Chromium	mg/L	ND	0.010	0.00055	10/07/20 15:45	
Cobalt	mg/L	ND	0.0050	0.00038	10/07/20 15:45	
Lead	mg/L	ND	0.0050	0.000036	10/07/20 15:45	
Lithium	mg/L	ND	0.030	0.00081	10/07/20 15:45	
Molybdenum	mg/L	ND	0.010	0.00069	10/07/20 15:45	
Selenium	mg/L	ND	0.010	0.0016	10/07/20 15:45	
Thallium	mg/L	ND	0.0010	0.00014	10/07/20 15:45	
Vanadium	mg/L	ND	0.010	0.0022	10/07/20 15:45	
Zinc	mg/L	ND	0.010	0.0022	10/07/20 15:45	

LABORATORY CONTROL SAMPLE: 3024611

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.12	115	80-120	
Arsenic	mg/L	0.1	0.095	95	80-120	
Barium	mg/L	0.1	0.10	101	80-120	
Beryllium	mg/L	0.1	0.10	100	80-120	
Boron	mg/L	1	1.0	103	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.098	98	80-120	
Lead	mg/L	0.1	0.098	98	80-120	
Lithium	mg/L	0.1	0.099	99	80-120	
Molybdenum	mg/L	0.1	0.10	101	80-120	
Selenium	mg/L	0.1	0.094	94	80-120	
Thallium	mg/L	0.1	0.099	99	80-120	
Vanadium	mg/L	0.1	0.099	99	80-120	
Zinc	mg/L	0.1	0.099	99	80-120	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

Parameter	Units	3024612		3024613		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92498544002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Antimony	mg/L	0.00056J	0.1	0.1	0.11	0.11	114	111	75-125	2	20
Arsenic	mg/L	ND	0.1	0.1	0.096	0.096	95	96	75-125	0	20
Barium	mg/L	0.058	0.1	0.1	0.16	0.16	101	100	75-125	1	20
Beryllium	mg/L	ND	0.1	0.1	0.096	0.092	96	92	75-125	4	20
Boron	mg/L	0.025J	1	1	0.93	0.90	90	88	75-125	3	20
Cadmium	mg/L	ND	0.1	0.1	0.095	0.096	95	96	75-125	1	20
Chromium	mg/L	0.0014J	0.1	0.1	0.099	0.097	98	96	75-125	2	20
Cobalt	mg/L	ND	0.1	0.1	0.099	0.096	98	96	75-125	3	20
Lead	mg/L	0.00021J	0.1	0.1	0.097	0.096	97	96	75-125	1	20
Lithium	mg/L	ND	0.1	0.1	0.097	0.095	96	94	75-125	3	20
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	102	99	75-125	3	20
Selenium	mg/L	0.0018J	0.1	0.1	0.092	0.094	90	92	75-125	2	20
Thallium	mg/L	ND	0.1	0.1	0.098	0.097	98	96	75-125	1	20
Vanadium	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	0	20
Zinc	mg/L	0.0023J	0.1	0.1	0.096	0.094	93	92	75-125	2	20

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

QC Batch:	570638	Analysis Method:	SM 2450C-2011
QC Batch Method:	SM 2450C-2011	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92498084001, 92498084002, 92498084003, 92498084004, 92498084005

METHOD BLANK: 3022933 Matrix: Water

Associated Lab Samples: 92498084001, 92498084002, 92498084003, 92498084004, 92498084005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	10/02/20 17:24	

LABORATORY CONTROL SAMPLE: 3022934

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	419	105	84-108	

SAMPLE DUPLICATE: 3022936

Parameter	Units	92497532034 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

SAMPLE DUPLICATE: 3023295

Parameter	Units	92497532027 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	243	245	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

QC Batch: 570640 Analysis Method: SM 2450C-2011
QC Batch Method: SM 2450C-2011 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92498084006, 92498084007, 92498084008, 92498084009, 92498084010, 92498084011

METHOD BLANK: 3022941 Matrix: Water
Associated Lab Samples: 92498084006, 92498084007, 92498084008, 92498084009, 92498084010, 92498084011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	10/02/20 17:27	

LABORATORY CONTROL SAMPLE: 3022942

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	430	108	84-108	

SAMPLE DUPLICATE: 3022943

Parameter	Units	92498367001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	65.0	71.0	9	10	

SAMPLE DUPLICATE: 3022944

Parameter	Units	92497532037 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	908	862	5	10	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

QC Batch: 570756 Analysis Method: SM 2450C-2011
QC Batch Method: SM 2450C-2011 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92498084012, 92498084013, 92498084014, 92498084015, 92498084016, 92498084017, 92498084018, 92498084019, 92498084020, 92498084021, 92498084022, 92498084023, 92498084024

METHOD BLANK: 3023513 Matrix: Water
Associated Lab Samples: 92498084012, 92498084013, 92498084014, 92498084015, 92498084016, 92498084017, 92498084018, 92498084019, 92498084020, 92498084021, 92498084022, 92498084023, 92498084024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	10/03/20 16:26	

LABORATORY CONTROL SAMPLE: 3023514

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	430	108	84-108	

SAMPLE DUPLICATE: 3023515

Parameter	Units	92498084012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	634	636	0	10	

SAMPLE DUPLICATE: 3023516

Parameter	Units	92498084023 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

QC Batch: 570217 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
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92498084001, 92498084002, 92498084003, 92498084004, 92498084005, 92498084006, 92498084007, 92498084008, 92498084009, 92498084010, 92498084011

METHOD BLANK: 3020447 Matrix: Water
Associated Lab Samples: 92498084001, 92498084002, 92498084003, 92498084004, 92498084005, 92498084006, 92498084007, 92498084008, 92498084009, 92498084010, 92498084011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	10/01/20 19:33	
Fluoride	mg/L	ND	0.10	0.050	10/01/20 19:33	
Sulfate	mg/L	ND	1.0	0.50	10/01/20 19:33	

LABORATORY CONTROL SAMPLE: 3020448

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.6	103	90-110	
Fluoride	mg/L	2.5	2.7	110	90-110	
Sulfate	mg/L	50	50.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020449 3020450

Parameter	Units	92497532033		3020450		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Chloride	mg/L	8.1	50	62.3	50	108	107	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.7	2.5	107	106	90-110	1	10	
Sulfate	mg/L	66.2	50	111	50	89	88	90-110	0	10 M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020451 3020452

Parameter	Units	92498084008		3020452		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Chloride	mg/L	10.6	50	64.0	50	107	107	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.3	2.5	91	93	90-110	3	10	
Sulfate	mg/L	93.5	50	134	50	82	81	90-110	0	10 M1	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

QC Batch: 571106 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
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92498084012, 92498084013, 92498084014, 92498084015, 92498084016, 92498084017, 92498084018, 92498084019, 92498084020, 92498084021, 92498084022

METHOD BLANK: 3024838 Matrix: Water
Associated Lab Samples: 92498084012, 92498084013, 92498084014, 92498084015, 92498084016, 92498084017, 92498084018, 92498084019, 92498084020, 92498084021, 92498084022

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	10/06/20 19:21	
Fluoride	mg/L	ND	0.10	0.050	10/06/20 19:21	
Sulfate	mg/L	ND	1.0	0.50	10/06/20 19:21	

LABORATORY CONTROL SAMPLE: 3024839

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.5	99	90-110	
Fluoride	mg/L	2.5	2.3	91	90-110	
Sulfate	mg/L	50	49.4	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3024840 3024841

Parameter	Units	3024840		3024841		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	265	50	50	309	313	87	96	90-110	1	10 M6
Fluoride	mg/L	8.8	2.5	2.5	13.4	13.5	182	185	90-110	1	10 M6
Sulfate	mg/L	28.4	50	50	78.6	79.5	100	102	90-110	1	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3024842 3024843

Parameter	Units	3024842		3024843		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	1.7	50	50	53.9	54.3	104	105	90-110	1	10
Fluoride	mg/L	ND	2.5	2.5	2.5	2.6	102	103	90-110	1	10
Sulfate	mg/L	18.5	50	50	69.7	70.2	102	103	90-110	1	10

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

QC Batch: 571109	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
	Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92498084023, 92498084024

METHOD BLANK: 3024847 Matrix: Water

Associated Lab Samples: 92498084023, 92498084024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	10/07/20 03:04	
Fluoride	mg/L	ND	0.10	0.050	10/07/20 03:04	
Sulfate	mg/L	ND	1.0	0.50	10/07/20 03:04	

LABORATORY CONTROL SAMPLE: 3024848

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.1	98	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	48.5	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3024849 3024850

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92498084023 Result	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	ND	50	50	52.3	52.3	105	105	90-110	0	10		
Fluoride	mg/L	ND	2.5	2.5	2.5	2.5	100	101	90-110	1	10		
Sulfate	mg/L	ND	50	50	51.4	51.4	103	103	90-110	0	10		

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QUALIFIERS

Project: GRUMMAN ROAD SEMI ANNUAL

Pace Project No.: 92498084

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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.

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: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92498084001	GWA-7				
92498084002	GWC-13				
92498084003	GWA-8				
92498084004	GWC-1				
92498084006	GWC-12				
92498084007	GWC-11				
92498084008	GWC-14				
92498084009	GWC-2				
92498084012	GWC-21				
92498084013	GWC-15				
92498084014	GWC-16				
92498084015	GWC-20				
92498084016	GWB-4R				
92498084019	GWC-17				
92498084020	GWC-22				
92498084021	GWB-6R				
92498084022	GWB-5R				
92498084024	GWC-9				
92498084001	GWA-7	EPA 3010A	570380	EPA 6010D	570413
92498084002	GWC-13	EPA 3010A	570380	EPA 6010D	570413
92498084003	GWA-8	EPA 3010A	570380	EPA 6010D	570413
92498084004	GWC-1	EPA 3010A	570380	EPA 6010D	570413
92498084005	FB-1-9-28-20	EPA 3010A	570380	EPA 6010D	570413
92498084006	GWC-12	EPA 3010A	570380	EPA 6010D	570413
92498084007	GWC-11	EPA 3010A	570380	EPA 6010D	570413
92498084008	GWC-14	EPA 3010A	570380	EPA 6010D	570413
92498084009	GWC-2	EPA 3010A	570380	EPA 6010D	570413
92498084010	EB-1-9-29-20	EPA 3010A	570380	EPA 6010D	570413
92498084011	DUP-1	EPA 3010A	570380	EPA 6010D	570413
92498084012	GWC-21	EPA 3010A	571010	EPA 6010D	571031
92498084013	GWC-15	EPA 3010A	571010	EPA 6010D	571031
92498084014	GWC-16	EPA 3010A	571010	EPA 6010D	571031
92498084015	GWC-20	EPA 3010A	571010	EPA 6010D	571031
92498084016	GWB-4R	EPA 3010A	571010	EPA 6010D	571031
92498084017	EB-2-9-30-20	EPA 3010A	571010	EPA 6010D	571031
92498084018	DUP-2	EPA 3010A	571010	EPA 6010D	571031
92498084019	GWC-17	EPA 3010A	571010	EPA 6010D	571031
92498084020	GWC-22	EPA 3010A	571010	EPA 6010D	571031
92498084021	GWB-6R	EPA 3010A	571010	EPA 6010D	571031
92498084022	GWB-5R	EPA 3010A	571010	EPA 6010D	571031
92498084023	FB-2-9-30-20	EPA 3010A	571010	EPA 6010D	571031
92498084024	GWC-9	EPA 3010A	571010	EPA 6010D	571031
92498084001	GWA-7	EPA 3005A	570626	EPA 6020B	570683
92498084002	GWC-13	EPA 3005A	570626	EPA 6020B	570683
92498084003	GWA-8	EPA 3005A	570626	EPA 6020B	570683
92498084004	GWC-1	EPA 3005A	570626	EPA 6020B	570683
92498084005	FB-1-9-28-20	EPA 3005A	570626	EPA 6020B	570683

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92498084006	GWC-12	EPA 3005A	570626	EPA 6020B	570683
92498084007	GWC-11	EPA 3005A	570626	EPA 6020B	570683
92498084008	GWC-14	EPA 3005A	570627	EPA 6020B	570682
92498084009	GWC-2	EPA 3005A	570627	EPA 6020B	570682
92498084010	EB-1-9-29-20	EPA 3005A	570627	EPA 6020B	570682
92498084011	DUP-1	EPA 3005A	570627	EPA 6020B	570682
92498084012	GWC-21	EPA 3005A	571011	EPA 6020B	571032
92498084013	GWC-15	EPA 3005A	571011	EPA 6020B	571032
92498084014	GWC-16	EPA 3005A	571011	EPA 6020B	571032
92498084015	GWC-20	EPA 3005A	571011	EPA 6020B	571032
92498084016	GWB-4R	EPA 3005A	571011	EPA 6020B	571032
92498084017	EB-2-9-30-20	EPA 3005A	571011	EPA 6020B	571032
92498084018	DUP-2	EPA 3005A	571011	EPA 6020B	571032
92498084019	GWC-17	EPA 3005A	571011	EPA 6020B	571032
92498084020	GWC-22	EPA 3005A	571011	EPA 6020B	571032
92498084021	GWB-6R	EPA 3005A	571011	EPA 6020B	571032
92498084022	GWB-5R	EPA 3005A	571011	EPA 6020B	571032
92498084023	FB-2-9-30-20	EPA 3005A	571011	EPA 6020B	571032
92498084024	GWC-9	EPA 3005A	571011	EPA 6020B	571032
92498084001	GWA-7	SM 2450C-2011	570638		
92498084002	GWC-13	SM 2450C-2011	570638		
92498084003	GWA-8	SM 2450C-2011	570638		
92498084004	GWC-1	SM 2450C-2011	570638		
92498084005	FB-1-9-28-20	SM 2450C-2011	570638		
92498084006	GWC-12	SM 2450C-2011	570640		
92498084007	GWC-11	SM 2450C-2011	570640		
92498084008	GWC-14	SM 2450C-2011	570640		
92498084009	GWC-2	SM 2450C-2011	570640		
92498084010	EB-1-9-29-20	SM 2450C-2011	570640		
92498084011	DUP-1	SM 2450C-2011	570640		
92498084012	GWC-21	SM 2450C-2011	570756		
92498084013	GWC-15	SM 2450C-2011	570756		
92498084014	GWC-16	SM 2450C-2011	570756		
92498084015	GWC-20	SM 2450C-2011	570756		
92498084016	GWB-4R	SM 2450C-2011	570756		
92498084017	EB-2-9-30-20	SM 2450C-2011	570756		
92498084018	DUP-2	SM 2450C-2011	570756		
92498084019	GWC-17	SM 2450C-2011	570756		
92498084020	GWC-22	SM 2450C-2011	570756		
92498084021	GWB-6R	SM 2450C-2011	570756		
92498084022	GWB-5R	SM 2450C-2011	570756		
92498084023	FB-2-9-30-20	SM 2450C-2011	570756		
92498084024	GWC-9	SM 2450C-2011	570756		
92498084001	GWA-7	EPA 300.0 Rev 2.1 1993	570217		
92498084002	GWC-13	EPA 300.0 Rev 2.1 1993	570217		
92498084003	GWA-8	EPA 300.0 Rev 2.1 1993	570217		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GRUMMAN ROAD SEMI ANNUAL
Pace Project No.: 92498084

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92498084004	GWC-1	EPA 300.0 Rev 2.1 1993	570217		
92498084005	FB-1-9-28-20	EPA 300.0 Rev 2.1 1993	570217		
92498084006	GWC-12	EPA 300.0 Rev 2.1 1993	570217		
92498084007	GWC-11	EPA 300.0 Rev 2.1 1993	570217		
92498084008	GWC-14	EPA 300.0 Rev 2.1 1993	570217		
92498084009	GWC-2	EPA 300.0 Rev 2.1 1993	570217		
92498084010	EB-1-9-29-20	EPA 300.0 Rev 2.1 1993	570217		
92498084011	DUP-1	EPA 300.0 Rev 2.1 1993	570217		
92498084012	GWC-21	EPA 300.0 Rev 2.1 1993	571106		
92498084013	GWC-15	EPA 300.0 Rev 2.1 1993	571106		
92498084014	GWC-16	EPA 300.0 Rev 2.1 1993	571106		
92498084015	GWC-20	EPA 300.0 Rev 2.1 1993	571106		
92498084016	GWB-4R	EPA 300.0 Rev 2.1 1993	571106		
92498084017	EB-2-9-30-20	EPA 300.0 Rev 2.1 1993	571106		
92498084018	DUP-2	EPA 300.0 Rev 2.1 1993	571106		
92498084019	GWC-17	EPA 300.0 Rev 2.1 1993	571106		
92498084020	GWC-22	EPA 300.0 Rev 2.1 1993	571106		
92498084021	GWB-6R	EPA 300.0 Rev 2.1 1993	571106		
92498084022	GWB-5R	EPA 300.0 Rev 2.1 1993	571106		
92498084023	FB-2-9-30-20	EPA 300.0 Rev 2.1 1993	571109		
92498084024	GWC-9	EPA 300.0 Rev 2.1 1993	571109		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Face Analytical

Client Name: BA Power

WO#: **92498084**



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

Proj. Name: _____

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

Packing Material: Bubble Wrap Bubble Bags None Other Ziplock

Thermometer Used 230 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 3.7 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: CO

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>WT</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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>CO</u> 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 checked="" type="checkbox"/> No <input 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:

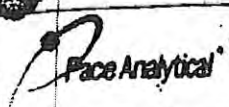
Field Data Required? Y / N

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)



Document Name:
Bottle Identification Form (BIF)
 Document No.:
 F-CAR-CS-043-Rev.00

Document issued: March 14, 2019
 Page 1 of 1
 Issuing Authority:

Project #

W0# : 92498084

PM: KLH1

Due Date: 10/14/20

CLIENT: GA-GA Power

• Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

• Bottom half of box is to list number of bottle

Matrix	Item#	BP4U-125 mL Plastic Unpreserved (N/A) (C-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (C-)	WGJU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (C-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (C-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(C-)	AG3H-40 mL VOA HCl (N/A)	DG9T-40 mL VOA NH2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP9A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG8U-100 mL Amber Unpreserved vials (N/A)	VS9U-20 mL Scintillation vials (N/A)		
	1																				3								
	2																					3							
	3																					3							
	4																					3							
	5																					3							
	6																					3							
	7																					3							
	8																					3							
	9																					3							
	10																					3							
	11																					3							
	12																					3							

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot

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. Out of hold, incorrect preservative, out of temp, incorrect containers.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company: GA Power Address: Atlanta, GA

Section B Required Project Information: Report To: SCS Contacts Copy To: ACC Contacts

Section C Invoice Information: Attention: Southern Co. Company Name: Address: PACE QUOTE Reference: Kevin Herring PACE Project Manager: PACE Profile #: 2926-1

Page: _____ of _____

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER

UST RCRA OTHER

Site Location: _____ STATE: GA

Requested Analysis Filtered (Y/N)

ITEM #	Valid Matrix Codes MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH
			COMPOSITE	ISOM/STATE						H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other				
1	GWA-7	WT G			9-28-20	15:20	9	V	V	V	V	V	V	V	V	V	V	V	V	pH = 5.86
2	GWA-13	WT G			9-28-20	16:40	9	V	V	V	V	V	V	V	V	V	V	V	V	pH = 4.76
3	GWA-8	WT G			9-28-20	16:04	9	V	V	V	V	V	V	V	V	V	V	V	V	pH = 4.41
4	GWA-1	WT G			9-28-20	17:08	9	V	V	V	V	V	V	V	V	V	V	V	V	pH = 5.79
5	FB-1-9-28-20	WT G			9-28-20	16:55	9	V	V	V	V	V	V	V	V	V	V	V	V	pH = N/A
6	GWC-12	WT G			9-24-20	09:35	9	V	V	V	V	V	V	V	V	V	V	V	V	pH = 5.95
7	GWC-11	WT G			9-24-20	12:20	9	V	V	V	V	V	V	V	V	V	V	V	V	pH = 4.77
8	GWC-14	WT G			9-24-20	14:42	9	V	V	V	V	V	V	V	V	V	V	V	V	pH = 5.69
9	GWC-2	WT G			9-29-20	15:25	9	V	V	V	V	V	V	V	V	V	V	V	V	pH = 4.60
10	FB-1-9-24-20	WT G			9-24-20	16:20	9	V	V	V	V	V	V	V	V	V	V	V	V	pH = N/A
11	DVP-1	WT G			9-29-20	—	9	V	V	V	V	V	V	V	V	V	V	V	V	pH = N/A
12																				

ADDITIONAL COMMENTS

Please note when the last sample for the event has been taken.

REINQUISHED BY / AFFILIATION: ACC DATE: 9-30-20 TIME: 0745

ACCEPTED BY / AFFILIATION: MIRA G. FERRARI DATE: 9-30-20 TIME: 1745

Temp in °C: 3.7

Received on Ice (Y/N): Y

Custody Sealed Cooler (Y/N): Y

Samples Intact (Y/N): Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jordan Bishop

SIGNATURE of SAMPLER: [Signature]

DATE Signed (MM/DD/YYYY): 09/30/20



CHAIN-OF-CUSTODY / Analytical Request Document

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Section A Required Client Information: Company: GA Power Address: Atlanta, GA

Section B Required Project Information: Report To: SCS Contacts Copy To: ACC Contacts

Section C Invoice Information: Attention: Southern Co. Company Name: Pace Analytical Reference: Kevin Herring Pace Project Manager: Pace Profile #: 2926-1

REGULATORY AGENCY: NPDES GROUND WATER DRINKING WATER UST RCRA OTHER

Site Location: STATE: GA

Page: 2 of 3

ITEM #	Section D Required Client Information Valid Matrix Codes MATRIX CODE SAMPLE TYPE (G=GRAB C=COMP) DATE TIME DATE TIME SAMPLE TEMP AT COLLECTION # OF CONTAINERS Preservatives Analysis Test Requested Analysis Filtered (Y/N)	COLLECTED		PRESERVED		ANALYSIS TEST		Residual Chlorine (Y/N)	SAMPLE CONDITIONS														
		COMPOSITE	COMPOSITE	Unpreserved	H ₂ SO ₄	HNO ₃	HCl			NaOH	Na ₂ S ₂ O ₃	Methanol	Other	TDS	Chloride/Fluoride/Sulfate 300.0	App. III + IV + State Metals *	RAD 226/228						
1	GWC-21			9-30-20	10/4/9	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
2	GWC-15			9-30-20	12:30	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
3	GWC-16			9-30-20	14:00	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
4	GWC-20			9-30-20	16:31	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
5	GWB-4R			10-1-20	08:50	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
6	GWC-20			9-30-20	14:30	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
7	GWC-20			9-30-20	14:30	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
8																				Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
9																				Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
10																				Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
11																				Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
12																				Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

ADDITIONAL COMMENTS: REMUNISHED BY / AFFILIATION: DATE: TIME: ACCEPTED BY / AFFILIATION: DATE: TIME:

PRINT Name of SAMPLER: DATE Signed (MM/DD/YYYY):

SIGNATURE OF SAMPLER: DATE Signed (MM/DD/YYYY):

Temp in °C: Received on Ice (Y/N): Custody Sealed Cooler (Y/N): Samples Intact (Y/N):

Important Note: By signing this form, you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-Feb-2007



CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 3 of 3

Section A Required Client Information	Section B Required Project Information:	Section C Invoice Information:
Company: GA Power	Report To: SCS Contacts	Attention: Southern Co.
Address: Atlanta, GA	Corp To: ACC Contacts	Company Name:
Address:	Address:	Address:
Email To: SCS Contacts	Purchase Order No.:	Site Location STATE: GA
Phone:	Project Name: Gurnman Road - Semi-Annual	Requested Analysis Filtered (Y/N)
Requested Due Date/TAT: 10 Day	Project Number:	Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information	Valid Matrix Codes CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	Preservatives							Analysis Test	Y/N	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)												
					COMPOSITE	COMPOSITE						H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other							TDS	Chloride/Fluoride/Sulfate 300.0	App. III + IV + State Metals *	RAD 228/228								
1	SWC-17	DW	WT 6	G	9-30-20	1200	10-2-20	1222	11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
2	SWC-22	DW	WT 6	G	9-30-20	1405	10-2-20	1222	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
3	SWB-6R	DW	WT 6	G	9-30-20	1535	10-2-20	1222	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
4	SWB-5R	DW	WT 6	G	9-30-20	1730	10-2-20	1222	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
5	FB-24-30-20	DW	WT 6	G	9-30-20	1525	10-2-20	1222	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
6	SWC-9	DW	WT 6	G	10-1-20	0821			9	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
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Relinquished By / Affiliation: *[Signature]* Date: *10-2-20* Time: *1222*
 Accepted By / Affiliation: *[Signature]* Date: *10-2-20* Time: *1222*

SAMPLER NAME AND SIGNATURE		PRINT Name of SAMPLER: <i>Sorley Beister</i>		DATE Signed: <i>10-2-20</i>	
SIGNATURE of SAMPLER: <i>[Signature]</i>		DATE Signed (MM/DD/YYYY): <i>10-2-20</i>		SITE or STATE: <i>GA</i>	

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

October 26, 2020

Joju Abraham
Georgia Power-CCR
2480 Maner Road
Atlanta, GA 30339

RE: Project: GRUMMAN ROAD SEMI ANNUAL RADS
Pace Project No.: 92498068

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between September 30, 2020 and October 02, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



Kevin Herring
kevin.herring@pacelabs.com
1(704)875-9092
HORIZON Database Administrator

Enclosures

cc: Owens Fuquea, ACC
Kristen Jurinko
Matt Malone, Atlantic Coast Consulting
Betsy McDaniel, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Ms. Lauren Petty, Southern Co. Services



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: GRUMMAN ROAD SEMI ANNUAL RADS
Pace Project No.: 92498068

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: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92498068001	GWA-7	Water	09/28/20 15:20	09/30/20 11:47
92498068002	GWC-13	Water	09/28/20 16:40	09/30/20 11:47
92498068003	GWA-8	Water	09/28/20 16:04	09/30/20 11:47
92498068004	GWC-1	Water	09/28/20 17:08	09/30/20 11:47
92498068005	FB-1-9-28-20	Water	09/28/20 16:55	09/30/20 11:47
92498068006	GWC-12	Water	09/29/20 09:35	09/30/20 11:47
92498068007	GWC-11	Water	09/29/20 12:20	09/30/20 11:47
92498068008	GWC-14	Water	09/29/20 14:42	09/30/20 11:47
92498068009	GWC-2	Water	09/29/20 15:05	09/30/20 11:47
92498068010	EB-1-9-29-20	Water	09/29/20 16:20	09/30/20 11:47
92498068011	DUP-1	Water	09/29/20 00:00	09/30/20 11:47
92498068012	GWC-21	Water	09/30/20 10:49	10/02/20 12:22
92498068013	GWC-15	Water	09/30/20 12:30	10/02/20 12:22
92498068014	GWC-16	Water	09/30/20 14:00	10/02/20 12:22
92498068015	GWC-20	Water	09/30/20 16:31	10/02/20 12:22
92498068016	GWB-4R	Water	10/01/20 08:50	10/02/20 12:22
92498068017	EB-2-9-30-20	Water	09/30/20 14:30	10/02/20 12:22
92498068018	DUP-2	Water	09/30/20 00:00	10/02/20 12:22
92498068019	GWC-17	Water	09/30/20 12:00	10/02/20 12:22
92498068020	GWC-22	Water	09/30/20 14:05	10/02/20 12:22
92498068021	GWB-6R	Water	09/30/20 15:35	10/02/20 12:22
92498068022	GWB-5R	Water	09/30/20 17:30	10/02/20 12:22
92498068023	FB-2-9-30-20	Water	09/30/20 15:25	10/02/20 12:22
92498068024	GWC-9	Water	10/01/20 08:21	10/02/20 12:22

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD SEMI ANNUAL RADS
Pace Project No.: 92498068

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92498068001	GWA-7	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92498068002	GWC-13	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92498068003	GWA-8	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92498068004	GWC-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92498068005	FB-1-9-28-20	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92498068006	GWC-12	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92498068007	GWC-11	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92498068008	GWC-14	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92498068009	GWC-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92498068010	EB-1-9-29-20	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92498068011	DUP-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92498068012	GWC-21	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92498068013	GWC-15	EPA 9315	LAL	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD SEMI ANNUAL RADS
Pace Project No.: 92498068

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92498068014	GWC-16	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92498068015	GWC-20	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92498068016	GWB-4R	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92498068017	EB-2-9-30-20	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92498068018	DUP-2	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92498068019	GWC-17	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92498068020	GWC-22	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92498068021	GWB-6R	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92498068022	GWB-5R	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92498068023	FB-2-9-30-20	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92498068024	GWC-9	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92498068001	GWA-7					
EPA 9315	Radium-226	22.2 ± 4.27 (0.964)	pCi/L		10/15/20 06:56	
EPA 9320	Radium-228	C:93% T:NA 0.156 ± 0.471 (1.06)	pCi/L		10/16/20 14:43	
Total Radium Calculation	Total Radium	C:71% T:81% 22.4 ± 4.74 (2.02)	pCi/L		10/21/20 12:22	
92498068002	GWC-13					
EPA 9315	Radium-226	0.676 ± 0.337 (0.373)	pCi/L		10/15/20 06:57	
EPA 9320	Radium-228	C:85% T:NA 0.606 ± 0.395 (0.737)	pCi/L		10/16/20 14:43	
Total Radium Calculation	Total Radium	C:71% T:79% 1.28 ± 0.732 (1.11)	pCi/L		10/21/20 12:22	
92498068003	GWA-8					
EPA 9315	Radium-226	0.929 ± 0.400 (0.425)	pCi/L		10/15/20 06:57	
EPA 9320	Radium-228	C:85% T:NA 1.15 ± 0.522 (0.868)	pCi/L		10/16/20 14:43	
Total Radium Calculation	Total Radium	C:70% T:78% 2.08 ± 0.922 (1.29)	pCi/L		10/21/20 12:22	
92498068004	GWC-1					
EPA 9315	Radium-226	0.727 ± 0.357 (0.460)	pCi/L		10/15/20 06:57	
EPA 9320	Radium-228	C:89% T:NA 0.564 ± 0.409 (0.795)	pCi/L		10/16/20 14:43	
Total Radium Calculation	Total Radium	C:75% T:78% 1.29 ± 0.766 (1.26)	pCi/L		10/21/20 12:22	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SEMI ANNUAL RADS
Pace Project No.: 92498068

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92498068005	FB-1-9-28-20					
EPA 9315	Radium-226	-0.0334 ± 0.133 (0.422) C:90% T:NA	pCi/L		10/15/20 06:55	
EPA 9320	Radium-228	0.886 ± 0.502 (0.919) C:68% T:78%	pCi/L		10/21/20 11:33	
Total Radium Calculation	Total Radium	0.886 ± 0.635 (1.34)	pCi/L		10/22/20 10:20	
92498068006	GWC-12					
EPA 9315	Radium-226	0.494 ± 0.318 (0.495) C:84% T:NA	pCi/L		10/15/20 06:58	
EPA 9320	Radium-228	0.351 ± 0.443 (0.942) C:73% T:78%	pCi/L		10/21/20 11:33	
Total Radium Calculation	Total Radium	0.845 ± 0.761 (1.44)	pCi/L		10/22/20 10:20	
92498068007	GWC-11					
EPA 9315	Radium-226	3.84 ± 0.898 (0.428) C:88% T:NA	pCi/L		10/15/20 07:57	
EPA 9320	Radium-228	4.46 ± 1.05 (0.851) C:68% T:81%	pCi/L		10/21/20 11:33	
Total Radium Calculation	Total Radium	8.30 ± 1.95 (1.28)	pCi/L		10/22/20 10:20	
92498068008	GWC-14					
EPA 9315	Radium-226	0.331 ± 0.258 (0.431) C:83% T:NA	pCi/L		10/15/20 07:57	
EPA 9320	Radium-228	-0.233 ± 0.396 (0.960) C:69% T:80%	pCi/L		10/21/20 11:33	
Total Radium Calculation	Total Radium	0.331 ± 0.654 (1.39)	pCi/L		10/22/20 10:20	

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92498068009	GWC-2					
EPA 9315	Radium-226	0.553 ± 0.323 (0.494) C:88% T:NA	pCi/L		10/15/20 07:57	
EPA 9320	Radium-228	0.450 ± 0.417 (0.853) C:73% T:84%	pCi/L		10/21/20 11:44	
Total Radium Calculation	Total Radium	1.00 ± 0.740 (1.35)	pCi/L		10/22/20 10:20	
92498068010	EB-1-9-29-20					
EPA 9315	Radium-226	0.00561 ± 0.156 (0.435) C:92% T:NA	pCi/L		10/15/20 07:57	
EPA 9320	Radium-228	0.149 ± 0.376 (0.838) C:73% T:83%	pCi/L		10/21/20 11:34	
Total Radium Calculation	Total Radium	0.155 ± 0.532 (1.27)	pCi/L		10/22/20 10:20	
92498068011	DUP-1					
EPA 9315	Radium-226	0.259 ± 0.219 (0.372) C:92% T:NA	pCi/L		10/15/20 07:57	
EPA 9320	Radium-228	1.42 ± 0.529 (0.789) C:69% T:84%	pCi/L		10/21/20 11:34	
Total Radium Calculation	Total Radium	1.68 ± 0.748 (1.16)	pCi/L		10/22/20 10:20	
92498068012	GWC-21					
EPA 9315	Radium-226	2.88 ± 0.770 (0.501) C:76% T:NA	pCi/L		10/15/20 07:57	
EPA 9320	Radium-228	0.945 ± 0.535 (0.993) C:69% T:79%	pCi/L		10/21/20 11:35	
Total Radium Calculation	Total Radium	3.83 ± 1.31 (1.49)	pCi/L		10/22/20 10:20	

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92498068013	GWC-15					
EPA 9315	Radium-226	0.709 ± 0.358 (0.518) C:97% T:NA	pCi/L		10/15/20 07:57	
EPA 9320	Radium-228	1.43 ± 0.547 (0.848) C:71% T:86%	pCi/L		10/21/20 11:45	
Total Radium Calculation	Total Radium	2.14 ± 0.905 (1.37)	pCi/L		10/22/20 10:20	
92498068014	GWC-16					
EPA 9315	Radium-226	1.69 ± 0.552 (0.449) C:86% T:NA	pCi/L		10/16/20 06:44	
EPA 9320	Radium-228	0.781 ± 0.435 (0.789) C:74% T:82%	pCi/L		10/21/20 11:45	
Total Radium Calculation	Total Radium	2.47 ± 0.987 (1.24)	pCi/L		10/22/20 10:20	
92498068015	GWC-20					
EPA 9315	Radium-226	3.50 ± 0.843 (0.419) C:93% T:NA	pCi/L		10/16/20 06:44	
EPA 9320	Radium-228	2.12 ± 0.638 (0.795) C:66% T:93%	pCi/L		10/21/20 11:35	
Total Radium Calculation	Total Radium	5.62 ± 1.48 (1.21)	pCi/L		10/22/20 10:20	
92498068016	GWB-4R					
EPA 9315	Radium-226	1.57 ± 0.530 (0.422) C:84% T:NA	pCi/L		10/16/20 06:44	
EPA 9320	Radium-228	1.03 ± 0.451 (0.721) C:68% T:81%	pCi/L		10/21/20 11:30	
Total Radium Calculation	Total Radium	2.60 ± 0.981 (1.14)	pCi/L		10/22/20 10:20	

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92498068017	EB-2-9-30-20					
EPA 9315	Radium-226	0.132 ± 0.292 (0.685) C:88% T:NA	pCi/L		10/16/20 06:44	
EPA 9320	Radium-228	0.612 ± 0.386 (0.710) C:71% T:75%	pCi/L		10/21/20 11:30	
Total Radium Calculation	Total Radium	0.744 ± 0.678 (1.40)	pCi/L		10/22/20 10:20	
92498068018	DUP-2					
EPA 9315	Radium-226	3.50 ± 0.853 (0.441) C:96% T:NA	pCi/L		10/16/20 06:44	
EPA 9320	Radium-228	3.29 ± 0.864 (0.988) C:77% T:84%	pCi/L		10/21/20 11:36	
Total Radium Calculation	Total Radium	6.79 ± 1.72 (1.43)	pCi/L		10/22/20 10:20	
92498068019	GWC-17					
EPA 9315	Radium-226	1.06 ± 0.448 (0.493) C:83% T:NA	pCi/L		10/16/20 06:45	
EPA 9320	Radium-228	2.03 ± 0.646 (0.909) C:75% T:88%	pCi/L		10/21/20 11:36	
Total Radium Calculation	Total Radium	3.09 ± 1.09 (1.40)	pCi/L		10/22/20 10:20	
92498068020	GWC-22					
EPA 9315	Radium-226	0.820 ± 0.408 (0.485) C:78% T:NA	pCi/L		10/16/20 06:45	
EPA 9320	Radium-228	1.97 ± 0.700 (1.08) C:74% T:79%	pCi/L		10/21/20 11:36	
Total Radium Calculation	Total Radium	2.79 ± 1.11 (1.57)	pCi/L		10/22/20 10:20	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SEMI ANNUAL RADS
Pace Project No.: 92498068

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92498068021	GWB-6R					
EPA 9315	Radium-226	3.02 ± 0.796 (0.521) C:90% T:NA	pCi/L		10/16/20 07:29	
EPA 9320	Radium-228	3.37 ± 0.979 (1.28) C:73% T:70%	pCi/L		10/21/20 11:36	
Total Radium Calculation	Total Radium	6.39 ± 1.78 (1.80)	pCi/L		10/22/20 10:20	
92498068022	GWB-5R					
EPA 9315	Radium-226	2.69 ± 0.719 (0.494) C:89% T:NA	pCi/L		10/16/20 08:56	
EPA 9320	Radium-228	1.76 ± 0.671 (1.03) C:70% T:85%	pCi/L		10/21/20 13:22	
Total Radium Calculation	Total Radium	4.45 ± 1.39 (1.52)	pCi/L		10/22/20 10:20	
92498068023	FB-2-9-30-20					
EPA 9315	Radium-226	0.0614 ± 0.242 (0.609) C:79% T:NA	pCi/L		10/16/20 06:51	
EPA 9320	Radium-228	0.534 ± 0.477 (0.974) C:71% T:83%	pCi/L		10/21/20 12:17	
Total Radium Calculation	Total Radium	0.595 ± 0.719 (1.58)	pCi/L		10/22/20 10:20	
92498068024	GWC-9					
EPA 9315	Radium-226	1.20 ± 0.475 (0.488) C:83% T:NA	pCi/L		10/16/20 06:51	
EPA 9320	Radium-228	2.10 ± 0.972 (1.72) C:68% T:77%	pCi/L		10/21/20 14:38	
Total Radium Calculation	Total Radium	3.30 ± 1.45 (2.21)	pCi/L		10/22/20 10:25	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RAD5

Pace Project No.: 92498068

Sample: GWA-7 **Lab ID: 92498068001** Collected: 09/28/20 15:20 Received: 09/30/20 11:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	22.2 ± 4.27 (0.964) C:93% T:NA	pCi/L	10/15/20 06:56	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.156 ± 0.471 (1.06) C:71% T:81%	pCi/L	10/16/20 14:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	22.4 ± 4.74 (2.02)	pCi/L	10/21/20 12:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Sample: GWC-13 **Lab ID: 92498068002** Collected: 09/28/20 16:40 Received: 09/30/20 11:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.676 ± 0.337 (0.373) C:85% T:NA	pCi/L	10/15/20 06:57	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.606 ± 0.395 (0.737) C:71% T:79%	pCi/L	10/16/20 14:43	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.28 ± 0.732 (1.11)	pCi/L	10/21/20 12:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Sample: GWA-8 **Lab ID: 92498068003** Collected: 09/28/20 16:04 Received: 09/30/20 11:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.929 ± 0.400 (0.425) C:85% T:NA	pCi/L	10/15/20 06:57	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.15 ± 0.522 (0.868) C:70% T:78%	pCi/L	10/16/20 14:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	2.08 ± 0.922 (1.29)	pCi/L	10/21/20 12:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Sample: GWC-1 **Lab ID: 92498068004** Collected: 09/28/20 17:08 Received: 09/30/20 11:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.727 ± 0.357 (0.460) C:89% T:NA	pCi/L	10/15/20 06:57	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.564 ± 0.409 (0.795) C:75% T:78%	pCi/L	10/16/20 14:43	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.29 ± 0.766 (1.26)	pCi/L	10/21/20 12:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Sample: FB-1-9-28-20 **Lab ID: 92498068005** Collected: 09/28/20 16:55 Received: 09/30/20 11:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	-0.0334 ± 0.133 (0.422) C:90% T:NA	pCi/L	10/15/20 06:55	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.886 ± 0.502 (0.919) C:68% T:78%	pCi/L	10/21/20 11:33	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.886 ± 0.635 (1.34)	pCi/L	10/22/20 10:20	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Sample: GWC-12 **Lab ID: 92498068006** Collected: 09/29/20 09:35 Received: 09/30/20 11:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.494 ± 0.318 (0.495) C:84% T:NA	pCi/L	10/15/20 06:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.351 ± 0.443 (0.942) C:73% T:78%	pCi/L	10/21/20 11:33	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.845 ± 0.761 (1.44)	pCi/L	10/22/20 10:20	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Sample: GWC-11 **Lab ID: 92498068007** Collected: 09/29/20 12:20 Received: 09/30/20 11:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	3.84 ± 0.898 (0.428) C:88% T:NA	pCi/L	10/15/20 07:57	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	4.46 ± 1.05 (0.851) C:68% T:81%	pCi/L	10/21/20 11:33	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	8.30 ± 1.95 (1.28)	pCi/L	10/22/20 10:20	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Sample: GWC-14 **Lab ID: 92498068008** Collected: 09/29/20 14:42 Received: 09/30/20 11:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.331 ± 0.258 (0.431) C:83% T:NA	pCi/L	10/15/20 07:57	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	-0.233 ± 0.396 (0.960) C:69% T:80%	pCi/L	10/21/20 11:33	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.331 ± 0.654 (1.39)	pCi/L	10/22/20 10:20	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Sample: GWC-2 **Lab ID: 92498068009** Collected: 09/29/20 15:05 Received: 09/30/20 11:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.553 ± 0.323 (0.494) C:88% T:NA	pCi/L	10/15/20 07:57	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.450 ± 0.417 (0.853) C:73% T:84%	pCi/L	10/21/20 11:44	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.00 ± 0.740 (1.35)	pCi/L	10/22/20 10:20	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Sample: EB-1-9-29-20 **Lab ID: 92498068010** Collected: 09/29/20 16:20 Received: 09/30/20 11:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.00561 ± 0.156 (0.435) C:92% T:NA	pCi/L	10/15/20 07:57	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.149 ± 0.376 (0.838) C:73% T:83%	pCi/L	10/21/20 11:34	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.155 ± 0.532 (1.27)	pCi/L	10/22/20 10:20	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Sample: DUP-1 **Lab ID: 92498068011** Collected: 09/29/20 00:00 Received: 09/30/20 11:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.259 ± 0.219 (0.372) C:92% T:NA	pCi/L	10/15/20 07:57	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.42 ± 0.529 (0.789) C:69% T:84%	pCi/L	10/21/20 11:34	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.68 ± 0.748 (1.16)	pCi/L	10/22/20 10:20	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Sample: GWC-21 **Lab ID: 92498068012** Collected: 09/30/20 10:49 Received: 10/02/20 12:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	2.88 ± 0.770 (0.501) C:76% T:NA	pCi/L	10/15/20 07:57	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.945 ± 0.535 (0.993) C:69% T:79%	pCi/L	10/21/20 11:35	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	3.83 ± 1.31 (1.49)	pCi/L	10/22/20 10:20	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Sample: GWC-15 **Lab ID: 92498068013** Collected: 09/30/20 12:30 Received: 10/02/20 12:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.709 ± 0.358 (0.518) C:97% T:NA	pCi/L	10/15/20 07:57	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.43 ± 0.547 (0.848) C:71% T:86%	pCi/L	10/21/20 11:45	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	2.14 ± 0.905 (1.37)	pCi/L	10/22/20 10:20	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Sample: GWC-16 **Lab ID: 92498068014** Collected: 09/30/20 14:00 Received: 10/02/20 12:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	1.69 ± 0.552 (0.449) C:86% T:NA	pCi/L	10/16/20 06:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.781 ± 0.435 (0.789) C:74% T:82%	pCi/L	10/21/20 11:45	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	2.47 ± 0.987 (1.24)	pCi/L	10/22/20 10:20	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Sample: GWC-20 **Lab ID: 92498068015** Collected: 09/30/20 16:31 Received: 10/02/20 12:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	3.50 ± 0.843 (0.419) C:93% T:NA	pCi/L	10/16/20 06:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	2.12 ± 0.638 (0.795) C:66% T:93%	pCi/L	10/21/20 11:35	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	5.62 ± 1.48 (1.21)	pCi/L	10/22/20 10:20	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RAD5

Pace Project No.: 92498068

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWB-4R Lab ID: 92498068016 Collected: 10/01/20 08:50 Received: 10/02/20 12:22 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	1.57 ± 0.530 (0.422) C:84% T:NA	pCi/L	10/16/20 06:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.03 ± 0.451 (0.721) C:68% T:81%	pCi/L	10/21/20 11:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	2.60 ± 0.981 (1.14)	pCi/L	10/22/20 10:20	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Sample: EB-2-9-30-20 **Lab ID: 92498068017** Collected: 09/30/20 14:30 Received: 10/02/20 12:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.132 ± 0.292 (0.685) C:88% T:NA	pCi/L	10/16/20 06:44	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.612 ± 0.386 (0.710) C:71% T:75%	pCi/L	10/21/20 11:30	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.744 ± 0.678 (1.40)	pCi/L	10/22/20 10:20	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Sample: DUP-2 **Lab ID: 92498068018** Collected: 09/30/20 00:00 Received: 10/02/20 12:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	3.50 ± 0.853 (0.441) C:96% T:NA	pCi/L	10/16/20 06:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	3.29 ± 0.864 (0.988) C:77% T:84%	pCi/L	10/21/20 11:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	6.79 ± 1.72 (1.43)	pCi/L	10/22/20 10:20	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Sample: GWC-17 **Lab ID: 92498068019** Collected: 09/30/20 12:00 Received: 10/02/20 12:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	1.06 ± 0.448 (0.493) C:83% T:NA	pCi/L	10/16/20 06:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	2.03 ± 0.646 (0.909) C:75% T:88%	pCi/L	10/21/20 11:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	3.09 ± 1.09 (1.40)	pCi/L	10/22/20 10:20	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Sample: GWC-22 **Lab ID: 92498068020** Collected: 09/30/20 14:05 Received: 10/02/20 12:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.820 ± 0.408 (0.485) C:78% T:NA	pCi/L	10/16/20 06:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.97 ± 0.700 (1.08) C:74% T:79%	pCi/L	10/21/20 11:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	2.79 ± 1.11 (1.57)	pCi/L	10/22/20 10:20	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Sample: GWB-6R **Lab ID: 92498068021** Collected: 09/30/20 15:35 Received: 10/02/20 12:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	3.02 ± 0.796 (0.521) C:90% T:NA	pCi/L	10/16/20 07:29	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	3.37 ± 0.979 (1.28) C:73% T:70%	pCi/L	10/21/20 11:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	6.39 ± 1.78 (1.80)	pCi/L	10/22/20 10:20	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Sample: GWB-5R **Lab ID: 92498068022** Collected: 09/30/20 17:30 Received: 10/02/20 12:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	2.69 ± 0.719 (0.494) C:89% T:NA	pCi/L	10/16/20 08:56	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.76 ± 0.671 (1.03) C:70% T:85%	pCi/L	10/21/20 13:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	4.45 ± 1.39 (1.52)	pCi/L	10/22/20 10:20	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Sample: FB-2-9-30-20 **Lab ID: 92498068023** Collected: 09/30/20 15:25 Received: 10/02/20 12:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0614 ± 0.242 (0.609) C:79% T:NA	pCi/L	10/16/20 06:51	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.534 ± 0.477 (0.974) C:71% T:83%	pCi/L	10/21/20 12:17	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.595 ± 0.719 (1.58)	pCi/L	10/22/20 10:20	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

Sample: GWC-9 **Lab ID: 92498068024** Collected: 10/01/20 08:21 Received: 10/02/20 12:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	1.20 ± 0.475 (0.488) C:83% T:NA	pCi/L	10/16/20 06:51	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	2.10 ± 0.972 (1.72) C:68% T:77%	pCi/L	10/21/20 14:38	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	3.30 ± 1.45 (2.21)	pCi/L	10/22/20 10:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

QC Batch: 418039

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92498068024

METHOD BLANK: 2021122

Matrix: Water

Associated Lab Samples: 92498068024

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.318 ± 0.365 (0.768) C:69% T:89%	pCi/L	10/21/20 11:32	

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 - RADIOCHEMISTRY

Project: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

QC Batch:	418038	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92498068005, 92498068006, 92498068007, 92498068008, 92498068009, 92498068010, 92498068011, 92498068012, 92498068013, 92498068014, 92498068015, 92498068016, 92498068017, 92498068018, 92498068019, 92498068020, 92498068021, 92498068022, 92498068023

METHOD BLANK: 2021121 Matrix: Water

Associated Lab Samples: 92498068005, 92498068006, 92498068007, 92498068008, 92498068009, 92498068010, 92498068011, 92498068012, 92498068013, 92498068014, 92498068015, 92498068016, 92498068017, 92498068018, 92498068019, 92498068020, 92498068021, 92498068022, 92498068023

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.180 ± 0.316 (0.690) C:70% T:90%	pCi/L	10/21/20 11:33	

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: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

QC Batch:	418032	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92498068001, 92498068002, 92498068003, 92498068004, 92498068005, 92498068006, 92498068007, 92498068008, 92498068009, 92498068010, 92498068011, 92498068012, 92498068013

METHOD BLANK: 2021109 Matrix: Water

Associated Lab Samples: 92498068001, 92498068002, 92498068003, 92498068004, 92498068005, 92498068006, 92498068007, 92498068008, 92498068009, 92498068010, 92498068011, 92498068012, 92498068013

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.106 ± 0.162 (0.345) C:92% T:NA	pCi/L	10/15/20 07:21	

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: GRUMMAN ROAD SEMI ANNUAL RADS
Pace Project No.: 92498068

QC Batch:	418033	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg
Associated Lab Samples:	92498068014, 92498068015, 92498068016, 92498068017, 92498068018, 92498068019, 92498068020, 92498068021, 92498068022, 92498068023, 92498068024		

METHOD BLANK:	2021110	Matrix:	Water
Associated Lab Samples:	92498068014, 92498068015, 92498068016, 92498068017, 92498068018, 92498068019, 92498068020, 92498068021, 92498068022, 92498068023, 92498068024		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0872 ± 0.193 (0.458) C:76% T:NA	pCi/L	10/16/20 06:43	

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: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

QC Batch: 418037

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92498068001, 92498068002, 92498068003, 92498068004

METHOD BLANK: 2021120

Matrix: Water

Associated Lab Samples: 92498068001, 92498068002, 92498068003, 92498068004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.335 ± 0.463 (0.993) C:71% T:73%	pCi/L	10/16/20 14:41	

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: GRUMMAN ROAD SEMI ANNUAL RADS

Pace Project No.: 92498068

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GRUMMAN ROAD SEMI ANNUAL RADS
Pace Project No.: 92498068

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92498068001	GWA-7	EPA 9315	418032		
92498068002	GWC-13	EPA 9315	418032		
92498068003	GWA-8	EPA 9315	418032		
92498068004	GWC-1	EPA 9315	418032		
92498068005	FB-1-9-28-20	EPA 9315	418032		
92498068006	GWC-12	EPA 9315	418032		
92498068007	GWC-11	EPA 9315	418032		
92498068008	GWC-14	EPA 9315	418032		
92498068009	GWC-2	EPA 9315	418032		
92498068010	EB-1-9-29-20	EPA 9315	418032		
92498068011	DUP-1	EPA 9315	418032		
92498068012	GWC-21	EPA 9315	418032		
92498068013	GWC-15	EPA 9315	418032		
92498068014	GWC-16	EPA 9315	418033		
92498068015	GWC-20	EPA 9315	418033		
92498068016	GWB-4R	EPA 9315	418033		
92498068017	EB-2-9-30-20	EPA 9315	418033		
92498068018	DUP-2	EPA 9315	418033		
92498068019	GWC-17	EPA 9315	418033		
92498068020	GWC-22	EPA 9315	418033		
92498068021	GWB-6R	EPA 9315	418033		
92498068022	GWB-5R	EPA 9315	418033		
92498068023	FB-2-9-30-20	EPA 9315	418033		
92498068024	GWC-9	EPA 9315	418033		
92498068001	GWA-7	EPA 9320	418037		
92498068002	GWC-13	EPA 9320	418037		
92498068003	GWA-8	EPA 9320	418037		
92498068004	GWC-1	EPA 9320	418037		
92498068005	FB-1-9-28-20	EPA 9320	418038		
92498068006	GWC-12	EPA 9320	418038		
92498068007	GWC-11	EPA 9320	418038		
92498068008	GWC-14	EPA 9320	418038		
92498068009	GWC-2	EPA 9320	418038		
92498068010	EB-1-9-29-20	EPA 9320	418038		
92498068011	DUP-1	EPA 9320	418038		
92498068012	GWC-21	EPA 9320	418038		
92498068013	GWC-15	EPA 9320	418038		
92498068014	GWC-16	EPA 9320	418038		
92498068015	GWC-20	EPA 9320	418038		
92498068016	GWB-4R	EPA 9320	418038		
92498068017	EB-2-9-30-20	EPA 9320	418038		
92498068018	DUP-2	EPA 9320	418038		
92498068019	GWC-17	EPA 9320	418038		
92498068020	GWC-22	EPA 9320	418038		
92498068021	GWB-6R	EPA 9320	418038		
92498068022	GWB-5R	EPA 9320	418038		
92498068023	FB-2-9-30-20	EPA 9320	418038		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GRUMMAN ROAD SEMI ANNUAL RADS
Pace Project No.: 92498068

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92498068024	GWC-9	EPA 9320	418039		
92498068001	GWA-7	Total Radium Calculation	419547		
92498068002	GWC-13	Total Radium Calculation	419547		
92498068003	GWA-8	Total Radium Calculation	419547		
92498068004	GWC-1	Total Radium Calculation	419547		
92498068005	FB-1-9-28-20	Total Radium Calculation	419736		
92498068006	GWC-12	Total Radium Calculation	419736		
92498068007	GWC-11	Total Radium Calculation	419736		
92498068008	GWC-14	Total Radium Calculation	419736		
92498068009	GWC-2	Total Radium Calculation	419736		
92498068010	EB-1-9-29-20	Total Radium Calculation	419736		
92498068011	DUP-1	Total Radium Calculation	419736		
92498068012	GWC-21	Total Radium Calculation	419736		
92498068013	GWC-15	Total Radium Calculation	419736		
92498068014	GWC-16	Total Radium Calculation	419736		
92498068015	GWC-20	Total Radium Calculation	419736		
92498068016	GWB-4R	Total Radium Calculation	419736		
92498068017	EB-2-9-30-20	Total Radium Calculation	419736		
92498068018	DUP-2	Total Radium Calculation	419736		
92498068019	GWC-17	Total Radium Calculation	419736		
92498068020	GWC-22	Total Radium Calculation	419736		
92498068021	GWB-6R	Total Radium Calculation	419736		
92498068022	GWB-5R	Total Radium Calculation	419736		
92498068023	FB-2-9-30-20	Total Radium Calculation	419736		
92498068024	GWC-9	Total Radium Calculation	419738		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Re

WO#: 92498068

Client Name: BA Power



92498068

Courier: Fed Ex UPS USPS Client Commercial Pace C

Tracking #: _____

Proj. Due Date: _____
Proj. Name: _____

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

Packing Material: Bubble Wrap Bubble Bags None Other Zip lock

Thermometer Used 230 Type of Ice: Ice Blue None Samples on ice, cooling process has begun

Cooler Temperature 3.7 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: CO

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>WT</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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>CO</u> 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 checked="" type="checkbox"/> No <input 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)

F-ALLC003rev.3, 11September2006



Document Name:
Bottle Identification Form (BIF)
Document No.:
F-CAR-CS-043-Rev.00

Document Issued: March 14, 2019
Page 1 of 1
Issuing Authority:
Pace Carolinas Quality Office

Project #

WO#: 92498068

PM: KLH1

Due Date: 10/21/20

CLIENT: GA-GA Power

Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/BOLS (water) DOC, LLHg
Bottom half of box is to list number of bottle

Matrix	Item#	BP4U-125 mL Plastic Unpreserved (N/A) (C-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (C-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (C-)	AG1H-1 liter Amber HCl (pH < 2)	AG1I-1 liter Amber Unpreserved (N/A) (C-)	AG3U-250 mL Amber H2SO4 (pH < 2)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(C-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	
	1																												
	2																												
	3																												
	4																												
	5																												
	6																												
	7																												
	8																												
	9																												
	10																												
	11																												
	12																												

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot

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. Out of hold, incorrect preservative, out of temp, incorrect containers.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Regulated Client Information:	Section B Required Project Information:	Section C Analytical Information:
Company: GA Power	Report To: SCS Contacts	Address: Southern Co.
Address: Atlanta, GA	Copy To: ACC Contacts	Company Name: Southern Co.
Small To: SCS Contacts	Purchase Order No.:	Address:
Phone: _____	Project Name: Grumman Road - Semi-Annual	Reference: _____
Requested Due Date/TAT: 10 Day	Project Number:	See Project: Kevin Herring
		Manufacturer: _____
		Price Profile #: 2926-1

REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>	
Site Location	STATE: GA
Requested Analyte Filtered (Y/N)	
Residual Chlorine (Y/N)	

ITEM #	Valid Matrix Codes MATRIX CODE DRINKING WATER DW WASTE WATER WW WATER WWT PRODUCT P SOIL/SOLID S WASTE W AIR AR OTHER OT TISSUE TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analyte Filtered (Y/N)	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
				DATE	TIME									
1	GW A-7	WT 6	G	9-28-20	15:20	9	Unpreserved	TDS						
2	GW C-13	WT 6	G	9-28-20	16:40	9	H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other	Chloride/Fluoride/Sulfate 300.0 App. III + IV + State Metals * RAD 226/228						
3	GW A-8	WT 6	G	9-28-20	16:04	9								
4	GW C-1	WT 6	G	9-28-20	17:08	9								
5	FB-1-9-28-20	WT 6	G	9-28-20	16:55	9								
6	GW C-12	WT 6	G	9-24-20	09:35	9								
7	GW C-11	WT 6	G	9-28-20	12:20	9								
8	GW C-14	WT 6	G	9-24-20	14:42	9								
9	GW C-2	WT 6	G	9-24-20	15:55	9								
10	FB-1-9-24-20	WT 6	G	9-24-20	16:20	9								
11	DVP-1	WT 6	G	9-29-20	—	9								
12														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	ACC	9-30-20	0745	MILLIE G. SEMANICK	9-30-20	0745
				OFFICE	9/30/20	1147

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER: Jordan Brisford	DATE Signed (MM/DD/YYYY): 09/30/20
SIGNATURE of SAMPLER: <i>Jordan Brisford</i>	

Temp in °C: _____
 Received on Ice (Y/N): _____
 Custody Sealed Cooler (Y/N): _____
 Samples Intact (Y/N): _____



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company: GA Power Address: Atlanta, GA

Section B Required Project Information: Report To: SCS Contacts Copy To: ACC Contacts

Section C Invoice Information: Attention: Southern Co. Company Name: Address: Reference: Kevin Herring Project Manager: Piece Profile #: 2926-1

REGULATORY AGENCY: NPDES GROUND WATER DRINKING WATER UST RCRA OTHER

Site Location STATE: GA

Page: 2 of 3

Section A Required Client Information: Company: GA Power Address: Atlanta, GA

Section B Required Project Information: Report To: SCS Contacts Copy To: ACC Contacts

Section C Invoice Information: Attention: Southern Co. Company Name: Address: Reference: Kevin Herring Project Manager: Piece Profile #: 2926-1

REGULATORY AGENCY: NPDES GROUND WATER DRINKING WATER UST RCRA OTHER

Site Location STATE: GA

ITEM #	Section B Required Client Information	Valid Matrix Codes	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH=
					DATE	TIME							
1	GWC-21	DRINKING WATER WATER WASTE WATER PRODUCT SEWAGE WATER AIR OTHER TISSE			9-30-20	1049	5	Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other	TDS Chloride/Fluoride/Sulfate 300.0 App. III + IV + State Metals * RAD 226/228				
2	GWC-15				9-30-20	1230	5						
3	GWC-16				9-30-20	1400	5						
4	GWC-20				9-30-20	1631	5						
5	GWB-4R				10-1-20	0650	5						
6	GR-2-9-30-20				9-30-20	1430	5						
7	DWP-2				9-30-20		5						
8													
9													
10													
11													
12													

Additional Comments: REMUNISHED BY / AFFILIATION: DATE: 10-2-20 TIME: 1222

ACCEPTED BY / AFFILIATION: DATE: TIME:

Temp in °C: Received on Ice (Y/N): Custody Sealed Cooler (Y/N): Samples Intact (Y/N):

Materials: B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mn, Se, Ti, V, Zn

Important Note: By signing this form you are accepting Face's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020 rev.07, 15-Feb-2007



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:
 Company: GA Power
 Address: Atlanta, GA
 Email To: SCS Contacts
 Phone: Fax:
 Requested Due Date/AT: 10 Day

Section B Required Project Information:
 Report To: SCS Contacts
 Copy To: ACC Contacts
 Purchase Order No.:
 Project Name: Gurnman Road - Semi-Annual
 Project Number:

Section C Invoice Information:
 Attention: Southern Co.
 Company Name:
 Address:
 P.O. Box:
 Reference: Kevin Herring
 Pace Project Manager:
 Pace Profile #: 2926-1

Page: 3 of 3

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RORA OTHER COP

Site Location: GA
 STATE:

ITEM #	Section D Required Client Information	Valid Matrix Codes MATERIAL Drinking Water WATER WASTE WATER PRODUCT SOLVENTS WASTE AIR OTHER TSS	CODE DW WT WW P SL WV WP AO OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	SAMPLE CONDITIONS
						COMPOSITE	COMPOSITE									
1	GW-C-17			WT G	G			9-30-20	1200		11	<input checked="" type="checkbox"/> Unpreserved <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> HNO ₃ <input type="checkbox"/> HCl <input type="checkbox"/> NaOH <input type="checkbox"/> Na ₂ S ₂ O ₃ <input type="checkbox"/> Methanol <input type="checkbox"/> Other	<input type="checkbox"/> TDS <input type="checkbox"/> Chloride/Fluoride/Sulfate 300.0 <input type="checkbox"/> App. III + IV + State Metals * <input type="checkbox"/> RAD 226/228			PH = 4.08
2	GW-C-22			WT G	G			9-30-20	1405		9					PH = 4.63
3	GW-B-6R			WT G	G			9-30-20	1535		9					PH = 5.39
4	GW-B-5R			WT G	G			9-30-20	1730		9					PH = 4.49
5	FB-2-9-30-20			WT G	G			9-30-20	1525		9					PH = 4.4
6	GW-C-9			WT G	G			10-1-20	0821		9					PH = 4.42
7																PH =
8																PH =
9																PH =
10																PH =
11																PH =
12																PH =

ADDITIONAL COMMENTS
 Requested when the first sample for the event has been taken.
 lost sample taken

RELINQUISHED BY / AFFILIATION: ACC 10-2-20 1222
 ACCEPTED BY / AFFILIATION: K. Williams of Pace 10/2/20 1200

SAMPLER NAME AND SIGNATURE
 PRINT NAME OF SAMPLER: Jordan Berisford Taylor Gayle
 SIGNATURE OF SAMPLER: [Signature]
 DATE SIGNED (MM/DD/YYYY): 10-2-20

Temp in °C: _____
 Received on ice (Y/N): _____
 Custody Sealed Cooler (Y/N): _____
 Samples Intact (Y/N): _____

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.
 F-ALL-Q-020rev.07, 15-Feb-2007

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 10/14/2020
Worklist: 56676
Matrix: DW



Method Blank Assessment	
MB Sample ID	2021109
MB Concentration:	0.106
MB Counting Uncertainty:	0.161
MB MDC:	0.345
MB Numerical Performance Indicator:	1.28
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS (Y or N)?		N
	LCS56676	LCS95676	
Count Date:	10/15/2020		
Spike I.D.:	19-033		
Decay Corrected Spike Concentration (pCi/mL):	24.044		
Volume Used (mL):	0.10		
Aliquot Volume (L, g, F):	0.516		
Target Conc. (pCi/L, g, F):	4.655		
Uncertainty (Calculated):	0.056		
Result (pCi/L, g, F):	4.795		
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.767		
Numerical Performance Indicator:	0.36		
Percent Recovery:	103.01%		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	Pass		
Upper % Recovery Limits:	125%		
Lower % Recovery Limits:	75%		

Duplicate Sample Assessment	92497524034	92497524034DUP
Sample I.D.:	92497524034	92497524034DUP
Duplicate Sample I.D.:	0.130	0.130
Sample Result (pCi/L, g, F):	0.179	0.179
Sample Result Counting Uncertainty (pCi/L, g, F):	0.326	0.326
Sample Duplicate Result (pCi/L, g, F):	0.264	0.264
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	See Below ##	See Below ##
Ave. sample and/or duplicate results below RL?	-1.205	-1.205
Duplicate Numerical Performance Indicator:	85.93%	85.93%
Duplicate RPD:	N/A	N/A
Duplicate Status vs Numerical Indicator:	Fail**	Fail**
Duplicate Status vs RPD:	25%	25%
% RPD Limit:		

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

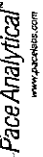
***Batch must be re-prepped due to unacceptable precision.

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): MS Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): MSD Aliquot (L, g, F): MSD Target Conc. (pCi/L, g, F): MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated):		
Sample Result: Sample Matrix Spike Result: Matrix Spike Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): MS Numerical Performance Indicator: MSD Numerical Performance Indicator: MS Percent Recovery: MSD Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D. Sample MS I.D. Sample MSD I.D. Sample Matrix Spike Result: Matrix Spike Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): Duplicate Numerical Performance Indicator: Duplicate Percent Recoveries MS/MSD Duplicate RPD: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPD: % RPD Limit:

LAM 10/15/2020
Total Alpha Radium (R104-3 11Feb2019).xls
10/15/2020

Quality Control Sample Performance Assessment



Analyst **Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226
Analyst: LAL
Date: 10/15/2020
Worklist: 56677
Matrix: DW

Method Blank Assessment	
MB Sample ID	2021110
MB concentration:	0.087
M/B Counting Uncertainty:	0.193
MB MDC:	0.456
MB Numerical Performance Indicator:	0.89
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	N
LCSD56677	LCSD56677
Count Date:	10/16/2020
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.044
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.524
Target Conc. (pCi/L, g, F):	4.586
Uncertainty (Calculated):	0.055
Result (pCi/L, g, F):	3.940
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.731
Numerical Performance Indicator:	-1.73
Percent Recovery:	85.91%
Status vs Numerical Indicator:	N/A
Upper % Recovery Limits:	Pass
Lower % Recovery Limits:	125%
	75%

Duplicate Sample Assessment	
Sample I.D.:	92498068019
Duplicate Sample I.D.:	92498068019DUP
Sample Result (pCi/L, g, F):	1.060
Sample Duplicate Result (pCi/L, g, F):	0.421
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.947
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.373
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	0.393
Duplicate RPD:	11.23%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
<p>Sample Collection Date:</p> <p>Sample I.D.:</p> <p>Sample MS I.D.:</p> <p>Sample MSD I.D.:</p> <p>Spike I.D.:</p> <p>MS/MSD Decay Corrected Spike Concentration (pCi/mL):</p> <p>Spike Volume Used in MS (mL):</p> <p>Spike Volume Used in MSD (mL):</p> <p>MS Aliquot (L, g, F):</p> <p>MS Target Conc. (pCi/L, g, F):</p> <p>MSD Aliquot (L, g, F):</p> <p>MSD Target Conc. (pCi/L, g, F):</p> <p>MSD Spike Uncertainty (calculated):</p> <p>MS Spike Uncertainty (calculated):</p> <p>MS Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Result:</p> <p>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):</p> <p>MS Numerical Performance Indicator:</p> <p>MSD Numerical Performance Indicator:</p> <p>MS Percent Recovery:</p> <p>MSD Percent Recovery:</p> <p>MS Status vs Numerical Indicator:</p> <p>MSD Status vs Numerical Indicator:</p> <p>MS Status vs Recovery:</p> <p>MSD Status vs Recovery:</p> <p>MS/MSD Upper % Recovery Limits:</p> <p>MS/MSD Lower % Recovery Limits:</p>		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
<p>Sample I.D.:</p> <p>Sample MS I.D.:</p> <p>Sample MSD I.D.:</p> <p>Sample Matrix Spike Result:</p> <p>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):</p> <p>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):</p> <p>Duplicate Numerical Performance Indicator:</p> <p>(Based on the Percent Recoveries) MS/MSD Duplicate RPD:</p> <p>MS/MSD Duplicate Status vs Numerical Indicator:</p> <p>MS/MSD Duplicate Status vs RPD:</p> <p>% RPD Limit:</p>

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

VAM 10/16/2020

Chm
10/16/2020

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 10/15/2020
Worklist: 56677
Matrix: DW

Method Blank Assessment	
MB Sample ID	2021110
MB Concentration:	0.087
M/B Counting Uncertainty:	0.193
MB MDC:	0.468
MB Numerical Performance Indicator:	0.89
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS/D (Y or N)?	
	LCSD56677	N LCSD56677
Count Date:	10/16/2020	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.044	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.524	
Target Conc. (pCi/L, g, F):	4.586	
Uncertainty (Calculated):	0.055	
Result (pCi/L, g, F):	3.940	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.731	
Numerical Performance Indicator:	-1.73	
Percent Recovery:	85.91%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

Duplicate Sample Assessment	LCS/D (Y or N)?	
	LCSD56677	N LCSD56677
Sample I.D.:	92498068014	
Duplicate Sample I.D.:	92498068014DUP	
Sample Result (pCi/L, g, F):	1.691	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.495	
Sample Duplicate Result (pCi/L, g, F):	1.375	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.433	
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:	0.942	
Duplicate RPD:	20.61%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
<p>Sample Collection Date:</p> <p>Sample I.D.:</p> <p>Sample MS I.D.:</p> <p>Sample MSD I.D.:</p> <p>Spike I.D.:</p> <p>MS/MSD Decay Corrected Spike Concentration (pCi/mL):</p> <p>Spike Volume Used in MS (mL):</p> <p>Spike Volume Used in MSD (mL):</p> <p>MS Aliquot (L, g, F):</p> <p>MSD Aliquot (L, g, F):</p> <p>MS Target Conc. (pCi/L, g, F):</p> <p>MSD Target Conc. (pCi/L, g, F):</p> <p>MS Spike Uncertainty (calculated):</p> <p>MSD Spike Uncertainty (calculated):</p> <p>Sample Result:</p> <p>Sample Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Result:</p> <p>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):</p> <p>MS Numerical Performance Indicator:</p> <p>MSD Numerical Performance Indicator:</p> <p>MS Percent Recovery:</p> <p>MSD Percent Recovery:</p> <p>MS Status vs Numerical Indicator:</p> <p>MSD Status vs Numerical Indicator:</p> <p>MS Status vs Recovery:</p> <p>MSD Status vs Recovery:</p> <p>MS/MSD Upper % Recovery Limits:</p> <p>MS/MSD Lower % Recovery Limits:</p>		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
<p>Sample I.D.:</p> <p>Sample MS I.D.:</p> <p>Sample MSD I.D.:</p> <p>Sample Matrix Spike Result:</p> <p>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):</p> <p>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):</p> <p>Duplicate Numerical Performance Indicator:</p> <p>(Based on the Percent Recoveries) MS/MSD Duplicate RPD:</p> <p>MS/MSD Duplicate Status vs Numerical Indicator:</p> <p>MS/MSD Duplicate Status vs RPD:</p> <p>% RPD Limit:</p>

Chlorine

NAM 10/16/2020

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 10/14/2020
Worklist: 56680
Matrix: WT

Method Blank Assessment	
MB Sample ID	2021120
MB concentration:	0.336
MB 2 Sigma CSU:	0.463
MB MDC:	0.993
MB Numerical Performance Indicator:	1.42
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSD (Y or N)?	Y
Count Date:	10/16/2020	LCSD56680	10/16/2020
Spike I.D.:	20-030	20-030	20-030
Decay Corrected Spike Concentration (pCi/mL):	38.004	38.004	38.004
Volume Used (mL):	0.10	0.10	0.10
Aliquot Volume (L, g, F):	0.814	0.821	0.821
Target Conc. (pCi/L, g, F):	4.668	4.627	4.627
Uncertainty (Calculated):	0.229	0.227	0.227
Result (pCi/L, g, F):	3.950	4.745	4.745
LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):	0.924	1.105	1.105
Numerical Performance Indicator:	-1.48	102.54%	102.54%
Percent Recovery:	84.63%	N/A	N/A
Status vs Numerical Indicator:	N/A	Pass	Pass
Status vs Recovery:	Pass	135%	135%
Upper % Recovery Limits:	135%	60%	60%
Lower % Recovery Limits:	60%		

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.	
Sample I.D.:	LCS56680		
Duplicate Sample I.D.:	LCSD56680		
Sample Result (pCi/L, g, F):	3.950		
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.924		
Sample Duplicate Result (pCi/L, g, F):	4.745		
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.105		
Are sample and/or duplicate results below RL?	NO		
Duplicate Numerical Performance Indicator:	-1.082		
Duplicate Percent Recoveries:	19.14%		
Duplicate Status vs Numerical Indicator:	Pass		
Duplicate Status vs RPD:	Pass		
% RPD Limit:	36%		

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

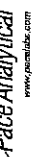
Handwritten signature/initials

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): MS Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): MSD Aliquot (L, g, F): MSD Target Conc. (pCi/L, g, F): MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated):		
Sample Result: Sample Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Result: Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): MS Numerical Performance Indicator: MSD Numerical Performance Indicator:		
MS Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D. Sample MS I.D. Sample MSD I.D. Sample Matrix Spike Result: Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): Duplicate Numerical Performance Indicator: (Based on the Percent Recoveries) MS/MSD Duplicate RPD: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPD: % RPD Limit:

Handwritten date: 10/16/2020

Quality Control Sample Performance Assessment



Test: Ra-228
Analyst: VAL
Date: 10/14/2020
Worklist: 56681
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2021121
MB concentration:	0.180
M/B 2 Sigma CSU:	0.316
MB MDC:	0.690
MB Numerical Performance Indicator:	1.12
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSID (Y or N)?	N
		LCS56681	LCS56681
Count Date:	10/21/2020		
Spike I.D.:	20-030		
Decay Corrected Spike Concentration (pCi/mL):	37.943		
Volume Used (mL):	0.10		
Aliquot Volume (L, g, F):	0.812		
Target Conc. (pCi/L, g, F):	4.670		
Uncertainty (Calculated):	0.229		
Result (pCi/L, g, F):	4.367		
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.004		
Numerical Performance Indicator:	-0.58		
Percent Recovery:	93.51%		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	Pass		
Upper % Recovery Limits:	135%		
Lower % Recovery Limits:	60%		

Duplicate Sample Assessment	
Sample I.D.:	92498068019
Duplicate Sample I.D.:	92498068019DUP
Sample Result (pCi/L, g, F):	2.028
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.646
Sample Duplicate Result (pCi/L, g, F):	2.044
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.603
Are sample and/or duplicate results below RL?	
Duplicate Numerical Performance Indicator:	-0.036
Duplicate RPD:	0.80%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Handwritten signature and date: 10-22-20

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date: Sample I.D. Sample MS I.D. Sample, MSD I.D. Spike I.D.: MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): Spike Volume Used in MSD (mL): MS Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): MSD Aliquot (L, g, F): MSD Target Conc. (pCi/L, g, F): MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated):		
Sample Result: Sample Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Result: Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): MS Numerical Performance Indicator: MSD Numerical Performance Indicator: MS Percent Recovery: MSD Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D. Sample MS I.D. Sample, MSD I.D. Sample Matrix Spike Result: Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): Duplicate Numerical Performance Indicator: Duplicate Numerical Performance Indicator (Based on the Percent Recoveries) MS/MSD Duplicate RPD: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPD: % RPD Limit:

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 10/14/2020
Worklist: 56682
Matrix: WT



Method Blank Assessment	
MB Sample ID	2021122
MB Concentration:	0.318
MB 2 Sigma CSU:	0.365
MB MDC:	0.768
MB Numerical Performance Indicator:	1.70
MB Status vs. Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSID (Y or N)?	
	LCS56682	Y
Count Date:	10/21/2020	LCS56682
Spike I.D.:	20-030	10/21/2020
Decay Corrected Spike Concentration (pCi/mL):	37.943	37.943
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.813	0.813
Target Conc. (pCi/L, g, F):	4.669	4.670
Uncertainty (Calculated):	0.229	0.229
Result (pCi/L, g, F):	4.756	5.987
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.070	1.314
Numerical Performance Indicator:	0.16	1.93
Percent Recovery:	101.86%	128.20%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

Duplicate Sample Assessment	
Sample I.D.:	LCS56682
Duplicate Sample I.D.:	LCS56682
Sample Result (pCi/L, g, F):	4.756
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.070
Sample Duplicate Result (pCi/L, g, F):	5.987
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.314
Ave sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-1.424
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	22.90%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Handwritten signature/initials

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.: MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): Spike Volume Used in MSD (mL): MS Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): MSD Aliquot (L, g, F): MSD Target Conc. (pCi/L, g, F): MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated):		
Sample Result: Sample Result 2 Sigma CSU (pCi/L, g, F): Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Result: Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): MS Numerical Performance Indicator: MSD Numerical Performance Indicator: MS Percent Recovery: MSD Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D. Sample MS I.D. Sample MSD I.D. Sample Matrix Spike Result: Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): Duplicate Numerical Performance Indicator: (Based on the Percent Recoveries) MS/MSD Duplicate RPD: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPD: % RPD Limit:

October 19, 2020

Joju Abraham
Georgia Power-CCR
2480 Maner Road
Atlanta, GA 30339

RE: Project: GRUMMAN ROAD SEMI ANNUAL FILT.
Pace Project No.: 92498079

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between September 30, 2020 and October 02, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

This report was revised 10/15/20 to change the reportable units for Ca to mg/L per client request.

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

Sincerely,



Tyler Forney for
Kevin Herring
kevin.herring@pacelabs.com
1(704)875-9092
HORIZON Database Administrator

Enclosures

cc: Owens Fuquea, ACC
Kristen Jurinko
Matt Malone, Atlantic Coast Consulting
Betsy McDaniel, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Ms. Lauren Petty, Southern Co. Services



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: GRUMMAN ROAD SEMI ANNUAL FILT.

Pace Project No.: 92498079

Pace Analytical Services Charlotte

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

Louisiana/NELAP Certification # LA170028

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Virginia/VELAP Certification #: 460221

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, 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: GRUMMAN ROAD SEMI ANNUAL FILT.

Pace Project No.: 92498079

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92498079001	GWA-7 FILTERED	Water	09/28/20 15:20	09/30/20 11:47
92498079002	GWB-5R FILTERED	Water	09/30/20 17:30	10/02/20 12:22

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD SEMI ANNUAL FILT.

Pace Project No.: 92498079

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92498079001	GWA-7 FILTERED	EPA 6010D	DRB	1
		EPA 6020B	CW1	15
92498079002	GWB-5R FILTERED	EPA 6010D	DRB	1
		EPA 6020B	CW1	15

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD SEMI ANNUAL FILT.

Pace Project No.: 92498079

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92498079001	GWA-7 FILTERED					
	Performed by	CUSTOME			09/30/20 15:08	
		R				
	pH	5.86	Std. Units		09/30/20 15:08	
EPA 6010D	Calcium, Dissolved	3.0	mg/L	1.0	10/06/20 18:57	
EPA 6020B	Antimony, Dissolved	0.0020J	mg/L	0.015	10/02/20 16:41	D3
EPA 6020B	Barium, Dissolved	0.079	mg/L	0.050	10/02/20 16:41	
EPA 6020B	Boron, Dissolved	4.6	mg/L	0.20	10/02/20 16:41	
EPA 6020B	Chromium, Dissolved	0.010J	mg/L	0.050	10/02/20 16:41	D3
EPA 6020B	Lead, Dissolved	0.00019J	mg/L	0.025	10/02/20 16:41	D3
EPA 6020B	Selenium, Dissolved	0.014J	mg/L	0.050	10/02/20 16:41	D3
EPA 6020B	Vanadium, Dissolved	0.10	mg/L	0.050	10/02/20 16:41	
EPA 6020B	Zinc, Dissolved	0.084	mg/L	0.050	10/02/20 16:41	
92498079002	GWB-5R FILTERED					
	Performed by	CUSTOME			10/02/20 15:06	
		R				
	pH	4.99	Std. Units		10/02/20 15:06	
EPA 6010D	Calcium, Dissolved	66.3	mg/L	1.0	10/06/20 19:16	
EPA 6020B	Arsenic, Dissolved	0.0014J	mg/L	0.0050	10/07/20 20:12	
EPA 6020B	Barium, Dissolved	0.15	mg/L	0.010	10/07/20 20:12	
EPA 6020B	Boron, Dissolved	3.9	mg/L	0.040	10/07/20 20:12	
EPA 6020B	Chromium, Dissolved	0.00085J	mg/L	0.010	10/07/20 20:12	
EPA 6020B	Cobalt, Dissolved	0.00047J	mg/L	0.0050	10/07/20 20:12	
EPA 6020B	Vanadium, Dissolved	0.0025J	mg/L	0.010	10/07/20 20:12	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL FILT.

Pace Project No.: 92498079

Sample: GWA-7 FILTERED Lab ID: 92498079001 Collected: 09/28/20 15:20 Received: 09/30/20 11:47 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		09/30/20 15:08		
pH	5.86	Std. Units			1		09/30/20 15:08		
6010 MET ICP, Dissolved									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium, Dissolved	3.0	mg/L	1.0	0.070	1	10/05/20 15:44	10/06/20 18:57	7440-70-2	
6020 MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony, Dissolved	0.0020J	mg/L	0.015	0.0014	5	10/01/20 14:57	10/02/20 16:41	7440-36-0	D3
Arsenic, Dissolved	ND	mg/L	0.025	0.0039	5	10/01/20 14:57	10/02/20 16:41	7440-38-2	D3
Barium, Dissolved	0.079	mg/L	0.050	0.0036	5	10/01/20 14:57	10/02/20 16:41	7440-39-3	
Beryllium, Dissolved	ND	mg/L	0.015	0.00023	5	10/01/20 14:57	10/02/20 16:41	7440-41-7	D3
Boron, Dissolved	4.6	mg/L	0.20	0.026	5	10/01/20 14:57	10/02/20 16:41	7440-42-8	
Cadmium, Dissolved	ND	mg/L	0.012	0.00059	5	10/01/20 14:57	10/02/20 16:41	7440-43-9	D3
Chromium, Dissolved	0.010J	mg/L	0.050	0.0028	5	10/01/20 14:57	10/02/20 16:41	7440-47-3	D3
Cobalt, Dissolved	ND	mg/L	0.025	0.0019	5	10/01/20 14:57	10/02/20 16:41	7440-48-4	D3
Lead, Dissolved	0.00019J	mg/L	0.025	0.00018	5	10/01/20 14:57	10/02/20 16:41	7439-92-1	D3
Lithium, Dissolved	ND	mg/L	0.15	0.0040	5	10/01/20 14:57	10/02/20 16:41	7439-93-2	D3
Molybdenum, Dissolved	ND	mg/L	0.050	0.0034	5	10/01/20 14:57	10/02/20 16:41	7439-98-7	D3
Selenium, Dissolved	0.014J	mg/L	0.050	0.0078	5	10/01/20 14:57	10/02/20 16:41	7782-49-2	D3
Thallium, Dissolved	ND	mg/L	0.0050	0.00072	5	10/01/20 14:57	10/02/20 16:41	7440-28-0	D3
Vanadium, Dissolved	0.10	mg/L	0.050	0.011	5	10/01/20 14:57	10/02/20 16:41	7440-62-2	
Zinc, Dissolved	0.084	mg/L	0.050	0.011	5	10/01/20 14:57	10/02/20 16:41	7440-66-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD SEMI ANNUAL FILT.

Pace Project No.: 92498079

Sample: GWB-5R FILTERED **Lab ID: 92498079002** Collected: 09/30/20 17:30 Received: 10/02/20 12:22 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		10/02/20 15:06		
pH	4.99	Std. Units			1		10/02/20 15:06		
6010 MET ICP, Dissolved									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium, Dissolved	66.3	mg/L	1.0	0.070	1	10/05/20 15:44	10/06/20 19:16	7440-70-2	
6020 MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony, Dissolved	ND	mg/L	0.0030	0.00028	1	10/07/20 15:26	10/07/20 20:12	7440-36-0	
Arsenic, Dissolved	0.0014J	mg/L	0.0050	0.00078	1	10/07/20 15:26	10/07/20 20:12	7440-38-2	
Barium, Dissolved	0.15	mg/L	0.010	0.00071	1	10/07/20 15:26	10/07/20 20:12	7440-39-3	
Beryllium, Dissolved	ND	mg/L	0.0030	0.000046	1	10/07/20 15:26	10/07/20 20:12	7440-41-7	
Boron, Dissolved	3.9	mg/L	0.040	0.0052	1	10/07/20 15:26	10/07/20 20:12	7440-42-8	
Cadmium, Dissolved	ND	mg/L	0.0025	0.00012	1	10/07/20 15:26	10/07/20 20:12	7440-43-9	
Chromium, Dissolved	0.00085J	mg/L	0.010	0.00055	1	10/07/20 15:26	10/07/20 20:12	7440-47-3	
Cobalt, Dissolved	0.00047J	mg/L	0.0050	0.00038	1	10/07/20 15:26	10/07/20 20:12	7440-48-4	
Lead, Dissolved	ND	mg/L	0.0050	0.000036	1	10/07/20 15:26	10/07/20 20:12	7439-92-1	
Lithium, Dissolved	ND	mg/L	0.030	0.00081	1	10/07/20 15:26	10/07/20 20:12	7439-93-2	
Molybdenum, Dissolved	ND	mg/L	0.010	0.00069	1	10/07/20 15:26	10/07/20 20:12	7439-98-7	
Selenium, Dissolved	ND	mg/L	0.010	0.0016	1	10/07/20 15:26	10/07/20 20:12	7782-49-2	
Thallium, Dissolved	ND	mg/L	0.0010	0.00014	1	10/07/20 15:26	10/07/20 20:12	7440-28-0	
Vanadium, Dissolved	0.0025J	mg/L	0.010	0.0022	1	10/07/20 15:26	10/07/20 20:12	7440-62-2	
Zinc, Dissolved	ND	mg/L	0.010	0.0022	1	10/07/20 15:26	10/07/20 20:12	7440-66-6	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SEMI ANNUAL FILT.

Pace Project No.: 92498079

QC Batch: 570950	Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A	Analysis Description: 6010 MET Filtered Diss.
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92498079001, 92498079002

METHOD BLANK: 3024402 Matrix: Water

Associated Lab Samples: 92498079001, 92498079002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium, Dissolved	mg/L	ND	1.0	0.070	10/06/20 18:48	

LABORATORY CONTROL SAMPLE: 3024403

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium, Dissolved	mg/L	1	0.96J	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3024456 3024457

Parameter	Units	3024456		3024457		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium, Dissolved	mg/L	66.3	1	67.3	67.3	97	102	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SEMI ANNUAL FILT.
Pace Project No.: 92498079

QC Batch: 570318 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92498079001

METHOD BLANK: 3021080 Matrix: Water
Associated Lab Samples: 92498079001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	mg/L	ND	0.0030	0.00028	10/02/20 16:01	
Arsenic, Dissolved	mg/L	ND	0.0050	0.00078	10/02/20 16:01	
Barium, Dissolved	mg/L	ND	0.010	0.00071	10/02/20 16:01	
Beryllium, Dissolved	mg/L	ND	0.0030	0.000046	10/02/20 16:01	
Boron, Dissolved	mg/L	ND	0.040	0.0052	10/02/20 16:01	
Cadmium, Dissolved	mg/L	ND	0.0025	0.00012	10/02/20 16:01	
Chromium, Dissolved	mg/L	ND	0.010	0.00055	10/02/20 16:01	
Cobalt, Dissolved	mg/L	ND	0.0050	0.00038	10/02/20 16:01	
Lead, Dissolved	mg/L	ND	0.0050	0.000036	10/02/20 16:01	
Lithium, Dissolved	mg/L	ND	0.030	0.00081	10/02/20 16:01	
Molybdenum, Dissolved	mg/L	ND	0.010	0.00069	10/02/20 16:01	
Selenium, Dissolved	mg/L	ND	0.010	0.0016	10/02/20 16:01	
Thallium, Dissolved	mg/L	ND	0.0010	0.00014	10/02/20 16:01	
Vanadium, Dissolved	mg/L	ND	0.010	0.0022	10/02/20 16:01	
Zinc, Dissolved	mg/L	ND	0.010	0.0022	10/02/20 16:01	

LABORATORY CONTROL SAMPLE: 3021081

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	mg/L	0.1	0.098	98	80-120	
Arsenic, Dissolved	mg/L	0.1	0.096	96	80-120	
Barium, Dissolved	mg/L	0.1	0.098	98	80-120	
Beryllium, Dissolved	mg/L	0.1	0.096	96	80-120	
Boron, Dissolved	mg/L	1	0.96	96	80-120	
Cadmium, Dissolved	mg/L	0.1	0.097	97	80-120	
Chromium, Dissolved	mg/L	0.1	0.099	99	80-120	
Cobalt, Dissolved	mg/L	0.1	0.099	99	80-120	
Lead, Dissolved	mg/L	0.1	0.097	97	80-120	
Lithium, Dissolved	mg/L	0.1	0.098	98	80-120	
Molybdenum, Dissolved	mg/L	0.1	0.096	96	80-120	
Selenium, Dissolved	mg/L	0.1	0.090	90	80-120	
Thallium, Dissolved	mg/L	0.1	0.099	99	80-120	
Vanadium, Dissolved	mg/L	0.1	0.10	100	80-120	
Zinc, Dissolved	mg/L	0.1	0.098	98	80-120	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SEMI ANNUAL FILT.

Pace Project No.: 92498079

Parameter	Units	3021082		3021083		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		92497893001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Antimony, Dissolved	mg/L	ND	0.1	0.1	0.099	0.099	99	99	75-125	0	20	
Arsenic, Dissolved	mg/L	ND	0.1	0.1	0.094	0.097	94	97	75-125	3	20	
Barium, Dissolved	mg/L	30.4 ug/L	0.1	0.1	0.13	0.13	100	100	75-125	0	20	
Beryllium, Dissolved	mg/L	ND	0.1	0.1	0.096	0.098	95	98	75-125	2	20	
Boron, Dissolved	mg/L	ND	1	1	0.95	0.98	94	97	75-125	3	20	
Cadmium, Dissolved	mg/L	ND	0.1	0.1	0.098	0.097	98	97	75-125	0	20	
Chromium, Dissolved	mg/L	ND	0.1	0.1	0.10	0.10	102	102	75-125	0	20	
Cobalt, Dissolved	mg/L	ND	0.1	0.1	0.10	0.10	100	102	75-125	1	20	
Lead, Dissolved	mg/L	ND	0.1	0.1	0.096	0.095	96	95	75-125	1	20	
Lithium, Dissolved	mg/L	ND	0.1	0.1	0.11	0.11	96	100	75-125	3	20	
Molybdenum, Dissolved	mg/L	ND	0.1	0.1	0.099	0.099	99	99	75-125	0	20	
Selenium, Dissolved	mg/L	ND	0.1	0.1	0.091	0.095	90	93	75-125	4	20	
Thallium, Dissolved	mg/L	ND	0.1	0.1	0.098	0.097	98	97	75-125	1	20	
Vanadium, Dissolved	mg/L	ND	0.1	0.1	0.10	0.10	102	103	75-125	1	20	
Zinc, Dissolved	mg/L	ND	0.1	0.1	0.11	0.11	98	100	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SEMI ANNUAL FILT.

Project No.: 92498079

QC Batch: 571522	Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A	Analysis Description: 6020 MET Dissolved
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92498079002

METHOD BLANK: 3026976 Matrix: Water

Associated Lab Samples: 92498079002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	mg/L	0.00029J	0.0030	0.00028	10/07/20 17:53	
Arsenic, Dissolved	mg/L	ND	0.0050	0.00078	10/07/20 17:53	
Barium, Dissolved	mg/L	ND	0.010	0.00071	10/07/20 17:53	
Beryllium, Dissolved	mg/L	ND	0.0030	0.000046	10/07/20 17:53	
Boron, Dissolved	mg/L	ND	0.040	0.0052	10/07/20 17:53	
Cadmium, Dissolved	mg/L	ND	0.0025	0.00012	10/07/20 17:53	
Chromium, Dissolved	mg/L	ND	0.010	0.00055	10/07/20 17:53	
Cobalt, Dissolved	mg/L	ND	0.0050	0.00038	10/07/20 17:53	
Lead, Dissolved	mg/L	ND	0.0050	0.000036	10/07/20 17:53	
Lithium, Dissolved	mg/L	ND	0.030	0.00081	10/07/20 17:53	
Molybdenum, Dissolved	mg/L	ND	0.010	0.00069	10/07/20 17:53	
Selenium, Dissolved	mg/L	ND	0.010	0.0016	10/07/20 17:53	
Thallium, Dissolved	mg/L	ND	0.0010	0.00014	10/07/20 17:53	
Vanadium, Dissolved	mg/L	ND	0.010	0.0022	10/07/20 17:53	
Zinc, Dissolved	mg/L	ND	0.010	0.0022	10/07/20 17:53	

METHOD BLANK: 3026985 Matrix: Water

Associated Lab Samples: 92498079002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	mg/L	ND	0.0030	0.00028	10/07/20 17:59	
Arsenic, Dissolved	mg/L	ND	0.0050	0.00078	10/07/20 17:59	
Barium, Dissolved	mg/L	ND	0.010	0.00071	10/07/20 17:59	
Beryllium, Dissolved	mg/L	ND	0.0030	0.000046	10/07/20 17:59	
Boron, Dissolved	mg/L	ND	0.040	0.0052	10/07/20 17:59	
Cadmium, Dissolved	mg/L	ND	0.0025	0.00012	10/07/20 17:59	
Chromium, Dissolved	mg/L	ND	0.010	0.00055	10/07/20 17:59	
Cobalt, Dissolved	mg/L	ND	0.0050	0.00038	10/07/20 17:59	
Lead, Dissolved	mg/L	ND	0.0050	0.000036	10/07/20 17:59	
Lithium, Dissolved	mg/L	ND	0.030	0.00081	10/07/20 17:59	
Molybdenum, Dissolved	mg/L	ND	0.010	0.00069	10/07/20 17:59	
Selenium, Dissolved	mg/L	ND	0.010	0.0016	10/07/20 17:59	
Thallium, Dissolved	mg/L	ND	0.0010	0.00014	10/07/20 17:59	
Vanadium, Dissolved	mg/L	ND	0.010	0.0022	10/07/20 17:59	
Zinc, Dissolved	mg/L	ND	0.010	0.0022	10/07/20 17:59	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SEMI ANNUAL FILT.

Pace Project No.: 92498079

LABORATORY CONTROL SAMPLE: 3026977

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	mg/L	0.1	0.11	109	80-120	
Arsenic, Dissolved	mg/L	0.1	0.099	99	80-120	
Barium, Dissolved	mg/L	0.1	0.097	97	80-120	
Beryllium, Dissolved	mg/L	0.1	0.099	99	80-120	
Boron, Dissolved	mg/L	1	0.97	97	80-120	
Cadmium, Dissolved	mg/L	0.1	0.098	98	80-120	
Chromium, Dissolved	mg/L	0.1	0.090	90	80-120	
Cobalt, Dissolved	mg/L	0.1	0.094	94	80-120	
Lead, Dissolved	mg/L	0.1	0.098	98	80-120	
Lithium, Dissolved	mg/L	0.1	0.099	99	80-120	
Molybdenum, Dissolved	mg/L	0.1	0.096	96	80-120	
Selenium, Dissolved	mg/L	0.1	0.097	97	80-120	
Thallium, Dissolved	mg/L	0.1	0.097	97	80-120	
Vanadium, Dissolved	mg/L	0.1	0.094	94	80-120	
Zinc, Dissolved	mg/L	0.1	0.096	96	80-120	

LABORATORY CONTROL SAMPLE: 3026986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	mg/L	0.1	0.11	111	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	0.10	102	80-120	
Boron, Dissolved	mg/L	1	1.0	103	80-120	
Cadmium, Dissolved	mg/L	0.1	0.099	99	80-120	
Chromium, Dissolved	mg/L	0.1	0.097	97	80-120	
Cobalt, Dissolved	mg/L	0.1	0.097	97	80-120	
Lead, Dissolved	mg/L	0.1	0.10	101	80-120	
Lithium, Dissolved	mg/L	0.1	0.10	100	80-120	
Molybdenum, Dissolved	mg/L	0.1	0.10	101	80-120	
Selenium, Dissolved	mg/L	0.1	0.098	98	80-120	
Thallium, Dissolved	mg/L	0.1	0.099	99	80-120	
Vanadium, Dissolved	mg/L	0.1	0.098	98	80-120	
Zinc, Dissolved	mg/L	0.1	0.095	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3026978 3026979

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		92498079002 Result	Spike Conc.	Spike Conc.	MSD Result							
Antimony, Dissolved	mg/L	ND	0.1	0.1	0.11	0.11	114	113	75-125	1	20	
Arsenic, Dissolved	mg/L	0.0014J	0.1	0.1	0.10	0.10	102	101	75-125	2	20	
Barium, Dissolved	mg/L	0.15	0.1	0.1	0.26	0.26	114	109	75-125	2	20	
Beryllium, Dissolved	mg/L	ND	0.1	0.1	0.096	0.094	96	94	75-125	2	20	
Boron, Dissolved	mg/L	3.9	1	1	5.0	4.9	110	99	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD SEMI ANNUAL FILT.

Pace Project No.: 92498079

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3026978												3026979	
Parameter	Units	92498079002 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual		
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD			
Cadmium, Dissolved	mg/L	ND	0.1	0.1	0.10	0.099	100	99	75-125	1	20		
Chromium, Dissolved	mg/L	0.00085J	0.1	0.1	0.099	0.10	98	102	75-125	4	20		
Cobalt, Dissolved	mg/L	0.00047J	0.1	0.1	0.098	0.097	98	96	75-125	2	20		
Lead, Dissolved	mg/L	ND	0.1	0.1	0.10	0.099	100	99	75-125	2	20		
Lithium, Dissolved	mg/L	ND	0.1	0.1	0.097	0.098	97	98	75-125	1	20		
Molybdenum, Dissolved	mg/L	ND	0.1	0.1	0.11	0.11	108	105	75-125	2	20		
Selenium, Dissolved	mg/L	ND	0.1	0.1	0.096	0.095	96	94	75-125	1	20		
Thallium, Dissolved	mg/L	ND	0.1	0.1	0.098	0.098	98	98	75-125	0	20		
Vanadium, Dissolved	mg/L	0.0025J	0.1	0.1	0.10	0.11	100	106	75-125	6	20		
Zinc, Dissolved	mg/L	ND	0.1	0.1	0.096	0.097	95	96	75-125	1	20		

SAMPLE DUPLICATE: 3026987

Parameter	Units	92497981005	Dup	RPD	Max	Qualifiers
		Result	Result		RPD	
Antimony, Dissolved	mg/L		ND		20	
Arsenic, Dissolved	mg/L	67.2 ug/L	0.068	1	20	
Barium, Dissolved	mg/L	100 ug/L	0.091		20	
Beryllium, Dissolved	mg/L		ND		20	
Boron, Dissolved	mg/L		0.96		20	
Cadmium, Dissolved	mg/L	ND	ND		20	
Chromium, Dissolved	mg/L	ND	ND		20	
Cobalt, Dissolved	mg/L		0.0029J		20	
Lead, Dissolved	mg/L	ND	ND		20	
Lithium, Dissolved	mg/L		0.0040J		20	
Molybdenum, Dissolved	mg/L		0.015		20	
Selenium, Dissolved	mg/L	ND	ND		20	
Thallium, Dissolved	mg/L		ND		20	
Vanadium, Dissolved	mg/L		ND		20	
Zinc, Dissolved	mg/L		0.0074J		20	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: GRUMMAN ROAD SEMI ANNUAL FILT.

Pace Project No.: 92498079

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GRUMMAN ROAD SEMI ANNUAL FILT.

Pace Project No.: 92498079

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92498079001	GWA-7 FILTERED				
92498079002	GWB-5R FILTERED				
92498079001	GWA-7 FILTERED	EPA 3010A	570950	EPA 6010D	570976
92498079002	GWB-5R FILTERED	EPA 3010A	570950	EPA 6010D	570976
92498079001	GWA-7 FILTERED	EPA 3005A	570318	EPA 6020B	570369
92498079002	GWB-5R FILTERED	EPA 3005A	571522	EPA 6020B	571615

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Face Analytical

Client Name: BA Power

WO#: **92498079**

Courier: Fed Ex UPS USPS Client Commercial Pace Oth:



Tracking #: _____

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

Packing Material: Bubble Wrap Bubble Bags None Other EZ:lock

Thermometer Used 230 Type of Ice: (Wet) Blue None Samples on ice, cooling process has begun

Cooler Temperature 3.7 Biological Tissue is Frozen: Yes No

Tamp should be above freezing to 6°C

Date and initials of person examining contents: CO

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>WT</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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>CO</u> 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 checked="" type="checkbox"/> No <input 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)



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
 Client Information: **GA POWER**
 Address: **Atlanta, GA**

Section B
 Required Project Information:
 Report To: **SCS CONTACTS**
 Copy To: **ACC CONTACTS**

Section C
 Invoice Information:
 Client: **SCS CONTACTS**
 Company Name: **SCIENTIFIC CO.**
 Address: **Grinnian Road - Semi-Annual**
 State: **GA**

Section B
 Required Project Information:
 Report To: **SCS CONTACTS**
 Copy To: **ACC CONTACTS**

Section C
 Invoice Information:
 Client: **SCS CONTACTS**
 Company Name: **SCIENTIFIC CO.**
 Address: **Grinnian Road - Semi-Annual**
 State: **GA**

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER COA

ITEM #	Section B Required Client Information	Valid Matrix Codes MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives		Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH=
				DATE	TIME			DATE	TIME				
1	SAMPLE ID (A-Z, 0-9, -) Sample IDs MUST BE UNIQUE	WT 6	GWA-7 Filtered	9-28-20	15:20	1	Unpreserved						02456679
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													

ADDITIONAL COMMENTS
 State note when the last sample for the event has been taken.

RELINQUISHED BY / AFFILIATION: **ACC** DATE: **9-30-20** TIME: **0945**

ACCEPTED BY / AFFILIATION: **MTC** DATE: **9-30-20** TIME: **0345**

Signature: **[Signature]**

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: **[Signature]**

SIGNATURE OF SAMPLER: **[Signature]**

DATE Signed (MM/DD/YYYY): **9/30/20**

Temp in °C

Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Sample Intact (Y/N)

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020 Rev 07, 15-Feb-2007



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 2 of 2

Section A Required Client Information:

Company: GA Power
 Address: Atlanta, GA
 Email To: SCS Contacts
 Phone: _____ Fax: _____
 Requested Due Date/TAT: 10 Day

Section B Required Project Information:

Report To: SCS Contacts
 Copy To: ACC Contacts
 Purchase Order No.: _____
 Project Name: Gunman Road - Semi-Annual
 Project Number: _____

Section C Invoice Information:

Attention: Southern Co.
 Company Name: _____
 Address: _____
 Site Code: _____
 Project: Kevin Herring
 Manager: _____
 Case Profile #: 2926-1

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER CCR
 Site Location: _____ STATE: GA

ITEM #	Section D Required Client Information SAMPLE ID (A-Z, 0-9, /,) Sample IDs MUST BE UNIQUE	VALID Matrix Codes MATRIX CODE DRAINAGE WATER DW WATER WW WASTE WATER WW PRODUCT P SOLID S OIL OL WIRE WP AIR AR OTHER OT TISSUE TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives		Analysis Test	Requested Analyte Filtered (Y/N)	Residual Chlorine (Y/N)	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)	
					COMPOSITE	COMPOSITE					H ₂ SO ₄	HNO ₃								HCl
1	6065R Filtered		W-6	G			9-20	1730		1										
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS: *lost sample tube*

REQUISITIONED BY / AFFILIATION: *Tyler Fullfill 10-2-20* DATE: *10-2-20* TIME: *12:22*

ACCEPTED BY / AFFILIATION: *Kevin Herring* DATE: _____ TIME: _____

SAMPLER NAME AND SIGNATURE: _____

PRINT Name of SAMPLER: *Kevin Herring* DATE Signed: *10-2-20*

SIGNATURE of SAMPLER: *Kevin Herring* DATE Signed: *10-2-20*

Temp in °C: _____

Received on Ice (Y/N): _____

Custody Sealed Cooler (Y/N): _____

Samples Intact (Y/N): _____

Temp in °C: _____

Received on Ice (Y/N): _____

Custody Sealed Cooler (Y/N): _____

Samples Intact (Y/N): _____

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-C-020Rev.07, 15-Feb-2007

LEVEL 2A LABORATORY DATA VALIDATIONS

Grumman Road

2nd Semi-Annual Event

September 2020

Georgia Power Company – Grumman Road

Quality Control Review of Analytical Data – September 2020

This narrative presents results of the Quality Control (QC) data review performed on analytical data submitted by Pace Analytical Services, Asheville, Atlanta, Charlotte, and Pittsburgh for groundwater samples collected at Grumman Road between September 28, 2020 and October 1, 2020. 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.

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 (USEPA 6010D), Inductively Coupled Plasma – Mass Spectrometry (USEPA Method 6020B), 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.

Field Precision: Field goals for precision were met, with the exceptions of Zinc on GWC-20 (92498084015) and Radium on GWC-12 (92498068006) and GWC-20 (92498068015) as described in the qualifications section below.

Accuracy: Laboratory goals for accuracy were met, with the exception of Fluoride in SDG 92498084. The Fluoride matrix spike (MS) and matrix spike duplicate (MSD) recoveries on GWC-14 (92498084008) that were outside criteria are 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 (92498084008) was qualified as estimated (J) for Fluoride as the associated MS and MSD recoveries were below QC criteria (82% and 81% below the range of 90-110).
- Samples GWC-12 (92498088006) and DUP-1 (92498086011) were qualified as estimated (J) for Radium-226 and Radium-228 as the field relative percent differences (RPD) exceeded QC criteria (62.42% and 120.72%, respectively, above limit of 20).
- Samples GWC-20 (92498084015) and DUP-2 (92498084018) were qualified as estimated (J) for Zinc as the field RPD exceeded QC criteria (113.33% above limit of 20).
- Samples GWC-20 (92498086015) and DUP-2 (92498086018) were qualified as estimated (J) for Radium-228 as the field RPD exceeded QC criteria (43.25% above limit of 20).
- Certain Antimony results in SDG 92498084 were qualified as non-detect (ND) due to the analyte(s) being detected at a similar concentration in an associated blank sample. As shown in Table 2, when the original sample result was below the RL, the method detection limit (MDL) was raised to the sample result as part of the qualification process.
- Certain Radium results in SDG 92498068 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 September 28, 2020 and October 1, 2020 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 – September 2020

SDG	Field Identification	Collection Date	Lab Identification	Matrix	QC Samples	Analyses			
						Metals (6010D, 6020B)	Anions (300.0)	TDS (SM 2540C)	Radium-226/-228 (9315, 9320)
498084	GWA-7	9/28/2020	92498084001	GW		X	X	X	
498068	GWA-7	9/28/2020	92498068001	GW					X
498084	GWC-13	9/28/2020	92498084002	GW		X	X	X	
498068	GWC-13	9/28/2020	92498068002	GW					X
498084	GWA-8	9/28/2020	92498084003	GW		X	X	X	
498068	GWA-8	9/28/2020	92498068003	GW					X
498084	GWC-1	9/28/2020	92498084004	GW		X	X	X	
498068	GWC-1	9/28/2020	92498068004	GW					X
498084	FB-1-9-28-20	9/28/2020	92498084005	WQ	FB	X	X	X	
498068	FB-1-9-28-20	9/28/2020	92498068005	WQ	FB				X
498084	GWC-12	9/29/2020	92498084006	GW		X	X	X	
498068	GWC-12	9/29/2020	92498068006	GW					X
498084	GWC-11	9/29/2020	92498084007	GW		X	X	X	
498068	GWC-11	9/29/2020	92498068007	GW					X
498084	GWC-14	9/29/2020	92498084008	GW		X	X	X	
498068	GWC-14	9/29/2020	92498068008	GW					X
498084	GWC-2	9/29/2020	92498084009	GW		X	X	X	
498068	GWC-2	9/29/2020	92498068009	GW					X
498084	EB-1-9-29-20	9/29/2020	92498084010	WQ	EB	X	X	X	
498068	EB-1-9-29-20	9/29/2020	92498068010	WQ	EB				X
498084	DUP-1	9/29/2020	92498084011	GW	FD (GWC-12)	X	X	X	
498068	DUP-1	9/29/2020	92498074011	GW	FD (GWC-12)				X
498084	GWC-21	9/30/2020	92498084012	GW		X	X	X	
498068	GWC-21	9/30/2020	92498068012	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 – September 2020

SDG	Field Identification	Collection Date	Lab Identification	Matrix	QC Samples	Analyses			
						Metals (6010D, 6020B)	Anions (300.0)	TDS (SM 2540C)	Radium-226/-228 (9315, 9320)
498084	GWC-15	9/30/2020	92498084013	GW		X	X	X	
498068	GWC-15	9/30/2020	92498068013	GW					X
498084	GWC-16	9/30/2020	92498084014	GW		X	X	X	
498068	GWC-16	9/30/2020	92498068014	GW					X
498084	GWC-20	9/30/2020	92498084015	GW		X	X	X	
498068	GWC-20	9/30/2020	92498068015	GW					X
498084	GWB-4R	10/1/2020	92498084016	GW		X	X	X	
498068	GWB-4R	10/1/2020	92498068016	GW					X
498084	EB-2-9-30-20	9/30/2020	92498084017	WQ	EB	X	X	X	
498068	EB-2-9-30-20	9/30/2020	92498068017	WQ	EB				X
498084	DUP-2	9/30/2020	92498084018	GW	FD (GWC-20)	X	X	X	
498068	DUP-2	9/30/2020	92498068018	GW	FD (GWC-20)				X
498084	GWC-17	9/30/2020	92498084019	GW		X	X	X	
498068	GWC-17	9/30/2020	92498068019	GW					X
498084	GWC-22	9/30/2020	92498084020	GW		X	X	X	
498068	GWC-22	9/30/2020	92498068020	GW					X
498084	GWB-6R	9/30/2020	92498084021	GW		X	X	X	
498068	GWB-6R	9/30/2020	92498068021	GW					X
498084	GWB-5R	9/30/2020	92498084022	GW		X	X	X	
498068	GWB-5R	9/30/2020	92498068022	GW					X
498084	FB-2-9-30-20	9/30/2020	92498084023	WQ	FB	X	X	X	
498068	FB-2-9-30-20	9/30/2020	92498068023	WQ	FB				X
498084	GWC-9	10/1/2020	92498084024	GW		X	X	X	
498068	GWC-9	10/1/2020	92498068024	GW					X
498079	GWA-7 Filtered	9/28/2020	92498079001	GW		X			
498079	GWB-5R Filtered	9/30/2020	92498079002	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 – September 2020

SDG	Field Identification	Constituent	New RL	New MDL or MDC	Qualifier	Reason
498084	GWC-14	Fluoride			J	MS/MSD outside QC criteria
498084	GWC-21	Antimony		0.00033	ND	Blank detection
498084	GWC-22	Antimony		0.0016	ND	Blank detection
498084	GWB-6R	Antimony		0.00059	ND	Blank detection
498084	GWB-5R	Antimony		0.0003	ND	Blank detection
498084	GWC-20	Zinc			J	RPD exceeds field goal
498084	DUP-2	Zinc			J	RPD exceeds field goal
498086	GWC-12	Radium-226			J	RPD exceeds field goal
498086	DUP-1	Radium-226			J	RPD exceeds field goal
498086	GWC-12	Radium-228			J	RPD exceeds field goal
498086	DUP-1	Radium-228			J	RPD exceeds field goal
498086	GWC-20	Radium-228			J	RPD exceeds field goal
498086	DUP-2	Radium-228			J	RPD exceeds field goal
498086	GWA-7	Radium-226		0.964	ND	Blank detection
498086	GWA-7	Radium-228		1.06	ND	Blank detection
498086	GWC-13	Radium-226		0.373	ND	Blank detection
498086	GWA-8	Radium-226		0.425	ND	Blank detection
498086	GWC-1	Radium-226		0.460	ND	Blank detection
498086	GWC-12	Radium-226		0.495	ND	Blank detection
498086	GWC-12	Radium-228		0.942	ND	Blank detection
498086	GWC-11	Radium-226		0.428	ND	Blank detection
498086	GWC-11	Radium-228		0.851	ND	Blank detection
498086	GWC-14	Radium-226		0.431	ND	Blank detection
498086	GWC-14	Radium-228		0.960	ND	Blank detection
498086	GWC-2	Radium-226		0.494	ND	Blank detection
498086	GWC-2	Radium-228		0.853	ND	Blank detection
498086	GWC-21	Radium-226		0.501	ND	Blank detection
498086	GWC-21	Radium-228		0.993	ND	Blank detection
498086	GWC-15	Radium-226		0.518	ND	Blank detection
498086	GWC-15	Radium-228		0.848	ND	Blank detection
498086	GWC-16	Radium-228		0.789	ND	Blank detection
498086	GWC-20	Radium-228		0.795	ND	Blank detection
498086	GWB-4R	Radium-228		0.721	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
TDS – Total Dissolved Solids

Qualifiers:

J – Estimated Result
ND – Non-Detect Result

TABLE 2 (continued)

Georgia Power Company – Grumman Road

Qualifier Summary Table – September 2020

SDG	Field Identification	Constituent	New RL	New MDL or MDC	Qualifier	Reason
498086	GWC-17	Radium-226		0.493	ND	Blank detection
498086	GWC-17	Radium-228		0.939	ND	Blank detection
498086	GWC-22	Radium-226		0.485	ND	Blank detection
498086	GWC-22	Radium-226		1.08	ND	Blank detection
498086	GWB-6R	Radium-226		0.521	ND	Blank detection
498086	GWB-6R	Radium-226		1.28	ND	Blank detection
498086	GWB-5R	Radium-228		0.494	ND	Blank detection
498086	GWB-5R	Radium-226		1.03	ND	Blank detection
498086	GWC-9	Radium-226		0.488	ND	Blank detection
498086	GWC-9	Radium-228		1.72	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
 TDS – Total Dissolved Solids

Qualifiers:

J – Estimated Result
 ND – Non-Detect Result

Low-Flow Test Report:

Test Date / Time: 9/28/2020 2:55:11 PM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: GWA-7 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 16.1 ft Total Depth: 21.1 ft Initial Depth to Water: 5.16 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 19 ft Estimated Total Volume Pumped: 5.625 liter Flow Cell Volume: 90 ml Final Flow Rate: 225 ml/min Final Draw Down: 4.5 in	Instrument Used: Aqua TROLL 400 Serial Number: 714293
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Test Notes:

Cloudy, 70s, sample time- 1520

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 5	+/- 300	+/- 0.3	
9/28/2020 2:55 PM	00:00	5.97 pH	21.37 °C	0.69 µS/cm	9.05 mg/L		140.0 mV	5.16 ft	225.00 ml/min
9/28/2020 3:00 PM	05:00	5.85 pH	25.38 °C	1,544.8 µS/cm	0.15 mg/L	28.00 NTU	95.8 mV	5.50 ft	225.00 ml/min
9/28/2020 3:05 PM	10:00	5.86 pH	25.81 °C	1,558.7 µS/cm	0.07 mg/L	49.00 NTU	79.6 mV	5.50 ft	225.00 ml/min
9/28/2020 3:10 PM	15:00	5.86 pH	25.90 °C	1,567.3 µS/cm	0.05 mg/L	66.00 NTU	69.2 mV	5.50 ft	225.00 ml/min
9/28/2020 3:15 PM	20:00	5.86 pH	26.04 °C	1,583.9 µS/cm	0.05 mg/L	72.00 NTU	61.2 mV	5.50 ft	225.00 ml/min
9/28/2020 3:20 PM	25:00	5.86 pH	25.88 °C	1,586.5 µS/cm	0.05 mg/L	129.00 NTU	54.4 mV	5.50 ft	225.00 ml/min

Samples

Sample ID:	Description:
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Product Name: Low-Flow System

Date: 2020-09-28 16:05:04

Project Information:

Operator Name Taylor Goble
Company Name Atlantic Coast Consulting
Project Name Grumman Road
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 601533
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peristaltic Pump
Tubing Type poly
Tubing Diameter 0.10 in
Tubing Length 21 ft
Pump placement from TOC 19 ft

Well Information:

Well ID GWA-8
Well diameter 2 in
Well Total Depth 20.90 ft
Screen Length 5 ft
Depth to Water 6.14 ft

Pumping Information:

Final Pumping Rate 230 mL/min
Total System Volume 0.1233332 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 24 in
Total Volume Pumped 9.2 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Last 5	15:44:06	1200.03	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 20
Last 5	15:49:06	1500.03	4.65	273.44	1.19	7.87	0.28	77.87
Last 5	15:54:06	1800.03	4.50	295.02	1.61	7.92	0.18	77.70
Last 5	15:59:08	2102.03	4.43	305.44	1.33	8.03	0.13	75.19
Last 5	16:04:08	2402.03	4.41	312.21	0.99	8.19	0.18	72.55
Variance 0		-0.04	4.40	314.39	1.23	8.30	0.19	70.36
Variance 1		-0.22	-0.07	10.42			-0.05	-2.50
Variance 2		-0.22	-0.02	6.77			0.05	-2.64
		-0.01	-0.01	2.18			0.01	-2.19

Notes

Sampled at 1604. Mostly cloudy 83 degrees

Grab Samples

Product Name: Low-Flow System

Date: 2020-10-01 08:51:03

Project Information:

Operator Name Taylor Goble
 Company Name Atlantic Coast Consulting
 Project Name Grumman Road
 Site Name Grumman Road
 Latitude 0° 0' 0"
 Longitude 0° 0' 0"
 Sonde SN 601533
 Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peristaltic Pump
 Tubing Type poly
 Tubing Diameter 0.10 in
 Tubing Length 27 ft
 Pump placement from TOC 22 ft

Well Information:

Well ID GWB-4R
 Well diameter 2 in
 Well Total Depth 26.95 ft
 Screen Length 10 ft
 Depth to Water 14.11 ft

Pumping Information:

Final Pumping Rate 130 mL/min
 Total System Volume 0.1325998 L
 Calculated Sample Rate 300 sec
 Stabilization Drawdown 2 in
 Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 20
Last 5 08:30:18	600.03	21.76	5.74	627.13	3.74	14.37	0.11	67.89
Last 5 08:35:18	900.03	21.77	5.74	625.33	3.67	14.37	0.11	64.29
Last 5 08:40:18	1200.03	21.84	5.74	622.02	3.60	14.37	0.11	62.54
Last 5 08:45:18	1500.03	21.86	5.74	622.84	3.51	14.37	0.11	60.46
Last 5 08:50:18	1800.03	21.99	5.75	621.71	3.55	14.37	0.11	58.38
Variance 0		0.07	0.00	-3.31			-0.01	-1.75
Variance 1		0.02	0.00	0.81			0.00	-2.08
Variance 2		0.13	0.00	-1.13			0.00	-2.09

Notes

Sampled at 0850. Sunny 60 degrees. Extended purge

Grab Samples

Low-Flow Test Report:

Test Date / Time: 9/30/2020 4:20:06 PM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: GWB-5R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 21.5 ft Total Depth: 26.5 ft Initial Depth to Water: 8.67 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 24 ft Estimated Total Volume Pumped: 14 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 6.4 in	Instrument Used: Aqua TROLL 400 Serial Number: 714293
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Test Notes:

Sunny, 70s, sample time-1730

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 5	+/- 300	+/- 0.3	
9/30/2020 4:20 PM	00:00	5.80 pH	39.87 °C	2.86 µS/cm	5.98 mg/L		100.1 mV	8.67 ft	200.00 ml/min
9/30/2020 4:25 PM	05:00	5.09 pH	27.00 °C	826.44 µS/cm	0.27 mg/L	44.00 NTU	36.7 mV	8.90 ft	200.00 ml/min
9/30/2020 4:30 PM	10:00	5.06 pH	26.24 °C	843.85 µS/cm	0.16 mg/L	32.00 NTU	39.7 mV	9.10 ft	200.00 ml/min
9/30/2020 4:35 PM	15:00	5.03 pH	26.15 °C	843.90 µS/cm	0.13 mg/L	36.00 NTU	40.8 mV	9.10 ft	200.00 ml/min
9/30/2020 4:40 PM	20:00	5.11 pH	26.14 °C	806.15 µS/cm	0.12 mg/L	38.00 NTU	40.5 mV	9.20 ft	200.00 ml/min
9/30/2020 4:45 PM	25:00	5.07 pH	26.07 °C	811.49 µS/cm	0.11 mg/L	35.00 NTU	41.0 mV	9.20 ft	200.00 ml/min
9/30/2020 4:50 PM	30:00	5.05 pH	26.04 °C	817.67 µS/cm	0.10 mg/L	39.00 NTU	41.2 mV	9.20 ft	200.00 ml/min
9/30/2020 4:55 PM	35:00	5.04 pH	26.06 °C	818.14 µS/cm	0.10 mg/L	41.00 NTU	41.2 mV	9.20 ft	200.00 ml/min
9/30/2020 5:00 PM	40:00	5.03 pH	26.03 °C	816.32 µS/cm	0.09 mg/L	44.00 NTU	41.2 mV	9.20 ft	200.00 ml/min
9/30/2020 5:05 PM	45:00	5.03 pH	25.99 °C	816.98 µS/cm	0.09 mg/L	45.00 NTU	41.1 mV	9.20 ft	200.00 ml/min
9/30/2020 5:10 PM	50:00	5.02 pH	25.91 °C	819.10 µS/cm	0.08 mg/L	47.00 NTU	41.2 mV	9.20 ft	200.00 ml/min
9/30/2020 5:15 PM	55:00	5.01 pH	25.79 °C	818.21 µS/cm	0.08 mg/L	49.00 NTU	41.3 mV	9.20 ft	200.00 ml/min
9/30/2020 5:20 PM	01:00:00	5.00 pH	25.79 °C	820.56 µS/cm	0.07 mg/L	48.00 NTU	41.3 mV	9.20 ft	200.00 ml/min
9/30/2020 5:25 PM	01:05:00	5.00 pH	25.70 °C	820.62 µS/cm	0.07 mg/L	45.00 NTU	41.2 mV	9.20 ft	200.00 ml/min
9/30/2020 5:30 PM	01:10:00	4.99 pH	25.62 °C	819.01 µS/cm	0.07 mg/L	47.00 NTU	41.2 mV	9.20 ft	200.00 ml/min

Low-Flow Test Report:

Test Date / Time: 9/30/2020 3:05:08 PM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: GWB-6R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 17.7 ft Total Depth: 22.7 ft Initial Depth to Water: 6 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 20 ft Estimated Total Volume Pumped: 6 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 2.4 in	Instrument Used: Aqua TROLL 400 Serial Number: 714293
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Test Notes:

Sunny, 70s, sample time- 1535, FB-2-9-30-20 at 1525

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 5	+/- 300	+/- 0.3	
9/30/2020 3:05 PM	00:00	5.41 pH	27.43 °C	1,093.3 µS/cm	0.20 mg/L		15.3 mV	6.00 ft	200.00 ml/min
9/30/2020 3:10 PM	05:00	5.40 pH	26.61 °C	1,123.8 µS/cm	0.08 mg/L	20.00 NTU	14.8 mV	6.20 ft	200.00 ml/min
9/30/2020 3:15 PM	10:00	5.41 pH	26.68 °C	1,130.1 µS/cm	0.06 mg/L	5.47 NTU	15.4 mV	6.20 ft	200.00 ml/min
9/30/2020 3:20 PM	15:00	5.39 pH	26.70 °C	1,093.2 µS/cm	0.04 mg/L	4.12 NTU	13.6 mV	6.20 ft	200.00 ml/min
9/30/2020 3:25 PM	20:00	5.38 pH	26.73 °C	1,085.5 µS/cm	0.04 mg/L	3.55 NTU	13.7 mV	6.20 ft	200.00 ml/min
9/30/2020 3:30 PM	25:00	5.39 pH	26.79 °C	1,096.2 µS/cm	0.03 mg/L	2.83 NTU	14.7 mV	6.20 ft	200.00 ml/min
9/30/2020 3:35 PM	30:00	5.39 pH	26.76 °C	1,096.2 µS/cm	0.03 mg/L	1.88 NTU	15.7 mV	6.20 ft	200.00 ml/min

Samples

Sample ID:	Description:
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Product Name: Low-Flow System

Date: 2020-09-28 17:10:44

Project Information:

Operator Name Taylor Goble
Company Name Atlantic Coast Consulting
Project Name Grumman Road
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 601533
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peristaltic Pump
Tubing Type poly
Tubing Diameter 0.10 in
Tubing Length 28 ft
Pump placement from TOC 26 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 28.10 ft
Screen Length 5 ft
Depth to Water 18.28 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.1341442 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 20
Last 5	16:48:56	24.01	5.66	501.60	1.12	18.38	0.18	99.06
Last 5	16:53:56	23.97	5.77	523.12	0.67	18.39	0.15	93.88
Last 5	16:58:56	24.01	5.78	524.76	0.61	18.41	0.13	92.40
Last 5	17:03:56	24.39	5.78	537.82	0.50	18.43	0.17	92.44
Last 5	17:08:56	24.24	5.79	519.74	0.55	18.44	0.15	90.40
Variance 0		0.04	0.01	1.64			-0.02	-1.48
Variance 1		0.37	0.00	13.05			0.04	0.03
Variance 2		-0.15	0.01	-18.08			-0.02	-2.03

Notes

Sampled at 1708. Mostly cloudy 82 degrees

Grab Samples

Low-Flow Test Report:

Test Date / Time: 9/29/2020 3:25:30 PM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: GWC-2 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 26.4 ft Total Depth: 31.4 ft Initial Depth to Water: 18 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 28 ft Estimated Total Volume Pumped: 6 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 2.4 in	Instrument Used: Aqua TROLL 400 Serial Number: 714293
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Test Notes:

Cloudy, 70s, sample time -1555

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 5	+/- 300	+/- 0.3	
9/29/2020 3:25 PM	00:00	6.01 pH	32.11 °C	0.48 µS/cm	7.16 mg/L		146.5 mV	18.00 ft	200.00 ml/min
9/29/2020 3:30 PM	05:00	4.66 pH	26.65 °C	50.98 µS/cm	0.52 mg/L	1.14 NTU	114.8 mV	18.20 ft	200.00 ml/min
9/29/2020 3:35 PM	10:00	4.60 pH	24.67 °C	51.25 µS/cm	0.22 mg/L	1.22 NTU	120.2 mV	18.20 ft	200.00 ml/min
9/29/2020 3:40 PM	15:00	4.60 pH	24.34 °C	51.96 µS/cm	0.14 mg/L	0.98 NTU	122.3 mV	18.20 ft	200.00 ml/min
9/29/2020 3:45 PM	20:00	4.59 pH	24.15 °C	51.73 µS/cm	0.12 mg/L	1.02 NTU	121.4 mV	18.20 ft	200.00 ml/min
9/29/2020 3:50 PM	25:00	4.60 pH	23.71 °C	51.67 µS/cm	0.11 mg/L	1.07 NTU	119.7 mV	18.20 ft	200.00 ml/min
9/29/2020 3:55 PM	30:00	4.60 pH	23.54 °C	51.44 µS/cm	0.11 mg/L	1.11 NTU	118.2 mV	18.20 ft	200.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 9/30/2020 6:06:02 PM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: GWC-9 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 20.7 ft Total Depth: 25.7 ft Initial Depth to Water: 7.07 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 25 ft Estimated Total Volume Pumped: 12.5 liter Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 18.43 ft	Instrument Used: Aqua TROLL 400 Serial Number: 714293
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Test Notes:

Purged dry, allow for overnight recharge

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 5	+/- 300	+/- 0.3	
9/30/2020 6:06 PM	00:00	5.40 pH	32.41 °C	3.44 µS/cm	6.65 mg/L		132.5 mV	7.07 ft	250.00 ml/min
9/30/2020 6:11 PM	05:00	4.53 pH	23.21 °C	170.05 µS/cm	0.45 mg/L	14.00 NTU	26.2 mV	9.20 ft	250.00 ml/min
9/30/2020 6:16 PM	10:00	4.46 pH	22.71 °C	170.99 µS/cm	0.17 mg/L	11.00 NTU	25.8 mV	11.80 ft	250.00 ml/min
9/30/2020 6:21 PM	15:00	4.51 pH	22.59 °C	168.24 µS/cm	0.13 mg/L	5.21 NTU	25.9 mV	13.40 ft	250.00 ml/min
9/30/2020 6:26 PM	20:00	4.56 pH	22.45 °C	167.33 µS/cm	0.12 mg/L	4.28 NTU	26.2 mV	15.00 ft	250.00 ml/min
9/30/2020 6:31 PM	25:00	4.60 pH	22.40 °C	167.20 µS/cm	0.11 mg/L	6.93 NTU	26.1 mV	16.50 ft	250.00 ml/min
9/30/2020 6:36 PM	30:00	4.62 pH	22.36 °C	167.59 µS/cm	0.11 mg/L	5.12 NTU	26.5 mV	18.00 ft	250.00 ml/min
9/30/2020 6:41 PM	35:00	4.63 pH	22.33 °C	167.65 µS/cm	0.11 mg/L	4.98 NTU	26.7 mV	20.20 ft	250.00 ml/min
9/30/2020 6:46 PM	40:00	4.63 pH	22.33 °C	167.54 µS/cm	0.16 mg/L	4.44 NTU	26.8 mV	22.30 ft	250.00 ml/min
9/30/2020 6:51 PM	45:00	4.59 pH	22.36 °C	166.55 µS/cm	0.30 mg/L	4.95 NTU	27.8 mV	24.00 ft	250.00 ml/min
9/30/2020 6:56 PM	50:00	4.60 pH	22.30 °C	165.69 µS/cm	1.01 mg/L	4.47 NTU	30.0 mV	25.50 ft	250.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 10/1/2020 8:01:07 AM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: GWC-9 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 20.7 ft Total Depth: 25.7 ft Initial Depth to Water: 7.86 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 25 ft Estimated Total Volume Pumped: 2.7 liter Flow Cell Volume: 90 ml Final Flow Rate: 135 ml/min Final Draw Down: 36.4 in	Instrument Used: Aqua TROLL 400 Serial Number: 714293
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Test Notes:

Sunny, 70s, sample time-0821.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 5	+/- 300	+/- 0.3	
10/1/2020 8:01 AM	00:00	7.73 pH	16.65 °C	13.66 µS/cm	9.56 mg/L		243.2 mV	7.86 ft	135.00 ml/min
10/1/2020 8:06 AM	05:00	4.64 pH	18.17 °C	157.19 µS/cm	1.47 mg/L	15.00 NTU	104.9 mV	9.10 ft	135.00 ml/min
10/1/2020 8:11 AM	10:00	4.43 pH	19.02 °C	154.20 µS/cm	0.43 mg/L	4.81 NTU	95.8 mV	9.70 ft	135.00 ml/min
10/1/2020 8:16 AM	15:00	4.40 pH	19.24 °C	153.40 µS/cm	0.30 mg/L	2.22 NTU	94.8 mV	10.30 ft	135.00 ml/min
10/1/2020 8:21 AM	20:00	4.42 pH	19.68 °C	153.50 µS/cm	0.25 mg/L	1.60 NTU	93.7 mV	10.90 ft	135.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 9/29/2020 10:30:16 AM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: GWC-11 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 17.55 ft Total Depth: 22.55 ft Initial Depth to Water: 11.2 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 20 ft Estimated Total Volume Pumped: 14.3 liter Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 39.6 in	Instrument Used: Aqua TROLL 400 Serial Number: 714293
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Test Notes:

Sunny, 80s, sample time-1220

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 5	+/- 300	+/- 0.3	
9/29/2020 10:30 AM	00:00	3.96 pH	29.58 °C	1.72 µS/cm	7.33 mg/L		133.4 mV	11.20 ft	130.00 ml/min
9/29/2020 10:35 AM	05:00	4.99 pH	26.40 °C	129.76 µS/cm	1.24 mg/L	1.15 NTU	78.5 mV	11.90 ft	130.00 ml/min
9/29/2020 10:40 AM	10:00	5.00 pH	25.00 °C	133.58 µS/cm	0.37 mg/L	1.18 NTU	81.8 mV	12.40 ft	130.00 ml/min
9/29/2020 10:45 AM	15:00	5.00 pH	24.86 °C	134.42 µS/cm	0.34 mg/L	1.31 NTU	83.7 mV	12.70 ft	130.00 ml/min
9/29/2020 10:50 AM	20:00	5.00 pH	24.68 °C	135.97 µS/cm	0.30 mg/L	1.20 NTU	84.5 mV	13.20 ft	130.00 ml/min
9/29/2020 10:55 AM	25:00	4.96 pH	24.61 °C	166.88 µS/cm	0.27 mg/L	1.22 NTU	91.8 mV	13.50 ft	130.00 ml/min
9/29/2020 11:00 AM	30:00	4.88 pH	24.72 °C	344.99 µS/cm	0.23 mg/L	1.47 NTU	103.5 mV	13.70 ft	130.00 ml/min
9/29/2020 11:05 AM	35:00	4.84 pH	24.68 °C	584.64 µS/cm	0.21 mg/L	1.80 NTU	115.7 mV	14.00 ft	130.00 ml/min
9/29/2020 11:10 AM	40:00	4.83 pH	24.62 °C	677.53 µS/cm	0.21 mg/L	1.75 NTU	119.2 mV	14.10 ft	130.00 ml/min
9/29/2020 11:15 AM	45:00	4.80 pH	24.61 °C	849.21 µS/cm	0.18 mg/L	1.97 NTU	125.0 mV	14.10 ft	130.00 ml/min
9/29/2020 11:20 AM	50:00	4.82 pH	24.49 °C	886.12 µS/cm	0.22 mg/L	1.88 NTU	125.1 mV	14.20 ft	130.00 ml/min
9/29/2020 11:25 AM	55:00	4.81 pH	24.34 °C	941.80 µS/cm	0.21 mg/L	1.73 NTU	127.5 mV	14.20 ft	130.00 ml/min
9/29/2020 11:30 AM	01:00:00	4.80 pH	24.29 °C	1,035.9 µS/cm	0.20 mg/L	1.43 NTU	129.8 mV	14.30 ft	130.00 ml/min
9/29/2020 11:35 AM	01:05:00	4.79 pH	24.25 °C	1,110.0 µS/cm	0.20 mg/L	1.59 NTU	131.7 mV	14.40 ft	130.00 ml/min
9/29/2020 11:40 AM	01:10:00	4.79 pH	24.16 °C	1,174.8 µS/cm	0.19 mg/L	1.32 NTU	133.8 mV	14.40 ft	130.00 ml/min

9/29/2020 11:45 AM	01:15:00	4.78 pH	24.29 °C	1,257.3 µS/cm	0.19 mg/L	1.30 NTU	135.9 mV	14.50 ft	130.00 ml/min
9/29/2020 11:50 AM	01:20:00	4.80 pH	24.68 °C	1,185.2 µS/cm	0.23 mg/L	1.29 NTU	134.7 mV	14.50 ft	130.00 ml/min
9/29/2020 11:55 AM	01:25:00	4.79 pH	25.26 °C	1,330.1 µS/cm	0.20 mg/L	1.49 NTU	136.7 mV	14.50 ft	130.00 ml/min
9/29/2020 12:00 PM	01:30:00	4.77 pH	25.76 °C	1,557.3 µS/cm	0.14 mg/L	1.51 NTU	140.9 mV	14.50 ft	130.00 ml/min
9/29/2020 12:05 PM	01:35:00	4.78 pH	25.72 °C	1,561.7 µS/cm	0.15 mg/L	1.22 NTU	141.4 mV	14.50 ft	130.00 ml/min
9/29/2020 12:10 PM	01:40:00	4.77 pH	25.39 °C	1,712.2 µS/cm	0.17 mg/L	1.20 NTU	144.0 mV	14.50 ft	130.00 ml/min
9/29/2020 12:15 PM	01:45:00	4.77 pH	25.41 °C	1,734.4 µS/cm	0.14 mg/L	1.19 NTU	145.2 mV	14.50 ft	130.00 ml/min
9/29/2020 12:20 PM	01:50:00	4.77 pH	25.76 °C	1,727.7 µS/cm	0.15 mg/L	1.29 NTU	145.3 mV	14.50 ft	130.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 9/29/2020 9:11:16 AM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: GWC-12 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 21.7 ft Total Depth: 26.7 ft Initial Depth to Water: 11.08 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 23 ft Estimated Total Volume Pumped: 5 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 5 in	Instrument Used: Aqua TROLL 400 Serial Number: 714293
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Test Notes:

Sunny, 70s, sample time-0935, DUP-1 here

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 5	+/- 300	+/- 0.3	
9/29/2020 9:11 AM	00:00	7.28 pH	24.56 °C	24.71 µS/cm	8.32 mg/L		221.2 mV	11.08 ft	200.00 ml/min
9/29/2020 9:16 AM	05:00	3.90 pH	24.51 °C	623.29 µS/cm	0.31 mg/L	1.92 NTU	83.5 mV	11.40 ft	200.00 ml/min
9/29/2020 9:20 AM	09:19	3.94 pH	24.38 °C	615.16 µS/cm	0.18 mg/L	1.35 NTU	81.2 mV	11.50 ft	200.00 ml/min
9/29/2020 9:25 AM	14:19	3.96 pH	24.41 °C	611.93 µS/cm	0.13 mg/L	0.96 NTU	81.9 mV	11.50 ft	200.00 ml/min
9/29/2020 9:30 AM	19:19	3.96 pH	24.15 °C	613.44 µS/cm	0.11 mg/L	0.72 NTU	82.9 mV	11.50 ft	200.00 ml/min
9/29/2020 9:35 AM	24:19	3.95 pH	23.99 °C	615.46 µS/cm	0.10 mg/L	0.45 NTU	83.4 mV	11.50 ft	200.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 9/28/2020 4:00:30 PM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: GWC-13 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 19.1 ft Total Depth: 24.1 ft Initial Depth to Water: 12.43 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 22 ft Estimated Total Volume Pumped: 10 liter Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 5.6 in	Instrument Used: Aqua TROLL 400 Serial Number: 714293
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Test Notes:

Cloudy, 70s, sample time-1640

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 5	+/- 300	+/- 0.3	
9/28/2020 4:00 PM	00:00	6.90 pH	25.42 °C	5.39 µS/cm	7.58 mg/L		82.0 mV	12.43 ft	250.00 ml/min
9/28/2020 4:05 PM	05:00	5.74 pH	25.79 °C	54.87 µS/cm	3.76 mg/L	4.38 NTU	53.9 mV	12.90 ft	250.00 ml/min
9/28/2020 4:10 PM	10:00	5.70 pH	25.33 °C	54.32 µS/cm	3.14 mg/L	2.89 NTU	61.8 mV	12.90 ft	250.00 ml/min
9/28/2020 4:15 PM	15:00	5.69 pH	24.99 °C	53.93 µS/cm	2.66 mg/L	3.02 NTU	65.3 mV	12.90 ft	250.00 ml/min
9/28/2020 4:20 PM	20:00	5.66 pH	24.89 °C	55.70 µS/cm	2.28 mg/L	3.28 NTU	67.1 mV	12.90 ft	250.00 ml/min
9/28/2020 4:25 PM	25:00	5.09 pH	24.90 °C	84.90 µS/cm	1.05 mg/L	3.33 NTU	55.8 mV	12.90 ft	250.00 ml/min
9/28/2020 4:30 PM	30:00	4.84 pH	24.93 °C	101.58 µS/cm	0.39 mg/L	3.29 NTU	42.1 mV	12.90 ft	250.00 ml/min
9/28/2020 4:35 PM	35:00	4.79 pH	24.83 °C	104.61 µS/cm	0.24 mg/L	1.22 NTU	36.7 mV	12.90 ft	250.00 ml/min
9/28/2020 4:40 PM	40:00	4.76 pH	24.70 °C	101.87 µS/cm	0.16 mg/L	0.97 NTU	34.5 mV	12.90 ft	250.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 9/29/2020 2:06:59 PM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: GWC-14 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 22 ft Total Depth: 27 ft Initial Depth to Water: 18.44 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 25 ft Estimated Total Volume Pumped: 7 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 4.3 in	Instrument Used: Aqua TROLL 400 Serial Number: 714293
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Test Notes:

Sunny, 70s, sample time-1442

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 5	+/- 300	+/- 0.3	
9/29/2020 2:06 PM	00:00	5.53 pH	25.97 °C	262.19 µS/cm	1.34 mg/L		122.1 mV	18.44 ft	200.00 ml/min
9/29/2020 2:11 PM	05:00	5.66 pH	23.84 °C	275.20 µS/cm	1.26 mg/L	1.49 NTU	124.9 mV	18.80 ft	200.00 ml/min
9/29/2020 2:16 PM	10:00	5.68 pH	23.52 °C	279.00 µS/cm	1.04 mg/L	1.52 NTU	126.2 mV	18.80 ft	200.00 ml/min
9/29/2020 2:21 PM	15:00	5.68 pH	23.61 °C	281.55 µS/cm	0.89 mg/L	1.39 NTU	126.5 mV	18.80 ft	200.00 ml/min
9/29/2020 2:26 PM	20:00	5.69 pH	23.53 °C	282.09 µS/cm	0.78 mg/L	1.11 NTU	126.6 mV	18.80 ft	200.00 ml/min
9/29/2020 2:31 PM	25:00	5.68 pH	23.39 °C	282.60 µS/cm	0.72 mg/L	1.25 NTU	126.9 mV	18.80 ft	200.00 ml/min
9/29/2020 2:36 PM	30:00	5.69 pH	23.35 °C	284.52 µS/cm	0.68 mg/L	0.89 NTU	127.1 mV	18.80 ft	200.00 ml/min
9/29/2020 2:41 PM	35:00	5.69 pH	23.37 °C	283.94 µS/cm	0.67 mg/L	0.74 NTU	127.2 mV	18.80 ft	200.00 ml/min

Samples

Sample ID:	Description:
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Product Name: Low-Flow System

Date: 2020-09-30 12:31:23

Project Information:

Operator Name Taylor Goble
Company Name Atlantic Coast Consulting
Project Name Grumman Road
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 601533
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peristaltic Pump
Tubing Type poly
Tubing Diameter 0.10 in
Tubing Length 27 ft
Pump placement from TOC 25 ft

Well Information:

Well ID GWC-15
Well diameter 2 in
Well Total Depth 26.80 ft
Screen Length 5 ft
Depth to Water 18.64 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.1325998 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 4.5 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 20
Last 5	12:10:15	25.24	6.72	642.28	2.33	18.85	0.16	76.25
Last 5	12:15:15	25.13	6.72	642.26	1.79	18.85	0.11	78.63
Last 5	12:20:15	25.19	6.71	643.30	1.61	18.85	0.10	80.88
Last 5	12:25:15	25.22	6.71	642.98	1.33	18.85	0.09	83.21
Last 5	12:30:15	25.14	6.71	642.36	3.03	18.85	0.08	85.03
Variance 0		0.06	-0.01	1.04			-0.01	2.25
Variance 1		0.03	-0.00	-0.32			-0.01	2.33
Variance 2		-0.07	0.00	-0.62			-0.01	1.81

Notes

Sampled at 1230. Sunny 72 degrees

Grab Samples

Product Name: Low-Flow System

Date: 2020-09-30 14:01:45

Project Information:

Operator Name Taylor Goble
Company Name Atlantic Coast Consulting
Project Name Grumman Road
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 601533
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peristaltic Pump
Tubing Type poly
Tubing Diameter 0.10 in
Tubing Length 28 ft
Pump placement from TOC 26 ft

Well Information:

Well ID GWC-16
Well diameter 2 in
Well Total Depth 28.20 ft
Screen Length 5 ft
Depth to Water 19.87 ft

Pumping Information:

Final Pumping Rate 125 mL/min
Total System Volume 0.1341442 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 5.6 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Last 5	13:40:29	1500.64	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 20
Last 5	13:45:29	1800.64	5.32	1377.38	4.88	20.07	1.80	109.53
Last 5	13:50:29	2100.64	5.37	1430.80	4.65	20.07	1.55	107.17
Last 5	13:55:29	2400.64	5.41	1466.64	5.40	20.07	1.41	106.62
Last 5	14:00:29	2700.64	5.44	1497.73	4.88	20.07	1.33	106.20
Variance 0			5.47	1519.11	4.44	20.07	1.27	105.64
Variance 1			0.04	35.84			-0.14	-0.55
Variance 2			0.03	31.09			-0.08	-0.42
			0.02	21.37			-0.05	-0.55

Notes

Sampled at 1400. Sunny 75 degrees

Grab Samples

Low-Flow Test Report:

Test Date / Time: 9/30/2020 8:56:05 AM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: GWC-17 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 17.98 ft Total Depth: 22.98 ft Initial Depth to Water: 4.48 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 20 ft Estimated Total Volume Pumped: 34.2 liter Flow Cell Volume: 90 ml Final Flow Rate: 185 ml/min Final Draw Down: 19.4 in	Instrument Used: Aqua TROLL 400 Serial Number: 714293
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Test Notes:

Sunny, 70s, sample time-1200

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 5	+/- 300	+/- 0.3	
9/30/2020 8:56 AM	00:00	7.57 pH	20.59 °C	17.62 µS/cm	3.37 mg/L		219.5 mV	4.48 ft	185.00 ml/min
9/30/2020 9:00 AM	04:29	6.85 pH	22.17 °C	13.81 µS/cm	3.25 mg/L	35.00 NTU	208.6 mV	5.50 ft	185.00 ml/min
9/30/2020 9:05 AM	09:29	6.57 pH	23.42 °C	12.47 µS/cm	4.52 mg/L	11.00 NTU	203.6 mV	5.80 ft	185.00 ml/min
9/30/2020 9:10 AM	14:29	6.49 pH	23.99 °C	10.12 µS/cm	5.42 mg/L	3.75 NTU	195.2 mV	6.00 ft	185.00 ml/min
9/30/2020 9:15 AM	19:29	6.54 pH	24.74 °C	9.38 µS/cm	5.80 mg/L	2.37 NTU	196.7 mV	6.10 ft	185.00 ml/min
9/30/2020 9:20 AM	24:29	6.56 pH	25.47 °C	9.17 µS/cm	5.88 mg/L	3.98 NTU	197.0 mV	6.10 ft	185.00 ml/min
9/30/2020 9:25 AM	29:29	6.55 pH	26.08 °C	8.63 µS/cm	5.95 mg/L	15.00 NTU	197.8 mV	6.10 ft	185.00 ml/min
9/30/2020 9:30 AM	34:29	6.37 pH	26.56 °C	9.60 µS/cm	5.95 mg/L	30.00 NTU	202.8 mV	6.10 ft	185.00 ml/min
9/30/2020 9:35 AM	39:29	6.31 pH	27.12 °C	7.90 µS/cm	5.71 mg/L	3.61 NTU	189.8 mV	6.10 ft	185.00 ml/min
9/30/2020 9:40 AM	44:29	6.22 pH	27.58 °C	8.51 µS/cm	5.46 mg/L	5.11 NTU	195.3 mV	6.10 ft	185.00 ml/min
9/30/2020 9:45 AM	49:29	6.05 pH	27.99 °C	8.51 µS/cm	5.21 mg/L	4.09 NTU	185.4 mV	6.10 ft	185.00 ml/min
9/30/2020 9:50 AM	54:29	6.09 pH	28.29 °C	6.42 µS/cm	4.94 mg/L	5.03 NTU	167.3 mV	6.10 ft	185.00 ml/min
9/30/2020 9:55 AM	59:29	6.05 pH	28.69 °C	6.47 µS/cm	4.74 mg/L	4.96 NTU	158.4 mV	6.10 ft	185.00 ml/min
9/30/2020 10:00 AM	01:04:29	5.94 pH	29.12 °C	6.30 µS/cm	4.55 mg/L	4.70 NTU	124.2 mV	6.10 ft	185.00 ml/min
9/30/2020 10:05 AM	01:09:29	5.78 pH	29.42 °C	6.42 µS/cm	4.32 mg/L	4.88 NTU	90.7 mV	6.10 ft	185.00 ml/min

9/30/2020 10:10 AM	01:14:29	5.76 pH	29.77 °C	6.46 µS/cm	4.04 mg/L	5.21 NTU	69.1 mV	6.10 ft	185.00 ml/min
9/30/2020 10:15 AM	01:19:29	5.67 pH	30.01 °C	6.60 µS/cm	3.80 mg/L	5.05 NTU	56.7 mV	6.10 ft	185.00 ml/min
9/30/2020 10:20 AM	01:24:29	5.58 pH	30.26 °C	6.50 µS/cm	3.58 mg/L	4.99 NTU	50.3 mV	6.10 ft	185.00 ml/min
9/30/2020 10:25 AM	01:29:29	5.25 pH	30.46 °C	6.46 µS/cm	3.37 mg/L	6.21 NTU	47.1 mV	6.10 ft	185.00 ml/min
9/30/2020 10:30 AM	01:34:29	5.00 pH	30.61 °C	6.58 µS/cm	3.20 mg/L	5.39 NTU	45.3 mV	6.10 ft	185.00 ml/min
9/30/2020 10:35 AM	01:39:29	4.80 pH	30.78 °C	6.40 µS/cm	3.03 mg/L	5.21 NTU	43.9 mV	6.10 ft	185.00 ml/min
9/30/2020 10:40 AM	01:44:29	4.66 pH	31.01 °C	6.41 µS/cm	2.87 mg/L	5.11 NTU	44.5 mV	6.10 ft	185.00 ml/min
9/30/2020 10:45 AM	01:49:29	4.54 pH	31.25 °C	6.26 µS/cm	2.72 mg/L	7.21 NTU	41.1 mV	6.10 ft	185.00 ml/min
9/30/2020 10:50 AM	01:54:29	4.47 pH	31.50 °C	6.19 µS/cm	2.57 mg/L	13.00 NTU	38.8 mV	6.10 ft	185.00 ml/min
9/30/2020 10:55 AM	01:59:29	4.39 pH	31.64 °C	6.24 µS/cm	2.42 mg/L	14.00 NTU	39.4 mV	6.10 ft	185.00 ml/min
9/30/2020 11:00 AM	02:04:29	4.33 pH	31.78 °C	6.52 µS/cm	2.29 mg/L	4.33 NTU	40.5 mV	6.10 ft	185.00 ml/min
9/30/2020 11:05 AM	02:09:29	4.26 pH	31.92 °C	8.25 µS/cm	2.16 mg/L	18.00 NTU	42.8 mV	6.10 ft	185.00 ml/min
9/30/2020 11:10 AM	02:14:29	4.20 pH	31.97 °C	8.24 µS/cm	2.04 mg/L	16.00 NTU	43.7 mV	6.10 ft	185.00 ml/min
9/30/2020 11:15 AM	02:19:29	4.14 pH	31.80 °C	8.48 µS/cm	1.93 mg/L	15.00 NTU	45.0 mV	6.10 ft	185.00 ml/min
9/30/2020 11:20 AM	02:24:29	4.09 pH	31.50 °C	8.99 µS/cm	1.82 mg/L	14.00 NTU	46.6 mV	6.10 ft	185.00 ml/min
9/30/2020 11:25 AM	02:29:29	4.06 pH	31.00 °C	9.94 µS/cm	1.73 mg/L	11.00 NTU	48.1 mV	6.10 ft	185.00 ml/min
9/30/2020 11:30 AM	02:34:29	4.04 pH	30.53 °C	11.48 µS/cm	1.66 mg/L	9.89 NTU	50.8 mV	6.10 ft	185.00 ml/min
9/30/2020 11:35 AM	02:39:29	4.10 pH	30.24 °C	11.95 µS/cm	1.60 mg/L	9.91 NTU	50.9 mV	6.10 ft	185.00 ml/min
9/30/2020 11:40 AM	02:44:29	4.10 pH	30.11 °C	12.15 µS/cm	1.53 mg/L	9.65 NTU	50.4 mV	6.10 ft	185.00 ml/min
9/30/2020 11:45 AM	02:49:29	4.12 pH	30.17 °C	12.29 µS/cm	1.47 mg/L	9.55 NTU	49.5 mV	6.10 ft	185.00 ml/min
9/30/2020 11:50 AM	02:54:29	4.15 pH	30.47 °C	12.47 µS/cm	1.40 mg/L	9.22 NTU	48.7 mV	6.10 ft	185.00 ml/min
9/30/2020 11:55 AM	02:59:29	4.10 pH	31.00 °C	12.31 µS/cm	1.30 mg/L	7.94 NTU	47.6 mV	6.10 ft	185.00 ml/min
9/30/2020 12:00 PM	03:04:29	4.08 pH	31.44 °C	12.33 µS/cm	1.21 mg/L	8.23 NTU	46.2 mV	6.10 ft	185.00 ml/min

Samples

Sample ID:	Description:
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Product Name: Low-Flow System

Date: 2020-09-30 16:32:08

Project Information:

Operator Name Taylor Goble
Company Name Atlantic Coast Consulting
Project Name Grumman Road
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 601533
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peristaltic Pump
Tubing Type poly
Tubing Diameter 0.10 in
Tubing Length 25 ft
Pump placement from TOC 23 ft

Well Information:

Well ID GWC-20
Well diameter 2 in
Well Total Depth 24.90 ft
Screen Length 5 ft
Depth to Water 20.50 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.1295109 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5.7 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Last 5	16:11:08	1200.03	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 20
Last 5	16:16:08	1500.03	6.04	2147.67	1.15	20.87	0.11	63.89
Last 5	16:21:08	1800.03	6.04	2144.27	1.01	20.90	0.09	60.91
Last 5	16:26:08	2100.03	6.04	2148.95	0.97	20.92	0.08	58.93
Last 5	16:31:09	2400.84	6.04	2149.68	0.88	20.95	0.08	57.32
Variance 0		-0.13	0.00	2147.17	0.75	20.98	0.08	56.65
Variance 1		0.01	-0.00	4.68			-0.01	-1.98
Variance 2		0.02	0.00	0.73			-0.00	-1.61
				-2.52			0.00	-0.67

Notes

Sampled at 1631. Sunny 76 degrees

Grab Samples

Product Name: Low-Flow System

Date: 2020-09-30 10:50:02

Project Information:

Operator Name Taylor Goble
Company Name Atlantic Coast Consulting
Project Name Grumman Road
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 601533
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peristaltic Pump
Tubing Type poly
Tubing Diameter 0.10 in
Tubing Length 24 ft
Pump placement from TOC 22 ft

Well Information:

Well ID GWC-21
Well diameter 2 in
Well Total Depth 23.80 ft
Screen Length 5 ft
Depth to Water 19.83 ft

Pumping Information:

Final Pumping Rate 180 mL/min
Total System Volume 0.1279665 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.5 in
Total Volume Pumped 21.6 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Last 5	10:29:16	23.00	5.76	706.60	0.38	20.04	3.79	52.98
Last 5	10:34:16	22.86	5.79	736.35	0.46	20.04	3.76	50.96
Last 5	10:39:16	22.89	5.80	771.73	0.55	20.04	3.68	52.04
Last 5	10:44:16	23.08	5.80	786.52	0.76	20.04	3.61	55.70
Last 5	10:49:20	23.34	5.82	803.81	0.43	20.04	3.50	58.67
Variance 0		0.03	0.01	35.38			-0.08	1.08
Variance 1		0.19	-0.00	14.79			-0.08	3.66
Variance 2		0.26	0.02	17.29			-0.11	2.97

Notes

Sampled at 1049. Sunny 66 degrees

Grab Samples

Low-Flow Test Report:

Test Date / Time: 9/30/2020 1:35:21 PM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: GWC-22 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 13.6 ft Total Depth: 18.6 ft Initial Depth to Water: 6.95 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 15 ft Estimated Total Volume Pumped: 4.95 liter Flow Cell Volume: 90 ml Final Flow Rate: 165 ml/min Final Draw Down: 3 in	Instrument Used: Aqua TROLL 400 Serial Number: 714293
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Test Notes:

Sunny, 70s, sample time-1405

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 5	+/- 300	+/- 0.3	
9/30/2020 1:35 PM	00:00	4.91 pH	36.98 °C	5.82 µS/cm	5.38 mg/L		97.2 mV	6.95 ft	165.00 ml/min
9/30/2020 1:40 PM	05:00	4.81 pH	27.45 °C	172.76 µS/cm	0.34 mg/L	17.00 NTU	-47.1 mV	7.10 ft	165.00 ml/min
9/30/2020 1:45 PM	10:00	4.71 pH	26.79 °C	173.55 µS/cm	0.20 mg/L	11.00 NTU	-29.7 mV	7.20 ft	165.00 ml/min
9/30/2020 1:50 PM	15:00	4.68 pH	26.65 °C	182.78 µS/cm	0.17 mg/L	7.21 NTU	-19.8 mV	7.20 ft	165.00 ml/min
9/30/2020 1:55 PM	20:00	4.65 pH	26.63 °C	187.99 µS/cm	0.15 mg/L	5.05 NTU	-13.1 mV	7.20 ft	165.00 ml/min
9/30/2020 2:00 PM	25:00	4.64 pH	26.42 °C	191.55 µS/cm	0.13 mg/L	4.44 NTU	-8.7 mV	7.20 ft	165.00 ml/min
9/30/2020 2:05 PM	30:00	4.63 pH	26.50 °C	192.92 µS/cm	0.12 mg/L	4.03 NTU	-5.7 mV	7.20 ft	165.00 ml/min

Samples

Sample ID:	Description:
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Daily Instrument Calibration Log

SITE: Grumman Rd
TECHNICIAN: T. Groble

WATER LEVEL: Soilmat
WATER LEVEL S/N: 236986

INSTRUMENT S/N: 040821
INSTRUMENT TYPE: Smartroll
CAL. SOLUTIONS:
ID: pH 7 LOT #: 06D808 EXP. DATE: 4/22
ID: pH 4 LOT #: 06E141 EXP. DATE: 5/22
ID: pH 10 LOT #: 9GL648 EXP. DATE: 12/21
ID: ORP LOT #: 06D520 EXP. DATE: 1/21
ID: Cond LOT #: 06E438 EXP. DATE: 5/21
ID: _____ LOT #: _____ EXP. DATE: _____
ID: _____ LOT #: _____ EXP. DATE: _____

Calibration Date: 9-28-20
RDO: 100% sat. = 95.4%
PH: 4.00 = 4.90 7.00 = 7.61 10.00 = 10.60
CONDUCTIVITY: 1413 = 1342
ORP (mV) 240 = 197.3

Calibration Date: 9-29-20
RDO: 100% sat. = 92.2
PH: 4.00 = 4.92 7.00 = 7.75 10.00 = 10.71
CONDUCTIVITY: 1413 = 1382
ORP (mV) 240 = 189.1

Calibration Date: 9-30-20
RDO: 100% sat. = 91.2
PH: 4.00 = 4.96 7.00 = 7.66 10.00 = 10.54
CONDUCTIVITY: 1413 = 1408
ORP (mV) 240 =

Calibration Date: 10-1-20
RDO: 100% sat. = 91.2
PH: 4.00 = 4.99 7.00 = 7.64 10.00 = 10.55
CONDUCTIVITY: 1413 = 1427
ORP (mV) 240 = 203.0

Calibration Date: _____
RDO: 100% sat. = _____
PH: 4.00 = _____ 7.00 = _____ 10.00 = _____
CONDUCTIVITY: _____
ORP (mV) _____



Daily Instrument Calibration Log

SITE: Grumman Rd.
TECHNICIAN: T. Goble

INSTRUMENT S/N: 18090C069299
INSTRUMENT TYPE: HACH 2100Q
CAL. SOLUTION: 0 NTU - LOT # NA EXP. DATE: New DI water
10 NTU - LOT # A9268 EXP. DATE: 1/21
20 NTU - LOT # A9235 EXP. DATE: 12/26

Calibration Date: 9-26-20

Calibration Solution	Instrument Reading	
0.0	0.26	NTU
10.0	9.6	NTU
20.0	19.4	NTU

100 = 98.1
800 = 810

Calibration Date: 9-29-20

Calibration Solution	Instrument Reading	
0.0	0.31	NTU
10.0	9.7	NTU
20.0	19.5	NTU

100 = 101
800 = 807

Calibration Date: 9-30-20

Calibration Solution	Instrument Reading	
0.0	0.22	NTU
10.0	9.5	NTU
20.0	19.6	NTU

100 = 102
800 = 807

Calibration Date: 10-1-20

Calibration Solution	Instrument Reading	
0.0	0.27	NTU
10.0	9.6	NTU
20.0	19.4	NTU

100 = 104
800 = 810

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU



Daily Instrument Calibration Log

SITE: Grumman Rd
TECHNICIAN: Jordan Beardsall

WATER LEVEL: Seaford
WATER LEVEL S/N: 267304

INSTRUMENT S/N: 714293
INSTRUMENT TYPE: Smartroll
CAL. SOLUTIONS/ID: pH 4 LOT #: 060046 EXP. DATE: 4/22
pH 7 LOT #: 060808 EXP. DATE: 4/22
pH 10 LOT #: 962648 EXP. DATE: 12/21
CaCl2 LOT #: 061538 EXP. DATE: 5/21
ORP LOT #: 060520 EXP. DATE: 1/21
ID: _____ LOT #: _____ EXP. DATE: _____
ID: _____ LOT #: _____ EXP. DATE: _____

Calibration Date: 9/28/20
RDO: 100% sat. = 93.95
PH: 4.00 = 3.94 7.00 = 6.96 10.00 = 9.95
CONDUCTIVITY: 1447
ORP (mV) 229.3

Calibration Date: 9/29/20
RDO: 100% sat. = 105.8
PH: 4.00 = 4.15 7.00 = 7.09 10.00 = 10.06
CONDUCTIVITY: 1390
ORP (mV) 226.1

Calibration Date: 9/30/20
RDO: 100% sat. = 104.0
PH: 4.00 = 3.97 7.00 = 6.96 10.00 = 10.06
CONDUCTIVITY: 1371
ORP (mV) 243.6

Calibration Date: 10/1/20
RDO: 100% sat. = 99.09
PH: 4.00 = 4.01 7.00 = 7.05 10.00 = 10.06
CONDUCTIVITY: 1527
ORP (mV) 237.3

Calibration Date: _____
RDO: 100% sat. = _____
PH: 4.00 = _____ 7.00 = _____ 10.00 = _____
CONDUCTIVITY: _____
ORP (mV) _____



Daily Instrument Calibration Log

SITE: Grumman Rd.
 TECHNICIAN: J. Bensford

INSTRUMENT S/N: 63767
 INSTRUMENT TYPE: Htc4 2100
 CAL. SOLUTION: 0 NTU - LOT # NA EXP. DATE: New DI water
 10 NTU - LOT # A0136 EXP. DATE: Aug-21
 20 NTU - LOT # A0139 EXP. DATE: Aug-21

Calibration Date: 9/18/20

Calibration Solution	Instrument Reading	
0.0	0.39	NTU
10.0	9.71	NTU
20.0	20.4	NTU

Calibration Date: 9/29/20

Calibration Solution	Instrument Reading	
0.0	0.29	NTU
10.0	9.68	NTU
20.0	19.9	NTU

Calibration Date: 9/30/20

Calibration Solution	Instrument Reading	
0.0	0.22	NTU
10.0	9.74	NTU
20.0	19.9	NTU

Calibration Date: 10/1/20

Calibration Solution	Instrument Reading	
0.0	0.23	NTU
10.0	9.62	NTU
20.0	19.7	NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU



Facility Name: Grumman Rd Landfill
 Staff: J. Berisford, T. Goble
 Date: 9/22/2020

Permit No.: 025-061D(LI)

1 - Location/Identification		GWA-7	GWA-8	GWB-4R	GWB-5R	GWC-6R	GWC-1	GWC-2	GWC-9	GWC-10	GWC-11
a	Is the well visible and accessible?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the well properly identified with the correct well ID?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well require protection from traffic?	No	No	No	No	No	No	No	No	No	No
d	Is the drainage around the well acceptable? (No standing water, nor is well located in obvious drainage flow path)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes



Facility Name: Grumman Rd Landfill
 Staff: J. Berisford, T. Goble
 Date: 9/22/2020

Permit No.: 025-061D(LI)

2 - Protective Outer Casing		GWA-7	GWA-8	GWB-4R	GWB-5R	GWB-6R	GWC-1	GWC-2	GWC-9	GWC-10	GWC-11
a	Is the protective casing free from apparent damage?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of degradation or deterioration?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the casing have a functioning weep hole?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the annular space between casings filled with pea gravel or sand?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the well locked, and is the lock in good working condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes



Facility Name: Grumman Rd Landfill
 Staff: J. Berisford, T. Goble
 Date: 9/22/2020

Permit No.: 025-061D(LI)

3 - Surface Pad		GWA-7	GWA-8	GWB-4R	GWB-5R	GWB-6R	GWC-1	GWC-2	GWC-9	GWC-10	GWC-11
a	Is the well pad in good condition? (Not cracked or broken)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Does the well pad provide adequate surface seal and stability to the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Is the well pad in complete contact with the protective casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the well pad in complete contact with the ground surface? (Not undermined by erosion, animal burrows, and does not move when stepped on)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the pad surface clean? (Not covered by soil or debris)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes



Facility Name: Grumman Rd Landfill
 Staff: J. Berisford, T. Goble
 Date: 9/22/2020

Permit No.: 025-061D(LI)

4 - Internal Well Casing		GWA-7	GWA-8	GWB-4R	GWB-5R	GWB-6R	GWC-1	GWC-2	GWC-9	GWC-10	GWC-11
a	Does the well cap prevent entry of foreign material into the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers) ?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well have a venting hole near the top of casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the survey point clearly marked on the inner casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the depth of the well consistent with the original well log?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
f	Does the PVC casing move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction?	No	No	No	No	No	No	No	No	No	No



Facility Name: Grumman Rd Landfill
 Staff: J. Berisford, T. Goble
 Date: 9/22/2020

Permit No.: 025-061D(LI)

5 - Sampling (Groundwater Monitoring Wells Only):

	GWA-7	GWA-8	GWB-4R	GWB-5R	GWB-6R	GWC-1	GWC-2	GWC-9	GWC-10	GWC-11
a	Does the well recharge adequately when purged? Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	If dedicated sampling equipment is installed, is it in good condition? N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
c	Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs? No	No	No	No	No	No	No	No	No	No

Note: N/A - Not Applicable

6 - Based on your professional judgment, is the well construction / location appropriate to:

	GWA-7	GWA-8	GWB-4R	GWB-5R	GWB-6R	GWC-1	GWC-2	GWC-9	GWC-10	GWC-11
1) achieve the objectives of the facility Groundwater Monitoring Program, and 2) comply with the applicable regulatory requirements? Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

7 - Corrective actions completed and Notes:

- 1) GWC-9: Corner of pad damaged; minimal, small repair done
- 2) GWC-12 and GWC-13 : Standing water around well due to very heavy rains; usually not an issue
- 3) GWC-14: Well pad has small movement if stepped on: will keep monitoring for future developments or repair needs.
- 4) GWC-17: Crack in middle of well pad; small repair done, will monitor and consider if future replacement could be needed.



Facility Name: Grumman Rd Landfill
 Staff: J. Berisford, T. Goble
 Date: 9/22/2020

Permit No.: 025-061D(LI)

1 - Location/Identification		GWC-12	GWC-13	GWC-14	GWC-15	GWC16	GWC-17	GWC-20	GWC-21	GWC-22
a	Is the well visible and accessible?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the well properly identified with the correct well ID?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well require protection from traffic?	No	No	No	No	No	No	No	No	No
d	Is the drainage around the well acceptable? (No standing water, nor is well located in obvious drainage flow path)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes



Facility Name: Grumman Rd Landfill
 Staff: J. Berisford, T. Goble
 Date: 9/22/2020

Permit No.: 025-061D(LI)

2 - Protective Outer Casing		GWC-12	GWC-13	GWC-14	GWC-15	GWC16	GWC-17	GWC-20	GWC-21	GWC-22
a	Is the protective casing free from apparent damage?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of degradation or deterioration?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the casing have a functioning weep hole?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the annular space between casings filled with pea gravel or sand?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the well locked, and is the lock in good working condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes



Facility Name: Grumman Rd Landfill
 Staff: J. Berisford, T. Goble
 Date: 9/22/2020

Permit No.: 025-061D(LI)

3 - Surface Pad		GWC-12	GWC-13	GWC-14	GWC-15	GWC16	GWC-17	GWC-20	GWC-21	GWC-22
a	Is the well pad in good condition? (Not cracked or broken)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Does the well pad provide adequate surface seal and stability to the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Is the well pad in complete contact with the protective casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the well pad in complete contact with the ground surface? (Not undermined by erosion, animal burrows, and does not move when stepped on)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the pad surface clean? (Not covered by soil or debris)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes



Facility Name: Grumman Rd Landfill
 Staff: J. Berisford, T. Goble
 Date: 9/22/2020

Permit No.: 025-061D(LI)

4 - Internal Well Casing		GWC-12	GWC-13	GWC-14	GWC-15	GWC16	GWC-17	GWC-20	GWC-21	GWC-22
a	Does the well cap prevent entry of foreign material into the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of kinks or bends, or any obstruction from foreign objects (such as ballers) ?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well have a venting hole near the top of casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the survey point clearly marked on the inner casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the depth of the well consistent with the original well log?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
f	Does the PVC casing move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction?	No	No	No	No	No	No	No	No	No



Facility Name: Grumman Rd Landfill
 Staff: J. Berisford, T. Goble
 Date: 9/22/2020

Permit No.: 025-061D(LI)

5 - Sampling (Groundwater Monitoring Wells Only):

	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16	GWC-17	GWC-20	GWC-21	GWC-22
a	Does the well recharge adequately when purged?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	If dedicated sampling equipment is installed, is it in good condition?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
c	Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs?	No	No	No	No	No	No	No	No

Note: N/A - Not Applicable

6 - Based on your professional judgment, is the well construction / location appropriate to:

	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16	GWC-17	GWC-20	GWC-21	GWC-22
1) achieve the objectives of the facility Groundwater Monitoring Program, and 2) comply with the applicable regulatory requirements?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

7 - Corrective actions completed and Notes:

- 1) GWC-9: Corner of pad damaged; repaired.
- 2) GWC-12 and GWC-13 : Standing water around well due to very heavy rains; usually not an issue.
- 3) GWC-14: Well pad has slight movement if stepped on; stabilized. Continue to monitor for future developments or repair needs.
- 4) GWC-17: Crack in middle of well pad; resealed. Consider future pad replacement.

January 27, 2021

Joju Abraham
Georgia Power-CCR
2480 Maner Road
Atlanta, GA 30339

RE: Project: GRUMMAN ROAD
Pace Project No.: 92517999

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on January 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

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

Sincerely,



Kevin Herring
kevin.herring@pacelabs.com
1(704)875-9092
HORIZON Database Administrator

Enclosures

cc: Owens Fuquea, ACC
Kristen Jurinko
Matt Malone, Atlantic Coast Consulting
Betsy McDaniel, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Ms. Lauren Petty, Southern Co. Services



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: GRUMMAN ROAD

Pace Project No.: 92517999

Pace Analytical Services Charlotte

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078
Louisiana/NELAP Certification # LA170028
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: GRUMMAN ROAD

Pace Project No.: 92517999

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92517999001	MW-23D	Water	01/21/21 09:45	01/22/21 09:41
92517999002	MW-24D	Water	01/21/21 13:10	01/22/21 09:41
92517999003	MW-25D	Water	01/20/21 10:50	01/22/21 09:41
92517999004	MW-26D	Water	01/20/21 09:50	01/22/21 09:41
92517999005	MW-27D	Water	01/20/21 14:20	01/22/21 09:41

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD

Pace Project No.: 92517999

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92517999001	MW-23D	EPA 6010D	DRB	1
		EPA 6020B	CW1	3
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92517999002	MW-24D	EPA 6010D	DRB	1
		EPA 6020B	CW1	3
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92517999003	MW-25D	EPA 6010D	DRB	1
		EPA 6020B	CW1	3
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92517999004	MW-26D	EPA 6010D	DRB	1
		EPA 6020B	CW1	2
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92517999005	MW-27D	EPA 6010D	DRB	1
		EPA 6020B	CW1	2
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	JLH	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD

Pace Project No.: 92517999

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92517999001	MW-23D					
	Performed by	CUSTOME			01/25/21 09:36	
		R				
	pH	5.75	Std. Units		01/25/21 09:36	
EPA 6010D	Calcium	4.4	mg/L	1.0	01/25/21 16:10	
EPA 6020B	Boron	0.018J	mg/L	0.040	01/22/21 18:27	
SM 2450C-2011	Total Dissolved Solids	41.0	mg/L	10.0	01/22/21 16:42	
EPA 300.0 Rev 2.1 1993	Chloride	6.1	mg/L	1.0	01/26/21 18:55	
EPA 300.0 Rev 2.1 1993	Sulfate	5.0	mg/L	1.0	01/26/21 18:55	
92517999002	MW-24D					
	Performed by	CUSTOME			01/25/21 09:36	
		R				
	pH	6.13	Std. Units		01/25/21 09:36	
EPA 6010D	Calcium	2.8	mg/L	1.0	01/25/21 16:15	
EPA 6020B	Boron	0.014J	mg/L	0.040	01/22/21 18:33	
EPA 6020B	Molybdenum	0.0014J	mg/L	0.010	01/22/21 18:33	
SM 2450C-2011	Total Dissolved Solids	50.0	mg/L	10.0	01/22/21 16:42	
EPA 300.0 Rev 2.1 1993	Chloride	6.1	mg/L	1.0	01/26/21 19:40	
EPA 300.0 Rev 2.1 1993	Sulfate	0.79J	mg/L	1.0	01/26/21 19:40	
92517999003	MW-25D					
	Performed by	CUSTOME			01/25/21 09:36	
		R				
	pH	6.25	Std. Units		01/25/21 09:36	
EPA 6010D	Calcium	4.9	mg/L	1.0	01/25/21 16:20	
EPA 6020B	Boron	0.013J	mg/L	0.040	01/22/21 18:39	
EPA 6020B	Molybdenum	0.0011J	mg/L	0.010	01/22/21 18:39	
SM 2450C-2011	Total Dissolved Solids	58.0	mg/L	10.0	01/22/21 16:43	
EPA 300.0 Rev 2.1 1993	Chloride	6.1	mg/L	1.0	01/26/21 19:55	
EPA 300.0 Rev 2.1 1993	Fluoride	0.11	mg/L	0.10	01/26/21 19:55	
EPA 300.0 Rev 2.1 1993	Sulfate	1.6	mg/L	1.0	01/26/21 19:55	
92517999004	MW-26D					
	Performed by	CUSTOME			01/25/21 09:36	
		R				
	pH	5.66	Std. Units		01/25/21 09:36	
EPA 6010D	Calcium	4.1	mg/L	1.0	01/25/21 16:24	
EPA 6020B	Boron	0.013J	mg/L	0.040	01/22/21 18:44	
SM 2450C-2011	Total Dissolved Solids	54.0	mg/L	10.0	01/22/21 16:43	
EPA 300.0 Rev 2.1 1993	Chloride	6.9	mg/L	1.0	01/26/21 20:10	
EPA 300.0 Rev 2.1 1993	Sulfate	1.0	mg/L	1.0	01/26/21 20:10	
92517999005	MW-27D					
	Performed by	CUSTOME			01/25/21 09:36	
		R				
	pH	5.68	Std. Units		01/25/21 09:36	
EPA 6010D	Calcium	3.0	mg/L	1.0	01/25/21 17:15	
EPA 6020B	Boron	0.011J	mg/L	0.040	01/22/21 19:02	
SM 2450C-2011	Total Dissolved Solids	43.0	mg/L	10.0	01/22/21 16:43	
EPA 300.0 Rev 2.1 1993	Chloride	6.1	mg/L	1.0	01/26/21 20:24	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD

Pace Project No.: 92517999

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92517999005	MW-27D					
EPA 300.0 Rev 2.1 1993	Sulfate	0.88J	mg/L	1.0	01/26/21 20:24	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD

Pace Project No.: 92517999

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: MW-23D									
Lab ID: 92517999001									
Collected: 01/21/21 09:45									
Received: 01/22/21 09:41									
Matrix: Water									
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/25/21 09:36		
pH	5.75	Std. Units			1		01/25/21 09:36		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	4.4	mg/L	1.0	0.070	1	01/25/21 09:35	01/25/21 16:10	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Arsenic	ND	mg/L	0.0050	0.00078	1	01/22/21 12:13	01/22/21 18:27	7440-38-2	
Boron	0.018J	mg/L	0.040	0.0052	1	01/22/21 12:13	01/22/21 18:27	7440-42-8	
Molybdenum	ND	mg/L	0.010	0.00069	1	01/22/21 12:13	01/22/21 18:27	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	41.0	mg/L	10.0	10.0	1		01/22/21 16:42		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	6.1	mg/L	1.0	0.60	1		01/26/21 18:55	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		01/26/21 18:55	16984-48-8	
Sulfate	5.0	mg/L	1.0	0.50	1		01/26/21 18:55	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD

Pace Project No.: 92517999

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: MW-24D									
Lab ID: 92517999002									
Collected: 01/21/21 13:10									
Received: 01/22/21 09:41									
Matrix: Water									
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/25/21 09:36		
pH	6.13	Std. Units			1		01/25/21 09:36		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	2.8	mg/L	1.0	0.070	1	01/25/21 09:35	01/25/21 16:15	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Arsenic	ND	mg/L	0.0050	0.00078	1	01/22/21 12:13	01/22/21 18:33	7440-38-2	
Boron	0.014J	mg/L	0.040	0.0052	1	01/22/21 12:13	01/22/21 18:33	7440-42-8	
Molybdenum	0.0014J	mg/L	0.010	0.00069	1	01/22/21 12:13	01/22/21 18:33	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	50.0	mg/L	10.0	10.0	1		01/22/21 16:42		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	6.1	mg/L	1.0	0.60	1		01/26/21 19:40	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		01/26/21 19:40	16984-48-8	
Sulfate	0.79J	mg/L	1.0	0.50	1		01/26/21 19:40	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD

Pace Project No.: 92517999

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: MW-25D									
Lab ID: 92517999003									
Collected: 01/20/21 10:50 Received: 01/22/21 09:41 Matrix: Water									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/25/21 09:36		
pH	6.25	Std. Units			1		01/25/21 09:36		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	4.9	mg/L	1.0	0.070	1	01/25/21 09:35	01/25/21 16:20	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Arsenic	ND	mg/L	0.0050	0.00078	1	01/22/21 12:13	01/22/21 18:39	7440-38-2	
Boron	0.013J	mg/L	0.040	0.0052	1	01/22/21 12:13	01/22/21 18:39	7440-42-8	
Molybdenum	0.0011J	mg/L	0.010	0.00069	1	01/22/21 12:13	01/22/21 18:39	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	58.0	mg/L	10.0	10.0	1		01/22/21 16:43		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	6.1	mg/L	1.0	0.60	1		01/26/21 19:55	16887-00-6	
Fluoride	0.11	mg/L	0.10	0.050	1		01/26/21 19:55	16984-48-8	
Sulfate	1.6	mg/L	1.0	0.50	1		01/26/21 19:55	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD
Pace Project No.: 92517999

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: MW-26D									
Lab ID: 92517999004									
Collected: 01/20/21 09:50									
Received: 01/22/21 09:41									
Matrix: Water									
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/25/21 09:36		
pH	5.66	Std. Units			1		01/25/21 09:36		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	4.1	mg/L	1.0	0.070	1	01/25/21 09:35	01/25/21 16:24	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Boron	0.013J	mg/L	0.040	0.0052	1	01/22/21 12:13	01/22/21 18:44	7440-42-8	
Molybdenum	ND	mg/L	0.010	0.00069	1	01/22/21 12:13	01/22/21 18:44	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	54.0	mg/L	10.0	10.0	1		01/22/21 16:43		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	6.9	mg/L	1.0	0.60	1		01/26/21 20:10	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		01/26/21 20:10	16984-48-8	
Sulfate	1.0	mg/L	1.0	0.50	1		01/26/21 20:10	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD
Pace Project No.: 92517999

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: MW-27D									
Lab ID: 92517999005									
Collected: 01/20/21 14:20 Received: 01/22/21 09:41 Matrix: Water									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/25/21 09:36		
pH	5.68	Std. Units			1		01/25/21 09:36		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	3.0	mg/L	1.0	0.070	1	01/25/21 09:35	01/25/21 17:15	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Boron	0.011J	mg/L	0.040	0.0052	1	01/22/21 12:13	01/22/21 19:02	7440-42-8	
Molybdenum	ND	mg/L	0.010	0.00069	1	01/22/21 12:13	01/22/21 19:02	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	43.0	mg/L	10.0	10.0	1		01/22/21 16:43		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	6.1	mg/L	1.0	0.60	1		01/26/21 20:24	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		01/26/21 20:24	16984-48-8	
Sulfate	0.88J	mg/L	1.0	0.50	1		01/26/21 20:24	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD

Pace Project No.: 92517999

QC Batch:	594973	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92517999001, 92517999002, 92517999003, 92517999004, 92517999005

METHOD BLANK: 3138783 Matrix: Water
Associated Lab Samples: 92517999001, 92517999002, 92517999003, 92517999004, 92517999005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	01/25/21 15:41	

LABORATORY CONTROL SAMPLE: 3138784

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.1	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3138785 3138786

Parameter	Units	3138785		3138786		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	6.7	1	7.7	7.6	98	91	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD
Pace Project No.: 92517999

QC Batch: 594723 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92517999001, 92517999002, 92517999003, 92517999004, 92517999005

METHOD BLANK: 3137728 Matrix: Water
Associated Lab Samples: 92517999001, 92517999002, 92517999003, 92517999004, 92517999005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.0050	0.00078	01/22/21 17:53	
Boron	mg/L	ND	0.040	0.0052	01/22/21 17:53	
Molybdenum	mg/L	ND	0.010	0.00069	01/22/21 17:53	

LABORATORY CONTROL SAMPLE: 3137729

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	0.1	0.090	90	80-120	
Boron	mg/L	1	0.98	98	80-120	
Molybdenum	mg/L	0.1	0.094	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3137730 3137731

Parameter	Units	92517846001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Arsenic	mg/L	ND	0.1	0.1	0.094	0.095	89	91	75-125	1	20	
Boron	mg/L	ND	1	1	0.89	0.90	88	89	75-125	1	20	
Molybdenum	mg/L	ND	0.1	0.1	0.097	0.10	93	96	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD

Pace Project No.: 92517999

QC Batch: 594779

Analysis Method: SM 2450C-2011

QC Batch Method: SM 2450C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92517999001, 92517999002, 92517999003, 92517999004, 92517999005

METHOD BLANK: 3137995

Matrix: Water

Associated Lab Samples: 92517999001, 92517999002, 92517999003, 92517999004, 92517999005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	01/22/21 16:40	

LABORATORY CONTROL SAMPLE: 3137996

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	394	98	84-108	

SAMPLE DUPLICATE: 3137997

Parameter	Units	92517969001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

SAMPLE DUPLICATE: 3138171

Parameter	Units	92517909004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	289	270	7	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: GRUMMAN ROAD
Pace Project No.: 92517999

QC Batch: 595172 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
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92517999001, 92517999002, 92517999003, 92517999004, 92517999005

METHOD BLANK: 3139608 Matrix: Water
Associated Lab Samples: 92517999001, 92517999002, 92517999003, 92517999004, 92517999005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	01/26/21 18:25	
Fluoride	mg/L	ND	0.10	0.050	01/26/21 18:25	
Sulfate	mg/L	ND	1.0	0.50	01/26/21 18:25	

LABORATORY CONTROL SAMPLE: 3139609

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.7	99	90-110	
Fluoride	mg/L	2.5	2.3	93	90-110	
Sulfate	mg/L	50	51.5	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3139610 3139611

Parameter	Units	92517999001		3139610		3139611		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	6.1	50	50	58.6	58.9	105	106	90-110	1	10		
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	102	102	90-110	0	10		
Sulfate	mg/L	5.0	50	50	59.1	59.4	108	109	90-110	1	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3139612 3139613

Parameter	Units	92517909004		3139612		3139613		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	3.5	50	50	56.5	56.6	106	106	90-110	0	10		
Fluoride	mg/L	0.22	2.5	2.5	2.5	2.5	92	93	90-110	0	10		
Sulfate	mg/L	14.2	50	50	67.4	67.7	106	107	90-110	1	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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QUALIFIERS

Project: GRUMMAN ROAD

Pace Project No.: 92517999

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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: GRUMMAN ROAD

Pace Project No.: 92517999

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92517999001	MW-23D				
92517999002	MW-24D				
92517999003	MW-25D				
92517999004	MW-26D				
92517999005	MW-27D				
92517999001	MW-23D	EPA 3010A	594973	EPA 6010D	595039
92517999002	MW-24D	EPA 3010A	594973	EPA 6010D	595039
92517999003	MW-25D	EPA 3010A	594973	EPA 6010D	595039
92517999004	MW-26D	EPA 3010A	594973	EPA 6010D	595039
92517999005	MW-27D	EPA 3010A	594973	EPA 6010D	595039
92517999001	MW-23D	EPA 3005A	594723	EPA 6020B	594790
92517999002	MW-24D	EPA 3005A	594723	EPA 6020B	594790
92517999003	MW-25D	EPA 3005A	594723	EPA 6020B	594790
92517999004	MW-26D	EPA 3005A	594723	EPA 6020B	594790
92517999005	MW-27D	EPA 3005A	594723	EPA 6020B	594790
92517999001	MW-23D	SM 2450C-2011	594779		
92517999002	MW-24D	SM 2450C-2011	594779		
92517999003	MW-25D	SM 2450C-2011	594779		
92517999004	MW-26D	SM 2450C-2011	594779		
92517999005	MW-27D	SM 2450C-2011	594779		
92517999001	MW-23D	EPA 300.0 Rev 2.1 1993	595172		
92517999002	MW-24D	EPA 300.0 Rev 2.1 1993	595172		
92517999003	MW-25D	EPA 300.0 Rev 2.1 1993	595172		
92517999004	MW-26D	EPA 300.0 Rev 2.1 1993	595172		
92517999005	MW-27D	EPA 300.0 Rev 2.1 1993	595172		

REPORT OF LABORATORY ANALYSIS

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Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: GA Power

Project #: **WO# : 92517999**



92517999

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

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 11/22/21

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 233 Type of Ice: Wet Blue None

Cooler Temp: 31 Correction Factor: Add/Subtract (°C) -0.2

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 29

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.?) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-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	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>W</u>	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project #

WO# : 92517999

PM: KLH1

Due Date: 01/27/21

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

CLIENT : GA-GA Power

**Bottom half of box is to list number of bottles

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFW-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2SO3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-S035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1																													
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<p>Section A Required Client Information: Company: GA Power Address: Atlanta, GA</p>	<p>Section B Required Project Information: Report To: SCS Contacts Copy To: ACC Contacts</p>
<p>Section C Invoice Information: Attention: Southern Co. Address: Company Name: Reference: Pace Project Manager: Kevin Herring Pace Profile #: 2926-1</p>	<p>REGULATORY AGENCY NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> Site Location: _____ GA _____ STATE:</p>

ITEM #	Valid Matrix Codes MATRIX CODE <small>DOMESTIC WATER DW WATER WT WASTE WATER WW PRODUCT P SOLID S SOLIDS SL WIFE WP AIR AR OTHER OT TISSUE TS</small>	Requested Client Information	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	SAMPLER NAME AND SIGNATURE	DATE SIGNED (MM/DD/YY)	SAMPLER CONDITIONS				
			DATE	TIME			DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH						Na ₂ S ₂ O ₃	Methanol	Other	TDS	Chloride/Fluoride/Sulfate 300.0
1	MW-23D		1-21-21	0945		3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	PH= 5.75	Pace Project No./ Lab ID. 925179499				
2	MW-24D		1-21-21	1310		3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	PH= 6.13					
3	MW-25D		1-20-21	1050		3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	PH= 6.75					
4	MW-26D		1-20-21	0800		3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	PH= 5.66					
5	MW-27D		1-20-21	1420		3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	PH= 5.68					
6																		PH=					
7																		PH=					
8																		PH=					
9																		PH=					
10																		PH=					
11																		PH=					
12																		PH=					

<p>ADDITIONAL COMMENTS</p> <p>Please note when the last sample for the event has been taken.</p> <p>Relinquished by / Affiliation: <i>ACC</i></p> <p>Date: <i>1/21/21</i></p> <p>Time: <i>0945</i></p> <p>Accepted by / Affiliation: <i>Bill Paul</i></p> <p>Date: <i>1/21/21</i></p> <p>Time: <i>0941</i></p>	<p>SAMPLER NAME AND SIGNATURE</p> <p>PRINT Name of SAMPLER: <i>Jordan Bristol</i></p> <p>SIGNATURE of SAMPLER: <i>[Signature]</i></p> <p>DATE SIGNED (MM/DD/YY):</p>
---	---

LEVEL 2A LABORATORY DATA VALIDATIONS

Grumman Road

Vertical Delineation

January 2021

Georgia Power Company – Grumman Road

Quality Control Review of Analytical Data – January 2021

This narrative presents results of the Quality Control (QC) data review performed on analytical data submitted by Pace Analytical Services, Asheville, Atlanta, and Charlotte for groundwater samples collected at Grumman Road between January 20, 2021 and January 21, 2021. 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.

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 (USEPA 6010D), Inductively Coupled Plasma – Mass Spectrometry (USEPA Method 6020B), Determination of Inorganic Anions (USEPA Method 300.0), and Solids in Water (Standard Methods 2540C).

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 (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.

Field Precision: Field goals for precision were not applicable to this scope.

Accuracy: Laboratory goals for accuracy were met.

Detection Limits: Project goals for detection limits were met.

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.

Atlantic Coast Consulting, Inc. reviewed the laboratory data from Grumman Road sampled between January 20, 2021 and January 21, 2021 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 – January 2021

SDG	Field Identification	Collection Date	Lab Identification	Matrix	QC Samples	Analyses		
						Metals (6010D, 6020B)	Anions (300.0)	TDS (SM 2540C)
517999	MW-23D	1/21/2021	92517999001	GW		X	X	X
517999	MW-24D	1/21/2021	92517999001	GW		X	X	X
517999	MW-25D	1/20/2021	92517999001	GW		X	X	X
517999	MW-26D	1/20/2021	92517999001	GW		X	X	X
517999	MW-27D	1/20/2021	92517999001	GW		X	X	X

Abbreviations:

EB – Equipment Blank

FB – Field Blank

FD – Field Duplicate

GW – Groundwater

QC – Quality Control

TDS – Total Dissolved Solids

WQ – Water Quality Control

Low-Flow Test Report:

Test Date / Time: 1/21/2021 9:05:44 AM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: MW-23D Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 58.3 ft Total Depth: 63.3 ft Initial Depth to Water: 22.92 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 61 ft Estimated Total Volume Pumped: 10 liter Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 15.4 in	Instrument Used: Aqua TROLL 400 Serial Number: 714302
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Test Notes:

Cloudy, 50s, sample time-0945

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
1/21/2021 9:05 AM	00:00	5.79 pH	21.37 °C	68.36 µS/cm	0.13 mg/L		88.8 mV	22.92 ft	250.00 ml/min
1/21/2021 9:10 AM	05:00	5.85 pH	21.54 °C	72.45 µS/cm	0.08 mg/L	25.00 NTU	77.5 mV	23.50 ft	250.00 ml/min
1/21/2021 9:15 AM	10:00	5.84 pH	21.49 °C	68.88 µS/cm	0.07 mg/L	15.00 NTU	70.0 mV	23.80 ft	250.00 ml/min
1/21/2021 9:20 AM	15:00	5.83 pH	21.46 °C	67.25 µS/cm	0.06 mg/L	9.42 NTU	63.0 mV	24.00 ft	250.00 ml/min
1/21/2021 9:25 AM	20:00	5.80 pH	21.46 °C	63.78 µS/cm	0.05 mg/L	5.42 NTU	58.9 mV	24.10 ft	250.00 ml/min
1/21/2021 9:30 AM	25:00	5.77 pH	21.49 °C	61.56 µS/cm	0.04 mg/L	5.03 NTU	55.0 mV	24.20 ft	250.00 ml/min
1/21/2021 9:35 AM	30:00	5.78 pH	21.46 °C	62.41 µS/cm	0.04 mg/L	4.12 NTU	49.0 mV	24.20 ft	250.00 ml/min
1/21/2021 9:40 AM	35:00	5.76 pH	21.50 °C	59.85 µS/cm	0.03 mg/L	3.62 NTU	45.6 mV	24.20 ft	250.00 ml/min
1/21/2021 9:45 AM	40:00	5.75 pH	21.46 °C	60.80 µS/cm	0.03 mg/L	3.68 NTU	42.1 mV	24.20 ft	250.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 1/21/2021 12:29:32 PM

Project: Grumman Road

Operator Name: Z Davis

Location Name: MW-24D Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 61 ft Total Depth: 66 ft Initial Depth to Water: 29.61 ft	Pump Type: Peri Tubing Type: Poly Pump Intake From TOC: 64.5 ft Estimated Total Volume Pumped: 8000 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.19 ft	Instrument Used: Aqua TROLL 400 Serial Number: 714293
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Test Notes:

Weather Conditions:

Cloudy, 50s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 0.2	+/- 10	+/- 100	+/- 2	
1/21/2021 12:29 PM	00:00	6.14 pH	22.03 °C	67.37 µS/cm	0.10 mg/L	12.70 NTU	54.0 mV	29.61 ft	200.00 ml/min
1/21/2021 12:34 PM	05:00	6.13 pH	21.58 °C	68.66 µS/cm	0.08 mg/L	7.72 NTU	49.8 mV	29.61 ft	200.00 ml/min
1/21/2021 12:39 PM	10:00	6.10 pH	22.09 °C	68.94 µS/cm	0.07 mg/L	6.93 NTU	47.9 mV	29.70 ft	200.00 ml/min
1/21/2021 12:44 PM	15:00	6.11 pH	22.27 °C	71.79 µS/cm	0.03 mg/L	17.30 NTU	46.8 mV	29.80 ft	200.00 ml/min
1/21/2021 12:49 PM	20:00	6.18 pH	22.21 °C	72.48 µS/cm	0.03 mg/L	22.30 NTU	45.1 mV	29.80 ft	200.00 ml/min
1/21/2021 12:54 PM	25:00	6.18 pH	21.95 °C	69.85 µS/cm	0.10 mg/L	25.60 NTU	45.6 mV	29.80 ft	200.00 ml/min
1/21/2021 12:59 PM	30:00	6.16 pH	21.93 °C	67.79 µS/cm	0.03 mg/L	13.90 NTU	45.9 mV	29.80 ft	200.00 ml/min
1/21/2021 1:04 PM	35:00	6.14 pH	22.15 °C	66.32 µS/cm	0.03 mg/L	7.80 NTU	46.3 mV	29.80 ft	200.00 ml/min
1/21/2021 1:09 PM	40:00	6.13 pH	22.09 °C	65.56 µS/cm	0.03 mg/L	4.16 NTU	47.1 mV	29.80 ft	200.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 1/20/2021 10:25:34 AM

Project: Grumman Road

Operator Name: Z Davis

Location Name: MW-25D Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 65.2 ft Total Depth: 70.2 ft Initial Depth to Water: 20.91 ft	Pump Type: Peri Tubing Type: Poly Pump Intake From TOC: 67.5 ft Estimated Total Volume Pumped: 3750 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 714293
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Test Notes:

Weather Conditions:

Sunny, 60s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 0.2	+/- 5	+/- 100	+/- 1	
1/20/2021 10:25 AM	00:00	6.34 pH	19.33 °C	75.51 µS/cm	0.09 mg/L		35.5 mV	37.90 ft	150.00 ml/min
1/20/2021 10:29 AM	04:25	6.30 pH	19.33 °C	77.11 µS/cm	0.07 mg/L	5.27 NTU	34.7 mV	37.90 ft	150.00 ml/min
1/20/2021 10:30 AM	04:35	6.30 pH	19.40 °C	77.12 µS/cm	0.07 mg/L	4.76 NTU	34.9 mV	37.90 ft	150.00 ml/min
1/20/2021 10:35 AM	09:35	6.26 pH	20.00 °C	76.34 µS/cm	0.06 mg/L	4.71 NTU	37.0 mV	37.90 ft	150.00 ml/min
1/20/2021 10:40 AM	14:35	6.26 pH	20.32 °C	75.80 µS/cm	0.05 mg/L	5.20 NTU	36.8 mV	37.90 ft	150.00 ml/min
1/20/2021 10:45 AM	19:35	6.26 pH	20.43 °C	75.75 µS/cm	0.05 mg/L	5.02 NTU	37.8 mV	37.90 ft	150.00 ml/min
1/20/2021 10:50 AM	24:35	6.25 pH	20.44 °C	75.80 µS/cm	0.05 mg/L	4.93 NTU	39.0 mV	37.90 ft	150.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 1/20/2021 9:05:17 AM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: MW-26D Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 64.9 ft Total Depth: 69.9 ft Initial Depth to Water: 19.91 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 67 ft Estimated Total Volume Pumped: 9 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 16.68 in	Instrument Used: Aqua TROLL 400 Serial Number: 714302
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Test Notes:

Sunny, 50s sample time 0950

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
1/20/2021 9:05 AM	00:00	7.92 pH	10.82 °C	2.61 µS/cm	11.30 mg/L		150.1 mV	19.91 ft	200.00 ml/min
1/20/2021 9:07 AM	02:07	8.00 pH	11.65 °C	68.08 µS/cm	8.98 mg/L	17.00 NTU	146.6 mV	20.40 ft	200.00 ml/min
1/20/2021 9:10 AM	04:48	6.04 pH	16.57 °C	55.22 µS/cm	0.80 mg/L	12.00 NTU	115.7 mV	20.80 ft	200.00 ml/min
1/20/2021 9:15 AM	09:48	5.74 pH	18.96 °C	52.24 µS/cm	0.42 mg/L	16.00 NTU	105.8 mV	21.00 ft	200.00 ml/min
1/20/2021 9:20 AM	14:48	5.73 pH	19.12 °C	51.79 µS/cm	0.52 mg/L	17.00 NTU	100.0 mV	21.20 ft	200.00 ml/min
1/20/2021 9:25 AM	19:48	5.68 pH	19.60 °C	50.79 µS/cm	0.31 mg/L	13.00 NTU	101.1 mV	21.30 ft	200.00 ml/min
1/20/2021 9:30 AM	24:48	5.72 pH	18.92 °C	51.01 µS/cm	1.80 mg/L	10.00 NTU	97.0 mV	21.30 ft	200.00 ml/min
1/20/2021 9:35 AM	29:48	5.69 pH	18.96 °C	49.55 µS/cm	0.34 mg/L	9.12 NTU	95.4 mV	21.30 ft	200.00 ml/min
1/20/2021 9:40 AM	34:48	5.69 pH	18.82 °C	49.05 µS/cm	0.28 mg/L	7.33 NTU	94.0 mV	21.30 ft	200.00 ml/min
1/20/2021 9:45 AM	39:48	5.68 pH	18.84 °C	48.94 µS/cm	0.28 mg/L	5.95 NTU	93.9 mV	21.30 ft	200.00 ml/min
1/20/2021 9:50 AM	44:48	5.66 pH	18.90 °C	48.77 µS/cm	0.25 mg/L	3.22 NTU	91.6 mV	21.30 ft	200.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 1/20/2021 1:45:21 PM

Project: Grumman Road

Operator Name: Jordan Berisford

Location Name: MW-27D Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 67.43 ft Total Depth: 72.43 ft Initial Depth to Water: 25.72 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 70 ft Estimated Total Volume Pumped: 8.75 liter Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 8.16 in	Instrument Used: Aqua TROLL 400 Serial Number: 714302
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Test Notes:

Sunny, sample time-1420 60s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
1/20/2021 1:45 PM	00:00	5.67 pH	21.65 °C	42.23 µS/cm	0.03 mg/L		68.5 mV	25.72 ft	250.00 ml/min
1/20/2021 1:50 PM	05:00	5.67 pH	21.64 °C	42.35 µS/cm	0.03 mg/L	3.85 NTU	65.7 mV	26.00 ft	250.00 ml/min
1/20/2021 1:55 PM	10:00	5.68 pH	21.59 °C	42.39 µS/cm	0.02 mg/L	4.02 NTU	63.3 mV	26.10 ft	250.00 ml/min
1/20/2021 2:00 PM	15:00	5.67 pH	21.59 °C	42.42 µS/cm	0.02 mg/L	3.69 NTU	61.9 mV	26.30 ft	250.00 ml/min
1/20/2021 2:05 PM	20:00	5.68 pH	21.64 °C	42.51 µS/cm	0.02 mg/L	4.84 NTU	59.9 mV	26.30 ft	250.00 ml/min
1/20/2021 2:10 PM	25:00	5.67 pH	21.65 °C	42.42 µS/cm	0.02 mg/L	4.32 NTU	58.2 mV	26.30 ft	250.00 ml/min
1/20/2021 2:15 PM	30:00	5.67 pH	21.65 °C	42.56 µS/cm	0.03 mg/L	3.99 NTU	57.5 mV	26.40 ft	250.00 ml/min
1/20/2021 2:20 PM	35:00	5.68 pH	21.66 °C	42.61 µS/cm	0.03 mg/L	3.85 NTU	55.3 mV	26.40 ft	250.00 ml/min

Samples

Sample ID:	Description:
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Daily Instrument Calibration Log

SITE: Grumman Rd
TECHNICIAN: J Bradford
WATER LEVEL: Solent
WATER LEVEL S/N: 267304

INSTRUMENT S/N: 714302
INSTRUMENT TYPE: AquaTroll
CAL. SOLUTIONS:
ID: pH 4 LOT #: 061407 EXP. DATE: 1/22
ID: pH 7 LOT #: 061615 EXP. DATE: 1/22
ID: pH 10 LOT #: 060851 EXP. DATE: 1/22
ID: Cond LOT #: 061103 EXP. DATE: 1/21
ID: ORP LOT #: 060520 EXP. DATE: 1/21
ID: _____ LOT #: _____ EXP. DATE: _____
ID: _____ LOT #: _____ EXP. DATE: _____

Calibration Date: 1-19-21
RDO: 100% sat. = 100.13%
PH: 4.00 = 4.12 7.00 = 7.47 10.00 = 10.52
CONDUCTIVITY: 1535
ORP (mV) 277.5

Calibration Date: 1-20-21
RDO: 100% sat. = 102.43
PH: 4.00 = 3.93 7.00 = 7.12 10.00 = 10.09
CONDUCTIVITY: 1552
ORP (mV) 248.8

Calibration Date: 1-21-21
RDO: 100% sat. = 100.28
PH: 4.00 = 4.04 7.00 = 7.07 10.00 = 10.10
CONDUCTIVITY: 1413
ORP (mV) 244.2

Calibration Date: _____
RDO: 100% sat. = _____
PH: 4.00 = _____ 7.00 = _____ 10.00 = _____
CONDUCTIVITY: _____
ORP (mV) _____

Calibration Date: _____
RDO: 100% sat. = _____
PH: 4.00 = _____ 7.00 = _____ 10.00 = _____
CONDUCTIVITY: _____
ORP (mV) _____



Daily Instrument Calibration Log

SITE: Grumman Rd.
 TECHNICIAN: J Bonford

INSTRUMENT S/N: 63767
 INSTRUMENT TYPE: HACH 2100R

CAL. SOLUTION: 0 NTU - LOT # NA EXP. DATE: New DI water
10 NTU - LOT # A0136 EXP. DATE: Aug-21
20 NTU - LOT # A0139 EXP. DATE: Aug-21

Calibration Date: 1-19-21

Calibration Solution	Instrument Reading	
0.0	0.15	NTU
10.0	9.49	NTU
20.0	20.7	NTU

Calibration Date: 1-20-21

Calibration Solution	Instrument Reading	
0.0	0.17	NTU
10.0	10.4	NTU
20.0	20.3	NTU

Calibration Date: 1-21-21

Calibration Solution	Instrument Reading	
0.0	0.16	NTU
10.0	10.1	NTU
20.0	20.2	NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

April 05, 2021

Joju Abraham
Georgia Power-CCR
2480 Maner Road
Atlanta, GA 30339

RE: Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 11, 2021 and March 17, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

This report was revised 4/5/21 to correct a field pH error and some sample ID prefix changes.

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

Sincerely,



Kevin Herring
kevin.herring@pacelabs.com
1(704)875-9092
HORIZON Database Administrator

Enclosures

cc: Owens Fuquea, ACC
Kristen Jurinko
Matt Malone, Atlantic Coast Consulting
Betsy McDaniel, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Ms. Lauren Petty, Southern Company



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Pace Analytical Services Charlotte

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078
Louisiana/NELAP Certification # LA170028
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92527234001	DUP-2	Water	03/10/21 00:00	03/11/21 12:40
92527234002	FB-2	Water	03/10/21 16:15	03/11/21 12:40
92527234003	GWB-4R	Water	03/10/21 09:50	03/11/21 12:40
92527234004	GWB-5R	Water	03/10/21 13:15	03/11/21 12:40
92527234005	GWB-6R	Water	03/10/21 15:05	03/11/21 12:40
92527234006	GWC-1	Water	03/10/21 16:45	03/11/21 12:40
92527234007	GWC-12	Water	03/10/21 11:50	03/11/21 12:40
92527234008	GWC-11	Water	03/10/21 14:15	03/11/21 12:40
92527234009	GWC-22	Water	03/10/21 17:25	03/11/21 12:40
92527234010	GWC-9	Water	03/10/21 15:55	03/11/21 12:40
92527234011	FB-3	Water	03/11/21 12:50	03/12/21 16:00
92527234012	EB-3	Water	03/11/21 10:55	03/12/21 16:00
92527234013	DUP-3	Water	03/12/21 00:00	03/12/21 16:00
92527234014	MW-24D	Water	03/11/21 10:50	03/12/21 16:00
92527234015	MW-23D	Water	03/11/21 14:00	03/12/21 16:00
92527234016	MW-26D	Water	03/11/21 12:25	03/12/21 16:00
92527234017	MW-27D	Water	03/11/21 15:45	03/12/21 16:00
92527234018	MW-25D	Water	03/11/21 14:35	03/12/21 16:00
92527234019	GWC-17	Water	03/11/21 10:30	03/12/21 16:00
92527234020	GWA-7	Water	03/11/21 16:45	03/12/21 16:00
92527234021	GWA-8	Water	03/12/21 08:50	03/12/21 16:00
92527234022	GWC-15	Water	03/12/21 08:35	03/12/21 16:00
92527234023	GWC-20	Water	03/12/21 08:35	03/12/21 16:00
92527234025	GWC-2	Water	03/15/21 15:10	03/17/21 12:25
92527234026	GWC-13	Water	03/15/21 16:25	03/17/21 12:25
92527234027	GWC-14	Water	03/16/21 09:30	03/17/21 12:25
92527234028	GWC-16	Water	03/16/21 11:05	03/17/21 12:25
92527234029	GWC-21	Water	03/16/21 15:00	03/17/21 12:25
92527234030	FB-1	Water	03/15/21 16:15	03/17/21 12:25
92527234031	DUP-1	Water	03/16/21 00:00	03/17/21 12:25
92527234032	EB-2	Water	03/16/21 10:40	03/17/21 12:25
92527234033	EB-1	Water	03/16/21 15:15	03/17/21 12:25

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92527234001	DUP-2	EPA 6010D	KH	1
		EPA 6020B	CW1	15
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527234002	FB-2	EPA 6010D	KH	1
		EPA 6020B	CW1	15
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527234003	GWB-4R	EPA 6010D	KH	1
		EPA 6020B	CW1	15
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527234004	GWB-5R	EPA 6010D	KH	1
		EPA 6020B	CW1	15
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527234005	GWB-6R	EPA 6010D	KH	1
		EPA 6020B	CW1	15
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527234006	GWC-1	EPA 6010D	KH	1
		EPA 6020B	CW1	15
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527234007	GWC-12	EPA 6010D	KH	1
		EPA 6020B	CW1	15
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527234008	GWC-11	EPA 6010D	KH	1
		EPA 6020B	CW1	15
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527234009	GWC-22	EPA 6010D	KH	1
		EPA 6020B	CW1	15
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527234010	GWC-9	EPA 6010D	KH	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92527234011	FB-3	EPA 6020B	CW1	15
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	1
		EPA 6020B	CW1	15
92527234012	EB-3	SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	1
		EPA 6020B	CW1	15
		SM 2450C-2011	ALW	1
92527234013	DUP-3	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	1
		EPA 6020B	CW1	15
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527234014	MW-24D	EPA 6010D	KH	1
		EPA 6020B	CW1	15
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	1
92527234015	MW-23D	EPA 6020B	CW1	15
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	1
		EPA 6020B	CW1	15
92527234016	MW-26D	SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	1
		EPA 6020B	CW1	15
		SM 2450C-2011	ALW	1
92527234017	MW-27D	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	1
		EPA 6020B	CW1	15
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527234018	MW-25D	EPA 6010D	KH	1
		EPA 6020B	CW1	15
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	1
92527234019	GWC-17	EPA 6020B	CW1	15
		EPA 6010D	KH	1
		EPA 6020B	CW1	15

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92527234020	GWA-7	SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	1
		EPA 6020B	CW1	15
92527234021	GWA-8	SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	1
		EPA 6020B	CW1	15
92527234022	GWC-15	SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	1
		EPA 6020B	CW1	15
92527234023	GWC-20	SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	1
		EPA 6020B	CW1	15
92527234025	GWC-2	SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC, JLH	3
		EPA 6010D	KH	1
		EPA 6020B	CW1	15
92527234026	GWC-13	SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	1
		EPA 6020B	CW1	15
92527234027	GWC-14	SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
		EPA 6010D	KH	1
		EPA 6020B	CW1	15
92527234028	GWC-16	SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
		EPA 6010D	KH	1
		EPA 6020B	CW1	15
92527234029	GWC-21	SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
		EPA 6010D	KH	1
		EPA 6020B	CW1	15

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92527234030	FB-1	EPA 300.0 Rev 2.1 1993	JLH	3
		EPA 6010D	KH	1
		EPA 6020B	CW1	15
		SM 2450C-2011	ALW	1
92527234031	DUP-1	EPA 300.0 Rev 2.1 1993	JLH	3
		EPA 6010D	KH	1
		EPA 6020B	CW1	15
		SM 2450C-2011	ALW	1
92527234032	EB-2	EPA 300.0 Rev 2.1 1993	JLH	3
		EPA 6010D	KH	1
		EPA 6020B	CW1	15
		SM 2450C-2011	ALW	1
92527234033	EB-1	EPA 300.0 Rev 2.1 1993	JLH	3
		EPA 6010D	KH	1
		EPA 6020B	CW1	15
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527234001	DUP-2					
EPA 6010D	Calcium	62.8	mg/L	1.0	03/24/21 18:08	
EPA 6020B	Antimony	0.00046J	mg/L	0.0030	03/25/21 17:09	B
EPA 6020B	Arsenic	0.0057	mg/L	0.0050	03/25/21 17:09	
EPA 6020B	Barium	0.050	mg/L	0.0050	03/25/21 17:09	
EPA 6020B	Boron	0.61	mg/L	0.040	03/25/21 17:09	
EPA 6020B	Chromium	0.0025J	mg/L	0.0050	03/25/21 17:09	
EPA 6020B	Lead	0.000049J	mg/L	0.0010	03/25/21 17:09	
EPA 6020B	Molybdenum	0.056	mg/L	0.010	03/25/21 17:09	
EPA 6020B	Vanadium	0.0046J	mg/L	0.010	03/25/21 17:09	
SM 2450C-2011	Total Dissolved Solids	352	mg/L	10.0	03/15/21 12:50	
EPA 300.0 Rev 2.1 1993	Chloride	8.4	mg/L	1.0	03/16/21 21:01	
EPA 300.0 Rev 2.1 1993	Sulfate	59.9	mg/L	1.0	03/16/21 21:01	
92527234002	FB-2					
EPA 6020B	Selenium	0.0019J	mg/L	0.0050	03/25/21 17:14	
92527234003	GWB-4R					
	Performed by	CUSTOME			03/22/21 11:57	
		R				
	pH	5.60	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	263	mg/L	1.0	03/24/21 18:18	M1
EPA 6020B	Arsenic	0.0025J	mg/L	0.0050	03/25/21 17:20	
EPA 6020B	Barium	0.070	mg/L	0.0050	03/25/21 17:20	
EPA 6020B	Boron	4.9	mg/L	0.040	03/25/21 17:20	
EPA 6020B	Chromium	0.0030J	mg/L	0.0050	03/25/21 17:20	
EPA 6020B	Cobalt	0.00069J	mg/L	0.0050	03/25/21 17:20	
EPA 6020B	Lead	0.00030J	mg/L	0.0010	03/25/21 17:20	
EPA 6020B	Lithium	0.012J	mg/L	0.030	03/25/21 17:20	
EPA 6020B	Molybdenum	0.12	mg/L	0.010	03/25/21 17:20	
EPA 6020B	Selenium	0.0021J	mg/L	0.0050	03/25/21 17:20	
EPA 6020B	Vanadium	0.0054J	mg/L	0.010	03/25/21 17:20	
SM 2450C-2011	Total Dissolved Solids	434	mg/L	10.0	03/15/21 12:53	
EPA 300.0 Rev 2.1 1993	Chloride	16.0	mg/L	1.0	03/16/21 21:32	
EPA 300.0 Rev 2.1 1993	Sulfate	160	mg/L	4.0	03/17/21 07:35	
92527234004	GWB-5R					
	Performed by	CUSTOME			03/22/21 11:57	
		R				
	pH	4.73	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	134	mg/L	1.0	03/24/21 18:52	
EPA 6020B	Arsenic	0.0019J	mg/L	0.0050	03/25/21 17:26	
EPA 6020B	Barium	0.096	mg/L	0.0050	03/25/21 17:26	
EPA 6020B	Beryllium	0.000082J	mg/L	0.00050	03/25/21 17:26	
EPA 6020B	Boron	3.9	mg/L	0.040	03/25/21 17:26	
EPA 6020B	Chromium	0.0010J	mg/L	0.0050	03/25/21 17:26	
EPA 6020B	Cobalt	0.0057	mg/L	0.0050	03/25/21 17:26	
EPA 6020B	Lead	0.000052J	mg/L	0.0010	03/25/21 17:26	
EPA 6020B	Selenium	0.0060	mg/L	0.0050	03/25/21 17:26	
EPA 6020B	Vanadium	0.0026J	mg/L	0.010	03/25/21 17:26	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527234004	GWB-5R					
SM 2450C-2011	Total Dissolved Solids	1040	mg/L	20.0	03/15/21 12:53	
EPA 300.0 Rev 2.1 1993	Chloride	25.7	mg/L	1.0	03/16/21 21:48	
EPA 300.0 Rev 2.1 1993	Sulfate	572	mg/L	14.0	03/17/21 07:51	
92527234005	GWB-6R					
	Performed by	CUSTOMER			03/22/21 11:57	
	pH	5.69	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	55.9	mg/L	1.0	03/24/21 18:56	
EPA 6020B	Antimony	0.00029J	mg/L	0.0030	03/25/21 17:32	B
EPA 6020B	Arsenic	0.0054	mg/L	0.0050	03/25/21 17:32	
EPA 6020B	Barium	0.027	mg/L	0.0050	03/25/21 17:32	
EPA 6020B	Boron	6.9	mg/L	0.040	03/25/21 17:32	
EPA 6020B	Chromium	0.0060	mg/L	0.0050	03/25/21 17:32	
EPA 6020B	Lead	0.000096J	mg/L	0.0010	03/25/21 17:32	
EPA 6020B	Molybdenum	0.0013J	mg/L	0.010	03/25/21 17:32	
EPA 6020B	Selenium	0.0049J	mg/L	0.0050	03/25/21 17:32	
EPA 6020B	Vanadium	0.027	mg/L	0.010	03/25/21 17:32	
SM 2450C-2011	Total Dissolved Solids	2120	mg/L	100	03/15/21 13:13	D6
EPA 300.0 Rev 2.1 1993	Chloride	42.4	mg/L	1.0	03/18/21 14:33	
EPA 300.0 Rev 2.1 1993	Sulfate	1160	mg/L	31.0	03/19/21 02:08	
92527234006	GWC-1					
	Performed by	CUSTOMER			03/22/21 11:57	
	pH	5.42	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	67.2	mg/L	1.0	03/24/21 19:01	
EPA 6020B	Antimony	0.00069J	mg/L	0.0030	03/25/21 18:10	B
EPA 6020B	Arsenic	0.0055	mg/L	0.0050	03/25/21 18:10	
EPA 6020B	Barium	0.052	mg/L	0.0050	03/25/21 18:10	
EPA 6020B	Boron	0.63	mg/L	0.040	03/25/21 18:10	
EPA 6020B	Chromium	0.0023J	mg/L	0.0050	03/25/21 18:10	
EPA 6020B	Lead	0.00010J	mg/L	0.0010	03/25/21 18:10	
EPA 6020B	Molybdenum	0.057	mg/L	0.010	03/25/21 18:10	
EPA 6020B	Selenium	0.0026J	mg/L	0.0050	03/25/21 18:10	
EPA 6020B	Vanadium	0.0050J	mg/L	0.010	03/25/21 18:10	
SM 2450C-2011	Total Dissolved Solids	329	mg/L	10.0	03/15/21 13:14	
EPA 300.0 Rev 2.1 1993	Chloride	8.5	mg/L	1.0	03/18/21 14:49	
EPA 300.0 Rev 2.1 1993	Sulfate	61.2	mg/L	1.0	03/18/21 14:49	
92527234007	GWC-12					
	Performed by	CUSTOMER			03/22/21 11:57	
	pH	4.08	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	53.1	mg/L	1.0	03/24/21 19:06	
EPA 6020B	Antimony	0.00030J	mg/L	0.0030	03/25/21 18:16	B
EPA 6020B	Barium	0.028	mg/L	0.0050	03/25/21 18:16	
EPA 6020B	Beryllium	0.00054	mg/L	0.00050	03/25/21 18:16	
EPA 6020B	Boron	6.1	mg/L	0.040	03/25/21 18:16	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527234007	GWC-12					
EPA 6020B	Chromium	0.00091J	mg/L	0.0050	03/25/21 18:16	
EPA 6020B	Cobalt	0.00071J	mg/L	0.0050	03/25/21 18:16	
EPA 6020B	Lead	0.000068J	mg/L	0.0010	03/25/21 18:16	
EPA 6020B	Lithium	0.00095J	mg/L	0.030	03/25/21 18:16	
EPA 6020B	Selenium	0.0030J	mg/L	0.0050	03/25/21 18:16	
EPA 6020B	Vanadium	0.0055J	mg/L	0.010	03/25/21 18:16	
SM 2450C-2011	Total Dissolved Solids	566	mg/L	20.0	03/15/21 13:14	
EPA 300.0 Rev 2.1 1993	Chloride	48.7	mg/L	1.0	03/18/21 15:35	
EPA 300.0 Rev 2.1 1993	Fluoride	0.14	mg/L	0.10	03/18/21 15:35	
EPA 300.0 Rev 2.1 1993	Sulfate	282	mg/L	7.0	03/19/21 02:23	
92527234008	GWC-11					
	Performed by	CUSTOMER			03/22/21 11:57	
	pH	4.97	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	126	mg/L	1.0	03/24/21 19:11	
EPA 6020B	Antimony	0.00076J	mg/L	0.0030	03/25/21 18:21	B
EPA 6020B	Barium	0.13	mg/L	0.0050	03/25/21 18:21	
EPA 6020B	Beryllium	0.000047J	mg/L	0.00050	03/25/21 18:21	
EPA 6020B	Boron	1.8	mg/L	0.040	03/25/21 18:21	
EPA 6020B	Cadmium	0.00090	mg/L	0.00050	03/25/21 18:21	
EPA 6020B	Chromium	0.0013J	mg/L	0.0050	03/25/21 18:21	
EPA 6020B	Cobalt	0.00082J	mg/L	0.0050	03/25/21 18:21	
EPA 6020B	Lead	0.00042J	mg/L	0.0010	03/25/21 18:21	
EPA 6020B	Selenium	0.0044J	mg/L	0.0050	03/25/21 18:21	
EPA 6020B	Thallium	0.00022J	mg/L	0.0010	03/25/21 18:21	
EPA 6020B	Vanadium	0.0023J	mg/L	0.010	03/25/21 18:21	
SM 2450C-2011	Total Dissolved Solids	1240	mg/L	100	03/15/21 13:14	
EPA 300.0 Rev 2.1 1993	Chloride	188	mg/L	17.0	03/19/21 02:38	
EPA 300.0 Rev 2.1 1993	Sulfate	687	mg/L	17.0	03/19/21 02:38	
92527234009	GWC-22					
	Performed by	CUSTOMER			03/22/21 11:57	
	pH	4.82	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	18.7	mg/L	1.0	03/24/21 19:16	
EPA 6020B	Antimony	0.00040J	mg/L	0.0030	03/25/21 18:27	B
EPA 6020B	Barium	0.049	mg/L	0.0050	03/25/21 18:27	
EPA 6020B	Boron	0.32	mg/L	0.040	03/25/21 18:27	
EPA 6020B	Lead	0.00016J	mg/L	0.0010	03/25/21 18:27	
SM 2450C-2011	Total Dissolved Solids	210	mg/L	10.0	03/15/21 13:14	
EPA 300.0 Rev 2.1 1993	Chloride	48.2	mg/L	1.0	03/18/21 16:06	
EPA 300.0 Rev 2.1 1993	Sulfate	101	mg/L	3.0	03/19/21 02:54	
92527234010	GWC-9					
	Performed by	CUSTOMER			03/22/21 11:57	
	pH	4.55	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	5.3	mg/L	1.0	03/24/21 19:20	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527234010	GWC-9					
EPA 6020B	Barium	0.15	mg/L	0.0050	03/25/21 18:33	
EPA 6020B	Beryllium	0.00019J	mg/L	0.00050	03/25/21 18:33	
EPA 6020B	Boron	0.022J	mg/L	0.040	03/25/21 18:33	
EPA 6020B	Chromium	0.0011J	mg/L	0.0050	03/25/21 18:33	
EPA 6020B	Cobalt	0.00096J	mg/L	0.0050	03/25/21 18:33	
EPA 6020B	Lead	0.00012J	mg/L	0.0010	03/25/21 18:33	
EPA 6020B	Lithium	0.0018J	mg/L	0.030	03/25/21 18:33	
SM 2450C-2011	Total Dissolved Solids	89.0	mg/L	10.0	03/15/21 13:14	
EPA 300.0 Rev 2.1 1993	Chloride	18.3	mg/L	1.0	03/17/21 20:37	
EPA 300.0 Rev 2.1 1993	Fluoride	0.066J	mg/L	0.10	03/17/21 20:37	
EPA 300.0 Rev 2.1 1993	Sulfate	38.7	mg/L	1.0	03/17/21 20:37	
92527234012	EB-3					
EPA 6010D	Calcium	0.075J	mg/L	1.0	03/24/21 19:30	
92527234013	DUP-3					
EPA 6010D	Calcium	100	mg/L	1.0	03/24/21 19:45	
EPA 6020B	Arsenic	0.15	mg/L	0.0050	03/25/21 18:50	
EPA 6020B	Barium	0.038	mg/L	0.0050	03/25/21 18:50	
EPA 6020B	Boron	0.75	mg/L	0.040	03/25/21 18:50	
EPA 6020B	Chromium	0.0037J	mg/L	0.0050	03/25/21 18:50	
EPA 6020B	Molybdenum	0.094	mg/L	0.010	03/25/21 18:50	
EPA 6020B	Selenium	0.0062	mg/L	0.0050	03/25/21 18:50	
EPA 6020B	Vanadium	0.0034J	mg/L	0.010	03/25/21 18:50	
SM 2450C-2011	Total Dissolved Solids	387	mg/L	10.0	03/17/21 17:40	
EPA 300.0 Rev 2.1 1993	Chloride	2.3	mg/L	1.0	03/19/21 08:25	
EPA 300.0 Rev 2.1 1993	Sulfate	22.6	mg/L	1.0	03/19/21 08:25	
92527234014	MW-24D					
	Performed by	CUSTOMER			03/22/21 11:57	
	pH	6.47	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	5.4	mg/L	1.0	03/24/21 20:04	M1
EPA 6020B	Barium	0.047	mg/L	0.0050	03/25/21 18:56	
EPA 6020B	Boron	0.019J	mg/L	0.040	03/25/21 18:56	
EPA 6020B	Chromium	0.00069J	mg/L	0.0050	03/25/21 18:56	
EPA 6020B	Lead	0.000094J	mg/L	0.0010	03/25/21 18:56	
EPA 6020B	Molybdenum	0.0035J	mg/L	0.010	03/25/21 18:56	
EPA 6020B	Zinc	0.0025J	mg/L	0.010	03/25/21 18:56	
SM 2450C-2011	Total Dissolved Solids	53.0	mg/L	10.0	03/16/21 15:07	
EPA 300.0 Rev 2.1 1993	Chloride	6.0	mg/L	1.0	03/19/21 08:39	
92527234015	MW-23D					
	Performed by	CUSTOMER			03/22/21 11:57	
	pH	5.82	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	12.4	mg/L	1.0	03/24/21 20:24	
EPA 6020B	Barium	0.076	mg/L	0.0050	03/25/21 19:01	
EPA 6020B	Boron	0.030J	mg/L	0.040	03/25/21 19:01	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527234015	MW-23D					
EPA 6020B	Lead	0.000057J	mg/L	0.0010	03/25/21 19:01	
EPA 6020B	Zinc	0.0067J	mg/L	0.010	03/25/21 19:01	
SM 2450C-2011	Total Dissolved Solids	149	mg/L	10.0	03/16/21 15:07	
EPA 300.0 Rev 2.1 1993	Chloride	9.9	mg/L	1.0	03/19/21 08:53	
EPA 300.0 Rev 2.1 1993	Sulfate	62.4	mg/L	1.0	03/19/21 08:53	
92527234016	MW-26D					
	Performed by	CUSTOMER			03/22/21 11:57	
	pH	6.00	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	3.1	mg/L	1.0	03/24/21 20:28	
EPA 6020B	Arsenic	0.0010J	mg/L	0.0050	03/25/21 19:19	
EPA 6020B	Barium	0.037	mg/L	0.0050	03/25/21 19:19	
EPA 6020B	Beryllium	0.00010J	mg/L	0.00050	03/25/21 19:19	
EPA 6020B	Boron	0.015J	mg/L	0.040	03/25/21 19:19	
EPA 6020B	Cadmium	0.00029J	mg/L	0.00050	03/25/21 19:19	
EPA 6020B	Chromium	0.0020J	mg/L	0.0050	03/25/21 19:19	
EPA 6020B	Lead	0.00015J	mg/L	0.0010	03/25/21 19:19	
EPA 6020B	Zinc	0.0080J	mg/L	0.010	03/25/21 19:19	
SM 2450C-2011	Total Dissolved Solids	41.0	mg/L	10.0	03/16/21 15:07	
EPA 300.0 Rev 2.1 1993	Chloride	7.0	mg/L	1.0	03/19/21 09:07	
92527234017	MW-27D					
	Performed by	CUSTOMER			03/22/21 11:57	
	pH	5.12	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	2.6	mg/L	1.0	03/24/21 20:43	
EPA 6020B	Barium	0.031	mg/L	0.0050	03/25/21 19:24	
EPA 6020B	Beryllium	0.00032J	mg/L	0.00050	03/25/21 19:24	
EPA 6020B	Boron	0.014J	mg/L	0.040	03/25/21 19:24	
EPA 6020B	Cadmium	0.0015	mg/L	0.00050	03/25/21 19:24	
EPA 6020B	Chromium	0.00073J	mg/L	0.0050	03/25/21 19:24	
EPA 6020B	Lead	0.00022J	mg/L	0.0010	03/25/21 19:24	
EPA 6020B	Vanadium	0.0024J	mg/L	0.010	03/25/21 19:24	
EPA 6020B	Zinc	0.0066J	mg/L	0.010	03/25/21 19:24	
SM 2450C-2011	Total Dissolved Solids	43.0	mg/L	10.0	03/16/21 15:07	
EPA 300.0 Rev 2.1 1993	Chloride	6.5	mg/L	1.0	03/19/21 09:21	
92527234018	MW-25D					
	Performed by	CUSTOMER			03/22/21 11:57	
	pH	6.31	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	4.7	mg/L	1.0	03/24/21 20:48	
EPA 6020B	Arsenic	0.00092J	mg/L	0.0050	03/25/21 19:30	
EPA 6020B	Barium	0.030	mg/L	0.0050	03/25/21 19:30	
EPA 6020B	Beryllium	0.000084J	mg/L	0.00050	03/25/21 19:30	
EPA 6020B	Boron	0.017J	mg/L	0.040	03/25/21 19:30	
EPA 6020B	Cadmium	0.00019J	mg/L	0.00050	03/25/21 19:30	
EPA 6020B	Chromium	0.0016J	mg/L	0.0050	03/25/21 19:30	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527234018	MW-25D					
EPA 6020B	Lead	0.000095J	mg/L	0.0010	03/25/21 19:30	
EPA 6020B	Molybdenum	0.0015J	mg/L	0.010	03/25/21 19:30	
EPA 6020B	Vanadium	0.0024J	mg/L	0.010	03/25/21 19:30	
EPA 6020B	Zinc	0.0054J	mg/L	0.010	03/25/21 19:30	
SM 2450C-2011	Total Dissolved Solids	57.0	mg/L	10.0	03/16/21 15:08	
EPA 300.0 Rev 2.1 1993	Chloride	6.4	mg/L	1.0	03/19/21 09:35	
EPA 300.0 Rev 2.1 1993	Fluoride	0.12	mg/L	0.10	03/19/21 09:35	
EPA 300.0 Rev 2.1 1993	Sulfate	0.52J	mg/L	1.0	03/19/21 09:35	
92527234019	GWC-17					
	Performed by	CUSTOMER			03/22/21 11:57	
	pH	5.20	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	67.0	mg/L	1.0	03/24/21 20:52	
EPA 6020B	Antimony	0.00039J	mg/L	0.0030	03/25/21 19:36	B
EPA 6020B	Arsenic	0.00090J	mg/L	0.0050	03/25/21 19:36	
EPA 6020B	Barium	0.044	mg/L	0.0050	03/25/21 19:36	
EPA 6020B	Beryllium	0.0012	mg/L	0.00050	03/25/21 19:36	
EPA 6020B	Boron	0.85	mg/L	0.040	03/25/21 19:36	
EPA 6020B	Chromium	0.00090J	mg/L	0.0050	03/25/21 19:36	
EPA 6020B	Cobalt	0.0019J	mg/L	0.0050	03/25/21 19:36	
EPA 6020B	Lead	0.00019J	mg/L	0.0010	03/25/21 19:36	
EPA 6020B	Lithium	0.0036J	mg/L	0.030	03/25/21 19:36	
EPA 6020B	Molybdenum	0.0038J	mg/L	0.010	03/25/21 19:36	
EPA 6020B	Selenium	0.0016J	mg/L	0.0050	03/25/21 19:36	
EPA 6020B	Zinc	0.0056J	mg/L	0.010	03/25/21 19:36	
SM 2450C-2011	Total Dissolved Solids	705	mg/L	50.0	03/16/21 15:08	
EPA 300.0 Rev 2.1 1993	Chloride	334	mg/L	7.0	03/19/21 14:16	
EPA 300.0 Rev 2.1 1993	Fluoride	0.42	mg/L	0.10	03/19/21 09:49	
EPA 300.0 Rev 2.1 1993	Sulfate	244	mg/L	7.0	03/19/21 14:16	
92527234020	GWA-7					
	Performed by	CUSTOMER			03/22/21 11:57	
	pH	5.85	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	2.4	mg/L	1.0	03/24/21 20:57	
EPA 6020B	Arsenic	0.0047J	mg/L	0.025	03/25/21 19:41	
EPA 6020B	Barium	0.070	mg/L	0.025	03/25/21 19:41	
EPA 6020B	Beryllium	0.00028J	mg/L	0.0025	03/25/21 19:41	
EPA 6020B	Boron	8.0	mg/L	0.20	03/25/21 19:41	
EPA 6020B	Chromium	0.020J	mg/L	0.025	03/25/21 19:41	
EPA 6020B	Cobalt	0.0023J	mg/L	0.025	03/25/21 19:41	
EPA 6020B	Lead	0.0079	mg/L	0.0050	03/25/21 19:41	
EPA 6020B	Vanadium	0.14	mg/L	0.050	03/25/21 19:41	
EPA 6020B	Zinc	0.054	mg/L	0.050	03/25/21 19:41	
SM 2450C-2011	Total Dissolved Solids	1220	mg/L	100	03/16/21 15:08	
EPA 300.0 Rev 2.1 1993	Chloride	96.7	mg/L	2.0	03/19/21 14:32	
EPA 300.0 Rev 2.1 1993	Sulfate	12.0	mg/L	1.0	03/19/21 10:31	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527234021	GWA-8					
	Performed by	CUSTOME			03/22/21 11:57	
		R				
	pH	4.54	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	21.4	mg/L	1.0	03/24/21 21:02	
EPA 6020B	Barium	0.052	mg/L	0.0050	03/25/21 18:50	
EPA 6020B	Beryllium	0.00023J	mg/L	0.00050	03/25/21 18:50	
EPA 6020B	Boron	0.11	mg/L	0.040	03/25/21 18:50	
EPA 6020B	Chromium	0.00074J	mg/L	0.0050	03/25/21 18:50	
EPA 6020B	Cobalt	0.00058J	mg/L	0.0050	03/25/21 18:50	
EPA 6020B	Lead	0.000093J	mg/L	0.0010	03/25/21 18:50	
EPA 6020B	Lithium	0.0013J	mg/L	0.030	03/25/21 18:50	
EPA 6020B	Zinc	0.0028J	mg/L	0.010	03/25/21 18:50	
SM 2450C-2011	Total Dissolved Solids	163	mg/L	10.0	03/17/21 17:40	
EPA 300.0 Rev 2.1 1993	Chloride	14.1	mg/L	1.0	03/19/21 10:45	
EPA 300.0 Rev 2.1 1993	Fluoride	0.087J	mg/L	0.10	03/19/21 10:45	
EPA 300.0 Rev 2.1 1993	Sulfate	103	mg/L	2.0	03/19/21 14:48	
92527234022	GWC-15					
	Performed by	CUSTOME			03/22/21 11:57	
		R				
	pH	6.21	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	101	mg/L	1.0	03/24/21 21:07	
EPA 6020B	Antimony	0.0018J	mg/L	0.0030	03/25/21 19:13	
EPA 6020B	Arsenic	0.16	mg/L	0.0050	03/25/21 19:13	
EPA 6020B	Barium	0.038	mg/L	0.0050	03/25/21 19:13	
EPA 6020B	Boron	0.81	mg/L	0.040	03/25/21 19:13	
EPA 6020B	Chromium	0.0031J	mg/L	0.0050	03/25/21 19:13	
EPA 6020B	Lead	0.000053J	mg/L	0.0010	03/25/21 19:13	
EPA 6020B	Molybdenum	0.098	mg/L	0.010	03/25/21 19:13	
EPA 6020B	Selenium	0.0064	mg/L	0.0050	03/25/21 19:13	
EPA 6020B	Vanadium	0.0037J	mg/L	0.010	03/25/21 19:13	
SM 2450C-2011	Total Dissolved Solids	353	mg/L	10.0	03/17/21 17:40	
EPA 300.0 Rev 2.1 1993	Chloride	2.3	mg/L	1.0	03/22/21 19:50	
EPA 300.0 Rev 2.1 1993	Sulfate	21.1	mg/L	1.0	03/22/21 19:50	
92527234023	GWC-20					
	Performed by	CUSTOME			03/22/21 11:57	
		R				
	pH	5.86	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	241	mg/L	1.0	03/24/21 21:12	
EPA 6020B	Antimony	0.00065J	mg/L	0.0030	03/25/21 19:19	
EPA 6020B	Arsenic	0.27	mg/L	0.0050	03/25/21 19:19	
EPA 6020B	Barium	0.34	mg/L	0.0050	03/25/21 19:19	
EPA 6020B	Boron	15.6	mg/L	0.40	03/26/21 15:16	
EPA 6020B	Cadmium	0.00018J	mg/L	0.00050	03/25/21 19:19	
EPA 6020B	Chromium	0.0014J	mg/L	0.0050	03/25/21 19:19	
EPA 6020B	Molybdenum	0.53	mg/L	0.010	03/25/21 19:19	
EPA 6020B	Vanadium	0.0038J	mg/L	0.010	03/25/21 19:19	
SM 2450C-2011	Total Dissolved Solids	1730	mg/L	50.0	03/17/21 17:40	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527234023	GWC-20					
EPA 300.0 Rev 2.1 1993	Chloride	31.9	mg/L	1.0	03/19/21 19:59	
EPA 300.0 Rev 2.1 1993	Sulfate	933	mg/L	100	03/22/21 20:05	
92527234025	GWC-2					
	Performed by	CUSTOMER			03/22/21 11:57	
	pH	4.56	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	0.22J	mg/L	1.0	03/24/21 21:17	
EPA 6020B	Barium	0.053	mg/L	0.0050	03/25/21 19:25	
EPA 6020B	Beryllium	0.000073J	mg/L	0.00050	03/25/21 19:25	
EPA 6020B	Boron	0.084	mg/L	0.040	03/25/21 19:25	
EPA 6020B	Chromium	0.0011J	mg/L	0.0050	03/25/21 19:25	
EPA 6020B	Lead	0.000041J	mg/L	0.0010	03/25/21 19:25	
SM 2450C-2011	Total Dissolved Solids	11.0	mg/L	10.0	03/22/21 15:11	D6
EPA 300.0 Rev 2.1 1993	Chloride	6.4	mg/L	1.0	03/26/21 08:26	
EPA 300.0 Rev 2.1 1993	Sulfate	10	mg/L	1.0	03/26/21 08:26	
92527234026	GWC-13					
	Performed by	CUSTOMER			03/22/21 11:57	
	pH	4.74	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	2.4	mg/L	1.0	03/24/21 21:22	
EPA 6020B	Barium	0.034	mg/L	0.0050	03/25/21 19:31	
EPA 6020B	Boron	0.31	mg/L	0.040	03/25/21 19:31	
EPA 6020B	Lead	0.00013J	mg/L	0.0010	03/25/21 19:31	
EPA 6020B	Zinc	0.039	mg/L	0.010	03/25/21 19:31	
EPA 300.0 Rev 2.1 1993	Chloride	7.6	mg/L	1.0	03/20/21 22:54	
EPA 300.0 Rev 2.1 1993	Sulfate	30.6	mg/L	1.0	03/20/21 22:54	
92527234027	GWC-14					
	Performed by	CUSTOMER			03/22/21 11:57	
	pH	5.53	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	34.4	mg/L	1.0	03/24/21 21:36	
EPA 6020B	Barium	0.037	mg/L	0.0050	03/25/21 19:48	
EPA 6020B	Boron	0.080	mg/L	0.040	03/25/21 19:48	
EPA 6020B	Molybdenum	0.0054J	mg/L	0.010	03/25/21 19:48	
EPA 6020B	Selenium	0.0034J	mg/L	0.0050	03/25/21 19:48	
SM 2450C-2011	Total Dissolved Solids	137	mg/L	10.0	03/22/21 15:50	
EPA 300.0 Rev 2.1 1993	Chloride	15.8	mg/L	1.0	03/21/21 00:15	
EPA 300.0 Rev 2.1 1993	Sulfate	92.0	mg/L	1.0	03/21/21 00:15	
92527234028	GWC-16					
	Performed by	CUSTOMER			03/22/21 11:57	
	pH	5.67	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	188	mg/L	1.0	03/24/21 21:41	
EPA 6020B	Arsenic	0.064	mg/L	0.0050	03/25/21 19:53	
EPA 6020B	Barium	0.16	mg/L	0.0050	03/25/21 19:53	
EPA 6020B	Boron	10	mg/L	0.040	03/25/21 19:53	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD-SEMI ANNUAL
 Pace Project No.: 92527234

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527234028	GWC-16					
EPA 6020B	Chromium	0.0012J	mg/L	0.0050	03/25/21 19:53	
EPA 6020B	Lead	0.000073J	mg/L	0.0010	03/25/21 19:53	
EPA 6020B	Molybdenum	0.31	mg/L	0.010	03/25/21 19:53	
EPA 6020B	Selenium	0.0044J	mg/L	0.0050	03/25/21 19:53	
EPA 6020B	Vanadium	0.0034J	mg/L	0.010	03/25/21 19:53	
SM 2450C-2011	Total Dissolved Solids	980	mg/L	100	03/22/21 15:51	
EPA 300.0 Rev 2.1 1993	Chloride	44.9	mg/L	1.0	03/21/21 01:09	
EPA 300.0 Rev 2.1 1993	Sulfate	821	mg/L	17.0	03/21/21 11:00	
92527234029	GWC-21					
	Performed by	CUSTOMER			03/22/21 11:57	
	pH	5.74	Std. Units		03/22/21 11:57	
EPA 6010D	Calcium	104	mg/L	1.0	03/24/21 21:46	
EPA 6020B	Arsenic	0.0098	mg/L	0.0050	03/25/21 19:59	
EPA 6020B	Barium	0.18	mg/L	0.0050	03/25/21 19:59	
EPA 6020B	Boron	3.5	mg/L	0.040	03/25/21 19:59	
EPA 6020B	Chromium	0.00075J	mg/L	0.0050	03/25/21 19:59	
EPA 6020B	Molybdenum	0.024	mg/L	0.010	03/25/21 19:59	
EPA 6020B	Selenium	0.0055	mg/L	0.0050	03/25/21 19:59	
EPA 6020B	Vanadium	0.0030J	mg/L	0.010	03/25/21 19:59	
SM 2450C-2011	Total Dissolved Solids	454	mg/L	20.0	03/22/21 15:51	
EPA 300.0 Rev 2.1 1993	Chloride	25.3	mg/L	1.0	03/21/21 01:23	
EPA 300.0 Rev 2.1 1993	Sulfate	343	mg/L	7.0	03/21/21 11:14	
92527234030	FB-1					
EPA 6020B	Boron	0.018J	mg/L	0.040	03/25/21 20:11	
92527234031	DUP-1					
EPA 6010D	Calcium	35.9	mg/L	1.0	03/24/21 21:55	
EPA 6020B	Barium	0.038	mg/L	0.0050	03/25/21 20:16	
EPA 6020B	Boron	0.085	mg/L	0.040	03/25/21 20:16	
EPA 6020B	Chromium	0.00064J	mg/L	0.0050	03/25/21 20:16	
EPA 6020B	Molybdenum	0.0053J	mg/L	0.010	03/25/21 20:16	
EPA 6020B	Selenium	0.0032J	mg/L	0.0050	03/25/21 20:16	
EPA 6020B	Vanadium	0.0022J	mg/L	0.010	03/25/21 20:16	
SM 2450C-2011	Total Dissolved Solids	194	mg/L	10.0	03/22/21 15:51	
EPA 300.0 Rev 2.1 1993	Chloride	15.6	mg/L	1.0	03/21/21 20:34	
EPA 300.0 Rev 2.1 1993	Sulfate	90.2	mg/L	1.0	03/21/21 20:34	
92527234032	EB-2					
EPA 6010D	Calcium	0.16J	mg/L	1.0	03/24/21 22:05	
EPA 6020B	Boron	0.0058J	mg/L	0.040	03/25/21 20:22	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Sample: DUP-2		Lab ID: 92527234001		Collected: 03/10/21 00:00	Received: 03/11/21 12:40	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	62.8	mg/L	1.0	0.070	1	03/24/21 14:10	03/24/21 18:08	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	0.00046J	mg/L	0.0030	0.00028	1	03/25/21 10:16	03/25/21 17:09	7440-36-0	B	
Arsenic	0.0057	mg/L	0.0050	0.00078	1	03/25/21 10:16	03/25/21 17:09	7440-38-2		
Barium	0.050	mg/L	0.0050	0.00071	1	03/25/21 10:16	03/25/21 17:09	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000046	1	03/25/21 10:16	03/25/21 17:09	7440-41-7		
Boron	0.61	mg/L	0.040	0.0052	1	03/25/21 10:16	03/25/21 17:09	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:16	03/25/21 17:09	7440-43-9		
Chromium	0.0025J	mg/L	0.0050	0.00055	1	03/25/21 10:16	03/25/21 17:09	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:16	03/25/21 17:09	7440-48-4		
Lead	0.000049J	mg/L	0.0010	0.000036	1	03/25/21 10:16	03/25/21 17:09	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:16	03/25/21 17:09	7439-93-2		
Molybdenum	0.056	mg/L	0.010	0.00069	1	03/25/21 10:16	03/25/21 17:09	7439-98-7		
Selenium	ND	mg/L	0.0050	0.0016	1	03/25/21 10:16	03/25/21 17:09	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:16	03/25/21 17:09	7440-28-0		
Vanadium	0.0046J	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 17:09	7440-62-2		
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 17:09	7440-66-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	352	mg/L	10.0	10.0	1		03/15/21 12:50			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	8.4	mg/L	1.0	0.60	1		03/16/21 21:01	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		03/16/21 21:01	16984-48-8		
Sulfate	59.9	mg/L	1.0	0.50	1		03/16/21 21:01	14808-79-8		

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Sample: FB-2		Lab ID: 92527234002		Collected: 03/10/21 16:15	Received: 03/11/21 12:40	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.070	1	03/24/21 14:10	03/24/21 18:13	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	03/25/21 10:16	03/25/21 17:14	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	03/25/21 10:16	03/25/21 17:14	7440-38-2		
Barium	ND	mg/L	0.0050	0.00071	1	03/25/21 10:16	03/25/21 17:14	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000046	1	03/25/21 10:16	03/25/21 17:14	7440-41-7		
Boron	ND	mg/L	0.040	0.0052	1	03/25/21 10:16	03/25/21 17:14	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:16	03/25/21 17:14	7440-43-9		
Chromium	ND	mg/L	0.0050	0.00055	1	03/25/21 10:16	03/25/21 17:14	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:16	03/25/21 17:14	7440-48-4		
Lead	ND	mg/L	0.0010	0.000036	1	03/25/21 10:16	03/25/21 17:14	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:16	03/25/21 17:14	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	03/25/21 10:16	03/25/21 17:14	7439-98-7		
Selenium	0.0019J	mg/L	0.0050	0.0016	1	03/25/21 10:16	03/25/21 17:14	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:16	03/25/21 17:14	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 17:14	7440-62-2		
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 17:14	7440-66-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/15/21 12:50			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		03/16/21 21:17	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		03/16/21 21:17	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		03/16/21 21:17	14808-79-8		

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Sample: GWB-4R		Lab ID: 92527234003		Collected: 03/10/21 09:50		Received: 03/11/21 12:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:57		
pH	5.60	Std. Units			1		03/22/21 11:57		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	263	mg/L	1.0	0.070	1	03/24/21 14:10	03/24/21 18:18	7440-70-2	M1
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/25/21 10:16	03/25/21 17:20	7440-36-0	
Arsenic	0.0025J	mg/L	0.0050	0.00078	1	03/25/21 10:16	03/25/21 17:20	7440-38-2	
Barium	0.070	mg/L	0.0050	0.00071	1	03/25/21 10:16	03/25/21 17:20	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/25/21 10:16	03/25/21 17:20	7440-41-7	
Boron	4.9	mg/L	0.040	0.0052	1	03/25/21 10:16	03/25/21 17:20	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:16	03/25/21 17:20	7440-43-9	
Chromium	0.0030J	mg/L	0.0050	0.00055	1	03/25/21 10:16	03/25/21 17:20	7440-47-3	
Cobalt	0.00069J	mg/L	0.0050	0.00038	1	03/25/21 10:16	03/25/21 17:20	7440-48-4	
Lead	0.00030J	mg/L	0.0010	0.000036	1	03/25/21 10:16	03/25/21 17:20	7439-92-1	
Lithium	0.012J	mg/L	0.030	0.00081	1	03/25/21 10:16	03/25/21 17:20	7439-93-2	
Molybdenum	0.12	mg/L	0.010	0.00069	1	03/25/21 10:16	03/25/21 17:20	7439-98-7	
Selenium	0.0021J	mg/L	0.0050	0.0016	1	03/25/21 10:16	03/25/21 17:20	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:16	03/25/21 17:20	7440-28-0	
Vanadium	0.0054J	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 17:20	7440-62-2	
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 17:20	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	434	mg/L	10.0	10.0	1		03/15/21 12:53		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	16.0	mg/L	1.0	0.60	1		03/16/21 21:32	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/16/21 21:32	16984-48-8	
Sulfate	160	mg/L	4.0	2.0	4		03/17/21 07:35	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Sample: GWB-5R		Lab ID: 92527234004		Collected: 03/10/21 13:15	Received: 03/11/21 12:40	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:57		
pH	4.73	Std. Units			1		03/22/21 11:57		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	134	mg/L	1.0	0.070	1	03/24/21 14:10	03/24/21 18:52	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/25/21 10:16	03/25/21 17:26	7440-36-0	
Arsenic	0.0019J	mg/L	0.0050	0.00078	1	03/25/21 10:16	03/25/21 17:26	7440-38-2	
Barium	0.096	mg/L	0.0050	0.00071	1	03/25/21 10:16	03/25/21 17:26	7440-39-3	
Beryllium	0.000082J	mg/L	0.00050	0.000046	1	03/25/21 10:16	03/25/21 17:26	7440-41-7	
Boron	3.9	mg/L	0.040	0.0052	1	03/25/21 10:16	03/25/21 17:26	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:16	03/25/21 17:26	7440-43-9	
Chromium	0.0010J	mg/L	0.0050	0.00055	1	03/25/21 10:16	03/25/21 17:26	7440-47-3	
Cobalt	0.0057	mg/L	0.0050	0.00038	1	03/25/21 10:16	03/25/21 17:26	7440-48-4	
Lead	0.000052J	mg/L	0.0010	0.000036	1	03/25/21 10:16	03/25/21 17:26	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:16	03/25/21 17:26	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/25/21 10:16	03/25/21 17:26	7439-98-7	
Selenium	0.0060	mg/L	0.0050	0.0016	1	03/25/21 10:16	03/25/21 17:26	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:16	03/25/21 17:26	7440-28-0	
Vanadium	0.0026J	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 17:26	7440-62-2	
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 17:26	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	1040	mg/L	20.0	20.0	1		03/15/21 12:53		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	25.7	mg/L	1.0	0.60	1		03/16/21 21:48	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/16/21 21:48	16984-48-8	
Sulfate	572	mg/L	14.0	7.0	14		03/17/21 07:51	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Sample: GWB-6R		Lab ID: 92527234005		Collected: 03/10/21 15:05		Received: 03/11/21 12:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:57		
pH	5.69	Std. Units			1		03/22/21 11:57		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	55.9	mg/L	1.0	0.070	1	03/24/21 14:10	03/24/21 18:56	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00029J	mg/L	0.0030	0.00028	1	03/25/21 10:16	03/25/21 17:32	7440-36-0	B
Arsenic	0.0054	mg/L	0.0050	0.00078	1	03/25/21 10:16	03/25/21 17:32	7440-38-2	
Barium	0.027	mg/L	0.0050	0.00071	1	03/25/21 10:16	03/25/21 17:32	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/25/21 10:16	03/25/21 17:32	7440-41-7	
Boron	6.9	mg/L	0.040	0.0052	1	03/25/21 10:16	03/25/21 17:32	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:16	03/25/21 17:32	7440-43-9	
Chromium	0.0060	mg/L	0.0050	0.00055	1	03/25/21 10:16	03/25/21 17:32	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:16	03/25/21 17:32	7440-48-4	
Lead	0.000096J	mg/L	0.0010	0.000036	1	03/25/21 10:16	03/25/21 17:32	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:16	03/25/21 17:32	7439-93-2	
Molybdenum	0.0013J	mg/L	0.010	0.00069	1	03/25/21 10:16	03/25/21 17:32	7439-98-7	
Selenium	0.0049J	mg/L	0.0050	0.0016	1	03/25/21 10:16	03/25/21 17:32	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:16	03/25/21 17:32	7440-28-0	
Vanadium	0.027	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 17:32	7440-62-2	
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 17:32	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	2120	mg/L	100	100	1		03/15/21 13:13		D6
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	42.4	mg/L	1.0	0.60	1		03/18/21 14:33	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/18/21 14:33	16984-48-8	
Sulfate	1160	mg/L	31.0	15.5	31		03/19/21 02:08	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Sample: GWC-1 Lab ID: 92527234006 Collected: 03/10/21 16:45 Received: 03/11/21 12:40 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:57		
pH	5.42	Std. Units			1		03/22/21 11:57		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	67.2	mg/L	1.0	0.070	1	03/24/21 14:10	03/24/21 19:01	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00069J	mg/L	0.0030	0.00028	1	03/25/21 10:16	03/25/21 18:10	7440-36-0	B
Arsenic	0.0055	mg/L	0.0050	0.00078	1	03/25/21 10:16	03/25/21 18:10	7440-38-2	
Barium	0.052	mg/L	0.0050	0.00071	1	03/25/21 10:16	03/25/21 18:10	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/25/21 10:16	03/25/21 18:10	7440-41-7	
Boron	0.63	mg/L	0.040	0.0052	1	03/25/21 10:16	03/25/21 18:10	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:16	03/25/21 18:10	7440-43-9	
Chromium	0.0023J	mg/L	0.0050	0.00055	1	03/25/21 10:16	03/25/21 18:10	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:16	03/25/21 18:10	7440-48-4	
Lead	0.00010J	mg/L	0.0010	0.000036	1	03/25/21 10:16	03/25/21 18:10	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:16	03/25/21 18:10	7439-93-2	
Molybdenum	0.057	mg/L	0.010	0.00069	1	03/25/21 10:16	03/25/21 18:10	7439-98-7	
Selenium	0.0026J	mg/L	0.0050	0.0016	1	03/25/21 10:16	03/25/21 18:10	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:16	03/25/21 18:10	7440-28-0	
Vanadium	0.0050J	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 18:10	7440-62-2	
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 18:10	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	329	mg/L	10.0	10.0	1		03/15/21 13:14		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	8.5	mg/L	1.0	0.60	1		03/18/21 14:49	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/18/21 14:49	16984-48-8	
Sulfate	61.2	mg/L	1.0	0.50	1		03/18/21 14:49	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Sample: GWC-12 Lab ID: 92527234007 Collected: 03/10/21 11:50 Received: 03/11/21 12:40 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:57		
pH	4.08	Std. Units			1		03/22/21 11:57		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	53.1	mg/L	1.0	0.070	1	03/24/21 14:10	03/24/21 19:06	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00030J	mg/L	0.0030	0.00028	1	03/25/21 10:16	03/25/21 18:16	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	03/25/21 10:16	03/25/21 18:16	7440-38-2	
Barium	0.028	mg/L	0.0050	0.00071	1	03/25/21 10:16	03/25/21 18:16	7440-39-3	
Beryllium	0.00054	mg/L	0.00050	0.000046	1	03/25/21 10:16	03/25/21 18:16	7440-41-7	
Boron	6.1	mg/L	0.040	0.0052	1	03/25/21 10:16	03/25/21 18:16	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:16	03/25/21 18:16	7440-43-9	
Chromium	0.00091J	mg/L	0.0050	0.00055	1	03/25/21 10:16	03/25/21 18:16	7440-47-3	
Cobalt	0.00071J	mg/L	0.0050	0.00038	1	03/25/21 10:16	03/25/21 18:16	7440-48-4	
Lead	0.000068J	mg/L	0.0010	0.000036	1	03/25/21 10:16	03/25/21 18:16	7439-92-1	
Lithium	0.00095J	mg/L	0.030	0.00081	1	03/25/21 10:16	03/25/21 18:16	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/25/21 10:16	03/25/21 18:16	7439-98-7	
Selenium	0.0030J	mg/L	0.0050	0.0016	1	03/25/21 10:16	03/25/21 18:16	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:16	03/25/21 18:16	7440-28-0	
Vanadium	0.0055J	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 18:16	7440-62-2	
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 18:16	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	566	mg/L	20.0	20.0	1		03/15/21 13:14		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	48.7	mg/L	1.0	0.60	1		03/18/21 15:35	16887-00-6	
Fluoride	0.14	mg/L	0.10	0.050	1		03/18/21 15:35	16984-48-8	
Sulfate	282	mg/L	7.0	3.5	7		03/19/21 02:23	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Sample: GWC-11		Lab ID: 92527234008		Collected: 03/10/21 14:15		Received: 03/11/21 12:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:57		
pH	4.97	Std. Units			1		03/22/21 11:57		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	126	mg/L	1.0	0.070	1	03/24/21 14:10	03/24/21 19:11	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00076J	mg/L	0.0030	0.00028	1	03/25/21 10:16	03/25/21 18:21	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	03/25/21 10:16	03/25/21 18:21	7440-38-2	
Barium	0.13	mg/L	0.0050	0.00071	1	03/25/21 10:16	03/25/21 18:21	7440-39-3	
Beryllium	0.000047J	mg/L	0.00050	0.000046	1	03/25/21 10:16	03/25/21 18:21	7440-41-7	
Boron	1.8	mg/L	0.040	0.0052	1	03/25/21 10:16	03/25/21 18:21	7440-42-8	
Cadmium	0.00090	mg/L	0.00050	0.00012	1	03/25/21 10:16	03/25/21 18:21	7440-43-9	
Chromium	0.0013J	mg/L	0.0050	0.00055	1	03/25/21 10:16	03/25/21 18:21	7440-47-3	
Cobalt	0.00082J	mg/L	0.0050	0.00038	1	03/25/21 10:16	03/25/21 18:21	7440-48-4	
Lead	0.00042J	mg/L	0.0010	0.000036	1	03/25/21 10:16	03/25/21 18:21	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:16	03/25/21 18:21	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/25/21 10:16	03/25/21 18:21	7439-98-7	
Selenium	0.0044J	mg/L	0.0050	0.0016	1	03/25/21 10:16	03/25/21 18:21	7782-49-2	
Thallium	0.00022J	mg/L	0.0010	0.00014	1	03/25/21 10:16	03/25/21 18:21	7440-28-0	
Vanadium	0.0023J	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 18:21	7440-62-2	
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 18:21	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	1240	mg/L	100	100	1		03/15/21 13:14		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	188	mg/L	17.0	10.2	17		03/19/21 02:38	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/18/21 15:51	16984-48-8	
Sulfate	687	mg/L	17.0	8.5	17		03/19/21 02:38	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Sample: GWC-22		Lab ID: 92527234009		Collected: 03/10/21 17:25	Received: 03/11/21 12:40	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:57		
pH	4.82	Std. Units			1		03/22/21 11:57		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	18.7	mg/L	1.0	0.070	1	03/24/21 14:10	03/24/21 19:16	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00040J	mg/L	0.0030	0.00028	1	03/25/21 10:16	03/25/21 18:27	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	03/25/21 10:16	03/25/21 18:27	7440-38-2	
Barium	0.049	mg/L	0.0050	0.00071	1	03/25/21 10:16	03/25/21 18:27	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/25/21 10:16	03/25/21 18:27	7440-41-7	
Boron	0.32	mg/L	0.040	0.0052	1	03/25/21 10:16	03/25/21 18:27	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:16	03/25/21 18:27	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/25/21 10:16	03/25/21 18:27	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:16	03/25/21 18:27	7440-48-4	
Lead	0.00016J	mg/L	0.0010	0.000036	1	03/25/21 10:16	03/25/21 18:27	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:16	03/25/21 18:27	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/25/21 10:16	03/25/21 18:27	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/25/21 10:16	03/25/21 18:27	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:16	03/25/21 18:27	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 18:27	7440-62-2	
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 18:27	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	210	mg/L	10.0	10.0	1		03/15/21 13:14		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	48.2	mg/L	1.0	0.60	1		03/18/21 16:06	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/18/21 16:06	16984-48-8	
Sulfate	101	mg/L	3.0	1.5	3		03/19/21 02:54	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Sample: GWC-9 **Lab ID: 92527234010** Collected: 03/10/21 15:55 Received: 03/11/21 12:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	CUSTOMER				1		03/22/21 11:57		
pH	4.55	Std. Units			1		03/22/21 11:57		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Calcium	5.3	mg/L	1.0	0.070	1	03/24/21 14:10	03/24/21 19:20	7440-70-2	
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6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00028	1	03/25/21 10:16	03/25/21 18:33	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/25/21 10:16	03/25/21 18:33	7440-38-2	
Barium	0.15	mg/L	0.0050	0.00071	1	03/25/21 10:16	03/25/21 18:33	7440-39-3	
Beryllium	0.00019J	mg/L	0.00050	0.000046	1	03/25/21 10:16	03/25/21 18:33	7440-41-7	
Boron	0.022J	mg/L	0.040	0.0052	1	03/25/21 10:16	03/25/21 18:33	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:16	03/25/21 18:33	7440-43-9	
Chromium	0.0011J	mg/L	0.0050	0.00055	1	03/25/21 10:16	03/25/21 18:33	7440-47-3	
Cobalt	0.00096J	mg/L	0.0050	0.00038	1	03/25/21 10:16	03/25/21 18:33	7440-48-4	
Lead	0.00012J	mg/L	0.0010	0.000036	1	03/25/21 10:16	03/25/21 18:33	7439-92-1	
Lithium	0.0018J	mg/L	0.030	0.00081	1	03/25/21 10:16	03/25/21 18:33	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/25/21 10:16	03/25/21 18:33	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/25/21 10:16	03/25/21 18:33	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:16	03/25/21 18:33	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 18:33	7440-62-2	
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 18:33	7440-66-6	

2540C Total Dissolved Solids

Analytical Method: SM 2450C-2011
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	89.0	mg/L	10.0	10.0	1		03/15/21 13:14		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	18.3	mg/L	1.0	0.60	1		03/17/21 20:37	16887-00-6	
Fluoride	0.066J	mg/L	0.10	0.050	1		03/17/21 20:37	16984-48-8	
Sulfate	38.7	mg/L	1.0	0.50	1		03/17/21 20:37	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Sample: FB-3		Lab ID: 92527234011		Collected: 03/11/21 12:50	Received: 03/12/21 16:00	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.070	1	03/24/21 14:10	03/24/21 19:25	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	03/25/21 10:16	03/25/21 18:38	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	03/25/21 10:16	03/25/21 18:38	7440-38-2		
Barium	ND	mg/L	0.0050	0.00071	1	03/25/21 10:16	03/25/21 18:38	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000046	1	03/25/21 10:16	03/25/21 18:38	7440-41-7		
Boron	ND	mg/L	0.040	0.0052	1	03/25/21 10:16	03/25/21 18:38	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:16	03/25/21 18:38	7440-43-9		
Chromium	ND	mg/L	0.0050	0.00055	1	03/25/21 10:16	03/25/21 18:38	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:16	03/25/21 18:38	7440-48-4		
Lead	ND	mg/L	0.0010	0.000036	1	03/25/21 10:16	03/25/21 18:38	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:16	03/25/21 18:38	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	03/25/21 10:16	03/25/21 18:38	7439-98-7		
Selenium	ND	mg/L	0.0050	0.0016	1	03/25/21 10:16	03/26/21 15:10	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:16	03/25/21 18:38	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 18:38	7440-62-2		
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 18:38	7440-66-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/16/21 15:07			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		03/19/21 07:02	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		03/19/21 07:02	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		03/19/21 07:02	14808-79-8		

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Sample: EB-3		Lab ID: 92527234012		Collected: 03/11/21 10:55	Received: 03/12/21 16:00	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	0.075J	mg/L	1.0	0.070	1	03/24/21 14:10	03/24/21 19:30	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	03/25/21 10:16	03/25/21 18:44	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	03/25/21 10:16	03/25/21 18:44	7440-38-2		
Barium	ND	mg/L	0.0050	0.00071	1	03/25/21 10:16	03/25/21 18:44	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000046	1	03/25/21 10:16	03/25/21 18:44	7440-41-7		
Boron	ND	mg/L	0.040	0.0052	1	03/25/21 10:16	03/25/21 18:44	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:16	03/25/21 18:44	7440-43-9		
Chromium	ND	mg/L	0.0050	0.00055	1	03/25/21 10:16	03/25/21 18:44	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:16	03/25/21 18:44	7440-48-4		
Lead	ND	mg/L	0.0010	0.000036	1	03/25/21 10:16	03/25/21 18:44	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:16	03/25/21 18:44	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	03/25/21 10:16	03/25/21 18:44	7439-98-7		
Selenium	ND	mg/L	0.0050	0.0016	1	03/25/21 10:16	03/25/21 18:44	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:16	03/25/21 18:44	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 18:44	7440-62-2		
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 18:44	7440-66-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/16/21 15:07			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		03/19/21 07:44	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		03/19/21 07:44	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		03/19/21 07:44	14808-79-8		

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Sample: DUP-3		Lab ID: 92527234013		Collected: 03/12/21 00:00	Received: 03/12/21 16:00	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	100	mg/L	1.0	0.070	1	03/24/21 14:10	03/24/21 19:45	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	03/25/21 10:16	03/25/21 18:50	7440-36-0		
Arsenic	0.15	mg/L	0.0050	0.00078	1	03/25/21 10:16	03/25/21 18:50	7440-38-2		
Barium	0.038	mg/L	0.0050	0.00071	1	03/25/21 10:16	03/25/21 18:50	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000046	1	03/25/21 10:16	03/25/21 18:50	7440-41-7		
Boron	0.75	mg/L	0.040	0.0052	1	03/25/21 10:16	03/25/21 18:50	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:16	03/25/21 18:50	7440-43-9		
Chromium	0.0037J	mg/L	0.0050	0.00055	1	03/25/21 10:16	03/25/21 18:50	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:16	03/25/21 18:50	7440-48-4		
Lead	ND	mg/L	0.0010	0.000036	1	03/25/21 10:16	03/25/21 18:50	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:16	03/25/21 18:50	7439-93-2		
Molybdenum	0.094	mg/L	0.010	0.00069	1	03/25/21 10:16	03/25/21 18:50	7439-98-7		
Selenium	0.0062	mg/L	0.0050	0.0016	1	03/25/21 10:16	03/25/21 18:50	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:16	03/25/21 18:50	7440-28-0		
Vanadium	0.0034J	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 18:50	7440-62-2		
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 18:50	7440-66-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	387	mg/L	10.0	10.0	1		03/17/21 17:40			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	2.3	mg/L	1.0	0.60	1		03/19/21 08:25	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		03/19/21 08:25	16984-48-8		
Sulfate	22.6	mg/L	1.0	0.50	1		03/19/21 08:25	14808-79-8		

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Sample: MW-24D		Lab ID: 92527234014		Collected: 03/11/21 10:50		Received: 03/12/21 16:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:57		
pH	6.47	Std. Units			1		03/22/21 11:57		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	5.4	mg/L	1.0	0.070	1	03/24/21 14:37	03/24/21 20:04	7440-70-2	M1
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/25/21 10:16	03/25/21 18:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/25/21 10:16	03/25/21 18:56	7440-38-2	
Barium	0.047	mg/L	0.0050	0.00071	1	03/25/21 10:16	03/25/21 18:56	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/25/21 10:16	03/25/21 18:56	7440-41-7	
Boron	0.019J	mg/L	0.040	0.0052	1	03/25/21 10:16	03/25/21 18:56	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:16	03/25/21 18:56	7440-43-9	
Chromium	0.00069J	mg/L	0.0050	0.00055	1	03/25/21 10:16	03/25/21 18:56	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:16	03/25/21 18:56	7440-48-4	
Lead	0.000094J	mg/L	0.0010	0.000036	1	03/25/21 10:16	03/25/21 18:56	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:16	03/25/21 18:56	7439-93-2	
Molybdenum	0.0035J	mg/L	0.010	0.00069	1	03/25/21 10:16	03/25/21 18:56	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/25/21 10:16	03/25/21 18:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:16	03/25/21 18:56	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 18:56	7440-62-2	
Zinc	0.0025J	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 18:56	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	53.0	mg/L	10.0	10.0	1		03/16/21 15:07		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	6.0	mg/L	1.0	0.60	1		03/19/21 08:39	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/19/21 08:39	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		03/19/21 08:39	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Sample: MW-23D		Lab ID: 92527234015		Collected: 03/11/21 14:00		Received: 03/12/21 16:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:57		
pH	5.82	Std. Units			1		03/22/21 11:57		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	12.4	mg/L	1.0	0.070	1	03/24/21 14:37	03/24/21 20:24	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/25/21 10:16	03/25/21 19:01	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/25/21 10:16	03/25/21 19:01	7440-38-2	
Barium	0.076	mg/L	0.0050	0.00071	1	03/25/21 10:16	03/25/21 19:01	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/25/21 10:16	03/25/21 19:01	7440-41-7	
Boron	0.030J	mg/L	0.040	0.0052	1	03/25/21 10:16	03/25/21 19:01	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:16	03/25/21 19:01	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/25/21 10:16	03/25/21 19:01	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:16	03/25/21 19:01	7440-48-4	
Lead	0.000057J	mg/L	0.0010	0.000036	1	03/25/21 10:16	03/25/21 19:01	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:16	03/25/21 19:01	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/25/21 10:16	03/25/21 19:01	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/25/21 10:16	03/25/21 19:01	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:16	03/25/21 19:01	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 19:01	7440-62-2	
Zinc	0.0067J	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 19:01	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	149	mg/L	10.0	10.0	1		03/16/21 15:07		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	9.9	mg/L	1.0	0.60	1		03/19/21 08:53	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/19/21 08:53	16984-48-8	
Sulfate	62.4	mg/L	1.0	0.50	1		03/19/21 08:53	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Sample: MW-26D	Lab ID: 92527234016	Collected: 03/11/21 12:25	Received: 03/12/21 16:00	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	CUSTOMER				1		03/22/21 11:57		
pH	6.00	Std. Units			1		03/22/21 11:57		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	3.1	mg/L	1.0	0.070	1	03/24/21 14:37	03/24/21 20:28	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	03/25/21 10:16	03/25/21 19:19	7440-36-0	
Arsenic	0.0010J	mg/L	0.0050	0.00078	1	03/25/21 10:16	03/25/21 19:19	7440-38-2	
Barium	0.037	mg/L	0.0050	0.00071	1	03/25/21 10:16	03/25/21 19:19	7440-39-3	
Beryllium	0.00010J	mg/L	0.00050	0.000046	1	03/25/21 10:16	03/25/21 19:19	7440-41-7	
Boron	0.015J	mg/L	0.040	0.0052	1	03/25/21 10:16	03/25/21 19:19	7440-42-8	
Cadmium	0.00029J	mg/L	0.00050	0.00012	1	03/25/21 10:16	03/25/21 19:19	7440-43-9	
Chromium	0.0020J	mg/L	0.0050	0.00055	1	03/25/21 10:16	03/25/21 19:19	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:16	03/25/21 19:19	7440-48-4	
Lead	0.00015J	mg/L	0.0010	0.000036	1	03/25/21 10:16	03/25/21 19:19	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:16	03/25/21 19:19	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/25/21 10:16	03/25/21 19:19	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/25/21 10:16	03/25/21 19:19	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:16	03/25/21 19:19	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 19:19	7440-62-2	
Zinc	0.0080J	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 19:19	7440-66-6	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	41.0	mg/L	10.0	10.0	1		03/16/21 15:07		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	7.0	mg/L	1.0	0.60	1		03/19/21 09:07	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/19/21 09:07	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		03/19/21 09:07	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Sample: MW-27D	Lab ID: 92527234017	Collected: 03/11/21 15:45	Received: 03/12/21 16:00	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:57		
pH	5.12	Std. Units			1		03/22/21 11:57		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	2.6	mg/L	1.0	0.070	1	03/24/21 14:37	03/24/21 20:43	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/25/21 10:16	03/25/21 19:24	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/25/21 10:16	03/25/21 19:24	7440-38-2	
Barium	0.031	mg/L	0.0050	0.00071	1	03/25/21 10:16	03/25/21 19:24	7440-39-3	
Beryllium	0.00032J	mg/L	0.00050	0.000046	1	03/25/21 10:16	03/25/21 19:24	7440-41-7	
Boron	0.014J	mg/L	0.040	0.0052	1	03/25/21 10:16	03/25/21 19:24	7440-42-8	
Cadmium	0.0015	mg/L	0.00050	0.00012	1	03/25/21 10:16	03/25/21 19:24	7440-43-9	
Chromium	0.00073J	mg/L	0.0050	0.00055	1	03/25/21 10:16	03/25/21 19:24	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:16	03/25/21 19:24	7440-48-4	
Lead	0.00022J	mg/L	0.0010	0.000036	1	03/25/21 10:16	03/25/21 19:24	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:16	03/25/21 19:24	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/25/21 10:16	03/25/21 19:24	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/25/21 10:16	03/25/21 19:24	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:16	03/25/21 19:24	7440-28-0	
Vanadium	0.0024J	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 19:24	7440-62-2	
Zinc	0.0066J	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 19:24	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	43.0	mg/L	10.0	10.0	1		03/16/21 15:07		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	6.5	mg/L	1.0	0.60	1		03/19/21 09:21	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/19/21 09:21	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		03/19/21 09:21	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Sample: MW-25D		Lab ID: 92527234018		Collected: 03/11/21 14:35		Received: 03/12/21 16:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:57		
pH	6.31	Std. Units			1		03/22/21 11:57		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	4.7	mg/L	1.0	0.070	1	03/24/21 14:37	03/24/21 20:48	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/25/21 10:16	03/25/21 19:30	7440-36-0	
Arsenic	0.00092J	mg/L	0.0050	0.00078	1	03/25/21 10:16	03/25/21 19:30	7440-38-2	
Barium	0.030	mg/L	0.0050	0.00071	1	03/25/21 10:16	03/25/21 19:30	7440-39-3	
Beryllium	0.000084J	mg/L	0.00050	0.000046	1	03/25/21 10:16	03/25/21 19:30	7440-41-7	
Boron	0.017J	mg/L	0.040	0.0052	1	03/25/21 10:16	03/25/21 19:30	7440-42-8	
Cadmium	0.00019J	mg/L	0.00050	0.00012	1	03/25/21 10:16	03/25/21 19:30	7440-43-9	
Chromium	0.0016J	mg/L	0.0050	0.00055	1	03/25/21 10:16	03/25/21 19:30	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:16	03/25/21 19:30	7440-48-4	
Lead	0.000095J	mg/L	0.0010	0.000036	1	03/25/21 10:16	03/25/21 19:30	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:16	03/25/21 19:30	7439-93-2	
Molybdenum	0.0015J	mg/L	0.010	0.00069	1	03/25/21 10:16	03/25/21 19:30	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/25/21 10:16	03/25/21 19:30	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:16	03/25/21 19:30	7440-28-0	
Vanadium	0.0024J	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 19:30	7440-62-2	
Zinc	0.0054J	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 19:30	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	57.0	mg/L	10.0	10.0	1		03/16/21 15:08		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	6.4	mg/L	1.0	0.60	1		03/19/21 09:35	16887-00-6	
Fluoride	0.12	mg/L	0.10	0.050	1		03/19/21 09:35	16984-48-8	
Sulfate	0.52J	mg/L	1.0	0.50	1		03/19/21 09:35	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Sample: GWC-17 **Lab ID: 92527234019** Collected: 03/11/21 10:30 Received: 03/12/21 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	CUSTOMER				1		03/22/21 11:57		
pH	5.20	Std. Units			1		03/22/21 11:57		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Calcium	67.0	mg/L	1.0	0.070	1	03/24/21 14:37	03/24/21 20:52	7440-70-2	
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6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	0.00039J	mg/L	0.0030	0.00028	1	03/25/21 10:16	03/25/21 19:36	7440-36-0	B
Arsenic	0.00090J	mg/L	0.0050	0.00078	1	03/25/21 10:16	03/25/21 19:36	7440-38-2	
Barium	0.044	mg/L	0.0050	0.00071	1	03/25/21 10:16	03/25/21 19:36	7440-39-3	
Beryllium	0.0012	mg/L	0.00050	0.000046	1	03/25/21 10:16	03/25/21 19:36	7440-41-7	
Boron	0.85	mg/L	0.040	0.0052	1	03/25/21 10:16	03/25/21 19:36	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:16	03/25/21 19:36	7440-43-9	
Chromium	0.00090J	mg/L	0.0050	0.00055	1	03/25/21 10:16	03/25/21 19:36	7440-47-3	
Cobalt	0.0019J	mg/L	0.0050	0.00038	1	03/25/21 10:16	03/25/21 19:36	7440-48-4	
Lead	0.00019J	mg/L	0.0010	0.000036	1	03/25/21 10:16	03/25/21 19:36	7439-92-1	
Lithium	0.0036J	mg/L	0.030	0.00081	1	03/25/21 10:16	03/25/21 19:36	7439-93-2	
Molybdenum	0.0038J	mg/L	0.010	0.00069	1	03/25/21 10:16	03/25/21 19:36	7439-98-7	
Selenium	0.0016J	mg/L	0.0050	0.0016	1	03/25/21 10:16	03/25/21 19:36	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:16	03/25/21 19:36	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 19:36	7440-62-2	
Zinc	0.0056J	mg/L	0.010	0.0022	1	03/25/21 10:16	03/25/21 19:36	7440-66-6	

2540C Total Dissolved Solids

Analytical Method: SM 2450C-2011
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	705	mg/L	50.0	50.0	1		03/16/21 15:08		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	334	mg/L	7.0	4.2	7		03/19/21 14:16	16887-00-6	
Fluoride	0.42	mg/L	0.10	0.050	1		03/19/21 09:49	16984-48-8	
Sulfate	244	mg/L	7.0	3.5	7		03/19/21 14:16	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Sample: GWA-7 Lab ID: 92527234020 Collected: 03/11/21 16:45 Received: 03/12/21 16:00 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:57		
pH	5.85	Std. Units			1		03/22/21 11:57		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	2.4	mg/L	1.0	0.070	1	03/24/21 14:37	03/24/21 20:57	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.015	0.0014	5	03/25/21 10:16	03/25/21 19:41	7440-36-0	
Arsenic	0.0047J	mg/L	0.025	0.0039	5	03/25/21 10:16	03/25/21 19:41	7440-38-2	
Barium	0.070	mg/L	0.025	0.0036	5	03/25/21 10:16	03/25/21 19:41	7440-39-3	
Beryllium	0.00028J	mg/L	0.0025	0.00023	5	03/25/21 10:16	03/25/21 19:41	7440-41-7	
Boron	8.0	mg/L	0.20	0.026	5	03/25/21 10:16	03/25/21 19:41	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00059	5	03/25/21 10:16	03/25/21 19:41	7440-43-9	
Chromium	0.020J	mg/L	0.025	0.0028	5	03/25/21 10:16	03/25/21 19:41	7440-47-3	
Cobalt	0.0023J	mg/L	0.025	0.0019	5	03/25/21 10:16	03/25/21 19:41	7440-48-4	
Lead	0.0079	mg/L	0.0050	0.00018	5	03/25/21 10:16	03/25/21 19:41	7439-92-1	
Lithium	ND	mg/L	0.15	0.0040	5	03/25/21 10:16	03/25/21 19:41	7439-93-2	
Molybdenum	ND	mg/L	0.050	0.0034	5	03/25/21 10:16	03/25/21 19:41	7439-98-7	
Selenium	ND	mg/L	0.025	0.0078	5	03/25/21 10:16	03/25/21 19:41	7782-49-2	
Thallium	ND	mg/L	0.0050	0.00072	5	03/25/21 10:16	03/25/21 19:41	7440-28-0	
Vanadium	0.14	mg/L	0.050	0.011	5	03/25/21 10:16	03/25/21 19:41	7440-62-2	
Zinc	0.054	mg/L	0.050	0.011	5	03/25/21 10:16	03/25/21 19:41	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	1220	mg/L	100	100	1		03/16/21 15:08		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	96.7	mg/L	2.0	1.2	2		03/19/21 14:32	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/19/21 10:31	16984-48-8	
Sulfate	12.0	mg/L	1.0	0.50	1		03/19/21 10:31	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Sample: GWA-8 Lab ID: 92527234021 Collected: 03/12/21 08:50 Received: 03/12/21 16:00 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:57		
pH	4.54	Std. Units			1		03/22/21 11:57		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	21.4	mg/L	1.0	0.070	1	03/24/21 14:37	03/24/21 21:02	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/25/21 10:30	03/25/21 18:50	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/25/21 10:30	03/25/21 18:50	7440-38-2	
Barium	0.052	mg/L	0.0050	0.00071	1	03/25/21 10:30	03/25/21 18:50	7440-39-3	
Beryllium	0.00023J	mg/L	0.00050	0.000046	1	03/25/21 10:30	03/25/21 18:50	7440-41-7	
Boron	0.11	mg/L	0.040	0.0052	1	03/25/21 10:30	03/25/21 18:50	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:30	03/25/21 18:50	7440-43-9	
Chromium	0.00074J	mg/L	0.0050	0.00055	1	03/25/21 10:30	03/25/21 18:50	7440-47-3	
Cobalt	0.00058J	mg/L	0.0050	0.00038	1	03/25/21 10:30	03/25/21 18:50	7440-48-4	
Lead	0.000093J	mg/L	0.0010	0.000036	1	03/25/21 10:30	03/25/21 18:50	7439-92-1	
Lithium	0.0013J	mg/L	0.030	0.00081	1	03/25/21 10:30	03/25/21 18:50	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/25/21 10:30	03/25/21 18:50	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/25/21 10:30	03/25/21 18:50	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:30	03/25/21 18:50	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 18:50	7440-62-2	
Zinc	0.0028J	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 18:50	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	163	mg/L	10.0	10.0	1		03/17/21 17:40		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	14.1	mg/L	1.0	0.60	1		03/19/21 10:45	16887-00-6	
Fluoride	0.087J	mg/L	0.10	0.050	1		03/19/21 10:45	16984-48-8	
Sulfate	103	mg/L	2.0	1.0	2		03/19/21 14:48	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: GWC-15									
Lab ID: 92527234022									
Collected: 03/12/21 08:35 Received: 03/12/21 16:00 Matrix: Water									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:57		
pH	6.21	Std. Units			1		03/22/21 11:57		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	101	mg/L	1.0	0.070	1	03/24/21 14:37	03/24/21 21:07	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0018J	mg/L	0.0030	0.00028	1	03/25/21 10:30	03/25/21 19:13	7440-36-0	
Arsenic	0.16	mg/L	0.0050	0.00078	1	03/25/21 10:30	03/25/21 19:13	7440-38-2	
Barium	0.038	mg/L	0.0050	0.00071	1	03/25/21 10:30	03/25/21 19:13	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/25/21 10:30	03/25/21 19:13	7440-41-7	
Boron	0.81	mg/L	0.040	0.0052	1	03/25/21 10:30	03/25/21 19:13	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:30	03/25/21 19:13	7440-43-9	
Chromium	0.0031J	mg/L	0.0050	0.00055	1	03/25/21 10:30	03/25/21 19:13	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:30	03/25/21 19:13	7440-48-4	
Lead	0.000053J	mg/L	0.0010	0.000036	1	03/25/21 10:30	03/25/21 19:13	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:30	03/25/21 19:13	7439-93-2	
Molybdenum	0.098	mg/L	0.010	0.00069	1	03/25/21 10:30	03/25/21 19:13	7439-98-7	
Selenium	0.0064	mg/L	0.0050	0.0016	1	03/25/21 10:30	03/25/21 19:13	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:30	03/25/21 19:13	7440-28-0	
Vanadium	0.0037J	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 19:13	7440-62-2	
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 19:13	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	353	mg/L	10.0	10.0	1		03/17/21 17:40		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.3	mg/L	1.0	0.60	1		03/22/21 19:50	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/22/21 19:50	16984-48-8	
Sulfate	21.1	mg/L	1.0	0.50	1		03/22/21 19:50	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Sample: GWC-20		Lab ID: 92527234023		Collected: 03/12/21 08:35	Received: 03/12/21 16:00	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:57		
pH	5.86	Std. Units			1		03/22/21 11:57		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	241	mg/L	1.0	0.070	1	03/24/21 14:37	03/24/21 21:12	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00065J	mg/L	0.0030	0.00028	1	03/25/21 10:30	03/25/21 19:19	7440-36-0	
Arsenic	0.27	mg/L	0.0050	0.00078	1	03/25/21 10:30	03/25/21 19:19	7440-38-2	
Barium	0.34	mg/L	0.0050	0.00071	1	03/25/21 10:30	03/25/21 19:19	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/25/21 10:30	03/25/21 19:19	7440-41-7	
Boron	15.6	mg/L	0.40	0.052	10	03/25/21 10:30	03/26/21 15:16	7440-42-8	
Cadmium	0.00018J	mg/L	0.00050	0.00012	1	03/25/21 10:30	03/25/21 19:19	7440-43-9	
Chromium	0.0014J	mg/L	0.0050	0.00055	1	03/25/21 10:30	03/25/21 19:19	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:30	03/25/21 19:19	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/25/21 10:30	03/25/21 19:19	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:30	03/25/21 19:19	7439-93-2	
Molybdenum	0.53	mg/L	0.010	0.00069	1	03/25/21 10:30	03/25/21 19:19	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/25/21 10:30	03/25/21 19:19	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:30	03/25/21 19:19	7440-28-0	
Vanadium	0.0038J	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 19:19	7440-62-2	
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 19:19	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	1730	mg/L	50.0	50.0	1		03/17/21 17:40		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	31.9	mg/L	1.0	0.60	1		03/19/21 19:59	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/19/21 19:59	16984-48-8	
Sulfate	933	mg/L	100	50.0	100		03/22/21 20:05	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Sample: GWC-2		Lab ID: 92527234025		Collected: 03/15/21 15:10		Received: 03/17/21 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:57		
pH	4.56	Std. Units			1		03/22/21 11:57		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	0.22J	mg/L	1.0	0.070	1	03/24/21 14:37	03/24/21 21:17	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/25/21 10:30	03/25/21 19:25	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/25/21 10:30	03/25/21 19:25	7440-38-2	
Barium	0.053	mg/L	0.0050	0.00071	1	03/25/21 10:30	03/25/21 19:25	7440-39-3	
Beryllium	0.000073J	mg/L	0.00050	0.000046	1	03/25/21 10:30	03/25/21 19:25	7440-41-7	
Boron	0.084	mg/L	0.040	0.0052	1	03/25/21 10:30	03/25/21 19:25	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:30	03/25/21 19:25	7440-43-9	
Chromium	0.0011J	mg/L	0.0050	0.00055	1	03/25/21 10:30	03/25/21 19:25	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:30	03/25/21 19:25	7440-48-4	
Lead	0.000041J	mg/L	0.0010	0.000036	1	03/25/21 10:30	03/25/21 19:25	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:30	03/25/21 19:25	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/25/21 10:30	03/25/21 19:25	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/25/21 10:30	03/25/21 19:25	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:30	03/25/21 19:25	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 19:25	7440-62-2	
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 19:25	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	11.0	mg/L	10.0	10.0	1		03/22/21 15:11		D6
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	6.4	mg/L	1.0	0.60	1		03/26/21 08:26	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/26/21 08:26	16984-48-8	
Sulfate	10	mg/L	1.0	0.50	1		03/26/21 08:26	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Sample: GWC-13 Lab ID: 92527234026 Collected: 03/15/21 16:25 Received: 03/17/21 12:25 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:57		
pH	4.74	Std. Units			1		03/22/21 11:57		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	2.4	mg/L	1.0	0.070	1	03/24/21 14:37	03/24/21 21:22	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/25/21 10:30	03/25/21 19:31	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/25/21 10:30	03/25/21 19:31	7440-38-2	
Barium	0.034	mg/L	0.0050	0.00071	1	03/25/21 10:30	03/25/21 19:31	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/25/21 10:30	03/25/21 19:31	7440-41-7	
Boron	0.31	mg/L	0.040	0.0052	1	03/25/21 10:30	03/25/21 19:31	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:30	03/25/21 19:31	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/25/21 10:30	03/25/21 19:31	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:30	03/25/21 19:31	7440-48-4	
Lead	0.00013J	mg/L	0.0010	0.000036	1	03/25/21 10:30	03/25/21 19:31	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:30	03/25/21 19:31	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/25/21 10:30	03/25/21 19:31	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/25/21 10:30	03/25/21 19:31	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:30	03/25/21 19:31	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 19:31	7440-62-2	
Zinc	0.039	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 19:31	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/22/21 15:11		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	7.6	mg/L	1.0	0.60	1		03/20/21 22:54	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/20/21 22:54	16984-48-8	
Sulfate	30.6	mg/L	1.0	0.50	1		03/20/21 22:54	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Sample: GWC-14 Lab ID: 92527234027 Collected: 03/16/21 09:30 Received: 03/17/21 12:25 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:57		
pH	5.53	Std. Units			1		03/22/21 11:57		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	34.4	mg/L	1.0	0.070	1	03/24/21 14:37	03/24/21 21:36	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/25/21 10:30	03/25/21 19:48	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/25/21 10:30	03/25/21 19:48	7440-38-2	
Barium	0.037	mg/L	0.0050	0.00071	1	03/25/21 10:30	03/25/21 19:48	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/25/21 10:30	03/25/21 19:48	7440-41-7	
Boron	0.080	mg/L	0.040	0.0052	1	03/25/21 10:30	03/25/21 19:48	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:30	03/25/21 19:48	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/25/21 10:30	03/25/21 19:48	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:30	03/25/21 19:48	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/25/21 10:30	03/25/21 19:48	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:30	03/25/21 19:48	7439-93-2	
Molybdenum	0.0054J	mg/L	0.010	0.00069	1	03/25/21 10:30	03/25/21 19:48	7439-98-7	
Selenium	0.0034J	mg/L	0.0050	0.0016	1	03/25/21 10:30	03/25/21 19:48	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:30	03/25/21 19:48	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 19:48	7440-62-2	
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 19:48	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	137	mg/L	10.0	10.0	1		03/22/21 15:50		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	15.8	mg/L	1.0	0.60	1		03/21/21 00:15	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/21/21 00:15	16984-48-8	
Sulfate	92.0	mg/L	1.0	0.50	1		03/21/21 00:15	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Sample: GWC-16 **Lab ID: 92527234028** Collected: 03/16/21 11:05 Received: 03/17/21 12:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	CUSTOMER				1		03/22/21 11:57		
pH	5.67	Std. Units			1		03/22/21 11:57		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Calcium	188	mg/L	1.0	0.070	1	03/24/21 14:37	03/24/21 21:41	7440-70-2	
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6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00028	1	03/25/21 10:30	03/25/21 19:53	7440-36-0	
Arsenic	0.064	mg/L	0.0050	0.00078	1	03/25/21 10:30	03/25/21 19:53	7440-38-2	
Barium	0.16	mg/L	0.0050	0.00071	1	03/25/21 10:30	03/25/21 19:53	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/25/21 10:30	03/25/21 19:53	7440-41-7	
Boron	10	mg/L	0.040	0.0052	1	03/25/21 10:30	03/25/21 19:53	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:30	03/25/21 19:53	7440-43-9	
Chromium	0.0012J	mg/L	0.0050	0.00055	1	03/25/21 10:30	03/25/21 19:53	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:30	03/25/21 19:53	7440-48-4	
Lead	0.000073J	mg/L	0.0010	0.000036	1	03/25/21 10:30	03/25/21 19:53	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:30	03/25/21 19:53	7439-93-2	
Molybdenum	0.31	mg/L	0.010	0.00069	1	03/25/21 10:30	03/25/21 19:53	7439-98-7	
Selenium	0.0044J	mg/L	0.0050	0.0016	1	03/25/21 10:30	03/25/21 19:53	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:30	03/25/21 19:53	7440-28-0	
Vanadium	0.0034J	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 19:53	7440-62-2	
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 19:53	7440-66-6	

2540C Total Dissolved Solids

Analytical Method: SM 2450C-2011
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	980	mg/L	100	100	1		03/22/21 15:51		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	44.9	mg/L	1.0	0.60	1		03/21/21 01:09	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/21/21 01:09	16984-48-8	
Sulfate	821	mg/L	17.0	8.5	17		03/21/21 11:00	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Sample: GWC-21 Lab ID: 92527234029 Collected: 03/16/21 15:00 Received: 03/17/21 12:25 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:57		
pH	5.74	Std. Units			1		03/22/21 11:57		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	104	mg/L	1.0	0.070	1	03/24/21 14:37	03/24/21 21:46	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/25/21 10:30	03/25/21 19:59	7440-36-0	
Arsenic	0.0098	mg/L	0.0050	0.00078	1	03/25/21 10:30	03/25/21 19:59	7440-38-2	
Barium	0.18	mg/L	0.0050	0.00071	1	03/25/21 10:30	03/25/21 19:59	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/25/21 10:30	03/25/21 19:59	7440-41-7	
Boron	3.5	mg/L	0.040	0.0052	1	03/25/21 10:30	03/25/21 19:59	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:30	03/25/21 19:59	7440-43-9	
Chromium	0.00075J	mg/L	0.0050	0.00055	1	03/25/21 10:30	03/25/21 19:59	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:30	03/25/21 19:59	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/25/21 10:30	03/25/21 19:59	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:30	03/25/21 19:59	7439-93-2	
Molybdenum	0.024	mg/L	0.010	0.00069	1	03/25/21 10:30	03/25/21 19:59	7439-98-7	
Selenium	0.0055	mg/L	0.0050	0.0016	1	03/25/21 10:30	03/25/21 19:59	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:30	03/25/21 19:59	7440-28-0	
Vanadium	0.0030J	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 19:59	7440-62-2	
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 19:59	7440-66-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	454	mg/L	20.0	20.0	1		03/22/21 15:51		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	25.3	mg/L	1.0	0.60	1		03/21/21 01:23	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/21/21 01:23	16984-48-8	
Sulfate	343	mg/L	7.0	3.5	7		03/21/21 11:14	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Sample: FB-1		Lab ID: 92527234030		Collected: 03/15/21 16:15		Received: 03/17/21 12:25		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.070	1	03/24/21 14:37	03/24/21 21:50	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	03/25/21 10:30	03/25/21 20:11	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	03/25/21 10:30	03/25/21 20:11	7440-38-2		
Barium	ND	mg/L	0.0050	0.00071	1	03/25/21 10:30	03/25/21 20:11	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000046	1	03/25/21 10:30	03/25/21 20:11	7440-41-7		
Boron	0.018J	mg/L	0.040	0.0052	1	03/25/21 10:30	03/25/21 20:11	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:30	03/25/21 20:11	7440-43-9		
Chromium	ND	mg/L	0.0050	0.00055	1	03/25/21 10:30	03/25/21 20:11	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:30	03/25/21 20:11	7440-48-4		
Lead	ND	mg/L	0.0010	0.000036	1	03/25/21 10:30	03/25/21 20:11	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:30	03/25/21 20:11	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	03/25/21 10:30	03/25/21 20:11	7439-98-7		
Selenium	ND	mg/L	0.0050	0.0016	1	03/25/21 10:30	03/25/21 20:11	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:30	03/25/21 20:11	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 20:11	7440-62-2		
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 20:11	7440-66-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/22/21 15:11			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		03/21/21 19:54	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		03/21/21 19:54	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		03/21/21 19:54	14808-79-8		

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Sample: DUP-1		Lab ID: 92527234031		Collected: 03/16/21 00:00	Received: 03/17/21 12:25	Matrix: Water			
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Calcium	35.9	mg/L	1.0	0.070	1	03/24/21 14:37	03/24/21 21:55	7440-70-2	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00028	1	03/25/21 10:30	03/25/21 20:16	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/25/21 10:30	03/25/21 20:16	7440-38-2	
Barium	0.038	mg/L	0.0050	0.00071	1	03/25/21 10:30	03/25/21 20:16	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/25/21 10:30	03/25/21 20:16	7440-41-7	
Boron	0.085	mg/L	0.040	0.0052	1	03/25/21 10:30	03/25/21 20:16	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:30	03/25/21 20:16	7440-43-9	
Chromium	0.00064J	mg/L	0.0050	0.00055	1	03/25/21 10:30	03/25/21 20:16	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:30	03/25/21 20:16	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/25/21 10:30	03/25/21 20:16	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:30	03/25/21 20:16	7439-93-2	
Molybdenum	0.0053J	mg/L	0.010	0.00069	1	03/25/21 10:30	03/25/21 20:16	7439-98-7	
Selenium	0.0032J	mg/L	0.0050	0.0016	1	03/25/21 10:30	03/25/21 20:16	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:30	03/25/21 20:16	7440-28-0	
Vanadium	0.0022J	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 20:16	7440-62-2	
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 20:16	7440-66-6	
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	194	mg/L	10.0	10.0	1		03/22/21 15:51		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	15.6	mg/L	1.0	0.60	1		03/21/21 20:34	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/21/21 20:34	16984-48-8	
Sulfate	90.2	mg/L	1.0	0.50	1		03/21/21 20:34	14808-79-8	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Sample: EB-2		Lab ID: 92527234032		Collected: 03/16/21 10:40	Received: 03/17/21 12:25	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	0.16J	mg/L	1.0	0.070	1	03/24/21 14:37	03/24/21 22:05	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	03/25/21 10:30	03/25/21 20:22	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	03/25/21 10:30	03/25/21 20:22	7440-38-2		
Barium	ND	mg/L	0.0050	0.00071	1	03/25/21 10:30	03/25/21 20:22	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000046	1	03/25/21 10:30	03/25/21 20:22	7440-41-7		
Boron	0.0058J	mg/L	0.040	0.0052	1	03/25/21 10:30	03/25/21 20:22	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:30	03/25/21 20:22	7440-43-9		
Chromium	ND	mg/L	0.0050	0.00055	1	03/25/21 10:30	03/25/21 20:22	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:30	03/25/21 20:22	7440-48-4		
Lead	ND	mg/L	0.0010	0.000036	1	03/25/21 10:30	03/25/21 20:22	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:30	03/25/21 20:22	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	03/25/21 10:30	03/25/21 20:22	7439-98-7		
Selenium	ND	mg/L	0.0050	0.0016	1	03/25/21 10:30	03/25/21 20:22	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:30	03/25/21 20:22	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 20:22	7440-62-2		
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 20:22	7440-66-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/22/21 15:51			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		03/21/21 20:48	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		03/21/21 20:48	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		03/21/21 20:48	14808-79-8		

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Sample: EB-1		Lab ID: 92527234033		Collected: 03/16/21 15:15	Received: 03/17/21 12:25	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.070	1	03/24/21 14:37	03/24/21 22:10	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	03/25/21 10:30	03/25/21 20:28	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	03/25/21 10:30	03/25/21 20:28	7440-38-2		
Barium	ND	mg/L	0.0050	0.00071	1	03/25/21 10:30	03/25/21 20:28	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000046	1	03/25/21 10:30	03/25/21 20:28	7440-41-7		
Boron	ND	mg/L	0.040	0.0052	1	03/25/21 10:30	03/25/21 20:28	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00012	1	03/25/21 10:30	03/25/21 20:28	7440-43-9		
Chromium	ND	mg/L	0.0050	0.00055	1	03/25/21 10:30	03/25/21 20:28	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	03/25/21 10:30	03/25/21 20:28	7440-48-4		
Lead	ND	mg/L	0.0010	0.000036	1	03/25/21 10:30	03/25/21 20:28	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	03/25/21 10:30	03/25/21 20:28	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	03/25/21 10:30	03/25/21 20:28	7439-98-7		
Selenium	ND	mg/L	0.0050	0.0016	1	03/25/21 10:30	03/25/21 20:28	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	03/25/21 10:30	03/25/21 20:28	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 20:28	7440-62-2		
Zinc	ND	mg/L	0.010	0.0022	1	03/25/21 10:30	03/25/21 20:28	7440-66-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/22/21 15:51			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		03/21/21 21:01	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		03/21/21 21:01	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		03/21/21 21:01	14808-79-8		

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

QC Batch:	608884	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527234001, 92527234002, 92527234003, 92527234004, 92527234005, 92527234006, 92527234007, 92527234008, 92527234009, 92527234010, 92527234011, 92527234012, 92527234013

METHOD BLANK: 3206990 Matrix: Water

Associated Lab Samples: 92527234001, 92527234002, 92527234003, 92527234004, 92527234005, 92527234006, 92527234007, 92527234008, 92527234009, 92527234010, 92527234011, 92527234012, 92527234013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	03/24/21 17:54	

LABORATORY CONTROL SAMPLE: 3206991

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.97J	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3206992 3206993

Parameter	Units	92527234003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	263	1	1	263	272	-66	863	75-125	3	20	M1

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

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

QC Batch: 608886

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527234014, 92527234015, 92527234016, 92527234017, 92527234018, 92527234019, 92527234020, 92527234021, 92527234022, 92527234023, 92527234025, 92527234026, 92527234027, 92527234028, 92527234029, 92527234030, 92527234031, 92527234032, 92527234033

METHOD BLANK: 3206998

Matrix: Water

Associated Lab Samples: 92527234014, 92527234015, 92527234016, 92527234017, 92527234018, 92527234019, 92527234020, 92527234021, 92527234022, 92527234023, 92527234025, 92527234026, 92527234027, 92527234028, 92527234029, 92527234030, 92527234031, 92527234032, 92527234033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	03/24/21 19:54	

LABORATORY CONTROL SAMPLE: 3206999

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3207000 3207001

Parameter	Units	3207000		3207001		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	5.4	1	1	6.4	6.0	105	62	75-125	7	20 M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

QC Batch: 609148 Analysis Method: EPA 6020B
 QC Batch Method: EPA 3005A Analysis Description: 6020 MET
 Laboratory: Pace Analytical Services - Peachtree Corners, GA
 Associated Lab Samples: 92527234001, 92527234002, 92527234003, 92527234004, 92527234005, 92527234006, 92527234007, 92527234008, 92527234009, 92527234010, 92527234011, 92527234012, 92527234013, 92527234014, 92527234015, 92527234016, 92527234017, 92527234018, 92527234019, 92527234020

METHOD BLANK: 3208325 Matrix: Water
 Associated Lab Samples: 92527234001, 92527234002, 92527234003, 92527234004, 92527234005, 92527234006, 92527234007, 92527234008, 92527234009, 92527234010, 92527234011, 92527234012, 92527234013, 92527234014, 92527234015, 92527234016, 92527234017, 92527234018, 92527234019, 92527234020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00038J	0.0030	0.00028	03/25/21 16:57	
Arsenic	mg/L	ND	0.0050	0.00078	03/25/21 16:57	
Barium	mg/L	ND	0.0050	0.00071	03/25/21 16:57	
Beryllium	mg/L	ND	0.00050	0.000046	03/25/21 16:57	
Boron	mg/L	ND	0.040	0.0052	03/25/21 16:57	
Cadmium	mg/L	ND	0.00050	0.00012	03/25/21 16:57	
Chromium	mg/L	ND	0.0050	0.00055	03/25/21 16:57	
Cobalt	mg/L	ND	0.0050	0.00038	03/25/21 16:57	
Lead	mg/L	ND	0.0010	0.000036	03/25/21 16:57	
Lithium	mg/L	ND	0.030	0.00081	03/25/21 16:57	
Molybdenum	mg/L	ND	0.010	0.00069	03/25/21 16:57	
Selenium	mg/L	ND	0.0050	0.0016	03/25/21 16:57	
Thallium	mg/L	ND	0.0010	0.00014	03/25/21 16:57	
Vanadium	mg/L	ND	0.010	0.0022	03/25/21 16:57	
Zinc	mg/L	ND	0.010	0.0022	03/25/21 16:57	

LABORATORY CONTROL SAMPLE: 3208326

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	107	80-120	
Arsenic	mg/L	0.1	0.095	95	80-120	
Barium	mg/L	0.1	0.099	99	80-120	
Beryllium	mg/L	0.1	0.098	98	80-120	
Boron	mg/L	1	0.97	97	80-120	
Cadmium	mg/L	0.1	0.096	96	80-120	
Chromium	mg/L	0.1	0.096	96	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Lead	mg/L	0.1	0.096	96	80-120	
Lithium	mg/L	0.1	0.098	98	80-120	
Molybdenum	mg/L	0.1	0.10	100	80-120	
Selenium	mg/L	0.1	0.095	95	80-120	
Thallium	mg/L	0.1	0.094	94	80-120	
Vanadium	mg/L	0.1	0.098	98	80-120	
Zinc	mg/L	0.1	0.098	98	80-120	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Parameter	Units	3208332		3208333		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527234005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Antimony	mg/L	0.00029J	0.1	0.1	0.11	0.11	109	109	75-125	0	20
Arsenic	mg/L	0.0054	0.1	0.1	0.11	0.11	101	102	75-125	1	20
Barium	mg/L	0.027	0.1	0.1	0.13	0.13	105	105	75-125	1	20
Beryllium	mg/L	ND	0.1	0.1	0.085	0.085	85	85	75-125	0	20
Boron	mg/L	6.9	1	1	7.7	7.9	83	101	75-125	2	20
Cadmium	mg/L	ND	0.1	0.1	0.090	0.090	90	90	75-125	0	20
Chromium	mg/L	0.0060	0.1	0.1	0.10	0.11	98	99	75-125	1	20
Cobalt	mg/L	ND	0.1	0.1	0.098	0.099	98	98	75-125	1	20
Lead	mg/L	0.000096J	0.1	0.1	0.090	0.091	90	91	75-125	1	20
Lithium	mg/L	ND	0.1	0.1	0.087	0.088	87	88	75-125	1	20
Molybdenum	mg/L	0.0013J	0.1	0.1	0.11	0.11	106	107	75-125	1	20
Selenium	mg/L	0.0049J	0.1	0.1	0.11	0.12	108	112	75-125	3	20
Thallium	mg/L	ND	0.1	0.1	0.090	0.091	90	91	75-125	1	20
Vanadium	mg/L	0.027	0.1	0.1	0.13	0.13	106	108	75-125	1	20
Zinc	mg/L	ND	0.1	0.1	0.092	0.092	92	92	75-125	0	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

QC Batch: 609157 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527234021, 92527234022, 92527234023, 92527234025, 92527234026, 92527234027, 92527234028, 92527234029, 92527234030, 92527234031, 92527234032, 92527234033

METHOD BLANK: 3208420 Matrix: Water
Associated Lab Samples: 92527234021, 92527234022, 92527234023, 92527234025, 92527234026, 92527234027, 92527234028, 92527234029, 92527234030, 92527234031, 92527234032, 92527234033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	03/25/21 18:39	
Arsenic	mg/L	ND	0.0050	0.00078	03/25/21 18:39	
Barium	mg/L	ND	0.0050	0.00071	03/25/21 18:39	
Beryllium	mg/L	ND	0.00050	0.000046	03/25/21 18:39	
Boron	mg/L	ND	0.040	0.0052	03/25/21 18:39	
Cadmium	mg/L	ND	0.00050	0.00012	03/25/21 18:39	
Chromium	mg/L	ND	0.0050	0.00055	03/25/21 18:39	
Cobalt	mg/L	ND	0.0050	0.00038	03/25/21 18:39	
Lead	mg/L	ND	0.0010	0.000036	03/25/21 18:39	
Lithium	mg/L	ND	0.030	0.00081	03/25/21 18:39	
Molybdenum	mg/L	ND	0.010	0.00069	03/25/21 18:39	
Selenium	mg/L	ND	0.0050	0.0016	03/25/21 18:39	
Thallium	mg/L	ND	0.0010	0.00014	03/25/21 18:39	
Vanadium	mg/L	ND	0.010	0.0022	03/25/21 18:39	
Zinc	mg/L	ND	0.010	0.0022	03/25/21 18:39	

LABORATORY CONTROL SAMPLE: 3208421

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	101	80-120	
Arsenic	mg/L	0.1	0.095	95	80-120	
Barium	mg/L	0.1	0.094	94	80-120	
Beryllium	mg/L	0.1	0.10	101	80-120	
Boron	mg/L	1	1.1	108	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	0.099	99	80-120	
Lead	mg/L	0.1	0.093	93	80-120	
Lithium	mg/L	0.1	0.10	104	80-120	
Molybdenum	mg/L	0.1	0.097	97	80-120	
Selenium	mg/L	0.1	0.097	97	80-120	
Thallium	mg/L	0.1	0.091	91	80-120	
Vanadium	mg/L	0.1	0.10	100	80-120	
Zinc	mg/L	0.1	0.10	100	80-120	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Parameter	Units	3208422		3208423		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	100	104	75-125	3	20
Arsenic	mg/L	ND	0.1	0.1	0.092	0.096	91	96	75-125	5	20
Barium	mg/L	0.052	0.1	0.1	0.14	0.14	87	92	75-125	4	20
Beryllium	mg/L	0.00023J	0.1	0.1	0.096	0.098	96	97	75-125	1	20
Boron	mg/L	0.11	1	1	1.1	1.1	95	98	75-125	3	20
Cadmium	mg/L	ND	0.1	0.1	0.095	0.10	95	100	75-125	5	20
Chromium	mg/L	0.00074J	0.1	0.1	0.095	0.10	95	99	75-125	5	20
Cobalt	mg/L	0.00058J	0.1	0.1	0.093	0.097	92	97	75-125	5	20
Lead	mg/L	0.000093J	0.1	0.1	0.090	0.092	90	92	75-125	3	20
Lithium	mg/L	0.0013J	0.1	0.1	0.097	0.099	96	98	75-125	2	20
Molybdenum	mg/L	ND	0.1	0.1	0.093	0.098	93	98	75-125	4	20
Selenium	mg/L	ND	0.1	0.1	0.092	0.098	92	98	75-125	6	20
Thallium	mg/L	ND	0.1	0.1	0.089	0.092	89	92	75-125	3	20
Vanadium	mg/L	ND	0.1	0.1	0.095	0.10	94	99	75-125	4	20
Zinc	mg/L	0.0028J	0.1	0.1	0.096	0.10	93	98	75-125	4	20

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

QC Batch: 606580 Analysis Method: SM 2450C-2011
QC Batch Method: SM 2450C-2011 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527234001, 92527234002, 92527234003, 92527234004

METHOD BLANK: 3195732 Matrix: Water
Associated Lab Samples: 92527234001, 92527234002, 92527234003, 92527234004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/15/21 12:47	

LABORATORY CONTROL SAMPLE: 3195733

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	386	96	90-111	

SAMPLE DUPLICATE: 3195734

Parameter	Units	92526988001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	790	840	6	10	

SAMPLE DUPLICATE: 3195735

Parameter	Units	92526996004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

QC Batch: 606587 Analysis Method: SM 2450C-2011
QC Batch Method: SM 2450C-2011 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527234005, 92527234006, 92527234007, 92527234008, 92527234009, 92527234010

METHOD BLANK: 3195825 Matrix: Water
Associated Lab Samples: 92527234005, 92527234006, 92527234007, 92527234008, 92527234009, 92527234010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/15/21 13:13	

LABORATORY CONTROL SAMPLE: 3195826

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	362	90	90-111	

SAMPLE DUPLICATE: 3195827

Parameter	Units	92527234005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2120	2390	12	10	D6

SAMPLE DUPLICATE: 3195998

Parameter	Units	92527273001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	223	190	16	10	D6

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

QC Batch: 606868 Analysis Method: SM 2450C-2011
QC Batch Method: SM 2450C-2011 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527234011, 92527234012, 92527234014, 92527234015, 92527234016, 92527234017, 92527234018, 92527234019, 92527234020

METHOD BLANK: 3197215 Matrix: Water
Associated Lab Samples: 92527234011, 92527234012, 92527234014, 92527234015, 92527234016, 92527234017, 92527234018, 92527234019, 92527234020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/16/21 15:05	

LABORATORY CONTROL SAMPLE: 3197216

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	386	96	90-111	

SAMPLE DUPLICATE: 3197217

Parameter	Units	92527492010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	43.0	52.0	19	10	D6

SAMPLE DUPLICATE: 3197218

Parameter	Units	92527234015 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	149	147	1	10	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

QC Batch:	607316	Analysis Method:	SM 2450C-2011
QC Batch Method:	SM 2450C-2011	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527234013, 92527234021, 92527234022, 92527234023

METHOD BLANK: 3199480 Matrix: Water
Associated Lab Samples: 92527234013, 92527234021, 92527234022, 92527234023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/17/21 17:40	

LABORATORY CONTROL SAMPLE: 3199481

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	400	100	90-111	

SAMPLE DUPLICATE: 3199482

Parameter	Units	92527256010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	279	278	0	10	

SAMPLE DUPLICATE: 3199483

Parameter	Units	92526996006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	255	258	1	10	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

QC Batch:	608133	Analysis Method:	SM 2450C-2011
QC Batch Method:	SM 2450C-2011	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527234025, 92527234026, 92527234030

METHOD BLANK: 3203640 Matrix: Water

Associated Lab Samples: 92527234025, 92527234026, 92527234030

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/22/21 15:08	

LABORATORY CONTROL SAMPLE: 3203641

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	370	92	90-111	

SAMPLE DUPLICATE: 3203642

Parameter	Units	92527261013 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	614	640	4	10	

SAMPLE DUPLICATE: 3203644

Parameter	Units	92527234025 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	11.0	18.0	48	10	D6

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

QC Batch: 608135 Analysis Method: SM 2450C-2011
QC Batch Method: SM 2450C-2011 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527234027, 92527234028, 92527234029, 92527234031, 92527234032, 92527234033

METHOD BLANK: 3203645 Matrix: Water
Associated Lab Samples: 92527234027, 92527234028, 92527234029, 92527234031, 92527234032, 92527234033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/22/21 15:47	

LABORATORY CONTROL SAMPLE: 3203646

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	388	97	90-111	

SAMPLE DUPLICATE: 3203647

Parameter	Units	92527943001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	494	490	1	10	

SAMPLE DUPLICATE: 3203649

Parameter	Units	92527835007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	255	298	16	10 D6	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

QC Batch: 606815 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
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92527234001, 92527234002, 92527234003, 92527234004

METHOD BLANK: 3196953 Matrix: Water
Associated Lab Samples: 92527234001, 92527234002, 92527234003, 92527234004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/16/21 14:18	
Fluoride	mg/L	ND	0.10	0.050	03/16/21 14:18	
Sulfate	mg/L	ND	1.0	0.50	03/16/21 14:18	

LABORATORY CONTROL SAMPLE: 3196954

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	47.1	94	90-110	
Fluoride	mg/L	2.5	2.4	96	90-110	
Sulfate	mg/L	50	49.7	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196955 3196956

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526941004	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	302	50	50	340	339	77	74	90-110	0	10	M6	
Fluoride	mg/L	0.90	2.5	2.5	3.5	3.6	106	108	90-110	1	10		
Sulfate	mg/L	223	50	50	266	265	87	85	90-110	0	10	M6	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196957 3196958

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92525536004	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	ND	50	50	50.1	50.6	100	101	90-110	1	10		
Fluoride	mg/L	ND	2.5	2.5	2.5	2.5	100	102	90-110	1	10		
Sulfate	mg/L	ND	50	50	52.8	53.5	106	107	90-110	1	10		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

QC Batch: 607145 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
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92527234005, 92527234006, 92527234007, 92527234008, 92527234009

METHOD BLANK: 3198588 Matrix: Water
Associated Lab Samples: 92527234005, 92527234006, 92527234007, 92527234008, 92527234009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/18/21 09:24	
Fluoride	mg/L	ND	0.10	0.050	03/18/21 09:24	
Sulfate	mg/L	ND	1.0	0.50	03/18/21 09:24	

LABORATORY CONTROL SAMPLE: 3198589

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	48.4	97	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	50	51.5	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3198590 3198591

Parameter	Units	92527951001		MS		MSD		% Rec	% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result								
Chloride	mg/L	13.6	50	50	64.1	65.4	101	104	90-110	2	10				
Fluoride	mg/L	ND	2.5	2.5	2.5	2.6	98	100	90-110	2	10				
Sulfate	mg/L	2.9	50	50	57.0	57.9	108	110	90-110	2	10				

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3198592 3198593

Parameter	Units	92527960016		MS		MSD		% Rec	% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result								
Chloride	mg/L	1.1	50	50	51.8	52.5	101	103	90-110	1	10				
Fluoride	mg/L	0.26	2.5	2.5	2.9	3.0	107	108	90-110	1	10				
Sulfate	mg/L	0.56J	50	50	54.4	55.2	108	109	90-110	1	10				

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

QC Batch: 607170 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
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92527234010

METHOD BLANK: 3198670 Matrix: Water
Associated Lab Samples: 92527234010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/17/21 17:51	
Fluoride	mg/L	ND	0.10	0.050	03/17/21 17:51	
Sulfate	mg/L	ND	1.0	0.50	03/17/21 17:51	

LABORATORY CONTROL SAMPLE: 3198671

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.3	101	90-110	
Fluoride	mg/L	2.5	2.7	107	90-110	
Sulfate	mg/L	50	52.7	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3198672 3198673

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527256001	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	7.4	50	50	59.6	59.8	104	105	90-110	0	10		
Fluoride	mg/L	0.079J	2.5	2.5	2.7	2.7	106	107	90-110	0	10		
Sulfate	mg/L	49.6	50	50	94.1	95.1	89	91	90-110	1	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3198674 3198675

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527256002	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	2.9	50	50	54.4	53.4	103	101	90-110	2	10		
Fluoride	mg/L	ND	2.5	2.5	3.0	2.8	118	112	90-110	6	10	M1	
Sulfate	mg/L	1.2	50	50	54.5	53.7	107	105	90-110	1	10		

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

QC Batch:	607539	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
		Laboratory:	Pace Analytical Services - Asheville

Associated Lab Samples: 92527234011, 92527234012, 92527234013, 92527234014, 92527234015, 92527234016, 92527234017, 92527234018, 92527234019, 92527234020, 92527234021

METHOD BLANK: 3200518 Matrix: Water
Associated Lab Samples: 92527234011, 92527234012, 92527234013, 92527234014, 92527234015, 92527234016, 92527234017, 92527234018, 92527234019, 92527234020, 92527234021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/19/21 03:33	
Fluoride	mg/L	ND	0.10	0.050	03/19/21 03:33	
Sulfate	mg/L	ND	1.0	0.50	03/19/21 03:33	

LABORATORY CONTROL SAMPLE: 3200519

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.4	101	90-110	
Fluoride	mg/L	2.5	2.5	101	90-110	
Sulfate	mg/L	50	52.6	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3200520 3200521

Parameter	Units	92528108001		92528108002		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Chloride	mg/L	4.2	50	50	56.5	56.6	105	105	90-110	0	10		
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	104	104	90-110	0	10		
Sulfate	mg/L	1.8	50	50	56.3	56.4	109	109	90-110	0	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3200522 3200523

Parameter	Units	92528108002		92528108003		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Chloride	mg/L	24.3	50	50	52.2	52.0	56	55	90-110	0	10	M1	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	105	104	90-110	1	10		
Sulfate	mg/L	1.5	50	50	54.4	54.2	106	105	90-110	0	10		

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

QC Batch: 607751 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
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92527234022, 92527234023

METHOD BLANK: 3201757 Matrix: Water
Associated Lab Samples: 92527234022, 92527234023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/19/21 17:15	
Fluoride	mg/L	ND	0.10	0.050	03/19/21 17:15	
Sulfate	mg/L	ND	1.0	0.50	03/19/21 17:15	

LABORATORY CONTROL SAMPLE: 3201758

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.2	100	90-110	
Fluoride	mg/L	2.5	2.3	91	90-110	
Sulfate	mg/L	50	50.2	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3201759 3201760

Parameter	Units	92528475003		3201759		3201760		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
Chloride	mg/L	2510	50	50	2520	2520	27	27	90-110	0	10	M6	
Fluoride	mg/L	4.6	2.5	2.5	12.1	11.9	302	294	90-110	2	10	M6	
Sulfate	mg/L	1530	50	50	1510	1480	-49	-112	90-110	2	10	M6	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3201761 3201762

Parameter	Units	92527256007		3201761		3201762		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
Chloride	mg/L	5.9	50	50	58.9	57.5	106	103	90-110	2	10		
Fluoride	mg/L	ND	2.5	2.5	2.3	2.3	91	90	90-110	1	10		
Sulfate	mg/L	50.4	50	50	102	101	103	101	90-110	1	10		

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

QC Batch: 607982 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
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92527234026, 92527234027, 92527234028, 92527234029

METHOD BLANK: 3202733 Matrix: Water
Associated Lab Samples: 92527234026, 92527234027, 92527234028, 92527234029

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/20/21 17:54	
Fluoride	mg/L	ND	0.10	0.050	03/20/21 17:54	
Sulfate	mg/L	ND	1.0	0.50	03/20/21 17:54	

LABORATORY CONTROL SAMPLE: 3202734

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.7	103	90-110	
Fluoride	mg/L	2.5	2.6	102	90-110	
Sulfate	mg/L	50	52.5	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3202737 3202738

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92528140001 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	57.9	50	50	50	105	105	94	94	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	1.9	2.0	73	74	90-110	2	10	M6
Sulfate	mg/L	17.2	50	50	50	66.0	66.0	98	98	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3203204 3203205

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92528440001 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	319	50	50	50	332	332	26	27	90-110	0	10	M6
Fluoride	mg/L	0.34	2.5	2.5	2.5	2.6	2.7	90	94	90-110	3	10	
Sulfate	mg/L	132	50	50	50	178	179	94	94	90-110	0	10	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

QC Batch: 607984 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
 Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92527234030, 92527234031, 92527234032, 92527234033

METHOD BLANK: 3202745 Matrix: Water
 Associated Lab Samples: 92527234030, 92527234031, 92527234032, 92527234033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/21/21 19:26	
Fluoride	mg/L	ND	0.10	0.050	03/21/21 19:26	
Sulfate	mg/L	ND	1.0	0.50	03/21/21 19:26	

LABORATORY CONTROL SAMPLE: 3202746

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.2	104	90-110	
Fluoride	mg/L	2.5	2.6	104	90-110	
Sulfate	mg/L	50	52.8	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3202747 3202748

Parameter	Units	92527234030		MS		MSD		% Rec	% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result								
Chloride	mg/L	ND	50	50	51.8	50.4	104	101	90-110	3	10				
Fluoride	mg/L	ND	2.5	2.5	2.6	2.5	104	101	90-110	3	10				
Sulfate	mg/L	ND	50	50	52.2	50.8	104	102	90-110	3	10				

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3202749 3202750

Parameter	Units	92527612006		MS		MSD		% Rec	% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result								
Chloride	mg/L	1.6	50	50	52.6	51.8	102	100	90-110	1	10				
Fluoride	mg/L	0.18	2.5	2.5	2.7	2.7	99	102	90-110	2	10				
Sulfate	mg/L	7.7	50	50	57.9	57.5	100	100	90-110	1	10				

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

QC Batch: 608963 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
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92527234025

METHOD BLANK: 3207653 Matrix: Water
Associated Lab Samples: 92527234025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/25/21 20:54	
Fluoride	mg/L	ND	0.10	0.050	03/25/21 20:54	
Sulfate	mg/L	ND	1.0	0.50	03/25/21 20:54	

LABORATORY CONTROL SAMPLE: 3207654

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.0	104	90-110	
Fluoride	mg/L	2.5	2.4	97	90-110	
Sulfate	mg/L	50	52.0	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3207655 3207656

Parameter	Units	92527700009		3207655		3207656		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	16.7	16.7	50	50	68.7	68.9	104	104	90-110	0	10	
Fluoride	mg/L	ND	ND	2.5	2.5	2.7	2.7	108	108	90-110	0	10	
Sulfate	mg/L	ND	ND	50	50	52.1	52.2	104	104	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3207657 3207658

Parameter	Units	92527700019		3207657		3207658		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	4.3	4.3	50	50	57.2	57.1	106	106	90-110	0	10	
Fluoride	mg/L	ND	ND	2.5	2.5	2.7	2.7	107	106	90-110	0	10	
Sulfate	mg/L	1.3	1.3	50	50	54.1	54.0	106	106	90-110	0	10	

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QUALIFIERS

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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.

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.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527234003	GWB-4R				
92527234004	GWB-5R				
92527234005	GWB-6R				
92527234006	GWC-1				
92527234007	GWC-12				
92527234008	GWC-11				
92527234009	GWC-22				
92527234010	GWC-9				
92527234014	MW-24D				
92527234015	MW-23D				
92527234016	MW-26D				
92527234017	MW-27D				
92527234018	MW-25D				
92527234019	GWC-17				
92527234020	GWA-7				
92527234021	GWA-8				
92527234022	GWC-15				
92527234023	GWC-20				
92527234025	GWC-2				
92527234026	GWC-13				
92527234027	GWC-14				
92527234028	GWC-16				
92527234029	GWC-21				
92527234001	DUP-2	EPA 3010A	608884	EPA 6010D	608987
92527234002	FB-2	EPA 3010A	608884	EPA 6010D	608987
92527234003	GWB-4R	EPA 3010A	608884	EPA 6010D	608987
92527234004	GWB-5R	EPA 3010A	608884	EPA 6010D	608987
92527234005	GWB-6R	EPA 3010A	608884	EPA 6010D	608987
92527234006	GWC-1	EPA 3010A	608884	EPA 6010D	608987
92527234007	GWC-12	EPA 3010A	608884	EPA 6010D	608987
92527234008	GWC-11	EPA 3010A	608884	EPA 6010D	608987
92527234009	GWC-22	EPA 3010A	608884	EPA 6010D	608987
92527234010	GWC-9	EPA 3010A	608884	EPA 6010D	608987
92527234011	FB-3	EPA 3010A	608884	EPA 6010D	608987
92527234012	EB-3	EPA 3010A	608884	EPA 6010D	608987
92527234013	DUP-3	EPA 3010A	608884	EPA 6010D	608987
92527234014	MW-24D	EPA 3010A	608886	EPA 6010D	608990
92527234015	MW-23D	EPA 3010A	608886	EPA 6010D	608990
92527234016	MW-26D	EPA 3010A	608886	EPA 6010D	608990
92527234017	MW-27D	EPA 3010A	608886	EPA 6010D	608990
92527234018	MW-25D	EPA 3010A	608886	EPA 6010D	608990
92527234019	GWC-17	EPA 3010A	608886	EPA 6010D	608990
92527234020	GWA-7	EPA 3010A	608886	EPA 6010D	608990
92527234021	GWA-8	EPA 3010A	608886	EPA 6010D	608990
92527234022	GWC-15	EPA 3010A	608886	EPA 6010D	608990
92527234023	GWC-20	EPA 3010A	608886	EPA 6010D	608990
92527234025	GWC-2	EPA 3010A	608886	EPA 6010D	608990
92527234026	GWC-13	EPA 3010A	608886	EPA 6010D	608990

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527234027	GWC-14	EPA 3010A	608886	EPA 6010D	608990
92527234028	GWC-16	EPA 3010A	608886	EPA 6010D	608990
92527234029	GWC-21	EPA 3010A	608886	EPA 6010D	608990
92527234030	FB-1	EPA 3010A	608886	EPA 6010D	608990
92527234031	DUP-1	EPA 3010A	608886	EPA 6010D	608990
92527234032	EB-2	EPA 3010A	608886	EPA 6010D	608990
92527234033	EB-1	EPA 3010A	608886	EPA 6010D	608990
92527234001	DUP-2	EPA 3005A	609148	EPA 6020B	609274
92527234002	FB-2	EPA 3005A	609148	EPA 6020B	609274
92527234003	GWB-4R	EPA 3005A	609148	EPA 6020B	609274
92527234004	GWB-5R	EPA 3005A	609148	EPA 6020B	609274
92527234005	GWB-6R	EPA 3005A	609148	EPA 6020B	609274
92527234006	GWC-1	EPA 3005A	609148	EPA 6020B	609274
92527234007	GWC-12	EPA 3005A	609148	EPA 6020B	609274
92527234008	GWC-11	EPA 3005A	609148	EPA 6020B	609274
92527234009	GWC-22	EPA 3005A	609148	EPA 6020B	609274
92527234010	GWC-9	EPA 3005A	609148	EPA 6020B	609274
92527234011	FB-3	EPA 3005A	609148	EPA 6020B	609274
92527234012	EB-3	EPA 3005A	609148	EPA 6020B	609274
92527234013	DUP-3	EPA 3005A	609148	EPA 6020B	609274
92527234014	MW-24D	EPA 3005A	609148	EPA 6020B	609274
92527234015	MW-23D	EPA 3005A	609148	EPA 6020B	609274
92527234016	MW-26D	EPA 3005A	609148	EPA 6020B	609274
92527234017	MW-27D	EPA 3005A	609148	EPA 6020B	609274
92527234018	MW-25D	EPA 3005A	609148	EPA 6020B	609274
92527234019	GWC-17	EPA 3005A	609148	EPA 6020B	609274
92527234020	GWA-7	EPA 3005A	609148	EPA 6020B	609274
92527234021	GWA-8	EPA 3005A	609157	EPA 6020B	609289
92527234022	GWC-15	EPA 3005A	609157	EPA 6020B	609289
92527234023	GWC-20	EPA 3005A	609157	EPA 6020B	609289
92527234025	GWC-2	EPA 3005A	609157	EPA 6020B	609289
92527234026	GWC-13	EPA 3005A	609157	EPA 6020B	609289
92527234027	GWC-14	EPA 3005A	609157	EPA 6020B	609289
92527234028	GWC-16	EPA 3005A	609157	EPA 6020B	609289
92527234029	GWC-21	EPA 3005A	609157	EPA 6020B	609289
92527234030	FB-1	EPA 3005A	609157	EPA 6020B	609289
92527234031	DUP-1	EPA 3005A	609157	EPA 6020B	609289
92527234032	EB-2	EPA 3005A	609157	EPA 6020B	609289
92527234033	EB-1	EPA 3005A	609157	EPA 6020B	609289
92527234001	DUP-2	SM 2450C-2011	606580		
92527234002	FB-2	SM 2450C-2011	606580		
92527234003	GWB-4R	SM 2450C-2011	606580		
92527234004	GWB-5R	SM 2450C-2011	606580		
92527234005	GWB-6R	SM 2450C-2011	606587		
92527234006	GWC-1	SM 2450C-2011	606587		
92527234007	GWC-12	SM 2450C-2011	606587		
92527234008	GWC-11	SM 2450C-2011	606587		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GRUMMAN ROAD-SEMI ANNUAL
Pace Project No.: 92527234

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527234009	GWC-22	SM 2450C-2011	606587		
92527234010	GWC-9	SM 2450C-2011	606587		
92527234011	FB-3	SM 2450C-2011	606868		
92527234012	EB-3	SM 2450C-2011	606868		
92527234013	DUP-3	SM 2450C-2011	607316		
92527234014	MW-24D	SM 2450C-2011	606868		
92527234015	MW-23D	SM 2450C-2011	606868		
92527234016	MW-26D	SM 2450C-2011	606868		
92527234017	MW-27D	SM 2450C-2011	606868		
92527234018	MW-25D	SM 2450C-2011	606868		
92527234019	GWC-17	SM 2450C-2011	606868		
92527234020	GWA-7	SM 2450C-2011	606868		
92527234021	GWA-8	SM 2450C-2011	607316		
92527234022	GWC-15	SM 2450C-2011	607316		
92527234023	GWC-20	SM 2450C-2011	607316		
92527234025	GWC-2	SM 2450C-2011	608133		
92527234026	GWC-13	SM 2450C-2011	608133		
92527234027	GWC-14	SM 2450C-2011	608135		
92527234028	GWC-16	SM 2450C-2011	608135		
92527234029	GWC-21	SM 2450C-2011	608135		
92527234030	FB-1	SM 2450C-2011	608133		
92527234031	DUP-1	SM 2450C-2011	608135		
92527234032	EB-2	SM 2450C-2011	608135		
92527234033	EB-1	SM 2450C-2011	608135		
92527234001	DUP-2	EPA 300.0 Rev 2.1 1993	606815		
92527234002	FB-2	EPA 300.0 Rev 2.1 1993	606815		
92527234003	GWB-4R	EPA 300.0 Rev 2.1 1993	606815		
92527234004	GWB-5R	EPA 300.0 Rev 2.1 1993	606815		
92527234005	GWB-6R	EPA 300.0 Rev 2.1 1993	607145		
92527234006	GWC-1	EPA 300.0 Rev 2.1 1993	607145		
92527234007	GWC-12	EPA 300.0 Rev 2.1 1993	607145		
92527234008	GWC-11	EPA 300.0 Rev 2.1 1993	607145		
92527234009	GWC-22	EPA 300.0 Rev 2.1 1993	607145		
92527234010	GWC-9	EPA 300.0 Rev 2.1 1993	607170		
92527234011	FB-3	EPA 300.0 Rev 2.1 1993	607539		
92527234012	EB-3	EPA 300.0 Rev 2.1 1993	607539		
92527234013	DUP-3	EPA 300.0 Rev 2.1 1993	607539		
92527234014	MW-24D	EPA 300.0 Rev 2.1 1993	607539		
92527234015	MW-23D	EPA 300.0 Rev 2.1 1993	607539		
92527234016	MW-26D	EPA 300.0 Rev 2.1 1993	607539		
92527234017	MW-27D	EPA 300.0 Rev 2.1 1993	607539		
92527234018	MW-25D	EPA 300.0 Rev 2.1 1993	607539		
92527234019	GWC-17	EPA 300.0 Rev 2.1 1993	607539		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GRUMMAN ROAD-SEMI ANNUAL

Pace Project No.: 92527234

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527234020	GWA-7	EPA 300.0 Rev 2.1 1993	607539		
92527234021	GWA-8	EPA 300.0 Rev 2.1 1993	607539		
92527234022	GWC-15	EPA 300.0 Rev 2.1 1993	607751		
92527234023	GWC-20	EPA 300.0 Rev 2.1 1993	607751		
92527234025	GWC-2	EPA 300.0 Rev 2.1 1993	608963		
92527234026	GWC-13	EPA 300.0 Rev 2.1 1993	607982		
92527234027	GWC-14	EPA 300.0 Rev 2.1 1993	607982		
92527234028	GWC-16	EPA 300.0 Rev 2.1 1993	607982		
92527234029	GWC-21	EPA 300.0 Rev 2.1 1993	607982		
92527234030	FB-1	EPA 300.0 Rev 2.1 1993	607984		
92527234031	DUP-1	EPA 300.0 Rev 2.1 1993	607984		
92527234032	EB-2	EPA 300.0 Rev 2.1 1993	607984		
92527234033	EB-1	EPA 300.0 Rev 2.1 1993	607984		

REPORT OF LABORATORY ANALYSIS

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Document Name:
Sample Condition Upon Receipt(SCUR)
 Document No.:
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020
 Page 1 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition
 Upon Receipt

Client Name:
G. A. Lower

Project #: **WO# : 92527234**

Courier: Commercial Fed Ex Pace UPS USPS Other: Client



Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 3/11/21
CSJ

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?
 Yes No N/A

Thermometer: IR Gun ID: 230 Type of Ice: Wet Blue None

Cooler Temp: 4.6 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 4.6

USDA Regulated Soil (N/A, water sample)
 Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?
 Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
-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	7.	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Includes Date/Time/ID/Analysis Matrix:	<u>W</u>		
Headspace In VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company: GA Power Address: Atlanta, GA

Section B Required Project Information: Report To: SCS Contacts Copy To: ACC Contacts

Section C Invoice Information: Attention: Southern Co. Company Name: Address: Regulatory Agency: NPDES GROUND WATER DRINKING WATER UST RCRA OTHER CCR

Requested Due Date/FAT: 10 Day Project Name: Grumman Road - Semi-Annual Project Number: Reference: Kevin Herring Pace Profile #: 2926-1 Site Location: GA STATE: Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information	Valid Matrix Codes	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
					COMPOSITE	COMPOSITE							
1	DUP-2		GM G	-	3-10-21	1645	5	2	3	1	1	2	pH= N/A
2	FB-2		GM G	-	3-10-21	0950	5	2	3	1	1	2	pH= N/A
3	GWB-41R		GM G	-	3-10-21	1315	5	2	3	1	1	2	pH= 5.23
4	GWB-51R		GM G	-	3-10-21	1505	5	2	3	1	1	2	pH= 4.73
5	GWB-6R		GM G	-	3-10-21	1645	5	2	3	1	1	2	pH= 5.69
6	GWC-1		GM G	-	3-10-21	1150	5	2	3	1	1	2	pH= 5.42
7	GWC-12		GM G	-	3-10-21	1415	5	2	3	1	1	2	pH= 4.08
8	GWC-11		GM G	-	3-10-21	1725	5	2	2	1	1	2	pH= 4.97
9	GWC-22		GM G	-	3-10-21	1555	5	2	2	1	1	2	pH= 4.82
10	GWC-9		GM G	-	3-10-21	1555	5	2	2	1	1	2	pH= 4.55
11													
12													

ADDITIONAL COMMENTS	RELEASED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	ACC	3-10-21	0830	Florie Coyle	3-10-21	1240	Temp in °C Received on Ice (Y/N) Custody Sealed Cooler (Y/N) Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER:	O. FUGENT
SIGNATURE of SAMPLER:	[Signature]
DATE Signed (MM/DD/YY):	3-10-21

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-Feb-2007



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A

Required Client Information:
 Company: GA Power
 Address: Atlanta, GA
 Email To: SCS Contacts
 Phone: []
 Requested Due Date/TAT: 10 Day

Section B

Required Project Information:
 Report To: SCS Contacts
 Copy To: ACC Contacts
 Purchase Order No.:
 Project Name: Gunman Road - Semi-Annual
 Project Number:

Section C

Invoice Information:
 Attention: Southern Co.
 Company Name:
 Address:
 POC Name: Kevin Herring
 POC Title: Manager
 POC Phone #: 2926-1

Page: 4 of

REGULATORY AGENCY
 NPDES GROUND WATER
 UST RCRA
 Site Location: GA
 STATE: GA

ITEM #	Section D Required Client Information SAMPLE ID (A-Z, 0-9, -) Sample IDs MUST BE UNIQUE	Valid Matrix Codes MATRIX CODE DRINKING WATER DW WATER WATER WW WASTE WATER WWT WASTEWATER WWT SOLIDIFIED S OIL OIL WASTE WASTE AIR AIR OTHER OTHER TSS TSS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	SAMP E CONDITIONS
					DATE	TIME							
1	FB-3		VG	G	3-11-21	1250	5	2	3	1	1	1	2
2	ER-3		VG	G	3-11-21	1055	5	2	3	1	1	1	2
3	DID-3		VG	G	3-12-21		5	2	3	1	1	1	2
4	GWC-24D		VG	G	3-11-21	1030	5	2	3	1	1	1	2
5	GWC-23D		VG	G	3-11-21	1400	5	2	3	1	1	1	2
6	GWC-26D		VG	G	3-11-21	1225	5	2	3	1	1	1	2
7	GWC-27D		VG	G	3-11-21	1545	5	2	3	1	1	1	2
8	GWC-25D		VG	G	3-11-21	1435	5	2	3	1	1	1	2
9	GWC-17		VG	G	3-11-21	1030	5	2	3	1	1	1	2
10	GWA-7		VG	G	3-11-21	1645	5	2	3	1	1	1	2
11	GWA-8		VG	G	3-12-21	0850	5	2	3	1	1	1	2
12	GWC-15		VG	G	3-12-21	0835	5	2	3	1	1	1	2

Additional Comments:
 Please note when the last sample for the event has been taken.

RELINQUISHED BY / AFFILIATION
 AKC 3-12-21

ACCEPTED BY / AFFILIATION
 [Signature] 3/12/21

Temp in °C
 Received on Ice (Y/N)
 Custody Sealed Cooler (Y/N)
 Samples Intact (Y/N)

Printer Name of Sampler: O. FUGER
 Signature of Sampler: [Signature]
 Date Signed (MM/DD/YY): 3-12-21



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company: GA Power Address: Atlanta, GA	Section B Required Project Information: Report To: SCS Contacts Copy To: ACC Contacts	Section C Invoice Information: Attention: Southern Co. Company Name: Address: Pace Guide Reference: Pace Project Manager: Kevin Herring Pace Profile #: 2926-1	Page: 5 of
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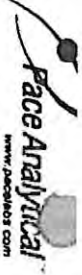
Email To: SCS Contacts Phone: Requested Due Date/TAT: 10 Day	Purchase Order No.: Project Name: Grumman Road - Semi-Annual Project Number:	REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER Site Location: GA STATE:
--	--	--

ITEM #	Section D Required Client Information Valid Matrix Codes DRINKING WATER DW WASTE WATER WW WASTE WATER PRODUCT P SOLID SC WASTE WASTE W AIR AR OTHER OT TISSUE TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives			Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./Lab I.D.
				COMPOSITE	COMPOSITE							H ₂ SO ₄	HNO ₃	HCl				
1		GWB				3-12-21	0635				5	2	3	1	1	1	2	586
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

ADDITIONAL COMMENTS Please note when the last sample for the event has been taken.	RELINQUISHED BY / AFFILIATION <i>[Signature]</i>	DATE 3-12-21	TIME 1400	ACCEPTED BY / AFFILIATION <i>[Signature]</i>	DATE 3/12/21	TIME 1600	SAMPLE CONDITIONS Temp in °C Received on Ice (Y/N) Custody Sealed Cooler (Y/N) Samples Intact (Y/N)
---	---	-----------------	--------------	---	-----------------	--------------	---

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: O. ROBERT AC SIGNATURE of SAMPLER: <i>[Signature]</i>		DATE Signed (MM/DD/YYYY): 3-12-21
---	--	-----------------------------------

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
 Required Client Information:
 Company: GA Power
 Address: Atlanta, GA

Section B
 Required Project Information:
 Report To: SCS Contacts
 Copy To: ACC Contacts

Section C
 Invoice Information:
 Attention: Southern Co.
 Company Name:

Email To: SCS Contacts
 Phone: _____ Fax: _____
 Requested Due Date/TAT: 10 Day

Purchase Order No.: _____
 Project Name: Grumman Road - Semi-Annual
 Project Number: _____

Address: _____
 PACE Quote Reference: _____
 PACE Project Manager: Kevin Herring
 PACE Profile #: 2926-1

REGULATORY AGENCY
 NPDES GROUND WATER
 UST RCRA
 Site Location: GA
 STATE: _____

DRINKING WATER
 OTHER
 CCA: _____

Page: 4 of 4

ITEM #	Section D Required Client Information	Valid Matrix Codes SCS CODE DRINKING WATER DW WASTE WATER WW WASTE WATER WWT PRODUCT P SOL/SOLID SL DIE OI WIRE WP AIR AR OTHER OT TSS TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./Lab I.D.
					DATE	TIME			DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH				
1	GWL-2		GWL-2	G	3-15-21	1510	5	2	3										456
2	GWL-L3		GWL-L3	G	3-15-21	1625	5	2	3										474
3	GWL-14		GWL-14	G	3-16-21	0930	5	2	3										5.53
4	GWL-10		GWL-10	G	3-16-21	1105	5	2	2										5.67
5	GWL-21		GWL-21	G	3-16-21	1500	5	2	3										5.74
6	FR-1		FR-1	G	3-15-21	1415	5	2	3										NA
7	DUP-1		DUP-1	G	3-16-21	-	5	2	3										NA
8	EB-2		EB-2	G	3-16-21	1040	5	2	2										NA
9	EB-1		EB-1	G	3-16-21	1515	5	2	2										NA
10																			
11																			
12																			

REQUISITED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
<i>[Signature]</i>	3-17-21	1225	<i>[Signature]</i>	3-17-21	1225	
<i>[Signature]</i>			<i>[Signature]</i>	3/17/21	1225	

SAMPLER NAME AND SIGNATURE		DATE Signed (MM/DD/YY)	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	<i>[Signature]</i>	3/16/21				
SIGNATURE of SAMPLER:	<i>[Signature]</i>	3/16/21				

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020/rev 07 15-Feb-2007

April 14, 2021

Joju Abraham
Georgia Power-CCR
2480 Maner Road
Atlanta, GA 30339

RE: Project: GRUMMAN ROAD-SEMI ANNUAL RADS
Pace Project No.: 92527242

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 11, 2021 and March 17, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



Kevin Herring
kevin.herring@pacelabs.com
1(704)875-9092
HORIZON Database Administrator

Enclosures

cc: Owens Fuquea, ACC
Kristen Jurinko
Matt Malone, Atlantic Coast Consulting
Betsy McDaniel, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Ms. Lauren Petty, Southern Company



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

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: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92527242001	DUP-2	Water	03/10/21 00:00	03/11/21 12:40
92527242002	FB-2	Water	03/10/21 16:15	03/11/21 12:40
92527242003	GWB-4R	Water	03/10/21 09:50	03/11/21 12:40
92527242004	GWB-5R	Water	03/10/21 13:15	03/11/21 12:40
92527242005	GWB-6R	Water	03/10/21 15:05	03/11/21 12:40
92527242006	GWC-1	Water	03/10/21 10:45	03/11/21 12:40
92527242007	GWC-12	Water	03/10/21 11:50	03/11/21 12:40
92527242008	GWC-11	Water	03/10/21 14:15	03/11/21 12:40
92527242009	GWC-22	Water	03/10/21 17:25	03/11/21 12:40
92527242010	GWC-9	Water	03/10/21 15:55	03/11/21 12:40
92527242011	FB-3	Water	03/11/21 12:50	03/12/21 16:00
92527242012	EB-3	Water	03/11/21 10:55	03/12/21 16:00
92527242013	DUP-3	Water	03/12/21 00:00	03/12/21 16:00
92527242014	MW-24D	Water	03/11/21 10:50	03/12/21 16:00
92527242015	MW-23D	Water	03/11/21 14:00	03/12/21 16:00
92527242016	MW-26D	Water	03/11/21 12:25	03/12/21 16:00
92527242017	MW-27D	Water	03/11/21 15:45	03/12/21 16:00
92527242018	MW-25D	Water	03/11/21 14:35	03/12/21 16:00
92527242019	GWC-17	Water	03/11/21 10:30	03/12/21 16:00
92527242020	GWA-7	Water	03/11/21 16:45	03/12/21 16:00
92527242021	GWA-8	Water	03/12/21 08:50	03/12/21 16:00
92527242022	GWC-15	Water	03/12/21 08:35	03/12/21 16:00
92527242023	GWC-20	Water	03/12/21 08:35	03/12/21 16:00
92527242024	GWC-2	Water	03/15/21 15:10	03/17/21 12:25
92527242025	GWC-13	Water	03/15/21 16:25	03/17/21 12:25
92527242026	GWC-14	Water	03/16/21 09:30	03/17/21 12:25
92527242027	GWC-16	Water	03/16/21 11:05	03/17/21 12:25
92527242028	GWC-21	Water	03/16/21 15:00	03/17/21 12:25
92527242029	FB-1	Water	03/15/21 16:15	03/17/21 12:25
92527242030	DUP-1	Water	03/16/21 00:00	03/17/21 12:25
92527242031	EB-2	Water	03/16/21 10:40	03/17/21 12:25
92527242032	EB-1	Water	03/16/21 15:15	03/17/21 12:25

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD-SEMI ANNUAL RADS
Pace Project No.: 92527242

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92527242001	DUP-2	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527242002	FB-2	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527242003	GWB-4R	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527242004	GWB-5R	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527242005	GWB-6R	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527242006	GWC-1	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527242007	GWC-12	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527242008	GWC-11	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527242009	GWC-22	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527242010	GWC-9	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527242011	FB-3	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527242012	EB-3	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527242013	DUP-3	EPA 9315	CLA	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD-SEMI ANNUAL RADS
Pace Project No.: 92527242

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92527242014	MW-24D	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	CLA	1	PASI-PA
92527242015	MW-23D	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	CLA	1	PASI-PA
92527242016	MW-26D	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	CLA	1	PASI-PA
92527242017	MW-27D	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	CLA	1	PASI-PA
92527242018	MW-25D	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	CLA	1	PASI-PA
92527242019	GWC-17	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	CLA	1	PASI-PA
92527242020	GWA-7	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	CLA	1	PASI-PA
92527242021	GWA-8	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	CLA	1	PASI-PA
92527242022	GWC-15	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	CLA	1	PASI-PA
92527242023	GWC-20	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	CLA	1	PASI-PA
92527242024	GWC-2	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92527242025	GWC-13	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92527242026	GWC-14	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92527242027	GWC-16	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92527242028	GWC-21	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92527242029	FB-1	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92527242030	DUP-1	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92527242031	EB-2	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92527242032	EB-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

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD-SEMI ANNUAL RAD5

Pace Project No.: 92527242

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527242001	DUP-2					
EPA 9315	Radium-226	0.553 ± 0.250 (0.315)	pCi/L		03/29/21 07:36	
EPA 9320	Radium-228	C:91% T:NA 1.79 ± 1.14 (2.15) C:73% T:79%	pCi/L		04/07/21 19:41	
Total Radium Calculation	Total Radium	2.34 ± 1.39 (2.47)	pCi/L		04/08/21 10:32	
92527242002	FB-2					
EPA 9315	Radium-226	-0.0594 ± 0.205 (0.543)	pCi/L		03/29/21 07:36	
EPA 9320	Radium-228	C:93% T:NA 0.265 ± 0.556 (1.23) C:72% T:86%	pCi/L		04/07/21 19:41	
Total Radium Calculation	Total Radium	0.265 ± 0.761 (1.77)	pCi/L		04/08/21 10:32	
92527242003	GWB-4R					
EPA 9315	Radium-226	1.25 ± 0.384 (0.334)	pCi/L		03/29/21 07:36	
EPA 9320	Radium-228	C:83% T:NA 0.862 ± 0.508 (0.942) C:67% T:84%	pCi/L		04/09/21 14:45	
Total Radium Calculation	Total Radium	2.11 ± 0.892 (1.28)	pCi/L		04/12/21 12:04	
92527242004	GWB-5R					
EPA 9315	Radium-226	3.40 ± 0.642 (0.276)	pCi/L		04/08/21 08:10	
EPA 9320	Radium-228	C:87% T:NA 1.27 ± 0.527 (0.811) C:59% T:88%	pCi/L		04/09/21 14:45	
Total Radium Calculation	Total Radium	4.67 ± 1.17 (1.09)	pCi/L		04/12/21 12:04	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527242005	GWB-6R					
EPA 9315	Radium-226	2.23 ± 0.500 (0.412)	pCi/L		04/08/21 08:07	
EPA 9320	Radium-228	C:86% T:NA 2.38 ± 0.816 (1.13)	pCi/L		04/09/21 14:45	
Total Radium Calculation	Total Radium	C:66% T:83% 4.61 ± 1.32 (1.54)	pCi/L		04/12/21 12:04	
92527242006	GWC-1					
EPA 9315	Radium-226	0.674 ± 0.296 (0.414)	pCi/L		03/29/21 07:37	
EPA 9320	Radium-228	C:89% T:NA 1.03 ± 0.658 (1.24)	pCi/L		04/09/21 14:45	
Total Radium Calculation	Total Radium	C:61% T:90% 1.70 ± 0.954 (1.65)	pCi/L		04/12/21 12:04	
92527242007	GWC-12					
EPA 9315	Radium-226	0.853 ± 0.328 (0.428)	pCi/L		03/29/21 07:37	
EPA 9320	Radium-228	C:72% T:NA 0.921 ± 0.518 (0.948)	pCi/L		04/09/21 14:45	
Total Radium Calculation	Total Radium	C:64% T:86% 1.77 ± 0.846 (1.38)	pCi/L		04/12/21 12:04	
92527242008	GWC-11					
EPA 9315	Radium-226	4.28 ± 0.778 (0.269)	pCi/L		04/08/21 13:05	
EPA 9320	Radium-228	C:94% T:NA 3.27 ± 0.852 (0.802)	pCi/L		04/09/21 14:45	
Total Radium Calculation	Total Radium	C:64% T:87% 7.55 ± 1.63 (1.07)	pCi/L		04/12/21 12:04	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527242009	GWC-22					
EPA 9315	Radium-226	1.66 ± 0.482 (0.404) C:76% T:NA	pCi/L		03/29/21 08:06	
EPA 9320	Radium-228	0.873 ± 0.520 (0.957) C:64% T:79%	pCi/L		04/09/21 14:45	
Total Radium Calculation	Total Radium	2.53 ± 1.00 (1.36)	pCi/L		04/12/21 12:04	
92527242010	GWC-9					
EPA 9315	Radium-226	0.959 ± 0.316 (0.434) C:86% T:NA	pCi/L		03/29/21 08:07	
EPA 9320	Radium-228	1.12 ± 0.557 (0.977) C:65% T:84%	pCi/L		04/09/21 14:43	
Total Radium Calculation	Total Radium	2.08 ± 0.873 (1.41)	pCi/L		04/12/21 12:04	
92527242011	FB-3					
EPA 9315	Radium-226	0.0465 ± 0.149 (0.367) C:89% T:NA	pCi/L		03/29/21 08:07	
EPA 9320	Radium-228	0.123 ± 0.338 (0.761) C:67% T:84%	pCi/L		04/09/21 14:44	
Total Radium Calculation	Total Radium	0.170 ± 0.487 (1.13)	pCi/L		04/12/21 12:04	
92527242012	EB-3					
EPA 9315	Radium-226	-0.160 ± 0.129 (0.441) C:71% T:NA	pCi/L		03/29/21 08:07	
EPA 9320	Radium-228	0.445 ± 0.378 (0.754) C:68% T:88%	pCi/L		04/09/21 14:44	
Total Radium Calculation	Total Radium	0.445 ± 0.507 (1.20)	pCi/L		04/12/21 12:04	

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD-SEMI ANNUAL RADS
Pace Project No.: 92527242

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527242013	DUP-3					
EPA 9315	Radium-226	0.544 ± 0.261 (0.372) C:89% T:NA	pCi/L		03/29/21 08:07	
EPA 9320	Radium-228	0.907 ± 0.526 (0.973) C:63% T:86%	pCi/L		04/09/21 14:44	
Total Radium Calculation	Total Radium	1.45 ± 0.787 (1.35)	pCi/L		04/12/21 12:04	
92527242014	MW-24D					
EPA 9315	Radium-226	0.692 ± 0.299 (0.401) C:85% T:NA	pCi/L		03/29/21 08:07	
EPA 9320	Radium-228	0.601 ± 0.440 (0.855) C:64% T:85%	pCi/L		04/09/21 14:44	
Total Radium Calculation	Total Radium	1.29 ± 0.739 (1.26)	pCi/L		04/12/21 12:04	
92527242015	MW-23D					
EPA 9315	Radium-226	0.663 ± 0.299 (0.382) C:75% T:NA	pCi/L		03/29/21 08:08	
EPA 9320	Radium-228	0.888 ± 0.496 (0.901) C:66% T:84%	pCi/L		04/09/21 14:44	
Total Radium Calculation	Total Radium	1.55 ± 0.795 (1.28)	pCi/L		04/12/21 12:06	
92527242016	MW-26D					
EPA 9315	Radium-226	0.575 ± 0.272 (0.400) C:84% T:NA	pCi/L		03/29/21 08:29	
EPA 9320	Radium-228	0.208 ± 0.433 (0.955) C:67% T:81%	pCi/L		04/09/21 14:44	
Total Radium Calculation	Total Radium	0.783 ± 0.705 (1.36)	pCi/L		04/12/21 12:06	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD-SEMI ANNUAL RADS
Pace Project No.: 92527242

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527242017	MW-27D					
EPA 9315	Radium-226	0.582 ± 0.270 (0.374)	pCi/L		03/29/21 08:25	
EPA 9320	Radium-228	C:87% T:NA 1.09 ± 0.525 (0.904)	pCi/L		04/09/21 14:44	
Total Radium Calculation	Total Radium	C:67% T:83% 1.67 ± 0.795 (1.28)	pCi/L		04/12/21 12:06	
92527242018	MW-25D					
EPA 9315	Radium-226	0.164 ± 0.204 (0.432)	pCi/L		03/29/21 08:25	
EPA 9320	Radium-228	C:76% T:NA 0.189 ± 0.396 (0.873)	pCi/L		04/09/21 14:44	
Total Radium Calculation	Total Radium	C:68% T:88% 0.353 ± 0.600 (1.31)	pCi/L		04/12/21 12:06	
92527242019	GWC-17					
EPA 9315	Radium-226	1.17 ± 0.376 (0.359)	pCi/L		03/29/21 07:47	
EPA 9320	Radium-228	C:88% T:NA 1.60 ± 0.632 (1.02)	pCi/L		04/09/21 14:36	
Total Radium Calculation	Total Radium	C:68% T:84% 2.77 ± 1.01 (1.38)	pCi/L		04/12/21 12:06	
92527242020	GWA-7					
EPA 9315	Radium-226	1.34 ± 0.588 (0.937)	pCi/L		04/13/21 09:20	
EPA 9320	Radium-228	C:85% T:NA 1.88 ± 0.747 (1.19)	pCi/L		04/09/21 14:36	
Total Radium Calculation	Total Radium	C:65% T:87% 3.22 ± 1.34 (2.13)	pCi/L		04/13/21 15:22	

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527242021	GWA-8					
EPA 9315	Radium-226	0.917 ± 0.328 (0.439)	pCi/L		03/29/21 07:47	
EPA 9320	Radium-228	C:87% T:NA 1.25 ± 0.560 (0.927)	pCi/L		04/09/21 14:45	
Total Radium Calculation	Total Radium	C:67% T:79% 2.17 ± 0.888 (1.37)	pCi/L		04/12/21 12:06	
92527242022	GWC-15					
EPA 9315	Radium-226	0.352 ± 0.243 (0.437)	pCi/L		03/29/21 07:47	
EPA 9320	Radium-228	C:82% T:NA 0.255 ± 0.415 (0.901)	pCi/L		04/09/21 14:36	
Total Radium Calculation	Total Radium	C:68% T:93% 0.607 ± 0.658 (1.34)	pCi/L		04/12/21 12:06	
92527242023	GWC-20					
EPA 9315	Radium-226	2.71 ± 0.554 (0.292)	pCi/L		04/13/21 09:20	
EPA 9320	Radium-228	C:81% T:NA 2.46 ± 0.702 (0.897)	pCi/L		04/09/21 12:02	
Total Radium Calculation	Total Radium	C:78% T:89% 5.17 ± 1.26 (1.19)	pCi/L		04/13/21 15:22	
92527242024	GWC-2					
EPA 9315	Radium-226	0.0925 ± 0.130 (0.273)	pCi/L		04/05/21 07:59	
EPA 9320	Radium-228	C:77% T:NA 0.711 ± 0.431 (0.818)	pCi/L		04/09/21 12:02	
Total Radium Calculation	Total Radium	C:75% T:90% 0.804 ± 0.561 (1.09)	pCi/L		04/12/21 12:06	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527242025	GWC-13					
EPA 9315	Radium-226	0.122 ± 0.285 (0.665) C:69% T:NA	pCi/L		04/05/21 08:03	
EPA 9320	Radium-228	0.647 ± 0.469 (0.933) C:79% T:80%	pCi/L		04/09/21 12:02	
Total Radium Calculation	Total Radium	0.769 ± 0.754 (1.60)	pCi/L		04/12/21 12:06	
92527242026	GWC-14					
EPA 9315	Radium-226	0.0831 ± 0.154 (0.352) C:77% T:NA	pCi/L		04/05/21 08:03	
EPA 9320	Radium-228	-0.0569 ± 0.461 (1.06) C:73% T:86%	pCi/L		04/09/21 12:02	
Total Radium Calculation	Total Radium	0.0831 ± 0.615 (1.41)	pCi/L		04/12/21 12:06	
92527242027	GWC-16					
EPA 9315	Radium-226	1.26 ± 0.441 (0.606) C:85% T:NA	pCi/L		04/05/21 08:03	
EPA 9320	Radium-228	0.888 ± 0.460 (0.847) C:76% T:95%	pCi/L		04/09/21 15:16	
Total Radium Calculation	Total Radium	2.15 ± 0.901 (1.45)	pCi/L		04/12/21 12:06	
92527242028	GWC-21					
EPA 9315	Radium-226	1.64 ± 0.442 (0.251) C:85% T:NA	pCi/L		04/05/21 09:32	
EPA 9320	Radium-228	1.24 ± 0.490 (0.791) C:75% T:92%	pCi/L		04/09/21 15:16	
Total Radium Calculation	Total Radium	2.88 ± 0.932 (1.04)	pCi/L		04/12/21 12:06	

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD-SEMI ANNUAL RADS
Pace Project No.: 92527242

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527242029	FB-1					
EPA 9315	Radium-226	0.0364 ± 0.116 (0.289) C:87% T:NA	pCi/L		04/05/21 09:32	
EPA 9320	Radium-228	-0.0970 ± 0.354 (0.831) C:77% T:92%	pCi/L		04/09/21 15:16	
Total Radium Calculation	Total Radium	0.0364 ± 0.470 (1.12)	pCi/L		04/12/21 12:06	
92527242030	DUP-1					
EPA 9315	Radium-226	0.129 ± 0.150 (0.301) C:81% T:NA	pCi/L		04/05/21 09:32	
EPA 9320	Radium-228	-0.117 ± 0.444 (1.03) C:78% T:80%	pCi/L		04/09/21 15:16	
Total Radium Calculation	Total Radium	0.129 ± 0.594 (1.33)	pCi/L		04/12/21 12:06	
92527242031	EB-2					
EPA 9315	Radium-226	0.0155 ± 0.108 (0.290) C:82% T:NA	pCi/L		04/05/21 09:32	
EPA 9320	Radium-228	1.02 ± 0.453 (0.759) C:69% T:92%	pCi/L		04/09/21 15:20	
Total Radium Calculation	Total Radium	1.04 ± 0.561 (1.05)	pCi/L		04/12/21 12:06	
92527242032	EB-1					
EPA 9315	Radium-226	0.0395 ± 0.115 (0.286) C:75% T:NA	pCi/L		04/05/21 09:32	
EPA 9320	Radium-228	0.419 ± 0.448 (0.941) C:69% T:86%	pCi/L		04/09/21 15:21	
Total Radium Calculation	Total Radium	0.459 ± 0.563 (1.23)	pCi/L		04/12/21 12:06	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Sample: DUP-2 **Lab ID: 92527242001** Collected: 03/10/21 00:00 Received: 03/11/21 12:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.553 ± 0.250 (0.315) C:91% T:NA	pCi/L	03/29/21 07:36	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.79 ± 1.14 (2.15) C:73% T:79%	pCi/L	04/07/21 19:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	2.34 ± 1.39 (2.47)	pCi/L	04/08/21 10:32	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Sample: FB-2 **Lab ID: 92527242002** Collected: 03/10/21 16:15 Received: 03/11/21 12:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	-0.0594 ± 0.205 (0.543) C:93% T:NA	pCi/L	03/29/21 07:36	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.265 ± 0.556 (1.23) C:72% T:86%	pCi/L	04/07/21 19:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.265 ± 0.761 (1.77)	pCi/L	04/08/21 10:32	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Sample: GWB-4R **Lab ID: 92527242003** Collected: 03/10/21 09:50 Received: 03/11/21 12:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	1.25 ± 0.384 (0.334) C:83% T:NA	pCi/L	03/29/21 07:36	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.862 ± 0.508 (0.942) C:67% T:84%	pCi/L	04/09/21 14:45	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	2.11 ± 0.892 (1.28)	pCi/L	04/12/21 12:04	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Sample: GWB-5R **Lab ID: 92527242004** Collected: 03/10/21 13:15 Received: 03/11/21 12:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	3.40 ± 0.642 (0.276) C:87% T:NA	pCi/L	04/08/21 08:10	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.27 ± 0.527 (0.811) C:59% T:88%	pCi/L	04/09/21 14:45	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	4.67 ± 1.17 (1.09)	pCi/L	04/12/21 12:04	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Sample: GWB-6R **Lab ID: 92527242005** Collected: 03/10/21 15:05 Received: 03/11/21 12:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	2.23 ± 0.500 (0.412) C:86% T:NA	pCi/L	04/08/21 08:07	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	2.38 ± 0.816 (1.13) C:66% T:83%	pCi/L	04/09/21 14:45	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	4.61 ± 1.32 (1.54)	pCi/L	04/12/21 12:04	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Sample: GWC-1 **Lab ID: 92527242006** Collected: 03/10/21 10:45 Received: 03/11/21 12:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.674 ± 0.296 (0.414) C:89% T:NA	pCi/L	03/29/21 07:37	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.03 ± 0.658 (1.24) C:61% T:90%	pCi/L	04/09/21 14:45	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.70 ± 0.954 (1.65)	pCi/L	04/12/21 12:04	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-12 Lab ID: 92527242007 Collected: 03/10/21 11:50 Received: 03/11/21 12:40 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.853 ± 0.328 (0.428) C:72% T:NA	pCi/L	03/29/21 07:37	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.921 ± 0.518 (0.948) C:64% T:86%	pCi/L	04/09/21 14:45	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.77 ± 0.846 (1.38)	pCi/L	04/12/21 12:04	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Sample: GWC-11 **Lab ID: 92527242008** Collected: 03/10/21 14:15 Received: 03/11/21 12:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	4.28 ± 0.778 (0.269) C:94% T:NA	pCi/L	04/08/21 13:05	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	3.27 ± 0.852 (0.802) C:64% T:87%	pCi/L	04/09/21 14:45	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	7.55 ± 1.63 (1.07)	pCi/L	04/12/21 12:04	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-22 Lab ID: 92527242009 Collected: 03/10/21 17:25 Received: 03/11/21 12:40 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	1.66 ± 0.482 (0.404) C:76% T:NA	pCi/L	03/29/21 08:06	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.873 ± 0.520 (0.957) C:64% T:79%	pCi/L	04/09/21 14:45	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	2.53 ± 1.00 (1.36)	pCi/L	04/12/21 12:04	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Sample: GWC-9 **Lab ID: 92527242010** Collected: 03/10/21 15:55 Received: 03/11/21 12:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.959 ± 0.316 (0.434) C:86% T:NA	pCi/L	03/29/21 08:07	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.12 ± 0.557 (0.977) C:65% T:84%	pCi/L	04/09/21 14:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	2.08 ± 0.873 (1.41)	pCi/L	04/12/21 12:04	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Sample: FB-3 **Lab ID: 92527242011** Collected: 03/11/21 12:50 Received: 03/12/21 16:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.0465 ± 0.149 (0.367) C:89% T:NA	pCi/L	03/29/21 08:07	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.123 ± 0.338 (0.761) C:67% T:84%	pCi/L	04/09/21 14:44	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.170 ± 0.487 (1.13)	pCi/L	04/12/21 12:04	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Sample: EB-3 **Lab ID: 92527242012** Collected: 03/11/21 10:55 Received: 03/12/21 16:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	-0.160 ± 0.129 (0.441) C:71% T:NA	pCi/L	03/29/21 08:07	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.445 ± 0.378 (0.754) C:68% T:88%	pCi/L	04/09/21 14:44	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.445 ± 0.507 (1.20)	pCi/L	04/12/21 12:04	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: DUP-3 Lab ID: 92527242013 Collected: 03/12/21 00:00 Received: 03/12/21 16:00 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.544 ± 0.261 (0.372) C:89% T:NA	pCi/L	03/29/21 08:07	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.907 ± 0.526 (0.973) C:63% T:86%	pCi/L	04/09/21 14:44	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.45 ± 0.787 (1.35)	pCi/L	04/12/21 12:04	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-24D Lab ID: 92527242014 Collected: 03/11/21 10:50 Received: 03/12/21 16:00 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.692 ± 0.299 (0.401) C:85% T:NA	pCi/L	03/29/21 08:07	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.601 ± 0.440 (0.855) C:64% T:85%	pCi/L	04/09/21 14:44	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.29 ± 0.739 (1.26)	pCi/L	04/12/21 12:04	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-23D Lab ID: 92527242015 Collected: 03/11/21 14:00 Received: 03/12/21 16:00 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.663 ± 0.299 (0.382) C:75% T:NA	pCi/L	03/29/21 08:08	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.888 ± 0.496 (0.901) C:66% T:84%	pCi/L	04/09/21 14:44	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.55 ± 0.795 (1.28)	pCi/L	04/12/21 12:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-26D Lab ID: 92527242016 Collected: 03/11/21 12:25 Received: 03/12/21 16:00 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.575 ± 0.272 (0.400) C:84% T:NA	pCi/L	03/29/21 08:29	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.208 ± 0.433 (0.955) C:67% T:81%	pCi/L	04/09/21 14:44	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.783 ± 0.705 (1.36)	pCi/L	04/12/21 12:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-27D Lab ID: 92527242017 Collected: 03/11/21 15:45 Received: 03/12/21 16:00 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.582 ± 0.270 (0.374) C:87% T:NA	pCi/L	03/29/21 08:25	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.09 ± 0.525 (0.904) C:67% T:83%	pCi/L	04/09/21 14:44	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.67 ± 0.795 (1.28)	pCi/L	04/12/21 12:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-25D Lab ID: 92527242018 Collected: 03/11/21 14:35 Received: 03/12/21 16:00 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.164 ± 0.204 (0.432) C:76% T:NA	pCi/L	03/29/21 08:25	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.189 ± 0.396 (0.873) C:68% T:88%	pCi/L	04/09/21 14:44	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.353 ± 0.600 (1.31)	pCi/L	04/12/21 12:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-17 Lab ID: 92527242019 Collected: 03/11/21 10:30 Received: 03/12/21 16:00 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	1.17 ± 0.376 (0.359) C:88% T:NA	pCi/L	03/29/21 07:47	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.60 ± 0.632 (1.02) C:68% T:84%	pCi/L	04/09/21 14:36	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	2.77 ± 1.01 (1.38)	pCi/L	04/12/21 12:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Sample: GWA-7 **Lab ID: 92527242020** Collected: 03/11/21 16:45 Received: 03/12/21 16:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	1.34 ± 0.588 (0.937) C:85% T:NA	pCi/L	04/13/21 09:20	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.88 ± 0.747 (1.19) C:65% T:87%	pCi/L	04/09/21 14:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	3.22 ± 1.34 (2.13)	pCi/L	04/13/21 15:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Sample: GWA-8 **Lab ID: 92527242021** Collected: 03/12/21 08:50 Received: 03/12/21 16:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.917 ± 0.328 (0.439) C:87% T:NA	pCi/L	03/29/21 07:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.25 ± 0.560 (0.927) C:67% T:79%	pCi/L	04/09/21 14:45	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	2.17 ± 0.888 (1.37)	pCi/L	04/12/21 12:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Sample: GWC-15 **Lab ID: 92527242022** Collected: 03/12/21 08:35 Received: 03/12/21 16:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.352 ± 0.243 (0.437) C:82% T:NA	pCi/L	03/29/21 07:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.255 ± 0.415 (0.901) C:68% T:93%	pCi/L	04/09/21 14:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.607 ± 0.658 (1.34)	pCi/L	04/12/21 12:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Sample: GWC-20 **Lab ID: 92527242023** Collected: 03/12/21 08:35 Received: 03/12/21 16:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	2.71 ± 0.554 (0.292) C:81% T:NA	pCi/L	04/13/21 09:20	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	2.46 ± 0.702 (0.897) C:78% T:89%	pCi/L	04/09/21 12:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	5.17 ± 1.26 (1.19)	pCi/L	04/13/21 15:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Sample: GWC-2 **Lab ID: 92527242024** Collected: 03/15/21 15:10 Received: 03/17/21 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0925 ± 0.130 (0.273) C:77% T:NA	pCi/L	04/05/21 07:59	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.711 ± 0.431 (0.818) C:75% T:90%	pCi/L	04/09/21 12:02	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.804 ± 0.561 (1.09)	pCi/L	04/12/21 12:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-13 Lab ID: 92527242025 Collected: 03/15/21 16:25 Received: 03/17/21 12:25 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.122 ± 0.285 (0.665) C:69% T:NA	pCi/L	04/05/21 08:03	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.647 ± 0.469 (0.933) C:79% T:80%	pCi/L	04/09/21 12:02	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.769 ± 0.754 (1.60)	pCi/L	04/12/21 12:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Sample: GWC-14 **Lab ID: 92527242026** Collected: 03/16/21 09:30 Received: 03/17/21 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.0831 ± 0.154 (0.352) C:77% T:NA	pCi/L	04/05/21 08:03	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	-0.0569 ± 0.461 (1.06) C:73% T:86%	pCi/L	04/09/21 12:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.0831 ± 0.615 (1.41)	pCi/L	04/12/21 12:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-16 Lab ID: 92527242027 Collected: 03/16/21 11:05 Received: 03/17/21 12:25 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	1.26 ± 0.441 (0.606) C:85% T:NA	pCi/L	04/05/21 08:03	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.888 ± 0.460 (0.847) C:76% T:95%	pCi/L	04/09/21 15:16	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	2.15 ± 0.901 (1.45)	pCi/L	04/12/21 12:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Sample: GWC-21 **Lab ID: 92527242028** Collected: 03/16/21 15:00 Received: 03/17/21 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	1.64 ± 0.442 (0.251) C:85% T:NA	pCi/L	04/05/21 09:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.24 ± 0.490 (0.791) C:75% T:92%	pCi/L	04/09/21 15:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	2.88 ± 0.932 (1.04)	pCi/L	04/12/21 12:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Sample: FB-1 **Lab ID: 92527242029** Collected: 03/15/21 16:15 Received: 03/17/21 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.0364 ± 0.116 (0.289) C:87% T:NA	pCi/L	04/05/21 09:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	-0.0970 ± 0.354 (0.831) C:77% T:92%	pCi/L	04/09/21 15:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.0364 ± 0.470 (1.12)	pCi/L	04/12/21 12:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Sample: DUP-1 **Lab ID: 92527242030** Collected: 03/16/21 00:00 Received: 03/17/21 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.129 ± 0.150 (0.301) C:81% T:NA	pCi/L	04/05/21 09:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	-0.117 ± 0.444 (1.03) C:78% T:80%	pCi/L	04/09/21 15:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.129 ± 0.594 (1.33)	pCi/L	04/12/21 12:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EB-2 Lab ID: 92527242031 Collected: 03/16/21 10:40 Received: 03/17/21 12:25 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0155 ± 0.108 (0.290) C:82% T:NA	pCi/L	04/05/21 09:32	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.02 ± 0.453 (0.759) C:69% T:92%	pCi/L	04/09/21 15:20	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.04 ± 0.561 (1.05)	pCi/L	04/12/21 12:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Sample: EB-1 **Lab ID: 92527242032** Collected: 03/16/21 15:15 Received: 03/17/21 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.0395 ± 0.115 (0.286) C:75% T:NA	pCi/L	04/05/21 09:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.419 ± 0.448 (0.941) C:69% T:86%	pCi/L	04/09/21 15:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.459 ± 0.563 (1.23)	pCi/L	04/12/21 12:06	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

QC Batch: 440194

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92527242001, 92527242002

METHOD BLANK: 2125114

Matrix: Water

Associated Lab Samples: 92527242001, 92527242002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.922 ± 0.466 (0.823) C:75% T:77%	pCi/L	04/07/21 12:38	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RAD5

Pace Project No.: 92527242

QC Batch:	440196	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92527242023, 92527242024, 92527242025, 92527242026, 92527242027, 92527242028, 92527242029, 92527242030, 92527242031, 92527242032

METHOD BLANK:	2125122	Matrix:	Water
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Associated Lab Samples: 92527242023, 92527242024, 92527242025, 92527242026, 92527242027, 92527242028, 92527242029, 92527242030, 92527242031, 92527242032

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.624 ± 0.351 (0.633) C:78% T:86%	pCi/L	04/09/21 12:05	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

QC Batch:	440195	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg
Associated Lab Samples:	92527242003, 92527242004, 92527242005, 92527242006, 92527242007, 92527242008, 92527242009, 92527242010, 92527242011, 92527242012, 92527242013, 92527242014, 92527242015, 92527242016, 92527242017, 92527242018, 92527242019, 92527242020, 92527242021, 92527242022		

METHOD BLANK:	2125117	Matrix:	Water
Associated Lab Samples:	92527242003, 92527242004, 92527242005, 92527242006, 92527242007, 92527242008, 92527242009, 92527242010, 92527242011, 92527242012, 92527242013, 92527242014, 92527242015, 92527242016, 92527242017, 92527242018, 92527242019, 92527242020, 92527242021, 92527242022		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.0670 ± 0.361 (0.866) C:67% T:78%	pCi/L	04/09/21 14:44	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

QC Batch: 439778

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92527242001, 92527242002, 92527242003, 92527242004, 92527242005, 92527242006, 92527242007, 92527242008, 92527242009, 92527242010, 92527242011, 92527242012, 92527242013, 92527242014, 92527242015, 92527242016, 92527242017, 92527242018

METHOD BLANK: 2123479

Matrix: Water

Associated Lab Samples: 92527242001, 92527242002, 92527242003, 92527242004, 92527242005, 92527242006, 92527242007, 92527242008, 92527242009, 92527242010, 92527242011, 92527242012, 92527242013, 92527242014, 92527242015, 92527242016, 92527242017, 92527242018

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0589 ± 0.0974 (0.215) C:102% T:NA	pCi/L	03/29/21 07:35	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

QC Batch:	439779	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92527242019, 92527242020, 92527242021, 92527242022, 92527242023

METHOD BLANK: 2123480 Matrix: Water

Associated Lab Samples: 92527242019, 92527242020, 92527242021, 92527242022, 92527242023

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.00660 ± 0.163 (0.432) C:92% T:NA	pCi/L	03/29/21 08:25	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: GRUMMAN ROAD-SEMI ANNUAL RAD5

Pace Project No.: 92527242

QC Batch: 440497

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92527242024, 92527242025, 92527242026, 92527242027, 92527242028, 92527242029, 92527242030, 92527242031, 92527242032

METHOD BLANK: 2126659

Matrix: Water

Associated Lab Samples: 92527242024, 92527242025, 92527242026, 92527242027, 92527242028, 92527242029, 92527242030, 92527242031, 92527242032

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0621 ± 0.152 (0.366) C:63% T:NA	pCi/L	04/05/21 07:59	

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QUALIFIERS

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GRUMMAN ROAD-SEMI ANNUAL RADS
Pace Project No.: 92527242

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527242001	DUP-2	EPA 9315	439778		
92527242002	FB-2	EPA 9315	439778		
92527242003	GWB-4R	EPA 9315	439778		
92527242004	GWB-5R	EPA 9315	439778		
92527242005	GWB-6R	EPA 9315	439778		
92527242006	GWC-1	EPA 9315	439778		
92527242007	GWC-12	EPA 9315	439778		
92527242008	GWC-11	EPA 9315	439778		
92527242009	GWC-22	EPA 9315	439778		
92527242010	GWC-9	EPA 9315	439778		
92527242011	FB-3	EPA 9315	439778		
92527242012	EB-3	EPA 9315	439778		
92527242013	DUP-3	EPA 9315	439778		
92527242014	MW-24D	EPA 9315	439778		
92527242015	MW-23D	EPA 9315	439778		
92527242016	MW-26D	EPA 9315	439778		
92527242017	MW-27D	EPA 9315	439778		
92527242018	MW-25D	EPA 9315	439778		
92527242019	GWC-17	EPA 9315	439779		
92527242020	GWA-7	EPA 9315	439779		
92527242021	GWA-8	EPA 9315	439779		
92527242022	GWC-15	EPA 9315	439779		
92527242023	GWC-20	EPA 9315	439779		
92527242024	GWC-2	EPA 9315	440497		
92527242025	GWC-13	EPA 9315	440497		
92527242026	GWC-14	EPA 9315	440497		
92527242027	GWC-16	EPA 9315	440497		
92527242028	GWC-21	EPA 9315	440497		
92527242029	FB-1	EPA 9315	440497		
92527242030	DUP-1	EPA 9315	440497		
92527242031	EB-2	EPA 9315	440497		
92527242032	EB-1	EPA 9315	440497		
92527242001	DUP-2	EPA 9320	440194		
92527242002	FB-2	EPA 9320	440194		
92527242003	GWB-4R	EPA 9320	440195		
92527242004	GWB-5R	EPA 9320	440195		
92527242005	GWB-6R	EPA 9320	440195		
92527242006	GWC-1	EPA 9320	440195		
92527242007	GWC-12	EPA 9320	440195		
92527242008	GWC-11	EPA 9320	440195		
92527242009	GWC-22	EPA 9320	440195		
92527242010	GWC-9	EPA 9320	440195		
92527242011	FB-3	EPA 9320	440195		
92527242012	EB-3	EPA 9320	440195		
92527242013	DUP-3	EPA 9320	440195		
92527242014	MW-24D	EPA 9320	440195		
92527242015	MW-23D	EPA 9320	440195		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GRUMMAN ROAD-SEMI ANNUAL RADS
 Pace Project No.: 92527242

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527242016	MW-26D	EPA 9320	440195		
92527242017	MW-27D	EPA 9320	440195		
92527242018	MW-25D	EPA 9320	440195		
92527242019	GWC-17	EPA 9320	440195		
92527242020	GWA-7	EPA 9320	440195		
92527242021	GWA-8	EPA 9320	440195		
92527242022	GWC-15	EPA 9320	440195		
92527242023	GWC-20	EPA 9320	440196		
92527242024	GWC-2	EPA 9320	440196		
92527242025	GWC-13	EPA 9320	440196		
92527242026	GWC-14	EPA 9320	440196		
92527242027	GWC-16	EPA 9320	440196		
92527242028	GWC-21	EPA 9320	440196		
92527242029	FB-1	EPA 9320	440196		
92527242030	DUP-1	EPA 9320	440196		
92527242031	EB-2	EPA 9320	440196		
92527242032	EB-1	EPA 9320	440196		
92527242001	DUP-2	Total Radium Calculation	442420		
92527242002	FB-2	Total Radium Calculation	442420		
92527242003	GWB-4R	Total Radium Calculation	442866		
92527242004	GWB-5R	Total Radium Calculation	442866		
92527242005	GWB-6R	Total Radium Calculation	442866		
92527242006	GWC-1	Total Radium Calculation	442866		
92527242007	GWC-12	Total Radium Calculation	442866		
92527242008	GWC-11	Total Radium Calculation	442866		
92527242009	GWC-22	Total Radium Calculation	442866		
92527242010	GWC-9	Total Radium Calculation	442866		
92527242011	FB-3	Total Radium Calculation	442866		
92527242012	EB-3	Total Radium Calculation	442866		
92527242013	DUP-3	Total Radium Calculation	442866		
92527242014	MW-24D	Total Radium Calculation	442866		
92527242015	MW-23D	Total Radium Calculation	442867		
92527242016	MW-26D	Total Radium Calculation	442867		
92527242017	MW-27D	Total Radium Calculation	442867		
92527242018	MW-25D	Total Radium Calculation	442867		
92527242019	GWC-17	Total Radium Calculation	442867		
92527242020	GWA-7	Total Radium Calculation	443120		
92527242021	GWA-8	Total Radium Calculation	442867		
92527242022	GWC-15	Total Radium Calculation	442867		
92527242023	GWC-20	Total Radium Calculation	443120		
92527242024	GWC-2	Total Radium Calculation	442867		
92527242025	GWC-13	Total Radium Calculation	442867		
92527242026	GWC-14	Total Radium Calculation	442867		
92527242027	GWC-16	Total Radium Calculation	442867		
92527242028	GWC-21	Total Radium Calculation	442867		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GRUMMAN ROAD-SEMI ANNUAL RADS

Pace Project No.: 92527242

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527242029	FB-1	Total Radium Calculation	442867		
92527242030	DUP-1	Total Radium Calculation	442867		
92527242031	EB-2	Total Radium Calculation	442867		
92527242032	EB-1	Total Radium Calculation	442867		

REPORT OF LABORATORY ANALYSIS

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Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: G A Power

Project #: **WO# : 92527242**

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



Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 3/17/21

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 214 Type of Ice: Wet Blue None

Cooler Temp: 5.6 Correction Factor: Add/Subtract (°C) +0.1

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 5.7

JSDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?
 Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
-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	7.	
Dissolved analysis: Samples Field Filtered?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Includes Date/Time/ID/Analysis Matrix: <u>W</u>			
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

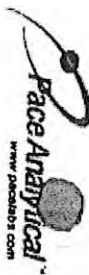
Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



CHAIN-OF-CUSTODY / Analytical Request Document
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company: GA Power, Atlanta, GA
Section B Required Project Information: Report To: SCS Contacts, Copy To: ACC Contacts
Section C Invoice Information: Attention: Southern Co., Company Name: Southern Co., Address:
REGULATORY AGENCY: NPDES [], GROUND WATER [], DRINKING WATER []
UST [], RCRA [], OTHER []
Site Location: Pace Project Manager: Kevin Harting, Pace Profile #: 2926-1
STATE: GA

Table with columns for Section A (Client Info), Section B (Project Info), Section C (Invoice/Agency), and Regulatory Agency checkboxes. Includes fields for company name, address, project name, and various regulatory codes.

Main data table with columns: ITEM #, Section D (Matrix Info), Valid Matrix Codes, MATRIX CODE, SAMPLE TYPE, DATE, TIME, SAMPLE TEMP AT COLLECTION, # OF CONTAINERS, Preservatives, Analysis Test, Requested Analysis Filtered (Y/N), Residual Chlorine (Y/N), Pace Project No./ Lab ID, pH.

Table for Relinquished By / Affiliation and Accepted By / Affiliation. Includes columns for name, affiliation, date, and time. Signatures are present for both sections.

Sampler Name and Signature section. Includes fields for Print Name of Sampler (O. FURBER), Signature of Sampler (handwritten), Date Signed (3-11-21), and Date Signed (Mandatory) (3-11-21).



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A

Required Client Information:
 Company: GA Power
 Address: Atlanta, GA

Section B

Required Project Information:
 Report To: SCS Contacts
 Copy To: ACC Contacts
 Project Name: Grumman Road - Semi-Annual
 Project Number: 10 Day

Section C

Invoice Information:
 Attention: Southern Co.
 Company Name:
 Address:
 Reference: Kevin Herring
 Manager:
 Pace Profile #: 2926-1

Page: 4 of

REGULATORY AGENCY

NPDES GROUND WATER
 UST RCRA
 OTHER

Site Location
 STATE: GA

Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information SAMPLE ID (A-Z, 0-9, -) Sample IDs MUST BE UNIQUE	Valid Matrix Codes MATRIX CODE DW WT WW WATER WASTE WATER PRODUCT OIL/SOLUO WIFE AIR OTHER TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	Preservatives						Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.	
					COMPOSITE	COMPOSITE				H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol					Other
1	EB-3		V G			DATE	TIME		5											
2	ER-3		V G			3-11-21	1250		5											
3	DUD-3		V G			3-11-21	1055		2											
4	GWC-24D		V G			3-11-21	1050		2											
5	GWC-23D		V G			3-11-21	1400		2											
6	GWC-26D		V G			3-11-21	1225		2											
7	GWC-27D		V G			3-11-21	1545		2											
8	GWC-25D		V G			3-11-21	1435		2											
9	GWA-17		V G			3-11-21	1030		2											
10	GWA-7		V G			3-11-21	1045		2											
11	GWA-8		V G			3-11-21	0850		2											
12	GWC-15		V G			3-12-21	0835		2											

Additional Comments

Please note when the last sample for the event has been taken.

REQUISHER / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
ARC	3-12-21	1400	[Signature]	3/12/21	1600	pH=6.21

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: O. Fiquera

SIGNATURE of SAMPLER: [Signature]

DATE Signed (MM/DD/YY): 3-12-21

Temp in °C
 Received on Ice (Y/N)
 Custody Sealed Cooler (Y/N)
 Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:
 Company: GA Power
 Address: Atlanta, GA

Section B Required Project Information:
 Report To: SCS Contacts
 Copy To: ACC Contacts

Section C Invoice Information:
 Attention: Southern Co.
 Company Name:
 Address:
 Pace Quote Reference: Kevin Herring
 Pace Project Manager:
 Pace Profile #: 2926-1

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER
 Site Location: GA
 STATE: GA

ITEM #	Section D Required Client Information	Valid Matrix Codes MATERIALS: DRINKING WATER, WASTE WATER, PRODUCT, SOLE/SOLID, OIL, WIFE, AIR, OTHER, TISSUE SCOPE: DW, WT, W, P, SL, OL, WP, AR, OT, TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
					DATE	TIME			DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl				
1	GWR-20		AM10		3-12-21	0635	5	2									pH= 5.86	
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

ADDITIONAL COMMENTS
 Please note when the last sample for the event has been taken.

RELINQUISHED BY / AFFILIATION
 Date: 3-12-21 Time: 1100
 Signature: [Handwritten Signature]

ACCEPTED BY / AFFILIATION
 Date: 3/12/21 Time: 1100
 Signature: [Handwritten Signature]

SAMPLE CONDITIONS
 Temp in °C: _____
 Received on Ice (Y/N): _____
 Custody Sealed Cooler (Y/N): _____
 Samples Intact (Y/N): _____

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: D. FURBER
 SIGNATURE of SAMPLER: [Handwritten Signature]

DATE Signed (MM/DD/YYYY): 3-12-21

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
Required Client Information:

Company: GA Power
Address: Atlanta, GA
Phone: _____
Fax: _____
Requested Date Data/TAT: 10 Day

Section B
Required Project Information:

Report To: SCS Contacts
Copy To: ACC Contacts
Purchase Order No.: _____
Project Name: Grumman Road - Semi-Annual
Project Number: _____

Section C
Invoice Information:

Attention: Southern Co.
Company Name: _____
Address: _____
Pace Quote Reference: _____
Pace Project Manager: Kevin Herring
Pace Profile #: 2926-1

Page: 4 of 4

REGULATORY AGENCY

NPDES GROUND WATER
 UST RCRA
STATE: GA

DRINKING WATER
 OTHER

ITEM #	Section D Required Client Information Valid Matrix Codes MATRIX CODE (see valid codes to left) SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		PRESERVED		ANALYSIS TEST			Residual Chlorine (Y/N)	Page Project No./ Lab ID.	
		DATE	TIME	DATE	TIME	TDS	Chloride/Fluoride/Sulfate 300.0	App. III + IV + Permit Metals *			RAD 226/228
1	GWL-2	3-15-21	1610	5	2	3	1	1	1	2	4.56
2	GWL-13	3-15-21	1625	5	2	3	1	1	1	2	4.74
3	GWL-14	3-16-21	0930	5	2	3	1	1	1	2	5.53
4	GWL-16	3-16-21	1105	5	2	2	1	1	1	2	5.67
5	GWL-21	3-16-21	1500	5	2	3	1	1	1	2	5.74
6	FB-1	3-15-21	1615	5	2	3	1	1	1	2	NA
7	DUP-1	3-16-21	--	5	2	3	1	1	1	2	NA
8	FB-2	3-16-21	1040	5	2	2	1	1	1	2	NA
9	EB-1	3-16-21	1515	5	2	2	1	1	1	2	NA
10											
11											
12											

Section B
Additional Comments

Requested by Affiliation

Date

Time

Accepted by Affiliation

Sampler Name and Signature
Print Name of Sampler: O. Everett
Signature of Sampler: [Signature]Date Signed (MM/DD/YY): 3/16/21

Temp in °C
Received on Ice (Y/N)
Custody Sealed Cooler (Y/N)
Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: CLA
Date: 3/26/2021
Worklist: 59453
Matrix: DW

Method Blank Assessment	
MB Sample ID	2129480
MB Concentration:	-0.007
MB Counting Uncertainty:	0.163
MB MDC:	0.432
MB Numerical Performance Indicator:	-0.08
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSD (Y or N)?	Y
Count Date:	3/29/2021	LCS59453	3/29/2021
Spike I.D.:	19-033		
Decay Corrected Spike Concentration (pCi/mL):	24.039		
Volume Used (mL):	0.10		
Aliquot Volume (L, g, F):	0.503		
Target Conc. (pCi/L, g, F):	4.780		
Uncertainty (Calculated):	0.057		
Result (pCi/L, g, F):	3.897		
LCSD Counting Uncertainty (pCi/L, g, F):	0.623		
Numerical Performance Indicator:	-2.77		
Percent Recovery:	81.54%		
Status vs. Numerical Indicator:	N/A		
Status vs Recovery:	Pass		
Upper % Recovery Limits:	125%		
Lower % Recovery Limits:	75%		

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below:
Sample I.D.:	LCS59453	
Duplicate Sample I.D.:	LCS59453	
Sample Result (pCi/L, g, F):	3.897	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.623	
Sample Duplicate Result (pCi/L, g, F):	3.978	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.583	
Ave sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.186	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	2.49%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

M 3/30/21
lam3/30/21

Sample Matrix Spike Control Assessment		MS/MSD 1	MS/MSD 2
Sample Collection Date:			
Sample I.D.:			
Sample MS I.D.:			
Sample MSD I.D.:			
MS/MSD Decay Corrected Spike Concentration (pCi/mL):			
Spike Volume Used in MSD (mL):			
MS Aliquot (L, g, F):			
MS Target Conc. (pCi/L, g, F):			
MSD Aliquot (L, g, F):			
MSD Target Conc. (pCi/L, g, F):			
MS Spike Uncertainty (calculated):			
MSD Spike Uncertainty (calculated):			
Sample Result:			
Sample Result Counting Uncertainty (pCi/L, g, F):			
Sample Matrix Spike Result:			
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):			
Sample Matrix Spike Duplicate Result:			
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):			
MS Numerical Performance Indicator:			
MSD Numerical Performance Indicator:			
MS Percent Recovery:			
MSD Percent Recovery:			
MS Status vs Numerical Indicator:			
MSD Status vs Numerical Indicator:			
MS Status vs Recovery:			
MSD Status vs Recovery:			
MS/MSD Upper % Recovery Limits:			
MS/MSD Lower % Recovery Limits:			

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	
% RPD Limit:	

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.



Test: Ra-226
Analyst: CLA
Date: 3/26/2021
Worklist: 59453
Matrix: DW

Method Blank Assessment	
MB Sample ID	2123480
MB Concentration:	-0.007
MB Counting Uncertainty:	0.163
MB MDC:	0.432
MB Numerical Performance Indicator:	-0.08
MB Status vs. Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

LCS/D (Y or N)?	N	
	LCS/59453	LCS/D59453
Count Date:	3/29/2021	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.039	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.503	
Target Conc. (pCi/L, g, F):	4.780	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	3.897	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.623	
Numerical Performance Indicator:	-2.77	
Percent Recovery:	81.54%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

Duplicate Sample Assessment	
Sample I.D.:	92527242019
Duplicate Sample I.D.:	92527242019DUP
Sample Result (pCi/L, g, F):	1.172
Sample Result Counting Uncertainty (pCi/L, g, F):	0.336
Sample Duplicate Result (pCi/L, g, F):	0.742
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.339
Are sample and/or duplicate results below RL?	See Below.##
Duplicate Numerical Performance Indicator:	1.768
Duplicate RPD:	44.99%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***
% RPD Limit:	25%

*** Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

***Batch must be re-assessed due to unacceptable precision. N/A
 Results c Sp MDC, NI - 3 accepted
 N/A M 3/30/21

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.: MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): Spike Volume Used in MSD (mL): MS Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): MSD Aliquot (L, g, F): MSD Target Conc. (pCi/L, g, F): MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated): Sample Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Result: Matrix Spike Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): MS Numerical Performance Indicator: MSD Numerical Performance Indicator: MS Percent Recovery: MSD Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D. Sample MS I.D. Sample MSD I.D. Sample Matrix Spike Result: Matrix Spike Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): Duplicate Numerical Performance Indicator: Duplicate Numerical Performance Indicator: (Based on the Percent Recoveries) MS/MSD Duplicate RPD: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPD: % RPD Limit:

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.



Test: Ra-226
 Analyst: CLA
 Date: 3/26/2021
 Worklist: 59452
 Matrix: DW

Method Blank Assessment	
MB Sample ID	2123479
MB Concentration:	0.059
MB Counting Uncertainty:	0.087
MB MDC:	0.215
MB Numerical Performance Indicator:	1.19
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	Y
LCSD59452	3/29/2021
LCSD59452	3/29/2021
Count Date:	19-033
Spike I.D.:	24.039
Decay Corrected Spike Concentration (pCi/mL):	0.10
Volume Used (mL):	0.508
Aliquot Volume (L, g, F):	4.749
Target Conc. (pCi/L, g, F):	0.057
Uncertainty (Calculated):	4.865
Result (pCi/L, g, F):	0.699
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	0.32
Numerical Performance Indicator:	102.45%
Percent Recovery:	N/A
Status vs Numerical Indicator:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	LCSD59452
Duplicate Sample I.D.:	LCSD59452
Sample Result (pCi/L, g, F):	4.865
Sample Result Counting Uncertainty (pCi/L, g, F):	0.699
Sample Duplicate Result (pCi/L, g, F):	4.528
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.629
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	0.702
Duplicate (Based on the LCSD/LCSD Percent Recoveries) Duplicate RPD:	6.79%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
MS Spike Uncertainty (calculated):	
MSD Spike Uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	
MS/MSD Upper % Recovery Limits:	
MS/MSD Lower % Recovery Limits:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
Duplicate (Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	
% RPD Limit:	

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

3/30/21

3/30/21

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.



Test: Ra-226
Analyst: CLA
Date: 3/26/2021
Worklist: 59452
Matrix: DW

Method Blank Assessment	
MB Sample ID	2123479
MB concentration:	0.059
M/B Counting Uncertainty:	0.097
MB MDC:	0.215
MB Numerical Performance Indicator:	1.19
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCS/D (Y or N)?	N
LCS59452	LCS59452
Count Date:	3/29/2021
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.039
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.506
Target Conc. (pCi/L, g, F):	4.749
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	4.865
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.699
Numerical Performance Indicator:	0.32
Percent Recovery:	102.45%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	92527605002
Duplicate Sample I.D.:	92527605002DUP
Sample Result (pCi/L, g, F):	0.055
Sample Duplicate Result (pCi/L, g, F):	0.100
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.097
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.161
Are sample and/or duplicate results below RL?	See Below #
Duplicate Numerical Performance Indicator:	-0.428
Duplicate RPD:	54.54%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***
% RPD Limit:	25%

*** Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

***Batch must be re-prepped due to unacceptable precision. N/A

03/30/21

03/30/21

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
<p>Sample Collection Date:</p> <p>Sample I.D.:</p> <p>Sample MS I.D.:</p> <p>Sample MSD I.D.:</p> <p>Spike I.D.:</p> <p>MS/MSD Decay Corrected Spike Concentration (pCi/mL):</p> <p>Spike Volume Used in MS (mL):</p> <p>Spike Volume Used in MSD (mL):</p> <p>MS Aliquot (L, g, F):</p> <p>MS Target Conc. (pCi/L, g, F):</p> <p>MSD Aliquot (L, g, F):</p> <p>MSD Target Conc. (pCi/L, g, F):</p> <p>MS Spike Uncertainty (calculated):</p> <p>MSD Spike Uncertainty (calculated):</p> <p>Sample Result:</p> <p>Sample Result Counting Uncertainty (pCi/L, g, F):</p> <p>Matrix Spike Result:</p> <p>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):</p> <p>Matrix Spike Duplicate Result:</p> <p>Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):</p> <p>MS Numerical Performance Indicator:</p> <p>MSD Numerical Performance Indicator:</p> <p>MS Percent Recovery:</p> <p>MSD Percent Recovery:</p> <p>MS Status vs Numerical Indicator:</p> <p>MSD Status vs Numerical Indicator:</p> <p>MS Status vs Recovery:</p> <p>MSD Status vs Recovery:</p> <p>MS/MSD Upper % Recovery Limits:</p> <p>MS/MSD Lower % Recovery Limits:</p>		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
<p>Sample I.D.:</p> <p>Sample MS I.D.:</p> <p>Sample MSD I.D.:</p> <p>Sample Matrix Spike Result:</p> <p>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):</p> <p>Matrix Spike Duplicate Result:</p> <p>Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):</p> <p>Duplicate Numerical Performance Indicator:</p> <p>(Based on the Percent Recoveries) MS/MSD Duplicate RPD:</p> <p>MS/MSD Duplicate Status vs Numerical Indicator:</p> <p>MS/MSD Duplicate Status vs RPD:</p> <p>% RPD Limit:</p>

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.



Test: Ra-226
Analyst: LAL
Date: 4/5/2021
Worklist: 59558
Matrix: DW

Method Blank Assessment	
MB Sample ID	2126859
MB concentration:	0.062
M/B Counting Uncertainty:	0.152
MB MDC:	0.366
MB Numerical Performance Indicator:	0.80
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
		LCSD59558
Count Date:	4/5/2021	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.039	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.504	
Target Conc. (pCi/L, g, F):	4.767	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	4.602	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.640	
Numerical Performance Indicator:	-0.50	
Percent Recovery:	96.54%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	92527242024
Duplicate Sample I.D.:	92527242024DUP
Sample Result (pCi/L, g, F):	0.093
Sample Result Counting Uncertainty (pCi/L, g, F):	0.130
Sample Duplicate Result (pCi/L, g, F):	0.308
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.260
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	-1.453
Duplicate RPD:	107.60%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***
% RPD Limit:	25%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

***Batch must be re-prepped due to unacceptable precision.

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
<p>Sample Collection Date:</p> <p>Sample I.D.:</p> <p>Sample MS I.D.:</p> <p>Sample MSD I.D.:</p> <p>Spike I.D.:</p> <p>MS/MSD Decay Corrected Spike Concentration (pCi/mL):</p> <p>Spike Volume Used in MS (mL):</p> <p>Spike Volume Used in MSD (mL):</p> <p>MS Aliquot (L, g, F):</p> <p>MS Target Conc. (pCi/L, g, F):</p> <p>MSD Aliquot (L, g, F):</p> <p>MSD Target Conc. (pCi/L, g, F):</p> <p>MS Spike Uncertainty (calculated):</p> <p>MSD Spike Uncertainty (calculated):</p> <p>Sample Result:</p> <p>Sample Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Result:</p> <p>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):</p> <p>MS Numerical Performance Indicator:</p> <p>MSD Numerical Performance Indicator:</p> <p>MS Percent Recovery:</p> <p>MSD Percent Recovery:</p> <p>MS Status vs Numerical Indicator:</p> <p>MSD Status vs Numerical Indicator:</p> <p>MS Status vs Recovery:</p> <p>MSD Status vs Recovery:</p> <p>MS/MSD Upper % Recovery Limits:</p> <p>MS/MSD Lower % Recovery Limits:</p>		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
<p>Sample I.D.:</p> <p>Sample MS I.D.:</p> <p>Sample MSD I.D.:</p> <p>Sample Matrix Spike Result:</p> <p>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):</p> <p>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):</p> <p>Duplicate Numerical Performance Indicator:</p> <p>(Based on the Percent Recoveries) MS/MSD Duplicate RPD:</p> <p>MS/MSD Duplicate Status vs Numerical Indicator:</p> <p>MS/MSD Duplicate Status vs RPD:</p> <p>% RPD Limit:</p>

LAMM/15/21

012/9/10

Quality Control Sample Performance Assessment

Analyst **Must Manually Enter All Fields Highlighted in Yellow.**



Test: Ra-226
Analyst: LAL
Date: 4/5/2021
Worklist: 59558
Matrix: DW

Method Blank Assessment	
MB Sample ID	2126689
MB concentration:	0.062
M/B Counting Uncertainty:	0.152
MB MDC:	0.366
MB Numerical Performance Indicator:	0.80
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	Y
LCS59558	4/5/2021
LCS59558	4/5/2021
Count Date:	4/5/2021
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.039
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.504
Target Conc. (pCi/L, g, F):	4.767
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	4.602
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.640
Numerical Performance Indicator:	-0.50
Percent Recovery:	96.54%
Status vs Numerical Indicator:	N/A
Upper % Recovery Limits:	Pass
Lower % Recovery Limits:	125%
	75%

Duplicate Sample Assessment	
Sample I.D.:	LCS59558
Duplicate Sample I.D.:	LCS59558
Sample Result (pCi/L, g, F):	4.602
Sample Result Counting Uncertainty (pCi/L, g, F):	0.640
Sample Duplicate Result (pCi/L, g, F):	4.903
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.628
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-0.658
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	7.65%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
MS Spike Uncertainty (calculated):	
MSD Spike Uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	
MS/MSD Upper % Recovery Limits:	
MS/MSD Lower % Recovery Limits:	

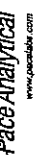
Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	
% RPD Limit:	

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Handwritten notes: *LAN 4/5/21*, *CWC 4/5/21*

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 4/5/2021
Worklist: 59500
Matrix: WT

Method Blank Assessment	
MB Sample ID	2125117
MB concentration:	-0.067
MB 2 Sigma CSU:	0.361
MB MDC:	0.866
MB Numerical Performance Indicator:	-0.36
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSD (Y or N)?	Y
Count Date:		LCSD59500	4/9/2021
Spike I.D.:		21-003	38.140
Decay Corrected Spike Concentration (pCi/mL):		0.10	0.10
Volume Used (mL):		0.813	0.811
Aliquot Volume (L, g, F):		4.682	4.700
Target Conc. (pCi/L, g, F):		0.230	0.230
Uncertainty (Calculated):		4.843	4.843
Result (pCi/L, g, F):		1.175	1.175
LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):		0.61	0.23
Numerical Performance Indicator:		107.93%	103.03%
Percent Recovery:		N/A	N/A
Status vs Numerical Indicator:		Pass	Pass
Upper % Recovery Limits:		135%	135%
Lower % Recovery Limits:		60%	60%

Duplicate Sample Assessment	
Sample I.D.:	LCSD59500
Duplicate Sample I.D.:	LCSD59500
Sample Result (pCi/L, g, F):	5.064
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.175
Sample Duplicate Result (pCi/L, g, F):	4.843
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.175
Ave sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	0.261
(Based on the LCSD/LCSD Percent Recoveries) Duplicate RPD:	4.65%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	38%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

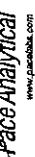
Comments:

Sample Matrix Spike Control Assessment		MS/MSD 1	MS/MSD 2
Sample Collection Date:			
Sample I.D.:			
Sample MS I.D.:			
Sample MSD I.D.:			
Spike I.D.:			
MS/MSD Decay Corrected Spike Concentration (pCi/mL):			
Spike Volume Used in MS (mL):			
MS Aliquot (L, g, F):			
MS Target Conc. (pCi/L, g, F):			
MSD Aliquot (L, g, F):			
MSD Target Conc. (pCi/L, g, F):			
MS Spike Uncertainty (calculated):			
MSD Spike Uncertainty (calculated):			
Sample Result 2 Sigma CSU (pCi/L, g, F):			
Sample Matrix Spike Result:			
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):			
Sample Matrix Spike Duplicate Result:			
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):			
MS Numerical Performance Indicator:			
MSD Numerical Performance Indicator:			
MS Percent Recovery:			
MSD Percent Recovery:			
MS Status vs Numerical Indicator:			
MSD Status vs Numerical Indicator:			
MS Status vs Recovery:			
MSD Status vs Recovery:			
MS/MSD Upper % Recovery Limits:			
MS/MSD Lower % Recovery Limits:			

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	
% RPD Limit:	

Handwritten signature/initials

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow

Test: Ra-228
Analyst: VAL
Date: 4/5/2021
Worklist: 59501
Matrix: WT

Method Blank Assessment	
MB Sample ID	2125122
MB concentration:	0.624
MB 2 Sigma CSU:	0.351
MB MDC:	0.633
MB Numerical Performance Indicator:	3.48
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS# (Y or N)?	
	LCS#9501	Y
Count Date:	4/9/2021	LCS#59501
Spike I.D.:	21-003	21-003
Decay Corrected Spike Concentration (pCi/mL):	38.142	38.142
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.811	0.812
Target Conc. (pCi/L, g, F):	4.704	4.697
Uncertainty (Calculated):	0.230	0.230
Result (pCi/L, g, F):	4.512	5.514
LCS#LCS# 2 Sigma CSU (pCi/L, g, F):	1.028	1.197
Numerical Performance Indicator:	-0.36	1.31
Percent Recovery:	95.93%	117.38%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS#LCS# in the space below.
Sample I.D.:	
Duplicate Sample I.D.:	
Sample Result (pCi/L, g, F):	
Sample Result 2 Sigma CSU (pCi/L, g, F):	
Sample Duplicate Result (pCi/L, g, F):	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	
Are sample and/or duplicate results below RL?	
Duplicate Numerical Performance Indicator:	
(Based on the LCS/LCS# Percent Recoveries) Duplicate RPD:	
Duplicate Status vs Numerical Indicator:	
Duplicate Status vs RPD:	
% RPD Limit:	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.:		
Sample MS I.D.:		
Sample MSD I.D.:		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
MS Aliquot (L, g, F):		
MS Target Conc. (pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):		
MSD Spike Uncertainty (calculated):		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
MS Numerical Performance Indicator:		
MS Numerical Performance Indicator:		
MS Percent Recovery:		
MSD Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:		
MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D.:
Sample MS I.D.:
Sample MSD I.D.:
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):
Duplicate Numerical Performance Indicator:
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:
MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs RPD:
% RPD Limit:

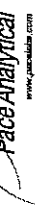
Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

If the lowest activity sample in this batch is greater than ten times the blank value, the blank is acceptable; otherwise this batch must be re-prepped.

Handwritten notes:
MB < 1/1000 Pass
Oval
4/4/21

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 4/2/2021
Worklist: 59499
Matrix: WT

Method Blank Assessment	
MB Sample ID	2125114
MB concentration:	0.922
M/B 2 Sigma CSU:	0.466
MB MDC:	0.823
MB Numerical Performance Indicator:	3.88
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment		LCSD (Y or N)?	Y
Count Date:		LCS59499	47/2021
Spike I.D.:		21-003	21-003
Decay Corrected Spike Concentration (pCi/mL):		38.167	38.167
Volume Used (mL):		0.10	0.10
Aliquot Volume (L, g, F):		0.815	0.814
Target Conc. (pCi/L, g, F):		4.686	4.686
Uncertainty (Calculated):		0.230	0.230
Result (pCi/L, g, F):		4.965	4.724
LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):		1.122	1.103
Numerical Performance Indicator:		0.51	0.07
Percent Recovery:		106.39%	100.80%
Status vs Numerical Indicator:		N/A	N/A
Status vs Recovery:		Pass	Pass
Upper % Recovery Limits:		135%	135%
Lower % Recovery Limits:		60%	60%

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:		LCS59499
Duplicate Sample I.D.:		LCS59499
Sample Result (pCi/L, g, F):		4.985
Sample Result 2 Sigma CSU (pCi/L, g, F):		1.122
Sample Duplicate Result (pCi/L, g, F):		4.724
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):		1.103
Are sample and/or duplicate results below RL?		NO
Duplicate Numerical Performance Indicator:		0.326
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:		5.40%
Duplicate Status vs Numerical Indicator:		Pass
Duplicate Status vs RPD:		Pass
% RPD Limit:		36%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date: Sample I.D.: Sample MS I.D.: Sample MSD I.D.: Spike I.D.: MSMSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): Spike Volume Used in MSD (mL): MS Aliquot (L, g, F): MS Target Conc.(pCi/L, g, F): MSD Aliquot (L, g, F): MSD Target Conc. (pCi/L, g, F): MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated): Sample Result: Sample Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Result: Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): MS Numerical Performance Indicator: MSD Numerical Performance Indicator: MS Percent Recovery: MSD Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D.: Sample MS I.D.: Sample MSD I.D.: Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): Duplicate Numerical Performance Indicator: (Based on the Percent Recoveries) MS/MSD Duplicate RPD: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPD: % RPD Limit:

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

*The method blank result is below the reporting limit for this analysis and is acceptable.

Handwritten signature/initials

LEVEL 2A LABORATORY DATA VALIDATIONS

Grumman Road

Annual Event

March 2021

Georgia Power Company – Grumman Road

Quality Control Review of Analytical Data – March 2021

This narrative presents results of the Quality Control (QC) data review performed on analytical data submitted by Pace Analytical Services, Asheville, Atlanta, Charlotte, and Pittsburgh for groundwater samples collected at Grumman Road between March 10, 2021 and March 16, 2021. 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.

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 (USEPA 6010D), Inductively Coupled Plasma – Mass Spectrometry (USEPA Method 6020B), Determination of Inorganic Anions (USEPA Method 300.0), Solids in Water (Standard Methods 2450C), 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 Total Dissolved Solids (TDS) on GWB-6R (92527234005) and GWC-2 (92527234025) as described in the qualifications section below.
- Field Precision:** Field goals for precision were met, with the exceptions of TDS on GWC-14 (92527234027), Radium-226 on GWC-14 (92527242026), Antimony and Lead on GWC-1 (92527234006), Radium-228 on GWC-1 (92527242006), and Radium-226 and Radium-228 on GWC-15 (92527242022) as described in the qualifications section below.
- Accuracy:** Laboratory goals for accuracy were met, with the exception of Calcium in SDG 92527234. Sample GWB-4R (92527234003) was used for matrix spike (MS) and matrix spike duplicate (MSD) in one batch, and GWC-24D (92527234014) in another. Recoveries were outside criteria 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 GWB-4R (92527234003) was qualified as estimated (J) for Calcium as the associated MS and MSD recoveries were outside QC criteria (-66% and 863% outside the range of 75-125).
- Sample GWC-24D (92527234014) was qualified as estimated (J) for Calcium as the associated MSD recovery was below QC criteria (62% outside the range of 75-125).
- Samples GWB-6R (92527234005) and GWC-2 (92527234025) were qualified as estimated (J) for TDS as the laboratory relative percent differences (RPD) exceeded QC criteria (12% and 48%, respectively, above limit of 10).
- Samples GWC-14 (92527234027) and DUP-1 (92527234031) were qualified as estimated (J) for TDS as the field RPD exceeded QC criteria (34.44% above limit of 20).
- Samples GWC-14 (92527242026) and DUP-1 (92527242030) were qualified as estimated (J) for Radium-226 as the field RPD exceeded QC criteria (43.28% above limit of 20).
- Samples GWC-1 (92527234006) and DUP-2 (92527234001) were qualified as estimated (J) for Antimony and Lead as the field RPD exceeded QC criteria (40.00% and 68.46%, respectively, above limit of 20).
- Samples GWC-1 (92527242006) and DUP-2 (92527242001) were qualified as estimated (J) for Radium-228 as the field RPD exceeded QC criteria (53.90% above limit of 20).
- Samples GWC-15 (92527242022) and DUP-3 (92527242013) were qualified as estimated (J) for Radium-226 and Radium-228 as the field RPD exceeded QC criteria (42.86% and 112.22%, respectively, above limit of 25).
- Certain Antimony results in SDG 92527234 were qualified as non-detect (ND) due to the analyte(s) being detected at a similar concentration in an associated blank sample. As shown in Table 2, when the original sample result was below the RL, the method

detection limit (MDL) 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 March 10, 2021 and March 16, 2021 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 – March 2021

SDG	Field Identification	Collection Date	Lab Identification	Matrix	QC Samples	Analyses			
						Metals (6010D, 6020B)	Anions (300.0)	TDS (SM 2450C)	Radium-226/-228 (9315, 9320)
527234	DUP-2	3/10/2021	92527234001	GW	FD (GWC-1)	X	X	X	
527242	DUP-2	3/10/2021	92527242001	GW	FD (GWC-1)				X
527234	FB-2	3/10/2021	92527234002	WQ	FB	X	X	X	
527242	FB-2	3/10/2021	92527242002	WQ	FB				X
527234	GWB-4R	3/10/2021	92527234003	GW		X	X	X	
527242	GWB-4R	3/10/2021	92527242003	GW					X
527234	GWB-5R	3/10/2021	92527234004	GW		X	X	X	
527242	GWB-5R	3/10/2021	92527242004	GW					X
527234	GWB-6R	3/10/2021	92527234005	GW		X	X	X	
527242	GWB-6R	3/10/2021	92527242005	GW					X
527234	GWC-1	3/10/2021	92527234006	GW		X	X	X	
527242	GWC-1	3/10/2021	92527242006	GW					X
527234	GWC-12	3/10/2021	92527234007	GW		X	X	X	
527242	GWC-12	3/10/2021	92527242007	GW					X
527234	GWC-11	3/10/2021	92527234008	GW		X	X	X	
527242	GWC-11	3/10/2021	92527242008	GW					X
527234	GWC-22	3/10/2021	92527234009	GW		X	X	X	
527242	GWC-22	3/10/2021	92527242009	GW					X
527234	GWC-9	3/10/2021	92527234010	GW		X	X	X	
527242	GWC-9	3/10/2021	92527242010	GW					X
527234	FB-3	3/11/2021	92527234011	WQ	FB	X	X	X	
527242	FB-3	3/11/2021	92527242011	WQ	FB				X
527234	EB-3	3/11/2021	92527234012	WQ	EB	X	X	X	
527242	EB-3	3/11/2021	92527242012	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 1 (continued)

Georgia Power Company – Grumman Road

Sample Summary Table – March 2021

SDG	Field Identification	Collection Date	Lab Identification	Matrix	QC Samples	Analyses			
						Metals (6010D, 6020B)	Anions (300.0)	TDS (SM 2450C)	Radium-226/-228 (9315, 9320)
527234	DUP-3	3/12/2021	92527234013	GW	FD (GWC-15)	X	X	X	
527242	DUP-3	3/12/2021	92527242013	GW	FD (GWC-15)				X
527234	MW-24D	3/11/2021	92527234014	GW		X	X	X	
527242	MW-24D	3/11/2021	92527242014	GW					X
527234	MW-23D	3/11/2021	92527234015	GW		X	X	X	
527242	MW-23D	3/11/2021	92527242015	GW					X
527234	MW-26D	3/11/2021	92527234016	GW		X	X	X	
527242	MW-26D	3/11/2021	92527242016	GW					X
527234	MW-27D	3/11/2021	92527234017	GW		X	X	X	
527242	MW-27D	3/11/2021	92527242017	GW					X
527234	MW-25D	3/11/2021	92527234018	GW		X	X	X	
527242	MW-25D	3/11/2021	92527242018	GW					X
527234	GWC-17	3/11/2021	92527234019	GW		X	X	X	
527242	GWC-17	3/11/2021	92527242019	GW					X
527234	GWA-7	3/11/2021	92527234020	GW		X	X	X	
527242	GWA-7	3/11/2021	92527242020	GW					X
527234	GWA-8	3/12/2021	92527234021	GW		X	X	X	
527242	GWA-8	3/12/2021	92527242021	GW					X
527234	GWC-15	3/12/2021	92527234022	GW		X	X	X	
527242	GWC-15	3/12/2021	92527242022	GW					X
527234	GWC-20	3/12/2021	92527234023	GW		X	X	X	
527242	GWC-20	3/12/2021	92527242023	GW					X
527234	GWC-2	3/15/2021	92527234025	GW		X	X	X	
527242	GWC-2	3/15/2021	92527242024	GW					X
527234	GWC-13	3/15/2021	92527234026	GW		X	X	X	
527242	GWC-13	3/15/2021	92527242025	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 – March 2021

SDG	Field Identification	Collection Date	Lab Identification	Matrix	QC Samples	Analyses			
						Metals (6010D, 6020B)	Anions (300.0)	TDS (SM 2450C)	Radium-226/-228 (9315, 9320)
527234	GWC-14	3/16/2021	92527234027	GW		X	X	X	
527242	GWC-14	3/16/2021	92527242026	GW					X
527234	GWC-16	3/16/2021	92527234028	GW		X	X	X	
527242	GWC-16	3/16/2021	92527242027	GW					X
527234	GWC-21	3/16/2021	92527234029	GW		X	X	X	
527242	GWC-21	3/16/2021	92527242028	GW					X
527234	FB-1	3/15/2021	92527234030	WQ	FB	X	X	X	
527242	FB-1	3/15/2021	92527242029	WQ	FB				X
527234	DUP-1	3/16/2021	92527234031	GW	FD (GWC-14)	X	X	X	
527242	DUP-1	3/16/2021	92527242030	GW	FD (GWC-14)				X
527234	EB-2	3/16/2021	92527234032	WQ	EB	X	X	X	
527242	EB-2	3/16/2021	92527242031	WQ	EB				X
527234	EB-1	3/16/2021	92527234033	WQ	EB	X	X	X	
527242	EB-1	3/16/2021	92527242032	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 – March 2021

SDG	Field Identification	Constituent	New RL	New MDL or MDC	Qualifier	Reason
527234	GWB-4R	Calcium			J	MS/MSD outside QC criteria
527234	GWC-24D	Calcium			J	MSD outside QC criteria
527234	GWB-6R	Antimony		0.00029	ND	Blank detection
527234	GWC-1	Antimony		0.00069	ND	Blank detection
527234	GWC-12	Antimony		0.00030	ND	Blank detection
527234	GWC-11	Antimony		0.00076	ND	Blank detection
527234	GWC-22	Antimony		0.00040	ND	Blank detection
527234	GWC-17	Antimony		0.00039	ND	Blank detection
527234	GWB-6R	TDS			J	RPD exceeds lab goal
527234	GWC-2	TDS			J	RPD exceeds lab goal
527234	GWC-14	TDS			J	RPD exceeds field goal
527234	DUP-1	TDS			J	RPD exceeds field goal
527242	GWC-14	Radium-226			J	RPD exceeds field goal
527242	DUP-1	Radium-226			J	RPD exceeds field goal
527234	GWC-1	Antimony			J	RPD exceeds field goal
527234	DUP-2	Antimony			J	RPD exceeds field goal
527234	GWC-1	Lead			J	RPD exceeds field goal
527234	DUP-2	Lead			J	RPD exceeds field goal
527242	GWC-1	Radium-228			J	RPD exceeds field goal
527242	DUP-2	Radium-228			J	RPD exceeds field goal
527242	GWC-15	Radium-226			J	RPD exceeds field goal
527242	DUP-3	Radium-226			J	RPD exceeds field goal
527242	GWC-15	Radium-228			J	RPD exceeds field goal
527242	DUP-3	Radium-228			J	RPD exceeds field goal

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
TDS – Total Dissolved Solids

Qualifiers:

J – Estimated Result
ND – Non-Detect Result

Low-Flow Test Report:

Test Date / Time: 3/11/2021 4:20:37 PM

Project: Grumman Road

Operator Name: O. Fuquea

Location Name: GWA-7 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 16.1 ft Total Depth: 21.1 ft Initial Depth to Water: 4.93 ft	Pump Type: Peri. Pump Tubing Type: Poly Pump Intake From TOC: 19 ft Estimated Total Volume Pumped: 8.6 liter Flow Cell Volume: 130 ml Final Flow Rate: 250 ml/min Final Draw Down: 5 in	Instrument Used: Aqua TROLL 500 Serial Number: 590987
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Test Notes:

Collected at 1645. 71F clear.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
3/11/2021 4:20 PM	00:00	6.05 pH	20.04 °C	1,922.0 µS/cm	0.37 mg/L	123.62 NTU	48.4 mV	4.93 ft	250.00 ml/min
3/11/2021 4:25 PM	05:00	6.03 pH	19.37 °C	1,934.0 µS/cm	0.07 mg/L	407.74 NTU	12.4 mV	5.40 ft	250.00 ml/min
3/11/2021 4:30 PM	10:00	6.02 pH	19.43 °C	1,945.9 µS/cm	0.02 mg/L	569.74 NTU	-0.7 mV	5.40 ft	250.00 ml/min
3/11/2021 4:35 PM	15:00	5.98 pH	19.45 °C	1,964.3 µS/cm	0.00 mg/L	466.73 NTU	-5.0 mV	5.40 ft	250.00 ml/min
3/11/2021 4:40 PM	20:00	5.92 pH	19.33 °C	1,942.8 µS/cm	0.00 mg/L	400.77 NTU	-6.3 mV	5.40 ft	250.00 ml/min
3/11/2021 4:45 PM	25:00	5.87 pH	19.26 °C	1,899.5 µS/cm	0.00 mg/L	523.75 NTU	-7.5 mV	5.40 ft	250.00 ml/min
3/11/2021 4:50 PM	30:00	5.85 pH	19.41 °C	1,915.0 µS/cm	0.00 mg/L	385.71 NTU	-9.7 mV	5.40 ft	250.00 ml/min
3/11/2021 4:55 PM	35:00	5.85 pH	19.29 °C	1,865.8 µS/cm	0.00 mg/L	398.69 NTU	-11.9 mV	5.40 ft	250.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 3/11/2021 3:24:34 PM

Project: Grumman Road

Operator Name: Anna Schnittker

Location Name: GWA-8 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 15.8 ft Total Depth: 20.8 ft Initial Depth to Water: 6.19 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 18 ft Estimated Total Volume Pumped: 30 liter Flow Cell Volume: 130 ml Final Flow Rate: 230 ml/min Final Draw Down: 20 in	Instrument Used: Aqua TROLL 500 Serial Number: 649632
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Test Notes:

Purged. No sample.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
3/11/2021 3:24 PM	00:00	5.01 pH	25.41 °C	253.03 µS/cm	1.51 mg/L	5.60 NTU	135.3 mV	6.19 ft	230.00 ml/min
3/11/2021 3:27 PM	02:47	4.76 pH	21.42 °C	270.42 µS/cm	0.89 mg/L	15.34 NTU	160.9 mV	6.40 ft	230.00 ml/min
3/11/2021 3:32 PM	07:47	4.62 pH	20.74 °C	277.50 µS/cm	0.78 mg/L	28.58 NTU	151.9 mV	6.80 ft	230.00 ml/min
3/11/2021 3:37 PM	12:47	4.54 pH	23.23 °C	278.69 µS/cm	3.10 mg/L	33.15 NTU	162.2 mV	7.10 ft	230.00 ml/min
3/11/2021 3:42 PM	17:47	4.41 pH	20.57 °C	283.70 µS/cm	0.93 mg/L	44.11 NTU	138.0 mV	7.70 ft	230.00 ml/min
3/11/2021 3:47 PM	22:47	4.33 pH	20.44 °C	282.94 µS/cm	0.72 mg/L	45.67 NTU	134.2 mV	7.90 ft	230.00 ml/min
3/11/2021 3:52 PM	27:47	4.38 pH	20.38 °C	259.53 µS/cm	0.72 mg/L	38.98 NTU	131.4 mV	7.90 ft	230.00 ml/min
3/11/2021 3:57 PM	32:47	4.31 pH	20.61 °C	275.71 µS/cm	0.73 mg/L	54.83 NTU	126.2 mV	7.90 ft	230.00 ml/min
3/11/2021 4:02 PM	37:47	4.35 pH	20.28 °C	267.77 µS/cm	0.67 mg/L	64.04 NTU	119.4 mV	7.90 ft	230.00 ml/min
3/11/2021 4:04 PM	39:55	4.30 pH	20.45 °C	275.86 µS/cm	0.67 mg/L	52.44 NTU	116.7 mV	7.90 ft	230.00 ml/min
3/11/2021 4:09 PM	44:55	4.31 pH	20.51 °C	276.93 µS/cm	0.64 mg/L	62.83 NTU	110.0 mV	7.90 ft	230.00 ml/min
3/11/2021 4:10 PM	46:24	4.29 pH	20.47 °C	277.93 µS/cm	0.65 mg/L	69.52 NTU	108.4 mV	7.90 ft	230.00 ml/min
3/11/2021 4:15 PM	51:24	4.29 pH	20.65 °C	282.38 µS/cm	0.66 mg/L	58.90 NTU	102.9 mV	7.90 ft	230.00 ml/min
3/11/2021 4:20 PM	56:24	4.27 pH	20.74 °C	288.52 µS/cm	0.76 mg/L	41.06 NTU	98.3 mV	7.90 ft	230.00 ml/min
3/11/2021 4:25 PM	01:01:24	4.33 pH	20.48 °C	281.14 µS/cm	0.70 mg/L	48.86 NTU	92.2 mV	7.90 ft	230.00 ml/min

3/11/2021 4:29 PM	01:04:57	4.32 pH	20.49 °C	285.52 µS/cm	0.70 mg/L	43.36 NTU	88.9 mV	7.90 ft	230.00 ml/min
3/11/2021 4:34 PM	01:09:57	4.37 pH	20.47 °C	283.82 µS/cm	0.70 mg/L	34.55 NTU	83.2 mV	7.90 ft	230.00 ml/min
3/11/2021 4:39 PM	01:14:57	4.42 pH	20.39 °C	281.92 µS/cm	0.69 mg/L	27.38 NTU	78.4 mV	7.90 ft	230.00 ml/min
3/11/2021 4:44 PM	01:19:57	4.45 pH	20.39 °C	283.76 µS/cm	0.69 mg/L	31.51 NTU	75.0 mV	7.90 ft	230.00 ml/min
3/11/2021 4:54 PM	01:29:57	4.54 pH	20.36 °C	279.31 µS/cm	0.69 mg/L	27.29 NTU	65.3 mV	7.90 ft	230.00 ml/min
3/11/2021 4:59 PM	01:34:57	4.60 pH	20.29 °C	278.71 µS/cm	0.80 mg/L	25.38 NTU	63.4 mV	7.90 ft	230.00 ml/min
3/11/2021 5:03 PM	01:39:21	4.63 pH	20.19 °C	274.30 µS/cm	0.68 mg/L	23.78 NTU	60.3 mV	7.90 ft	230.00 ml/min
3/11/2021 5:08 PM	01:44:21	4.60 pH	20.22 °C	286.22 µS/cm	0.68 mg/L	30.10 NTU	58.9 mV	7.90 ft	230.00 ml/min
3/11/2021 5:13 PM	01:49:21	4.62 pH	20.22 °C	289.53 µS/cm	0.71 mg/L	34.56 NTU	55.8 mV	7.90 ft	230.00 ml/min
3/11/2021 5:18 PM	01:54:21	4.62 pH	20.19 °C	295.81 µS/cm	0.66 mg/L	23.41 NTU	52.6 mV	7.90 ft	230.00 ml/min
3/11/2021 5:23 PM	01:59:21	4.63 pH	20.15 °C	294.93 µS/cm	0.70 mg/L	27.43 NTU	50.5 mV	7.90 ft	230.00 ml/min
3/11/2021 5:28 PM	02:04:21	4.68 pH	20.05 °C	281.63 µS/cm	0.70 mg/L	28.56 NTU	48.0 mV	7.90 ft	230.00 ml/min
3/11/2021 5:33 PM	02:09:21	4.62 pH	20.04 °C	302.61 µS/cm	0.69 mg/L	33.39 NTU	46.8 mV	7.90 ft	230.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 3/12/2021 8:09:37 AM

Project: Grumman Road

Operator Name: Anna Schnittker

Location Name: GWA-8 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 15.8 ft Total Depth: 20.8 ft Initial Depth to Water: 6.18 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 18 ft Estimated Total Volume Pumped: 11 liter Flow Cell Volume: 130 ml Final Flow Rate: 230 ml/min Final Draw Down: 25 in	Instrument Used: Aqua TROLL 500 Serial Number: 649632
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Test Notes:

Sample time: 0855. Sunny 60

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
3/12/2021 8:09 AM	00:00	4.54 pH	18.35 °C	264.16 µS/cm	0.98 mg/L	4.5 NTU	87.3 mV	6.18 ft	230.00 ml/min
3/12/2021 8:14 AM	05:00	4.55 pH	18.62 °C	255.63 µS/cm	0.78 mg/L	3.8 NTU	65.1 mV	7.40 ft	230.00 ml/min
3/12/2021 8:19 AM	10:00	4.53 pH	18.74 °C	258.16 µS/cm	0.76 mg/L	3.6 NTU	47.6 mV	8.00 ft	230.00 ml/min
3/12/2021 8:24 AM	15:00	4.52 pH	18.77 °C	255.85 µS/cm	0.76 mg/L	3.4 NTU	43.0 mV	8.30 ft	230.00 ml/min
3/12/2021 8:29 AM	20:00	4.52 pH	18.81 °C	257.77 µS/cm	0.76 mg/L	2.1 NTU	41.3 mV	8.30 ft	230.00 ml/min
3/12/2021 8:34 AM	25:00	4.50 pH	18.84 °C	261.77 µS/cm	0.79 mg/L	2.2 NTU	42.5 mV	8.30 ft	230.00 ml/min
3/12/2021 8:39 AM	30:00	4.55 pH	18.89 °C	248.48 µS/cm	0.75 mg/L	2.6 NTU	41.9 mV	8.30 ft	230.00 ml/min
3/12/2021 8:44 AM	35:00	4.51 pH	19.12 °C	253.86 µS/cm	0.73 mg/L	1.8 NTU	43.0 mV	8.30 ft	230.00 ml/min
3/12/2021 8:49 AM	40:00	4.54 pH	19.19 °C	256.16 µS/cm	0.74 mg/L	1.2 NTU	44.0 mV	8.30 ft	230.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 3/10/2021 9:50:22 AM

Project: Grumman Road

Operator Name: O. Fuquea

Location Name: GWB-4R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 19.7 ft Total Depth: 29.65 ft Initial Depth to Water: 13.95 ft	Pump Type: Peri. Pump Tubing Type: Poly Pump Intake From TOC: 24.5 ft Estimated Total Volume Pumped: 5.6 liter Flow Cell Volume: 130 ml Final Flow Rate: 225 ml/min Final Draw Down: 2 in	Instrument Used: Aqua TROLL 500 Serial Number: 590987
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Test Notes:

Collected at 0950. 69F clear. 2nd Rad collected.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
3/10/2021 9:25 AM	00:00	5.79 pH	19.11 °C	204.23 µS/cm	5.54 mg/L	8.73 NTU	113.0 mV	14.00 ft	225.00 ml/min
3/10/2021 9:30 AM	05:00	5.63 pH	19.90 °C	612.70 µS/cm	0.19 mg/L	6.13 NTU	30.2 mV	14.10 ft	225.00 ml/min
3/10/2021 9:35 AM	10:00	5.62 pH	20.01 °C	615.95 µS/cm	0.10 mg/L	6.42 NTU	0.5 mV	14.10 ft	225.00 ml/min
3/10/2021 9:40 AM	15:00	5.62 pH	19.99 °C	620.85 µS/cm	0.11 mg/L	6.64 NTU	-22.9 mV	14.10 ft	225.00 ml/min
3/10/2021 9:45 AM	20:00	5.61 pH	20.08 °C	619.73 µS/cm	0.10 mg/L	5.5 NTU	-33.1 mV	14.10 ft	225.00 ml/min
3/10/2021 9:50 AM	25:00	5.60 pH	20.15 °C	618.32 µS/cm	0.10 mg/L	4.85 NTU	-36.0 mV	14.10 ft	225.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 3/10/2021 12:10:08 PM

Project: Grumman Road

Operator Name: O. Fuquea

<p>Location Name: GWB-5R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 16.5 ft Total Depth: 26.5 ft Initial Depth to Water: 8.31 ft</p>	<p>Pump Type: Peri. Pump Tubing Type: Poly Pump Intake From TOC: 21.5 ft Estimated Total Volume Pumped: 12.5 liter Flow Cell Volume: 130 ml Final Flow Rate: 205 ml/min Final Draw Down: 6 in</p>	<p>Instrument Used: Aqua TROLL 500 Serial Number: 590987</p>
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Test Notes:

Collected at 1315. 72F clear.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
3/10/2021 12:10 PM	00:00	4.66 pH	21.28 °C	1,373.6 µS/cm	0.39 mg/L	12.39 NTU	15.6 mV	8.31 ft	205.00 ml/min
3/10/2021 12:15 PM	05:00	4.69 pH	20.82 °C	1,374.2 µS/cm	0.20 mg/L	6.28 NTU	2.3 mV	8.70 ft	205.00 ml/min
3/10/2021 12:20 PM	10:00	4.70 pH	20.79 °C	1,375.5 µS/cm	0.13 mg/L	13.45 NTU	-10.3 mV	8.70 ft	205.00 ml/min
3/10/2021 12:25 PM	15:00	4.71 pH	20.71 °C	1,379.9 µS/cm	0.10 mg/L	10.44 NTU	-20.9 mV	8.70 ft	205.00 ml/min
3/10/2021 12:30 PM	20:00	4.71 pH	20.81 °C	1,378.4 µS/cm	0.10 mg/L	14.03 NTU	-28.2 mV	8.70 ft	205.00 ml/min
3/10/2021 12:35 PM	25:00	4.72 pH	20.87 °C	1,376.7 µS/cm	0.09 mg/L	19.68 NTU	-32.3 mV	8.70 ft	205.00 ml/min
3/10/2021 12:40 PM	30:00	4.72 pH	20.78 °C	1,378.9 µS/cm	0.07 mg/L	16.92 NTU	-36.2 mV	8.70 ft	205.00 ml/min
3/10/2021 12:45 PM	35:00	4.73 pH	20.73 °C	1,365.5 µS/cm	0.07 mg/L	12.7 NTU	-39.5 mV	8.70 ft	205.00 ml/min
3/10/2021 12:50 PM	40:00	4.73 pH	20.84 °C	1,373.7 µS/cm	0.06 mg/L	10.9 NTU	-42.3 mV	8.70 ft	205.00 ml/min
3/10/2021 12:55 PM	45:00	4.73 pH	20.84 °C	1,371.3 µS/cm	0.06 mg/L	8.9 NTU	-44.5 mV	8.70 ft	205.00 ml/min
3/10/2021 1:00 PM	50:00	4.73 pH	20.77 °C	1,362.6 µS/cm	0.06 mg/L	7.2 NTU	-46.6 mV	8.80 ft	205.00 ml/min
3/10/2021 1:05 PM	55:00	4.73 pH	20.76 °C	1,356.9 µS/cm	0.06 mg/L	5.5 NTU	-48.3 mV	8.80 ft	205.00 ml/min
3/10/2021 1:11 PM	01:01:26	4.73 pH	20.78 °C	1,362.0 µS/cm	0.05 mg/L	4.7 NTU	-46.5 mV	8.80 ft	205.00 ml/min

Samples

Low-Flow Test Report:

Test Date / Time: 3/10/2021 2:30:02 PM

Project: Grumman Road

Operator Name: O. Fuquea

Location Name: GWB-6R Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 12.7 ft Total Depth: 22.7 ft Initial Depth to Water: 5.8 ft	Pump Type: Peri. Pump Tubing Type: Poly Pump Intake From TOC: 15.7 ft Estimated Total Volume Pumped: 6 liter Flow Cell Volume: 130 ml Final Flow Rate: 200 ml/min Final Draw Down: 2 in	Instrument Used: Aqua TROLL 500 Serial Number: 590987
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Test Notes:

Collected at 1505. 73F clear.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
3/10/2021 2:30 PM	00:00	5.77 pH	20.06 °C	3,409.6 µS/cm	0.28 mg/L	4.99 NTU	17.4 mV	6.00 ft	200.00 ml/min
3/10/2021 2:35 PM	05:00	5.79 pH	19.74 °C	3,403.4 µS/cm	0.12 mg/L	4.65 NTU	-16.0 mV	6.00 ft	200.00 ml/min
3/10/2021 2:40 PM	10:00	5.79 pH	19.74 °C	3,406.7 µS/cm	0.08 mg/L	4.26 NTU	-29.1 mV	6.00 ft	200.00 ml/min
3/10/2021 2:45 PM	15:06	5.73 pH	19.56 °C	3,395.5 µS/cm	0.05 mg/L	4.05 NTU	-24.4 mV	6.00 ft	200.00 ml/min
3/10/2021 2:50 PM	20:06	5.76 pH	19.59 °C	3,385.6 µS/cm	0.04 mg/L	3.32 NTU	-38.5 mV	6.00 ft	200.00 ml/min
3/10/2021 2:55 PM	25:06	5.72 pH	19.49 °C	3,368.8 µS/cm	0.04 mg/L	3.3 NTU	-41.5 mV	6.00 ft	200.00 ml/min
3/10/2021 3:00 PM	30:06	5.69 pH	19.55 °C	3,342.4 µS/cm	0.03 mg/L	3.09 NTU	-43.4 mV	6.00 ft	200.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 3/10/2021 4:00:06 PM

Project: Grumman Road

Operator Name: O. Fuquea

Location Name: GWC-1 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 23.1 ft Total Depth: 28.1 ft Initial Depth to Water: 18.19 ft	Pump Type: Peri. Pump Tubing Type: Poly Pump Intake From TOC: 23.1 ft Estimated Total Volume Pumped: 9.5 liter Flow Cell Volume: 130 ml Final Flow Rate: 210 ml/min Final Draw Down: 1 in	Instrument Used: Aqua TROLL 500 Serial Number: 590987
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Test Notes:

Collected at 1645. 70F cloudy. Dup-2 collected.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
3/10/2021 4:00 PM	00:00	5.81 pH	22.10 °C	533.10 µS/cm	1.60 mg/L	2.70 NTU	27.8 mV	18.30 ft	210.00 ml/min
3/10/2021 4:05 PM	05:00	5.79 pH	21.24 °C	471.28 µS/cm	0.87 mg/L	2.21 NTU	36.6 mV	18.30 ft	210.00 ml/min
3/10/2021 4:10 PM	10:00	5.78 pH	21.00 °C	454.56 µS/cm	0.47 mg/L	1.42 NTU	42.8 mV	18.30 ft	210.00 ml/min
3/10/2021 4:15 PM	15:00	5.75 pH	20.98 °C	450.26 µS/cm	0.33 mg/L	1.27 NTU	50.3 mV	18.30 ft	210.00 ml/min
3/10/2021 4:20 PM	20:00	5.71 pH	21.02 °C	446.73 µS/cm	0.29 mg/L	1.15 NTU	57.2 mV	18.30 ft	210.00 ml/min
3/10/2021 4:24 PM	24:53	5.66 pH	20.92 °C	448.17 µS/cm	0.25 mg/L	1.61 NTU	76.6 mV	18.30 ft	210.00 ml/min
3/10/2021 4:29 PM	29:53	5.60 pH	20.96 °C	447.13 µS/cm	0.23 mg/L	1.16 NTU	83.9 mV	18.30 ft	210.00 ml/min
3/10/2021 4:34 PM	34:53	5.52 pH	20.91 °C	446.09 µS/cm	0.21 mg/L	1.61 NTU	90.8 mV	18.30 ft	210.00 ml/min
3/10/2021 4:39 PM	39:53	5.46 pH	20.86 °C	445.00 µS/cm	0.20 mg/L	1.63 NTU	98.0 mV	18.30 ft	210.00 ml/min
3/10/2021 4:44 PM	44:53	5.42 pH	20.74 °C	444.64 µS/cm	0.23 mg/L	1.44 NTU	103.2 mV	18.30 ft	210.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 3/15/2021 2:40:13 PM

Project: Grumman Road (4)

Operator Name: O. Fuquea

Location Name: GWC 2 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 26.4 ft Total Depth: 31.4 ft Initial Depth to Water: 17.8 ft	Pump Type: Peri. Pump Tubing Type: Poly Pump Intake From TOC: 22.5 ft Estimated Total Volume Pumped: 6 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 1 in	Instrument Used: Aqua TROLL 400 Serial Number: 714293
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Test Notes:

Collected at 1510. 70F cloudy.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
3/15/2021 2:40 PM	00:00	4.50 pH	21.63 °C	47.93 µS/cm	1,404.0 mg/L	10.90 NTU	165.4 mV	17.90 ft	200.00 ml/min
3/15/2021 2:45 PM	05:00	4.44 pH	21.64 °C	48.40 µS/cm	1,403.9 mg/L	4.54 NTU	184.6 mV	17.90 ft	200.00 ml/min
3/15/2021 2:54 PM	14:10	4.53 pH	21.33 °C	52.33 µS/cm	1,404.5 mg/L	3.61 NTU	113.5 mV	17.90 ft	200.00 ml/min
3/15/2021 2:59 PM	19:10	4.54 pH	21.29 °C	51.94 µS/cm	1,403.9 mg/L	2.96 NTU	127.3 mV	17.90 ft	200.00 ml/min
3/15/2021 3:04 PM	24:10	4.60 pH	21.29 °C	51.03 µS/cm	1,403.9 mg/L	3.22 NTU	139.0 mV	17.90 ft	200.00 ml/min
3/15/2021 3:09 PM	29:10	4.56 pH	21.38 °C	51.07 µS/cm	1,403.9 mg/L	3.11 NTU	149.8 mV	17.90 ft	200.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 3/10/2021 3:16:39 PM

Project: Grumman Road

Operator Name: Anna Schnittker

Location Name: GWC-9 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 22.4 ft Total Depth: 27.4 ft Initial Depth to Water: 7.04 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 25 ft Estimated Total Volume Pumped: 4.5 liter Flow Cell Volume: 130 ml Final Flow Rate: 130 ml/min Final Draw Down: 66 in	Instrument Used: Aqua TROLL 500 Serial Number: 649632
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Test Notes:

Sample time: 1555. Sunny 70s. FB2 here 1615

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 5	+/- 300	+/- 0.3	
3/10/2021 3:16 PM	00:00	4.89 pH	23.84 °C	677.60 µS/cm	2.33 mg/L	4.6 NTU	244.3 mV	7.04 ft	130.00 ml/min
3/10/2021 3:21 PM	05:00	4.64 pH	21.06 °C	152.72 µS/cm	1.38 mg/L	7.8 NTU	188.1 mV	7.80 ft	130.00 ml/min
3/10/2021 3:26 PM	10:00	4.50 pH	20.55 °C	137.74 µS/cm	1.16 mg/L	7.0 NTU	177.6 mV	9.50 ft	130.00 ml/min
3/10/2021 3:31 PM	15:00	4.50 pH	20.64 °C	137.16 µS/cm	1.28 mg/L	8.1 NTU	171.1 mV	10.20 ft	130.00 ml/min
3/10/2021 3:36 PM	20:00	4.52 pH	20.60 °C	136.74 µS/cm	1.36 mg/L	8.0 NTU	165.6 mV	10.90 ft	130.00 ml/min
3/10/2021 3:41 PM	25:00	4.52 pH	20.47 °C	136.83 µS/cm	1.25 mg/L	7.2 NTU	164.2 mV	11.80 ft	130.00 ml/min
3/10/2021 3:46 PM	30:00	4.53 pH	20.50 °C	136.52 µS/cm	1.34 mg/L	6.1 NTU	162.9 mV	12.50 ft	130.00 ml/min
3/10/2021 3:51 PM	35:00	4.55 pH	20.73 °C	136.79 µS/cm	1.31 mg/L	4.9 NTU	156.1 mV	12.50 ft	130.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 3/10/2021 12:40:17 PM

Project: Grumman Road

Operator Name: Anna Schnittker

Location Name: GWC-11 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 17.6 ft Total Depth: 22.6 ft Initial Depth to Water: 10.68 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 20 ft Estimated Total Volume Pumped: 8.7 L Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: 3.32 ft	Instrument Used: Aqua TROLL 500 Serial Number: 649632
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Test Notes:

Collected at 1415. 73F clear.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 5	+/- 300	+/- 0.3	
3/10/2021 12:40 PM	00:00	5.06 pH	24.16 °C	741.25 µS/cm	1.72 mg/L	6.9 NTU	151.9 mV	10.68 ft	130.00 ml/min
3/10/2021 12:41 PM	01:04	5.05 pH	22.95 °C	757.33 µS/cm	1.03 mg/L	6.3 NTU	157.6 mV	11.50 ft	115.00 ml/min
3/10/2021 12:46 PM	06:04	4.96 pH	22.63 °C	814.19 µS/cm	0.81 mg/L	6.7 NTU	180.9 mV	12.90 ft	100.00 ml/min
3/10/2021 12:51 PM	11:04	5.01 pH	23.58 °C	854.87 µS/cm	0.67 mg/L	6.7 NTU	193.8 mV	13.00 ft	100.00 ml/min
3/10/2021 12:56 PM	16:04	5.02 pH	23.46 °C	939.61 µS/cm	0.54 mg/L	6.3 NTU	206.5 mV	13.10 ft	100.00 ml/min
3/10/2021 1:01 PM	21:04	5.03 pH	23.28 °C	987.90 µS/cm	0.42 mg/L	6.3 NTU	220.1 mV	13.20 ft	100.00 ml/min
3/10/2021 1:06 PM	26:04	5.02 pH	22.48 °C	1,082.7 µS/cm	0.40 mg/L	6.4 NTU	231.8 mV	13.40 ft	100.00 ml/min
3/10/2021 1:11 PM	31:04	5.00 pH	22.46 °C	1,138.3 µS/cm	0.39 mg/L	6.5 NTU	242.9 mV	13.60 ft	100.00 ml/min
3/10/2021 1:16 PM	36:04	5.00 pH	23.13 °C	1,211.3 µS/cm	0.37 mg/L	6.1 NTU	252.9 mV	13.60 ft	100.00 ml/min
3/10/2021 1:21 PM	41:04	5.01 pH	23.59 °C	1,286.7 µS/cm	0.32 mg/L	5.6 NTU	260.6 mV	13.80 ft	100.00 ml/min
3/10/2021 1:26 PM	46:04	4.99 pH	23.01 °C	1,377.6 µS/cm	0.29 mg/L	5.5 NTU	264.3 mV	13.90 ft	100.00 ml/min
3/10/2021 1:31 PM	50:50	4.99 pH	23.37 °C	1,441.4 µS/cm	0.28 mg/L	5.3 NTU	267.6 mV	13.90 ft	100.00 ml/min
3/10/2021 1:36 PM	55:50	4.99 pH	23.28 °C	1,504.1 µS/cm	0.26 mg/L	5.0 NTU	269.3 mV	14.00 ft	100.00 ml/min
3/10/2021 1:41 PM	01:00:50	4.99 pH	23.52 °C	1,561.7 µS/cm	0.26 mg/L	4.5 NTU	270.6 mV	14.00 ft	100.00 ml/min
3/10/2021 1:46 PM	01:05:50	4.99 pH	23.45 °C	1,625.9 µS/cm	0.24 mg/L	4.3 NTU	270.9 mV	14.00 ft	100.00 ml/min

3/10/2021 1:51 PM	01:10:50	4.98 pH	23.20 °C	1,686.3 µS/cm	0.23 mg/L	6.72 NTU	271.0 mV	14.00 ft	100.00 ml/min
3/10/2021 1:56 PM	01:15:50	4.97 pH	22.95 °C	1,743.5 µS/cm	0.23 mg/L	3.7 NTU	271.6 mV	14.00 ft	100.00 ml/min
3/10/2021 2:01 PM	01:20:50	4.96 pH	22.98 °C	1,793.1 µS/cm	0.22 mg/L	3.1 NTU	271.0 mV	14.00 ft	100.00 ml/min
3/10/2021 2:06 PM	01:25:50	4.97 pH	23.09 °C	1,834.5 µS/cm	0.22 mg/L	3.1 NTU	271.2 mV	14.00 ft	100.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 3/10/2021 11:05:24 AM

Project: Grumman Road

Operator Name: Anna Schnittker

Location Name: GWC-12 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 21.7 ft Total Depth: 26.7 ft Initial Depth to Water: 10.85 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 24 ft Estimated Total Volume Pumped: 12 liter Flow Cell Volume: 130 ml Final Flow Rate: 265 ml/min Final Draw Down: 6 in	Instrument Used: Aqua TROLL 500 Serial Number: 649632
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Test Notes:

Sample time: 1150. Sunny 70s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 5	+/- 300	+/- 0.3	
3/10/2021 11:05 AM	00:00	4.03 pH	21.08 °C	787.51 µS/cm	0.17 mg/L	2.6 NTU	162.0 mV	10.85 ft	265.00 ml/min
3/10/2021 11:10 AM	05:00	4.06 pH	21.14 °C	779.55 µS/cm	0.10 mg/L	2.4 NTU	139.0 mV	11.40 ft	265.00 ml/min
3/10/2021 11:15 AM	10:00	4.06 pH	21.03 °C	779.25 µS/cm	0.09 mg/L	2.0 NTU	124.6 mV	11.40 ft	265.00 ml/min
3/10/2021 11:20 AM	15:00	4.07 pH	21.16 °C	782.26 µS/cm	0.08 mg/L	1.8 NTU	112.0 mV	11.40 ft	265.00 ml/min
3/10/2021 11:25 AM	20:00	4.07 pH	21.11 °C	772.88 µS/cm	0.08 mg/L	1.9 NTU	104.3 mV	11.40 ft	265.00 ml/min
3/10/2021 11:28 AM	22:42	4.06 pH	21.16 °C	788.63 µS/cm	0.07 mg/L	1.8 NTU	100.6 mV	11.40 ft	265.00 ml/min
3/10/2021 11:33 AM	27:42	4.08 pH	21.17 °C	769.20 µS/cm	0.07 mg/L	1.9 NTU	95.2 mV	11.40 ft	265.00 ml/min
3/10/2021 11:38 AM	32:42	4.08 pH	21.20 °C	766.21 µS/cm	0.07 mg/L	1.1 NTU	91.5 mV	11.40 ft	265.00 ml/min
3/10/2021 11:43 AM	37:42	4.08 pH	21.16 °C	779.17 µS/cm	0.08 mg/L	1.0 NTU	90.5 mV	11.40 ft	265.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 3/15/2021 3:55:04 PM

Project: Grumman Road

Operator Name: O. Fuquea

Location Name: GWC-13 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 19.1 ft Total Depth: 24.1 ft Initial Depth to Water: 12.37 ft	Pump Type: Peri. Pump Tubing Type: Poly Pump Intake From TOC: 22.1 ft Estimated Total Volume Pumped: 7 liter Flow Cell Volume: 90 ml Final Flow Rate: 230 ml/min Final Draw Down: 6 in	Instrument Used: Aqua TROLL 400 Serial Number: 714293
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Test Notes:

Sampled at 1625. 70 F cloudy. FB-1 @ 1615

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
3/15/2021 3:55 PM	00:00	4.79 pH	20.88 °C	105.44 µS/cm	1,404.2 mg/L	13.60 NTU	199.9 mV	12.60 ft	230.00 ml/min
3/15/2021 4:00 PM	05:00	4.77 pH	20.63 °C	103.78 µS/cm	1,404.1 mg/L	10.20 NTU	205.6 mV	12.90 ft	230.00 ml/min
3/15/2021 4:05 PM	10:00	4.78 pH	20.59 °C	103.81 µS/cm	1,404.0 mg/L	5.28 NTU	211.3 mV	12.90 ft	230.00 ml/min
3/15/2021 4:10 PM	15:00	4.78 pH	20.51 °C	102.12 µS/cm	1,404.0 mg/L	5.08 NTU	209.3 mV	12.90 ft	230.00 ml/min
3/15/2021 4:15 PM	20:00	4.78 pH	20.51 °C	103.02 µS/cm	1,404.0 mg/L	4.74 NTU	211.4 mV	12.90 ft	230.00 ml/min
3/15/2021 4:20 PM	25:00	4.78 pH	20.53 °C	100.97 µS/cm	1,404.0 mg/L	4.60 NTU	209.2 mV	12.90 ft	230.00 ml/min
3/15/2021 4:25 PM	30:00	4.74 pH	20.51 °C	99.21 µS/cm	1,404.0 mg/L	3.56 NTU	205.6 mV	12.90 ft	230.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 3/16/2021 8:45:04 AM

Project: Grumman Road

Operator Name: O. Fuquea

Location Name: GWC-14 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 22 ft Total Depth: 27 ft Initial Depth to Water: 18.29 ft	Pump Type: Peri. Pump Tubing Type: Poly Pump Intake From TOC: 25 ft Estimated Total Volume Pumped: 9 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 4 in	Instrument Used: Aqua TROLL 400 Serial Number: 714302
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Test Notes:

Collected at 0930. 60F overcast. Dup-1 collected.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
3/16/2021 8:45 AM	00:00	5.77 pH	18.39 °C	308.29 µS/cm	1,404.4 mg/L	4.76 NTU	140.3 mV	18.30 ft	200.00 ml/min
3/16/2021 9:05 AM	20:29	8.16 pH	17.20 °C	462.92 µS/cm	8.86 mg/L	3.52 NTU	121.1 mV	18.60 ft	200.00 ml/min
3/16/2021 9:10 AM	25:29	5.48 pH	18.87 °C	351.02 µS/cm	0.90 mg/L	2.51 NTU	102.2 mV	18.60 ft	200.00 ml/min
3/16/2021 9:15 AM	30:29	5.49 pH	19.01 °C	349.68 µS/cm	0.94 mg/L	2.80 NTU	97.9 mV	18.60 ft	200.00 ml/min
3/16/2021 9:20 AM	35:29	5.50 pH	19.05 °C	347.44 µS/cm	1.02 mg/L	2.65 NTU	95.9 mV	18.60 ft	200.00 ml/min
3/16/2021 9:25 AM	40:29	5.51 pH	19.10 °C	347.73 µS/cm	1.09 mg/L	2.84 NTU	95.0 mV	18.60 ft	200.00 ml/min
3/16/2021 9:30 AM	45:29	5.53 pH	19.11 °C	347.07 µS/cm	1.07 mg/L	2.88 NTU	93.8 mV	18.60 ft	200.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 3/12/2021 8:05:07 AM

Project: Grumman Road

Operator Name: O. Fuquea

Location Name: GWC-15 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 21.8 ft Total Depth: 26.8 ft Initial Depth to Water: 18.53 ft	Pump Type: Peri. Pump Tubing Type: Poly Pump Intake From TOC: 24 ft Estimated Total Volume Pumped: 6300 ml Flow Cell Volume: 130 ml Final Flow Rate: 210 ml/min Final Draw Down: 2 in	Instrument Used: Aqua TROLL 500 Serial Number: 590987
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Test Notes:

Collected at 0835. 58F clear. Dup-3 collected.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
3/12/2021 8:05 AM	00:00	6.35 pH	19.14 °C	595.86 µS/cm	0.20 mg/L	3.08 NTU	92.5 mV	18.53 ft	210.00 ml/min
3/12/2021 8:10 AM	05:00	6.37 pH	19.17 °C	597.76 µS/cm	0.17 mg/L	2.87 NTU	87.5 mV	18.60 ft	210.00 ml/min
3/12/2021 8:15 AM	10:00	6.32 pH	19.32 °C	599.53 µS/cm	0.14 mg/L	3.18 NTU	88.4 mV	18.60 ft	210.00 ml/min
3/12/2021 8:20 AM	15:00	6.28 pH	19.35 °C	600.73 µS/cm	0.13 mg/L	3.18 NTU	89.4 mV	18.60 ft	210.00 ml/min
3/12/2021 8:25 AM	20:00	6.25 pH	19.35 °C	601.30 µS/cm	0.11 mg/L	3.25 NTU	88.6 mV	18.70 ft	210.00 ml/min
3/12/2021 8:30 AM	25:00	6.23 pH	19.36 °C	601.61 µS/cm	0.11 mg/L	2.36 NTU	91.3 mV	18.70 ft	210.00 ml/min
3/12/2021 8:35 AM	30:00	6.21 pH	19.45 °C	601.76 µS/cm	0.11 mg/L	2.41 NTU	88.9 mV	18.70 ft	210.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 3/16/2021 10:35:05 AM

Project: Grumman Road (5)

Operator Name: O. Fuquea

Location Name: GWC-16 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 26.4 ft Total Depth: 31.4 ft Initial Depth to Water: 19.71 ft	Pump Type: Peri. Pump Tubing Type: Poly Pump Intake From TOC: 25 ft Estimated Total Volume Pumped: 6 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 1 in	Instrument Used: Aqua TROLL 400 Serial Number: 714302
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Test Notes:

Collected at 1105. 68F overcast. FB-2 collected at 1040.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
3/16/2021 10:35 AM	00:00	5.66 pH	23.67 °C	1,723.7 µS/cm	1.01 mg/L	3.06 NTU	128.3 mV	19.80 ft	200.00 ml/min
3/16/2021 10:40 AM	05:00	5.65 pH	22.41 °C	1,758.9 µS/cm	0.93 mg/L	3.00 NTU	126.9 mV	19.80 ft	200.00 ml/min
3/16/2021 10:45 AM	10:00	5.65 pH	22.35 °C	1,760.2 µS/cm	0.92 mg/L	2.71 NTU	126.0 mV	19.80 ft	200.00 ml/min
3/16/2021 10:50 AM	15:00	5.66 pH	22.31 °C	1,764.6 µS/cm	0.91 mg/L	2.85 NTU	125.1 mV	19.80 ft	200.00 ml/min
3/16/2021 10:55 AM	20:00	5.66 pH	22.30 °C	1,758.8 µS/cm	0.89 mg/L	2.49 NTU	124.2 mV	19.80 ft	200.00 ml/min
3/16/2021 11:00 AM	25:00	5.66 pH	22.32 °C	1,764.5 µS/cm	0.88 mg/L	2.84 NTU	123.4 mV	19.80 ft	200.00 ml/min
3/16/2021 11:05 AM	30:00	5.67 pH	22.31 °C	1,765.6 µS/cm	0.86 mg/L	2.55 NTU	122.7 mV	19.80 ft	200.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 3/11/2021 9:04:41 AM

Project: Grumman Road

Operator Name: Anna Schnittker

Location Name: GWC-17 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 18.5 ft Total Depth: 23.5 ft Initial Depth to Water: 4.88 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 20 ft Estimated Total Volume Pumped: 18 liter Flow Cell Volume: 130 ml Final Flow Rate: 165 ml/min Final Draw Down: 19 in	Instrument Used: Aqua TROLL 500 Serial Number: 649632
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Test Notes:

Sample time 1030. Sunny 60s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 5	+/- 300	+/- 0.3	
3/11/2021 9:04 AM	00:00	5.63 pH	18.29 °C	1,178.4 µS/cm	0.79 mg/L	59 NTU	98.8 mV	4.88 ft	185.00 ml/min
3/11/2021 9:09 AM	05:00	5.66 pH	17.81 °C	1,157.9 µS/cm	0.29 mg/L	57 NTU	50.3 mV	5.90 ft	185.00 ml/min
3/11/2021 9:14 AM	10:00	5.65 pH	17.85 °C	1,180.8 µS/cm	0.22 mg/L	43 NTU	34.2 mV	5.90 ft	165.00 ml/min
3/11/2021 9:19 AM	15:00	5.56 pH	18.08 °C	1,287.8 µS/cm	0.15 mg/L	37 NTU	26.9 mV	6.00 ft	165.00 ml/min
3/11/2021 9:24 AM	20:00	5.29 pH	18.45 °C	1,557.2 µS/cm	0.12 mg/L	23 NTU	24.2 mV	6.30 ft	165.00 ml/min
3/11/2021 9:29 AM	25:00	5.27 pH	18.67 °C	1,540.7 µS/cm	0.12 mg/L	16.5 NTU	20.5 mV	6.40 ft	165.00 ml/min
3/11/2021 9:34 AM	30:00	5.18 pH	18.63 °C	1,671.4 µS/cm	0.11 mg/L	11.6 NTU	20.3 mV	6.50 ft	165.00 ml/min
3/11/2021 9:39 AM	35:00	5.14 pH	18.97 °C	1,707.5 µS/cm	0.10 mg/L	9.8 NTU	20.8 mV	6.50 ft	165.00 ml/min
3/11/2021 9:44 AM	40:00	5.18 pH	19.07 °C	1,665.4 µS/cm	0.10 mg/L	9.1 NTU	19.8 mV	6.50 ft	165.00 ml/min
3/11/2021 9:49 AM	45:00	5.11 pH	19.28 °C	1,747.6 µS/cm	0.10 mg/L	8.8 NTU	21.4 mV	6.50 ft	165.00 ml/min
3/11/2021 9:54 AM	50:00	5.15 pH	19.31 °C	1,715.9 µS/cm	0.09 mg/L	7.9 NTU	21.1 mV	6.50 ft	165.00 ml/min
3/11/2021 9:59 AM	55:00	5.12 pH	19.49 °C	1,734.9 µS/cm	0.08 mg/L	7.8 NTU	22.7 mV	6.50 ft	165.00 ml/min
3/11/2021 10:04 AM	01:00:00	5.22 pH	19.17 °C	1,623.4 µS/cm	0.08 mg/L	7.7 NTU	20.1 mV	6.50 ft	165.00 ml/min
3/11/2021 10:09 AM	01:05:00	5.20 pH	19.38 °C	1,670.4 µS/cm	0.07 mg/L	7.2 NTU	18.8 mV	6.50 ft	165.00 ml/min
3/11/2021 10:14 AM	01:10:00	5.16 pH	19.52 °C	1,707.7 µS/cm	0.06 mg/L	6.1 NTU	18.6 mV	6.50 ft	165.00 ml/min

3/11/2021 10:19 AM	01:15:00	5.13 pH	19.61 °C	1,763.1 μS/cm	0.06 mg/L	4.4 NTU	18.0 mV	6.50 ft	165.00 ml/min
3/11/2021 10:24 AM	01:20:00	5.20 pH	19.62 °C	1,697.0 μS/cm	0.06 mg/L	3.8 NTU	14.2 mV	6.50 ft	165.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 3/12/2021 9:25:20 AM

Project: Grumman Road

Operator Name: O. Fuquea

Location Name: GWC-20 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 19.9 ft Total Depth: 24.9 ft Initial Depth to Water: 20.34 ft	Pump Type: Peri. Pump Tubing Type: Poly Pump Intake From TOC: 22.5 ft Estimated Total Volume Pumped: 9 liter Flow Cell Volume: 130 ml Final Flow Rate: 210 ml/min Final Draw Down: 5 in	Instrument Used: Aqua TROLL 500 Serial Number: 590987
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Test Notes:

Collected at 1005. 68F clear.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
3/12/2021 9:25 AM	00:00	5.81 pH	20.39 °C	2,149.2 µS/cm	0.24 mg/L	0.52 NTU	74.9 mV	20.50 ft	200.00 ml/min
3/12/2021 9:30 AM	05:00	5.86 pH	20.55 °C	2,145.8 µS/cm	0.15 mg/L	1.49 NTU	55.6 mV	20.60 ft	200.00 ml/min
3/12/2021 9:35 AM	10:00	5.85 pH	20.62 °C	2,140.2 µS/cm	0.12 mg/L	3.07 NTU	45.7 mV	20.70 ft	200.00 ml/min
3/12/2021 9:40 AM	15:00	5.85 pH	20.66 °C	2,137.9 µS/cm	0.12 mg/L	3.00 NTU	39.5 mV	20.80 ft	200.00 ml/min
3/12/2021 9:45 AM	20:00	5.85 pH	20.65 °C	2,135.0 µS/cm	0.11 mg/L	2.92 NTU	35.3 mV	20.80 ft	200.00 ml/min
3/12/2021 9:50 AM	25:00	5.86 pH	20.79 °C	2,139.9 µS/cm	0.10 mg/L	2.54 NTU	32.1 mV	20.80 ft	200.00 ml/min
3/12/2021 9:55 AM	30:00	5.85 pH	20.79 °C	2,131.8 µS/cm	0.09 mg/L	2.42 NTU	29.9 mV	20.80 ft	200.00 ml/min
3/12/2021 10:00 AM	35:00	5.85 pH	20.83 °C	2,125.7 µS/cm	0.08 mg/L	2.36 NTU	27.8 mV	20.80 ft	200.00 ml/min
3/12/2021 10:05 AM	40:00	5.86 pH	20.97 °C	2,131.3 µS/cm	0.08 mg/L	2.60 NTU	26.9 mV	20.80 ft	200.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 3/16/2021 12:30:04 PM

Project: Grumman Road

Operator Name: O. Fuquea

Location Name: GWC-21 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 18.8 ft Total Depth: 23.8 ft Initial Depth to Water: 19.62 ft	Pump Type: Peri. Pump Tubing Type: Poly Pump Intake From TOC: 25 ft Estimated Total Volume Pumped: 6 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 3 in	Instrument Used: Aqua TROLL 400 Serial Number: 714302
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Test Notes:

Collected at 1500. 76F overcast.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
3/16/2021 12:30 PM	00:00	5.77 pH	22.84 °C	805.40 µS/cm	3.44 mg/L	3.97 NTU	104.2 mV	19.90 ft	200.00 ml/min
3/16/2021 12:35 PM	05:00	5.73 pH	22.04 °C	758.72 µS/cm	3.74 mg/L	1.81 NTU	103.6 mV	19.90 ft	200.00 ml/min
3/16/2021 12:40 PM	10:00	5.74 pH	22.05 °C	797.00 µS/cm	3.70 mg/L	2.01 NTU	105.2 mV	19.90 ft	200.00 ml/min
3/16/2021 12:45 PM	15:00	5.73 pH	22.22 °C	791.12 µS/cm	3.68 mg/L	1.80 NTU	105.3 mV	19.90 ft	200.00 ml/min
3/16/2021 12:50 PM	20:00	5.73 pH	22.18 °C	820.48 µS/cm	3.52 mg/L	2.07 NTU	106.3 mV	19.90 ft	200.00 ml/min
3/16/2021 12:55 PM	25:00	5.74 pH	22.03 °C	837.24 µS/cm	3.39 mg/L	2.07 NTU	107.0 mV	19.90 ft	200.00 ml/min
3/16/2021 1:00 PM	30:00	5.74 pH	22.08 °C	843.83 µS/cm	3.41 mg/L	1.81 NTU	107.5 mV	19.90 ft	200.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 3/10/2021 4:42:29 PM

Project: Grumman Road

Operator Name: Anna Schnittker

Location Name: GWC-22 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 14.2 ft Total Depth: 19.21 ft Initial Depth to Water: 6.58 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 15 ft Estimated Total Volume Pumped: 9 liter Flow Cell Volume: 130 ml Final Flow Rate: 130 ml/min Final Draw Down: 5 in	Instrument Used: Aqua TROLL 500 Serial Number: 649632
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Test Notes:

Sample time 1725. Sunny 70s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 5	+/- 300	+/- 0.3	
3/10/2021 4:42 PM	00:00	4.90 pH	19.79 °C	120.40 µS/cm	2.41 mg/L	1.7 NTU	177.0 mV	6.58 ft	130.00 ml/min
3/10/2021 4:47 PM	05:00	4.60 pH	18.19 °C	124.35 µS/cm	0.81 mg/L	2.9 NTU	217.1 mV	7.00 ft	130.00 ml/min
3/10/2021 4:52 PM	10:00	4.57 pH	18.36 °C	127.18 µS/cm	1.03 mg/L	6.2 NTU	233.3 mV	7.00 ft	130.00 ml/min
3/10/2021 4:57 PM	15:00	4.61 pH	18.39 °C	126.82 µS/cm	0.99 mg/L	5.2 NTU	243.0 mV	7.00 ft	130.00 ml/min
3/10/2021 5:02 PM	20:00	4.68 pH	18.52 °C	127.59 µS/cm	0.97 mg/L	4.1 NTU	249.6 mV	7.00 ft	130.00 ml/min
3/10/2021 5:07 PM	25:00	4.73 pH	18.58 °C	129.28 µS/cm	0.98 mg/L	3.8 NTU	256.6 mV	7.00 ft	130.00 ml/min
3/10/2021 5:12 PM	30:00	4.80 pH	18.67 °C	129.92 µS/cm	0.97 mg/L	3.2 NTU	261.2 mV	7.00 ft	130.00 ml/min
3/10/2021 5:17 PM	35:00	4.82 pH	18.71 °C	136.04 µS/cm	0.93 mg/L	2.5 NTU	266.2 mV	7.00 ft	130.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 3/11/2021 12:15:51 PM

Project: Grumman Road

Operator Name: O. Fuquea

Location Name: MW-23D Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 58.3 ft Total Depth: 63.3 ft Initial Depth to Water: 21.76 ft	Pump Type: Peri. Pump Tubing Type: Poly Pump Intake From TOC: 61.81 ft Estimated Total Volume Pumped: 18.6 liter Flow Cell Volume: 130 ml Final Flow Rate: 230 ml/min Final Draw Down: 18.6 in	Instrument Used: Aqua TROLL 500 Serial Number: 590987
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Test Notes:

Collected at 1400. 74F clear.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
3/11/2021 12:15 PM	00:00	6.26 pH	22.02 °C	758.99 µS/cm	0.77 mg/L	10.80 NTU	-4.1 mV	21.76 ft	230.00 ml/min
3/11/2021 12:20 PM	05:00	6.28 pH	22.10 °C	755.44 µS/cm	0.22 mg/L	18.18 NTU	-46.6 mV	22.70 ft	230.00 ml/min
3/11/2021 12:25 PM	10:00	6.28 pH	21.99 °C	660.83 µS/cm	0.18 mg/L	15.02 NTU	-52.0 mV	24.00 ft	230.00 ml/min
3/11/2021 12:30 PM	15:00	6.22 pH	22.13 °C	565.05 µS/cm	0.13 mg/L	12.09 NTU	-50.5 mV	24.10 ft	230.00 ml/min
3/11/2021 12:35 PM	20:00	6.14 pH	22.01 °C	524.99 µS/cm	0.12 mg/L	16.15 NTU	-45.4 mV	24.10 ft	230.00 ml/min
3/11/2021 12:40 PM	25:00	6.07 pH	21.88 °C	488.38 µS/cm	0.12 mg/L	15.55 NTU	-41.7 mV	24.20 ft	230.00 ml/min
3/11/2021 12:45 PM	30:00	6.03 pH	21.99 °C	473.95 µS/cm	0.12 mg/L	15.84 NTU	-40.8 mV	24.20 ft	230.00 ml/min
3/11/2021 12:50 PM	35:00	5.98 pH	21.97 °C	448.41 µS/cm	0.11 mg/L	14.72 NTU	-40.0 mV	24.20 ft	230.00 ml/min
3/11/2021 12:55 PM	40:00	5.95 pH	21.81 °C	425.20 µS/cm	0.11 mg/L	20.55 NTU	-39.3 mV	24.20 ft	230.00 ml/min
3/11/2021 1:00 PM	45:00	5.93 pH	21.96 °C	421.32 µS/cm	0.10 mg/L	9.35 NTU	-39.4 mV	24.20 ft	230.00 ml/min
3/11/2021 1:05 PM	50:00	5.91 pH	22.06 °C	401.39 µS/cm	0.08 mg/L	8.25 NTU	-39.8 mV	24.20 ft	230.00 ml/min
3/11/2021 1:10 PM	55:00	5.90 pH	22.01 °C	401.20 µS/cm	0.08 mg/L	7.89 NTU	-40.6 mV	24.20 ft	230.00 ml/min
3/11/2021 1:15 PM	01:00:00	5.89 pH	22.10 °C	376.16 µS/cm	0.07 mg/L	7.66 NTU	-41.1 mV	24.20 ft	230.00 ml/min
3/11/2021 1:20 PM	01:05:00	5.89 pH	22.04 °C	359.60 µS/cm	0.07 mg/L	6.0 NTU	-41.7 mV	24.20 ft	230.00 ml/min
3/11/2021 1:25 PM	01:10:00	5.88 pH	21.89 °C	354.27 µS/cm	0.07 mg/L	5.49 NTU	-41.6 mV	24.20 ft	230.00 ml/min

3/11/2021 1:30 PM	01:15:00	5.86 pH	22.03 °C	330.52 µS/cm	0.07 mg/L	5.4 NTU	-42.5 mV	24.20 ft	230.00 ml/min
3/11/2021 1:35 PM	01:20:00	5.86 pH	21.90 °C	325.98 µS/cm	0.06 mg/L	5.72 NTU	-43.0 mV	24.20 ft	230.00 ml/min
3/11/2021 1:40 PM	01:25:00	5.85 pH	22.07 °C	311.21 µS/cm	0.09 mg/L	5.39 NTU	-43.1 mV	24.20 ft	230.00 ml/min
3/11/2021 1:45 PM	01:30:00	5.84 pH	22.06 °C	302.45 µS/cm	0.09 mg/L	4.74 NTU	-43.3 mV	24.20 ft	230.00 ml/min
3/11/2021 1:50 PM	01:35:00	5.83 pH	22.04 °C	294.99 µS/cm	0.07 mg/L	4.73 NTU	-43.1 mV	24.20 ft	230.00 ml/min
3/11/2021 1:55 PM	01:40:00	5.82 pH	22.06 °C	290.15 µS/cm	0.08 mg/L	4.67 NTU	-43.3 mV	24.20 ft	230.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 3/11/2021 8:50:05 AM

Project: Grumman Road

Operator Name: O. Fuquea

Location Name: MW-24D Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 61.81 ft Total Depth: 66.81 ft Initial Depth to Water: 22.82 ft	Pump Type: Peri. Pump Tubing Type: Poly Pump Intake From TOC: 64.31 ft Estimated Total Volume Pumped: 24 liter Flow Cell Volume: 130 ml Final Flow Rate: 200 ml/min Final Draw Down: 33 in	Instrument Used: Aqua TROLL 500 Serial Number: 590987
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Test Notes:

Collected at 1050. 71F cloudy.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
3/11/2021 8:50 AM	00:00	5.88 pH	20.68 °C	92.73 µS/cm	0.18 mg/L	30.61 NTU	44.9 mV	23.50 ft	200.00 ml/min
3/11/2021 8:55 AM	05:00	5.99 pH	20.82 °C	92.69 µS/cm	0.14 mg/L	22.29 NTU	33.4 mV	24.80 ft	200.00 ml/min
3/11/2021 9:00 AM	10:00	6.06 pH	21.03 °C	92.62 µS/cm	0.12 mg/L	28.47 NTU	17.7 mV	25.00 ft	200.00 ml/min
3/11/2021 9:01 AM	11:36	6.04 pH	21.02 °C	92.70 µS/cm	0.12 mg/L	30.19 NTU	16.7 mV	25.10 ft	200.00 ml/min
3/11/2021 9:06 AM	16:36	6.21 pH	21.12 °C	93.12 µS/cm	0.11 mg/L	37.42 NTU	3.8 mV	25.40 ft	200.00 ml/min
3/11/2021 9:11 AM	21:36	6.39 pH	21.21 °C	96.48 µS/cm	0.11 mg/L	38.14 NTU	-19.9 mV	25.40 ft	200.00 ml/min
3/11/2021 9:16 AM	26:36	6.60 pH	21.27 °C	111.66 µS/cm	0.11 mg/L	25.98 NTU	-56.3 mV	25.50 ft	200.00 ml/min
3/11/2021 9:21 AM	31:36	6.68 pH	21.35 °C	114.28 µS/cm	0.09 mg/L	19.37 NTU	-79.2 mV	25.50 ft	200.00 ml/min
3/11/2021 9:26 AM	36:36	6.68 pH	21.38 °C	112.81 µS/cm	0.10 mg/L	16.09 NTU	-83.9 mV	25.50 ft	200.00 ml/min
3/11/2021 9:31 AM	41:36	6.68 pH	21.39 °C	112.65 µS/cm	0.10 mg/L	5.60 NTU	-71.5 mV	25.60 ft	200.00 ml/min
3/11/2021 9:36 AM	46:36	6.64 pH	21.53 °C	110.79 µS/cm	0.10 mg/L	5.39 NTU	-80.2 mV	25.60 ft	200.00 ml/min
3/11/2021 9:41 AM	51:36	6.66 pH	21.49 °C	108.47 µS/cm	0.10 mg/L	5.52 NTU	-84.1 mV	25.60 ft	200.00 ml/min
3/11/2021 9:46 AM	56:36	6.66 pH	21.46 °C	107.09 µS/cm	0.10 mg/L	5.89 NTU	-80.1 mV	25.60 ft	200.00 ml/min
3/11/2021 9:51 AM	01:01:36	6.61 pH	21.60 °C	105.22 µS/cm	0.10 mg/L	5.67 NTU	-79.9 mV	25.60 ft	200.00 ml/min
3/11/2021 9:56 AM	01:06:36	6.61 pH	21.75 °C	103.96 µS/cm	0.10 mg/L	5.64 NTU	-81.0 mV	25.60 ft	200.00 ml/min

3/11/2021 10:01 AM	01:11:36	6.59 pH	21.80 °C	102.68 µS/cm	0.11 mg/L	5.70 NTU	-79.6 mV	25.60 ft	200.00 ml/min
3/11/2021 10:06 AM	01:16:36	6.56 pH	21.76 °C	100.26 µS/cm	0.09 mg/L	5.71 NTU	-75.7 mV	25.60 ft	200.00 ml/min
3/11/2021 10:11 AM	01:21:36	6.54 pH	21.74 °C	99.12 µS/cm	0.08 mg/L	5.58 NTU	-70.5 mV	25.60 ft	200.00 ml/min
3/11/2021 10:16 AM	01:26:36	6.53 pH	21.76 °C	98.56 µS/cm	0.08 mg/L	5.54 NTU	-58.9 mV	25.60 ft	200.00 ml/min
3/11/2021 10:21 AM	01:31:36	6.50 pH	21.79 °C	97.41 µS/cm	0.08 mg/L	5.60 NTU	-51.5 mV	25.60 ft	200.00 ml/min
3/11/2021 10:26 AM	01:36:36	6.48 pH	21.85 °C	96.51 µS/cm	0.09 mg/L	5.57 NTU	-72.7 mV	25.60 ft	200.00 ml/min
3/11/2021 10:31 AM	01:41:36	6.43 pH	21.91 °C	94.38 µS/cm	0.09 mg/L	5.59 NTU	-59.0 mV	25.60 ft	200.00 ml/min
3/11/2021 10:36 AM	01:46:36	6.48 pH	21.96 °C	93.96 µS/cm	0.09 mg/L	5.63 NTU	-59.9 mV	25.60 ft	200.00 ml/min
3/11/2021 10:41 AM	01:51:36	6.46 pH	21.95 °C	92.20 µS/cm	0.09 mg/L	5.63 NTU	-43.3 mV	25.60 ft	200.00 ml/min
3/11/2021 10:42 AM	01:52:04	6.46 pH	21.94 °C	91.97 µS/cm	0.09 mg/L	5.18 NTU	-43.4 mV	25.60 ft	200.00 ml/min
3/11/2021 10:45 AM	01:55:48	6.47 pH	21.80 °C	91.73 µS/cm	0.09 mg/L	4.78 NTU	-56.3 mV	25.60 ft	200.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 3/11/2021 2:00:53 PM

Project: Grumman Road

Operator Name: Anna Schnittker

Location Name: MW-25D Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 63.7 ft Total Depth: 68.75 ft Initial Depth to Water: 19.95 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 65 ft Estimated Total Volume Pumped: 8 liter Flow Cell Volume: 130 ml Final Flow Rate: 165 ml/min Final Draw Down: 45 in	Instrument Used: Aqua TROLL 500 Serial Number: 649632
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Test Notes:

Sample time: 14:35. Sunny 70s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 5	+/- 300	+/- 0.3	
3/11/2021 2:00 PM	00:00	6.76 pH	22.72 °C	80.25 µS/cm	0.43 mg/L	16 NTU	-28.9 mV	19.95 ft	225.00 ml/min
3/11/2021 2:05 PM	05:00	6.64 pH	22.36 °C	78.73 µS/cm	0.28 mg/L	14 NTU	-28.3 mV	23.20 ft	165.00 ml/min
3/11/2021 2:10 PM	10:00	6.49 pH	22.62 °C	77.52 µS/cm	0.25 mg/L	7.6 NTU	-19.7 mV	23.30 ft	165.00 ml/min
3/11/2021 2:15 PM	15:00	6.40 pH	22.55 °C	78.00 µS/cm	0.23 mg/L	3.4 NTU	-13.4 mV	23.50 ft	165.00 ml/min
3/11/2021 2:20 PM	20:00	6.35 pH	22.56 °C	78.26 µS/cm	0.21 mg/L	3.2 NTU	-8.6 mV	23.70 ft	165.00 ml/min
3/11/2021 2:25 PM	25:00	6.33 pH	22.91 °C	78.90 µS/cm	0.20 mg/L	4.5 NTU	-9.1 mV	23.70 ft	165.00 ml/min
3/11/2021 2:30 PM	30:00	6.31 pH	22.67 °C	81.29 µS/cm	0.19 mg/L	3.4 NTU	-8.8 mV	23.70 ft	165.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 3/11/2021 11:27:33 AM

Project: Grumman Road

Operator Name: Anna Schnittker

Location Name: MW-26D Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 64.9 ft Total Depth: 69.9 ft Initial Depth to Water: 18.66 ft	Pump Type: Peri Pump Tubing Type: Poly Pump Intake From TOC: 67 ft Estimated Total Volume Pumped: 14 liter Flow Cell Volume: 130 ml Final Flow Rate: 225 ml/min Final Draw Down: 19 in	Instrument Used: Aqua TROLL 500 Serial Number: 649632
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Test Notes:

Sample time: 12:25. Sunny 60s

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 5	+/- 300	+/- 0.3	
3/11/2021 11:27 AM	00:00	6.06 pH	21.57 °C	83.39 µS/cm	0.49 mg/L	8.05 NTU	64.6 mV	18.66 ft	225.00 ml/min
3/11/2021 11:32 AM	05:00	5.94 pH	21.65 °C	79.88 µS/cm	0.27 mg/L	6.79 NTU	66.2 mV	20.20 ft	225.00 ml/min
3/11/2021 11:37 AM	10:00	5.87 pH	21.56 °C	75.40 µS/cm	0.20 mg/L	4.88 NTU	54.0 mV	20.30 ft	225.00 ml/min
3/11/2021 11:42 AM	15:00	5.85 pH	21.37 °C	75.99 µS/cm	0.17 mg/L	4.34 NTU	44.0 mV	20.30 ft	225.00 ml/min
3/11/2021 11:47 AM	20:00	5.86 pH	21.56 °C	75.33 µS/cm	0.15 mg/L	1.33 NTU	40.4 mV	20.30 ft	225.00 ml/min
3/11/2021 11:52 AM	25:00	5.93 pH	22.15 °C	74.64 µS/cm	0.14 mg/L	2.26 NTU	33.7 mV	20.30 ft	225.00 ml/min
3/11/2021 11:57 AM	30:00	6.01 pH	22.16 °C	72.86 µS/cm	0.13 mg/L	3.32 NTU	26.8 mV	20.30 ft	225.00 ml/min
3/11/2021 12:02 PM	35:00	6.05 pH	22.11 °C	71.26 µS/cm	0.12 mg/L	3.91 NTU	20.8 mV	20.30 ft	225.00 ml/min
3/11/2021 12:07 PM	40:00	6.07 pH	21.62 °C	69.12 µS/cm	0.11 mg/L	4.61 NTU	17.1 mV	20.30 ft	225.00 ml/min
3/11/2021 12:12 PM	45:00	6.03 pH	21.43 °C	67.84 µS/cm	0.11 mg/L	4.09 NTU	16.7 mV	20.30 ft	225.00 ml/min
3/11/2021 12:17 PM	50:00	6.00 pH	21.33 °C	66.52 µS/cm	0.10 mg/L	3.73 NTU	14.8 mV	20.30 ft	225.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 3/11/2021 2:40:09 PM

Project: Grumman Road

Operator Name: O. Fuqea

Location Name: MW-27D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 67.4 ft Total Depth: 72.43 ft Initial Depth to Water: 20.5 ft	Pump Type: Peri. Pump Tubing Type: Poly Pump Intake From TOC: 69.9 ft Estimated Total Volume Pumped: 62.3 liter Flow Cell Volume: 130 ml Final Flow Rate: 250 ml/min Final Draw Down: 76 in	Instrument Used: Aqua TROLL 500 Serial Number: 590987
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Test Notes:

Collected at 1545. 74F clear.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
3/11/2021 2:40 PM	00:00	5.85 pH	22.00 °C	48.63 µS/cm	0.20 mg/L	11.35 NTU	43.9 mV	22.60 ft	250.00 ml/min
3/11/2021 2:45 PM	05:00	5.75 pH	21.95 °C	49.93 µS/cm	0.13 mg/L	7.48 NTU	48.1 mV	23.90 ft	250.00 ml/min
3/11/2021 2:50 PM	10:00	5.71 pH	21.97 °C	51.26 µS/cm	0.14 mg/L	5.54 NTU	47.6 mV	24.80 ft	250.00 ml/min
3/11/2021 2:55 PM	15:00	5.64 pH	21.90 °C	52.40 µS/cm	0.13 mg/L	5.45 NTU	48.3 mV	25.40 ft	250.00 ml/min
3/11/2021 3:00 PM	20:00	5.54 pH	21.72 °C	52.92 µS/cm	0.11 mg/L	4.93 NTU	52.6 mV	25.90 ft	250.00 ml/min
3/11/2021 3:05 PM	25:00	5.46 pH	21.76 °C	54.13 µS/cm	0.08 mg/L	6.13 NTU	54.6 mV	26.20 ft	250.00 ml/min
3/11/2021 3:10 PM	30:00	5.36 pH	21.72 °C	54.65 µS/cm	0.08 mg/L	9.35 NTU	58.1 mV	26.40 ft	250.00 ml/min
3/11/2021 3:15 PM	35:00	5.26 pH	21.86 °C	54.38 µS/cm	0.06 mg/L	10.2 NTU	62.2 mV	26.50 ft	250.00 ml/min
3/11/2021 3:20 PM	40:00	5.19 pH	21.82 °C	54.57 µS/cm	0.07 mg/L	9.42 NTU	64.4 mV	26.60 ft	250.00 ml/min
3/11/2021 3:25 PM	45:00	5.14 pH	21.74 °C	54.70 µS/cm	0.06 mg/L	9.08 NTU	64.8 mV	26.70 ft	250.00 ml/min
3/11/2021 3:30 PM	50:00	5.11 pH	21.73 °C	54.90 µS/cm	0.07 mg/L	8.71 NTU	65.4 mV	26.80 ft	250.00 ml/min
3/11/2021 3:35 PM	55:00	5.10 pH	21.67 °C	54.86 µS/cm	0.06 mg/L	8.12 NTU	64.4 mV	26.80 ft	250.00 ml/min
3/11/2021 3:40 PM	01:00:00	5.13 pH	21.72 °C	55.65 µS/cm	0.07 mg/L	6.08 NTU	61.5 mV	26.80 ft	250.00 ml/min
3/11/2021 3:45 PM	01:05:00	5.12 pH	21.67 °C	54.97 µS/cm	0.07 mg/L	4.99 NTU	61.2 mV	26.80 ft	250.00 ml/min



Daily Instrument Calibration Log

SITE: GRUMMAN ROAD
 TECHNICIAN: O FOUQUA
 WATER LEVEL: SOLWIST M101
 WATER LEVEL S/N: 322814

INSTRUMENT S/N: AQUA TROLL 069541 (R35231) / 590987 R38019
 INSTRUMENT TYPE: AquaTroll
 CAL. SOLUTIONS:
 ID: COND LOT#: 0611033 EXP. DATE: 9-21
 ID: PH 8.4 LOT#: 060046 EXP. DATE: 4-22
 ID: PH 10 LOT#: 962648 EXP. DATE: 12-21
 ID: PH 7 LOT#: 061615 EXP. DATE: 9-22
 ID: ORP LOT#: 169114 EXP. DATE: 10-21 **Midday pH check**
 ID: _____ LOT#: _____ EXP. DATE: _____ **Must be less than .10**
 ID: _____ LOT#: _____ EXP. DATE: _____ **(6.90-7.10 range)**
 Recalibrate if not within range

Calibration Date: 3-8-21
 RDO: 100% sat. = 106.39% **Midday pH check** NA (1 WELL SAMPLED)
 PH: 4.00 = 4.57 4.19 7.00 = 6.90 10.00 = 9.99 7.0 = _____
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____ post recal check
 CONDUCTIVITY: 1473.6 = _____
 ORP (mV) 254.1 = _____

Calibration Date: 3-9-21
 RDO: 100% sat. = 100.0% **Midday pH check**
 PH: 4.00 = 3.65 4.02 7.00 = 7.19 7.06 10.00 = 10.00 7.0 = 7.09
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____ post recal check
 CONDUCTIVITY: 1413.0 = _____
 ORP (mV) 243.63 = _____

Calibration Date: 3-10-21
 RDO: 100% sat. = 107.44 **Midday pH check**
 PH: 4.00 = 4.70 7.00 = 7.38 10.00 = 10.31 7.0 = 7.08
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____ post recal check
 CONDUCTIVITY: 1281 = _____
 ORP (mV) 248 = _____

Calibration Date: 3-11-21
 RDO: 100% sat. = 99.98% **Midday pH check**
 PH: 4.00 = 3.95 7.00 = 7.10 10.00 = 10.35 7.0 = 7.04
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____ post recal check
 CONDUCTIVITY: 1382 = _____
 ORP (mV) 241.4 = _____

Calibration Date: 3-12-21
 RDO: 100% sat. = 101.3 **Midday pH check**
 PH: 4.00 = 4.07 7.00 = 7.02 10.00 = 10.14 7.0 = 7.09
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____ post recal check
 CONDUCTIVITY: 1439 = _____
 ORP (mV) 242 = _____



Daily Instrument Calibration Log

SITE: Grumman
 TECHNICIAN: A Schritter
 WATER LEVEL: Solist
 WATER LEVEL S/N: 377060

INSTRUMENT S/N: 649632
 INSTRUMENT TYPE: AquaTroll
 CAL. SOLUTIONS: ID: PH4 LOT #: 06E441 EXP. DATE: 5/22
 ID: PH7 LOT #: 06D803 EXP. DATE: 4/22
 ID: PH10 LOT #: 06D851 EXP. DATE: 4/22
 ID: Conductivity LOT #: 06E438 EXP. DATE: 5/21
 ID: ORP LOT #: 06H1018 EXP. DATE: 5/21
 ID: Stick Cal LOT #: 4821A EXP. DATE: 09/21
 ID: _____ LOT #: _____ EXP. DATE: _____

Midday pH check
 Must be less than .10
 (6.90-7.10 range)
 Recalibrate if not within range

Calibration Date: 3/8/21
 RDO: 100% sat. = 102.17
 PH: 4.00 = 4.15 7.00 = 7.02 10.00 = 10.11 7.0 = 7.02
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = a 7.0 = _____ post recal check
 CONDUCTIVITY: 1413 mS/cm = 1.558
 ORP (mV) 240 = 243 mV

Calibration Date: 3/9/21
 RDO: 100% sat. = 98.09
 PH: 4.00 = 4.02 7.00 = 7.23 10.00 = 9.97 7.0 = 7.03
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____ post recal check
 CONDUCTIVITY: 5690 = 6794
 ORP (mV) 247 = 233

Calibration Date: 3/10/21
 RDO: 100% sat. = 102.22
 PH: 4.00 = 3.97 7.00 = 7.01 10.00 = 10.20 7.0 = 7.04
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____ post recal check
 CONDUCTIVITY: 5190 = 8040
 ORP (mV) 247 = 240.3

Calibration Date: 3/11/21
 RDO: 100% sat. = 99.45
 PH: 4.00 = 3.97 7.00 = 7.03 10.00 = 10.10 7.0 = 7.01
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____ post recal check
 CONDUCTIVITY: 6450 = 7121
 ORP (mV) 237 = 236
239

Calibration Date: 3/12/21
 RDO: 100% sat. = 101.33
 PH: 4.00 = 4.25 7.00 = 7.04 10.00 = 10.04 7.0 = 7.05
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____ post recal check
 CONDUCTIVITY: 1413 = 1642
 ORP (mV) 240 = 255.6



Daily Instrument Calibration Log

SITE: Grumman Rd.
TECHNICIAN: A Schmitt
INSTRUMENT S/N: 1720C063767
INSTRUMENT TYPE: _____
CAL. SOLUTION: 0 NTU - LOT # NA EXP. DATE: New DI water
10 NTU - LOT # A0136 EXP. DATE: 8/21
20 NTU - LOT # A01369 EXP. DATE: 8/21

Calibration Date: 3/8/21

Calibration Solution	Instrument Reading	
0.0	<u>0.19</u>	NTU
10.0	<u>10.9</u>	NTU
20.0	<u>20.6</u>	NTU

Calibration Date: 3/9/21

Calibration Solution	Instrument Reading	
0.0	<u>0.17</u>	NTU
10.0	<u>9.91</u>	NTU
20.0	<u>19.7</u>	NTU

Calibration Date: 3/10/21

Calibration Solution	Instrument Reading	
0.0	<u>0.19</u>	NTU
10.0	<u>10.6</u>	NTU
20.0	<u>20.7</u>	NTU

Calibration Date: 3/11/21

Calibration Solution	Instrument Reading	
0.0	<u>0.21</u>	NTU
10.0	<u>9.85</u>	NTU
20.0	<u>20.5</u>	NTU

Calibration Date: 3/12/21

Calibration Solution	Instrument Reading	
0.0	<u>0.18</u>	NTU
10.0	<u>9.96</u>	NTU
20.0	<u>20.1</u>	NTU

Calibration Date: _____

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Facility Name: Grumman Rd Landfil

Staff: O. Fuquea, A. Schnittker

Date: 3/8/2021

Permit No.: 025-061D(LI)

1 - Location/Identification

		GWA-7	GWA-8	GWB-4R	GWB-5R	GWC-6R	GWC-1	GWC-2	GWC-9	GWC-10	GWC-11	GWC-12	GWC-13
a	Is the well visible and accessible?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the well properly identified with the correct well ID?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well require protection from traffic?	No	No	No	No	No	No	No	No	No	No	No	No
d	Is the drainage around the well acceptable? (No standing water, nor is well located in obvious drainage flow path)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Facility Name: Grumman Rd Landfil
 Staff: O. Fuquea, A. Schnittker
 Date: 3/8/2021

Permit No.: 025-061D(LI)

2 - Protective Outer Casing

		GWA-7	GWA-8	GWB-4R	GWB-5R	GWC-6R	GWC-1	GWC-2	GWC-9	GWC-10	GWC-11	GWC-12	GWC-13
a	Is the protective casing free from apparent damage?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of degradation or deterioration?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the casing have a functioning weep hole?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the annular space between casings filled with pea gravel or sand?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the well locked, and is the lock in good working condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Facility Name: Grumman Rd Landfil
 Staff: O. Fuquea, A. Schnittker
 Date: 3/8/2021

Permit No.: 025-061D(LI)

3 - Surface Pad

		GWA-7	GWA-8	GWB-4R	GWB-5R	GWC-6R	GWC-1	GWC-2	GWC-9	GWC-10	GWC-11	GWC-12	GWC-13
a	Is the well pad in good condition? (Not cracked or broken)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
b	Does the well pad provide adequate surface seal and stability to the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Is the well pad in complete contact with the protective casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the well pad in complete contact with the ground surface? (Not undermined by erosion, animal burrows, and does not move when stepped on)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the pad surface clean? (Not covered by soil or debris)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No

Facility Name: Grumman Rd Landfil
 Staff: O. Fuquea, A. Schnittker
 Date: 3/8/2021

Permit No.: 025-061D(LI)

4 - Internal Well Casing		GWA-7	GWA-8	GWB-4R	GWB-5R	GWC-6R	GWC-1	GWC-2	GWC-9	GWC-10	GWC-11	GWC-12	GWC-13
a	Does the well cap prevent entry of foreign material into the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers) ?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well have a venting hole near the top of casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the survey point clearly marked on the inner casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the depth of the well consistent with the original well log?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
f	Does the PVC casing move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction?	No	No	No	No	No	No	No	No	No	No	No	No

5 - Sampling (Groundwater Monitoring Wells Only):

5 - Sampling (Groundwater Monitoring Wells Only):		GWA-7	GWA-8	GWB-4R	GWB-5R	GWC-6R	GWC-1	GWC-2	GWC-9	GWC-10	GWC-11	GWC-12	GWC-13
a	Does the well recharge adequately when purged?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	If dedicated sampling equipment is installed, is it in good condition?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
c	Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs?	No	No	No	No	No	No	No	No	No	No	No	No

NOTE: N/A - Not Applicable



Facility Name: Grumman Rd Landfil

Staff: O. Fuquea, A. Schnittker

Date: 3/8/2021

Permit No.: 025-061D(LI)

6 - Based on your professional judgment, is the well construction / location appropriate to:

	GWA-7	GWA-8	GWB-4R	GWB-5R	GWC-6R	GWC-1	GWC-2	GWC-9	GWC-10	GWC-11	GWC-12	GWC-13
1) achieve the objectives of the facility Groundwater Monitoring Program, and 2) comply with the applicable regulatory requirements?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

7 - Corrective actions completed and Notes:

- 1) GWC-13: Wellpad destroyed and buried. Corrective action still needed.

Facility Name: Grumman Rd Landfill

Staff: O. Fuquea, A. Schnittker

Date: 3/8/2021

Permit No.: 025-061D(LI)

1 - Location/Identification		GWC-14	GWC-15	GWC-16	GWC-17	GWC-20	GWC-21	GWC-22	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
a	Is the well visible and accessible?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the well properly identified with the correct well ID?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well require protection from traffic?	No	No	No	No	No	No	No	No	No	No	No	No
d	Is the drainage around the well acceptable? (No standing water, nor is well located in obvious drainage flow path)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Facility Name: Grumman Rd Landfill

Staff: O. Fuquea, A. Schnittker

Date: 3/8/2021

Permit No.: 025-061D(LI)

2 - Protective Outer Casing

		GWC-14	GWC-15	GWC-16	GWC-17	GWC-20	GWC-21	GWC-22	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
a	Is the protective casing free from apparent damage?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of degradation or deterioration?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the casing have a functioning weep hole?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the annular space between casings filled with pea gravel or sand?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the well locked, and is the lock in good working condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Facility Name: Grumman Rd Landfill

Staff: O. Fuquea, A. Schnittker

Date: 3/8/2021

Permit No.: 025-061D(LI)

3 - Surface Pad

		GWC-14	GWC-15	GWC-16	GWC-17	GWC-20	GWC-21	GWC-22	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
a	Is the well pad in good condition? (Not cracked or broken)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Does the well pad provide adequate surface seal and stability to the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Is the well pad in complete contact with the protective casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the well pad in complete contact with the ground surface? (Not undermined by erosion, animal burrows, and does not move when stepped on)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the pad surface clean? (Not covered by soil or debris)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Facility Name: Grumman Rd Landfill

Staff: O. Fuquea, A. Schnittker

Date: 3/8/2021

Permit No.: 025-061D(LI)

4 - Internal Well Casing		GWC-14	GWC-15	GWC-16	GWC-17	GWC-20	GWC-21	GWC-22	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
a	Does the well cap prevent entry of foreign material into the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers) ?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well have a venting hole near the top of casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the survey point clearly marked on the inner casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the depth of the well consistent with the original well log?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
f	Does the PVC casing move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction?	No	No	No	No	No	No	No	No	No	No	No	No

5 - Sampling (Groundwater Monitoring Wells Only):

		GWC-14	GWC-15	GWC-16	GWC-17	GWC-20	GWC-21	GWC-22	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
a	Does the well recharge adequately when purged?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	If dedicated sampling equipment is installed, is it in good condition?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
c	Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs?	No	No	No	No	No	No	No	No	No	No	No	No

NOTE: N/A - Not Applicable



Facility Name: Grumman Rd Landfill

Staff: O. Fuquea, A. Schnittker

Date: 3/8/2021

Permit No.: 025-061D(LI)

6 - Based on your professional judgment, is the well construction / location appropriate to:

	GWC-14	GWC-15	GWC-16	GWC-17	GWC-20	GWC-21	GWC-22	GWC-23	GWC-24	GWC-25	GWC-26	GWC-27
1) achieve the objectives of the facility Groundwater Monitoring Program, and 2) comply with the applicable regulatory requirements?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

7 - Corrective actions completed and Notes:

April 05, 2021

Joju Abraham
Georgia Power-CCR
2480 Maner Road
Atlanta, GA 30339

RE: Project: GRUMMAN CLIFTON SEEP
Pace Project No.: 92528134

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on March 17, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

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

Sincerely,



Kevin Herring
kevin.herring@pacelabs.com
1(704)875-9092
HORIZON Database Administrator

Enclosures

cc: Owens Fuquea, ACC
Kristen Jurinko
Matt Malone, Atlantic Coast Consulting
Betsy McDaniel, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Ms. Lauren Petty, Southern Company



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: GRUMMAN CLIFTON SEEP

Pace Project No.: 92528134

Pace Analytical Services Charlotte

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

Louisiana/NELAP Certification # LA170028

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: GRUMMAN CLIFTON SEEP
Pace Project No.: 92528134

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92528134001	CLIFTON SEEP	Water	03/16/21 14:00	03/17/21 12:25

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GRUMMAN CLIFTON SEEP

Pace Project No.: 92528134

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92528134001	CLIFTON SEEP	RSK 175 Modified	MAD	1
		EPA 6010D	DRB	6
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		EPA 353.2	JRS	1
		SM 2320B-2011	ECH	3
		EPA 300.0 Rev 2.1 1993	JLH	3
		EPA 350.1 Rev 2.0 1993	NAL	1
		EPA 351.2 Rev 2.0 1993	MFO	1
		SM 5310B-2011	ECH	1

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN CLIFTON SEEP

Pace Project No.: 92528134

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92528134001	CLIFTON SEEP					
	Performed by	CUSTOME			03/17/21 13:14	
		R				
	pH	8.92	Std. Units		03/17/21 13:14	
EPA 6010D	Iron	2.3	mg/L	0.040	03/26/21 20:32	
EPA 6010D	Manganese	0.046	mg/L	0.040	03/26/21 20:32	
EPA 6010D	Potassium	200	mg/L	0.20	03/26/21 20:32	
EPA 6010D	Calcium	21.7	mg/L	1.0	03/26/21 20:32	
EPA 6010D	Magnesium	76.5	mg/L	0.050	03/26/21 20:32	
EPA 6010D	Sodium	1060	mg/L	10.0	03/29/21 12:57	
EPA 6020B	Antimony	0.0015J	mg/L	0.015	03/30/21 18:29	D3
EPA 6020B	Arsenic	0.0041J	mg/L	0.025	03/30/21 18:29	D3
EPA 6020B	Barium	0.67	mg/L	0.025	03/30/21 18:29	
EPA 6020B	Boron	46.5	mg/L	0.20	03/30/21 18:29	
EPA 6020B	Chromium	0.014J	mg/L	0.025	03/30/21 18:29	B,D3
EPA 6020B	Cobalt	0.0043J	mg/L	0.025	03/30/21 18:29	D3
EPA 6020B	Lead	0.015	mg/L	0.0050	03/30/21 18:29	
EPA 6020B	Lithium	0.54	mg/L	0.15	03/30/21 18:29	
EPA 6020B	Zinc	0.11	mg/L	0.050	03/30/21 18:29	
SM 2450C-2011	Total Dissolved Solids	3200	mg/L	100	03/22/21 15:50	
EPA 353.2	Nitrogen, Nitrate	17.0	mg/L	0.20	03/18/21 03:51	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	2710	mg/L	5.0	03/29/21 18:52	
SM 2320B-2011	Alkalinity,Carbonate (CaCO3)	276	mg/L	5.0	03/29/21 18:52	
SM 2320B-2011	Alkalinity, Total as CaCO3	2990	mg/L	5.0	03/29/21 18:52	
EPA 300.0 Rev 2.1 1993	Chloride	195	mg/L	8.0	03/21/21 10:46	
EPA 300.0 Rev 2.1 1993	Fluoride	0.48	mg/L	0.10	03/20/21 21:30	
EPA 300.0 Rev 2.1 1993	Sulfate	0.89J	mg/L	1.0	03/20/21 21:30	
EPA 350.1 Rev 2.0 1993	Nitrogen, Ammonia	2.6	mg/L	0.10	03/28/21 13:36	
EPA 351.2 Rev 2.0 1993	Nitrogen, Kjeldahl, Total	11.7	mg/L	0.50	03/25/21 04:55	
SM 5310B-2011	Total Organic Carbon	92.2	mg/L	5.0	04/03/21 16:12	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN CLIFTON SEEP
Pace Project No.: 92528134

Sample: CLIFTON SEEP									
Lab ID: 92528134001 Collected: 03/16/21 14:00 Received: 03/17/21 12:25 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/17/21 13:14		
pH	8.92	Std. Units			1		03/17/21 13:14		
RSK 175 Headspace									
Analytical Method: RSK 175 Modified Pace Analytical Services - Charlotte									
Methane	ND	ug/L	10.0	3.4	1		03/19/21 14:54	74-82-8	
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	2.3	mg/L	0.040	0.016	1	03/26/21 10:56	03/26/21 20:32	7439-89-6	
Manganese	0.046	mg/L	0.040	0.0017	1	03/26/21 10:56	03/26/21 20:32	7439-96-5	
Potassium	200	mg/L	0.20	0.056	1	03/26/21 10:56	03/26/21 20:32	7440-09-7	
Calcium	21.7	mg/L	1.0	0.070	1	03/26/21 10:56	03/26/21 20:32	7440-70-2	
Magnesium	76.5	mg/L	0.050	0.0076	1	03/26/21 10:56	03/26/21 20:32	7439-95-4	
Sodium	1060	mg/L	10.0	2.6	10	03/26/21 10:56	03/29/21 12:57	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0015J	mg/L	0.015	0.0014	5	03/27/21 11:54	03/30/21 18:29	7440-36-0	D3
Arsenic	0.0041J	mg/L	0.025	0.0039	5	03/27/21 11:54	03/30/21 18:29	7440-38-2	D3
Barium	0.67	mg/L	0.025	0.0036	5	03/27/21 11:54	03/30/21 18:29	7440-39-3	
Beryllium	ND	mg/L	0.0025	0.00023	5	03/27/21 11:54	03/30/21 18:29	7440-41-7	D3
Boron	46.5	mg/L	0.20	0.026	5	03/27/21 11:54	03/30/21 18:29	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00059	5	03/27/21 11:54	03/30/21 18:29	7440-43-9	D3
Chromium	0.014J	mg/L	0.025	0.0028	5	03/27/21 11:54	03/30/21 18:29	7440-47-3	B,D3
Cobalt	0.0043J	mg/L	0.025	0.0019	5	03/27/21 11:54	03/30/21 18:29	7440-48-4	D3
Lead	0.015	mg/L	0.0050	0.00018	5	03/27/21 11:54	03/30/21 18:29	7439-92-1	
Lithium	0.54	mg/L	0.15	0.0040	5	03/27/21 11:54	03/30/21 18:29	7439-93-2	
Molybdenum	ND	mg/L	0.050	0.0034	5	03/27/21 11:54	03/30/21 18:29	7439-98-7	D3
Selenium	ND	mg/L	0.025	0.0078	5	03/27/21 11:54	03/30/21 18:29	7782-49-2	D3
Thallium	ND	mg/L	0.0050	0.00072	5	03/27/21 11:54	03/30/21 18:29	7440-28-0	D3
Vanadium	ND	mg/L	0.050	0.011	5	03/27/21 11:54	03/30/21 18:29	7440-62-2	D3
Zinc	0.11	mg/L	0.050	0.011	5	03/27/21 11:54	03/30/21 18:29	7440-66-6	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	03/25/21 08:05	03/25/21 13:42	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	3200	mg/L	100	100	1		03/22/21 15:50		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN CLIFTON SEEP
Pace Project No.: 92528134

Sample: CLIFTON SEEP Lab ID: 92528134001 Collected: 03/16/21 14:00 Received: 03/17/21 12:25 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
353.2 Nitrogen, NO2/NO3 unpres									
Analytical Method: EPA 353.2 Pace Analytical Services - Peachtree Corners, GA									
Nitrogen, Nitrate	17.0	mg/L	0.20	0.080	5		03/18/21 03:51	14797-55-8	
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO3)	2710	mg/L	5.0	5.0	1		03/29/21 18:52		
Alkalinity, Carbonate (CaCO3)	276	mg/L	5.0	5.0	1		03/29/21 18:52		
Alkalinity, Total as CaCO3	2990	mg/L	5.0	5.0	1		03/29/21 18:52		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	195	mg/L	8.0	4.8	8		03/21/21 10:46	16887-00-6	
Fluoride	0.48	mg/L	0.10	0.050	1		03/20/21 21:30	16984-48-8	
Sulfate	0.89J	mg/L	1.0	0.50	1		03/20/21 21:30	14808-79-8	
350.1 Ammonia									
Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, Ammonia	2.6	mg/L	0.10	0.031	1		03/28/21 13:36	7664-41-7	
351.2 Total Kjeldahl Nitrogen									
Analytical Method: EPA 351.2 Rev 2.0 1993 Preparation Method: EPA 351.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, Kjeldahl, Total	11.7	mg/L	0.50	0.25	1	03/24/21 20:15	03/25/21 04:55	7727-37-9	
5310B TOC									
Analytical Method: SM 5310B-2011 Pace Analytical Services - Asheville									
Total Organic Carbon	92.2	mg/L	5.0	2.5	5		04/03/21 16:12	7440-44-0	

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QUALITY CONTROL DATA

Project: GRUMMAN CLIFTON SEEP
Pace Project No.: 92528134

QC Batch: 608017	Analysis Method: RSK 175 Modified
QC Batch Method: RSK 175 Modified	Analysis Description: RSK 175 HEADSPACE
	Laboratory: Pace Analytical Services - Charlotte

Associated Lab Samples: 92528134001

METHOD BLANK: 3202937 Matrix: Water

Associated Lab Samples: 92528134001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methane	ug/L	ND	10.0	3.4	03/19/21 14:38	

LABORATORY CONTROL SAMPLE: 3202938

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methane	ug/L	396	324	82	70-130	

MATRIX SPIKE SAMPLE: 3204314

Parameter	Units	92527185020 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Methane	ug/L	ND	396	332	84	70-130	

SAMPLE DUPLICATE: 3204313

Parameter	Units	92527185019 Result	Dup Result	RPD	Max RPD	Qualifiers
Methane	ug/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: GRUMMAN CLIFTON SEEP
Pace Project No.: 92528134

QC Batch: 609342 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92528134001

METHOD BLANK: 3209682 Matrix: Water
Associated Lab Samples: 92528134001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	03/26/21 19:09	
Iron	mg/L	ND	0.040	0.016	03/26/21 19:09	
Magnesium	mg/L	ND	0.050	0.0076	03/26/21 19:09	
Manganese	mg/L	ND	0.040	0.0017	03/26/21 19:09	
Potassium	mg/L	ND	0.20	0.056	03/26/21 19:09	
Sodium	mg/L	ND	1.0	0.26	03/26/21 19:09	

LABORATORY CONTROL SAMPLE: 3209683

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	105	80-120	
Iron	mg/L	1	1.0	101	80-120	
Magnesium	mg/L	1	1.1	108	80-120	
Manganese	mg/L	1	1.0	100	80-120	
Potassium	mg/L	1	1.1	110	80-120	
Sodium	mg/L	1	1.0	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3209684 3209685

Parameter	Units	3209684		3209685		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	146	1	147	153	8	641	75-125	4	20	M1
Iron	mg/L	ND	1	1.0	1.0	103	103	75-125	1	20	
Magnesium	mg/L	10.6	1	11.8	12.1	122	149	75-125	2	20	M1
Manganese	mg/L	0.90	1	1.9	1.9	97	102	75-125	3	20	
Potassium	mg/L	2.0	1	3.1	3.2	114	128	75-125	4	20	M1
Sodium	mg/L	10.0	1	11.0	11.5	103	151	75-125	4	20	M1

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QUALITY CONTROL DATA

Project: GRUMMAN CLIFTON SEEP
Pace Project No.: 92528134

QC Batch: 609689	Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A	Analysis Description: 6020 MET
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92528134001

METHOD BLANK: 3211380 Matrix: Water

Associated Lab Samples: 92528134001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	03/30/21 18:18	
Arsenic	mg/L	ND	0.0050	0.00078	03/30/21 18:18	
Barium	mg/L	ND	0.0050	0.00071	03/30/21 18:18	
Beryllium	mg/L	ND	0.00050	0.000046	03/30/21 18:18	
Boron	mg/L	ND	0.040	0.0052	03/30/21 18:18	
Cadmium	mg/L	ND	0.00050	0.00012	03/30/21 18:18	
Chromium	mg/L	0.0011J	0.0050	0.00055	03/30/21 18:18	
Cobalt	mg/L	ND	0.0050	0.00038	03/30/21 18:18	
Lead	mg/L	ND	0.0010	0.000036	03/30/21 18:18	
Lithium	mg/L	ND	0.030	0.00081	03/30/21 18:18	
Molybdenum	mg/L	ND	0.010	0.00069	03/30/21 18:18	
Selenium	mg/L	ND	0.0050	0.0016	03/30/21 18:18	
Thallium	mg/L	ND	0.0010	0.00014	03/30/21 18:18	
Vanadium	mg/L	ND	0.010	0.0022	03/30/21 18:18	
Zinc	mg/L	ND	0.010	0.0022	03/30/21 18:18	

LABORATORY CONTROL SAMPLE: 3211381

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	101	80-120	
Arsenic	mg/L	0.1	0.097	97	80-120	
Barium	mg/L	0.1	0.097	97	80-120	
Beryllium	mg/L	0.1	0.095	95	80-120	
Boron	mg/L	1	0.99	99	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.097	97	80-120	
Cobalt	mg/L	0.1	0.096	96	80-120	
Lead	mg/L	0.1	0.096	96	80-120	
Lithium	mg/L	0.1	0.099	99	80-120	
Molybdenum	mg/L	0.1	0.097	97	80-120	
Selenium	mg/L	0.1	0.095	95	80-120	
Thallium	mg/L	0.1	0.094	94	80-120	
Vanadium	mg/L	0.1	0.097	97	80-120	
Zinc	mg/L	0.1	0.097	97	80-120	

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QUALITY CONTROL DATA

Project: GRUMMAN CLIFTON SEEP

Pace Project No.: 92528134

Parameter	Units	3211382		3211383		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		92528827004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Antimony	mg/L	ND	0.1	0.1	0.11	0.10	108	102	75-125	6	20	
Arsenic	mg/L	ND	0.1	0.1	0.098	0.094	97	93	75-125	4	20	
Barium	mg/L	65.7 ug/L	0.1	0.1	0.17	0.16	105	94	75-125	7	20	
Beryllium	mg/L	ND	0.1	0.1	0.10	0.10	102	101	75-125	1	20	
Boron	mg/L	47.7 ug/L	1	1	1.1	1.0	103	100	75-125	3	20	
Cadmium	mg/L	ND	0.1	0.1	0.099	0.097	99	97	75-125	2	20	
Chromium	mg/L	ND	0.1	0.1	0.097	0.096	95	94	75-125	1	20	
Cobalt	mg/L	ND	0.1	0.1	0.096	0.092	95	91	75-125	4	20	
Lead	mg/L	ND	0.1	0.1	0.097	0.094	97	94	75-125	3	20	
Lithium	mg/L	ND	0.1	0.1	0.11	0.10	106	103	75-125	3	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.097	99	96	75-125	3	20	
Selenium	mg/L	ND	0.1	0.1	0.095	0.093	94	92	75-125	2	20	
Thallium	mg/L	ND	0.1	0.1	0.094	0.091	94	91	75-125	4	20	
Vanadium	mg/L	ND	0.1	0.1	0.099	0.096	99	95	75-125	4	20	
Zinc	mg/L	ND	0.1	0.1	0.097	0.094	96	93	75-125	3	20	

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QUALITY CONTROL DATA

Project: GRUMMAN CLIFTON SEEP

Pace Project No.: 92528134

QC Batch: 609136	Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A	Analysis Description: 7470 Mercury
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92528134001

METHOD BLANK: 3208288 Matrix: Water

Associated Lab Samples: 92528134001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.000078	03/25/21 13:28	

LABORATORY CONTROL SAMPLE: 3208289

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3208290 3208291

Parameter	Units	3208290		3208291		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	92528826006 ND	0.0025	0.0025	0.0026	0.0023	102	92	75-125	10	20

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QUALITY CONTROL DATA

Project: GRUMMAN CLIFTON SEEP

Pace Project No.: 92528134

QC Batch: 608135	Analysis Method: SM 2450C-2011
QC Batch Method: SM 2450C-2011	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92528134001

METHOD BLANK: 3203645 Matrix: Water

Associated Lab Samples: 92528134001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/22/21 15:47	

LABORATORY CONTROL SAMPLE: 3203646

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	388	97	90-111	

SAMPLE DUPLICATE: 3203647

Parameter	Units	92527943001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	494	490	1	10	

SAMPLE DUPLICATE: 3203649

Parameter	Units	92527835007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	255	298	16	10	D6

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QUALITY CONTROL DATA

Project: GRUMMAN CLIFTON SEEP
Pace Project No.: 92528134

QC Batch: 607458 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres. G
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92528134001

METHOD BLANK: 3200262 Matrix: Water
Associated Lab Samples: 92528134001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.040	0.016	03/18/21 03:07	

LABORATORY CONTROL SAMPLE: 3200263

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.5	1.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3200264 3200265

Parameter	Units	3200264		3200265		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Nitrogen, Nitrate	mg/L	0.28	1.5	1.5	1.6	1.7	91	92	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3200266 3200267

Parameter	Units	3200266		3200267		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Nitrogen, Nitrate	mg/L	1.5	1.5	1.5	3.2	3.2	112	109	90-110	2	10	

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QUALITY CONTROL DATA

Project: GRUMMAN CLIFTON SEEP
Pace Project No.: 92528134

QC Batch: 609940 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92528134001

METHOD BLANK: 3212293 Matrix: Water
Associated Lab Samples: 92528134001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	5.0	03/29/21 16:34	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	ND	5.0	5.0	03/29/21 16:34	
Alkalinity,Carbonate (CaCO ₃)	mg/L	ND	5.0	5.0	03/29/21 16:34	

LABORATORY CONTROL SAMPLE: 3212294

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	46.1	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3212295 3212296

Parameter	Units	92528542001		3212296		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Alkalinity, Total as CaCO ₃	mg/L	89.3	50	50	138	146	98	113	80-120	5	25

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3212297 3212298

Parameter	Units	92528542002		3212298		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Alkalinity, Total as CaCO ₃	mg/L	30.0	50	50	80.1	81.2	100	102	80-120	1	25

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QUALITY CONTROL DATA

Project: GRUMMAN CLIFTON SEEP
Pace Project No.: 92528134

QC Batch: 607982 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
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92528134001

METHOD BLANK: 3202733 Matrix: Water
Associated Lab Samples: 92528134001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/20/21 17:54	
Fluoride	mg/L	ND	0.10	0.050	03/20/21 17:54	
Sulfate	mg/L	ND	1.0	0.50	03/20/21 17:54	

LABORATORY CONTROL SAMPLE: 3202734

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.7	103	90-110	
Fluoride	mg/L	2.5	2.6	102	90-110	
Sulfate	mg/L	50	52.5	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3202737 3202738

Parameter	Units	92528140001		3202737		3202738		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					MS % Rec
Chloride	mg/L	57.9	50	50	50	105	105	94	94	90-110	0	10
Fluoride	mg/L	ND	2.5	2.5	2.5	1.9	2.0	73	74	90-110	2	10 M6
Sulfate	mg/L	17.2	50	50	50	66.0	66.0	98	98	90-110	0	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3203204 3203205

Parameter	Units	92528440001		3203204		3203205		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					MS % Rec
Chloride	mg/L	319	50	50	50	332	332	26	27	90-110	0	10 M6
Fluoride	mg/L	0.34	2.5	2.5	2.5	2.6	2.7	90	94	90-110	3	10
Sulfate	mg/L	132	50	50	50	178	179	94	94	90-110	0	10

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QUALITY CONTROL DATA

Project: GRUMMAN CLIFTON SEEP
Pace Project No.: 92528134

QC Batch: 609781 Analysis Method: EPA 350.1 Rev 2.0 1993
QC Batch Method: EPA 350.1 Rev 2.0 1993 Analysis Description: 350.1 Ammonia
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92528134001

METHOD BLANK: 3211656 Matrix: Water

Associated Lab Samples: 92528134001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	0.031	03/28/21 13:14	

LABORATORY CONTROL SAMPLE: 3211657

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	4.9	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3211658 3211659

Parameter	Units	92525439002		3211659		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.							
Nitrogen, Ammonia	mg/L	ND	5	5	5.3	5.3	106	106	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3211660 3211661

Parameter	Units	92528059006		3211661		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.							
Nitrogen, Ammonia	mg/L	ND	5	5	5.2	5.2	103	103	90-110	0	10	

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QUALITY CONTROL DATA

Project: GRUMMAN CLIFTON SEEP
Pace Project No.: 92528134

QC Batch: 608918 Analysis Method: EPA 351.2 Rev 2.0 1993
QC Batch Method: EPA 351.2 Rev 2.0 1993 Analysis Description: 351.2 TKN
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92528134001

METHOD BLANK: 3207275 Matrix: Water
Associated Lab Samples: 92528134001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	ND	0.50	0.25	03/25/21 04:29	

LABORATORY CONTROL SAMPLE: 3207276

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	10	9.8	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3207277 3207278

Parameter	Units	92528612001		3207277		3207278		% Rec Limits	RPD	Max RPD	Qual	
		Result	MS Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result					MS % Rec
Nitrogen, Kjeldahl, Total	mg/L	9.6	10	10	10	22.2	21.4	126	118	90-110	4	10 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3207279 3207280

Parameter	Units	92528699001		3207279		3207280		% Rec Limits	RPD	Max RPD	Qual	
		Result	MS Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result					MS % Rec
Nitrogen, Kjeldahl, Total	mg/L	3.4	10	10	10	15.2	15.0	118	116	90-110	1	10 M1

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GRUMMAN CLIFTON SEEP
Pace Project No.: 92528134

QC Batch: 611248 Analysis Method: SM 5310B-2011
QC Batch Method: SM 5310B-2011 Analysis Description: 5310B TOC
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92528134001

METHOD BLANK: 3218336 Matrix: Water
Associated Lab Samples: 92528134001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.50	04/03/21 08:44	

LABORATORY CONTROL SAMPLE: 3218337

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	24.2	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3218338 3218339

Parameter	Units	92527508001		MS		MSD		% Rec		Max		Qual
		Result	Spike Conc.	Spike Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Total Organic Carbon	mg/L	23.1	25	25	47.1	47.0	96	95	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3218340 3218341

Parameter	Units	92527508011		MS		MSD		% Rec		Max		Qual
		Result	Spike Conc.	Spike Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Total Organic Carbon	mg/L	25.4	25	25	49.5	49.5	96	96	90-110	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: GRUMMAN CLIFTON SEEP

Pace Project No.: 92528134

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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: GRUMMAN CLIFTON SEEP
Pace Project No.: 92528134

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92528134001	CLIFTON SEEP				
92528134001	CLIFTON SEEP	RSK 175 Modified	608017		
92528134001	CLIFTON SEEP	EPA 3010A	609342	EPA 6010D	609604
92528134001	CLIFTON SEEP	EPA 3005A	609689	EPA 6020B	609798
92528134001	CLIFTON SEEP	EPA 7470A	609136	EPA 7470A	609168
92528134001	CLIFTON SEEP	SM 2450C-2011	608135		
92528134001	CLIFTON SEEP	EPA 353.2	607458		
92528134001	CLIFTON SEEP	SM 2320B-2011	609940		
92528134001	CLIFTON SEEP	EPA 300.0 Rev 2.1 1993	607982		
92528134001	CLIFTON SEEP	EPA 350.1 Rev 2.0 1993	609781		
92528134001	CLIFTON SEEP	EPA 351.2 Rev 2.0 1993	608918	EPA 351.2 Rev 2.0 1993	609091
92528134001	CLIFTON SEEP	SM 5310B-2011	611248		

REPORT OF LABORATORY ANALYSIS

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Document Name:
Sample Condition Upon Receipt(SCUR)
Document No.:
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020
Page 1 of 2
Issuing Authority:
Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition
Upon Receipt

Client Name:

G A Power

Project #: **WO# : 92528134**

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



92528134

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: *3/17/21*

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Thermometer: IR Gun ID: *214* Type of Ice: Wet Blue None

Yes No N/A

Cooler Temp: *5.6* Correction Factor: Add/Subtract (°C) *+0.1*

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): *5.7*

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-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	7.
Dissolved analysis: Samples Field Filtered? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <i>W</i>	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



Document Name:
Sample Condition Upon Receipt(SCUR)
 Document No.:
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020
 Page 2 of 2

Issuing Authority:
 Dept. of Environment & Natural Resources

WO# : 92528134

PM: KLH1

Due Date: 03/31/21

CLIENT: GA-GA Power

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project #

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

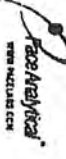
**Bottom half of box is to list number of bottles

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGfU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2SO3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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).



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
 Client Information: **Adantic Coast Consult'g, Inc**
 Address: 1150 Northmeadow Parkway
 Tallahassee, FL 32310
 Phone: (904) 594-5988
 Email: belys.mcdaniel@adoc.net

Section B
 Required Project Information:
 Report To: Betsy McDaniel
 Copy To: _____
 Purchase Order #: _____
 Project Name: Gunnman Clifton Seep
 Project #: _____

Section C
 Invoice Information:
 Attention: _____
 Company Name: _____
 Address: _____
 Page Quote: _____
 Page Project Manager: kevin.herring@peccolabs.com
 Page Profile #: 10843

Requested Analysis Pinned (Y/N)
 State/Location: GA

ITEM #	MATRIX	CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Y/N	Residual Chlorine (Y/N)
1	One Character per box (A-Z, 0-9, /, -)				03-14-21	1400				13		Metals		
												Radium 226/228		
												Nitrate		
												Alkalinity/Chloride/Fluoride/S		
												Ammonia/TKN		
												TOC		
												Methane by RSK-175		
												TDS by 2540C		

ADDITIONAL COMMENTS	REQUISITIONED BY (AFFILIATION)	DATE	TIME	ACCEPTED BY (AFFILIATION)	DATE	TIME	SAMPLE CONDITIONS
		03-16-21	1400		03-17-21	1425	Received on ice Custody Sealed Cooler Samples intact

TEMP in C

Received on ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples intact (Y/N)

SAMPLER NAME AND SIGNATURE: _____

PRINT Name of SAMPLER: O. F. ...

SIGNATURE OF SAMPLER: _____

DATE Signed: 3-16-21

April 12, 2021

Joju Abraham
Georgia Power-CCR
2480 Maner Road
Atlanta, GA 30339

RE: Project: GRUMMAN CLIFTON SEEP RADS
Pace Project No.: 92528132

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on March 17, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



Kevin Herring
kevin.herring@pacelabs.com
1(704)875-9092
HORIZON Database Administrator

Enclosures

cc: Owens Fuquea, ACC
Kristen Jurinko
Matt Malone, Atlantic Coast Consulting
Betsy McDaniel, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Ms. Lauren Petty, Southern Company



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: GRUMMAN CLIFTON SEEP RADS

Pace Project No.: 92528132

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: GRUMMAN CLIFTON SEEP RADS

Pace Project No.: 92528132

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92528132001	CLIFTON SEEP	Water	03/16/21 14:00	03/17/21 12:25

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GRUMMAN CLIFTON SEEP RADS
Pace Project No.: 92528132

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92528132001	CLIFTON SEEP	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN CLIFTON SEEP RADS

Pace Project No.: 92528132

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92528132001	CLIFTON SEEP					
EPA 9315	Radium-226	0.695 ± 0.316 (0.519)	pCi/L		03/29/21 18:47	
EPA 9320	Radium-228	C:79% T:NA 1.34 ± 0.946 (1.86)	pCi/L		04/09/21 15:21	
Total Radium Calculation	Total Radium	C:65% T:56% 2.04 ± 1.26 (2.38)	pCi/L		04/12/21 12:06	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GRUMMAN CLIFTON SEEP RADS

Pace Project No.: 92528132

Sample: CLIFTON SEEP **Lab ID: 92528132001** Collected: 03/16/21 14:00 Received: 03/17/21 12:25 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • Upon receipt at the laboratory, 7.5 mls of nitric acid were added to the sample to meet the sample preservation requirement of pH <2 for radiochemistry analysis. The samples were preserved <2 within the required 5 days of collection.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.695 ± 0.316 (0.519) C:79% T:NA	pCi/L	03/29/21 18:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.34 ± 0.946 (1.86) C:65% T:56%	pCi/L	04/09/21 15:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	2.04 ± 1.26 (2.38)	pCi/L	04/12/21 12:06	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: GRUMMAN CLIFTON SEEP RADS

Pace Project No.: 92528132

QC Batch: 440196

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92528132001

METHOD BLANK: 2125122

Matrix: Water

Associated Lab Samples: 92528132001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.624 ± 0.351 (0.633) C:78% T:86%	pCi/L	04/09/21 12:05	

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 - RADIOCHEMISTRY

Project: GRUMMAN CLIFTON SEEP RADS

Pace Project No.: 92528132

QC Batch: 439779

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92528132001

METHOD BLANK: 2123480

Matrix: Water

Associated Lab Samples: 92528132001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.00660 ± 0.163 (0.432) C:92% T:NA	pCi/L	03/29/21 08:25	

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: GRUMMAN CLIFTON SEEP RADS

Pace Project No.: 92528132

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GRUMMAN CLIFTON SEEP RADS
Pace Project No.: 92528132

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92528132001	CLIFTON SEEP	EPA 9315	439779		
92528132001	CLIFTON SEEP	EPA 9320	440196		
92528132001	CLIFTON SEEP	Total Radium Calculation	442867		

REPORT OF LABORATORY ANALYSIS

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Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:
G A Power

Project #: **WO# : 92528132**



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

Custody Seal Present? Yes No Seals Intact? Yes No

Date/initials Person Examining Contents: 3/17/21

Packing Material: Bubble Wrap Bubble Bags None Other
 Thermometer: IR Gun ID: 214 Type of Ice: Wet Blue None

Biological Tissue Frozen?
 Yes No N/A

Cooler Temp: 5.6 Correction Factor: Add/Subtract (°C) +0.1

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 5.7

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?
 Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-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	7.
Dissolved analysis: Samples Field Filtered?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>W</u>		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

Project # **WO# : 92528132**

PM: KLH1

Due Date: 04/07/21

CLIENT : GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved.(N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	3	/	/	/	/	/	/	/	3
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
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5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
9	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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).

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.



Section A
 Required Client Information:
 Agency: Atlantic Coast Consulting, Inc
 Address: 1150 Northmeadow Parkway
 Town: GA 30076
 All: betsy.mcdaniel@acc.net
 Fax: (770) 594-5998
 Requested Due Date: _____

Section B
 Required Project Information:
 Report To: Betsy McDaniel
 Copy To: _____
 Purchase Order #: _____
 Project Name: Gurmanan Clifton Seep
 Project #: _____

Section C
 Invoice Information:
 Attention: _____
 Company Name: _____
 Address: _____
 Pace Quote: _____
 Pace Project Manager: kevin.heating@pacelabs.com
 Pace Profile #: 10843

Regulatory Agency: _____
 State / Location: _____
Page : 1 Of 1

ITEM #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives		Analysis Test	Y/N	Requested Analysis Filtered (Y/N)		Residual Chlorine (Y/N)	PH = 8.92					
			DATE	TIME			DATE	TIME			Unpreserved	H2SO4			HNO3	HCl	NaOH	Na2S2O3	Methanol
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			

DISCHARGED BY / AFFILIATION	DATE	TIME	ACQ. BY / AFFILIATION	DATE	TIME
<u>[Signature]</u>	<u>3-16-21</u>	<u>175</u>	<u>[Signature]</u>	<u>3-16-21</u>	<u>1223</u>

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: <u>O. Furrer</u> SIGNATURE OF SAMPLER: <u>[Signature]</u>		DATE Signed: <u>3-16-21</u>
TEMP in C	Received on Ice <input type="checkbox"/>	Custody Sealed <input type="checkbox"/>
	Cooler <input type="checkbox"/>	Samples Intact <input type="checkbox"/>

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: CLA
Date: 3/26/2021
Worklist: 59453
Matrix: DW

Method Blank Assessment	
MB Sample ID	2129480
MB Concentration:	-0.007
MB Counting Uncertainty:	0.163
MB MDC:	0.432
MB Numerical Performance Indicator:	-0.08
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSD (Y or N)?	Y
Count Date:	LCS59453	LCS059453	3/29/2021
Spike I.D.:	19-033	19-033	24.039
Decay Corrected Spike Concentration (pCi/mL):	24.039	0.10	0.505
Volume Used (mL):	0.503	4.780	4.759
Aliquot Volume (L, g, F):	4.780	0.057	3.978
Target Conc. (pCi/L, g, F):	0.057	3.897	0.563
Uncertainty (Calculated):	3.897	-2.77	83.59%
Result (pCi/L, g, F):	0.623	N/A	Pass
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	-2.77	Pass	125%
Numerical Performance Indicator:	81.54%	Pass	75%
Percent Recovery:	N/A	Pass	75%
Status vs. Numerical Indicator:	Pass	Pass	75%
Upper % Recovery Limits:	125%	Pass	75%
Lower % Recovery Limits:	75%	Pass	75%

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below:
Sample I.D.:	LCS59453	92527242019
Duplicate Sample I.D.:	LCS059453	92527242019DUP
Sample Result (pCi/L, g, F):	3.897	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.623	
Sample Duplicate Result (pCi/L, g, F):	3.978	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.563	
Ave sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.186	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	2.49%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

M 3/30/21
lam3/30/21

Sample Matrix Spike Control Assessment		MS/MSD 1	MS/MSD 2
Sample Collection Date:			
Sample I.D.:			
Sample MS I.D.:			
Sample MSD I.D.:			
Spike I.D.:			
MS/MSD Decay Corrected Spike Concentration (pCi/mL):			
Spike Volume Used in MSD (mL):			
MS Aliquot (L, g, F):			
MS Target Conc. (pCi/L, g, F):			
MSD Aliquot (L, g, F):			
MSD Target Conc. (pCi/L, g, F):			
MS Spike Uncertainty (calculated):			
MS Spike Uncertainty (calculated):			
Sample Result:			
Sample Matrix Spike Result:			
Sample Matrix Spike Duplicate Result:			
Matrix-Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):			
MS Numerical Performance Indicator:			
MS Numerical Performance Indicator:			
MS Percent Recovery:			
MSD Percent Recovery:			
MS Status vs Numerical Indicator:			
MSD Status vs Numerical Indicator:			
MS Status vs Recovery:			
MSD Status vs Recovery:			
MS/MSD Upper % Recovery Limits:			
MS/MSD Lower % Recovery Limits:			

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Duplicate Result:	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	
% RPD Limit:	

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.



Test: Ra-226
Analyst: CLA
Date: 3/26/2021
Worklist: 59453
Matrix: DW

Method Blank Assessment	
MB Sample ID	2123480
MB Concentration:	-0.007
MB Counting Uncertainty:	0.163
MB MDC:	0.432
MB Numerical Performance Indicator:	-0.08
MB Status vs. Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS/D (Y or N)?		N
	LCS59453	LCS09453	
Count Date:	3/29/2021		LCS09453
Spike I.D.:	19-033		
Decay Corrected Spike Concentration (pCi/mL):	24.039		
Volume Used (mL):	0.10		
Aliquot Volume (L, g, F):	0.503		
Target Conc. (pCi/L, g, F):	4.780		
Uncertainty (Calculated):	0.057		
Result (pCi/L, g, F):	3.897		
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.623		
Numerical Performance Indicator:	-2.77		
Percent Recovery:	81.54%		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	Pass		
Upper % Recovery Limits:	125%		
Lower % Recovery Limits:	75%		

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	92527242019
Duplicate Sample I.D.:	92527242019DUP
Sample Result (pCi/L, g, F):	1.172
Sample Result Counting Uncertainty (pCi/L, g, F):	0.336
Sample Duplicate Result (pCi/L, g, F):	0.742
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.339
Are sample and/or duplicate results below RL?	See Below.##
Duplicate Numerical Performance Indicator:	1.768
Duplicate RPD:	44.99%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***
% RPD Limit:	25%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

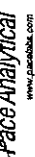
Comments:

***Batch must be re-assessed due to unacceptable precision. N/A
 Results c Sp MDC, NI - 3 accepted
 N/A M 3/30/21

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): Spike Volume Used in MSD (mL): MS Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): MSD Aliquot (L, g, F): MSD Target Conc. (pCi/L, g, F): MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated):		
Sample Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Result: Matrix Spike Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): MS Numerical Performance Indicator: MSD Numerical Performance Indicator: MS Percent Recovery: MSD Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D. Sample MS I.D. Sample MSD I.D. Sample Matrix Spike Result: Matrix Spike Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): Duplicate Numerical Performance Indicator: (Based on the Percent Recoveries) MS/MSD Duplicate RPD: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPD: % RPD Limit:

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow

Test: Ra-228
Analyst: VAL
Date: 4/5/2021
Worklist: 59501
Matrix: WT

Method Blank Assessment	
MB Sample ID	2125122
MB concentration:	0.624
MB 2 Sigma CSU:	0.351
MB MDC:	0.633
MB Numerical Performance Indicator:	3.48
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS# (Y or N)?	
	LCS#9501	Y
Count Date:	4/9/2021	LCS#59501
Spike I.D.:	21-003	21-003
Decay Corrected Spike Concentration (pCi/mL):	38.142	38.142
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.811	0.812
Target Conc. (pCi/L, g, F):	4.704	4.697
Uncertainty (Calculated):	0.230	0.230
Result (pCi/L, g, F):	4.512	5.514
LCS#LCS# 2 Sigma CSU (pCi/L, g, F):	1.028	1.197
Numerical Performance Indicator:	-0.36	1.31
Percent Recovery:	95.93%	117.38%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS#LCS# in the space below.
Sample I.D.:	LCS#59501
Duplicate Sample I.D.:	LCS#59501
Sample Result (pCi/L, g, F):	4.512
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.028
Sample Duplicate Result (pCi/L, g, F):	5.514
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.197
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-1.244
(Based on the LCS/LCS# Percent Recoveries) Duplicate RPD:	20.11%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.:		
Sample MS I.D.:		
Sample MSD I.D.:		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
MS Aliquot (L, g, F):		
MS Target Conc. (pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):		
MSD Spike Uncertainty (calculated):		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
MS Numerical Performance Indicator:		
MS Numerical Performance Indicator:		
MS Percent Recovery:		
MSD Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:		
MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D.:
Sample MS I.D.:
Sample MSD I.D.:
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):
Duplicate Numerical Performance Indicator:
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:
MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs RPD:
% RPD Limit:

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

If the lowest activity sample in this batch is greater than ten times the blank value, the blank is acceptable; otherwise this batch must be re-prepped.

Handwritten notes:
MB < 1/1000 Pass
Oval
4/12/21

Low-Flow Test Report:

Test Date / Time: 3/16/2021 1:55:18 PM

Project: Grumman Road

Operator Name: O. Fuquea

Location Name: Clifton Seep Leachate Well Diameter: 0 cm Casing Type: NA Screen Length: 0 m Top of Screen: 0 m Total Depth: 0 m Initial Depth to Water: 0 ft	Pump Type: Peri. Pump Tubing Type: Poly Pump Intake From TOC: 0 ft Estimated Total Volume Pumped: 100 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 714302
---	---	---

Test Notes:

Collected at 1400. 79F cloudy.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
3/16/2021 1:55 PM	00:00	8.91 pH	28.83 °C	4,887.0 µS/cm	8.16 mg/L	141.00 NTU	169.4 mV	0.00 ft	100.00 ml/min
3/16/2021 1:55 PM	00:30	8.91 pH	28.21 °C	4,962.2 µS/cm	8.55 mg/L	141.00 NTU	169.6 mV	0.00 ft	100.00 ml/min
3/16/2021 1:56 PM	01:00	8.92 pH	27.74 °C	4,995.3 µS/cm	8.74 mg/L	141.00 NTU	169.4 mV	0.00 ft	100.00 ml/min

Samples

Sample ID:	Description:
------------	--------------

LEVEL 2A LABORATORY DATA VALIDATIONS

Grumman Road – Clifton Seep

Annual Event

March 2021

Georgia Power Company – Clifton Seep

Quality Control Review of Analytical Data – March 2021

This narrative presents results of the Quality Control (QC) data review performed on analytical data submitted by Pace Analytical Services, Asheville, Atlanta, Charlotte, and Pittsburgh for the water sample collected at Grumman Road Clifton Seep on March 16, 2021. 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 location, analytical parameters, QC samples, sampling date, and laboratory sample delivery group (SDG) designations is summarized in Table 1 of this Appendix.

In accordance with water 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 sample was 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 (USEPA 6010D), 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 2450C), Radium-226 (USEPA 9315), and Radium-228 (USEPA Method 9320) as well as select geochemical indicator parameters.

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 (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.

Field Precision: Field goals for precision were not applicable to this sampling event.

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. 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 sample 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 CLIFTON SEEP (92528134001) was qualified as non-detect (ND) for chromium 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 below the RL, the method detection limit (MDL) was raised to the sample result as part of the qualification process.

Atlantic Coast Consulting, Inc. reviewed the laboratory data from Grumman Road Clifton Seep sampled on March 16, 2021 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 – Clifton Seep

Sample Summary Table – March 2021

SDG	Field Identification	Collection Date	Lab Identification	Matrix	QC Samples	Analyses			
						Metals (6010D, 6020B)	Anions (300.0)	TDS (SM 2450C)	Radium-226/-228 (9315, 9320)
528134	CLIFTON SEEP	3/16/2021	92528134001	W		X	X	X	
528132	CLIFTON SEEP	3/16/2021	92528132001	W					X

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

TABLE 2

Georgia Power Company – Clifton Seep

Qualifier Summary Table – March 2021

SDG	Field Identification	Constituent	New RL	New MDL or MDC	Qualifier	Reason
528134	CLIFTON SEEP	Chromium		0.014	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
 TDS – Total Dissolved Solids

Qualifiers:

J – Estimated Result
 ND – Non-Detect Result

APPENDIX C

Semiannual Remedy Selection and Design Progress Report

Grumman Road Landfill
Chatham County, Georgia

2021 Annual Groundwater Monitoring and Corrective Action Report



July 2021
Grumman Road Private Industrial Landfill



Semiannual Remedy Selection and Design Progress Report

Prepared for Georgia Power Company

July 2021

Grumman Road Private Industrial Landfill

Semiannual Remedy Selection and Design Progress Report

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Engineer's Certification

This *Semiannual Remedy Selection and Design Progress Report* has been prepared for Georgia Power Company's Grumman Road Private Industrial Landfill in accordance with the U.S. Environmental Protection Agency coal combustion residuals rule, specifically 40 Code of Federal Regulations 257.97(a) and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10(6)(a). This report describes the progress made during the second semiannual period of 2020 in selecting and designing a remedy previously documented in the *Assessment of Corrective Measures* (Anchor QEA 2020).

This report was prepared under the supervision and direction of the undersigned, whose seal as a registered professional engineer is affixed below. The undersigned is practicing through Anchor QEA, LLC, which is an authorized engineering business in the State of Georgia (Certificate of Authorization license number PEF006751; a copy of this license is provided in Appendix A).



Walter John Dinicola, Principal Engineer
Georgia Professional Engineer No. PE038601

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APPENDICES

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ABBREVIATIONS

µm	micron
ACM	Assessment of Corrective Measures
ACM Report	<i>Assessment of Corrective Measures Report</i>
bgs	below ground surface
CCR	coal combustion residuals
CFR	Code of Federal Regulations
Clifton Landfill	Clifton Rental Company, Inc., Landfill
CSM	conceptual site model
D&M	Dzombak and Morel
EGL	Environmental Geochemistry Laboratory
Fe(OH) ₃ (s)	mineral phase ferrihydrite
GA EPD	Georgia Environmental Protection Division
Georgia Power	Georgia Power Company
GWPS	groundwater protection standards
ISS	in situ stabilization/solidification
K	hydraulic conductivity
K _d	soil-water partition coefficient
K _h	horizontal hydraulic conductivity
LiDAR	Light Detection and Ranging
MNA	monitored natural attenuation
MODFLOW-2005	U.S. Geological Survey modular finite-difference flow model version 2005
NAVD88	North American Vertical Datum of 1988
NOAA	National Oceanic and Atmospheric Administration
O&M	operation and maintenance
ORP	oxidation-reduction potential
PHREEQC	PH REdox EQUilibrium (C language)
PRB	permeable reactive barrier
SCM	surface complexation model
Site	Grumman Road Private Industrial Landfill
SRIL	Savannah Regional Industrial Landfill
SSE	selective sequential extraction
SSI	statistically significant increase
SSL	statistically significant level
USEPA	U.S. Environmental Protection Agency
XRD	X-ray diffraction
XRF	X-ray fluorescence

1 Introduction

In accordance with the Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4.10(6)(a), this *Semiannual Remedy Selection and Design Progress Report* has been prepared for the Grumman Road Private Industrial Landfill (Site). Assessment of Corrective Measures (ACM) requirements of GA EPD Rule 391-3-4.10(6)(a) are incorporated by reference from the U.S. Environmental Protection Agency (USEPA) coal combustion residuals (CCR) rule (40 Code of Federal Regulations [CFR] Part 257, Subpart D). This report, in support of the previously submitted *Assessment of Corrective Measures* (ACM Report; Anchor QEA 2020), documents the progress made in selecting and designing a remedy. Specifically, this report has been prepared to describe supplementary activities conducted since the first *Semiannual Remedy Selection and Design Progress Report*, which was dated February 2021 (Anchor QEA 2021).

Georgia Power Company (Georgia Power) submitted the ACM Report (Anchor QEA 2020) on December 4, 2020. Georgia Power has placed the ACM Report in the Site's operating record and posted it to the Site's CCR rule compliance website. The purpose of the ACM Report (and the subsequent semiannual progress reports) is to evaluate potential corrective measures to address the occurrence of arsenic and molybdenum in groundwater at statistically significant levels (SSLs). This process is typically iterative and may comprise multiple steps to analyze the effectiveness of corrective measures to improve groundwater quality.

Pursuant to 40 CFR 257.97, Georgia Power is evaluating the potential corrective measures presented in the ACM Report to identify an appropriate remedy or combination of remedies as soon as feasible (Anchor QEA 2020). In the ACM Report, the following remedies were considered feasible for corrective measures for groundwater at the Site (Anchor QEA 2020):

- Geochemical approaches (in situ injection)
- Hydraulic containment (pump-and-treat)
- In situ stabilization/solidification (ISS)
- Monitored natural attenuation (MNA)
- Permeable reactive barrier (PRB) wall
- Phytoremediation
- Subsurface vertical barrier wall

A comparative screening of these corrective measures is presented in Table 1 and summarized in Section 5.

This *Semiannual Remedy Selection and Design Progress Report* is included as an appendix to the *2021 Annual Groundwater Monitoring and Corrective Action Report* (ACC 2021a). Georgia Power will include future semiannual remedy selection progress reports as an appendix to the routine semiannual groundwater monitoring and corrective action reports.

Georgia Power has proactively initiated adaptive site management as outlined in the ACM Report (Anchor QEA 2020) to support the groundwater remedy selection process and address potential changes in Site conditions as appropriate. The adaptive site management approach takes existing Site conditions, including natural attenuation mechanisms, into account. Characterization activities to evaluate attenuation mechanisms at the Site include collection of data necessary to progressively evaluate the existing and long-term effectiveness of these processes in the aquifer and reduce uncertainty for decision-making at each of the following screening steps as listed in the USEPA guidelines for MNA. The 1999 MNA guidance originally introduced the “tiered approach” with three tiers of site-specific information, or lines of evidence, to evaluate the appropriate use of MNA at certain sites (USEPA 1999). In 2007, USEPA issued MNA technical guidance specific to inorganic contaminants (USEPA 2007a, 2007b) that contained four “tiers.” The 2015 MNA guidance for inorganic contaminants expands on and is designed to be a companion to the 1999 and 2007 MNA guidance. The 2015 document retains these four “tiers” but describes them as “phases” as follows (USEPA 2015):

- Phase I: demonstration that the groundwater plume is *not expanding*
- Phase II: determination that the *mechanism and rate* of the attenuation process are sufficient
- Phase III: determination that the *capacity* of the aquifer is sufficient to attenuate the mass of contaminant within the plume and that the *stability* of the immobilized contaminant is sufficient to resist remobilization
- Phase IV: design of a *performance monitoring program* based on an understanding of the mechanism of the attenuation process and establishment of contingency remedies tailored to site-specific characteristics

Georgia Power will address Phase IV, as appropriate, during the development of the future corrective action monitoring plan, after the final remedy selection report.

1.1 Site Background

The Site, located in Port Wentworth, Chatham County, Georgia, is a permitted industrial landfill owned and operated by Georgia Power, which was previously used for disposal of fly ash and bottom ash from Georgia Power’s Plant Kraft. The Site has not received ash since Plant Kraft was retired in late 2015, exempting it from the requirements of the federal CCR rule. The Site location is shown in Figure 1.

The Site is adjacent to two other permitted solid waste disposal facilities: one to the east and the other to the south (Figure 1). The closed Clifton Rental Company, Inc., Landfill (Clifton Landfill; Permit No. 025-030D(L)) is east and hydraulically upgradient and lateral gradient of the Site. Based on available information, the Clifton Landfill was not constructed with a synthetic liner or leachate collection system (which was consistent with GA EPD requirements at time of construction), and waste extends below the water table. Studies performed in 2018 and 2019 verified that Site

monitoring wells are affected by leachate-impacted water from the Clifton Landfill, which is affecting general groundwater quality at the Site. This could contribute a source of arsenic (and, by geochemical inference, molybdenum) from Site soils. The active Savannah Regional Industrial Landfill (SRIL) operated by Republic Services, Inc. (Permit No. 025-072D(L)), is south of the Site and hydraulically downgradient of both the Clifton Landfill and the Site. The SRIL is constructed with a synthetic liner and leachate collection system meeting the requirements specified in GA EPD Rule 391-3-4.

The Site consists of four parcels—A, B1, B2, and B3—comprising approximately 33 acres. Closure of the Site in accordance with the landfill permit has been completed. Parcels A and B1 were closed in 2004, and Parcels B2 and B3 were closed in 2017. The Site is permitted under Solid Waste Handling Permit No. 025-061D(LI).

A new final cover system was installed at the Site in 2019 to meet the requirements of GA EPD Rule 391-3-4-.10(7). The final cover was designed and constructed to meet the performance standards listed in 40 CFR 257.102(d)(3). The final closure Certification Report was submitted to GA EPD on November 25, 2019 (Brantley Engineering 2019).

1.2 Nature and Extent

Groundwater monitoring has been performed at the Site according to a state permit since 2000. Assessment monitoring was initiated in 2005 under the state program. Since that time, additional investigations and closure were performed, the conceptual site model (CSM) was updated based on additional investigations, and ACMs were prepared and updated.

Under GA EPD regulations applicable to the Site (GA EPD Rule 391-3-4.10(6)(a)), background sampling occurred between 2016 and 2018. Groundwater detection monitoring began following completion of background sampling, with the first sampling event occurring in March 2019. Statistically significant increases (SSIs) of 40 CFR 257 Appendix III constituents were noted as described in the *Supplemental 2019 First Semiannual Groundwater Monitoring Report* (ACC 2019). The Appendix III SSIs triggered assessment sampling for 40 CFR 257 Appendix IV constituents. Subsequent monitoring verified Appendix IV constituents arsenic and molybdenum at SSLs that exceeded the groundwater protection standards (GWPS). Recurring SSLs that exceeded the GWPS for arsenic (0.029 milligram per liter) and molybdenum (0.01 milligram per liter) during assessment monitoring are summarized as follows (ACC 2021a):

- Arsenic SSLs were identified at monitoring wells GWC-15, GWC-16, and GWC-20.
- Molybdenum SSLs were identified at monitoring wells GWB-4R, GWC-1, GWC-15, GWC-16, GWC-20, and GWC-21.

Pursuant to 40 CFR 257.96, groundwater at the Site continues to be monitored in accordance with the established assessment monitoring program while potential corrective measures are evaluated. Details are provided in the *2021 Annual Groundwater Monitoring and Corrective Action Report* (ACC 2021a). Monitoring well locations are shown in Figure 2. A potentiometric surface contour map from the March 8, 2021, gauging event is shown in Figure 3. Isoconcentration maps that show the interpreted extent of arsenic and molybdenum, as well as the posted data from the March 2021 semiannual sampling, are shown in Figures 4 and 5.

As introduced in the *2020 Semiannual Groundwater Monitoring and Corrective Action Report* (ACC 2021b) and *Semiannual Remedy Selection and Design Progress Report* (Anchor QEA 2021), five additional groundwater monitoring wells were installed between December 2020 and January 2021 to provide data to vertically delineate arsenic and molybdenum SSLs. Monitoring wells MW-23D, MW-24D, and MW-25D were installed for vertical delineation of arsenic and molybdenum. Monitoring wells MW-26D and MW-27D were installed for vertical delineation of molybdenum. The locations of these wells are shown in Figure 2. Boring and well installation logs for the new delineation wells were included in the *2020 Semiannual Groundwater Monitoring and Corrective Action Report* (ACC 2021b) and are also included in the *2021 Annual Groundwater Monitoring and Corrective Action Report* (ACC 2021a) for reference. Lithologic data from these new wells were used to update the existing CSM (Section 4).

Results from the March 2021 groundwater sampling event corroborate earlier indications that vertical delineation is complete: arsenic and molybdenum concentrations in the new vertical delineation wells are less than the GWPS. The March 2021 delineation results are provided in the *2021 Annual Groundwater Monitoring and Corrective Action Report* (ACC 2021a). The applicable laboratory analytical report is also provided in Appendix B.

As indicated in Figures 4 and 5, horizontal delineation to the south of the Site using empirical data is dependent on securing access from adjacent property owners. Per GA EPD guidance, where “denial of access prevents the installation of off-site delineation wells, a USEPA approved fate and transport model analysis may be used to delineate the limit of the contaminant plume” (GA EPD 2018). Because off-site access has not been secured, a transport model is being developed to complete horizontal delineation (Section 2.2).

2 Summary of Work Completed

Routine semiannual groundwater monitoring events performed by ACC in August 2020, September 2020, and March 2021 are documented in the *2021 Annual Groundwater Monitoring and Corrective Action Report* (ACC 2021a).

Additional data collection and analysis, treatability studies, and site-specific evaluation are necessary to further refine the CSM and evaluate the feasibility of the proposed corrective measures. To address these needs, field efforts conducted in December 2020 and January 2021 after the ACM was completed in December 2020 included collecting soil samples during the vertical delineation well drilling and installation activities. The soil samples are being used for column studies to evaluate rates, capacity, and stability of MNA. In the column studies, soils are being characterized using X-ray fluorescence (XRF), X-ray diffraction (XRD), grain size analysis, selective sequential extraction (SSE), and possibly other techniques, as needed. These evaluation activities are discussed in more detail in Section 6.

Additional field efforts conducted in March and May 2021 included collection of groundwater and well solids (precipitate) samples for laboratory analysis, as well as slug testing and installation of transducers for long-term water level monitoring to support the groundwater modeling. These activities are described in Section 2.1. The status of the groundwater modeling task is presented in Section 2.2.

2.1 Field Activities

The following summarizes the non-routine (outside of the routine semiannual sampling) field investigations and data evaluation completed since the issuance of the most recent *Semiannual Remedy Selection and Design Progress Report* (Anchor QEA 2021) in support of delineating the Appendix IV SSLs and evaluating the corrective measures presented in the ACM Report (Anchor QEA 2020).

2.1.1 Groundwater Sampling

Groundwater samples were collected from GWC-1, GWC-2, GWB-4R, GWB-5R, GWB-6R, GWA-7, GWA-8, GWC-11, GWC-12, GWC-13, GWC-14, GWC-15, GWC-16, GWC-20, and GWC-21 on March 10 through March 16, 2021, for major cation and anion analysis and subsequent PH REDox EQUilibrium (C language) (PHREEQC) geochemical modeling to predict attenuating phases. This geochemical data will also be used as input into the transport model. These samples were collected by ACC using conventional low-flow sampling techniques as part of its routine semiannual monitoring event (ACC 2021a).

Larger volumes of groundwater were collected from wells GWA-7, GWA-8, GWC-15, and GWC-20 on March 9 and March 11, 2021. Additional larger-volume groundwater samples were collected from GWC-15 and GWC-20 on May 6 and May 7, 2021, during the field mobilization for slug testing described in Section 2.1.3. These samples were collected for potential treatability studies for the geochemical approaches, specifically oxygenation and reagent injection. Groundwater samples were collected from the monitoring wells in a manner that preserved oxidation-reduction conditions of the groundwater. Prior to groundwater sample collection, each monitoring well was purged with low-flow techniques until the following field parameters stabilized: turbidity, oxidation-reduction potential (ORP), dissolved oxygen, specific conductance, temperature, and pH. Once sampling was initiated, the flow rate was increased to a rate that did not affect turbidity of the samples to reduce sample time. The groundwater samples were collected by pumping from the well directly into a collapsible Cubitainer, which was filled completely and capped with no headspace. Groundwater was field-filtered with a standard in-line 0.45-micron (μm) capsule filter. The filled container was packed and sealed inside a large Mylar bag containing oxygen-absorbent packets. The samples were stored on ice and shipped overnight to the Anchor QEA Environmental Geochemistry Laboratory (EGL) in Portland, Oregon.

2.1.2 Collection of Well Solid (Precipitate) Samples

Precipitate (well solids) samples were collected from the bottom of 17 monitoring wells: GWC-1, GWC-2, GWB-4R, GWB-5R, GWB-6R, GWA-7, GWC-9, GWC-11, GWC-12, GWC-13, GWC-14, GWC-15, GWC-16, GWC-17, GWC-20, GWC-21, and GWC-22. These monitoring wells represent all of the monitoring wells shown in Figure 2, except for the five deeper wells installed in December 2020 and January 2021. The precipitate samples were collected after the groundwater samples (Section 2.1.1) so as not to introduce turbidity into the groundwater samples.

The samples were collected as follows:

- Precipitate was pumped from the bottom of the well via polyethylene tubing and a peristaltic pump.
- Groundwater and precipitate were pumped through an in-line filter holder and stand (e.g., those manufactured by Geotech) with a 0.45- μm filter membrane until the filter clogged or the water ran clear. Up to five filters were collected at each well (with the objective to collect as much precipitate as possible from the bottom of each well). Representative photographs of the precipitate samples are provided in Appendix C.
- All filters from each well were placed in a single plastic petri dish, and the petri dish lid was secured with duct tape.
- Each wrapped petri dish was placed in a Mylar bag with oxygen-absorbent packets.
- The Mylar bags were sealed with no headspace and placed in a secured iced cooler.

- Samples were stored on ice and shipped to the Anchor QEA EGL in Portland, Oregon, for analysis.

2.1.3 Slug Test and Water Level Monitoring

To estimate horizontal hydraulic conductivity (K_h) of Unit 1 and provide input data for groundwater modeling, slug tests were performed on May 6 and May 7, 2021, and long-term water level monitoring was initiated on May 7, 2021. The slug tests (falling and rising head) were conducted on GWB-4R, GWB-6R, GWC-16, GWC-15, and GWC-13 to provide K_h estimates in support of the groundwater modeling. Dataloggers (TROLL 500s, manufactured by In-Situ) were emplaced in selected monitoring wells (the same wells as the slug test monitoring wells, plus GWA-7 and GWC-17) to provide long-term daily water level data to support the groundwater modeling.

The slug tests were performed using a PVC slug with dimensions of 0.12 foot in diameter and 5 feet long to estimate the K_h of the aquifer in the screen interval. For each test, an In-Situ Level TROLL pressure transducer was lowered into the well screen. The properly decontaminated slug was lowered to a designated depth to initiate a falling head test, then removed to begin the rising head test. The water level change was recorded at 0.5-second intervals until approximately 95% recovery had been attained.

2.2 Groundwater Modeling

Transport modeling is being conducted to evaluate horizontal delineation of arsenic and molybdenum south of the Site because access has not been secured, and the area is overlain by a permitted and lined municipal solid-waste landfill and is not accessible for drilling and well installation. The model, which is currently under development, simulates groundwater flow and reactive transport processes using the U.S. Geological Survey modular finite-difference flow model MODFLOW-2005 (Harbaugh 2005) and the reactive multicomponent transport model PHT3D (PHT3D 2020). Model construction is being performed using the graphical user interface Groundwater Vistas (Rumbaugh and Rumbaugh 2021). Based on the CSM presented in Section 4, the model is two-dimensional, consisting of one layer representing the upper sands, including topsoil, and Unit 1. As described in the ACM Report (Anchor QEA 2020), the upper sands and topsoil unit is discontinuous across the site, and both units consist of silty, fine-grain sand; therefore, combining both units into a single model layer is appropriate for meeting the objectives of the modeling exercise.

The model domain includes the Site and the neighboring Clifton Landfill and SRIL with constant head boundary conditions defining the northern and southern boundaries based on existing water level data and no flow boundary conditions defining the eastern and western boundaries.

The top of the model represents ground surface as defined by site Light Detection and Ranging (LiDAR) data and digital elevation model data from the National Oceanic and Atmospheric

Administration (NOAA), except for within the footprint of SRIL, where the top of the model represents the elevation of impermeable landfill liner. Elevations for the SRIL liner were obtained from a construction drawing of the landfill (EMC 1997). The bottom of the model represents the bottom of Unit 1 as interpreted from available soil borings from the Site and adjacent landfills.

Hydraulic conductivity (K) in the model is being defined from Site slug test data; however, K data are limited to the Site, and thus model calibration is expected to be conducted using the widely accepted model-independent parameter estimation and uncertainty analysis software PEST. Several sensitivity analyses will likely be performed as well.

Recharge inputs to the model are being defined as net recharge, considering land cover types and average annual rainfall. Rainfall data were obtained from the NOAA Climate Data Center for the Savannah International Airport, whereas land cover data were obtained from the U.S. Geological Survey National Land Cover Dataset and the Cropland Data Layer from the Natural Resources Conservation Service data gateway. In addition, the existence of landfill caps and liners and their respective design permeabilities are being accounted for in the model.

Evapotranspiration is not explicitly being defined in the "base" version of the model; however, the influence of evapotranspiration on groundwater flow and contaminant transport, particularly within highly vegetated areas such as ditches, will be evaluated under sensitivity analyses.

Geochemical reactions simulated by the model include aqueous speciation, mineral dissolution-precipitation, redox, ion exchange, and surface complexation reactions. The U.S. Geological Survey `wateq4f.dat` thermodynamic database, augmented with additional species and reactions for molybdenum from the USEPA's `minteq.dat` thermodynamic database, will be used. The Dzombak and Morel (D&M) surface complexation model (SCM) will be used for modeling adsorption on hydrous iron oxides (D&M 1990). The D&M SCM includes reactions for arsenic but was augmented with reactions for molybdenum adsorption from Gustafsson (2003). It represents a significant improvement over the traditionally used soil-water partition coefficient (K_d) approach for modeling transport and attenuation of inorganic constituents in groundwater systems. In the model, the sorption capacity of iron oxides is linked to the abundance of the mineral phase ferrihydrite ($\text{Fe}(\text{OH})_3(\text{s})$).

Conceptually, and implemented in the model, leachate-impacted groundwater from the adjacent Clifton Landfill migrates onto the Site. Reducing groundwater conditions due to infiltration of Clifton Landfill leachate (represented by high dissolved organic carbon in the model) drive the reductive dissolution of ferric iron oxides (e.g., ferrihydrite) in soil and/or ash, where present, below the water table. Ferrihydrite is a host phase for adsorbed arsenic and molybdenum, and its interaction with dissolved organic carbon releases iron, arsenic, and molybdenum to groundwater.

The transport model will be calibrated to approximately match observed arsenic and molybdenum concentrations (calibration targets) at monitoring well locations along the southern boundary of the Site. Source and background concentrations (i.e., initial conditions) are being defined based on groundwater data collected in March 2021, as well as leachate-impacted and unimpacted groundwater, soil, and ash data reported in the *Arsenic Mobilization Laboratory Evaluation* (Anchor QEA 2019). Calibration of the transport model is focused on parameters with the most uncertainty, which include K, soil sorption capacity (i.e., concentration of ferrihydrite and its associated sorption sites) and related reactivity parameters, source concentrations, and/or plume migration time as controlled by K and effective porosity. The Clifton Landfill began operation in 1978, and the Site began operation in 1986; therefore, the range of possible Clifton Landfill leachate plume migration times beneath the Site is between 35 and 43 years.

Upon completion of the groundwater reactive transport modeling, a modeling report will be developed and provided under separate cover by October 31, 2021.

3 Summary of Results

The data from the groundwater and well solids (precipitate) sampling conducted in March 2021 are being evaluated and will be reported in the next Semiannual Remedy Selection and Design Progress Report in February 2022. Preliminary data received during this reporting period are included in Appendix B.

The slug test and water level data are being applied to the transport model and will be included in the groundwater modeling report.

The laboratory analytical results from the March 2021 routine groundwater sampling event are presented in Appendix B. The isoconcentration maps for arsenic and molybdenum are presented in Figures 4 and 5. These data are discussed in detail in the *2021 Annual Groundwater Monitoring Report* (ACC 2021a).

The updated CSM and updated evaluation of corrective measures are presented in Sections 4 and 5, respectively.

4 Updated Conceptual Site Model

The additional data collected since the issuance of the ACM Report (Anchor QEA 2020) have allowed a refinement of the CSM. The refined CSM, including revised cross sections (Figures 6 and 7), are described in Sections 4.1 and 4.2.

4.1 Hydrogeological Units

Four units comprising the near-surface aquifer system have been identified (Anchor QEA 2020):

- Upper sands and topsoil
- Unit 1: uppermost aquifer: silty fine sand
- Unit 2: low permeability zone: interbedded fine sand, silt, and clay
- Unit 3: lower sand aquifer: silty and/or clayey fine to coarse sand

Detailed descriptions of these units are provided in the ACM Report (Anchor QEA 2020).

The five deep borings advanced for the monitoring wells MW-23D through MW-27D extended to depths of 60 to 70 feet below ground surface (bgs). Their boring logs, presented in the *2020 Semiannual Groundwater Monitoring and Corrective Action Report (ACC 2021b)* and in the *2021 Annual Groundwater Monitoring and Corrective Action Report (ACC 2021a)*, provide insight into the presence of Unit 2 and the lithologic character of Unit 3 underlying the southern parts of the Site. Figures 6 and 7 show updated cross sections based on the recent boring logs. The Unit 2 low permeability zone was not identified in the borings for monitoring wells MW-23D, MW-24D, MW-25D, and MW-27D located along the southern edge and southeastern part of the Site. Unit 2 was identified in the boring for MW-26D, located along the eastern edge of the Site. In MW-26D, Unit 2 was described as an approximately 8-foot-thick section of light gray clayey sand at a depth of approximately 20 feet bgs at a corresponding elevation of 26.7 feet North American Vertical Datum of 1988 (NAVD88). This indicates that Unit 2 is absent in the southeastern and southern parts of the Site, with Unit 1 directly overlying Unit 3.

The evaluation of the deeper boring logs has also provided additional information on the character of Unit 3. Well logs from borings MW-23D through MW-27D, in addition to GWC-11 and GWC-7 (Clifton Landfill wells), indicate a light yellowish brown to light or olive gray to dark gray, silty to clayey fine to coarse sand that appears to be hydraulically connected to Unit 1 in the absence of Unit 2.

4.2 Groundwater Flow

The groundwater flow characteristics described in the ACM Report (Anchor QEA 2020) have been generally corroborated by data obtained during this study period. Generally, groundwater in the near-surface aquifer system flows from north to south at the Site but is influenced by local

topography and the Clifton Landfill to the east. Figure 3 represents a depiction of a potentiometric surface for the groundwater flow regime at the Site in March 2021.

As depicted in Figure 5 of the ACM Report (Anchor QEA 2020), groundwater flows radially from the topographic and potentiometric high on Clifton Landfill toward wells GWA-7 and GWB-6R in the northern portion of the Site, creating a semiradial flow pattern from these wells onto the Site. This flow pattern from the Clifton Landfill was documented as early as 1998 (ACC 2017). The groundwater mound from the Clifton Landfill may be caused by the higher elevation of the top of Unit 2, as well as probable greater infiltration through the landfill material. In the southern portion of the Site, near Parcel A, groundwater flow is south-southeast. Based on the *2021 Annual Groundwater Monitoring and Corrective Action Report*, the flow velocity ranges from 0.15 to 0.32 foot per day (ACC 2021a).

Groundwater elevations observed across the site and adjacent landfills generally corroborate the suggestion made in the ACM Report (Anchor QEA 2020) that hydraulic communication exists between Units 1, 2, and 3, as indicated by similar water level elevations in wells screened in the various units in the east-central and southern parts of the Site (Figures 6 and 7). Note that in March 2021, the groundwater elevations in the deeper monitoring wells screened in Unit 3, MW-23D through MW-25D, as well as MW-27D, were consistently 1 to 2 feet lower elevation than the clustered shallower monitoring well screened in Unit 1. This suggests a downward vertical gradient between the two units. The greatest head difference was 5.07 feet between MW-26D and GWB-4R. This location is interpreted to have an approximately 8-foot-thick section of Unit 2 at approximately 20 feet bgs, indicating decreasing hydraulic connection between Units 1 and 3 toward the northern part of the Site.

5 Updated Evaluation of Corrective Measures

Closure of the Site and installation of a cover system in 2019 provides source control that reduces the potential for migration of CCR constituents to groundwater. The corrective measures proposed in the ACM Report (Anchor QEA 2020) were further evaluated based on site-specific conditions to address SSLs in groundwater at the Site. Each individual corrective measure was evaluated relative to criteria specified in 40 CFR 257.96(c) and 40 CFR 257.97(b).

An updated comparative evaluation and feasibility assessment of the corrective measures is provided in Table 1, which includes a brief overview of each corrective measure as follows:

- Geochemical approaches
- Hydraulic containment (pump-and-treat)
- ISS
- MNA
- PRB walls
- Phytoremediation
- Subsurface vertical barrier walls

5.1 Corrective Measures Retained

The following corrective measures are considered feasible and retained for further analyses:

- Geochemical approaches
 - Geochemical approaches involve modifying the geochemistry of the Site to immobilize arsenic and molybdenum on solids created by injection. Depending upon the objective and Site geochemical conditions, immobilization may be achieved by oxygenation or injection of the appropriate treatment solutions. Oxygenation may be achieved chemically by injecting oxidants or placing slow-release oxidizing chemical candles in wells, or by physical methods such as air sparging or installation of Waterloo Emitters in wells. Other forms of geochemical approaches (also known as enhanced attenuation) include the injection of treatment solutions to immobilize constituents by precipitation/coprecipitation and/or sorption. The treatment solutions would likely contain iron compounds to create ferrihydrite to sorb arsenic and molybdenum, or to precipitate sulfide minerals, which incorporate arsenic and molybdenum into their mineral structures.
 - Because they have been applied successfully at other sites for treatment of arsenic and are applicable over a wide range of groundwater geochemical conditions, geochemical approaches are retained for further analysis. Treatability studies for geochemical approaches are currently underway in the laboratory.

- ISS
 - ISS, also known as deep soil mixing, is a method for solidifying soil or waste material, immobilizing constituents of interest in the solid matrix, and reducing leaching of the constituents to groundwater. ISS both reduces permeability and chemically binds constituents of interest such as arsenic and molybdenum. Materials specific to the constituents of interest (e.g., ferrous sulfate or zero-valent iron for arsenic and molybdenum) may be added in small quantities to further reduce leaching of the constituents. In ISS, Portland cement and, sometimes, select chemical additives, are mixed with soil or waste material using a bucket, large augers, or rotary methods. At the Site, ISS would be used as a source-control measure to solidify/stabilize ash beneath the water table, thereby reducing leaching to groundwater. Due to the ISS application depths required at the Site, mixing by auger is likely the only viable application method.
 - Because it has been widely applied in similar applications and has been demonstrated to significantly reduce arsenic leaching to groundwater, ISS is retained for further analysis.
- MNA
 - MNA relies on natural attenuation processes (within the context of a carefully controlled and monitored site cleanup approach) to achieve site-specific remediation objectives within a time frame that is reasonable compared to that offered by other, more active methods. For arsenic and molybdenum, the primary mechanisms of natural attenuation include sorption to iron compounds such as ferrihydrite or iron sulfide minerals, precipitation and coprecipitation with sparingly soluble sulfide minerals and other compounds, and physical processes such as dispersion (USEPA 1999, 2007a, 2007b; EPRI 2015). Under favorable conditions, these processes act without human intervention to reduce the mass, toxicity, mobility, volume, or concentration of contaminants in soil or groundwater. This potential corrective measure may either be a stand-alone corrective measure or part of a combination of corrective measures to address groundwater impacts.
 - Because natural attenuation has been documented as occurring at many CCR sites and is expected to be occurring at the Site, it is retained for additional analysis. Field and laboratory studies are currently underway to demonstrate the viability of MNA at the Site.
- Phytoremediation
 - Phytoremediation uses trees or other plants to take up or immobilize constituents or achieve some level of hydraulic containment. Hyperaccumulating plants are available for arsenic and molybdenum, but the roots of those plants are too shallow to access impacted groundwater at the Site. Some level of hydraulic containment could be achieved at the Site using trees, including the engineered TreeWell system. Trees can

affect hydraulic gradients and groundwater flow by removal of water and thus can be used to create a partial barrier to groundwater flow. This process may be enhanced by planting the tree in a column of more permeable material (e.g., the TreeWell system), such that water preferentially flows toward the TreeWell. Transpiration of groundwater causes the TreeWell to act like a pumping well. In addition, some arsenic and molybdenum may be immobilized within the root zone or incidentally taken up into the tree's biomass.

- This potential corrective measure may still be feasible through targeted placement of TreeWells to promote the uptake of impacted groundwater at the Site and provide hydraulic containment without the need to treat extracted groundwater.

5.2 Corrective Measures Not Retained

The following corrective measures are not recommended for further evaluation or implementation due to site-specific conditions:

- Hydraulic containment (pump-and-treat)
- PRB walls
- Subsurface vertical barrier walls, either stand-alone or in conjunction with PRB walls in a funnel-and-gate configuration

5.2.1 Hydraulic Containment

Hydraulic containment uses pumping wells (and sometimes injection wells, trenches, and/or galleries) to contain and prevent the expansion of impacted groundwater by creating a horizontal and vertical capture zone or a hydraulic barrier. If pumped, the water may be reused in beneficial applications or treated, discharged, or reinjected after treatment. Reinjection contributes to hydraulic containment by creating a hydraulic barrier of clean water. Hydraulic containment in various applications (including pump-and-treat) is applicable to arsenic and molybdenum because conventional and proven water treatment technologies are available for arsenic and molybdenum. Implementation of hydraulic containment is not recommended for the following reasons:

- Geometry of the Site may not be amenable to effective hydraulic containment due to possible spatial constraints for system installation and the conditions created by adjacent landfills.
- Without control of Clifton Landfill leachate, the Site hydraulic control system may essentially be a treatment system for Clifton Landfill leachate and would operate indefinitely until the Clifton Landfill leachate is controlled. The Clifton Landfill leachate was sampled in March 2021. Details on sampling and analysis are included in the *2021 Annual Groundwater Monitoring and Corrective Action Report* (ACC 2021a).
- Installation of a water treatment system and identification of a discharge point for treated water would be required.

- Operation and maintenance (O&M) requirements would be high.
- A long time, likely beyond the post-closure period of 30 years, would be required to achieve GWPS.
- Hydraulic containment has low sustainability (excessive use of resources).

The geometry of the Site and spatial constraints may not allow the installation of an effective hydraulic containment system, especially in the context of adjacent landfills and the likely ongoing contribution of Clifton Landfill leachate. Unless migration of Clifton Landfill leachate is controlled, the pump-and-treat system would likely need to operate indefinitely (in perpetuity).

Based on the array of pumping (and, possibly, injection) wells, a water treatment plant would need to be located and installed. Probable spatial constraints and the associated effluent discharge point would make installation of the water treatment plant difficult. The most likely discharge point for effluent is the ditch south of the Site, which is outside of the Site property line. For this reason, it may not be available for discharge.

Hydraulic containment requires a large amount of O&M, including pumps, piping, and a water treatment system. No staff that could address the O&M needs of the system are currently on site. Hydraulic containment requires not only people resources for O&M but also continuous use of electricity and chemicals for long periods, likely for decades. Therefore, hydraulic containment is one of the least sustainable corrective action measures (EPRI 2015).

5.2.2 Permeable Reactive Barrier and Subsurface Vertical Barrier Walls

A PRB wall is the emplacement of chemically reactive materials in the subsurface to intercept impacted groundwater, provide a flow path through the reactive media, and capture or transform the constituents in groundwater to achieve GWPS downgradient of the PRB wall. PRB walls are an in situ technology that allows impacted water to flow through the media and provide a barrier to constituents, rather than to groundwater flow, thereby reducing constituents downgradient of the reactive barrier to compliance levels (Powell et al. 1998, 2002). PRB walls may be constructed as funnel-and-gate systems.

In a PRB wall implementation, reactive media may be emplaced in a trench or mixed directly with the soil or aquifer media using augers or other mixing techniques. If emplaced in a trench, coarse sand is usually included to maintain permeability through the wall. Effective reactive media are commercially available for arsenic and molybdenum. Depending on the site conditions and the objective for the PRB wall, three types of media could be used: oxygenating chemicals, adsorptive media, or organic matter and chemicals to create sulfide minerals (i.e., a biowall).

Subsurface vertical barrier walls can be used to stop the flow of groundwater and any constituents that groundwater contains, including arsenic and molybdenum. Though effective, vertical barrier

walls may serve as groundwater dams such that groundwater rises to the surface or flows around the ends of the wall. Subsurface barrier walls are not envisioned as stand-alone corrective measures at the Site.

PRB walls and associated subsurface vertical barrier walls are not recommended for further evaluation because of the following:

- Lack of a continuous, low permeability confining layer to tie the PRB wall into at depths above the maximum depth investigated (approximately 70 feet bgs)
- Periodic replacement of the reactive media for a PRB wall as the media becomes spent or clogged
 - The implementation of PRB walls can also be challenged by biofouling and mineral precipitation, which reduce the effectiveness of media over time and can increase the amount of maintenance needed for media changeouts.
- Inability to address previously impacted groundwater downgradient of wall installation

6 Planned Activities and Anticipated Schedule

Georgia Power proactively plans to initiate adaptive site management as outlined in the ACM Report (Anchor QEA 2020) to support the remedial strategy and address potential changes in Site conditions, as appropriate. The adaptive site management approach may be adjusted over the Site's life cycle as new Site information and technologies become available. Georgia Power will continue its data-collection efforts as necessary to refine the CSM and to further evaluate the feasibility of each corrective measure proposed in the ACM Report. The corrective measures that continue to be evaluated are presented in Section 5 and explained in Table 1. Once sufficient data are available to make technically sound decisions regarding the ability to implement one or more specific corrective measures, appropriate steps will be taken to design and implement a remedy for the Site.

Based on USEPA's four-phase MNA approach (USEPA 2015), additional data evaluation activities proposed to be completed during the next semiannual reporting period include the following:

- Determine if natural attenuation is occurring at the Site for arsenic and molybdenum; the geochemical data from this task will inform design of the two following tasks.
- Perform oxygenation treatability studies on groundwater to determine if oxygenation will induce the precipitation of arsenic and molybdenum, thereby enhancing natural attenuation.
- Perform treatability studies (batch and/or column tests) to determine the optimum treatment solutions, dose, and staging for in situ geochemical approaches.

Specific activities to be performed during the next semiannual reporting period include the following:

- Continued routine groundwater sampling to analyze and evaluate trends for effectiveness of source control and plume stability
- Plot concentration versus time and concentration versus distance graphs (as applicable) to determine if natural attenuation is already occurring through time and space. Concentration versus time graphs may also be used to determine expected attenuation rates.
- Continue analyses and data evaluation of the well solids (precipitate) samples collected in March 2021 (Table 2), including the following tasks:
 - XRF: provides bulk chemistry
 - XRD: identifies and provides mineralogy of crystalline attenuating phases
 - Scanning electron microscopy: allows direct visual observation and microchemical elemental analysis of attenuating phases
 - SSE: determines which attenuating solid phases are associated with arsenic and molybdenum
 - Cation exchange capacity: determines if cation exchange on clays is an attenuating mechanism

- As necessary, perform treatability studies using groundwater collected from wells GWC-15 and GWC-20 and a subset of soil samples collected during well installation in December 2020 and January 2021.
 - Potential treatability studies include aeration, chemical oxidation, and evaluation of arsenic and molybdenum sequestration by in situ formation of biogenic sulfide minerals.
- Evaluate hydraulic containment feasibility using TreeWells.
- Evaluate ISS feasibility.

Table 3 presents these additional data collection and evaluation activities proposed to be completed during the next semiannual reporting period. The results of the evaluations are anticipated to be included in the next *Semiannual Remedy Selection and Design Progress Report* in February 2022.

Georgia Power will continue to prepare semiannual remedy selection progress reports to document groundwater conditions, results associated with additional data gathering, and the progress in selecting and designing the remedy in accordance with 40 CFR 257.97(a). Georgia Power will include future semiannual remedy selection progress reports in routine groundwater monitoring and corrective action reports. Recordkeeping, notifications, and publicly accessible website requirements for the semiannual remedy selection progress reports will be provided in accordance with 40 CFR 257.105(h)(12), 257.106(h)(9), and 257.107(h)(9), respectively.

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Tables

Table 1
Evaluation of Remedial Technologies

Corrective Measure	Regulatory Citation for Criteria	40 CFR 257.96(C)(1)			
	Description	Performance	Reliability	Ease or Difficulty of Implementation	Potential Impacts of Remedy
Geochemical approaches (injection of oxidizing chemicals or placement of slow-release oxidizing chemical candles in wells)	Geochemical approaches involve modifying the geochemistry of the Site to immobilize arsenic and molybdenum on solids created by injection. Depending upon the objective and Site geochemical conditions, immobilization may be achieved by oxygenation or injection of the appropriate treatment solutions. Oxygenation may be achieved chemically by injecting oxidants, placing slow-release oxidizing chemical candles in wells, or by physical methods such as air sparging or installation of Waterloo Emitters in wells. Other forms of geochemical approaches (also known as enhanced attenuation) include the injection of treatment solutions to immobilize constituents by precipitation/coprecipitation and/or sorption. The treatment solutions would likely contain iron compounds to create ferrihydrite to sorb arsenic and molybdenum, or to precipitate sulfide minerals, which incorporate arsenic and molybdenum into their mineral structures.	The performance of this remedy is considered medium. The groundwater is made more oxidizing by the treatment chemicals, which prevents mobilization of arsenic and molybdenum concentrations due to Clifton Landfill leachate and produces conditions more amenable to attenuation.	The reliability of this remedy is considered medium. Multiple injections will likely be required, or oxidizing candles will need to be replaced.	Implementation of this remedy would be relatively easy.	The unintended release of constituents currently bound to soil is possible if inappropriate treatment chemicals are used.
Geochemical approaches (oxygenation by physical means such as air sparging or Waterloo Emitters)	placating slow-release oxidizing chemical candles in wells, or by physical methods such as air sparging or installation of Waterloo Emitters in wells. Other forms of geochemical approaches (also known as enhanced attenuation) include the injection of treatment solutions to immobilize constituents by precipitation/coprecipitation and/or sorption. The treatment solutions would likely contain iron compounds to create ferrihydrite to sorb arsenic and molybdenum, or to precipitate sulfide minerals, which incorporate arsenic and molybdenum into their mineral structures.	The performance of this remedy is considered medium. Oxygen would need good distribution within the aquifer, and sufficient iron would need to be present in groundwater to facilitate attenuation.	The reliability of this remedy is considered medium. Mechanical components such as sparging wells and emitters would need to be maintained.	The ease of implementation for this remedy is considered moderate. Mechanical components would need to be designed and installed.	The unintended release of constituents currently bound to soil is possible if geochemical conditions are not well understood.
Geochemical approaches (adsorption to or coprecipitation with iron compounds via injection of treatment chemicals)		The performance of this remedy is considered medium. Leachate from the Clifton Landfill would need to be controlled for adsorption to iron compounds.	The reliability of this remedy is considered medium. Multiple injections will likely be required.	Implementation of this remedy would be relatively easy.	The unintended release of constituents currently bound to soil is possible if inappropriate treatment chemicals are used.
Hydraulic containment (pump-and-treat)	Hydraulic containment uses pumping wells (and sometimes injection wells, trenches, and/or galleries) to contain and prevent the expansion of impacted groundwater by creating a horizontal and vertical capture zone or a hydraulic barrier. If pumped, the water may be reused in beneficial applications or treated, discharged, or reinjected after treatment. Reinjection contributes to hydraulic containment by creating a hydraulic barrier of clean water. Hydraulic containment in various applications (including pump-and-treat) is applicable to arsenic and molybdenum because conventional and proven water treatment technologies are available for arsenic and molybdenum.	Hydraulic containment via pump-and-treat has been used for groundwater corrective action for decades. When the pump-and-treat system is online, the performance is considered high. Arsenic and molybdenum are readily treated, and if the system subsurface hydraulics are designed properly, the area of impact will stabilize or shrink.	Because the pump-and-treat system requires substantial operation and maintenance, reliability is considered medium. Pumps, piping, and the water treatment system must be maintained and will be offline occasionally for various reasons.	Hydraulic containment via pump-and-treat is difficult to implement due to design; installation of wells, pumps, and piping; and space constraints. An on-site water treatment plant would be required to accommodate the quantity and constituents in the pumped groundwater. Because the quantity of water requiring treatment cannot be determined without further study, the design parameters of the treatment system would also need to be verified through additional investigations.	Hydraulic containment via pump-and-treat will alter groundwater-flow hydraulics beneath and adjacent to the Site.
In situ solidification/stabilization	ISS, also known as deep soil mixing, is a method for solidifying soil or waste material, immobilizing constituents of interest in the solid matrix, and reducing leaching of the constituents to groundwater. ISS both reduces permeability and chemically binds constituents of interest such as arsenic and molybdenum. Materials specific to the constituents of interest (e.g., ferrous sulfate or zero-valent iron for arsenic and molybdenum) may be added in small quantities to further reduce leaching of the constituents. In ISS, Portland cement and, sometimes, select chemical additives are mixed with soil or waste material using a bucket, large augers, or rotary methods. At the Site, ISS would be used as a source control measure to solidify/stabilize ash beneath the water table, thereby reducing leaching to groundwater. Due to the ISS application depths required at the Site, mixing by auger is likely the only viable application method.	Performance is considered high, as leaching of constituents can be greatly reduced in both laboratory treatability studies, and subsequent field applications. Site-specific performance would need to be assessed with laboratory treatability and, possibly, a field pilot test.	Reliability is considered high because the stabilized block does not require maintenance and is essentially permanent.	Ease of implementation is considered moderate at the Site because mixing would need to be implemented at depth from the top or slopes of the ash landfill. Depending upon the method of application, a cement batch plant (and associated pumps) may need to be constructed at the Site.	ISS may cause a temporary spike of arsenic and, possibly, molybdenum in groundwater at the time of implementation. This spike is expected to dissipate, and groundwater arsenic and molybdenum concentrations are expected to fall below pre-implementation values with time.

Corrective Measure	Regulatory Citation for Criteria	40 CFR 257.96(C)(1)			
	Description	Performance	Reliability	Ease or Difficulty of Implementation	Potential Impacts of Remedy
MNA	MNA relies on natural attenuation processes (within the context of a carefully controlled and monitored site cleanup approach) to achieve site-specific remediation objectives within a time frame that is reasonable compared to that offered by other, more active, methods. For arsenic and molybdenum, the primary mechanisms of natural attenuation include sorption to iron compounds such as ferrihydrite or iron sulfide minerals, precipitation and coprecipitation with sparingly soluble sulfide minerals and other compounds, and physical processes such as dispersion (USEPA 2007a, 2007b; EPRI 2015). Under favorable conditions, these processes act without human intervention to reduce the mass, toxicity, mobility, volume, or concentration of contaminants in soil or groundwater.	The performance of MNA requires further investigation, especially related to the identification of attenuating mechanisms, aquifer capacity for attenuation, and time to achieve GWPS. The aquifer material at the Site contains significant silt and/or clay, which favors natural attenuation mechanisms such as sorption. However, leachate from the Clifton Landfill is likely mobilizing arsenic and, possibly, molybdenum from ash and natural soil, resulting in a continued source of those constituents to groundwater if not controlled. Therefore, MNA performance is considered medium to high if landfill leachate from Clifton Landfill is controlled.	Reliability of MNA will be relatively high because MNA requires almost no operation and maintenance.	Implementation of MNA at the Site will be relatively easy. Most of the wells for MNA are already in place, though a few additional wells may need to be installed to monitor progress in critical areas.	Potential impacts of the remedy will be negligible because MNA is non-intrusive and produces no effluents or emissions.
PRB wall (containing sorptive media, oxygenation chemicals, or organic matter)	A PRB wall is the emplacement of chemically reactive materials in the subsurface to intercept impacted groundwater, provide a flow path through the reactive media, and capture or transform the constituents in groundwater to achieve GWPS downgradient of the PRB wall. PRB walls are an in situ technology that allows impacted water to flow through the media and provides a barrier to constituents, rather than to groundwater flow, thereby reducing constituents downgradient of the reactive barrier to compliance levels (Powell et al. 1998, 2002). PRB walls may be constructed as funnel-and-gate systems. In a PRB wall implementation, reactive media may be emplaced in a trench or mixed directly with the soil or aquifer media using augers or other mixing techniques. If emplaced in a trench, coarse sand is usually included to maintain permeability through the wall. Effective reactive media are commercially available for arsenic and molybdenum. Depending on the site conditions and the objective of the PRB wall, three types of media could be used: oxygenating chemicals, adsorptive media, or organic matter and chemicals to create sulfide minerals (i.e., a biowall).	When working effectively in suitable conditions, PRB walls can reduce constituents to GWPS downgradient of the walls. However, because of site-specific uncertainties associated with the reactive media and subsurface hydraulics, performance is considered medium to high.	Because the reactive media are expended, may clog through time, and will need to be replaced, reliability is considered medium.	Because it involves trenching or mixing with augers, and due to space constraints, ease of implementation is considered moderate to difficult.	Alteration of subsurface hydraulics (flow) may be a potential impact of this remedy.
Phytoremediation	Phytoremediation uses trees or other plants to take up or immobilize constituents or achieve some level of hydraulic containment. Hyperaccumulating plants are available for arsenic and molybdenum, but the roots of those plants are too shallow to access impacted groundwater at the Site. Some level of hydraulic containment could be achieved at the Site using trees, including the engineered TreeWell system. Transpiration of groundwater causes the TreeWell to act like a pumping well. Trees can affect hydraulic gradients and groundwater flow by removal of water and thus can be used to create a partial barrier to groundwater flow. This process may be enhanced by planting the tree in a column of more permeable material (e.g., the TreeWell system), such that water preferentially flows toward the TreeWell. In addition, some arsenic and molybdenum may be immobilized within the root zone or incidentally taken up into the tree biomass.	The performance of TreeWells is considered medium because the trees may not transpire (pump) enough water to maintain hydraulic containment based on site-specific conditions.	The reliability of TreeWells is considered medium because the trees may not transpire (pump) as much during winter.	Implementation of hydraulic containment using trees will be relatively easy, primarily consisting of constructing the TreeWells and planting the trees.	None have been identified.

Corrective Measure	Regulatory Citation for Criteria	40 CFR 257.96(C)(1)			
	Description	Performance	Reliability	Ease or Difficulty of Implementation	Potential Impacts of Remedy
Subsurface vertical barrier walls (if/as needed as a component of PRB walls or possibly hydraulic containment)	Subsurface vertical barrier walls can be used to stop the flow of groundwater and any constituents that groundwater contains, including arsenic and molybdenum. Though effective, vertical barrier walls may serve as groundwater dams such that groundwater rises to the surface or flows around the ends of the wall. Subsurface barrier walls are not envisioned as stand-alone corrective measures at the Site. If they offer advantages, subsurface barrier walls could be a component of PRB walls in a funnel-and-gate configuration or as part of a hydraulic containment system to direct groundwater toward pumping wells.	Subsurface vertical barrier walls are a widely used and accepted technology with relatively high performance.	Subsurface vertical barrier walls are a widely used and accepted technology with relatively high reliability due to minimal need for maintenance or replacement.	Implementation at the Site is considered easy to moderate due to trenching or other emplacement methods.	Potential impacts of the remedy include alteration of subsurface hydraulics (flow) beneath and adjacent to the Site.

Corrective Measure	Regulatory Citation for Criteria	40 CFR 257.96(C)(2)	40 CFR 257.96(C)(3)		Relative Cost	Feasibility
	Description	Time to Begin/Complete Remedy	Institutional Requirements	Other Environmental or Public Health Requirements		
Geochemical approaches (injection of oxidizing chemicals or placement of slow-release oxidizing chemical candles in wells)	Geochemical approaches involve modifying the geochemistry of the Site to immobilize arsenic and molybdenum on solids created by injection. Depending upon the objective and Site geochemical conditions, immobilization may be achieved by oxygenation or injection of the appropriate treatment solutions. Oxygenation may be achieved chemically by injecting oxidants, placing slow-release oxidizing chemical candles in wells, or by physical methods such as air sparging or installation of Waterloo Emitters in wells. Other forms of geochemical approaches (also known as enhanced attenuation) include the injection of treatment solutions to immobilize constituents by precipitation/coprecipitation and/or sorption. The treatment solutions would likely contain iron compounds to create ferrihydrite to sorb arsenic and molybdenum or to precipitate sulfide minerals, which incorporate arsenic and molybdenum into their mineral structures.	This remedy could be designed and implemented in 1 to 2 years. Once installed, the time required to achieve GWPS within the treatment area may be relatively quick but depends on the attenuation processes of each targeted constituent. The time for complete distribution of the injected materials throughout the treatment area is also variable.	An underground injection control permit may be required for injection of oxidizing chemicals.	Groundwater and/or geochemical modeling and monitoring may be required to demonstrate that unintended impacts (e.g., release of constituents) are not occurring and do not extend off site.	Low to medium	Feasible
Geochemical approaches (oxygenation by physical means such as air sparging or Waterloo Emitters)		This remedy could be designed and implemented in 1 to 2 years. Once installed, the time required to achieve GWPS within the treatment area may be relatively quick but depends on the attenuation processes of each targeted constituent. The time for complete distribution of the introduced oxygen throughout the treatment area is also variable.	None identified		Medium, due to mechanical equipment and possible use of oxygen	Feasible
Geochemical approaches (adsorption to or coprecipitation with iron compounds via injection of treatment chemicals)		This remedy could be designed and implemented in 1 to 2 years. Once installed, the time required to achieve GWPS within the treatment area may be relatively quick but depends on the attenuation processes of each targeted constituent. The time for complete distribution of the injected materials throughout the treatment area is also variable.	An underground injection control permit may be required for injection of treatment chemicals.		Low to medium	Feasible

Corrective Measure	Regulatory Citation for Criteria		40 CFR 257.96(C)(3)		Relative Cost	Feasibility
	Description	40 CFR 257.96(C)(2) Time to Begin/Complete Remedy	Institutional Requirements	Other Environmental or Public Health Requirements		
Hydraulic containment (pump-and-treat)	Hydraulic containment uses pumping wells (and sometimes injection wells, trenches, and/or galleries) to contain and prevent the expansion of impacted groundwater by creating a horizontal and vertical capture zone or hydraulic barrier. If pumped, the water may be reused in beneficial applications or treated, discharged, or reinjected after treatment. Reinjection contributes to hydraulic containment by creating a hydraulic barrier of clean water. Hydraulic containment in various applications (including pump-and-treat) is applicable to arsenic and molybdenum because conventional and proven water treatment technologies are available for arsenic and molybdenum.	Pump-and-treat could probably be designed and installed within 1 to 2 years. Based on case histories, time to achieve GWPS is dependent on the desorption kinetics of arsenic and molybdenum from the aquifer solids and could take an extended period of time. If leachate coming from the Clifton Landfill is not controlled, time to achieve GWPS cannot be determined.	Regulatory requirements and institutional controls may be greater for pump-and-treat than some of the other technologies. For example, permits may be required for the withdrawal and reinjection (if used) of water. Discharge of treated water would likely require a National Pollutant Discharge Elimination System permit.	Aboveground treatment components may need to be present for an extended period of time, generating residuals requiring management and disposal.	High	Not recommended Hydraulic containment is not recommended for the following reasons: geometry of the Site may not be amenable to effective hydraulic containment due to possible spatial constraints for system installation and the conditions created by adjacent landfills; without control of Clifton Landfill leachate, the Site hydraulic control system may essentially be a treatment system for Clifton Landfill leachate and would operate indefinitely until the landfill leachate is controlled; required installation of a water treatment system and identification of a discharge point for treated water; high operation and maintenance requirements; long time required to achieve GWPS, likely beyond the post-closure period of 30 years; and excessive use of resources (such as electricity and water treatment chemicals), making it one of the least sustainable corrective action options (EPRI 2015).
In situ solidification/stabilization	ISS is achieved by creating reactive zones in the subsurface through chemical injection to intercept constituents and permanently immobilize or degrade them into harmless end products. ISS is the process by which constituent mobility in a solid matrix is decreased through physical and/or chemical means. Grout or other chemical additives are mixed with aquifer materials to reduce permeability. The resulting lower aquifer permeability limits the flow of impacted groundwater.	ISS could be designed and implemented in 1 to 2 years. Laboratory treatability and, possibly, a field pilot test would need to be performed. Time to achieve GWPS is uncertain and may be dependent on natural attenuation processes.	No institutional requirements are expected.	There would be a small disruption of industrial area during construction. Following installation, the remedy is passive.	Medium, due to mobilization and use of large equipment and, possibly, a cement batch plant and associated equipment such as pumps	Feasible

Corrective Measure	Regulatory Citation for Criteria	40 CFR 257.96(C)(2)	40 CFR 257.96(C)(3)		Relative Cost	Feasibility
	Description	Time to Begin/Complete Remedy	Institutional Requirements	Other Environmental or Public Health Requirements		
MNA	MNA relies on natural attenuation processes (within the context of a carefully controlled and monitored site cleanup approach) to achieve site-specific remediation objectives within a time frame that is reasonable compared to that offered by other, more active methods. For arsenic and molybdenum, the primary mechanisms of natural attenuation include sorption to iron compounds such as ferrihydrite or iron sulfide minerals, precipitation and coprecipitation with sparingly soluble sulfide minerals and other compounds, and physical processes such as dispersion (USEPA 1999, 2007a, 2007b; EPRI 2015). Under favorable conditions, these processes act without human intervention to reduce the mass, toxicity, mobility, volume, or concentration of contaminants in soil or groundwater.	Implementation of MNA would require some geochemical studies and, possibly, the installation of some new wells. Because MNA does not require design and construction of infrastructure other than new monitoring wells, it can be initiated within 6 months to a year and fully implemented in 18 to 24 months. The longer time period is because initial geochemical studies would need to be performed to support USEPA's phases, and at least 1 year of groundwater monitoring data is recommended before implementation of MNA is considered complete. The additional data would be needed for statistical analysis and to determine if additional monitoring wells need to be installed. MNA is expected to be successful within a reasonable time frame if Clifton Landfill leachate is controlled.	None identified	Little to no physical disruption to remediation areas and no adverse construction-related impacts are expected on the surrounding industrial area. Following installation, the remedy is passive and does not require external energy.	Low	Feasible
PRB wall (containing sorptive media, oxygenation chemicals, or organic matter)	A PRB wall is the emplacement of chemically reactive materials in the subsurface to intercept impacted groundwater, provide a flow path through the reactive media, and capture or transform the constituents in groundwater to achieve GWPS downgradient of the PRB wall. PRB walls are an in situ technology that allows impacted water to flow through the media and provides a barrier to constituents, rather than to groundwater flow, thereby reducing constituents downgradient of the reactive barrier to compliance levels (Powell et al. 1998, 2002). PRB walls may be constructed as funnel-and-gate systems. In a PRB wall implementation, reactive media may be emplaced in a trench or mixed directly with the soil or aquifer media using augers or other mixing techniques. If emplaced in a trench, coarse sand is usually included to maintain permeability through the wall. Effective reactive media are commercially available for arsenic and molybdenum. Depending on the site conditions and the objective of the PRB wall, three types of media could be used: oxygenating chemicals, adsorptive media, or organic matter and chemicals to create sulfide minerals (i.e., a biowall).	Considering the need for laboratory treatability studies on the reactive media, analysis of the subsurface hydraulics, and the relatively small area of emplacement, time to implement the remedy is estimated to be 1 to 2 years. Once installed, the time to achieve GWPS immediately downgradient of the PRB wall is anticipated to be relatively quick. Time to achieve GWPS more distant from the PRB wall would be dependent on natural attenuation processes.	None identified	There would be a small disruption of industrial area during construction. Following installation, the remedy is passive. If reactive media are not selected carefully through laboratory treatability studies, groundwater geochemistry could be altered (possibly resulting in unintended releases of constituents downgradient of the wall).	Medium	Not recommended This is not recommended due to a lack of a continuous, low permeability confining layer to tie the PRB wall into at depths above the maximum depth investigated (approximately 70 feet bgs), periodic replacement of the reactive media as the media becomes spent or clogged, and inability to address previously impacted groundwater downgradient of wall installation.

Corrective Measure	Regulatory Citation for Criteria	40 CFR 257.96(C)(2)	40 CFR 257.96(C)(3)		Relative Cost	Feasibility
	Description	Time to Begin/Complete Remedy	Institutional Requirements	Other Environmental or Public Health Requirements		
Phytoremediation	Phytoremediation uses trees or other plants to take up or immobilize constituents or achieve some level of hydraulic containment. Hyperaccumulating plants are available for arsenic and molybdenum, but the roots of those plants are too shallow to access impacted groundwater at the Site. Some level of hydraulic containment could be achieved at the Site using trees, including the engineered TreeWell system. Trees can affect hydraulic gradients and groundwater flow by removal of water and thus can be used to create a partial barrier to groundwater flow. This process may be enhanced by planting the tree in a column of more permeable material (e.g., the TreeWell system), such that water preferentially flows toward the TreeWell. Transpiration of groundwater causes the TreeWell to act like a pumping well. In addition, some arsenic and molybdenum may be immobilized within the root zone or incidentally taken up into the tree biomass.	Phytoremediation could be designed and implemented in 6 to 12 months. Hydraulic containment is expected to occur in a reasonable time frame but needs to be calculated based on the number and transpiration rate of the TreeWells.	None identified	Little to no physical disruption to remediation areas and no adverse construction-related impacts are expected on the surrounding industrial area. Following installation, the remedy is passive and does not require external energy.	Low	Feasible
Subsurface vertical barrier walls (if/as needed as a component of PRB walls or possibly hydraulic containment)	Subsurface vertical barrier walls can be used to stop the flow of groundwater and any constituents that groundwater contains, including arsenic and molybdenum. Though effective, vertical barrier walls may serve as groundwater dams such that groundwater rises to the surface or flows around the ends of the wall. Subsurface barrier walls are not envisioned as stand-alone corrective measures at the Site. If they offer advantages, subsurface barrier walls could be a component of PRB walls in a funnel-and-gate configuration or as part of a hydraulic containment system to direct groundwater toward pumping wells.	Time to implement the remedy (design and construct the wall) could be 1 to 2 years. As a component of PRB walls in a funnel-and-gate configuration or as part of a hydraulic containment system, time to achieve GWPS would be dependent on the other corrective measures.	None identified	There would be some disruption of industrial area during construction. Following installation, the remedy is passive.	Medium	Not Recommended This is not recommended due to being contingent on companion technology; see PRB wall implementation discussion above. Also, as with a PRB wall, there is no continuous, low permeability confining layer to tie into at depths above the maximum depth investigated (approximately 70 feet bgs).

Notes:

- bgs: below ground surface
- CFR: Code of Federal Regulations
- Clifton Landfill: Clifton Rental Company, Inc., Landfill (closed)
- GWPS: groundwater protection standard
- ISS: in situ stabilization/solidification
- MNA: monitored natural attenuation
- PRB: permeable reactive barrier
- Site: Grumman Road Private Industrial Landfill
- USEPA: U.S. Environmental Protection Agency

Table 2
Summary of Well Solids Analyses

Analysis	Description	Relevance to MNA Demonstration
X-ray fluorescence	Provides bulk chemistry.	Relationships are determined among elements in attenuating phases (e.g., iron and calcium) and arsenic and/or molybdenum; supports Phase 2 (mechanisms) and Phase 3 (stability).
X-ray diffraction	Identifies and provides mineralogy of crystalline attenuating phases.	Supports Phase 2 (mechanisms) and Phase 3 (stability) of attenuation involving crystalline mineral phases.
Scanning electron microscopy	Allows direct visual observation and microchemical elemental analysis of attenuating phases.	Supports Phase 2 (mechanisms) and Phase 3 (stability) of attenuating phases.
Selective sequential extraction	Determines which attenuating solid phases are associated with arsenic and molybdenum.	Supports Phase 2 (mechanisms) and Phase 3 (stability) of attenuating phases.
Cation exchange capacity	Determines if cation exchange on clays is an attenuating mechanism.	Supports Phase 2 (mechanisms) and Phase 3 (stability) for cation exchange.

Note:

MNA: monitored natural attenuation

Table 3
Proposed ACM Supplementary Data Collection and Analysis Tasks

Task/Data Collection Event	Applicable CM	Applicability/Rationale	Field Component	Parameters of Interest	Analytical Laboratory Performing Analysis
Continue routine groundwater sampling.	1, 2, 3, 4	Analyze and evaluate trends for effectiveness of source control and plume stability.	Semiannual routine groundwater sampling	Arsenic and molybdenum	Pace Analytical Services, LLC
Determine if area of impacts is stable or shrinking.	2	First requirement (phase) for MNA; may not be met until leachate from Clifton Landfill is controlled.	No additional field component; work with groundwater monitoring data as it becomes available.	Prepare concentration versus time and concentration versus distance graphs for arsenic and molybdenum, apply statistics to graphs to demonstrate statistically significant decreases, compute rates of decrease, prepare isoconcentration maps, compute decrease in area through time, and apply Ricker method.	Desktop analysis performed by Anchor QEA using existing data.
Perform treatability studies (as necessary).	1 and 2	Site geochemical data indicate that reductive dissolution of iron is mobilizing arsenic and molybdenum. Introduction of oxygen into the system is expected to mitigate release of arsenic and molybdenum. Based on previous work, the addition of iron compounds to groundwater may also create solids that remove arsenic and molybdenum from groundwater.	No additional field component; use samples collected in spring 2021.	Arsenic, molybdenum, and iron: introduce oxygen and/or iron compounds to groundwater in the laboratory, observe whether precipitates form, and analyze the precipitates and treated groundwater.	Anchor QEA laboratory work, oxygenation and precipitation treatability studies, and follow-up data analysis
Evaluate hydraulic containment feasibility using TreeWells.	3	Determine number, placement, and pumping rate of trees to stabilize plume.	No additional field work	Arsenic and molybdenum	Desktop analysis performed by Anchor QEA.
Evaluate ISS feasibility.	4	Determine location, depth, volume, probable mixtures, and feasibility; develop treatability studies plan (if needed).	No additional field work	Arsenic and molybdenum	Desktop analysis performed by Anchor QEA.

Notes:
 CM codes:
 1. Geochemical approaches (injections and in situ oxidation)
 2. Monitored natural attenuation (MNA)
 3. TreeWells
 4. In situ solidification/stabilization (ISS)
 Clifton Landfill: Clifton Rental Company, Inc., Landfill (closed)
 CM: corrective measure

Figures

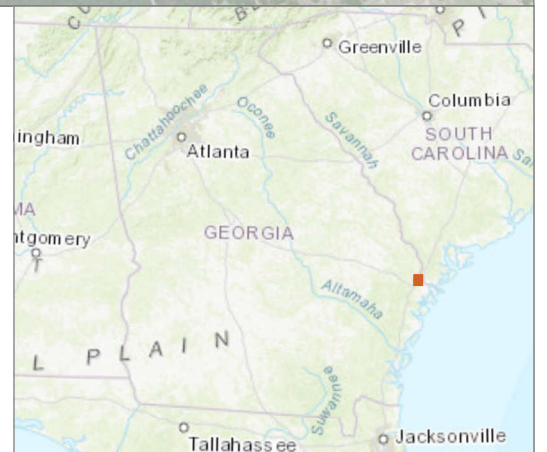
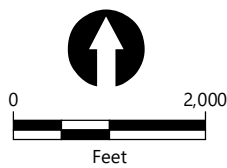


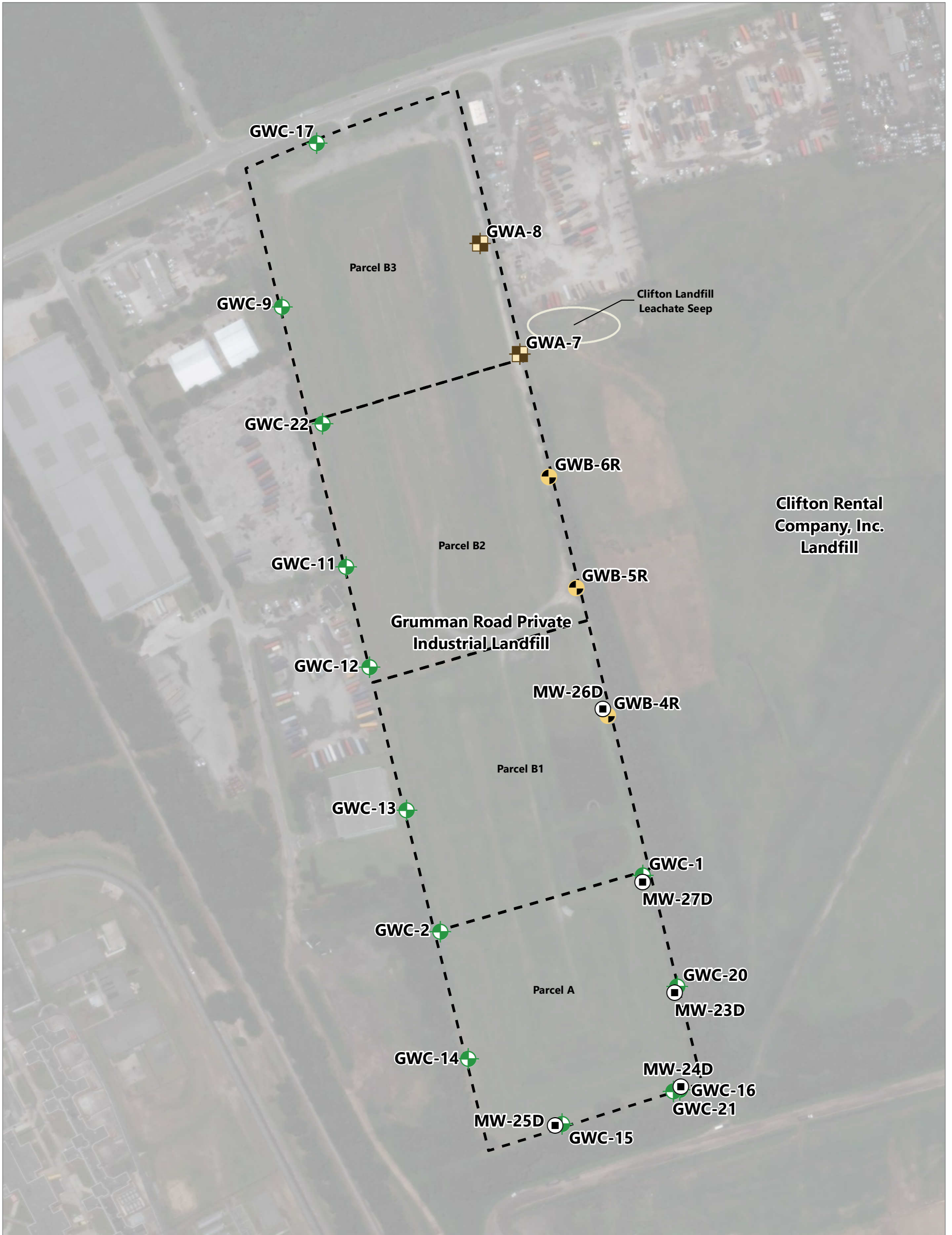
LEGEND:

 Grumman Road Private Industrial Landfill

NOTE:

1. Aerial imagery is from Esri basemap service (source date: June 24, 2020).





LEGEND:

Grumman Road Private Industrial Landfill

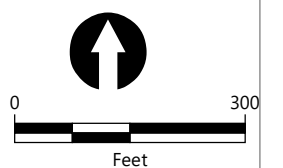
Monitoring Wells:

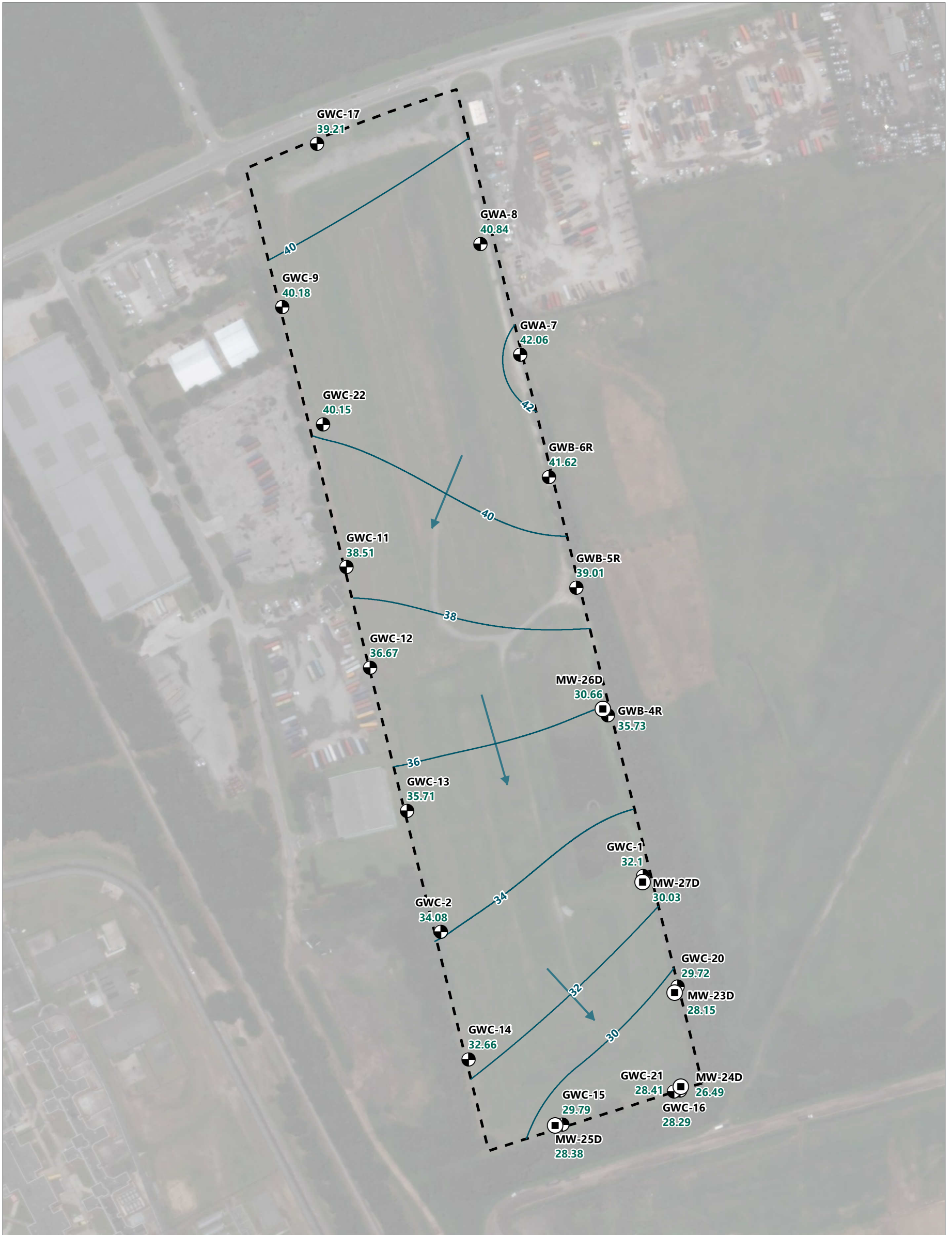
- Downgradient
- Sidegradient
- Upgradient
- Vertical Delineation

NOTES:

1. MW-23D, MW-24D, MW-25D, MW-26D, and MW-27D were installed between December 2020 and January 2021.

2. Aerial imagery is from Esri basemap service (source date: June 24, 2020).





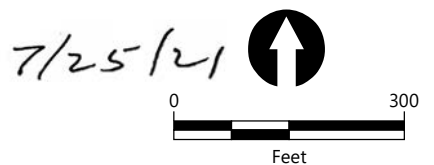
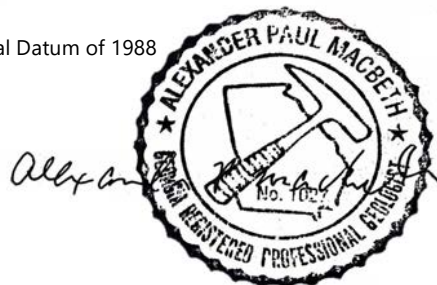
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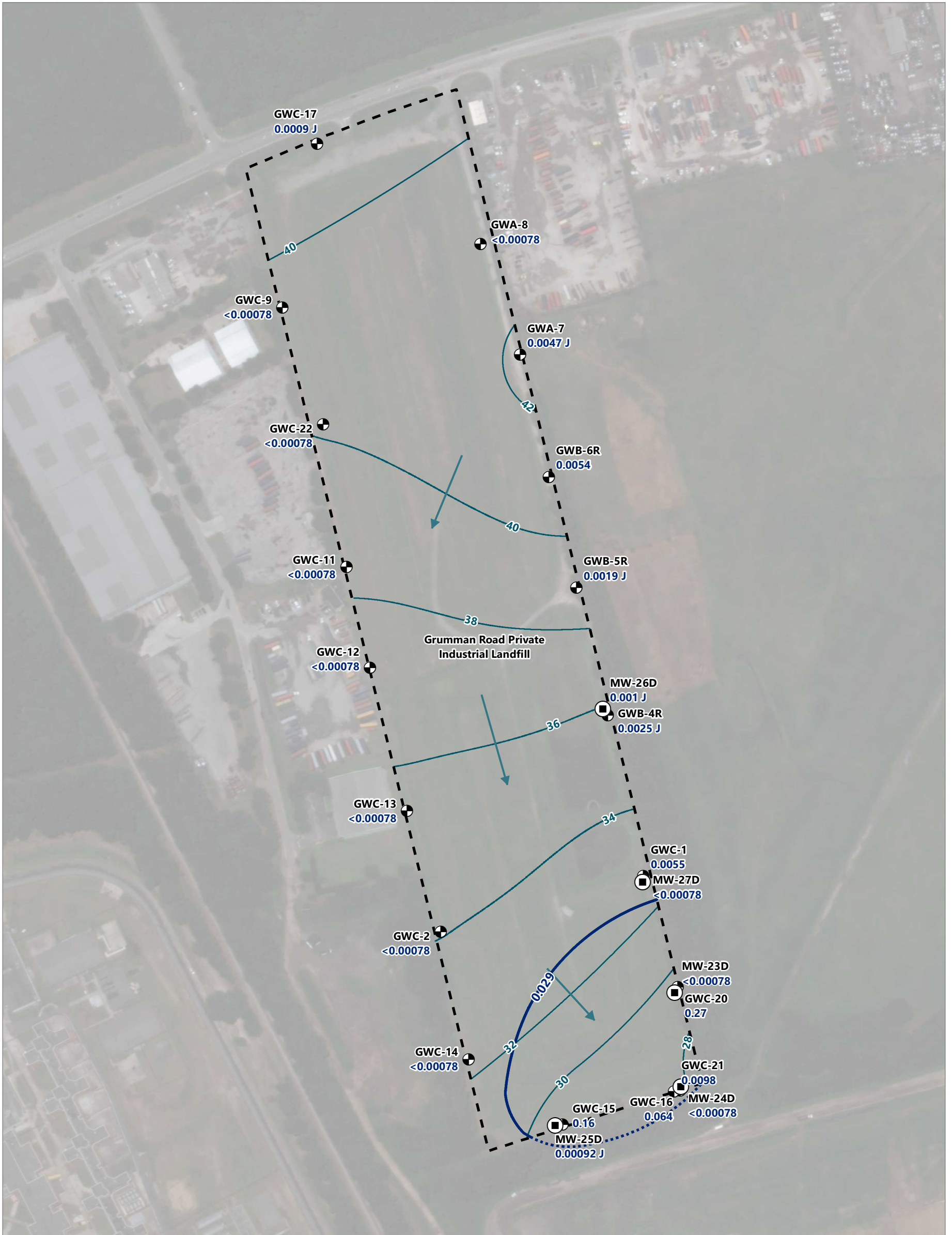
- Grumman Road Private Industrial Landfill
- Groundwater Contour (NAVD88)
- Groundwater Flow Direction
- Monitoring Well
- Vertical Delineation Well
- Measured Groundwater Table Elevation (feet NAVD88)

NOTES:

1. Groundwater elevations are from March 8, 2021, sampling event.
2. Aerial imagery is from Esri online basemap service (source date: June 24, 2020).
3. MW-23D, MW-24D, MW-25D, MW-26D, and MW-27D were not used to create groundwater contours.
4. MW-23D, MW-24D, MW-25D, MW-26D, and MW-27D were installed between December 2020 and January 2021.

NAVD88: North American Vertical Datum of 1988





LEGEND:

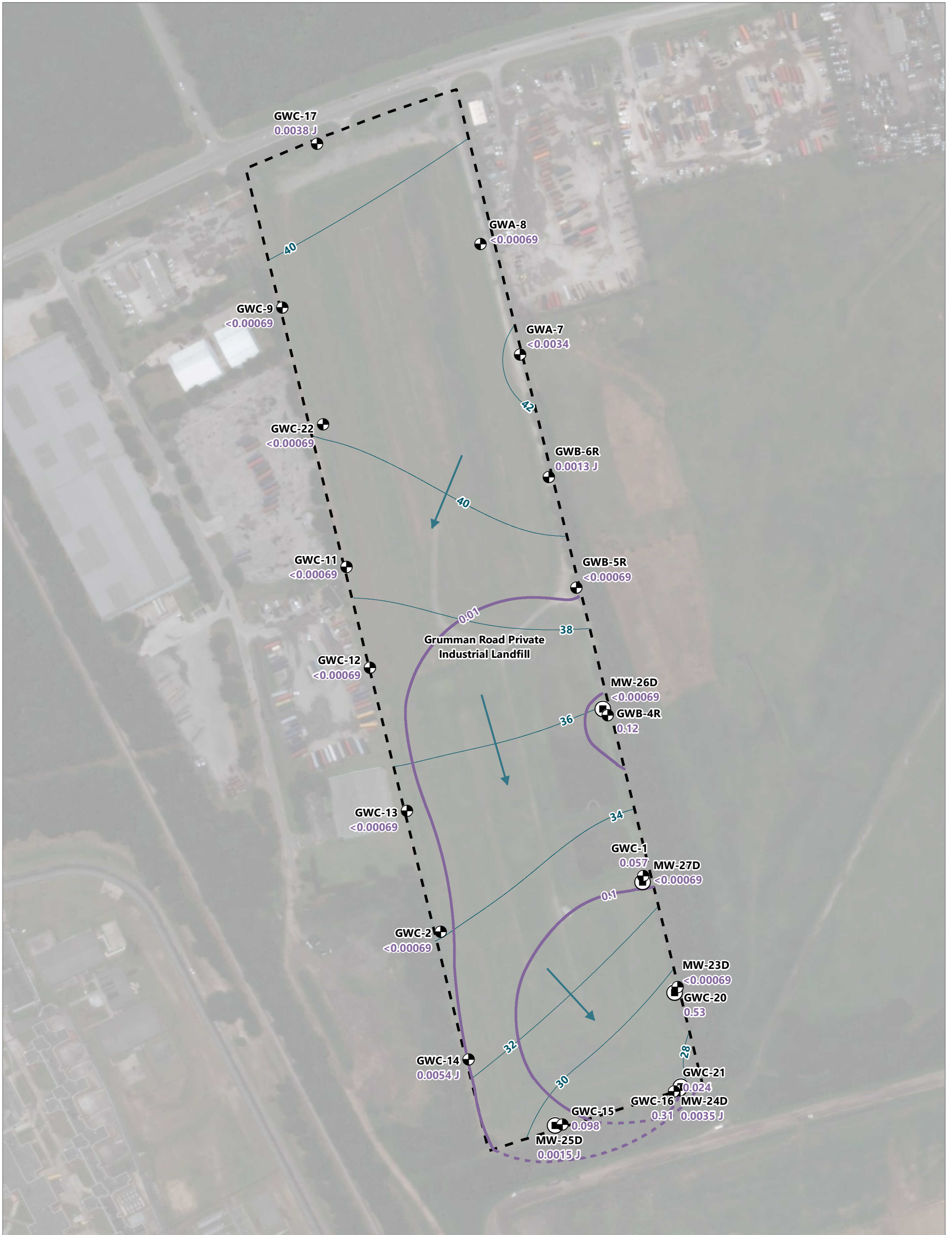
- Site Boundary
- Monitoring Well
- Vertical Delineation Well
- Arsenic Isoconcentration Contour
- Projected Arsenic Isoconcentration Contour
- Groundwater Flow Direction
- Groundwater Contour (NAVD88)

NOTES:

1. Grumman Road Private Industrial Landfill arsenic data are from the March 2021 sampling event.
2. Concentrations are reported in mg/L.
3. Site background concentration for arsenic is 0.029 mg/L and is the site-specific groundwater protection standard.
4. The groundwater protection standard was calculated using data through the March 2021 sampling event.
5. Groundwater elevations are in feet NAVD88.
6. MW-23D, MW-24D, MW-25D, MW-26D, and MW-27D were not used to create the isocontour.
7. MW-23D, MW-24D, MW-25D, MW-26D, and MW-27D were installed between December 2020 and January 2021.
8. Aerial imagery is from Esri basemap service (source date: June 24, 2020).

<: Indicates the constituent was analyzed for but not detected above the method detection limit.
 J: Reported value is an estimate because concentration is less than reporting limit and greater than the method detection limit.
 mg/L: milligrams per liter
 NAVD88: North American Vertical Datum of 1988



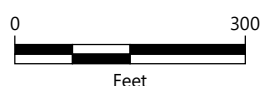


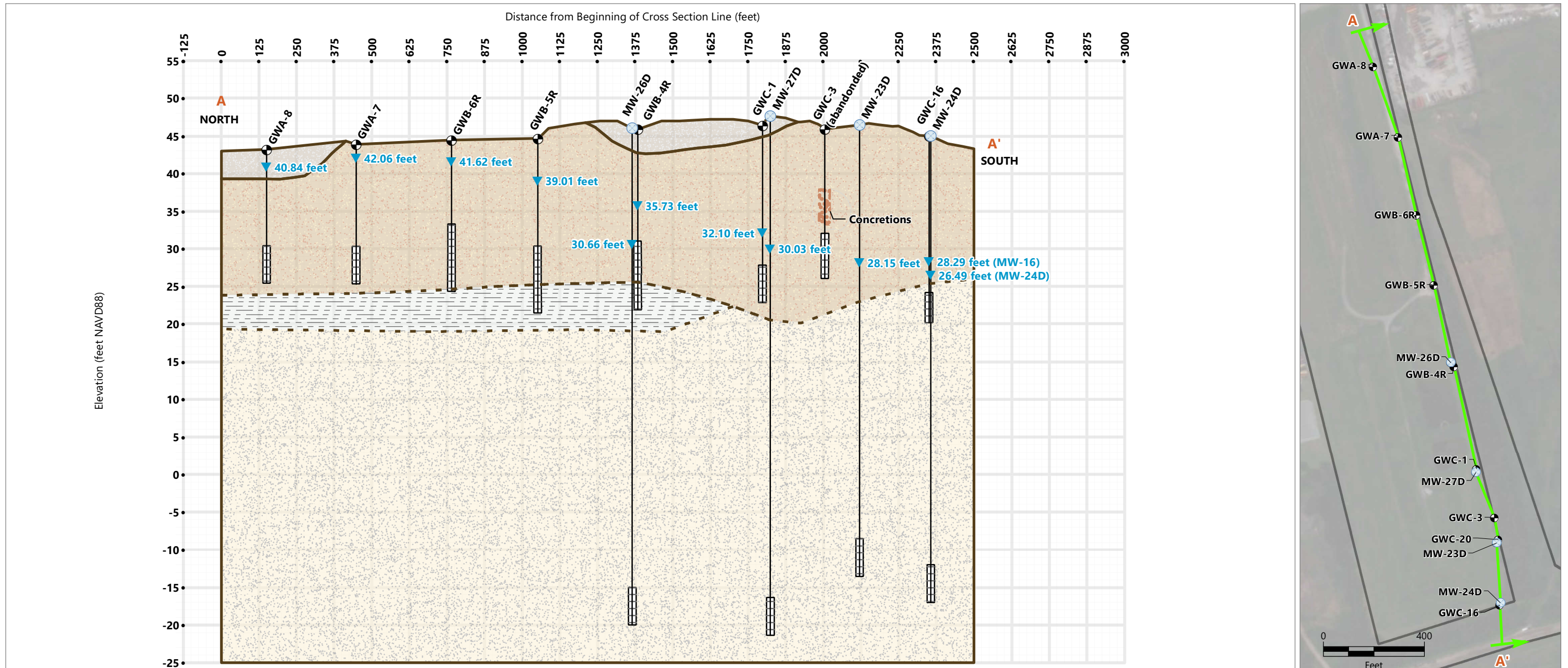
LEGEND:

- Site Boundary
- Vertical Delineation Well
- Monitoring Well
- Molybdenum Isoconcentration Contour
- Projected Molybdenum Isoconcentration Contour
- Groundwater Flow Direction
- Groundwater Contour (NAVD88)

NOTES:

1. Molybdenum and groundwater elevation data are from the March 2021 sampling event.
 2. Concentrations are reported in mg/L.
 3. RSL is 0.1 mg/L.
 4. Site background for molybdenum is 0.01 mg/L and is the site-specific groundwater protection standard.
 5. Dashed lines indicate projected molybdenum isoconcentration contours.
 6. The groundwater protection standard was calculated using data through the March 2021 sampling event.
 7. MW-23D, MW-24D, MW-25D, MW-26D, and MW-27D were not used to create isoconcentration.
 8. MW-23D, MW-24D, MW-25D, MW-26D, and MW-27D were installed between December 2020 and January 2021.
 9. Aerial imagery is from Esri basemap service (source date: June 24, 2020).
- <: Indicates the constituent was analyzed for but not detected above the method detection limit.
 J: Reported value is an estimate because concentration is less than reporting limit and greater than the method detection limit.
 mg/L: milligrams per liter
 NAVD88: North American Vertical Datum of 1988
 RSL: rule-specified level





LEGEND:

- Monitoring Well
- Vertical Delineation Well Location
- Well Depth Below Top of Casing
- Approximate Groundwater Elevation
- Monitoring Well Screened Interval
- Upper Sands and Topsoil: tan to brown or black, silty fine sand with occasional organic matter
- Unit 1: Uppermost Water-Bearing Zone: gray, tan, yellow, orange and/or brown, silty fine sand with occasional opaque minerals and orange-brown concretions
- Unit 2: Low Permeability Zone: olive gray to light gray, very silty fine sands, clayey sands, and sandy silt
- Unit 3: Lower Sand Water Bearing Zone: light yellowish brown to light or olive gray, silty to clayey fine to coarse sands

NOTES:

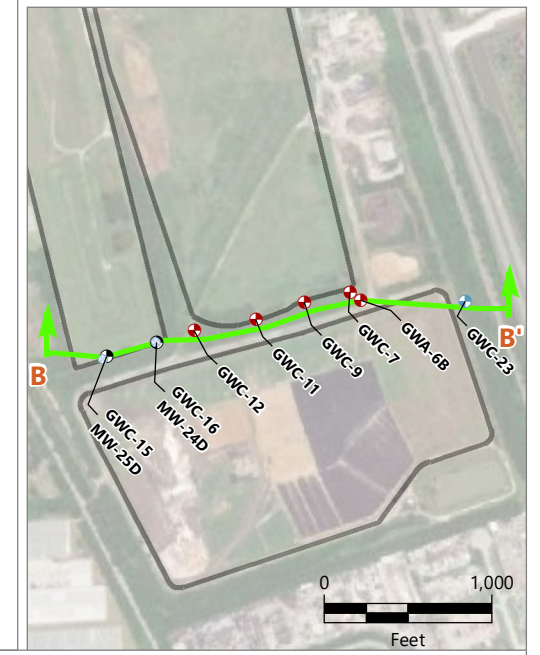
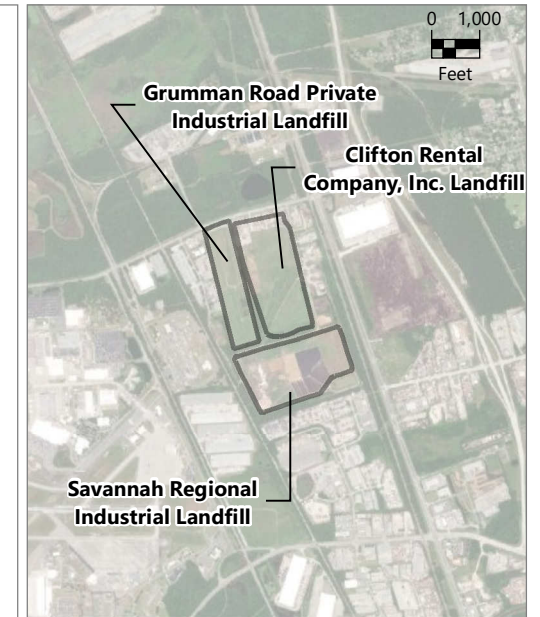
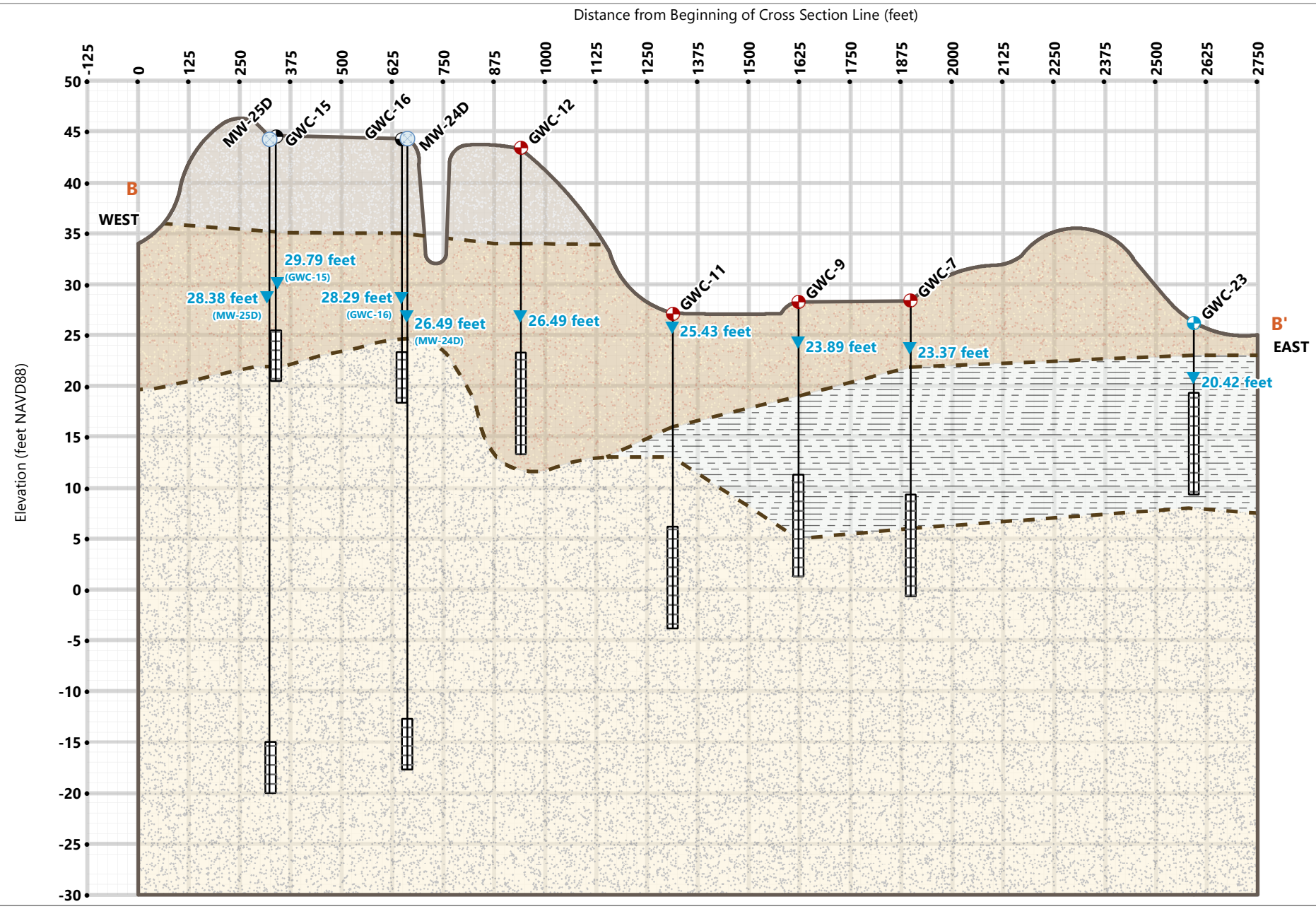
1. Cross section redrawn from figures provided in *Assessment of Corrective Measures* (Anchor QEA 2020).
2. Stratigraphic layers were correlated using a combination of boring data and gamma logs.
3. Aerial imagery is from Esri online basemap service (source date: November 10, 2019).
4. Approximate groundwater elevation data for Grumman Landfill are from the March 8, 2021, gauging event.

NAVD88: North American Vertical Datum of 1988

Publish Date: 2021/07/07, 12:08 PM | User: jquinley
 Report Title: Semiannual Remedy Selection and Design Progress Report



Figure 6
A to A' Geologic Cross Section
 Semiannual Remedy Selection and Design Progress Report
 Grumman Road Private Industrial Landfill, Port Wentworth, Georgia



LEGEND:

- Clifton Rental Company, Inc. Landfill
- Grumman Road Private Industrial Landfill
- Savannah Regional Industrial Landfill
- Vertical Delineation Well Location
- Approximate Groundwater Elevation
- Monitoring Well Screened Interval
- Upper Sands and Topsoil: tan to brown or black, silty fine sand with occasional organic matter
- Unit 1: Uppermost Water-Bearing Zone: gray, tan, yellow, orange and/or brown, silty fine sand with occasional opaque minerals and orange-brown concretions
- Unit 2: Low Permeability Zone: olive gray to light gray, very silty fine sands, clayey sands, and sandy silt
- Unit 3: Lower Sand Water Bearing Zone: light yellowish brown to light or olive gray, silty to clayey fine to coarse sands.

NOTES:

1. Stratigraphic layers were correlated using a combination of boring data and gamma logs.
 2. Approximate groundwater elevation data for Grumman Landfill are reported in NAVD88.
 3. Approximate groundwater elevation data for Clifton and Savannah landfills are reported in NAVD88.
 4. Approximate groundwater elevation data for Grumman Landfill are from the March 8, 2021, gauging event.
 5. Approximate groundwater elevation data for Clifton Landfill are from the April 13 through April 14, 2020, gauging event.
 6. Approximate groundwater elevation data for Savannah Landfill are from the February 19 through February 20, 2020, gauging event.
 7. Groundwater elevation data are not available for GWA-5.
 8. Vertical exaggeration is 25x.
 9. Aerial imagery is from Esri online basemap service (source date: November 10, 2019).
- NAVD88: North American Vertical Datum of 1988



Appendix A

Certificate of Authorization



STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
State Board of Registration for Professional Engineers and
Land Surveyors

LICENSE NO. PEF006751
Anchor QEA, LLC

10320 Little Patuxent Parkway Suite 1140
Columbia MD 21044

Engineer Firm

EXP DATE - 06/30/2022 Status: Active
Issue Date: 06/18/2015

A pocket-sized license card is below. Above is an enlarged copy of your pocket card.

Please make note of the expiration date on your license. It is your responsibility to renew your license before it expires. Please notify the Board if you have a change of address.

Wall certificates suitable for framing are available at cost, see board fee schedule. To order a wall certificate, please order from the web site – www.sos.ga.gov/plb.

Please refer to Board Rules for any continuing education requirements your profession may require.

Georgia State Board of Professional Licensing
237 Coliseum Drive
Macon GA 31217
Phone: (404) 424-9966
www.sos.ga.gov/plb

Anchor QEA, LLC
10320 Little Patuxent Parkway Suite 1140
Columbia MD 21044



STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
Georgia State Board of Registration for Professional Engineers and
Land Surveyors

License No. PEF006751
Anchor QEA, LLC

10320 Little Patuxent Parkway Suite 1140
Columbia MD 21044

Engineer Firm

EXP DATE - 06/30/2022 Status: Active
Issue Date: 06/18/2015

Appendix B

Laboratory Analytical Data

April 08, 2021

Joju Abraham
Georgia Power-CCR
2480 Maner Road
Atlanta, GA 30339

RE: Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 11, 2021 and March 17, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Peachtree Corners, GA

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

Sincerely,



Kevin Herring
kevin.herring@pacelabs.com
1(704)875-9092
HORIZON Database Administrator

Enclosures

cc: Owens Fuquea, ACC
Kristen Jurinko
Matt Malone, Atlantic Coast Consulting
Betsy McDaniel, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Ms. Lauren Petty, Southern Company



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92527508001	GWB-4R	Water	03/10/21 09:50	03/11/21 12:40
92527508002	GWB-5R	Water	03/10/21 13:15	03/11/21 12:40
92527508003	GWB-6R	Water	03/10/21 15:05	03/11/21 12:40
92527508004	GWC-1	Water	03/10/21 16:45	03/11/21 12:40
92527508005	GWC-11	Water	03/10/21 14:15	03/11/21 12:40
92527508006	GWC-12	Water	03/10/21 11:50	03/11/21 12:40
92527508007	GWA-7	Water	03/11/21 16:45	03/12/21 16:00
92527508008	GWA-8	Water	03/12/21 10:55	03/12/21 16:00
92527508009	GWC-15	Water	03/12/21 08:35	03/12/21 16:00
92527508010	GWC-20	Water	03/12/21 10:05	03/12/21 16:00
92527508011	GWC-16	Water	03/16/21 11:05	03/17/21 12:25
92527508012	GWC-14	Water	03/16/21 09:30	03/17/21 12:25
92527508013	GWC-21	Water	03/16/21 15:00	03/17/21 12:25
92527508014	GWC-2	Water	03/15/21 15:10	03/17/21 12:25
92527508015	GWC-13	Water	03/15/21 16:25	03/17/21 12:25

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92527508001	GWB-4R	EPA 6010D	KH	3
		EPA 6010D	KH	8
		EPA 6020B	CW1	16
		SM 4500-P E-2011	AW1	1
		SM 2320B-2011	ECH	3
		EPA 350.1 Rev 2.0 1993	NAL	1
		EPA 353.2 Rev 2.0 1993	KDF1	1
92527508002	GWB-5R	SM 5310B-2011	ECH	1
		EPA 6010D	KH	3
		EPA 6010D	KH	8
		EPA 6020B	CW1	16
		SM 4500-P E-2011	AW1	1
		SM 2320B-2011	ECH	3
		EPA 350.1 Rev 2.0 1993	NAL	1
92527508003	GWB-6R	EPA 353.2 Rev 2.0 1993	KDF1	1
		SM 5310B-2011	ECH	1
		EPA 6010D	KH	3
		EPA 6010D	KH	8
		EPA 6020B	CW1	16
		SM 4500-P E-2011	AW1	1
		SM 2320B-2011	ECH	3
92527508004	GWC-1	EPA 350.1 Rev 2.0 1993	NAL	1
		EPA 353.2 Rev 2.0 1993	KDF1	1
		SM 5310B-2011	ECH	1
		EPA 6010D	KH	3
		EPA 6010D	KH	8
		EPA 6020B	CW1	16
		SM 4500-P E-2011	AW1	1
92527508005	GWC-11	SM 2320B-2011	ECH	3
		SM 2320B-2011	ECH	3
		EPA 350.1 Rev 2.0 1993	NAL	1
		EPA 353.2 Rev 2.0 1993	KDF1	1
		SM 5310B-2011	ECH	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92527508006	GWC-12	EPA 350.1 Rev 2.0 1993	NAL	1
		EPA 353.2 Rev 2.0 1993	KDF1	1
		SM 5310B-2011	ECH	1
		EPA 6010D	KH	3
		EPA 6010D	KH	8
		EPA 6020B	CW1	16
		SM 4500-P E-2011	AW1	1
		SM 2320B-2011	ECH	3
		EPA 350.1 Rev 2.0 1993	NAL	1
		EPA 353.2 Rev 2.0 1993	KDF1	1
92527508007	GWA-7	SM 5310B-2011	ECH	1
		EPA 6010D	KH	3
		EPA 6010D	KH	8
		EPA 6020B	CW1	16
		SM 4500-P E-2011	AW1	1
		SM 2320B-2011	ECH	3
		EPA 350.1 Rev 2.0 1993	NAL	1
		EPA 353.2 Rev 2.0 1993	KDF1	1
		SM 5310B-2011	ECH	1
		EPA 6010D	KH	3
92527508008	GWA-8	EPA 6010D	KH	8
		EPA 6020B	CW1	16
		SM 4500-P E-2011	AW1	1
		SM 2320B-2011	ECH	3
		EPA 350.1 Rev 2.0 1993	NAL	1
		EPA 353.2 Rev 2.0 1993	KDF1	1
		SM 5310B-2011	ECH	1
		EPA 6010D	KH	3
		EPA 6010D	KH	8
		EPA 6020B	CW1	16
92527508009	GWC-15	SM 4500-P E-2011	AW1	1
		SM 2320B-2011	ECH	3
		EPA 350.1 Rev 2.0 1993	NAL	1
		EPA 353.2 Rev 2.0 1993	KDF1	1
		SM 5310B-2011	ECH	1
		EPA 6010D	KH	3
		EPA 6010D	KH	8
		EPA 6020B	CW1	16
		SM 4500-P E-2011	AW1	1
		SM 2320B-2011	ECH	3
92527508010	GWC-20	EPA 350.1 Rev 2.0 1993	NAL	1
		EPA 353.2 Rev 2.0 1993	KDF1	1
		SM 5310B-2011	ECH	1
		EPA 6010D	KH	3
		EPA 6010D	KH	8

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92527508011	GWC-16	EPA 6020B	CW1	16
		SM 4500-P E-2011	AW1	1
		SM 2320B-2011	ECH	3
		EPA 350.1 Rev 2.0 1993	NAL	1
		EPA 353.2 Rev 2.0 1993	KDF1	1
		SM 5310B-2011	ECH	1
		EPA 6010D	DRB	3
		EPA 6010D	KH	8
		EPA 6020B	CW1	16
		SM 4500-P E-2011	AW1	1
		SM 2320B-2011	ECH	3
		EPA 350.1 Rev 2.0 1993	NAL	1
		EPA 353.2 Rev 2.0 1993	KDF1	1
92527508012	GWC-14	SM 5310B-2011	ECH	1
		EPA 6010D	DRB	3
		EPA 6010D	KH	8
		EPA 6020B	CW1	16
		SM 4500-P E-2011	AW1	1
		SM 2320B-2011	ECH	3
		EPA 350.1 Rev 2.0 1993	NAL	1
		EPA 353.2 Rev 2.0 1993	KDF1	1
		SM 5310B-2011	ECH	1
		EPA 6010D	DRB	3
		EPA 6010D	KH	8
		EPA 6020B	CW1	16
		SM 4500-P E-2011	AW1	1
SM 2320B-2011	ECH	3		
EPA 350.1 Rev 2.0 1993	NAL	1		
EPA 353.2 Rev 2.0 1993	KDF1	1		
92527508013	GWC-21	SM 5310B-2011	ECH	1
		EPA 6010D	DRB	3
		EPA 6010D	KH	8
		EPA 6020B	CW1	16
		SM 4500-P E-2011	AW1	1
		SM 2320B-2011	ECH	3
		EPA 350.1 Rev 2.0 1993	NAL	1
		EPA 353.2 Rev 2.0 1993	KDF1	1
		SM 5310B-2011	ECH	1
		EPA 6010D	DRB	3
		EPA 6010D	KH	8
		EPA 6020B	CW1	16
		SM 4500-P E-2011	AW1	1
SM 2320B-2011	ECH	3		
EPA 350.1 Rev 2.0 1993	NAL	1		
EPA 353.2 Rev 2.0 1993	KDF1	1		
92527508014	GWC-2	SM 5310B-2011	ECH	1
		EPA 6010D	DRB	3
		EPA 6010D	KH	8
		EPA 6020B	CW1	16
		SM 4500-P E-2011	AW1	1
		SM 2320B-2011	ECH	3
		EPA 350.1 Rev 2.0 1993	NAL	1
		EPA 353.2 Rev 2.0 1993	KDF1	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92527508015	GWC-13	SM 5310B-2011	ECH	1
		EPA 6010D	DRB	3
		EPA 6010D	KH	8
		EPA 6020B	CW1	16
		SM 4500-P E-2011	AW1	1
		SM 2320B-2011	ECH	3
		EPA 350.1 Rev 2.0 1993	NAL	1
		EPA 353.2 Rev 2.0 1993	KDF1	1
		SM 5310B-2011	ECH	1

PASI-A = Pace Analytical Services - Asheville

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527508001	GWB-4R					
EPA 6010D	Aluminum	0.059J	mg/L	0.10	03/24/21 18:18	
EPA 6010D	Iron	0.42	mg/L	0.040	03/24/21 18:18	
EPA 6010D	Manganese	0.10	mg/L	0.040	03/24/21 18:18	
EPA 6010D	Aluminum, Dissolved	0.22	mg/L	0.10	03/23/21 19:31	
EPA 6010D	Iron, Dissolved	5.8	mg/L	0.040	03/23/21 19:31	
EPA 6010D	Manganese, Dissolved	0.17	mg/L	0.040	03/23/21 19:31	
EPA 6010D	Calcium, Dissolved	54.0	mg/L	1.0	03/23/21 19:31	M1
EPA 6010D	Magnesium, Dissolved	12.2	mg/L	0.050	03/23/21 19:31	
EPA 6010D	Sodium, Dissolved	47.9	mg/L	1.0	03/23/21 19:31	M1
EPA 6010D	Potassium, Dissolved	20.3	mg/L	0.20	03/23/21 19:31	M1
EPA 6010D	Silicon, Dissolved	1.2	mg/L	0.040	03/23/21 19:31	
EPA 6020B	Arsenic, Dissolved	0.0029J	mg/L	0.0050	03/24/21 18:56	
EPA 6020B	Barium, Dissolved	0.071	mg/L	0.0050	03/24/21 18:56	
EPA 6020B	Boron, Dissolved	4.7	mg/L	0.040	03/24/21 18:56	
EPA 6020B	Chromium, Dissolved	0.0029J	mg/L	0.0050	03/24/21 18:56	B
EPA 6020B	Cobalt, Dissolved	0.00046J	mg/L	0.0050	03/24/21 18:56	
EPA 6020B	Lead, Dissolved	0.00012J	mg/L	0.0010	03/24/21 18:56	
EPA 6020B	Lithium, Dissolved	0.012J	mg/L	0.030	03/24/21 18:56	
EPA 6020B	Molybdenum, Dissolved	0.12	mg/L	0.010	03/24/21 18:56	
EPA 6020B	Zinc, Dissolved	0.0035J	mg/L	0.010	03/24/21 18:56	
SM 2320B-2011	Alkalinity, Bicarbonate (CaCO ₃)	81.8	mg/L	5.0	03/23/21 19:41	
SM 2320B-2011	Alkalinity, Total as CaCO ₃	81.8	mg/L	5.0	03/23/21 19:41	
EPA 350.1 Rev 2.0 1993	Nitrogen, Ammonia	2.3	mg/L	0.10	03/23/21 13:03	
SM 5310B-2011	Total Organic Carbon	23.1	mg/L	1.0	04/03/21 09:22	
92527508002	GWB-5R					
EPA 6010D	Aluminum	1.3	mg/L	0.10	03/24/21 18:52	
EPA 6010D	Iron	48.7	mg/L	0.040	03/24/21 18:52	
EPA 6010D	Manganese	1.4	mg/L	0.040	03/24/21 18:52	
EPA 6010D	Aluminum, Dissolved	1.1	mg/L	0.10	03/23/21 19:50	
EPA 6010D	Iron, Dissolved	46.9	mg/L	0.040	03/23/21 19:50	
EPA 6010D	Manganese, Dissolved	1.2	mg/L	0.040	03/23/21 19:50	
EPA 6010D	Calcium, Dissolved	131	mg/L	1.0	03/23/21 19:50	
EPA 6010D	Magnesium, Dissolved	59.7	mg/L	0.050	03/23/21 19:50	
EPA 6010D	Sodium, Dissolved	48.7	mg/L	1.0	03/23/21 19:50	
EPA 6010D	Potassium, Dissolved	18.5	mg/L	0.20	03/23/21 19:50	
EPA 6010D	Silicon, Dissolved	3.5	mg/L	0.040	03/23/21 19:50	
EPA 6020B	Antimony, Dissolved	0.0018J	mg/L	0.0030	03/24/21 19:19	
EPA 6020B	Arsenic, Dissolved	0.0019J	mg/L	0.0050	03/24/21 19:19	
EPA 6020B	Barium, Dissolved	0.11	mg/L	0.0050	03/24/21 19:19	
EPA 6020B	Beryllium, Dissolved	0.00013J	mg/L	0.00050	03/24/21 19:19	
EPA 6020B	Boron, Dissolved	3.9	mg/L	0.040	03/24/21 19:19	
EPA 6020B	Chromium, Dissolved	0.0011J	mg/L	0.0050	03/24/21 19:19	B
EPA 6020B	Cobalt, Dissolved	0.0057	mg/L	0.0050	03/24/21 19:19	
EPA 6020B	Lead, Dissolved	0.00024J	mg/L	0.0010	03/24/21 19:19	
EPA 6020B	Nickel, Dissolved	0.0013J	mg/L	0.0050	03/24/21 19:19	
EPA 6020B	Zinc, Dissolved	0.0035J	mg/L	0.010	03/24/21 19:19	
SM 4500-P E-2011	Orthophosphate as P	0.0024J	mg/L	0.020	03/12/21 14:06	H1

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527508002	GWB-5R					
EPA 350.1 Rev 2.0 1993	Nitrogen, Ammonia	1.2	mg/L	0.10	03/23/21 13:05	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.022J	mg/L	0.040	03/22/21 14:15	
SM 5310B-2011	Total Organic Carbon	7.1	mg/L	1.0	04/03/21 10:14	
92527508003	GWB-6R					
EPA 6010D	Aluminum	1.2	mg/L	0.10	03/24/21 18:56	
EPA 6010D	Iron	6.3	mg/L	0.040	03/24/21 18:56	
EPA 6010D	Manganese	0.19	mg/L	0.040	03/24/21 18:56	
EPA 6010D	Aluminum, Dissolved	1.1	mg/L	0.10	03/23/21 19:55	
EPA 6010D	Iron, Dissolved	5.0	mg/L	0.040	03/23/21 19:55	
EPA 6010D	Manganese, Dissolved	0.81	mg/L	0.040	03/23/21 19:55	
EPA 6010D	Calcium, Dissolved	264	mg/L	1.0	03/23/21 19:55	
EPA 6010D	Magnesium, Dissolved	76.1	mg/L	0.050	03/23/21 19:55	
EPA 6010D	Potassium, Dissolved	86.5	mg/L	0.20	03/23/21 19:55	
EPA 6010D	Silicon, Dissolved	1.3	mg/L	0.040	03/23/21 19:55	
EPA 6010D	Sodium, Dissolved	365	mg/L	10.0	03/24/21 14:54	
EPA 6020B	Antimony, Dissolved	0.00078J	mg/L	0.0030	03/24/21 19:25	
EPA 6020B	Arsenic, Dissolved	0.0058	mg/L	0.0050	03/24/21 19:25	
EPA 6020B	Barium, Dissolved	0.029	mg/L	0.0050	03/24/21 19:25	
EPA 6020B	Boron, Dissolved	6.7	mg/L	0.040	03/24/21 19:25	
EPA 6020B	Chromium, Dissolved	0.0060	mg/L	0.0050	03/24/21 19:25	B
EPA 6020B	Lead, Dissolved	0.00016J	mg/L	0.0010	03/24/21 19:25	
EPA 6020B	Molybdenum, Dissolved	0.0012J	mg/L	0.010	03/24/21 19:25	
EPA 6020B	Nickel, Dissolved	0.0012J	mg/L	0.0050	03/24/21 19:25	
EPA 6020B	Selenium, Dissolved	0.0032J	mg/L	0.0050	03/24/21 19:25	
SM 2320B-2011	Alkalinity, Bicarbonate (CaCO3)	202	mg/L	5.0	03/23/21 19:59	
SM 2320B-2011	Alkalinity, Total as CaCO3	202	mg/L	5.0	03/23/21 19:59	
EPA 350.1 Rev 2.0 1993	Nitrogen, Ammonia	3.2	mg/L	0.10	03/25/21 10:16	
SM 5310B-2011	Total Organic Carbon	65.3	mg/L	2.0	04/03/21 10:32	
92527508004	GWC-1					
EPA 6010D	Aluminum	0.32	mg/L	0.10	03/24/21 19:01	
EPA 6010D	Iron	0.16	mg/L	0.040	03/24/21 19:01	
EPA 6010D	Manganese	0.065	mg/L	0.040	03/24/21 19:01	
EPA 6010D	Aluminum, Dissolved	0.28	mg/L	0.10	03/23/21 20:00	
EPA 6010D	Iron, Dissolved	0.11	mg/L	0.040	03/23/21 20:00	
EPA 6010D	Manganese, Dissolved	0.061	mg/L	0.040	03/23/21 20:00	
EPA 6010D	Calcium, Dissolved	65.4	mg/L	1.0	03/23/21 20:00	
EPA 6010D	Magnesium, Dissolved	14.4	mg/L	0.050	03/23/21 20:00	
EPA 6010D	Sodium, Dissolved	13.3	mg/L	1.0	03/23/21 20:00	
EPA 6010D	Potassium, Dissolved	8.5	mg/L	0.20	03/23/21 20:00	
EPA 6010D	Silicon, Dissolved	0.74	mg/L	0.040	03/23/21 20:00	
EPA 6020B	Antimony, Dissolved	0.00056J	mg/L	0.0030	03/24/21 19:31	
EPA 6020B	Arsenic, Dissolved	0.0053	mg/L	0.0050	03/24/21 19:31	
EPA 6020B	Barium, Dissolved	0.052	mg/L	0.0050	03/24/21 19:31	
EPA 6020B	Boron, Dissolved	0.58	mg/L	0.040	03/24/21 19:31	
EPA 6020B	Chromium, Dissolved	0.0022J	mg/L	0.0050	03/24/21 19:31	B
EPA 6020B	Molybdenum, Dissolved	0.052	mg/L	0.010	03/24/21 19:31	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527508004	GWC-1					
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	168	mg/L	5.0	03/23/21 20:18	
SM 2320B-2011	Alkalinity, Total as CaCO3	168	mg/L	5.0	03/23/21 20:18	
EPA 350.1 Rev 2.0 1993	Nitrogen, Ammonia	0.48	mg/L	0.10	03/23/21 13:06	
SM 5310B-2011	Total Organic Carbon	42.5	mg/L	2.0	04/03/21 10:49	
92527508005	GWC-11					
EPA 6010D	Aluminum	0.73	mg/L	0.10	03/24/21 19:11	
EPA 6010D	Iron	1.8	mg/L	0.040	03/24/21 19:11	
EPA 6010D	Manganese	0.048	mg/L	0.040	03/24/21 19:11	
EPA 6010D	Aluminum, Dissolved	0.71	mg/L	0.10	03/23/21 20:05	
EPA 6010D	Iron, Dissolved	2.8	mg/L	0.040	03/23/21 20:05	
EPA 6010D	Manganese, Dissolved	0.059	mg/L	0.040	03/23/21 20:05	
EPA 6010D	Calcium, Dissolved	154	mg/L	1.0	03/23/21 20:05	
EPA 6010D	Magnesium, Dissolved	85.3	mg/L	0.050	03/23/21 20:05	
EPA 6010D	Sodium, Dissolved	282	mg/L	1.0	03/23/21 20:05	
EPA 6010D	Potassium, Dissolved	40.1	mg/L	0.20	03/23/21 20:05	
EPA 6010D	Silicon, Dissolved	2.5	mg/L	0.040	03/23/21 20:05	
EPA 6020B	Antimony, Dissolved	0.00078J	mg/L	0.0030	03/24/21 19:36	
EPA 6020B	Barium, Dissolved	0.15	mg/L	0.0050	03/24/21 19:36	
EPA 6020B	Boron, Dissolved	2.2	mg/L	0.040	03/24/21 19:36	
EPA 6020B	Cadmium, Dissolved	0.0010	mg/L	0.00050	03/24/21 19:36	
EPA 6020B	Chromium, Dissolved	0.0012J	mg/L	0.0050	03/24/21 19:36	B
EPA 6020B	Cobalt, Dissolved	0.0010J	mg/L	0.0050	03/24/21 19:36	
EPA 6020B	Lead, Dissolved	0.00040J	mg/L	0.0010	03/24/21 19:36	
EPA 6020B	Selenium, Dissolved	0.0021J	mg/L	0.0050	03/24/21 19:36	
EPA 6020B	Thallium, Dissolved	0.00022J	mg/L	0.0010	03/24/21 19:36	
EPA 6020B	Zinc, Dissolved	0.0042J	mg/L	0.010	03/24/21 19:36	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	7.7	mg/L	5.0	03/23/21 20:36	
SM 2320B-2011	Alkalinity, Total as CaCO3	7.7	mg/L	5.0	03/23/21 20:36	
EPA 350.1 Rev 2.0 1993	Nitrogen, Ammonia	1.3	mg/L	0.10	03/23/21 13:07	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.079	mg/L	0.040	03/22/21 14:17	
SM 5310B-2011	Total Organic Carbon	5.3	mg/L	1.0	04/03/21 11:06	
92527508006	GWC-12					
EPA 6010D	Aluminum	9.4	mg/L	0.10	03/24/21 19:06	
EPA 6010D	Iron	1.8	mg/L	0.040	03/24/21 19:06	
EPA 6010D	Manganese	0.090	mg/L	0.040	03/24/21 19:06	
EPA 6010D	Aluminum, Dissolved	10.0	mg/L	0.10	03/23/21 20:19	
EPA 6010D	Iron, Dissolved	1.9	mg/L	0.040	03/23/21 20:19	
EPA 6010D	Manganese, Dissolved	0.091	mg/L	0.040	03/23/21 20:19	
EPA 6010D	Calcium, Dissolved	57.0	mg/L	1.0	03/23/21 20:19	
EPA 6010D	Magnesium, Dissolved	19.8	mg/L	0.050	03/23/21 20:19	
EPA 6010D	Sodium, Dissolved	65.4	mg/L	1.0	03/23/21 20:19	
EPA 6010D	Potassium, Dissolved	7.7	mg/L	0.20	03/23/21 20:19	
EPA 6010D	Silicon, Dissolved	3.8	mg/L	0.040	03/23/21 20:19	
EPA 6020B	Antimony, Dissolved	0.00033J	mg/L	0.0030	03/24/21 19:53	
EPA 6020B	Barium, Dissolved	0.028	mg/L	0.0050	03/24/21 19:53	
EPA 6020B	Beryllium, Dissolved	0.00052	mg/L	0.00050	03/24/21 19:53	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527508006	GWC-12					
EPA 6020B	Boron, Dissolved	5.7	mg/L	0.040	03/24/21 19:53	
EPA 6020B	Chromium, Dissolved	0.00088J	mg/L	0.0050	03/24/21 19:53	B
EPA 6020B	Cobalt, Dissolved	0.00067J	mg/L	0.0050	03/24/21 19:53	
EPA 6020B	Lead, Dissolved	0.000089J	mg/L	0.0010	03/24/21 19:53	
EPA 6020B	Lithium, Dissolved	0.00091J	mg/L	0.030	03/24/21 19:53	
EPA 350.1 Rev 2.0 1993	Nitrogen, Ammonia	1.3	mg/L	0.10	03/23/21 13:09	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.021J	mg/L	0.040	03/23/21 09:46	
SM 5310B-2011	Total Organic Carbon	5.0	mg/L	1.0	04/03/21 11:56	
92527508007	GWA-7					
EPA 6010D	Aluminum	16.1	mg/L	0.10	03/24/21 20:57	
EPA 6010D	Iron	1.0	mg/L	0.040	03/24/21 20:57	
EPA 6010D	Manganese	0.0040J	mg/L	0.040	03/24/21 20:57	
EPA 6010D	Aluminum, Dissolved	4.0	mg/L	0.10	03/23/21 20:29	
EPA 6010D	Iron, Dissolved	0.40	mg/L	0.040	03/23/21 20:29	
EPA 6010D	Manganese, Dissolved	0.0025J	mg/L	0.040	03/23/21 20:29	
EPA 6010D	Calcium, Dissolved	2.4	mg/L	1.0	03/23/21 20:29	
EPA 6010D	Magnesium, Dissolved	0.41	mg/L	0.050	03/23/21 20:29	
EPA 6010D	Potassium, Dissolved	22.7	mg/L	0.20	03/23/21 20:29	
EPA 6010D	Silicon, Dissolved	2.1	mg/L	0.040	03/23/21 20:29	
EPA 6010D	Sodium, Dissolved	498	mg/L	10.0	03/24/21 14:59	
EPA 6020B	Barium, Dissolved	0.049	mg/L	0.025	03/24/21 20:05	
EPA 6020B	Boron, Dissolved	7.6	mg/L	0.20	03/24/21 20:05	
EPA 6020B	Chromium, Dissolved	0.013J	mg/L	0.025	03/24/21 20:05	B,D3
EPA 6020B	Lead, Dissolved	0.00025J	mg/L	0.0050	03/24/21 20:05	D3
EPA 6020B	Nickel, Dissolved	0.0062J	mg/L	0.025	03/24/21 20:05	D3
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	961	mg/L	5.0	03/24/21 13:56	
SM 2320B-2011	Alkalinity, Total as CaCO3	961	mg/L	5.0	03/24/21 13:56	
EPA 350.1 Rev 2.0 1993	Nitrogen, Ammonia	2.4	mg/L	0.10	03/23/21 16:01	
SM 5310B-2011	Total Organic Carbon	217	mg/L	25.0	04/03/21 12:13	
92527508008	GWA-8					
EPA 6010D	Aluminum	1.2	mg/L	0.10	03/24/21 21:02	
EPA 6010D	Iron	6.3	mg/L	0.040	03/24/21 21:02	
EPA 6010D	Manganese	0.028J	mg/L	0.040	03/24/21 21:02	
EPA 6010D	Aluminum, Dissolved	1.2	mg/L	0.10	03/23/21 20:34	
EPA 6010D	Iron, Dissolved	6.6	mg/L	0.040	03/23/21 20:34	
EPA 6010D	Manganese, Dissolved	0.028J	mg/L	0.040	03/23/21 20:34	
EPA 6010D	Calcium, Dissolved	24.1	mg/L	1.0	03/23/21 20:34	
EPA 6010D	Magnesium, Dissolved	4.2	mg/L	0.050	03/23/21 20:34	
EPA 6010D	Sodium, Dissolved	17.9	mg/L	1.0	03/23/21 20:34	
EPA 6010D	Potassium, Dissolved	3.1	mg/L	0.20	03/23/21 20:34	
EPA 6010D	Silicon, Dissolved	3.2	mg/L	0.040	03/23/21 20:34	
EPA 6020B	Arsenic, Dissolved	0.00084J	mg/L	0.0050	03/24/21 20:11	
EPA 6020B	Barium, Dissolved	0.055	mg/L	0.0050	03/24/21 20:11	
EPA 6020B	Beryllium, Dissolved	0.00018J	mg/L	0.00050	03/24/21 20:11	
EPA 6020B	Boron, Dissolved	0.11	mg/L	0.040	03/24/21 20:11	
EPA 6020B	Chromium, Dissolved	0.00062J	mg/L	0.0050	03/24/21 20:11	B

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527508008	GWA-8					
EPA 6020B	Cobalt, Dissolved	0.00051J	mg/L	0.0050	03/24/21 20:11	
EPA 6020B	Lead, Dissolved	0.000064J	mg/L	0.0010	03/24/21 20:11	
EPA 6020B	Lithium, Dissolved	0.0011J	mg/L	0.030	03/24/21 20:11	
EPA 6020B	Zinc, Dissolved	0.0025J	mg/L	0.010	03/24/21 20:11	
EPA 350.1 Rev 2.0 1993	Nitrogen, Ammonia	0.82	mg/L	0.10	03/23/21 16:02	
SM 5310B-2011	Total Organic Carbon	4.4	mg/L	1.0	04/03/21 12:32	
92527508009	GWC-15					
EPA 6010D	Aluminum	0.050J	mg/L	0.10	03/24/21 21:07	
EPA 6010D	Iron	0.12	mg/L	0.040	03/24/21 21:07	
EPA 6010D	Manganese	0.25	mg/L	0.040	03/24/21 21:07	
EPA 6010D	Aluminum, Dissolved	0.049J	mg/L	0.10	03/23/21 20:39	
EPA 6010D	Iron, Dissolved	0.12	mg/L	0.040	03/23/21 20:39	
EPA 6010D	Manganese, Dissolved	0.25	mg/L	0.040	03/23/21 20:39	
EPA 6010D	Calcium, Dissolved	109	mg/L	1.0	03/23/21 20:39	
EPA 6010D	Magnesium, Dissolved	15.8	mg/L	0.050	03/23/21 20:39	
EPA 6010D	Sodium, Dissolved	7.0	mg/L	1.0	03/23/21 20:39	
EPA 6010D	Potassium, Dissolved	11.9	mg/L	0.20	03/23/21 20:39	
EPA 6010D	Silicon, Dissolved	0.62	mg/L	0.040	03/23/21 20:39	
EPA 6020B	Antimony, Dissolved	0.00030J	mg/L	0.0030	03/24/21 20:16	
EPA 6020B	Arsenic, Dissolved	0.16	mg/L	0.0050	03/24/21 20:16	
EPA 6020B	Barium, Dissolved	0.040	mg/L	0.0050	03/24/21 20:16	
EPA 6020B	Boron, Dissolved	0.68	mg/L	0.040	03/24/21 20:16	
EPA 6020B	Chromium, Dissolved	0.0026J	mg/L	0.0050	03/24/21 20:16	B
EPA 6020B	Lead, Dissolved	0.00011J	mg/L	0.0010	03/24/21 20:16	
EPA 6020B	Molybdenum, Dissolved	0.094	mg/L	0.010	03/24/21 20:16	
EPA 6020B	Selenium, Dissolved	0.0058	mg/L	0.0050	03/24/21 20:16	
EPA 6020B	Zinc, Dissolved	0.0065J	mg/L	0.010	03/24/21 20:16	
SM 2320B-2011	Alkalinity, Bicarbonate (CaCO3)	351	mg/L	5.0	03/26/21 13:32	
SM 2320B-2011	Alkalinity, Total as CaCO3	351	mg/L	5.0	03/26/21 13:32	
EPA 350.1 Rev 2.0 1993	Nitrogen, Ammonia	0.21	mg/L	0.10	03/23/21 15:40	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.061	mg/L	0.040	03/23/21 10:34	
SM 5310B-2011	Total Organic Carbon	26.4	mg/L	1.0	04/03/21 12:49	
92527508010	GWC-20					
EPA 6010D	Aluminum	0.070J	mg/L	0.10	03/24/21 21:12	
EPA 6010D	Iron	0.39	mg/L	0.040	03/24/21 21:12	
EPA 6010D	Manganese	0.090	mg/L	0.040	03/24/21 21:12	
EPA 6010D	Aluminum, Dissolved	0.061J	mg/L	0.10	03/23/21 20:44	
EPA 6010D	Iron, Dissolved	0.42	mg/L	0.040	03/23/21 20:44	
EPA 6010D	Manganese, Dissolved	0.093	mg/L	0.040	03/23/21 20:44	
EPA 6010D	Calcium, Dissolved	261	mg/L	1.0	03/23/21 20:44	
EPA 6010D	Magnesium, Dissolved	103	mg/L	0.050	03/23/21 20:44	
EPA 6010D	Sodium, Dissolved	102	mg/L	1.0	03/23/21 20:44	
EPA 6010D	Potassium, Dissolved	26.6	mg/L	0.20	03/23/21 20:44	
EPA 6010D	Silicon, Dissolved	0.88	mg/L	0.040	03/23/21 20:44	
EPA 6020B	Arsenic, Dissolved	0.27	mg/L	0.0050	03/24/21 20:22	
EPA 6020B	Barium, Dissolved	0.37	mg/L	0.0050	03/24/21 20:22	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527508010	GWC-20					
EPA 6020B	Boron, Dissolved	14.8	mg/L	0.40	03/25/21 20:45	
EPA 6020B	Chromium, Dissolved	0.0012J	mg/L	0.0050	03/24/21 20:22	B
EPA 6020B	Molybdenum, Dissolved	0.56	mg/L	0.010	03/24/21 20:22	
SM 4500-P E-2011	Orthophosphate as P	0.0057J	mg/L	0.020	03/12/21 17:56	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	226	mg/L	5.0	03/26/21 13:43	
SM 2320B-2011	Alkalinity, Total as CaCO3	226	mg/L	5.0	03/26/21 13:43	
EPA 350.1 Rev 2.0 1993	Nitrogen, Ammonia	0.98	mg/L	0.10	03/23/21 16:05	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.042	mg/L	0.040	03/23/21 10:35	
SM 5310B-2011	Total Organic Carbon	27.3	mg/L	1.0	04/03/21 13:07	
92527508011	GWC-16					
EPA 6010D	Aluminum	0.26	mg/L	0.10	03/26/21 20:37	
EPA 6010D	Iron	0.26	mg/L	0.040	03/26/21 20:37	
EPA 6010D	Manganese	0.11	mg/L	0.040	03/26/21 20:37	
EPA 6010D	Aluminum, Dissolved	0.26	mg/L	0.10	03/23/21 20:48	
EPA 6010D	Iron, Dissolved	0.26	mg/L	0.040	03/23/21 20:48	
EPA 6010D	Manganese, Dissolved	0.12	mg/L	0.040	03/23/21 20:48	
EPA 6010D	Calcium, Dissolved	204	mg/L	1.0	03/23/21 20:48	
EPA 6010D	Magnesium, Dissolved	62.6	mg/L	0.050	03/23/21 20:48	
EPA 6010D	Sodium, Dissolved	116	mg/L	1.0	03/23/21 20:48	
EPA 6010D	Potassium, Dissolved	26.0	mg/L	0.20	03/23/21 20:48	
EPA 6010D	Silicon, Dissolved	1.1	mg/L	0.040	03/23/21 20:48	
EPA 6020B	Arsenic, Dissolved	0.055	mg/L	0.0050	03/24/21 20:28	
EPA 6020B	Barium, Dissolved	0.18	mg/L	0.0050	03/24/21 20:28	
EPA 6020B	Boron, Dissolved	7.8	mg/L	0.040	03/24/21 20:28	
EPA 6020B	Chromium, Dissolved	0.00096J	mg/L	0.0050	03/24/21 20:28	B
EPA 6020B	Molybdenum, Dissolved	0.25	mg/L	0.010	03/24/21 20:28	
EPA 6020B	Selenium, Dissolved	0.0045J	mg/L	0.0050	03/24/21 20:28	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	74.4	mg/L	5.0	03/26/21 16:21	
SM 2320B-2011	Alkalinity, Total as CaCO3	74.4	mg/L	5.0	03/26/21 16:21	
EPA 350.1 Rev 2.0 1993	Nitrogen, Ammonia	0.80	mg/L	0.10	03/28/21 15:20	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.21	mg/L	0.040	03/23/21 12:30	
SM 5310B-2011	Total Organic Carbon	25.4	mg/L	1.0	04/03/21 13:24	
92527508012	GWC-14					
EPA 6010D	Iron	0.51	mg/L	0.040	03/26/21 20:42	
EPA 6010D	Manganese	0.22	mg/L	0.040	03/26/21 20:42	
EPA 6010D	Iron, Dissolved	0.54	mg/L	0.040	03/23/21 20:53	
EPA 6010D	Manganese, Dissolved	0.24	mg/L	0.040	03/23/21 20:53	
EPA 6010D	Calcium, Dissolved	39.5	mg/L	1.0	03/23/21 20:53	
EPA 6010D	Magnesium, Dissolved	9.9	mg/L	0.050	03/23/21 20:53	
EPA 6010D	Sodium, Dissolved	12.7	mg/L	1.0	03/23/21 20:53	
EPA 6010D	Potassium, Dissolved	3.0	mg/L	0.20	03/23/21 20:53	
EPA 6010D	Silicon, Dissolved	1.0	mg/L	0.040	03/23/21 20:53	
EPA 6020B	Barium, Dissolved	0.041	mg/L	0.0050	03/24/21 20:34	
EPA 6020B	Boron, Dissolved	0.088	mg/L	0.040	03/24/21 20:34	
EPA 6020B	Molybdenum, Dissolved	0.0056J	mg/L	0.010	03/24/21 20:34	
EPA 6020B	Selenium, Dissolved	0.0023J	mg/L	0.0050	03/24/21 20:34	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527508012						
GWC-14						
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	46.4	mg/L	5.0	03/26/21 16:31	
SM 2320B-2011	Alkalinity, Total as CaCO3	46.4	mg/L	5.0	03/26/21 16:31	
EPA 350.1 Rev 2.0 1993	Nitrogen, Ammonia	0.31	mg/L	0.10	03/28/21 15:22	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.40	mg/L	0.040	03/23/21 12:31	
SM 5310B-2011	Total Organic Carbon	3.7	mg/L	1.0	04/03/21 14:24	
92527508013						
GWC-21						
EPA 6010D	Aluminum	0.061J	mg/L	0.10	03/26/21 20:47	
EPA 6010D	Iron	0.093	mg/L	0.040	03/26/21 20:47	
EPA 6010D	Manganese	0.072	mg/L	0.040	03/26/21 20:47	
EPA 6010D	Aluminum, Dissolved	0.076J	mg/L	0.10	03/23/21 20:58	
EPA 6010D	Iron, Dissolved	0.091	mg/L	0.040	03/23/21 20:58	
EPA 6010D	Manganese, Dissolved	0.074	mg/L	0.040	03/23/21 20:58	
EPA 6010D	Calcium, Dissolved	102	mg/L	1.0	03/23/21 20:58	
EPA 6010D	Magnesium, Dissolved	22.6	mg/L	0.050	03/23/21 20:58	
EPA 6010D	Sodium, Dissolved	43.1	mg/L	1.0	03/23/21 20:58	
EPA 6010D	Potassium, Dissolved	11.5	mg/L	0.20	03/23/21 20:58	
EPA 6010D	Silicon, Dissolved	1.3	mg/L	0.040	03/23/21 20:58	
EPA 6020B	Arsenic, Dissolved	0.011	mg/L	0.0050	03/24/21 20:39	
EPA 6020B	Barium, Dissolved	0.20	mg/L	0.0050	03/24/21 20:39	
EPA 6020B	Boron, Dissolved	3.1	mg/L	0.20	03/25/21 20:51	
EPA 6020B	Chromium, Dissolved	0.00073J	mg/L	0.0050	03/24/21 20:39	B
EPA 6020B	Lead, Dissolved	0.00010J	mg/L	0.0010	03/24/21 20:39	
EPA 6020B	Molybdenum, Dissolved	0.023	mg/L	0.010	03/24/21 20:39	
EPA 6020B	Selenium, Dissolved	0.0069	mg/L	0.0050	03/24/21 20:39	
EPA 6020B	Zinc, Dissolved	0.0040J	mg/L	0.010	03/24/21 20:39	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	61.1	mg/L	5.0	03/26/21 16:39	
SM 2320B-2011	Alkalinity, Total as CaCO3	61.1	mg/L	5.0	03/26/21 16:39	
EPA 350.1 Rev 2.0 1993	Nitrogen, Ammonia	0.24	mg/L	0.10	03/28/21 15:23	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.38	mg/L	0.040	03/23/21 12:32	
SM 5310B-2011	Total Organic Carbon	7.1	mg/L	1.0	04/03/21 14:40	
92527508014						
GWC-2						
EPA 6010D	Aluminum	0.12	mg/L	0.10	03/26/21 20:51	
EPA 6010D	Iron	0.87	mg/L	0.040	03/26/21 20:51	
EPA 6010D	Manganese	0.0050J	mg/L	0.040	03/26/21 20:51	
EPA 6010D	Aluminum, Dissolved	0.12	mg/L	0.10	03/23/21 21:03	
EPA 6010D	Iron, Dissolved	0.92	mg/L	0.040	03/23/21 21:03	
EPA 6010D	Manganese, Dissolved	0.0050J	mg/L	0.040	03/23/21 21:03	
EPA 6010D	Calcium, Dissolved	0.23J	mg/L	1.0	03/23/21 21:03	
EPA 6010D	Magnesium, Dissolved	0.91	mg/L	0.050	03/23/21 21:03	
EPA 6010D	Sodium, Dissolved	7.5	mg/L	1.0	03/23/21 21:03	
EPA 6010D	Potassium, Dissolved	0.59	mg/L	0.20	03/23/21 21:03	
EPA 6010D	Silicon, Dissolved	2.3	mg/L	0.040	03/23/21 21:03	
EPA 6020B	Barium, Dissolved	0.058	mg/L	0.0050	03/24/21 20:45	
EPA 6020B	Boron, Dissolved	0.026J	mg/L	0.040	03/24/21 20:45	
EPA 350.1 Rev 2.0 1993	Nitrogen, Ammonia	0.14	mg/L	0.10	03/28/21 15:25	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.31	mg/L	0.040	03/23/21 12:33	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527508015	GWC-13					
EPA 6010D	Aluminum	0.15	mg/L	0.10	03/26/21 20:56	
EPA 6010D	Iron	0.22	mg/L	0.040	03/26/21 20:56	
EPA 6010D	Manganese	0.0052J	mg/L	0.040	03/26/21 20:56	
EPA 6010D	Aluminum, Dissolved	0.16	mg/L	0.10	03/23/21 21:22	
EPA 6010D	Iron, Dissolved	0.23	mg/L	0.040	03/23/21 21:22	
EPA 6010D	Manganese, Dissolved	0.0053J	mg/L	0.040	03/23/21 21:22	
EPA 6010D	Calcium, Dissolved	2.8	mg/L	1.0	03/23/21 21:22	
EPA 6010D	Magnesium, Dissolved	7.6	mg/L	0.050	03/23/21 21:22	
EPA 6010D	Sodium, Dissolved	4.9	mg/L	1.0	03/23/21 21:22	
EPA 6010D	Potassium, Dissolved	1.5	mg/L	0.20	03/23/21 21:22	
EPA 6010D	Silicon, Dissolved	2.2	mg/L	0.040	03/23/21 21:22	
EPA 6020B	Barium, Dissolved	0.036	mg/L	0.0050	03/24/21 21:02	
EPA 6020B	Boron, Dissolved	0.23	mg/L	0.040	03/24/21 21:02	
EPA 6020B	Lead, Dissolved	0.00010J	mg/L	0.0010	03/24/21 21:02	
EPA 6020B	Zinc, Dissolved	0.042	mg/L	0.010	03/24/21 21:02	
EPA 350.1 Rev 2.0 1993	Nitrogen, Ammonia	0.032J	mg/L	0.10	03/28/21 14:01	
SM 5310B-2011	Total Organic Carbon	1.0	mg/L	1.0	04/03/21 15:51	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

Sample: GWB-4R		Lab ID: 92527508001		Collected: 03/10/21 09:50		Received: 03/11/21 12:40		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Aluminum	0.059J	mg/L	0.10	0.041	1	03/24/21 14:10	03/24/21 18:18	7429-90-5	
Iron	0.42	mg/L	0.040	0.016	1	03/24/21 14:10	03/24/21 18:18	7439-89-6	
Manganese	0.10	mg/L	0.040	0.0017	1	03/24/21 14:10	03/24/21 18:18	7439-96-5	
6010 MET ICP, Dissolved									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Aluminum, Dissolved	0.22	mg/L	0.10	0.041	1	03/23/21 12:29	03/23/21 19:31	7429-90-5	
Iron, Dissolved	5.8	mg/L	0.040	0.016	1	03/23/21 12:29	03/23/21 19:31	7439-89-6	
Manganese, Dissolved	0.17	mg/L	0.040	0.0017	1	03/23/21 12:29	03/23/21 19:31	7439-96-5	
Calcium, Dissolved	54.0	mg/L	1.0	0.070	1	03/23/21 12:29	03/23/21 19:31	7440-70-2	M1
Magnesium, Dissolved	12.2	mg/L	0.050	0.0076	1	03/23/21 12:29	03/23/21 19:31	7439-95-4	
Sodium, Dissolved	47.9	mg/L	1.0	0.26	1	03/23/21 12:29	03/23/21 19:31	7440-23-5	M1
Potassium, Dissolved	20.3	mg/L	0.20	0.056	1	03/23/21 12:29	03/23/21 19:31	7440-09-7	M1
Silicon, Dissolved	1.2	mg/L	0.040	0.033	1	03/23/21 12:29	03/23/21 19:31	7440-21-3	
6020 MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony, Dissolved	ND	mg/L	0.0030	0.00028	1	03/24/21 12:08	03/24/21 18:56	7440-36-0	
Arsenic, Dissolved	0.0029J	mg/L	0.0050	0.00078	1	03/24/21 12:08	03/24/21 18:56	7440-38-2	
Barium, Dissolved	0.071	mg/L	0.0050	0.00071	1	03/24/21 12:08	03/24/21 18:56	7440-39-3	
Beryllium, Dissolved	ND	mg/L	0.00050	0.000046	1	03/24/21 12:08	03/24/21 18:56	7440-41-7	
Boron, Dissolved	4.7	mg/L	0.040	0.0052	1	03/24/21 12:08	03/24/21 18:56	7440-42-8	
Cadmium, Dissolved	ND	mg/L	0.00050	0.00012	1	03/24/21 12:08	03/24/21 18:56	7440-43-9	
Chromium, Dissolved	0.0029J	mg/L	0.0050	0.00055	1	03/24/21 12:08	03/24/21 18:56	7440-47-3	B
Cobalt, Dissolved	0.00046J	mg/L	0.0050	0.00038	1	03/24/21 12:08	03/24/21 18:56	7440-48-4	
Lead, Dissolved	0.00012J	mg/L	0.0010	0.000036	1	03/24/21 12:08	03/24/21 18:56	7439-92-1	
Lithium, Dissolved	0.012J	mg/L	0.030	0.00081	1	03/24/21 12:08	03/24/21 18:56	7439-93-2	
Molybdenum, Dissolved	0.12	mg/L	0.010	0.00069	1	03/24/21 12:08	03/24/21 18:56	7439-98-7	
Nickel, Dissolved	ND	mg/L	0.0050	0.00069	1	03/24/21 12:08	03/24/21 18:56	7440-02-0	
Selenium, Dissolved	ND	mg/L	0.0050	0.0016	1	03/24/21 12:08	03/24/21 18:56	7782-49-2	
Silver, Dissolved	ND	mg/L	0.0050	0.00036	1	03/24/21 12:08	03/24/21 18:56	7440-22-4	
Thallium, Dissolved	ND	mg/L	0.0010	0.00014	1	03/24/21 12:08	03/24/21 18:56	7440-28-0	
Zinc, Dissolved	0.0035J	mg/L	0.010	0.0022	1	03/24/21 12:08	03/24/21 18:56	7440-66-6	
SM4500P-E, Phosphate, Ortho									
Analytical Method: SM 4500-P E-2011									
Pace Analytical Services - Peachtree Corners, GA									
Orthophosphate as P	ND	mg/L	0.020	0.0020	1		03/12/21 14:04		H1
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	81.8	mg/L	5.0	5.0	1		03/23/21 19:41		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/23/21 19:41		
Alkalinity, Total as CaCO3	81.8	mg/L	5.0	5.0	1		03/23/21 19:41		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Sample: GWB-4R		Lab ID: 92527508001		Collected: 03/10/21 09:50	Received: 03/11/21 12:40	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia		Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Ammonia	2.3	mg/L	0.10	0.031	1		03/23/21 13:03	7664-41-7	
353.2 Nitrogen, NO2/NO3 pres.		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	ND	mg/L	0.040	0.017	1		03/22/21 14:14		
5310B TOC		Analytical Method: SM 5310B-2011 Pace Analytical Services - Asheville							
Total Organic Carbon	23.1	mg/L	1.0	0.50	1		04/03/21 09:22	7440-44-0	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL
 Pace Project No.: 92527508

Sample: GWB-5R		Lab ID: 92527508002		Collected: 03/10/21 13:15		Received: 03/11/21 12:40		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Aluminum	1.3	mg/L	0.10	0.041	1	03/24/21 14:10	03/24/21 18:52	7429-90-5		
Iron	48.7	mg/L	0.040	0.016	1	03/24/21 14:10	03/24/21 18:52	7439-89-6		
Manganese	1.4	mg/L	0.040	0.0017	1	03/24/21 14:10	03/24/21 18:52	7439-96-5		
6010 MET ICP, Dissolved		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Aluminum, Dissolved	1.1	mg/L	0.10	0.041	1	03/23/21 12:29	03/23/21 19:50	7429-90-5		
Iron, Dissolved	46.9	mg/L	0.040	0.016	1	03/23/21 12:29	03/23/21 19:50	7439-89-6		
Manganese, Dissolved	1.2	mg/L	0.040	0.0017	1	03/23/21 12:29	03/23/21 19:50	7439-96-5		
Calcium, Dissolved	131	mg/L	1.0	0.070	1	03/23/21 12:29	03/23/21 19:50	7440-70-2		
Magnesium, Dissolved	59.7	mg/L	0.050	0.0076	1	03/23/21 12:29	03/23/21 19:50	7439-95-4		
Sodium, Dissolved	48.7	mg/L	1.0	0.26	1	03/23/21 12:29	03/23/21 19:50	7440-23-5		
Potassium, Dissolved	18.5	mg/L	0.20	0.056	1	03/23/21 12:29	03/23/21 19:50	7440-09-7		
Silicon, Dissolved	3.5	mg/L	0.040	0.033	1	03/23/21 12:29	03/23/21 19:50	7440-21-3		
6020 MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony, Dissolved	0.0018J	mg/L	0.0030	0.00028	1	03/24/21 12:08	03/24/21 19:19	7440-36-0		
Arsenic, Dissolved	0.0019J	mg/L	0.0050	0.00078	1	03/24/21 12:08	03/24/21 19:19	7440-38-2		
Barium, Dissolved	0.11	mg/L	0.0050	0.00071	1	03/24/21 12:08	03/24/21 19:19	7440-39-3		
Beryllium, Dissolved	0.00013J	mg/L	0.00050	0.000046	1	03/24/21 12:08	03/24/21 19:19	7440-41-7		
Boron, Dissolved	3.9	mg/L	0.040	0.0052	1	03/24/21 12:08	03/24/21 19:19	7440-42-8		
Cadmium, Dissolved	ND	mg/L	0.00050	0.00012	1	03/24/21 12:08	03/24/21 19:19	7440-43-9		
Chromium, Dissolved	0.0011J	mg/L	0.0050	0.00055	1	03/24/21 12:08	03/24/21 19:19	7440-47-3	B	
Cobalt, Dissolved	0.0057	mg/L	0.0050	0.00038	1	03/24/21 12:08	03/24/21 19:19	7440-48-4		
Lead, Dissolved	0.00024J	mg/L	0.0010	0.000036	1	03/24/21 12:08	03/24/21 19:19	7439-92-1		
Lithium, Dissolved	ND	mg/L	0.030	0.00081	1	03/24/21 12:08	03/24/21 19:19	7439-93-2		
Molybdenum, Dissolved	ND	mg/L	0.010	0.00069	1	03/24/21 12:08	03/24/21 19:19	7439-98-7		
Nickel, Dissolved	0.0013J	mg/L	0.0050	0.00069	1	03/24/21 12:08	03/24/21 19:19	7440-02-0		
Selenium, Dissolved	ND	mg/L	0.0050	0.0016	1	03/24/21 12:08	03/24/21 19:19	7782-49-2		
Silver, Dissolved	ND	mg/L	0.0050	0.00036	1	03/24/21 12:08	03/24/21 19:19	7440-22-4		
Thallium, Dissolved	ND	mg/L	0.0010	0.00014	1	03/24/21 12:08	03/24/21 19:19	7440-28-0		
Zinc, Dissolved	0.0035J	mg/L	0.010	0.0022	1	03/24/21 12:08	03/24/21 19:19	7440-66-6		
SM4500P-E, Phosphate, Ortho		Analytical Method: SM 4500-P E-2011 Pace Analytical Services - Peachtree Corners, GA								
Orthophosphate as P	0.0024J	mg/L	0.020	0.0020	1		03/12/21 14:06		H1	
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/23/21 19:54			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/23/21 19:54			
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		03/23/21 19:54			

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Sample: GWB-5R		Lab ID: 92527508002		Collected: 03/10/21 13:15	Received: 03/11/21 12:40	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia		Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Ammonia	1.2	mg/L	0.10	0.031	1		03/23/21 13:05	7664-41-7	
353.2 Nitrogen, NO2/NO3 pres.		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	0.022J	mg/L	0.040	0.017	1		03/22/21 14:15		
5310B TOC		Analytical Method: SM 5310B-2011 Pace Analytical Services - Asheville							
Total Organic Carbon	7.1	mg/L	1.0	0.50	1		04/03/21 10:14	7440-44-0	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

Sample: GWB-6R		Lab ID: 92527508003		Collected: 03/10/21 15:05		Received: 03/11/21 12:40		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Aluminum	1.2	mg/L	0.10	0.041	1	03/24/21 14:10	03/24/21 18:56	7429-90-5		
Iron	6.3	mg/L	0.040	0.016	1	03/24/21 14:10	03/24/21 18:56	7439-89-6		
Manganese	0.19	mg/L	0.040	0.0017	1	03/24/21 14:10	03/24/21 18:56	7439-96-5		
6010 MET ICP, Dissolved		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Aluminum, Dissolved	1.1	mg/L	0.10	0.041	1	03/23/21 12:29	03/23/21 19:55	7429-90-5		
Iron, Dissolved	5.0	mg/L	0.040	0.016	1	03/23/21 12:29	03/23/21 19:55	7439-89-6		
Manganese, Dissolved	0.81	mg/L	0.040	0.0017	1	03/23/21 12:29	03/23/21 19:55	7439-96-5		
Calcium, Dissolved	264	mg/L	1.0	0.070	1	03/23/21 12:29	03/23/21 19:55	7440-70-2		
Magnesium, Dissolved	76.1	mg/L	0.050	0.0076	1	03/23/21 12:29	03/23/21 19:55	7439-95-4		
Potassium, Dissolved	86.5	mg/L	0.20	0.056	1	03/23/21 12:29	03/23/21 19:55	7440-09-7		
Silicon, Dissolved	1.3	mg/L	0.040	0.033	1	03/23/21 12:29	03/23/21 19:55	7440-21-3		
Sodium, Dissolved	365	mg/L	10.0	2.6	10	03/23/21 12:29	03/24/21 14:54	7440-23-5		
6020 MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony, Dissolved	0.00078J	mg/L	0.0030	0.00028	1	03/24/21 12:08	03/24/21 19:25	7440-36-0		
Arsenic, Dissolved	0.0058	mg/L	0.0050	0.00078	1	03/24/21 12:08	03/24/21 19:25	7440-38-2		
Barium, Dissolved	0.029	mg/L	0.0050	0.00071	1	03/24/21 12:08	03/24/21 19:25	7440-39-3		
Beryllium, Dissolved	ND	mg/L	0.00050	0.000046	1	03/24/21 12:08	03/24/21 19:25	7440-41-7		
Boron, Dissolved	6.7	mg/L	0.040	0.0052	1	03/24/21 12:08	03/24/21 19:25	7440-42-8		
Cadmium, Dissolved	ND	mg/L	0.00050	0.00012	1	03/24/21 12:08	03/24/21 19:25	7440-43-9		
Chromium, Dissolved	0.0060	mg/L	0.0050	0.00055	1	03/24/21 12:08	03/24/21 19:25	7440-47-3	B	
Cobalt, Dissolved	ND	mg/L	0.0050	0.00038	1	03/24/21 12:08	03/24/21 19:25	7440-48-4		
Lead, Dissolved	0.00016J	mg/L	0.0010	0.000036	1	03/24/21 12:08	03/24/21 19:25	7439-92-1		
Lithium, Dissolved	ND	mg/L	0.030	0.00081	1	03/24/21 12:08	03/24/21 19:25	7439-93-2		
Molybdenum, Dissolved	0.0012J	mg/L	0.010	0.00069	1	03/24/21 12:08	03/24/21 19:25	7439-98-7		
Nickel, Dissolved	0.0012J	mg/L	0.0050	0.00069	1	03/24/21 12:08	03/24/21 19:25	7440-02-0		
Selenium, Dissolved	0.0032J	mg/L	0.0050	0.0016	1	03/24/21 12:08	03/24/21 19:25	7782-49-2		
Silver, Dissolved	ND	mg/L	0.0050	0.00036	1	03/24/21 12:08	03/24/21 19:25	7440-22-4		
Thallium, Dissolved	ND	mg/L	0.0010	0.00014	1	03/24/21 12:08	03/24/21 19:25	7440-28-0		
Zinc, Dissolved	ND	mg/L	0.010	0.0022	1	03/24/21 12:08	03/24/21 19:25	7440-66-6		
SM4500P-E, Phosphate, Ortho		Analytical Method: SM 4500-P E-2011 Pace Analytical Services - Peachtree Corners, GA								
Orthophosphate as P	ND	mg/L	0.020	0.0020	1		03/12/21 14:05			
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	202	mg/L	5.0	5.0	1		03/23/21 19:59			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/23/21 19:59			
Alkalinity, Total as CaCO3	202	mg/L	5.0	5.0	1		03/23/21 19:59			

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Sample: GWB-6R		Lab ID: 92527508003		Collected: 03/10/21 15:05	Received: 03/11/21 12:40	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia		Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Ammonia	3.2	mg/L	0.10	0.031	1		03/25/21 10:16	7664-41-7	
353.2 Nitrogen, NO2/NO3 pres.		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	ND	mg/L	0.040	0.017	1		03/23/21 09:45		
5310B TOC		Analytical Method: SM 5310B-2011 Pace Analytical Services - Asheville							
Total Organic Carbon	65.3	mg/L	2.0	1.0	2		04/03/21 10:32	7440-44-0	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL

Sample Project No.: 92527508

Sample: GWC-1		Lab ID: 92527508004		Collected: 03/10/21 16:45		Received: 03/11/21 12:40		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Aluminum	0.32	mg/L	0.10	0.041	1	03/24/21 14:10	03/24/21 19:01	7429-90-5	
Iron	0.16	mg/L	0.040	0.016	1	03/24/21 14:10	03/24/21 19:01	7439-89-6	
Manganese	0.065	mg/L	0.040	0.0017	1	03/24/21 14:10	03/24/21 19:01	7439-96-5	
6010 MET ICP, Dissolved									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Aluminum, Dissolved	0.28	mg/L	0.10	0.041	1	03/23/21 12:29	03/23/21 20:00	7429-90-5	
Iron, Dissolved	0.11	mg/L	0.040	0.016	1	03/23/21 12:29	03/23/21 20:00	7439-89-6	
Manganese, Dissolved	0.061	mg/L	0.040	0.0017	1	03/23/21 12:29	03/23/21 20:00	7439-96-5	
Calcium, Dissolved	65.4	mg/L	1.0	0.070	1	03/23/21 12:29	03/23/21 20:00	7440-70-2	
Magnesium, Dissolved	14.4	mg/L	0.050	0.0076	1	03/23/21 12:29	03/23/21 20:00	7439-95-4	
Sodium, Dissolved	13.3	mg/L	1.0	0.26	1	03/23/21 12:29	03/23/21 20:00	7440-23-5	
Potassium, Dissolved	8.5	mg/L	0.20	0.056	1	03/23/21 12:29	03/23/21 20:00	7440-09-7	
Silicon, Dissolved	0.74	mg/L	0.040	0.033	1	03/23/21 12:29	03/23/21 20:00	7440-21-3	
6020 MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony, Dissolved	0.00056J	mg/L	0.0030	0.00028	1	03/24/21 12:08	03/24/21 19:31	7440-36-0	
Arsenic, Dissolved	0.0053	mg/L	0.0050	0.00078	1	03/24/21 12:08	03/24/21 19:31	7440-38-2	
Barium, Dissolved	0.052	mg/L	0.0050	0.00071	1	03/24/21 12:08	03/24/21 19:31	7440-39-3	
Beryllium, Dissolved	ND	mg/L	0.00050	0.000046	1	03/24/21 12:08	03/24/21 19:31	7440-41-7	
Boron, Dissolved	0.58	mg/L	0.040	0.0052	1	03/24/21 12:08	03/24/21 19:31	7440-42-8	
Cadmium, Dissolved	ND	mg/L	0.00050	0.00012	1	03/24/21 12:08	03/24/21 19:31	7440-43-9	
Chromium, Dissolved	0.0022J	mg/L	0.0050	0.00055	1	03/24/21 12:08	03/24/21 19:31	7440-47-3	B
Cobalt, Dissolved	ND	mg/L	0.0050	0.00038	1	03/24/21 12:08	03/24/21 19:31	7440-48-4	
Lead, Dissolved	ND	mg/L	0.0010	0.000036	1	03/24/21 12:08	03/24/21 19:31	7439-92-1	
Lithium, Dissolved	ND	mg/L	0.030	0.00081	1	03/24/21 12:08	03/24/21 19:31	7439-93-2	
Molybdenum, Dissolved	0.052	mg/L	0.010	0.00069	1	03/24/21 12:08	03/24/21 19:31	7439-98-7	
Nickel, Dissolved	ND	mg/L	0.0050	0.00069	1	03/24/21 12:08	03/24/21 19:31	7440-02-0	
Selenium, Dissolved	ND	mg/L	0.0050	0.0016	1	03/24/21 12:08	03/24/21 19:31	7782-49-2	
Silver, Dissolved	ND	mg/L	0.0050	0.00036	1	03/24/21 12:08	03/24/21 19:31	7440-22-4	
Thallium, Dissolved	ND	mg/L	0.0010	0.00014	1	03/24/21 12:08	03/24/21 19:31	7440-28-0	
Zinc, Dissolved	ND	mg/L	0.010	0.0022	1	03/24/21 12:08	03/24/21 19:31	7440-66-6	
SM4500P-E, Phosphate, Ortho									
Analytical Method: SM 4500-P E-2011									
Pace Analytical Services - Peachtree Corners, GA									
Orthophosphate as P	ND	mg/L	0.020	0.0020	1		03/12/21 14:04		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	168	mg/L	5.0	5.0	1		03/23/21 20:18		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/23/21 20:18		
Alkalinity, Total as CaCO3	168	mg/L	5.0	5.0	1		03/23/21 20:18		

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Sample: GWC-1 Lab ID: 92527508004 Collected: 03/10/21 16:45 Received: 03/11/21 12:40 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia									
Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, Ammonia	0.48	mg/L	0.10	0.031	1		03/23/21 13:06	7664-41-7	
353.2 Nitrogen, NO2/NO3 pres.									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	ND	mg/L	0.040	0.017	1		03/22/21 14:16		
5310B TOC									
Analytical Method: SM 5310B-2011 Pace Analytical Services - Asheville									
Total Organic Carbon	42.5	mg/L	2.0	1.0	2		04/03/21 10:49	7440-44-0	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL

Sample Project No.: 92527508

Sample: GWC-11		Lab ID: 92527508005		Collected: 03/10/21 14:15		Received: 03/11/21 12:40		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Aluminum	0.73	mg/L	0.10	0.041	1	03/24/21 14:10	03/24/21 19:11	7429-90-5		
Iron	1.8	mg/L	0.040	0.016	1	03/24/21 14:10	03/24/21 19:11	7439-89-6		
Manganese	0.048	mg/L	0.040	0.0017	1	03/24/21 14:10	03/24/21 19:11	7439-96-5		
6010 MET ICP, Dissolved		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Aluminum, Dissolved	0.71	mg/L	0.10	0.041	1	03/23/21 12:29	03/23/21 20:05	7429-90-5		
Iron, Dissolved	2.8	mg/L	0.040	0.016	1	03/23/21 12:29	03/23/21 20:05	7439-89-6		
Manganese, Dissolved	0.059	mg/L	0.040	0.0017	1	03/23/21 12:29	03/23/21 20:05	7439-96-5		
Calcium, Dissolved	154	mg/L	1.0	0.070	1	03/23/21 12:29	03/23/21 20:05	7440-70-2		
Magnesium, Dissolved	85.3	mg/L	0.050	0.0076	1	03/23/21 12:29	03/23/21 20:05	7439-95-4		
Sodium, Dissolved	282	mg/L	1.0	0.26	1	03/23/21 12:29	03/23/21 20:05	7440-23-5		
Potassium, Dissolved	40.1	mg/L	0.20	0.056	1	03/23/21 12:29	03/23/21 20:05	7440-09-7		
Silicon, Dissolved	2.5	mg/L	0.040	0.033	1	03/23/21 12:29	03/23/21 20:05	7440-21-3		
6020 MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony, Dissolved	0.00078J	mg/L	0.0030	0.00028	1	03/24/21 12:08	03/24/21 19:36	7440-36-0		
Arsenic, Dissolved	ND	mg/L	0.0050	0.00078	1	03/24/21 12:08	03/24/21 19:36	7440-38-2		
Barium, Dissolved	0.15	mg/L	0.0050	0.00071	1	03/24/21 12:08	03/24/21 19:36	7440-39-3		
Beryllium, Dissolved	ND	mg/L	0.00050	0.000046	1	03/24/21 12:08	03/24/21 19:36	7440-41-7		
Boron, Dissolved	2.2	mg/L	0.040	0.0052	1	03/24/21 12:08	03/24/21 19:36	7440-42-8		
Cadmium, Dissolved	0.0010	mg/L	0.00050	0.00012	1	03/24/21 12:08	03/24/21 19:36	7440-43-9		
Chromium, Dissolved	0.0012J	mg/L	0.0050	0.00055	1	03/24/21 12:08	03/24/21 19:36	7440-47-3	B	
Cobalt, Dissolved	0.0010J	mg/L	0.0050	0.00038	1	03/24/21 12:08	03/24/21 19:36	7440-48-4		
Lead, Dissolved	0.00040J	mg/L	0.0010	0.000036	1	03/24/21 12:08	03/24/21 19:36	7439-92-1		
Lithium, Dissolved	ND	mg/L	0.030	0.00081	1	03/24/21 12:08	03/24/21 19:36	7439-93-2		
Molybdenum, Dissolved	ND	mg/L	0.010	0.00069	1	03/24/21 12:08	03/24/21 19:36	7439-98-7		
Nickel, Dissolved	ND	mg/L	0.0050	0.00069	1	03/24/21 12:08	03/24/21 19:36	7440-02-0		
Selenium, Dissolved	0.0021J	mg/L	0.0050	0.0016	1	03/24/21 12:08	03/24/21 19:36	7782-49-2		
Silver, Dissolved	ND	mg/L	0.0050	0.00036	1	03/24/21 12:08	03/24/21 19:36	7440-22-4		
Thallium, Dissolved	0.00022J	mg/L	0.0010	0.00014	1	03/24/21 12:08	03/24/21 19:36	7440-28-0		
Zinc, Dissolved	0.0042J	mg/L	0.010	0.0022	1	03/24/21 12:08	03/24/21 19:36	7440-66-6		
SM4500P-E, Phosphate, Ortho		Analytical Method: SM 4500-P E-2011 Pace Analytical Services - Peachtree Corners, GA								
Orthophosphate as P	ND	mg/L	0.020	0.0020	1		03/12/21 17:52		H1	
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	7.7	mg/L	5.0	5.0	1		03/23/21 20:36			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/23/21 20:36			
Alkalinity, Total as CaCO3	7.7	mg/L	5.0	5.0	1		03/23/21 20:36			

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Sample: GWC-11		Lab ID: 92527508005		Collected: 03/10/21 14:15	Received: 03/11/21 12:40	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia		Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Ammonia	1.3	mg/L	0.10	0.031	1		03/23/21 13:07	7664-41-7	
353.2 Nitrogen, NO2/NO3 pres.		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	0.079	mg/L	0.040	0.017	1		03/22/21 14:17		
5310B TOC		Analytical Method: SM 5310B-2011 Pace Analytical Services - Asheville							
Total Organic Carbon	5.3	mg/L	1.0	0.50	1		04/03/21 11:06	7440-44-0	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

Sample: GWC-12		Lab ID: 92527508006		Collected: 03/10/21 11:50		Received: 03/11/21 12:40		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Aluminum	9.4	mg/L	0.10	0.041	1	03/24/21 14:10	03/24/21 19:06	7429-90-5		
Iron	1.8	mg/L	0.040	0.016	1	03/24/21 14:10	03/24/21 19:06	7439-89-6		
Manganese	0.090	mg/L	0.040	0.0017	1	03/24/21 14:10	03/24/21 19:06	7439-96-5		
6010 MET ICP, Dissolved		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Aluminum, Dissolved	10.0	mg/L	0.10	0.041	1	03/23/21 12:29	03/23/21 20:19	7429-90-5		
Iron, Dissolved	1.9	mg/L	0.040	0.016	1	03/23/21 12:29	03/23/21 20:19	7439-89-6		
Manganese, Dissolved	0.091	mg/L	0.040	0.0017	1	03/23/21 12:29	03/23/21 20:19	7439-96-5		
Calcium, Dissolved	57.0	mg/L	1.0	0.070	1	03/23/21 12:29	03/23/21 20:19	7440-70-2		
Magnesium, Dissolved	19.8	mg/L	0.050	0.0076	1	03/23/21 12:29	03/23/21 20:19	7439-95-4		
Sodium, Dissolved	65.4	mg/L	1.0	0.26	1	03/23/21 12:29	03/23/21 20:19	7440-23-5		
Potassium, Dissolved	7.7	mg/L	0.20	0.056	1	03/23/21 12:29	03/23/21 20:19	7440-09-7		
Silicon, Dissolved	3.8	mg/L	0.040	0.033	1	03/23/21 12:29	03/23/21 20:19	7440-21-3		
6020 MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony, Dissolved	0.00033J	mg/L	0.0030	0.00028	1	03/24/21 12:08	03/24/21 19:53	7440-36-0		
Arsenic, Dissolved	ND	mg/L	0.0050	0.00078	1	03/24/21 12:08	03/24/21 19:53	7440-38-2		
Barium, Dissolved	0.028	mg/L	0.0050	0.00071	1	03/24/21 12:08	03/24/21 19:53	7440-39-3		
Beryllium, Dissolved	0.00052	mg/L	0.00050	0.000046	1	03/24/21 12:08	03/24/21 19:53	7440-41-7		
Boron, Dissolved	5.7	mg/L	0.040	0.0052	1	03/24/21 12:08	03/24/21 19:53	7440-42-8		
Cadmium, Dissolved	ND	mg/L	0.00050	0.00012	1	03/24/21 12:08	03/24/21 19:53	7440-43-9		
Chromium, Dissolved	0.00088J	mg/L	0.0050	0.00055	1	03/24/21 12:08	03/24/21 19:53	7440-47-3	B	
Cobalt, Dissolved	0.00067J	mg/L	0.0050	0.00038	1	03/24/21 12:08	03/24/21 19:53	7440-48-4		
Lead, Dissolved	0.000089J	mg/L	0.0010	0.000036	1	03/24/21 12:08	03/24/21 19:53	7439-92-1		
Lithium, Dissolved	0.00091J	mg/L	0.030	0.00081	1	03/24/21 12:08	03/24/21 19:53	7439-93-2		
Molybdenum, Dissolved	ND	mg/L	0.010	0.00069	1	03/24/21 12:08	03/24/21 19:53	7439-98-7		
Nickel, Dissolved	ND	mg/L	0.0050	0.00069	1	03/24/21 12:08	03/24/21 19:53	7440-02-0		
Selenium, Dissolved	ND	mg/L	0.0050	0.0016	1	03/24/21 12:08	03/24/21 19:53	7782-49-2		
Silver, Dissolved	ND	mg/L	0.0050	0.00036	1	03/24/21 12:08	03/24/21 19:53	7440-22-4		
Thallium, Dissolved	ND	mg/L	0.0010	0.00014	1	03/24/21 12:08	03/24/21 19:53	7440-28-0		
Zinc, Dissolved	ND	mg/L	0.010	0.0022	1	03/24/21 12:08	03/24/21 19:53	7440-66-6		
SM4500P-E, Phosphate, Ortho		Analytical Method: SM 4500-P E-2011 Pace Analytical Services - Peachtree Corners, GA								
Orthophosphate as P	ND	mg/L	0.020	0.0020	1		03/12/21 14:05		H1	
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/23/21 20:42			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/23/21 20:42			
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		03/23/21 20:42			

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

Sample: GWC-12 Lab ID: 92527508006 Collected: 03/10/21 11:50 Received: 03/11/21 12:40 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia									
Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, Ammonia	1.3	mg/L	0.10	0.031	1		03/23/21 13:09	7664-41-7	
353.2 Nitrogen, NO2/NO3 pres.									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	0.021J	mg/L	0.040	0.017	1		03/23/21 09:46		
5310B TOC									
Analytical Method: SM 5310B-2011 Pace Analytical Services - Asheville									
Total Organic Carbon	5.0	mg/L	1.0	0.50	1		04/03/21 11:56	7440-44-0	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL
 Pace Project No.: 92527508

Sample: GWA-7		Lab ID: 92527508007		Collected: 03/11/21 16:45		Received: 03/12/21 16:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Aluminum	16.1	mg/L	0.10	0.041	1	03/24/21 14:37	03/24/21 20:57	7429-90-5	
Iron	1.0	mg/L	0.040	0.016	1	03/24/21 14:37	03/24/21 20:57	7439-89-6	
Manganese	0.0040J	mg/L	0.040	0.0017	1	03/24/21 14:37	03/24/21 20:57	7439-96-5	
6010 MET ICP, Dissolved									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Aluminum, Dissolved	4.0	mg/L	0.10	0.041	1	03/23/21 12:29	03/23/21 20:29	7429-90-5	
Iron, Dissolved	0.40	mg/L	0.040	0.016	1	03/23/21 12:29	03/23/21 20:29	7439-89-6	
Manganese, Dissolved	0.0025J	mg/L	0.040	0.0017	1	03/23/21 12:29	03/23/21 20:29	7439-96-5	
Calcium, Dissolved	2.4	mg/L	1.0	0.070	1	03/23/21 12:29	03/23/21 20:29	7440-70-2	
Magnesium, Dissolved	0.41	mg/L	0.050	0.0076	1	03/23/21 12:29	03/23/21 20:29	7439-95-4	
Potassium, Dissolved	22.7	mg/L	0.20	0.056	1	03/23/21 12:29	03/23/21 20:29	7440-09-7	
Silicon, Dissolved	2.1	mg/L	0.040	0.033	1	03/23/21 12:29	03/23/21 20:29	7440-21-3	
Sodium, Dissolved	498	mg/L	10.0	2.6	10	03/23/21 12:29	03/24/21 14:59	7440-23-5	
6020 MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony, Dissolved	ND	mg/L	0.015	0.0014	5	03/24/21 12:08	03/24/21 20:05	7440-36-0	D3
Arsenic, Dissolved	ND	mg/L	0.025	0.0039	5	03/24/21 12:08	03/24/21 20:05	7440-38-2	D3
Barium, Dissolved	0.049	mg/L	0.025	0.0036	5	03/24/21 12:08	03/24/21 20:05	7440-39-3	
Beryllium, Dissolved	ND	mg/L	0.0025	0.00023	5	03/24/21 12:08	03/24/21 20:05	7440-41-7	D3
Boron, Dissolved	7.6	mg/L	0.20	0.026	5	03/24/21 12:08	03/24/21 20:05	7440-42-8	
Cadmium, Dissolved	ND	mg/L	0.0025	0.00059	5	03/24/21 12:08	03/24/21 20:05	7440-43-9	D3
Chromium, Dissolved	0.013J	mg/L	0.025	0.0028	5	03/24/21 12:08	03/24/21 20:05	7440-47-3	B,D3
Cobalt, Dissolved	ND	mg/L	0.025	0.0019	5	03/24/21 12:08	03/24/21 20:05	7440-48-4	D3
Lead, Dissolved	0.00025J	mg/L	0.0050	0.00018	5	03/24/21 12:08	03/24/21 20:05	7439-92-1	D3
Lithium, Dissolved	ND	mg/L	0.15	0.0040	5	03/24/21 12:08	03/24/21 20:05	7439-93-2	D3
Molybdenum, Dissolved	ND	mg/L	0.050	0.0034	5	03/24/21 12:08	03/24/21 20:05	7439-98-7	D3
Nickel, Dissolved	0.0062J	mg/L	0.025	0.0035	5	03/24/21 12:08	03/24/21 20:05	7440-02-0	D3
Selenium, Dissolved	ND	mg/L	0.025	0.0078	5	03/24/21 12:08	03/24/21 20:05	7782-49-2	D3
Silver, Dissolved	ND	mg/L	0.025	0.0018	5	03/24/21 12:08	03/24/21 20:05	7440-22-4	D3
Thallium, Dissolved	ND	mg/L	0.0050	0.00072	5	03/24/21 12:08	03/24/21 20:05	7440-28-0	D3
Zinc, Dissolved	ND	mg/L	0.050	0.011	5	03/24/21 12:08	03/24/21 20:05	7440-66-6	D3
SM4500P-E, Phosphate, Ortho									
Analytical Method: SM 4500-P E-2011									
Pace Analytical Services - Peachtree Corners, GA									
Orthophosphate as P	ND	mg/L	0.020	0.0020	1		03/12/21 17:53		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	961	mg/L	5.0	5.0	1		03/24/21 13:56		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/24/21 13:56		
Alkalinity, Total as CaCO3	961	mg/L	5.0	5.0	1		03/24/21 13:56		

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Sample: GWA-7 Lab ID: 92527508007 Collected: 03/11/21 16:45 Received: 03/12/21 16:00 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia									
Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, Ammonia	2.4	mg/L	0.10	0.031	1		03/23/21 16:01	7664-41-7	
353.2 Nitrogen, NO2/NO3 pres.									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	ND	mg/L	0.040	0.017	1		03/23/21 10:31		
5310B TOC									
Analytical Method: SM 5310B-2011 Pace Analytical Services - Asheville									
Total Organic Carbon	217	mg/L	25.0	12.5	25		04/03/21 12:13	7440-44-0	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL

Sample Project No.: 92527508

Sample: GWA-8 **Lab ID: 92527508008** Collected: 03/12/21 10:55 Received: 03/12/21 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Aluminum	1.2	mg/L	0.10	0.041	1	03/24/21 14:37	03/24/21 21:02	7429-90-5	
Iron	6.3	mg/L	0.040	0.016	1	03/24/21 14:37	03/24/21 21:02	7439-89-6	
Manganese	0.028J	mg/L	0.040	0.0017	1	03/24/21 14:37	03/24/21 21:02	7439-96-5	
6010 MET ICP, Dissolved									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Aluminum, Dissolved	1.2	mg/L	0.10	0.041	1	03/23/21 12:29	03/23/21 20:34	7429-90-5	
Iron, Dissolved	6.6	mg/L	0.040	0.016	1	03/23/21 12:29	03/23/21 20:34	7439-89-6	
Manganese, Dissolved	0.028J	mg/L	0.040	0.0017	1	03/23/21 12:29	03/23/21 20:34	7439-96-5	
Calcium, Dissolved	24.1	mg/L	1.0	0.070	1	03/23/21 12:29	03/23/21 20:34	7440-70-2	
Magnesium, Dissolved	4.2	mg/L	0.050	0.0076	1	03/23/21 12:29	03/23/21 20:34	7439-95-4	
Sodium, Dissolved	17.9	mg/L	1.0	0.26	1	03/23/21 12:29	03/23/21 20:34	7440-23-5	
Potassium, Dissolved	3.1	mg/L	0.20	0.056	1	03/23/21 12:29	03/23/21 20:34	7440-09-7	
Silicon, Dissolved	3.2	mg/L	0.040	0.033	1	03/23/21 12:29	03/23/21 20:34	7440-21-3	
6020 MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony, Dissolved	ND	mg/L	0.0030	0.00028	1	03/24/21 12:08	03/24/21 20:11	7440-36-0	
Arsenic, Dissolved	0.00084J	mg/L	0.0050	0.00078	1	03/24/21 12:08	03/24/21 20:11	7440-38-2	
Barium, Dissolved	0.055	mg/L	0.0050	0.00071	1	03/24/21 12:08	03/24/21 20:11	7440-39-3	
Beryllium, Dissolved	0.00018J	mg/L	0.00050	0.000046	1	03/24/21 12:08	03/24/21 20:11	7440-41-7	
Boron, Dissolved	0.11	mg/L	0.040	0.0052	1	03/24/21 12:08	03/24/21 20:11	7440-42-8	
Cadmium, Dissolved	ND	mg/L	0.00050	0.00012	1	03/24/21 12:08	03/24/21 20:11	7440-43-9	
Chromium, Dissolved	0.00062J	mg/L	0.0050	0.00055	1	03/24/21 12:08	03/24/21 20:11	7440-47-3	B
Cobalt, Dissolved	0.00051J	mg/L	0.0050	0.00038	1	03/24/21 12:08	03/24/21 20:11	7440-48-4	
Lead, Dissolved	0.000064J	mg/L	0.0010	0.000036	1	03/24/21 12:08	03/24/21 20:11	7439-92-1	
Lithium, Dissolved	0.0011J	mg/L	0.030	0.00081	1	03/24/21 12:08	03/24/21 20:11	7439-93-2	
Molybdenum, Dissolved	ND	mg/L	0.010	0.00069	1	03/24/21 12:08	03/24/21 20:11	7439-98-7	
Nickel, Dissolved	ND	mg/L	0.0050	0.00069	1	03/24/21 12:08	03/24/21 20:11	7440-02-0	
Selenium, Dissolved	ND	mg/L	0.0050	0.0016	1	03/24/21 12:08	03/24/21 20:11	7782-49-2	
Silver, Dissolved	ND	mg/L	0.0050	0.00036	1	03/24/21 12:08	03/24/21 20:11	7440-22-4	
Thallium, Dissolved	ND	mg/L	0.0010	0.00014	1	03/24/21 12:08	03/24/21 20:11	7440-28-0	
Zinc, Dissolved	0.0025J	mg/L	0.010	0.0022	1	03/24/21 12:08	03/24/21 20:11	7440-66-6	
SM4500P-E, Phosphate, Ortho									
Analytical Method: SM 4500-P E-2011									
Pace Analytical Services - Peachtree Corners, GA									
Orthophosphate as P	ND	mg/L	0.020	0.0020	1		03/12/21 17:54		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/26/21 13:29		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/26/21 13:29		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		03/26/21 13:29		

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Sample: GWA-8 Lab ID: 92527508008 Collected: 03/12/21 10:55 Received: 03/12/21 16:00 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia									
Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, Ammonia	0.82	mg/L	0.10	0.031	1		03/23/21 16:02	7664-41-7	
353.2 Nitrogen, NO2/NO3 pres.									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	ND	mg/L	0.040	0.017	1		03/23/21 10:32		
5310B TOC									
Analytical Method: SM 5310B-2011 Pace Analytical Services - Asheville									
Total Organic Carbon	4.4	mg/L	1.0	0.50	1		04/03/21 12:32	7440-44-0	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

Sample: GWC-15		Lab ID: 92527508009		Collected: 03/12/21 08:35		Received: 03/12/21 16:00		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Aluminum	0.050J	mg/L	0.10	0.041	1	03/24/21 14:37	03/24/21 21:07	7429-90-5	
Iron	0.12	mg/L	0.040	0.016	1	03/24/21 14:37	03/24/21 21:07	7439-89-6	
Manganese	0.25	mg/L	0.040	0.0017	1	03/24/21 14:37	03/24/21 21:07	7439-96-5	
6010 MET ICP, Dissolved									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Aluminum, Dissolved	0.049J	mg/L	0.10	0.041	1	03/23/21 12:29	03/23/21 20:39	7429-90-5	
Iron, Dissolved	0.12	mg/L	0.040	0.016	1	03/23/21 12:29	03/23/21 20:39	7439-89-6	
Manganese, Dissolved	0.25	mg/L	0.040	0.0017	1	03/23/21 12:29	03/23/21 20:39	7439-96-5	
Calcium, Dissolved	109	mg/L	1.0	0.070	1	03/23/21 12:29	03/23/21 20:39	7440-70-2	
Magnesium, Dissolved	15.8	mg/L	0.050	0.0076	1	03/23/21 12:29	03/23/21 20:39	7439-95-4	
Sodium, Dissolved	7.0	mg/L	1.0	0.26	1	03/23/21 12:29	03/23/21 20:39	7440-23-5	
Potassium, Dissolved	11.9	mg/L	0.20	0.056	1	03/23/21 12:29	03/23/21 20:39	7440-09-7	
Silicon, Dissolved	0.62	mg/L	0.040	0.033	1	03/23/21 12:29	03/23/21 20:39	7440-21-3	
6020 MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony, Dissolved	0.00030J	mg/L	0.0030	0.00028	1	03/24/21 12:08	03/24/21 20:16	7440-36-0	
Arsenic, Dissolved	0.16	mg/L	0.0050	0.00078	1	03/24/21 12:08	03/24/21 20:16	7440-38-2	
Barium, Dissolved	0.040	mg/L	0.0050	0.00071	1	03/24/21 12:08	03/24/21 20:16	7440-39-3	
Beryllium, Dissolved	ND	mg/L	0.00050	0.000046	1	03/24/21 12:08	03/24/21 20:16	7440-41-7	
Boron, Dissolved	0.68	mg/L	0.040	0.0052	1	03/24/21 12:08	03/24/21 20:16	7440-42-8	
Cadmium, Dissolved	ND	mg/L	0.00050	0.00012	1	03/24/21 12:08	03/24/21 20:16	7440-43-9	
Chromium, Dissolved	0.0026J	mg/L	0.0050	0.00055	1	03/24/21 12:08	03/24/21 20:16	7440-47-3	B
Cobalt, Dissolved	ND	mg/L	0.0050	0.00038	1	03/24/21 12:08	03/24/21 20:16	7440-48-4	
Lead, Dissolved	0.00011J	mg/L	0.0010	0.000036	1	03/24/21 12:08	03/24/21 20:16	7439-92-1	
Lithium, Dissolved	ND	mg/L	0.030	0.00081	1	03/24/21 12:08	03/24/21 20:16	7439-93-2	
Molybdenum, Dissolved	0.094	mg/L	0.010	0.00069	1	03/24/21 12:08	03/24/21 20:16	7439-98-7	
Nickel, Dissolved	ND	mg/L	0.0050	0.00069	1	03/24/21 12:08	03/24/21 20:16	7440-02-0	
Selenium, Dissolved	0.0058	mg/L	0.0050	0.0016	1	03/24/21 12:08	03/24/21 20:16	7782-49-2	
Silver, Dissolved	ND	mg/L	0.0050	0.00036	1	03/24/21 12:08	03/24/21 20:16	7440-22-4	
Thallium, Dissolved	ND	mg/L	0.0010	0.00014	1	03/24/21 12:08	03/24/21 20:16	7440-28-0	
Zinc, Dissolved	0.0065J	mg/L	0.010	0.0022	1	03/24/21 12:08	03/24/21 20:16	7440-66-6	
SM4500P-E, Phosphate, Ortho									
Analytical Method: SM 4500-P E-2011									
Pace Analytical Services - Peachtree Corners, GA									
Orthophosphate as P	ND	mg/L	0.020	0.0020	1		03/12/21 17:55		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	351	mg/L	5.0	5.0	1		03/26/21 13:32		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/26/21 13:32		
Alkalinity, Total as CaCO3	351	mg/L	5.0	5.0	1		03/26/21 13:32		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Sample: GWC-15		Lab ID: 92527508009		Collected: 03/12/21 08:35	Received: 03/12/21 16:00	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia		Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Ammonia	0.21	mg/L	0.10	0.031	1		03/23/21 15:40	7664-41-7	
353.2 Nitrogen, NO2/NO3 pres.		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	0.061	mg/L	0.040	0.017	1		03/23/21 10:34		
5310B TOC		Analytical Method: SM 5310B-2011 Pace Analytical Services - Asheville							
Total Organic Carbon	26.4	mg/L	1.0	0.50	1		04/03/21 12:49	7440-44-0	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL
 Pace Project No.: 92527508

Sample: GWC-20		Lab ID: 92527508010		Collected: 03/12/21 10:05		Received: 03/12/21 16:00		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Aluminum	0.070J	mg/L	0.10	0.041	1	03/24/21 14:37	03/24/21 21:12	7429-90-5		
Iron	0.39	mg/L	0.040	0.016	1	03/24/21 14:37	03/24/21 21:12	7439-89-6		
Manganese	0.090	mg/L	0.040	0.0017	1	03/24/21 14:37	03/24/21 21:12	7439-96-5		
6010 MET ICP, Dissolved		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Aluminum, Dissolved	0.061J	mg/L	0.10	0.041	1	03/23/21 12:29	03/23/21 20:44	7429-90-5		
Iron, Dissolved	0.42	mg/L	0.040	0.016	1	03/23/21 12:29	03/23/21 20:44	7439-89-6		
Manganese, Dissolved	0.093	mg/L	0.040	0.0017	1	03/23/21 12:29	03/23/21 20:44	7439-96-5		
Calcium, Dissolved	261	mg/L	1.0	0.070	1	03/23/21 12:29	03/23/21 20:44	7440-70-2		
Magnesium, Dissolved	103	mg/L	0.050	0.0076	1	03/23/21 12:29	03/23/21 20:44	7439-95-4		
Sodium, Dissolved	102	mg/L	1.0	0.26	1	03/23/21 12:29	03/23/21 20:44	7440-23-5		
Potassium, Dissolved	26.6	mg/L	0.20	0.056	1	03/23/21 12:29	03/23/21 20:44	7440-09-7		
Silicon, Dissolved	0.88	mg/L	0.040	0.033	1	03/23/21 12:29	03/23/21 20:44	7440-21-3		
6020 MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony, Dissolved	ND	mg/L	0.0030	0.00028	1	03/24/21 12:08	03/24/21 20:22	7440-36-0		
Arsenic, Dissolved	0.27	mg/L	0.0050	0.00078	1	03/24/21 12:08	03/24/21 20:22	7440-38-2		
Barium, Dissolved	0.37	mg/L	0.0050	0.00071	1	03/24/21 12:08	03/24/21 20:22	7440-39-3		
Beryllium, Dissolved	ND	mg/L	0.00050	0.000046	1	03/24/21 12:08	03/24/21 20:22	7440-41-7		
Boron, Dissolved	14.8	mg/L	0.40	0.052	10	03/24/21 12:08	03/25/21 20:45	7440-42-8		
Cadmium, Dissolved	ND	mg/L	0.00050	0.00012	1	03/24/21 12:08	03/24/21 20:22	7440-43-9		
Chromium, Dissolved	0.0012J	mg/L	0.0050	0.00055	1	03/24/21 12:08	03/24/21 20:22	7440-47-3	B	
Cobalt, Dissolved	ND	mg/L	0.0050	0.00038	1	03/24/21 12:08	03/24/21 20:22	7440-48-4		
Lead, Dissolved	ND	mg/L	0.0010	0.000036	1	03/24/21 12:08	03/24/21 20:22	7439-92-1		
Lithium, Dissolved	ND	mg/L	0.030	0.00081	1	03/24/21 12:08	03/24/21 20:22	7439-93-2		
Molybdenum, Dissolved	0.56	mg/L	0.010	0.00069	1	03/24/21 12:08	03/24/21 20:22	7439-98-7		
Nickel, Dissolved	ND	mg/L	0.0050	0.00069	1	03/24/21 12:08	03/24/21 20:22	7440-02-0		
Selenium, Dissolved	ND	mg/L	0.0050	0.0016	1	03/24/21 12:08	03/24/21 20:22	7782-49-2		
Silver, Dissolved	ND	mg/L	0.0050	0.00036	1	03/24/21 12:08	03/24/21 20:22	7440-22-4		
Thallium, Dissolved	ND	mg/L	0.0010	0.00014	1	03/24/21 12:08	03/24/21 20:22	7440-28-0		
Zinc, Dissolved	ND	mg/L	0.010	0.0022	1	03/24/21 12:08	03/24/21 20:22	7440-66-6		
SM4500P-E, Phosphate, Ortho		Analytical Method: SM 4500-P E-2011 Pace Analytical Services - Peachtree Corners, GA								
Orthophosphate as P	0.0057J	mg/L	0.020	0.0020	1		03/12/21 17:56			
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	226	mg/L	5.0	5.0	1		03/26/21 13:43			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/26/21 13:43			
Alkalinity, Total as CaCO3	226	mg/L	5.0	5.0	1		03/26/21 13:43			

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Sample: GWC-20		Lab ID: 92527508010		Collected: 03/12/21 10:05	Received: 03/12/21 16:00	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia		Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Ammonia	0.98	mg/L	0.10	0.031	1		03/23/21 16:05	7664-41-7	
353.2 Nitrogen, NO2/NO3 pres.		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	0.042	mg/L	0.040	0.017	1		03/23/21 10:35		
5310B TOC		Analytical Method: SM 5310B-2011 Pace Analytical Services - Asheville							
Total Organic Carbon	27.3	mg/L	1.0	0.50	1		04/03/21 13:07	7440-44-0	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL
 Pace Project No.: 92527508

Sample: GWC-16 Lab ID: 92527508011 Collected: 03/16/21 11:05 Received: 03/17/21 12:25 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Aluminum	0.26	mg/L	0.10	0.041	1	03/26/21 10:56	03/26/21 20:37	7429-90-5	
Iron	0.26	mg/L	0.040	0.016	1	03/26/21 10:56	03/26/21 20:37	7439-89-6	
Manganese	0.11	mg/L	0.040	0.0017	1	03/26/21 10:56	03/26/21 20:37	7439-96-5	
6010 MET ICP, Dissolved Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Aluminum, Dissolved	0.26	mg/L	0.10	0.041	1	03/23/21 12:29	03/23/21 20:48	7429-90-5	
Iron, Dissolved	0.26	mg/L	0.040	0.016	1	03/23/21 12:29	03/23/21 20:48	7439-89-6	
Manganese, Dissolved	0.12	mg/L	0.040	0.0017	1	03/23/21 12:29	03/23/21 20:48	7439-96-5	
Calcium, Dissolved	204	mg/L	1.0	0.070	1	03/23/21 12:29	03/23/21 20:48	7440-70-2	
Magnesium, Dissolved	62.6	mg/L	0.050	0.0076	1	03/23/21 12:29	03/23/21 20:48	7439-95-4	
Sodium, Dissolved	116	mg/L	1.0	0.26	1	03/23/21 12:29	03/23/21 20:48	7440-23-5	
Potassium, Dissolved	26.0	mg/L	0.20	0.056	1	03/23/21 12:29	03/23/21 20:48	7440-09-7	
Silicon, Dissolved	1.1	mg/L	0.040	0.033	1	03/23/21 12:29	03/23/21 20:48	7440-21-3	
6020 MET ICPMS, Dissolved Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony, Dissolved	ND	mg/L	0.0030	0.00028	1	03/24/21 12:08	03/24/21 20:28	7440-36-0	
Arsenic, Dissolved	0.055	mg/L	0.0050	0.00078	1	03/24/21 12:08	03/24/21 20:28	7440-38-2	
Barium, Dissolved	0.18	mg/L	0.0050	0.00071	1	03/24/21 12:08	03/24/21 20:28	7440-39-3	
Beryllium, Dissolved	ND	mg/L	0.00050	0.000046	1	03/24/21 12:08	03/24/21 20:28	7440-41-7	
Boron, Dissolved	7.8	mg/L	0.040	0.0052	1	03/24/21 12:08	03/24/21 20:28	7440-42-8	
Cadmium, Dissolved	ND	mg/L	0.00050	0.00012	1	03/24/21 12:08	03/24/21 20:28	7440-43-9	
Chromium, Dissolved	0.00096J	mg/L	0.0050	0.00055	1	03/24/21 12:08	03/24/21 20:28	7440-47-3	B
Cobalt, Dissolved	ND	mg/L	0.0050	0.00038	1	03/24/21 12:08	03/24/21 20:28	7440-48-4	
Lead, Dissolved	ND	mg/L	0.0010	0.000036	1	03/24/21 12:08	03/24/21 20:28	7439-92-1	
Lithium, Dissolved	ND	mg/L	0.030	0.00081	1	03/24/21 12:08	03/24/21 20:28	7439-93-2	
Molybdenum, Dissolved	0.25	mg/L	0.010	0.00069	1	03/24/21 12:08	03/24/21 20:28	7439-98-7	
Nickel, Dissolved	ND	mg/L	0.0050	0.00069	1	03/24/21 12:08	03/24/21 20:28	7440-02-0	
Selenium, Dissolved	0.0045J	mg/L	0.0050	0.0016	1	03/24/21 12:08	03/24/21 20:28	7782-49-2	
Silver, Dissolved	ND	mg/L	0.0050	0.00036	1	03/24/21 12:08	03/24/21 20:28	7440-22-4	
Thallium, Dissolved	ND	mg/L	0.0010	0.00014	1	03/24/21 12:08	03/24/21 20:28	7440-28-0	
Zinc, Dissolved	ND	mg/L	0.010	0.0022	1	03/24/21 12:08	03/24/21 20:28	7440-66-6	
SM4500P-E, Phosphate, Ortho Analytical Method: SM 4500-P E-2011 Pace Analytical Services - Peachtree Corners, GA									
Orthophosphate as P	ND	mg/L	0.020	0.0020	1		03/17/21 14:46		H3
2320B Alkalinity Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	74.4	mg/L	5.0	5.0	1		03/26/21 16:21		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/26/21 16:21		
Alkalinity, Total as CaCO3	74.4	mg/L	5.0	5.0	1		03/26/21 16:21		

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Sample: GWC-16 Lab ID: 92527508011 Collected: 03/16/21 11:05 Received: 03/17/21 12:25 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia									
Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, Ammonia	0.80	mg/L	0.10	0.031	1		03/28/21 15:20	7664-41-7	
353.2 Nitrogen, NO2/NO3 pres.									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	0.21	mg/L	0.040	0.017	1		03/23/21 12:30		
5310B TOC									
Analytical Method: SM 5310B-2011 Pace Analytical Services - Asheville									
Total Organic Carbon	25.4	mg/L	1.0	0.50	1		04/03/21 13:24	7440-44-0	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

Sample: GWC-14 **Lab ID: 92527508012** Collected: 03/16/21 09:30 Received: 03/17/21 12:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Aluminum	ND	mg/L	0.10	0.041	1	03/26/21 10:56	03/26/21 20:42	7429-90-5	
Iron	0.51	mg/L	0.040	0.016	1	03/26/21 10:56	03/26/21 20:42	7439-89-6	
Manganese	0.22	mg/L	0.040	0.0017	1	03/26/21 10:56	03/26/21 20:42	7439-96-5	
6010 MET ICP, Dissolved									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Aluminum, Dissolved	ND	mg/L	0.10	0.041	1	03/23/21 12:29	03/23/21 20:53	7429-90-5	
Iron, Dissolved	0.54	mg/L	0.040	0.016	1	03/23/21 12:29	03/23/21 20:53	7439-89-6	
Manganese, Dissolved	0.24	mg/L	0.040	0.0017	1	03/23/21 12:29	03/23/21 20:53	7439-96-5	
Calcium, Dissolved	39.5	mg/L	1.0	0.070	1	03/23/21 12:29	03/23/21 20:53	7440-70-2	
Magnesium, Dissolved	9.9	mg/L	0.050	0.0076	1	03/23/21 12:29	03/23/21 20:53	7439-95-4	
Sodium, Dissolved	12.7	mg/L	1.0	0.26	1	03/23/21 12:29	03/23/21 20:53	7440-23-5	
Potassium, Dissolved	3.0	mg/L	0.20	0.056	1	03/23/21 12:29	03/23/21 20:53	7440-09-7	
Silicon, Dissolved	1.0	mg/L	0.040	0.033	1	03/23/21 12:29	03/23/21 20:53	7440-21-3	
6020 MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony, Dissolved	ND	mg/L	0.0030	0.00028	1	03/24/21 12:08	03/24/21 20:34	7440-36-0	
Arsenic, Dissolved	ND	mg/L	0.0050	0.00078	1	03/24/21 12:08	03/24/21 20:34	7440-38-2	
Barium, Dissolved	0.041	mg/L	0.0050	0.00071	1	03/24/21 12:08	03/24/21 20:34	7440-39-3	
Beryllium, Dissolved	ND	mg/L	0.00050	0.000046	1	03/24/21 12:08	03/24/21 20:34	7440-41-7	
Boron, Dissolved	0.088	mg/L	0.040	0.0052	1	03/24/21 12:08	03/24/21 20:34	7440-42-8	
Cadmium, Dissolved	ND	mg/L	0.00050	0.00012	1	03/24/21 12:08	03/24/21 20:34	7440-43-9	
Chromium, Dissolved	ND	mg/L	0.0050	0.00055	1	03/24/21 12:08	03/24/21 20:34	7440-47-3	B
Cobalt, Dissolved	ND	mg/L	0.0050	0.00038	1	03/24/21 12:08	03/24/21 20:34	7440-48-4	
Lead, Dissolved	ND	mg/L	0.0010	0.000036	1	03/24/21 12:08	03/24/21 20:34	7439-92-1	
Lithium, Dissolved	ND	mg/L	0.030	0.00081	1	03/24/21 12:08	03/24/21 20:34	7439-93-2	
Molybdenum, Dissolved	0.0056J	mg/L	0.010	0.00069	1	03/24/21 12:08	03/24/21 20:34	7439-98-7	
Nickel, Dissolved	ND	mg/L	0.0050	0.00069	1	03/24/21 12:08	03/24/21 20:34	7440-02-0	
Selenium, Dissolved	0.0023J	mg/L	0.0050	0.0016	1	03/24/21 12:08	03/24/21 20:34	7782-49-2	
Silver, Dissolved	ND	mg/L	0.0050	0.00036	1	03/24/21 12:08	03/24/21 20:34	7440-22-4	
Thallium, Dissolved	ND	mg/L	0.0010	0.00014	1	03/24/21 12:08	03/24/21 20:34	7440-28-0	
Zinc, Dissolved	ND	mg/L	0.010	0.0022	1	03/24/21 12:08	03/24/21 20:34	7440-66-6	
SM4500P-E, Phosphate, Ortho									
Analytical Method: SM 4500-P E-2011									
Pace Analytical Services - Peachtree Corners, GA									
Orthophosphate as P	ND	mg/L	0.020	0.0020	1		03/17/21 14:49		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	46.4	mg/L	5.0	5.0	1		03/26/21 16:31		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/26/21 16:31		
Alkalinity, Total as CaCO3	46.4	mg/L	5.0	5.0	1		03/26/21 16:31		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Sample: GWC-14		Lab ID: 92527508012		Collected: 03/16/21 09:30	Received: 03/17/21 12:25	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia		Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Ammonia	0.31	mg/L	0.10	0.031	1		03/28/21 15:22	7664-41-7	
353.2 Nitrogen, NO2/NO3 pres.		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	0.40	mg/L	0.040	0.017	1		03/23/21 12:31		
5310B TOC		Analytical Method: SM 5310B-2011 Pace Analytical Services - Asheville							
Total Organic Carbon	3.7	mg/L	1.0	0.50	1		04/03/21 14:24	7440-44-0	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL
 Pace Project No.: 92527508

Sample: GWC-21		Lab ID: 92527508013		Collected: 03/16/21 15:00		Received: 03/17/21 12:25		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Aluminum	0.061J	mg/L	0.10	0.041	1	03/26/21 10:56	03/26/21 20:47	7429-90-5		
Iron	0.093	mg/L	0.040	0.016	1	03/26/21 10:56	03/26/21 20:47	7439-89-6		
Manganese	0.072	mg/L	0.040	0.0017	1	03/26/21 10:56	03/26/21 20:47	7439-96-5		
6010 MET ICP, Dissolved		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Aluminum, Dissolved	0.076J	mg/L	0.10	0.041	1	03/23/21 12:29	03/23/21 20:58	7429-90-5		
Iron, Dissolved	0.091	mg/L	0.040	0.016	1	03/23/21 12:29	03/23/21 20:58	7439-89-6		
Manganese, Dissolved	0.074	mg/L	0.040	0.0017	1	03/23/21 12:29	03/23/21 20:58	7439-96-5		
Calcium, Dissolved	102	mg/L	1.0	0.070	1	03/23/21 12:29	03/23/21 20:58	7440-70-2		
Magnesium, Dissolved	22.6	mg/L	0.050	0.0076	1	03/23/21 12:29	03/23/21 20:58	7439-95-4		
Sodium, Dissolved	43.1	mg/L	1.0	0.26	1	03/23/21 12:29	03/23/21 20:58	7440-23-5		
Potassium, Dissolved	11.5	mg/L	0.20	0.056	1	03/23/21 12:29	03/23/21 20:58	7440-09-7		
Silicon, Dissolved	1.3	mg/L	0.040	0.033	1	03/23/21 12:29	03/23/21 20:58	7440-21-3		
6020 MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony, Dissolved	ND	mg/L	0.0030	0.00028	1	03/24/21 12:08	03/24/21 20:39	7440-36-0		
Arsenic, Dissolved	0.011	mg/L	0.0050	0.00078	1	03/24/21 12:08	03/24/21 20:39	7440-38-2		
Barium, Dissolved	0.20	mg/L	0.0050	0.00071	1	03/24/21 12:08	03/24/21 20:39	7440-39-3		
Beryllium, Dissolved	ND	mg/L	0.0025	0.00023	5	03/24/21 12:08	03/25/21 20:51	7440-41-7	D3	
Boron, Dissolved	3.1	mg/L	0.20	0.026	5	03/24/21 12:08	03/25/21 20:51	7440-42-8		
Cadmium, Dissolved	ND	mg/L	0.00050	0.00012	1	03/24/21 12:08	03/24/21 20:39	7440-43-9		
Chromium, Dissolved	0.00073J	mg/L	0.0050	0.00055	1	03/24/21 12:08	03/24/21 20:39	7440-47-3	B	
Cobalt, Dissolved	ND	mg/L	0.0050	0.00038	1	03/24/21 12:08	03/24/21 20:39	7440-48-4		
Lead, Dissolved	0.00010J	mg/L	0.0010	0.000036	1	03/24/21 12:08	03/24/21 20:39	7439-92-1		
Lithium, Dissolved	ND	mg/L	0.15	0.0040	5	03/24/21 12:08	03/25/21 20:51	7439-93-2	D3	
Molybdenum, Dissolved	0.023	mg/L	0.010	0.00069	1	03/24/21 12:08	03/24/21 20:39	7439-98-7		
Nickel, Dissolved	ND	mg/L	0.0050	0.00069	1	03/24/21 12:08	03/24/21 20:39	7440-02-0		
Selenium, Dissolved	0.0069	mg/L	0.0050	0.0016	1	03/24/21 12:08	03/24/21 20:39	7782-49-2		
Silver, Dissolved	ND	mg/L	0.0050	0.00036	1	03/24/21 12:08	03/24/21 20:39	7440-22-4		
Thallium, Dissolved	ND	mg/L	0.0010	0.00014	1	03/24/21 12:08	03/24/21 20:39	7440-28-0		
Zinc, Dissolved	0.0040J	mg/L	0.010	0.0022	1	03/24/21 12:08	03/24/21 20:39	7440-66-6		
SM4500P-E, Phosphate, Ortho		Analytical Method: SM 4500-P E-2011 Pace Analytical Services - Peachtree Corners, GA								
Orthophosphate as P	ND	mg/L	0.020	0.0020	1		03/17/21 14:50			
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	61.1	mg/L	5.0	5.0	1		03/26/21 16:39			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/26/21 16:39			
Alkalinity, Total as CaCO3	61.1	mg/L	5.0	5.0	1		03/26/21 16:39			

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Sample: GWC-21		Lab ID: 92527508013		Collected: 03/16/21 15:00	Received: 03/17/21 12:25	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia		Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Ammonia	0.24	mg/L	0.10	0.031	1		03/28/21 15:23	7664-41-7	
353.2 Nitrogen, NO2/NO3 pres.		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	0.38	mg/L	0.040	0.017	1		03/23/21 12:32		
5310B TOC		Analytical Method: SM 5310B-2011 Pace Analytical Services - Asheville							
Total Organic Carbon	7.1	mg/L	1.0	0.50	1		04/03/21 14:40	7440-44-0	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL

Project No.: 92527508

Sample: GWC-2 **Lab ID: 92527508014** Collected: 03/15/21 15:10 Received: 03/17/21 12:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Aluminum	0.12	mg/L	0.10	0.041	1	03/26/21 10:56	03/26/21 20:51	7429-90-5	
Iron	0.87	mg/L	0.040	0.016	1	03/26/21 10:56	03/26/21 20:51	7439-89-6	
Manganese	0.0050J	mg/L	0.040	0.0017	1	03/26/21 10:56	03/26/21 20:51	7439-96-5	
6010 MET ICP, Dissolved									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Aluminum, Dissolved	0.12	mg/L	0.10	0.041	1	03/23/21 12:29	03/23/21 21:03	7429-90-5	
Iron, Dissolved	0.92	mg/L	0.040	0.016	1	03/23/21 12:29	03/23/21 21:03	7439-89-6	
Manganese, Dissolved	0.0050J	mg/L	0.040	0.0017	1	03/23/21 12:29	03/23/21 21:03	7439-96-5	
Calcium, Dissolved	0.23J	mg/L	1.0	0.070	1	03/23/21 12:29	03/23/21 21:03	7440-70-2	
Magnesium, Dissolved	0.91	mg/L	0.050	0.0076	1	03/23/21 12:29	03/23/21 21:03	7439-95-4	
Sodium, Dissolved	7.5	mg/L	1.0	0.26	1	03/23/21 12:29	03/23/21 21:03	7440-23-5	
Potassium, Dissolved	0.59	mg/L	0.20	0.056	1	03/23/21 12:29	03/23/21 21:03	7440-09-7	
Silicon, Dissolved	2.3	mg/L	0.040	0.033	1	03/23/21 12:29	03/23/21 21:03	7440-21-3	
6020 MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony, Dissolved	ND	mg/L	0.0030	0.00028	1	03/24/21 12:08	03/24/21 20:45	7440-36-0	
Arsenic, Dissolved	ND	mg/L	0.0050	0.00078	1	03/24/21 12:08	03/24/21 20:45	7440-38-2	
Barium, Dissolved	0.058	mg/L	0.0050	0.00071	1	03/24/21 12:08	03/24/21 20:45	7440-39-3	
Beryllium, Dissolved	ND	mg/L	0.00050	0.000046	1	03/24/21 12:08	03/24/21 20:45	7440-41-7	
Boron, Dissolved	0.026J	mg/L	0.040	0.0052	1	03/24/21 12:08	03/24/21 20:45	7440-42-8	
Cadmium, Dissolved	ND	mg/L	0.00050	0.00012	1	03/24/21 12:08	03/24/21 20:45	7440-43-9	
Chromium, Dissolved	ND	mg/L	0.0050	0.00055	1	03/24/21 12:08	03/24/21 20:45	7440-47-3	
Cobalt, Dissolved	ND	mg/L	0.0050	0.00038	1	03/24/21 12:08	03/24/21 20:45	7440-48-4	
Lead, Dissolved	ND	mg/L	0.0010	0.000036	1	03/24/21 12:08	03/24/21 20:45	7439-92-1	
Lithium, Dissolved	ND	mg/L	0.030	0.00081	1	03/24/21 12:08	03/24/21 20:45	7439-93-2	
Molybdenum, Dissolved	ND	mg/L	0.010	0.00069	1	03/24/21 12:08	03/24/21 20:45	7439-98-7	
Nickel, Dissolved	ND	mg/L	0.0050	0.00069	1	03/24/21 12:08	03/24/21 20:45	7440-02-0	
Selenium, Dissolved	ND	mg/L	0.0050	0.0016	1	03/24/21 12:08	03/24/21 20:45	7782-49-2	
Silver, Dissolved	ND	mg/L	0.0050	0.00036	1	03/24/21 12:08	03/24/21 20:45	7440-22-4	
Thallium, Dissolved	ND	mg/L	0.0010	0.00014	1	03/24/21 12:08	03/24/21 20:45	7440-28-0	
Zinc, Dissolved	ND	mg/L	0.010	0.0022	1	03/24/21 12:08	03/24/21 20:45	7440-66-6	
SM4500P-E, Phosphate, Ortho									
Analytical Method: SM 4500-P E-2011									
Pace Analytical Services - Peachtree Corners, GA									
Orthophosphate as P	ND	mg/L	0.020	0.0020	1		03/17/21 14:48		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/26/21 14:52		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/26/21 14:52		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		03/26/21 14:52		

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Sample: GWC-2		Lab ID: 92527508014		Collected: 03/15/21 15:10	Received: 03/17/21 12:25	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia		Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Ammonia	0.14	mg/L	0.10	0.031	1		03/28/21 15:25	7664-41-7	
353.2 Nitrogen, NO2/NO3 pres.		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	0.31	mg/L	0.040	0.017	1		03/23/21 12:33		
5310B TOC		Analytical Method: SM 5310B-2011 Pace Analytical Services - Asheville							
Total Organic Carbon	ND	mg/L	1.0	0.50	1		04/03/21 15:28	7440-44-0	

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL
 Pace Project No.: 92527508

Sample: GWC-13		Lab ID: 92527508015		Collected: 03/15/21 16:25		Received: 03/17/21 12:25		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Aluminum	0.15	mg/L	0.10	0.041	1	03/26/21 10:56	03/26/21 20:56	7429-90-5		
Iron	0.22	mg/L	0.040	0.016	1	03/26/21 10:56	03/26/21 20:56	7439-89-6		
Manganese	0.0052J	mg/L	0.040	0.0017	1	03/26/21 10:56	03/26/21 20:56	7439-96-5		
6010 MET ICP, Dissolved		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Aluminum, Dissolved	0.16	mg/L	0.10	0.041	1	03/23/21 12:29	03/23/21 21:22	7429-90-5		
Iron, Dissolved	0.23	mg/L	0.040	0.016	1	03/23/21 12:29	03/23/21 21:22	7439-89-6		
Manganese, Dissolved	0.0053J	mg/L	0.040	0.0017	1	03/23/21 12:29	03/23/21 21:22	7439-96-5		
Calcium, Dissolved	2.8	mg/L	1.0	0.070	1	03/23/21 12:29	03/23/21 21:22	7440-70-2		
Magnesium, Dissolved	7.6	mg/L	0.050	0.0076	1	03/23/21 12:29	03/23/21 21:22	7439-95-4		
Sodium, Dissolved	4.9	mg/L	1.0	0.26	1	03/23/21 12:29	03/23/21 21:22	7440-23-5		
Potassium, Dissolved	1.5	mg/L	0.20	0.056	1	03/23/21 12:29	03/23/21 21:22	7440-09-7		
Silicon, Dissolved	2.2	mg/L	0.040	0.033	1	03/23/21 12:29	03/23/21 21:22	7440-21-3		
6020 MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony, Dissolved	ND	mg/L	0.0030	0.00028	1	03/24/21 12:08	03/24/21 21:02	7440-36-0		
Arsenic, Dissolved	ND	mg/L	0.0050	0.00078	1	03/24/21 12:08	03/24/21 21:02	7440-38-2		
Barium, Dissolved	0.036	mg/L	0.0050	0.00071	1	03/24/21 12:08	03/24/21 21:02	7440-39-3		
Beryllium, Dissolved	ND	mg/L	0.00050	0.000046	1	03/24/21 12:08	03/24/21 21:02	7440-41-7		
Boron, Dissolved	0.23	mg/L	0.040	0.0052	1	03/24/21 12:08	03/24/21 21:02	7440-42-8		
Cadmium, Dissolved	ND	mg/L	0.00050	0.00012	1	03/24/21 12:08	03/24/21 21:02	7440-43-9		
Chromium, Dissolved	ND	mg/L	0.0050	0.00055	1	03/24/21 12:08	03/24/21 21:02	7440-47-3		
Cobalt, Dissolved	ND	mg/L	0.0050	0.00038	1	03/24/21 12:08	03/24/21 21:02	7440-48-4		
Lead, Dissolved	0.00010J	mg/L	0.0010	0.000036	1	03/24/21 12:08	03/24/21 21:02	7439-92-1		
Lithium, Dissolved	ND	mg/L	0.030	0.00081	1	03/24/21 12:08	03/24/21 21:02	7439-93-2		
Molybdenum, Dissolved	ND	mg/L	0.010	0.00069	1	03/24/21 12:08	03/24/21 21:02	7439-98-7		
Nickel, Dissolved	ND	mg/L	0.0050	0.00069	1	03/24/21 12:08	03/24/21 21:02	7440-02-0		
Selenium, Dissolved	ND	mg/L	0.0050	0.0016	1	03/24/21 12:08	03/24/21 21:02	7782-49-2		
Silver, Dissolved	ND	mg/L	0.0050	0.00036	1	03/24/21 12:08	03/24/21 21:02	7440-22-4		
Thallium, Dissolved	ND	mg/L	0.0010	0.00014	1	03/24/21 12:08	03/24/21 21:02	7440-28-0		
Zinc, Dissolved	0.042	mg/L	0.010	0.0022	1	03/24/21 12:08	03/24/21 21:02	7440-66-6		
SM4500P-E, Phosphate, Ortho		Analytical Method: SM 4500-P E-2011 Pace Analytical Services - Peachtree Corners, GA								
Orthophosphate as P	ND	mg/L	0.020	0.0020	1		03/17/21 14:49			
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/26/21 14:56			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/26/21 14:56			
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		03/26/21 14:56			

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Sample: GWC-13		Lab ID: 92527508015		Collected: 03/15/21 16:25	Received: 03/17/21 12:25	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia		Analytical Method: EPA 350.1 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, Ammonia	0.032J	mg/L	0.10	0.031	1		03/28/21 14:01	7664-41-7	
353.2 Nitrogen, NO2/NO3 pres.		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	ND	mg/L	0.040	0.017	1		03/25/21 10:23		
5310B TOC		Analytical Method: SM 5310B-2011 Pace Analytical Services - Asheville							
Total Organic Carbon	1.0	mg/L	1.0	0.50	1		04/03/21 15:51	7440-44-0	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

QC Batch: 608884 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527508001, 92527508002, 92527508003, 92527508004, 92527508005, 92527508006

METHOD BLANK: 3206990 Matrix: Water
Associated Lab Samples: 92527508001, 92527508002, 92527508003, 92527508004, 92527508005, 92527508006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	mg/L	ND	0.10	0.041	03/24/21 17:54	
Iron	mg/L	ND	0.040	0.016	03/24/21 17:54	
Manganese	mg/L	ND	0.040	0.0017	03/24/21 17:54	

LABORATORY CONTROL SAMPLE: 3206991

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	mg/L	1	1.0	103	80-120	
Iron	mg/L	1	0.97	97	80-120	
Manganese	mg/L	1	0.98	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3206992 3206993

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527234003 Result	Spike Conc.	Spike Conc.	Result								
Aluminum	mg/L	0.059J	1	1	1.1	1.2	109	115	75-125	5	20		
Iron	mg/L	0.42	1	1	1.5	1.5	104	108	75-125	3	20		
Manganese	mg/L	0.10	1	1	1.1	1.2	101	105	75-125	3	20		

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

QC Batch: 608886 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527508007, 92527508008, 92527508009, 92527508010

METHOD BLANK: 3206998 Matrix: Water
Associated Lab Samples: 92527508007, 92527508008, 92527508009, 92527508010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	mg/L	ND	0.10	0.041	03/24/21 19:54	
Iron	mg/L	ND	0.040	0.016	03/24/21 19:54	
Manganese	mg/L	ND	0.040	0.0017	03/24/21 19:54	

LABORATORY CONTROL SAMPLE: 3206999

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	mg/L	1	1.1	110	80-120	
Iron	mg/L	1	1.0	103	80-120	
Manganese	mg/L	1	1.0	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3207000 3207001

Parameter	Units	92527234014		MS		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result							
Aluminum	mg/L	0.17	1	1	1.3	1.3	115	110	75-125	4	20			
Iron	mg/L	6.0	1	1	7.0	6.7	109	70	75-125	6	20	M1		
Manganese	mg/L	0.13	1	1	1.1	1.1	102	99	75-125	3	20			

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

QC Batch: 609342 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527508011, 92527508012, 92527508013, 92527508014, 92527508015

METHOD BLANK: 3209682 Matrix: Water
Associated Lab Samples: 92527508011, 92527508012, 92527508013, 92527508014, 92527508015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	mg/L	ND	0.10	0.041	03/26/21 19:09	
Iron	mg/L	ND	0.040	0.016	03/26/21 19:09	
Manganese	mg/L	ND	0.040	0.0017	03/26/21 19:09	

LABORATORY CONTROL SAMPLE: 3209683

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	mg/L	1	1.1	111	80-120	
Iron	mg/L	1	1.0	101	80-120	
Manganese	mg/L	1	1.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3209684 3209685

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527268006	Result	Spike Conc.	Spike Conc.								
Aluminum	mg/L	ND	1	1	1	1.1	1.1	107	108	75-125	0	20	
Iron	mg/L	ND	1	1	1	1.0	1.0	103	103	75-125	1	20	
Manganese	mg/L	0.90	1	1	1	1.9	1.9	97	102	75-125	3	20	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

QC Batch: 608526 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010 MET Filtered Diss.
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527508001, 92527508002, 92527508003, 92527508004, 92527508005, 92527508006, 92527508007, 92527508008, 92527508009, 92527508010, 92527508011, 92527508012, 92527508013, 92527508014, 92527508015

METHOD BLANK: 3205414 Matrix: Water
Associated Lab Samples: 92527508001, 92527508002, 92527508003, 92527508004, 92527508005, 92527508006, 92527508007, 92527508008, 92527508009, 92527508010, 92527508011, 92527508012, 92527508013, 92527508014, 92527508015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	mg/L	ND	0.10	0.041	03/23/21 19:21	
Calcium, Dissolved	mg/L	ND	1.0	0.070	03/23/21 19:21	
Iron, Dissolved	mg/L	ND	0.040	0.016	03/23/21 19:21	
Magnesium, Dissolved	mg/L	ND	0.050	0.0076	03/23/21 19:21	
Manganese, Dissolved	mg/L	ND	0.040	0.0017	03/23/21 19:21	
Potassium, Dissolved	mg/L	ND	0.20	0.056	03/23/21 19:21	
Silicon, Dissolved	mg/L	ND	0.040	0.033	03/23/21 19:21	
Sodium, Dissolved	mg/L	ND	1.0	0.26	03/23/21 19:21	

LABORATORY CONTROL SAMPLE: 3205415

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	mg/L	1	1.1	111	80-120	
Calcium, Dissolved	mg/L	1	1.1	106	80-120	
Iron, Dissolved	mg/L	1	1.1	107	80-120	
Magnesium, Dissolved	mg/L	1	1.1	106	80-120	
Manganese, Dissolved	mg/L	1	1.0	101	80-120	
Potassium, Dissolved	mg/L	1	0.99	99	80-120	
Silicon, Dissolved	mg/L	1	1.1	106	80-120	
Sodium, Dissolved	mg/L	1	1.1	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3205416 3205417

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527508001 Result	Spike Conc.	Spike Conc.	Result						
Aluminum, Dissolved	mg/L	0.22	1	1	1.3	1.3	107	108	75-125	0	20
Calcium, Dissolved	mg/L	54.0	1	1	53.6	54.5	-39	57	75-125	2	20 M1
Iron, Dissolved	mg/L	5.8	1	1	6.7	6.8	86	97	75-125	2	20
Magnesium, Dissolved	mg/L	12.2	1	1	12.9	13.2	75	104	75-125	2	20
Manganese, Dissolved	mg/L	0.17	1	1	1.1	1.1	96	98	75-125	1	20
Potassium, Dissolved	mg/L	20.3	1	1	21.0	21.5	63	112	75-125	2	20 M1
Silicon, Dissolved	mg/L	1.2	1	1	2.2	2.2	103	107	75-125	2	20
Sodium, Dissolved	mg/L	47.9	1	1	47.5	48.2	-45	26	75-125	1	20 M1

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

QC Batch: 608871

Analysis Method: EPA 6020B

QC Batch Method: EPA 3005A

Analysis Description: 6020 MET Dissolved

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527508001, 92527508002, 92527508003, 92527508004, 92527508005, 92527508006, 92527508007, 92527508008, 92527508009, 92527508010, 92527508011, 92527508012, 92527508013, 92527508014, 92527508015

METHOD BLANK: 3206919

Matrix: Water

Associated Lab Samples: 92527508001, 92527508002, 92527508003, 92527508004, 92527508005, 92527508006, 92527508007, 92527508008, 92527508009, 92527508010, 92527508011, 92527508012, 92527508013, 92527508014, 92527508015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	mg/L	ND	0.0030	0.00028	03/24/21 18:45	
Arsenic, Dissolved	mg/L	ND	0.0050	0.00078	03/24/21 18:45	
Barium, Dissolved	mg/L	ND	0.0050	0.00071	03/24/21 18:45	
Beryllium, Dissolved	mg/L	ND	0.00050	0.000046	03/24/21 18:45	
Boron, Dissolved	mg/L	ND	0.040	0.0052	03/24/21 18:45	
Cadmium, Dissolved	mg/L	ND	0.00050	0.00012	03/24/21 18:45	
Chromium, Dissolved	mg/L	0.0012J	0.0050	0.00055	03/24/21 18:45	
Cobalt, Dissolved	mg/L	ND	0.0050	0.00038	03/24/21 18:45	
Lead, Dissolved	mg/L	ND	0.0010	0.000036	03/24/21 18:45	
Lithium, Dissolved	mg/L	ND	0.030	0.00081	03/24/21 18:45	
Molybdenum, Dissolved	mg/L	ND	0.010	0.00069	03/24/21 18:45	
Nickel, Dissolved	mg/L	ND	0.0050	0.00069	03/24/21 18:45	
Selenium, Dissolved	mg/L	ND	0.0050	0.0016	03/24/21 18:45	
Silver, Dissolved	mg/L	ND	0.0050	0.00036	03/24/21 18:45	
Thallium, Dissolved	mg/L	ND	0.0010	0.00014	03/24/21 18:45	
Zinc, Dissolved	mg/L	ND	0.010	0.0022	03/24/21 18:45	

LABORATORY CONTROL SAMPLE: 3206920

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	mg/L	0.1	0.11	113	80-120	
Arsenic, Dissolved	mg/L	0.1	0.098	98	80-120	
Barium, Dissolved	mg/L	0.1	0.10	103	80-120	
Beryllium, Dissolved	mg/L	0.1	0.097	97	80-120	
Boron, Dissolved	mg/L	1	0.93	93	80-120	
Cadmium, Dissolved	mg/L	0.1	0.10	101	80-120	
Chromium, Dissolved	mg/L	0.1	0.096	96	80-120	
Cobalt, Dissolved	mg/L	0.1	0.097	97	80-120	
Lead, Dissolved	mg/L	0.1	0.10	101	80-120	
Lithium, Dissolved	mg/L	0.1	0.096	96	80-120	
Molybdenum, Dissolved	mg/L	0.1	0.10	100	80-120	
Nickel, Dissolved	mg/L	0.1	0.097	97	80-120	
Selenium, Dissolved	mg/L	0.1	0.097	97	80-120	
Silver, Dissolved	mg/L	0.1	0.097	97	80-120	
Thallium, Dissolved	mg/L	0.1	0.098	98	80-120	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

LABORATORY CONTROL SAMPLE: 3206920

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Zinc, Dissolved	mg/L	0.1	0.096	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3206921 3206922

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527508001 Result	Spike Conc.	Spike Conc.	MS Result						
Antimony, Dissolved	mg/L	ND	0.1	0.1	0.11	0.11	111	112	75-125	1	20
Arsenic, Dissolved	mg/L	0.0029J	0.1	0.1	0.10	0.10	98	98	75-125	1	20
Barium, Dissolved	mg/L	0.071	0.1	0.1	0.17	0.18	102	107	75-125	3	20
Beryllium, Dissolved	mg/L	ND	0.1	0.1	0.096	0.097	96	97	75-125	1	20
Boron, Dissolved	mg/L	4.7	1	1	5.7	5.8	99	105	75-125	1	20
Cadmium, Dissolved	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	1	20
Chromium, Dissolved	mg/L	0.0029J	0.1	0.1	0.10	0.10	97	98	75-125	1	20
Cobalt, Dissolved	mg/L	0.00046J	0.1	0.1	0.098	0.10	98	100	75-125	2	20
Lead, Dissolved	mg/L	0.00012J	0.1	0.1	0.096	0.098	96	98	75-125	3	20
Lithium, Dissolved	mg/L	0.012J	0.1	0.1	0.11	0.11	94	96	75-125	2	20
Molybdenum, Dissolved	mg/L	0.12	0.1	0.1	0.22	0.22	97	101	75-125	2	20
Nickel, Dissolved	mg/L	ND	0.1	0.1	0.096	0.097	95	97	75-125	1	20
Selenium, Dissolved	mg/L	ND	0.1	0.1	0.096	0.098	95	97	75-125	2	20
Silver, Dissolved	mg/L	ND	0.1	0.1	0.094	0.095	94	95	75-125	1	20
Thallium, Dissolved	mg/L	ND	0.1	0.1	0.094	0.096	94	96	75-125	2	20
Zinc, Dissolved	mg/L	0.0035J	0.1	0.1	0.099	0.098	96	95	75-125	1	20

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

QC Batch: 606366 Analysis Method: SM 4500-P E-2011
 QC Batch Method: SM 4500-P E-2011 Analysis Description: SM4500P-E Phosphorus, Ortho
 Laboratory: Pace Analytical Services - Peachtree Corners, GA
 Associated Lab Samples: 92527508001, 92527508002, 92527508003, 92527508004, 92527508005, 92527508006, 92527508007, 92527508008, 92527508009, 92527508010

METHOD BLANK: 3194526 Matrix: Water
 Associated Lab Samples: 92527508001, 92527508002, 92527508003, 92527508004, 92527508005, 92527508006, 92527508007, 92527508008, 92527508009, 92527508010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.020	0.0020	03/12/21 14:03	

LABORATORY CONTROL SAMPLE: 3194527

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.5	0.58	115	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3194528 3194529

Parameter	Units	3194528		3194529		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92527359001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Orthophosphate as P	mg/L	ND	0.5	0.5	0.56	0.55	112	110	80-120	1	10	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

QC Batch:	607370	Analysis Method:	SM 4500-P E-2011
QC Batch Method:	SM 4500-P E-2011	Analysis Description:	SM4500P-E Phosphorus, Ortho
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527508011, 92527508012, 92527508013, 92527508014, 92527508015

METHOD BLANK: 3199833 Matrix: Water
Associated Lab Samples: 92527508011, 92527508012, 92527508013, 92527508014, 92527508015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.020	0.0020	03/17/21 14:44	

LABORATORY CONTROL SAMPLE: 3199834

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.5	0.52	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3199835 3199836

Parameter	Units	3199835		3199836		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527508011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Orthophosphate as P	mg/L	ND	0.5	0.5	0.50	0.51	100	102	80-120	2	10 H3

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

QC Batch: 607911 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92527508001, 92527508002, 92527508003, 92527508004, 92527508005, 92527508006

METHOD BLANK: 3202328 Matrix: Water
Associated Lab Samples: 92527508001, 92527508002, 92527508003, 92527508004, 92527508005, 92527508006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	03/23/21 18:20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	03/23/21 18:20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	03/23/21 18:20	

LABORATORY CONTROL SAMPLE: 3202329

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	52.7	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3205394 3205395

Parameter	Units	92528425001		3205395		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Alkalinity, Total as CaCO3	mg/L	71.1	50	50	121	120	100	98	80-120	1	25

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3205396 3205397

Parameter	Units	92528425002		3205397		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Alkalinity, Total as CaCO3	mg/L	61.7	50	50	112	114	101	105	80-120	1	25

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

QC Batch: 608537 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92527508007

METHOD BLANK: 3205445 Matrix: Water
Associated Lab Samples: 92527508007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	5.0	03/24/21 11:50	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	ND	5.0	5.0	03/24/21 11:50	
Alkalinity,Carbonate (CaCO ₃)	mg/L	ND	5.0	5.0	03/24/21 11:50	

LABORATORY CONTROL SAMPLE: 3205446

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	52.2	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3206750 3206751

Parameter	Units	92528425003		3206751		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Alkalinity, Total as CaCO ₃	mg/L	87.1	50	50	135	135	96	96	80-120	0	25

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3206752 3206753

Parameter	Units	92528425004		3206753		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Alkalinity, Total as CaCO ₃	mg/L	ND	50	50	54.6	54.3	106	106	80-120	1	25

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

QC Batch: 609170 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92527508008, 92527508009, 92527508010, 92527508011, 92527508012, 92527508013, 92527508014, 92527508015

METHOD BLANK: 3208477 Matrix: Water
Associated Lab Samples: 92527508008, 92527508009, 92527508010, 92527508011, 92527508012, 92527508013, 92527508014, 92527508015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	03/26/21 12:39	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	03/26/21 12:39	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	03/26/21 12:39	

LABORATORY CONTROL SAMPLE: 3208478

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.5	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3208481 3208482

Parameter	Units	3208481		3208482		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.							
Alkalinity, Total as CaCO3	mg/L	ND	50	50	58.4	58.2	115	115	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3210468 3210469

Parameter	Units	3210468		3210469		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.							
Alkalinity, Total as CaCO3	mg/L	161	50	50	210	212	99	102	80-120	1	25	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

QC Batch: 608163 Analysis Method: EPA 350.1 Rev 2.0 1993
QC Batch Method: EPA 350.1 Rev 2.0 1993 Analysis Description: 350.1 Ammonia
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92527508001, 92527508002, 92527508004, 92527508005, 92527508006

METHOD BLANK: 3203739 Matrix: Water
Associated Lab Samples: 92527508001, 92527508002, 92527508004, 92527508005, 92527508006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	0.031	03/23/21 12:40	

LABORATORY CONTROL SAMPLE: 3203740

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	5.0	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3203741 3203742

Parameter	Units	3203741		3203742		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92528131002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Nitrogen, Ammonia	mg/L	0.11	5	5	5.1	5.1	99	99	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3203743 3203744

Parameter	Units	3203743		3203744		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92528631001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Nitrogen, Ammonia	mg/L	ND	5	5	4.8	4.8	96	96	90-110	0	10	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

QC Batch: 608167 Analysis Method: EPA 350.1 Rev 2.0 1993
QC Batch Method: EPA 350.1 Rev 2.0 1993 Analysis Description: 350.1 Ammonia
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92527508009

METHOD BLANK: 3203764 Matrix: Water
Associated Lab Samples: 92527508009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	0.031	03/23/21 14:55	

LABORATORY CONTROL SAMPLE: 3203765

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	4.8	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3203766 3203767

Parameter	Units	92528502003		3203767		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Nitrogen, Ammonia	mg/L	ND	5	5	4.8	4.8	94	94	90-110	0	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3203768 3203769

Parameter	Units	92528570004		3203769		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Nitrogen, Ammonia	mg/L	57.8	5	5	61.8	62.5	80	93	90-110	1	10 M6

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

QC Batch: 608169 Analysis Method: EPA 350.1 Rev 2.0 1993
QC Batch Method: EPA 350.1 Rev 2.0 1993 Analysis Description: 350.1 Ammonia
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92527508007, 92527508008, 92527508010

METHOD BLANK: 3203775 Matrix: Water
Associated Lab Samples: 92527508007, 92527508008, 92527508010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	0.031	03/23/21 15:42	

LABORATORY CONTROL SAMPLE: 3203776

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	4.9	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3203777 3203778

Parameter	Units	3203777		3203778		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527418004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Nitrogen, Ammonia	mg/L	5.7	5	5	10	10.4	86	94	90-110	4	10 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3203779 3203780

Parameter	Units	3203779		3203780		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527427001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Nitrogen, Ammonia	mg/L	5.1	5	5	9.8	9.8	94	94	90-110	0	10

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

QC Batch: 608827	Analysis Method: EPA 350.1 Rev 2.0 1993
QC Batch Method: EPA 350.1 Rev 2.0 1993	Analysis Description: 350.1 Ammonia
	Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92527508003

METHOD BLANK: 3206704 Matrix: Water

Associated Lab Samples: 92527508003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	0.031	03/25/21 10:13	

LABORATORY CONTROL SAMPLE: 3206705

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	5.1	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3206706 3206707

Parameter	Units	3206706		3206707		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92527508003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Nitrogen, Ammonia	mg/L	3.2	5	5	8.1	8.1	98	98	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3206708 3206709

Parameter	Units	3206708		3206709		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92527337002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Nitrogen, Ammonia	mg/L	20.7	5	5	25.7	25.5	99	95	90-110	1	10	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

QC Batch: 609784 Analysis Method: EPA 350.1 Rev 2.0 1993
QC Batch Method: EPA 350.1 Rev 2.0 1993 Analysis Description: 350.1 Ammonia
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92527508015

METHOD BLANK: 3211674 Matrix: Water
Associated Lab Samples: 92527508015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	0.031	03/28/21 13:58	

LABORATORY CONTROL SAMPLE: 3211675

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	4.8	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3211676 3211677

Parameter	Units	92527508015		3211676		3211677		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.				
Nitrogen, Ammonia	mg/L	0.032J	5	5	5.2	5.2	103	103	90-110	0	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3211678 3211679

Parameter	Units	92528275006		3211678		3211679		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.				
Nitrogen, Ammonia	mg/L	37.2	5	5	42.6	42.8	108	112	90-110	1	10 M6

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

QC Batch: 609785 Analysis Method: EPA 350.1 Rev 2.0 1993
QC Batch Method: EPA 350.1 Rev 2.0 1993 Analysis Description: 350.1 Ammonia
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92527508011, 92527508012, 92527508013, 92527508014

METHOD BLANK: 3211680 Matrix: Water
Associated Lab Samples: 92527508011, 92527508012, 92527508013, 92527508014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	0.031	03/28/21 14:45	

LABORATORY CONTROL SAMPLE: 3211681

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	4.8	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3211682 3211683

Parameter	Units	3211682		3211683		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92529274006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Nitrogen, Ammonia	mg/L	ND	5	5	5.2	5.2	103	103	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3211684 3211685

Parameter	Units	3211684		3211685		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92528059001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Nitrogen, Ammonia	mg/L	ND	5	5	5.3	5.3	103	103	90-110	0	10	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

QC Batch:	608128	Analysis Method:	EPA 353.2 Rev 2.0 1993
QC Batch Method:	EPA 353.2 Rev 2.0 1993	Analysis Description:	353.2 Nitrate + Nitrite, preserved
		Laboratory:	Pace Analytical Services - Asheville

Associated Lab Samples: 92527508001, 92527508002, 92527508004, 92527508005

METHOD BLANK: 3203628 Matrix: Water
Associated Lab Samples: 92527508001, 92527508002, 92527508004, 92527508005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	03/22/21 13:45	

LABORATORY CONTROL SAMPLE: 3203629

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3203630 3203631

Parameter	Units	3203630		3203631		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Result	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	0.27	2.5	2.6	2.6	93	94	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3203632 3203633

Parameter	Units	3203632		3203633		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Result	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	2.4	2.5	4.7	4.7	92	89	90-110	1	10 M1	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

QC Batch: 608423 Analysis Method: EPA 353.2 Rev 2.0 1993
QC Batch Method: EPA 353.2 Rev 2.0 1993 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92527508003, 92527508006

METHOD BLANK: 3204890 Matrix: Water
Associated Lab Samples: 92527508003, 92527508006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	03/23/21 09:31	

LABORATORY CONTROL SAMPLE: 3204891

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3204892 3204893

Parameter	Units	3204892		3204893		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92528824001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Nitrogen, NO2 plus NO3	mg/L	ND	2.5	2.5	2.4	2.4	94	93	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3204894 3204895

Parameter	Units	3204894		3204895		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92528824002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Nitrogen, NO2 plus NO3	mg/L	0.28	2.5	2.5	2.6	2.6	93	92	90-110	1	10	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

QC Batch: 608424 Analysis Method: EPA 353.2 Rev 2.0 1993
QC Batch Method: EPA 353.2 Rev 2.0 1993 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92527508007, 92527508008, 92527508009, 92527508010

METHOD BLANK: 3204896 Matrix: Water
Associated Lab Samples: 92527508007, 92527508008, 92527508009, 92527508010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	03/23/21 10:06	

LABORATORY CONTROL SAMPLE: 3204897

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3204898 3204899

Parameter	Units	3204898		3204899		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92528425004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Nitrogen, NO2 plus NO3	mg/L	ND	2.5	2.5	2.3	2.3	91	91	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3204900 3204901

Parameter	Units	3204900		3204901		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92528425005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Nitrogen, NO2 plus NO3	mg/L	0.068	2.5	2.5	2.4	2.4	92	92	90-110	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

QC Batch: 608427 Analysis Method: EPA 353.2 Rev 2.0 1993
QC Batch Method: EPA 353.2 Rev 2.0 1993 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92527508011, 92527508012, 92527508013, 92527508014

METHOD BLANK: 3204914 Matrix: Water
Associated Lab Samples: 92527508011, 92527508012, 92527508013, 92527508014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	03/23/21 12:01	

LABORATORY CONTROL SAMPLE: 3204915

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3204916 3204917

Parameter	Units	3204916		3204917		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92528672004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Nitrogen, NO2 plus NO3	mg/L	0.17	2.5	2.5	2.4	2.4	88	88	90-110	0	10 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3204918 3204919

Parameter	Units	3204918		3204919		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92528672005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Nitrogen, NO2 plus NO3	mg/L	0.24	2.5	2.5	2.5	2.5	91	92	90-110	1	10

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

QC Batch: 609117	Analysis Method: EPA 353.2 Rev 2.0 1993
QC Batch Method: EPA 353.2 Rev 2.0 1993	Analysis Description: 353.2 Nitrate + Nitrite, preserved
	Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92527508015

METHOD BLANK: 3208240 Matrix: Water

Associated Lab Samples: 92527508015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	03/25/21 09:51	

LABORATORY CONTROL SAMPLE: 3208241

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3208244 3208245

Parameter	Units	3208244		3208245		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92528744001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Nitrogen, NO2 plus NO3	mg/L	0.46	2.5	2.5	2.8	2.8	94	95	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3208259 3208260

Parameter	Units	3208259		3208260		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92528750001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Nitrogen, NO2 plus NO3	mg/L	3.2	2.5	2.5	5.5	5.5	90	92	90-110	1	10	

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QUALITY CONTROL DATA

Project: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

QC Batch: 611248

Analysis Method: SM 5310B-2011

QC Batch Method: SM 5310B-2011

Analysis Description: 5310B TOC

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92527508001, 92527508002, 92527508003, 92527508004, 92527508005, 92527508006, 92527508007, 92527508008, 92527508009, 92527508010, 92527508011, 92527508012, 92527508013, 92527508014, 92527508015

METHOD BLANK: 3218336

Matrix: Water

Associated Lab Samples: 92527508001, 92527508002, 92527508003, 92527508004, 92527508005, 92527508006, 92527508007, 92527508008, 92527508009, 92527508010, 92527508011, 92527508012, 92527508013, 92527508014, 92527508015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.50	04/03/21 08:44	

LABORATORY CONTROL SAMPLE: 3218337

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	24.2	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3218338 3218339

Parameter	Units	92527508001		3218339		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MS Spike Conc.	MS Result	MS Spike Conc.							
Total Organic Carbon	mg/L	23.1	25	25	25	47.1	47.0	96	95	90-110	0	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3218340 3218341

Parameter	Units	92527508011		3218341		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MS Spike Conc.	MS Result	MS Spike Conc.							
Total Organic Carbon	mg/L	25.4	25	25	25	49.5	49.5	96	96	90-110	0	10

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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. |
| H1 | Analysis conducted outside the EPA method holding time. |
| H3 | Sample was received or analysis requested beyond the recognized method holding time. |
| 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: GRUMMAN ROAD GEOCHEMICAL

Pace Project No.: 92527508

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527508001	GWB-4R	EPA 3010A	608884	EPA 6010D	608987
92527508002	GWB-5R	EPA 3010A	608884	EPA 6010D	608987
92527508003	GWB-6R	EPA 3010A	608884	EPA 6010D	608987
92527508004	GWC-1	EPA 3010A	608884	EPA 6010D	608987
92527508005	GWC-11	EPA 3010A	608884	EPA 6010D	608987
92527508006	GWC-12	EPA 3010A	608884	EPA 6010D	608987
92527508007	GWA-7	EPA 3010A	608886	EPA 6010D	608990
92527508008	GWA-8	EPA 3010A	608886	EPA 6010D	608990
92527508009	GWC-15	EPA 3010A	608886	EPA 6010D	608990
92527508010	GWC-20	EPA 3010A	608886	EPA 6010D	608990
92527508011	GWC-16	EPA 3010A	609342	EPA 6010D	609604
92527508012	GWC-14	EPA 3010A	609342	EPA 6010D	609604
92527508013	GWC-21	EPA 3010A	609342	EPA 6010D	609604
92527508014	GWC-2	EPA 3010A	609342	EPA 6010D	609604
92527508015	GWC-13	EPA 3010A	609342	EPA 6010D	609604
92527508001	GWB-4R	EPA 3010A	608526	EPA 6010D	608611
92527508002	GWB-5R	EPA 3010A	608526	EPA 6010D	608611
92527508003	GWB-6R	EPA 3010A	608526	EPA 6010D	608611
92527508004	GWC-1	EPA 3010A	608526	EPA 6010D	608611
92527508005	GWC-11	EPA 3010A	608526	EPA 6010D	608611
92527508006	GWC-12	EPA 3010A	608526	EPA 6010D	608611
92527508007	GWA-7	EPA 3010A	608526	EPA 6010D	608611
92527508008	GWA-8	EPA 3010A	608526	EPA 6010D	608611
92527508009	GWC-15	EPA 3010A	608526	EPA 6010D	608611
92527508010	GWC-20	EPA 3010A	608526	EPA 6010D	608611
92527508011	GWC-16	EPA 3010A	608526	EPA 6010D	608611
92527508012	GWC-14	EPA 3010A	608526	EPA 6010D	608611
92527508013	GWC-21	EPA 3010A	608526	EPA 6010D	608611
92527508014	GWC-2	EPA 3010A	608526	EPA 6010D	608611
92527508015	GWC-13	EPA 3010A	608526	EPA 6010D	608611
92527508001	GWB-4R	EPA 3005A	608871	EPA 6020B	608994
92527508002	GWB-5R	EPA 3005A	608871	EPA 6020B	608994
92527508003	GWB-6R	EPA 3005A	608871	EPA 6020B	608994
92527508004	GWC-1	EPA 3005A	608871	EPA 6020B	608994
92527508005	GWC-11	EPA 3005A	608871	EPA 6020B	608994
92527508006	GWC-12	EPA 3005A	608871	EPA 6020B	608994
92527508007	GWA-7	EPA 3005A	608871	EPA 6020B	608994
92527508008	GWA-8	EPA 3005A	608871	EPA 6020B	608994
92527508009	GWC-15	EPA 3005A	608871	EPA 6020B	608994
92527508010	GWC-20	EPA 3005A	608871	EPA 6020B	608994
92527508011	GWC-16	EPA 3005A	608871	EPA 6020B	608994
92527508012	GWC-14	EPA 3005A	608871	EPA 6020B	608994
92527508013	GWC-21	EPA 3005A	608871	EPA 6020B	608994
92527508014	GWC-2	EPA 3005A	608871	EPA 6020B	608994
92527508015	GWC-13	EPA 3005A	608871	EPA 6020B	608994
92527508001	GWB-4R	SM 4500-P E-2011	606366		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527508002	GWB-5R	SM 4500-P E-2011	606366		
92527508003	GWB-6R	SM 4500-P E-2011	606366		
92527508004	GWC-1	SM 4500-P E-2011	606366		
92527508005	GWC-11	SM 4500-P E-2011	606366		
92527508006	GWC-12	SM 4500-P E-2011	606366		
92527508007	GWA-7	SM 4500-P E-2011	606366		
92527508008	GWA-8	SM 4500-P E-2011	606366		
92527508009	GWC-15	SM 4500-P E-2011	606366		
92527508010	GWC-20	SM 4500-P E-2011	606366		
92527508011	GWC-16	SM 4500-P E-2011	607370		
92527508012	GWC-14	SM 4500-P E-2011	607370		
92527508013	GWC-21	SM 4500-P E-2011	607370		
92527508014	GWC-2	SM 4500-P E-2011	607370		
92527508015	GWC-13	SM 4500-P E-2011	607370		
92527508001	GWB-4R	SM 2320B-2011	607911		
92527508002	GWB-5R	SM 2320B-2011	607911		
92527508003	GWB-6R	SM 2320B-2011	607911		
92527508004	GWC-1	SM 2320B-2011	607911		
92527508005	GWC-11	SM 2320B-2011	607911		
92527508006	GWC-12	SM 2320B-2011	607911		
92527508007	GWA-7	SM 2320B-2011	608537		
92527508008	GWA-8	SM 2320B-2011	609170		
92527508009	GWC-15	SM 2320B-2011	609170		
92527508010	GWC-20	SM 2320B-2011	609170		
92527508011	GWC-16	SM 2320B-2011	609170		
92527508012	GWC-14	SM 2320B-2011	609170		
92527508013	GWC-21	SM 2320B-2011	609170		
92527508014	GWC-2	SM 2320B-2011	609170		
92527508015	GWC-13	SM 2320B-2011	609170		
92527508001	GWB-4R	EPA 350.1 Rev 2.0 1993	608163		
92527508002	GWB-5R	EPA 350.1 Rev 2.0 1993	608163		
92527508003	GWB-6R	EPA 350.1 Rev 2.0 1993	608827		
92527508004	GWC-1	EPA 350.1 Rev 2.0 1993	608163		
92527508005	GWC-11	EPA 350.1 Rev 2.0 1993	608163		
92527508006	GWC-12	EPA 350.1 Rev 2.0 1993	608163		
92527508007	GWA-7	EPA 350.1 Rev 2.0 1993	608169		
92527508008	GWA-8	EPA 350.1 Rev 2.0 1993	608169		
92527508009	GWC-15	EPA 350.1 Rev 2.0 1993	608167		
92527508010	GWC-20	EPA 350.1 Rev 2.0 1993	608169		
92527508011	GWC-16	EPA 350.1 Rev 2.0 1993	609785		
92527508012	GWC-14	EPA 350.1 Rev 2.0 1993	609785		
92527508013	GWC-21	EPA 350.1 Rev 2.0 1993	609785		
92527508014	GWC-2	EPA 350.1 Rev 2.0 1993	609785		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GRUMMAN ROAD GEOCHEMICAL
Pace Project No.: 92527508

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527508015	GWC-13	EPA 350.1 Rev 2.0 1993	609784		
92527508001	GWB-4R	EPA 353.2 Rev 2.0 1993	608128		
92527508002	GWB-5R	EPA 353.2 Rev 2.0 1993	608128		
92527508003	GWB-6R	EPA 353.2 Rev 2.0 1993	608423		
92527508004	GWC-1	EPA 353.2 Rev 2.0 1993	608128		
92527508005	GWC-11	EPA 353.2 Rev 2.0 1993	608128		
92527508006	GWC-12	EPA 353.2 Rev 2.0 1993	608423		
92527508007	GWA-7	EPA 353.2 Rev 2.0 1993	608424		
92527508008	GWA-8	EPA 353.2 Rev 2.0 1993	608424		
92527508009	GWC-15	EPA 353.2 Rev 2.0 1993	608424		
92527508010	GWC-20	EPA 353.2 Rev 2.0 1993	608424		
92527508011	GWC-16	EPA 353.2 Rev 2.0 1993	608427		
92527508012	GWC-14	EPA 353.2 Rev 2.0 1993	608427		
92527508013	GWC-21	EPA 353.2 Rev 2.0 1993	608427		
92527508014	GWC-2	EPA 353.2 Rev 2.0 1993	608427		
92527508015	GWC-13	EPA 353.2 Rev 2.0 1993	609117		
92527508001	GWB-4R	SM 5310B-2011	611248		
92527508002	GWB-5R	SM 5310B-2011	611248		
92527508003	GWB-6R	SM 5310B-2011	611248		
92527508004	GWC-1	SM 5310B-2011	611248		
92527508005	GWC-11	SM 5310B-2011	611248		
92527508006	GWC-12	SM 5310B-2011	611248		
92527508007	GWA-7	SM 5310B-2011	611248		
92527508008	GWA-8	SM 5310B-2011	611248		
92527508009	GWC-15	SM 5310B-2011	611248		
92527508010	GWC-20	SM 5310B-2011	611248		
92527508011	GWC-16	SM 5310B-2011	611248		
92527508012	GWC-14	SM 5310B-2011	611248		
92527508013	GWC-21	SM 5310B-2011	611248		
92527508014	GWC-2	SM 5310B-2011	611248		
92527508015	GWC-13	SM 5310B-2011	611248		

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Document Name:
Sample Condition Upon Receipt(SCUR)
 Document No.:
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020
 Page 1 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition
 Upon Receipt

Client Name:

G Abower

Project #:

WO# : 92527508



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

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: *3/11/21* *CSJ*

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Thermometer: IR Gun ID: 230 Type of Ice: Wet Blue None

Yes No N/A

Cooler Temp: 4.6 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 4.6

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
-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	7.	
Dissolved analysis: Samples Field Filtered?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	9.	<i>GWC-9 + GWC-22 Not Present</i>
-Includes Date/Time/ID/Analysis Matrix: <u>W</u>			
Headspace In VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



CHAIN-OF-CUSTODY / Analytical Request Document
 The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company: GA Power Address: Atlanta, GA
 Section B Required Project Information: Report To: SCS Contacts Copy To: ACC Contacts
 Section C Invoice Information: Attention: Southern Co. Company Name: Address:
 Requested Analysis Filtered (Y/N): NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER ccr
 Site Location: STATE: GA

Section D Valid Matrix Codes: MATRIX CODE (see valid codes to left) SAMPLE TYPE (G=GRAB C=COMP)
 Matrix Codes: DRINKING WATER (DW), WASTE WATER (WW), PRODUCT (P), SOIL/SOLID (S), WIFE (W), AIR (AR), OTHER (OT), TS
 Sample IDs MUST BE UNIQUE (A-Z 0-9 / -)
 Requested Due Date/TIME: 10 Day
 Project Name: Gunman Road - Geochemical
 Purchase Order No.:
 Address: Kevin Herring
 Pace Profile #: 2926-1

ITEM #	Section D Required Client Information	Valid Matrix Codes	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test				Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.			
					COMPOSITE	COMPOSITE							Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Y	N	Y			N	Y	N
1	GWB-41D		CV 6	G			3-10-21	1315	8	1315	8	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
2	GWB-51R		CV 6	G			3-10-21	1505	8	1505	8	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
3	GWB-6R		CV 6	G			3-10-21	1645	8	1645	8	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
4	GW-1		CV 6	G			3-10-21	1555	8	1555	8	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
5	GW-9		CV 6	G			3-10-21	1415	8	1415	8	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
6	GW-11		CV 6	G			3-10-21	1150	8	1150	8	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
7	GW-12		CV 6	G			3-10-21	1175	8	1175	8	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
8	GW-22		CV 6	G																								
9																												
10																												
11																												
12																												

ADDITIONAL COMMENTS: *CONTAINER SAMPLE SHOWN w/ SA EVENT
 Requisitioned by / AFFILIATION: (ARC) DATE: 3-11-21 TIME: 0830
 ACCEPTED BY / AFFILIATION: Flame Cell. DATE: 3-1-21
 SAMPLE CONDITIONS: Temp in °C: Received on Ice (Y/N): Custody Sealed Cooler (Y/N): Samples Intact (Y/N):
 SAMPLER NAME AND SIGNATURE: O. FLOQUEN
 PRINT Name of SAMPLER: SIGNATURE OF SAMPLER: DATE Signed (MM/DD/YY): 3-11-21
 Dissolved Metals: Al, Sb, As, Ba, Br, B, Cd, Ca, Cr, Co, Fe, Pb, Li, Mg, Mn, Mo, Ni, K, Se, Si, Ag, Na, Hg, Zn
 *Total Metals: Al, Fe, Mn

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.
 F-ALL-Q-20rev.07.15-7-Feb-2007



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company: GA Power Address: Atlanta, GA

Section B Required Project Information: Report To: SCS Contacts Copy To: ACC Contacts

Section C Invoice Information: Attention: Southern Co. Company Name: Address: Regulatory Agency: NPDDES GROUND WATER DRINKING WATER UST RCRA OTHER:

Requested Client Information: Email To: SCS Contacts Fax: Project Name: Grumman Road - Geochemical Project Number: Requested Due Date/TAT: 10 Day

Purchase Order No.: Reference: Kevin Herring Pace Profile #: 2926-1

Site Location: STATE: GA

Page: 10 of

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)		Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
				DATE	TIME					Y	N		
1	GWA-7	DRINKING WATER DW	G	3-11-21	10:45	8	Unpreserved	Alkalinity (total, carb, bicarb) *					
2	GWA-8	WASTE WATER WW	G	3-12-21	10:55	1	H ₂ SO ₄	Ammonia / NO3-NO2					
3	GWC-15	WASTE WATER WW	G	3-12-21	08:35	1	HNO ₃	TOC					
4	GWC-20	WASTE WATER WW	G	3-12-21	10:05	5	HCl	Ortho-Phosphate (field-filtered)					
5		WASTE WATER WW					NaOH	Total Metals *					
6		WASTE WATER WW					Na ₂ S ₂ O ₃	Dissolved Metals ** (field-filtered)					
7		WASTE WATER WW					Methanol						
8		WASTE WATER WW					Other						
9		WASTE WATER WW											
10		WASTE WATER WW											
11		WASTE WATER WW											
12		WASTE WATER WW											

Section D ADDITIONAL COMMENTS: Please note when the last sample for the event has been taken.

Section E RELINQUISHED BY / AFFILIATION: [Signature] DATE: 3-12-21 TIME: 1400

Section F ACCEPTED BY / AFFILIATION: [Signature] DATE: 3-12-21 TIME: 1400

Section G SAMPLER NAME AND SIGNATURE: [Signature] DATE Signed (MM/DD/YYYY): 3-12-21

Section H Temp in °C: Received on Ice (Y/N): Custody Sealed Cooler (Y/N): Samples Intact (Y/N):

* Shared Sample / container w/ Grumman SA project

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

XRF Data

Units	SAMPLE	Ag	Ag Error	Al	Al Error	As	As Error	Au	Au Error	Ba	Ba Error	Bal	Bal Error
ppm	BLANK	5.34	2.38	<LOD	329	<LOD	2.32	<LOD	2.45	239.29	11.09	593917.94	1413.58
ppm	USGS 180-706	22.34	3.11	45845	854	77.86	10.42	3.52	2.2	850.82	16.03	552708.06	1328.51
ppm	RCRA 180-661	467.32	7.34	37759	794	460.76	11.01	<LOD	7	770.21	14.87	606638.44	1237.03
ppm	NIST 180-649	<LOD	4.15	50195	915	9.98	2.37	<LOD	2.52	782.35	15.87	603885.25	1252.33
ppm	1 MW-23D 18-20	5.63	2.48	49073	744	<LOD	2.66	<LOD	2.18	404.54	12.34	626232.13	1178.3
ppm	1 MW-23D 18-20 DUP	<LOD	3.54	46715	706	<LOD	2.73	<LOD	2.22	346.95	11.95	638313.5	1158.67
ppm	1 mw-23d 18-20 dup2	<LOD	3.63	46492	717	<LOD	2.65	<LOD	2.12	362.77	12.13	636420.56	1140.32
ppm	2 mw-23d 46-488	6.02	2.48	21046	502	3.05	1.59	<LOD	2.11	315.76	11.87	587839.13	1184.94
ppm	2 mw-23d 46-48 dup	5.51	2.44	22036	513	<LOD	2.36	2.42	1.47	332.51	11.78	588608.06	1170.36
ppm	2 mw-23d 46-48 dup2	<LOD	3.62	23333	511	3.36	1.67	<LOD	2.09	327.02	11.87	596469.13	1149.73
ppm	3 mw-24d 22-24	3.74	2.37	38570	636	<LOD	2.43	<LOD	2.15	330.41	11.62	611004.75	1182.68
ppm	3 mw-24d 22-24 dup	<LOD	3.55	38355	628	<LOD	2.46	<LOD	2.13	316.71	11.73	622076.88	1161.34
ppm	3 mw-24d 22-24 dup2	<LOD	3.59	39033	613	<LOD	2.47	<LOD	2.08	313.89	11.82	623471	1151.96
ppm	4 mw-24d 58-60	<LOD	3.82	54022	817	4.11	1.93	<LOD	2.31	498.58	13.33	605300.44	1247.6
ppm	4 mw-24d 58-60 dup	<LOD	3.79	53102	790	3.88	1.91	<LOD	2.28	474.59	13.14	612846.81	1224.36
ppm	4 mw-24d 58-60 dup2	<LOD	3.87	52099	803	<LOD	3.69	<LOD	2.27	491.97	13.39	612351.56	1215.58
ppm	5 mw-25D 20-22	<LOD	3.57	65417	832	<LOD	2.54	<LOD	2.14	301.29	11.72	654689.25	1152.63
ppm	5 mw-25D 20-22 dup	<LOD	3.65	64990	833	<LOD	2.52	<LOD	2.18	300.63	11.84	656882.63	1141.83
ppm	5 mw-25D 20-22 dup2	<LOD	3.58	67002	823	<LOD	2.58	<LOD	2.12	293.81	11.69	655253.38	1148.26
ppm	6 mw-25d 62-64	<LOD	3.82	38224	714	3.36	2.03	<LOD	2.43	519.13	13.46	585901.63	1266.76
ppm	6 mw-25d 62-64 dup	<LOD	3.76	40679	740	<LOD	3.09	<LOD	2.4	509.34	13.22	589398.06	1268.78
ppm	6 mw-25d 62-64 dup	<LOD	3.96	37225	718	3.91	1.99	2.9	1.65	532.21	13.89	607428.06	1230.52
ppm	6 mw-25d 62-64 dup2	<LOD	3.79	38761	733	4.08	2.02	<LOD	2.39	489.29	13.31	593877.5	1241.72
ppm	7 mw-27d 20-22	<LOD	3.6	64453	841	<LOD	2.94	2.83	1.62	389.85	12.26	657966.56	1158.48
ppm	7 mw-27d 20-22 dup	<LOD	3.51	70092	872	<LOD	2.93	<LOD	2.35	346.78	11.84	632712.19	1210.21
ppm	7 mw-27d 20-22 dup2	<LOD	3.4	64596	811	<LOD	2.85	<LOD	2.33	333.62	11.5	648285.06	1164.36
ppm	8 mw-27d 66-68	<LOD	3.83	47230	795	<LOD	3.01	2.67	1.63	532.74	13.57	602703.5	1252.89
ppm	8 mw-27d 66-68 dup	<LOD	3.9	48909	800	<LOD	3.02	<LOD	2.33	539.06	13.73	604883.44	1237.75
ppm	8 mw-27d 66-68 dup2	<LOD	3.87	52097	822	<LOD	3.07	<LOD	2.37	529.34	13.58	603845.69	1277.61
ppm	blank	<LOD	3.56	<LOD	433	<LOD	1.96	<LOD	1.99	212.01	11.1	582285.38	1095.06
ppm	rcra 180-661	461.71	7.3	41181	852	455.01	11	14.19	4.76	746.15	14.76	589514.38	1288.26

XRF Data

Units	SAMPLE	Bi	Bi Error	Ca	Ca Error	Cd	Cd Error	Cl	Cl Error	Co	Co Error	Cr	Cr Error	Cs
ppm	BLANK	<LOD	2.69	<LOD	8.36	10.59	2.93	<LOD	17	<LOD	18.24	<LOD	5.07	31.31
ppm	USGS 180-706	13.32	5.51	5280	84.15	12.47	3.45	<LOD	25.41	88.28	41.31	69.12	6.04	39.76
ppm	RCRA 180-661	13.05	4.65	6877	84.15	405.55	6.79	<LOD	22.28	114.37	42.17	499.02	10.3	33.11
ppm	NIST 180-649	9.4	3.47	20552	340.49	8.95	3.44	<LOD	25.49	133.55	57.04	118.96	8.36	37.58
ppm	1 MW-23D 18-20	7.11	2.8	1969	45.8	6.58	2.99	<LOD	21.23	<LOD	33.89	47.7	5.05	28.55
ppm	1 MW-23D 18-20 DUP	6.88	2.81	1816	41.25	5.44	2.94	<LOD	21.01	<LOD	34.2	38.01	4.58	24.12
ppm	1 mw-23d 18-20 dup2	6.35	2.76	1775	42.22	7.69	3	<LOD	20.38	<LOD	33.7	32.24	4.68	26.41
ppm	2 mw-23d 46-488	<LOD	2.53	563	27.4	15.39	3.1	<LOD	20.99	<LOD	28.14	17.24	4.18	33.61
ppm	2 mw-23d 46-48 dup	<LOD	2.58	650	28.3	9.8	2.98	<LOD	20.98	<LOD	27.41	13.53	4.03	34.97
ppm	2 mw-23d 46-48 dup2	<LOD	2.62	763	30.18	8.9	3	<LOD	20.67	<LOD	28.12	19.45	4.18	34.49
ppm	3 mw-24d 22-24	<LOD	2.5	442	25.8	6.92	2.91	<LOD	19.83	36.81	15.51	9.1	3.9	28.72
ppm	3 mw-24d 22-24 dup	<LOD	2.62	498	26.07	6.1	2.94	<LOD	19.96	37.73	15.39	7.22	3.82	27.04
ppm	3 mw-24d 22-24 dup2	<LOD	2.6	493	26.51	7.2	2.98	<LOD	19.52	<LOD	22.89	11.85	3.89	28.38
ppm	4 mw-24d 58-60	8.34	2.9	4246	59.08	12.97	3.21	<LOD	22.03	<LOD	41.01	47.66	4.99	36.94
ppm	4 mw-24d 58-60 dup	<LOD	4.14	3971	55.87	11.88	3.18	<LOD	21.49	<LOD	40.63	43.52	4.82	33.73
ppm	4 mw-24d 58-60 dup2	<LOD	5.1	3981	57.14	12.07	3.22	<LOD	22.22	<LOD	40.55	50.37	4.99	35.72
ppm	5 mw-25D 20-22	<LOD	2.82	998	32.75	5.86	2.95	<LOD	20.52	<LOD	31.68	40.99	4.53	24.09
ppm	5 mw-25D 20-22 dup	<LOD	2.8	950	32.51	6.29	2.98	<LOD	20.51	<LOD	31.54	21.47	4.35	24.95
ppm	5 mw-25D 20-22 dup2	<LOD	4.49	1016	33.07	6.19	2.95	<LOD	20.07	<LOD	31.31	27.8	4.47	25.33
ppm	6 mw-25d 62-64	12.45	3.13	13576	216.41	12.13	3.21	<LOD	21.78	<LOD	45.9	46.87	5.34	36.74
ppm	6 mw-25d 62-64 dup	9.53	3.09	13942	222.13	13.83	3.18	<LOD	22.12	56.87	31.3	56.42	5.62	32.82
ppm	6 mw-25d 62-64 dup	7.7	2.99	13389	212.3	18.37	3.38	<LOD	22.87	80.32	30.34	44.02	5.01	36.37
ppm	6 mw-25d 62-64 dup2	8.71	3	13049	204.43	15.53	3.25	<LOD	22.97	91.44	29.96	51.72	5.03	34.27
ppm	7 mw-27d 20-22	5.06	2.84	732	35.79	5.47	2.97	<LOD	21.55	<LOD	37.53	42.4	5.11	28.25
ppm	7 mw-27d 20-22 dup	5.1	2.82	919	37.51	<LOD	4.32	<LOD	21.38	<LOD	37.39	54.4	5.25	21.06
ppm	7 mw-27d 20-22 dup2	<LOD	4.1	684	35.59	<LOD	4.23	<LOD	20.23	42.62	23.95	49.4	5.21	24.71
ppm	8 mw-27d 66-68	4.67	2.9	8003	79.2	12.95	3.23	<LOD	22.77	83.82	30.61	52.74	5.28	37.55
ppm	8 mw-27d 66-68 dup	12.88	3.11	8488	82.75	12.59	3.26	<LOD	22.81	48.24	31.49	60.13	5.5	37.58
ppm	8 mw-27d 66-68 dup2	5.03	2.95	8755	84.34	16.22	3.28	<LOD	22.2	<LOD	47.91	67.57	5.62	37.17
ppm	blank	<LOD	2.05	<LOD	8.39	7.72	2.93	<LOD	17.02	22.89	9.56	<LOD	4.84	28.53
ppm	rcra 180-661	<LOD	6.75	6879	84.18	400.14	6.75	<LOD	22.97	85.43	41.87	508.34	10.36	31.84

XRF Data

Units	SAMPLE	Cs Error	Cu	Cu Error	Fe	Fe Error	Hf	Hf Error	Hg	Hg Error	K	K Error	Mg
ppm	BLANK	1.41	<LOD	11.38	91	20	<LOD	1.5	<LOD	5.27	36.33	20.77	<LOD
ppm	USGS 180-706	1.69	241.01	11.77	18577	154	<LOD	1.5	<LOD	5.6	38689.47	298.67	4258.86
ppm	RCRA 180-661	1.57	29.42	7.91	19172	158	<LOD	1.5	<LOD	5.54	10073.28	152.8	2995.24
ppm	NIST 180-649	1.69	45.44	8.29	35802	217	<LOD	1.5	5.7	3.56	17857.46	227.79	10204.03
ppm	1 MW-23D 18-20	1.45	14.97	6.7	4541	60	<LOD	1.5	<LOD	4.59	13452.28	149.4	2058.36
ppm	1 MW-23D 18-20 DUP	1.42	11.52	6.69	4559	60	<LOD	1.5	<LOD	4.65	12556.33	137.62	<LOD
ppm	1 mw-23d 18-20 dup2	1.44	22.91	6.81	4561	59	<LOD	1.5	<LOD	4.49	12578.92	140.42	<LOD
ppm	2 mw-23d 46-488	1.47	11.46	6.35	3053	48	<LOD	1.5	6.9	2.93	8479.56	94.12	<LOD
ppm	2 mw-23d 46-48 dup	1.45	12.29	6.48	2745	47	<LOD	1.5	<LOD	4.42	9633.32	97.18	1656.47
ppm	2 mw-23d 46-48 dup2	1.46	14.65	6.5	2980	48	<LOD	1.5	<LOD	4.48	9670.87	100.19	<LOD
ppm	3 mw-24d 22-24	1.41	10.3	6.41	1579	36	<LOD	1.5	5.05	3	9464.77	94.98	<LOD
ppm	3 mw-24d 22-24 dup	1.42	18.21	6.52	1598	36	<LOD	1.5	<LOD	4.49	9524.58	94.17	<LOD
ppm	3 mw-24d 22-24 dup2	1.44	10.22	6.28	1726	37	<LOD	1.5	<LOD	4.4	10107.42	96.99	<LOD
ppm	4 mw-24d 58-60	1.55	16.77	7	6659	73	<LOD	1.5	6	3.22	13532.35	152.5	2333.52
ppm	4 mw-24d 58-60 dup	1.53	15.51	6.95	6739	73	<LOD	1.5	<LOD	4.86	12593.03	145.14	1660.08
ppm	4 mw-24d 58-60 dup2	1.56	21.92	7.01	6717	72	<LOD	1.5	<LOD	4.69	12526.93	147.24	2137.42
ppm	5 mw-25D 20-22	1.42	16.98	6.62	4161	56	<LOD	1.5	<LOD	4.48	10256.22	103.17	2504.87
ppm	5 mw-25D 20-22 dup	1.44	15.24	6.55	4009	55	<LOD	1.5	<LOD	4.45	9918.98	102.83	3044.47
ppm	5 mw-25D 20-22 dup2	1.43	18.9	6.62	3872	54	<LOD	1.5	5.12	2.96	9517.12	101.71	2665.49
ppm	6 mw-25d 62-64	1.55	20.15	7.34	11002	118	<LOD	1.5	<LOD	4.97	12204.2	150.16	4634.2
ppm	6 mw-25d 62-64 dup	1.52	27.89	7.54	11349	120	<LOD	1.5	5.24	3.38	13615.04	160.44	2561.62
ppm	6 mw-25d 62-64 dup	1.6	22.02	7.4	10670	115	<LOD	1.5	<LOD	5.02	12303.92	149.32	2685.01
ppm	6 mw-25d 62-64 dup2	1.54	19.26	7.28	10414	114	<LOD	1.5	<LOD	5.08	12022.43	143.5	2964.19
ppm	7 mw-27d 20-22	1.45	21.14	6.94	5576	66	<LOD	1.5	<LOD	4.71	11974.86	142.35	2223.54
ppm	7 mw-27d 20-22 dup	1.4	16.51	6.78	5724	67	<LOD	1.5	<LOD	4.64	12167.63	143.38	2007.3
ppm	7 mw-27d 20-22 dup2	1.38	20.8	6.71	5121	63	<LOD	1.5	<LOD	4.56	11444.07	135.62	2135.82
ppm	8 mw-27d 66-68	1.56	35.99	7.62	11027	117	<LOD	1.5	<LOD	5.03	12593.36	153.66	<LOD
ppm	8 mw-27d 66-68 dup	1.58	24.81	7.32	12314	122	<LOD	1.5	6.46	3.37	12933.25	158.46	2816.21
ppm	8 mw-27d 66-68 dup2	1.56	16.38	7.24	12388	125	<LOD	1.5	<LOD	5.04	13117.23	158.37	5368.77
ppm	blank	1.41	<LOD	8.96	93	15	<LOD	1.5	<LOD	4.24	39.2	20.55	<LOD
ppm	rcra 180-661	1.57	39.47	8.11	19290	157	<LOD	1.5	<LOD	5.64	10157.95	152.67	5791.87

XRF Data

Units	SAMPLE	Mg Error	Mn	Mn Error	Mo	Mo Error	Nb	Nb Error	Ni	Ni Error	P	P Error	Pb
ppm	BLANK	1744.94	85	24	<LOD	2.4	<LOD	1.5	22.2	9.56	190.76	106.94	<LOD
ppm	USGS 180-706	1382.49	873	38	10.61	1.4	33.14	1.63	76.32	9.89	892.15	118.89	957.96
ppm	RCRA 180-661	1118.88	183	27	<LOD	2.69	15.57	1.44	41.37	9.49	540.5	104.62	478.65
ppm	NIST 180-649	1646.97	534	33	<LOD	2.42	11.13	1.36	73.17	9.78	931.58	105.71	17.79
ppm	1 MW-23D 18-20	963.18	147	22	4.54	1.85	10.43	1.28	37.91	8.23	1056.31	100.22	10.74
ppm	1 MW-23D 18-20 DUP	1339.86	127	22	3.6	1.85	10.8	1.29	39.4	8.31	990.47	96.78	11.34
ppm	1 mw-23d 18-20 dup2	2056.93	156	22	<LOD	2.74	10.81	1.28	27.43	8.04	796.1	94.7	10.12
ppm	2 mw-23d 46-488	1337.99	134	21	<LOD	2.24	2.03	1.14	33.45	7.8	866.85	113.33	5.53
ppm	2 mw-23d 46-48 dup	957.27	124	21	<LOD	2.33	<LOD	1.73	31.46	7.92	912.25	112.33	5.51
ppm	2 mw-23d 46-48 dup2	1353.8	130	21	<LOD	2.33	4.5	1.18	38.26	7.95	710.51	107.03	7.36
ppm	3 mw-24d 22-24	1312.5	112	20	<LOD	2.37	8.13	1.23	31.31	7.89	648.27	101.92	7.78
ppm	3 mw-24d 22-24 dup	1331.92	115	20	<LOD	2.31	5.45	1.19	27.74	7.76	715.23	100.22	8.75
ppm	3 mw-24d 22-24 dup2	1161.97	107	20	<LOD	2.31	5.84	1.18	18.17	7.59	570.57	95.94	9.67
ppm	4 mw-24d 58-60	1082.46	251	25	<LOD	2.7	9.58	1.29	50.82	8.65	724.37	102.65	12.08
ppm	4 mw-24d 58-60 dup	1030.85	217	24	<LOD	2.69	10.81	1.3	45.56	8.55	859.46	100.39	12.2
ppm	4 mw-24d 58-60 dup2	1079.58	203	24	<LOD	2.7	10.18	1.28	40.24	8.42	910	103.58	14.37
ppm	5 mw-25D 20-22	915.4	124	21	4.53	1.68	8.59	1.24	27.46	7.91	664.67	87.75	9.57
ppm	5 mw-25D 20-22 dup	942.22	106	20	3.33	1.69	7.97	1.23	26.59	7.89	607.74	87.53	10.02
ppm	5 mw-25D 20-22 dup2	895.13	107	20	<LOD	2.51	9.78	1.25	29.13	7.91	564.61	84.81	9.35
ppm	6 mw-25d 62-64	1248.1	314	27	3.7	2.05	17.64	1.42	42.21	8.93	4761.79	1035.13	13.62
ppm	6 mw-25d 62-64 dup	1173.08	279	27	3.42	2.03	16.85	1.42	48.53	9.05	4233.45	1051.27	15.43
ppm	6 mw-25d 62-64 dup	1200.3	291	27	<LOD	2.96	15.29	1.39	46.6	8.98	4428.56	1043.63	12.05
ppm	6 mw-25d 62-64 dup2	1213.21	261	26	3.37	1.94	16.45	1.4	49.94	8.94	3131.8	124.52	13.74
ppm	7 mw-27d 20-22	934.26	143	22	3.88	1.93	15.5	1.35	37.99	8.37	2230.18	704.45	15.47
ppm	7 mw-27d 20-22 dup	926.33	154	22	<LOD	2.91	16.96	1.36	33.82	8.26	1863.7	726.96	15.07
ppm	7 mw-27d 20-22 dup2	881.88	149	22	<LOD	2.81	13.63	1.32	23.59	7.99	1799.85	691.34	14.14
ppm	8 mw-27d 66-68	2310.6	253	26	4.02	1.94	15.38	1.39	48.35	8.91	1155.77	108.16	14.36
ppm	8 mw-27d 66-68 dup	1167.36	378	28	3.73	1.85	16.95	1.39	46.82	8.79	1217.94	107.29	14.99
ppm	8 mw-27d 66-68 dup2	1255.79	282	27	<LOD	2.87	16.09	1.4	47.95	8.94	1063.79	103.57	15.7
ppm	blank	1104.46	73	18	<LOD	1.83	<LOD	1.5	19.67	7.31	225.03	109.78	<LOD
ppm	rcra 180-661	1274.4	211	27	<LOD	2.67	16.09	1.44	52.91	9.58	597.86	109.01	493.86

XRF Data

Units	SAMPLE	Pb Error	Pd	Pd Error	Rb	Rb Error	Re	Re Error	S	S Error	Sb	Sb Error	Sc
ppm	BLANK	2.86	<LOD	4.02	<LOD	1.2	<LOD	1.5	<LOD	69.79	31.28	4.58	<LOD
ppm	USGS 180-706	14.56	<LOD	4.7	91.93	1.8	<LOD	1.5	1860.78	56.73	115.48	6.08	<LOD
ppm	RCRA 180-661	10.83	17.7	3.61	40.28	1.24	<LOD	1.5	304.82	36.23	28.01	5.69	<LOD
ppm	NIST 180-649	2.65	<LOD	4.7	56.65	1.41	<LOD	1.5	1099.99	49.2	36.18	5.45	49.51
ppm	1 MW-23D 18-20	2.14	<LOD	4.02	31.69	1.42	<LOD	1.5	665.83	38.56	27.85	4.72	<LOD
ppm	1 MW-23D 18-20 DUP	2.18	<LOD	3.96	31.62	1.43	<LOD	1.5	680.1	38.11	22.34	4.63	<LOD
ppm	1 mw-23d 18-20 dup2	2.09	<LOD	4.1	31.34	1.41	<LOD	1.5	677.38	37.37	24.84	4.69	<LOD
ppm	2 mw-23d 46-488	1.81	<LOD	4.19	12.88	1.01	<LOD	1.5	4697.73	70.86	40.65	4.83	<LOD
ppm	2 mw-23d 46-48 dup	1.84	<LOD	4.15	12.65	1.03	<LOD	1.5	4993.86	72.56	38.57	4.74	<LOD
ppm	2 mw-23d 46-48 dup2	1.9	<LOD	4.16	15.6	1.09	<LOD	1.5	5293.99	72.79	37.08	4.77	<LOD
ppm	3 mw-24d 22-24	1.93	<LOD	3.99	18.17	1.14	<LOD	1.5	454.13	34.75	29.98	4.6	<LOD
ppm	3 mw-24d 22-24 dup	1.94	<LOD	3.98	18.69	1.13	<LOD	1.5	391.28	34.25	28.33	4.65	<LOD
ppm	3 mw-24d 22-24 dup2	1.97	<LOD	4.01	17.96	1.12	<LOD	1.5	392.73	33.09	26.87	4.68	<LOD
ppm	4 mw-24d 58-60	2.24	<LOD	4.34	29.51	1.43	<LOD	1.5	12328.42	116.06	33.86	5	<LOD
ppm	4 mw-24d 58-60 dup	2.21	<LOD	4.2	29.68	1.42	<LOD	1.5	12410.29	114.41	34.18	4.97	11.76
ppm	4 mw-24d 58-60 dup2	2.28	<LOD	4.36	28.81	1.39	<LOD	1.5	12432.45	116.92	35.25	5.04	<LOD
ppm	5 mw-25D 20-22	2.04	<LOD	4	23.75	1.26	<LOD	1.5	<LOD	101.34	21.64	4.62	<LOD
ppm	5 mw-25D 20-22 dup	2.05	<LOD	4.07	24.16	1.26	<LOD	1.5	140.13	70.11	25.89	4.7	<LOD
ppm	5 mw-25D 20-22 dup2	2.03	<LOD	4.03	24.79	1.27	<LOD	1.5	<LOD	102.03	23.51	4.64	<LOD
ppm	6 mw-25d 62-64	2.4	<LOD	4.31	31.28	1.53	<LOD	1.5	11824.79	135.02	33.18	5	<LOD
ppm	6 mw-25d 62-64 dup	2.48	<LOD	4.26	22.29	1	<LOD	1.5	12740.54	140.76	28.4	4.89	24.79
ppm	6 mw-25d 62-64 dup	2.31	<LOD	4.43	31.01	1.52	<LOD	1.5	12032.33	138.83	32.61	5.14	21.62
ppm	6 mw-25d 62-64 dup2	2.37	<LOD	4.29	31.24	1.51	<LOD	1.5	12586.6	122.21	31.21	4.98	20.51
ppm	7 mw-27d 20-22	2.39	<LOD	4.12	37.9	1.54	<LOD	1.5	1254.65	64.18	27.74	4.71	<LOD
ppm	7 mw-27d 20-22 dup	2.36	<LOD	3.9	37.39	1.53	<LOD	1.5	1307.77	65.49	19.58	4.55	<LOD
ppm	7 mw-27d 20-22 dup2	2.3	<LOD	3.87	34.4	1.47	<LOD	1.5	1191.54	61.84	22.62	4.47	<LOD
ppm	8 mw-27d 66-68	2.39	<LOD	4.36	22.15	1	<LOD	1.5	13536.42	124.03	31.93	5.01	18.73
ppm	8 mw-27d 66-68 dup	2.4	<LOD	4.24	23.09	1	<LOD	1.5	14352.97	127.96	33.77	5.07	<LOD
ppm	8 mw-27d 66-68 dup2	2.45	<LOD	4.4	23.02	1	<LOD	1.5	15897.84	133.96	37.39	5.07	<LOD
ppm	blank	2.29	<LOD	4.06	<LOD	0.94	<LOD	1.5	<LOD	70.04	28.39	4.61	<LOD
ppm	rcra 180-661	10.9	21.28	3.67	39.63	1.23	<LOD	1.5	329.94	37.15	36.56	5.74	18.17

XRF Data

Units	SAMPLE	Sc Error	Se	Se Error	Si	Si Error	Sn	Sn Error	Sr	Sr Error	Ta	Ta Error	Te
ppm	BLANK	1.88	<LOD	2.28	405790.78	1560.41	21.08	2.93	<LOD	1.11	<LOD	1.5	79.2
ppm	USGS 180-706	13.59	<LOD	3.11	325355.19	1182.09	20.62	3.45	144.59	2.52	<LOD	1.5	88.43
ppm	RCRA 180-661	15.91	521.3	8	308579.69	1181.35	19.45	3.83	78.38	1.92	<LOD	1.5	76.04
ppm	NIST 180-649	20.01	<LOD	2.46	254307.44	1081.54	18.91	3.44	222.09	3.03	<LOD	1.5	82.95
ppm	1 MW-23D 18-20	7.73	<LOD	2.17	295103.44	1126.55	15.54	2.99	64.96	1.62	<LOD	1.5	74.44
ppm	1 MW-23D 18-20 DUP	7.11	<LOD	2.21	288452.47	1116.67	13.24	2.93	66.29	1.65	<LOD	1.5	49.39
ppm	1 mw-23d 18-20 dup2	7.26	<LOD	2.09	290924.84	1103.03	15.71	2.98	63.78	1.6	<LOD	1.5	63.36
ppm	2 mw-23d 46-488	4.46	<LOD	1.98	371513.97	1257.83	21.46	3.04	23.06	1.05	<LOD	1.5	89.7
ppm	2 mw-23d 46-48 dup	4.49	<LOD	2.04	367023.59	1225.8	19.06	2.97	21.28	1.04	<LOD	1.5	86.83
ppm	2 mw-23d 46-48 dup2	4.92	<LOD	1.97	357529.56	1196.55	21.91	3.03	27.38	1.13	<LOD	1.5	82.24
ppm	3 mw-24d 22-24	3.92	<LOD	2.04	334492.34	1190.98	16.01	2.9	34.4	1.23	<LOD	1.5	63.53
ppm	3 mw-24d 22-24 dup	4.01	<LOD	1.94	324601.13	1176.42	14.9	2.93	35.74	1.23	<LOD	1.5	69.53
ppm	3 mw-24d 22-24 dup2	4.14	<LOD	1.94	321779.97	1153.57	16.21	2.97	34.04	1.2	<LOD	1.5	66.84
ppm	4 mw-24d 58-60	10.61	<LOD	2.18	293632.56	1122.83	18.28	3.15	97.61	1.98	<LOD	1.5	84.18
ppm	4 mw-24d 58-60 dup	6.8	<LOD	2.11	288635.69	1102.74	18.42	3.13	99.55	1.99	<LOD	1.5	70.75
ppm	4 mw-24d 58-60 dup2	10.26	<LOD	2.1	289763	1112.67	19.76	3.19	99.61	1.97	<LOD	1.5	84.86
ppm	5 mw-25D 20-22	5.43	<LOD	2.14	256220.22	1049.67	13.91	2.94	45.13	1.37	<LOD	1.5	55.08
ppm	5 mw-25D 20-22 dup	5.47	<LOD	2.18	254614.53	1045.47	12.71	2.95	44.18	1.35	<LOD	1.5	57.89
ppm	5 mw-25D 20-22 dup2	5.54	<LOD	2.12	255545.77	1035.69	11.73	2.91	48.15	1.4	<LOD	1.5	56.35
ppm	6 mw-25d 62-64	18.7	<LOD	2.28	312109.78	1198.17	17.77	3.15	187.64	2.76	<LOD	1.5	75.24
ppm	6 mw-25d 62-64 dup	13.01	<LOD	2.32	306682.31	1199.87	16.64	3.09	199.57	2.86	<LOD	1.5	74.01
ppm	6 mw-25d 62-64 dup	11.61	<LOD	2.3	294693.78	1194.4	19.12	3.25	193.18	2.78	<LOD	1.5	88.52
ppm	6 mw-25d 62-64 dup2	11.39	<LOD	2.3	308258.28	1156.36	15.36	3.12	187.78	2.73	<LOD	1.5	77.4
ppm	7 mw-27d 20-22	5.75	<LOD	2.48	246105.14	1052.76	14.16	2.97	58.2	1.57	<LOD	1.5	69.4
ppm	7 mw-27d 20-22 dup	6.08	<LOD	2.46	265483.5	1079.1	9.98	2.87	60.18	1.58	<LOD	1.5	48.3
ppm	7 mw-27d 20-22 dup2	5.67	<LOD	2.45	257909.66	1054.13	15.3	2.85	55	1.51	<LOD	1.5	55.73
ppm	8 mw-27d 66-68	9.86	<LOD	2.31	298391.13	1143.95	20.01	3.19	150.8	2.46	<LOD	1.5	85.58
ppm	8 mw-27d 66-68 dup	15.38	<LOD	2.26	288094.63	1111.88	21.44	3.23	152.03	2.45	<LOD	1.5	81.38
ppm	8 mw-27d 66-68 dup2	15.69	<LOD	2.24	281776.59	1101.66	19.39	3.19	155.08	2.52	<LOD	1.5	84.6
ppm	blank	1.8	<LOD	1.84	417389.03	1274.73	19.06	2.94	<LOD	0.87	<LOD	1.5	69.03
ppm	rcra 180-661	10.67	519.31	7.96	318990.81	1208.05	22.37	3.85	79.3	1.93	<LOD	1.5	63.18

XRF Data

Units	SAMPLE	Te Error	Th	Th Error	Ti	Ti Error	U	U Error	V	V Error	W	W Error	Zn	Zn Error
ppm	BLANK	6.85	<LOD	2.04	<LOD	11.9	<LOD	2.65	8	2.77	<LOD	23.82	<LOD	5.3
ppm	USGS 180-706	8.09	16.53	3.37	1526.27	40.98	5.35	3.22	41.32	9.84	31.94	17.29	726.25	14.05
ppm	RCRA 180-661	7.58	15.34	2.88	3682.52	55.12	6.64	2.61	98.94	12.62	27.16	16.01	43.96	4.77
ppm	NIST 180-649	8.13	9.67	1.91	3752.14	63.2	4.42	2.82	117.08	14.54	24.52	16.15	97.38	5.93
ppm	1 MW-23D 18-20	7.09	8.83	1.6	3832.12	43.12	5.31	2.06	51.36	9.27	<LOD	20.65	13.88	3.4
ppm	1 MW-23D 18-20 DUP	6.84	8.63	1.6	3823.61	39.75	5.18	2.07	44.33	8.44	<LOD	20.92	13.24	3.41
ppm	1 mw-23d 18-20 dup2	7	8.26	1.57	3695.8	40.55	5.34	2.04	54.76	8.73	<LOD	20.53	15.85	3.45
ppm	2 mw-23d 46-488	7.18	2.84	1.3	1456.81	26.4	<LOD	2.5	26.39	6.05	<LOD	19.12	16.14	3.31
ppm	2 mw-23d 46-48 dup	7.06	2.74	1.32	1449.01	25.63	2.62	1.72	26.29	5.88	<LOD	20.15	13.19	3.32
ppm	2 mw-23d 46-48 dup2	7.09	2.82	1.32	1689.26	27.84	3.53	1.77	22.84	6.23	<LOD	20.22	16.4	3.4
ppm	3 mw-24d 22-24	6.8	<LOD	1.92	2046.23	28.41	2.83	1.79	28.13	6.26	<LOD	19.92	6.6	3.07
ppm	3 mw-24d 22-24 dup	6.94	3.06	1.32	2100.47	28.53	2.68	1.77	25.04	6.25	21.68	13.45	9.93	3.18
ppm	3 mw-24d 22-24 dup2	6.98	3.04	1.31	2386.31	30.26	3.63	1.77	28.73	6.59	20.44	13.26	7.37	3.07
ppm	4 mw-24d 58-60	7.48	9.31	1.66	4159.18	44.72	5.96	2.14	45.62	9.49	<LOD	21.52	39.64	4.25
ppm	4 mw-24d 58-60 dup	7.34	5.04	1.51	3898.96	42.21	4.24	2.09	48.81	9	25.03	14.6	38.24	4.22
ppm	4 mw-24d 58-60 dup2	7.54	5.26	1.51	3900.26	43.28	4.72	2.07	43.57	9.2	<LOD	21.39	37.1	4.15
ppm	5 mw-25D 20-22	6.88	4.11	1.4	4022.08	39.1	5.47	1.93	51.32	8.22	<LOD	20.13	16.9	3.43
ppm	5 mw-25D 20-22 dup	6.97	3.81	1.38	3711.54	38.44	5.17	1.92	46.1	8.12	<LOD	20.16	14.54	3.35
ppm	5 mw-25D 20-22 dup2	6.89	5.9	1.45	3383.55	37.44	4.56	1.91	45.75	8	<LOD	19.68	14.99	3.34
ppm	6 mw-25d 62-64	7.43	12.57	1.84	5341.12	51.87	6.91	2.34	66.14	10.85	<LOD	22.64	53.17	4.77
ppm	6 mw-25d 62-64 dup	7.31	9.88	1.78	4258.47	48.89	7.41	2.4	73.53	10.58	<LOD	22.72	52.98	4.79
ppm	6 mw-25d 62-64 dup	7.74	9.11	1.72	4458.45	46.06	7.13	2.34	66.94	9.78	<LOD	22.55	52.73	4.74
ppm	6 mw-25d 62-64 dup2	7.44	9.93	1.73	4477.46	45.27	7.62	2.33	71.51	9.66	41.28	15.49	46.03	4.57
ppm	7 mw-27d 20-22	7.05	8.16	1.62	5435.24	49.87	4.95	2.13	67.21	10.43	<LOD	21.34	18.33	3.62
ppm	7 mw-27d 20-22 dup	6.76	7.85	1.6	5551.07	50.23	6.68	2.16	77.12	10.56	<LOD	20.89	17.33	3.54
ppm	7 mw-27d 20-22 dup2	6.66	7.47	1.56	5258.45	49.53	6.03	2.09	59.91	10.36	<LOD	20.36	17.01	3.49
ppm	8 mw-27d 66-68	7.54	8.25	1.68	4391.11	47.3	7.72	2.32	58.92	10.04	35.1	15.32	45.25	4.55
ppm	8 mw-27d 66-68 dup	7.58	12.67	1.8	4739.69	50.02	7.36	2.31	76.78	10.71	26.96	15	47.68	4.56
ppm	8 mw-27d 66-68 dup2	7.55	7.69	1.69	4949.81	50.94	7.92	2.36	77.8	10.85	<LOD	22.67	49.32	4.66
ppm	blank	6.87	<LOD	1.69	<LOD	12.63	<LOD	2.1	16.83	3.01	<LOD	18.96	<LOD	4.26
ppm	rcra 180-661	7.48	10.3	2.79	3818.3	55.8	4.65	2.57	96.53	12.71	<LOD	23.53	53.23	4.98

XRF Data

Units	SAMPLE	Zr	Zr Error
ppm	BLANK	<LOD	1.74
ppm	USGS 180-706	264.75	3.44
ppm	RCRA 180-661	344.75	3.79
ppm	NIST 180-649	168.37	2.91
ppm	1 MW-23D 18-20	609.8	4.48
ppm	1 MW-23D 18-20 DUP	595.97	4.47
ppm	1 mw-23d 18-20 dup2	605.06	4.44
ppm	2 mw-23d 46-488	242.47	2.84
ppm	2 mw-23d 46-48 dup	296.88	3.16
ppm	2 mw-23d 46-48 dup2	310.09	3.2
ppm	3 mw-24d 22-24	324.74	3.28
ppm	3 mw-24d 22-24 dup	300.15	3.13
ppm	3 mw-24d 22-24 dup2	297.33	3.1
ppm	4 mw-24d 58-60	491.61	4.17
ppm	4 mw-24d 58-60 dup	516.78	4.24
ppm	4 mw-24d 58-60 dup2	519.25	4.22
ppm	5 mw-25D 20-22	377.34	3.53
ppm	5 mw-25D 20-22 dup	431.15	3.73
ppm	5 mw-25D 20-22 dup2	434.59	3.74
ppm	6 mw-25d 62-64	761.51	5.32
ppm	6 mw-25d 62-64 dup	715.04	5.2
ppm	6 mw-25d 62-64 dup	681.35	5.03
ppm	6 mw-25d 62-64 dup2	625.42	4.81
ppm	7 mw-27d 20-22	691.77	4.81
ppm	7 mw-27d 20-22 dup	760.28	4.99
ppm	7 mw-27d 20-22 dup2	677.74	4.69
ppm	8 mw-27d 66-68	611.33	4.74
ppm	8 mw-27d 66-68 dup	503.29	4.3
ppm	8 mw-27d 66-68 dup2	576.07	4.65
ppm	blank	2.14	0.92
ppm	rcra 180-661	362.8	3.86

Sample ID	Group	Feldspar						Cordierite	Mica		Birnessite	Smectite	Limonite	Kaolinite-Serpentine		Dolomite	Pyrite
		Quartz low	Microcline	Albite	Feldspar	Anorthoclase	Orthoclase		Muscovite	Mica 1M	Birnessite	Montmorillonite	Lepidocrocite	Kaolinite	Nacrite		
GR-GWA-4R		81.1	17.4				0.5	0.8		0.1							
GR-GWA-7		84.4			15			0.1		0.3	0.15						
GR-GWA-8		61.3	27					11.5		0.21							
GR-GWB-5R		71.6	24.5					3.4		0.4							
GR-GWB-6R		65.9	14.5					19.1		0.4							
GR-GWC-2		90	10					0.4									
GR-GWC-14		30	39					1				3	27				
GR-GWC-15		67.1	14.5		6.5			7					4.8				
GR-GWC-16		94.5	1.7					3.1		0.8							
GR-GWC-17		26.9	11.8					17.8						30.4	13.1		
GR-GWC-21		97.4		1.9				0.4						0.3			
GR-GWC-22		93.3	1.5					1.5						3.7			
MW_23D 18-20		82.6	13.8					3.1		0.4	0.2						
MW_23D 46-48		86.1	12.4						1.3		0.2						
MW_24D 22-24		82.7				10.5		2.6			0.2			3.8		0.2	
MW_24D 58-60		40.9		14.1		18.1		8						17.7			1.3
MW_25D 20-22		37.7	12.3					22.8						27.2			
MW_25D 22-24		49.3			12.2									25.4		13	
MW_25D 62-64		64.7		23.3		11.9		0.1									
MW_27D 20-22		39				8.1	5.8	23.6						23.5			
MW_27D 66-68		37.7		10.2		22.9		27.7							1.5		



ANALYTICAL REPORT

AMENDED REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Friday, May 14, 2021
Dimitri Vlassopoulos
Anchor QEA, LLC
6720 SW Macadam Ave. Suite 125
Portland, OR 97219

RE: A1D0469 - Grumman Road - 201114-05.01

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A1D0469, which was received by the laboratory on 4/12/2021 at 3:14:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: dthomas@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	1.2 degC	Cooler #2	2.9 degC
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This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report. All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

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ANALYTICAL REPORT

AMENDED REPORT

Apex Laboratories, LLC

6720 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
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ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GR-SSE-F1-1	A1D0469-01	W	04/06/21 10:00	04/12/21 15:14
GR-SSE-F1-2	A1D0469-02	W	04/06/21 10:05	04/12/21 15:14
GR-SSE-F1-3	A1D0469-03	W	04/06/21 10:10	04/12/21 15:14
GR-SSE-F1-4	A1D0469-04	W	04/06/21 10:15	04/12/21 15:14
GR-SSE-F1-5	A1D0469-05	W	04/06/21 10:20	04/12/21 15:14
GR-SSE-F1-6	A1D0469-06	W	04/06/21 10:25	04/12/21 15:14
GR-SSE-F1-7	A1D0469-07	W	04/06/21 10:30	04/12/21 15:14
GR-SSE-F1-8	A1D0469-08	W	04/06/21 10:35	04/12/21 15:14
GR-SSE-F1-9	A1D0469-09	W	04/06/21 10:40	04/12/21 15:14
GR-SSE-F1-10	A1D0469-10	W	04/06/21 10:45	04/12/21 15:14
GR-SSE-F1-11	A1D0469-11	W	04/06/21 10:50	04/12/21 15:14
GR-SSE-F1-12	A1D0469-12	W	04/06/21 10:55	04/12/21 15:14
GR-SSE-F1-13	A1D0469-13	W	04/06/21 11:00	04/12/21 15:14
GR-SSE-F1-14	A1D0469-14	W	04/06/21 11:05	04/12/21 15:14
GR-SSE-F1-15	A1D0469-15	W	04/06/21 11:10	04/12/21 15:14
GR-SSE-F1-16	A1D0469-16	W	04/06/21 11:15	04/12/21 15:14
GR-SSE-F2-1	A1D0469-17	W	04/07/21 10:00	04/12/21 15:14
GR-SSE-F2-2	A1D0469-18	W	04/08/21 10:05	04/12/21 15:14
GR-SSE-F2-3	A1D0469-19	W	04/09/21 10:10	04/12/21 15:14
GR-SSE-F2-4	A1D0469-20	W	04/10/21 10:15	04/12/21 15:14
GR-SSE-F2-5	A1D0469-21	W	04/07/21 10:20	04/12/21 15:14
GR-SSE-F2-6	A1D0469-22	W	04/07/21 10:25	04/12/21 15:14
GR-SSE-F2-7	A1D0469-23	W	04/07/21 10:30	04/12/21 15:14
GR-SSE-F2-8	A1D0469-24	W	04/07/21 10:35	04/12/21 15:14
GR-SSE-F2-9	A1D0469-25	W	04/07/21 10:40	04/12/21 15:14
GR-SSE-F2-10	A1D0469-26	W	04/07/21 10:45	04/12/21 15:14
GR-SSE-F2-11	A1D0469-27	W	04/07/21 10:50	04/12/21 15:14
GR-SSE-F2-12	A1D0469-28	W	04/07/21 10:55	04/12/21 15:14
GR-SSE-F2-13	A1D0469-29	W	04/07/21 11:00	04/12/21 15:14
GR-SSE-F2-14	A1D0469-30	W	04/07/21 11:05	04/12/21 15:14
GR-SSE-F2-15	A1D0469-31	W	04/07/21 11:10	04/12/21 15:14
GR-SSE-F2-16	A1D0469-32	W	04/07/21 11:15	04/12/21 15:14
GR-SSE-F3-1	A1D0469-33	W	04/08/21 10:00	04/12/21 15:14

Apex Laboratories

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

AMENDED REPORT

Apex Laboratories, LLC

6720 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
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ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GR-SSE-F3-2	A1D0469-34	W	04/08/21 10:05	04/12/21 15:14
GR-SSE-F3-3	A1D0469-35	W	04/08/21 10:10	04/12/21 15:14
GR-SSE-F3-4	A1D0469-36	W	04/08/21 10:15	04/12/21 15:14
GR-SSE-F3-5	A1D0469-37	W	04/08/21 10:20	04/12/21 15:14
GR-SSE-F3-6	A1D0469-38	W	04/08/21 10:25	04/12/21 15:14
GR-SSE-F3-7	A1D0469-39	W	04/08/21 10:30	04/12/21 15:14
GR-SSE-F3-8	A1D0469-40	W	04/08/21 10:35	04/12/21 15:14
GR-SSE-F3-9	A1D0469-41	W	04/08/21 10:40	04/12/21 15:14
GR-SSE-F3-10	A1D0469-42	W	04/08/21 10:45	04/12/21 15:14
GR-SSE-F3-11	A1D0469-43	W	04/08/21 10:50	04/12/21 15:14
GR-SSE-F3-12	A1D0469-44	W	04/08/21 10:55	04/12/21 15:14
GR-SSE-F3-13	A1D0469-45	W	04/08/21 11:00	04/12/21 15:14
GR-SSE-F3-14	A1D0469-46	W	04/08/21 11:05	04/12/21 15:14
GR-SSE-F3-15	A1D0469-47	W	04/08/21 11:10	04/12/21 15:14
GR-SSE-F3-16	A1D0469-48	W	04/08/21 11:15	04/12/21 15:14
GR-SSE-F4-1	A1D0469-49	W	04/09/21 10:00	04/12/21 15:14
GR-SSE-F4-2	A1D0469-50	W	04/09/21 10:05	04/12/21 15:14
GR-SSE-F4-3	A1D0469-51	W	04/09/21 10:10	04/12/21 15:14
GR-SSE-F4-4	A1D0469-52	W	04/09/21 10:15	04/12/21 15:14
GR-SSE-F4-5	A1D0469-53	W	04/09/21 10:20	04/12/21 15:14
GR-SSE-F4-6	A1D0469-54	W	04/09/21 10:25	04/12/21 15:14
GR-SSE-F4-7	A1D0469-55	W	04/09/21 10:30	04/12/21 15:14
GR-SSE-F4-8	A1D0469-56	W	04/09/21 10:35	04/12/21 15:14
GR-SSE-F4-9	A1D0469-57	W	04/09/21 10:40	04/12/21 15:14
GR-SSE-F4-10	A1D0469-58	W	04/09/21 10:45	04/12/21 15:14
GR-SSE-F4-11	A1D0469-59	W	04/09/21 10:50	04/12/21 15:14
GR-SSE-F4-12	A1D0469-60	W	04/09/21 10:55	04/12/21 15:14
GR-SSE-F4-13	A1D0469-61	W	04/09/21 11:00	04/12/21 15:14
GR-SSE-F4-14	A1D0469-62	W	04/09/21 11:05	04/12/21 15:14
GR-SSE-F4-15	A1D0469-63	W	04/09/21 11:10	04/12/21 15:14
GR-SSE-F4-16	A1D0469-64	W	04/09/21 11:15	04/12/21 15:14
GR-SSE-F5-1	A1D0469-65	S	04/12/21 10:00	04/12/21 15:14
GR-SSE-F5-2	A1D0469-66	S	04/12/21 10:05	04/12/21 15:14

Apex Laboratories

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ANALYTICAL REPORT

AMENDED REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
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ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GR-SSE-F5-3	A1D0469-67	S	04/12/21 10:10	04/12/21 15:14
GR-SSE-F5-4	A1D0469-68	S	04/12/21 10:15	04/12/21 15:14
GR-SSE-F5-5	A1D0469-69	S	04/12/21 10:20	04/12/21 15:14
GR-SSE-F5-6	A1D0469-70	S	04/12/21 10:25	04/12/21 15:14
GR-SSE-F5-7	A1D0469-71	S	04/12/21 10:30	04/12/21 15:14
GR-SSE-F5-8	A1D0469-72	S	04/12/21 10:35	04/12/21 15:14
GR-SSE-F5-9	A1D0469-73	S	04/12/21 10:40	04/12/21 15:14
GR-SSE-F5-11	A1D0469-74	S	04/12/21 10:50	04/12/21 15:14
GR-SSE-F5-12	A1D0469-75	S	04/12/21 10:55	04/12/21 15:14
GR-SSE-F5-13	A1D0469-76	S	04/12/21 11:00	04/12/21 15:14
GR-SSE-F5-14	A1D0469-77	S	04/12/21 11:05	04/12/21 15:14
GR-SSE-F5-15	A1D0469-78	S	04/12/21 11:10	04/12/21 15:14
GR-SSE-F5-16	A1D0469-79	S	04/12/21 11:15	04/12/21 15:14

Apex Laboratories

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

AMENDED REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
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ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
--	---	---

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
GR-SSE-F1-1 (A1D0469-01)				Matrix: W					
Batch: 1040573									
Iron	ND	2500	5000	ug/L	100	04/16/21 19:07	EPA 6020B	R-04	
Molybdenum	ND	50.0	100	ug/L	100	04/16/21 19:07	EPA 6020B		
GR-SSE-F1-1 (A1D0469-01RE3)				Matrix: W					
Batch: 1040573									
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 04:22	EPA 6020B	R-04	
Iron	ND	1250	2500	ug/L	50	05/11/21 04:22	EPA 6020B	R-04	
Molybdenum	ND	25.0	50.0	ug/L	50	05/11/21 04:22	EPA 6020B	R-04	
GR-SSE-F1-2 (A1D0469-02RE3)				Matrix: W					
Batch: 1040573									
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 04:26	EPA 6020B	R-04	
Iron	ND	1250	2500	ug/L	50	05/11/21 04:26	EPA 6020B	R-04	
Molybdenum	ND	25.0	50.0	ug/L	50	05/11/21 04:26	EPA 6020B	R-04	
GR-SSE-F1-3 (A1D0469-03RE3)				Matrix: W					
Batch: 1040573									
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 04:29	EPA 6020B	R-04	
Iron	ND	1250	2500	ug/L	50	05/11/21 04:29	EPA 6020B	A-01, R-04	
Molybdenum	ND	25.0	50.0	ug/L	50	05/11/21 04:29	EPA 6020B	R-04	
GR-SSE-F1-4 (A1D0469-04RE3)				Matrix: W					
Batch: 1040573									
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 04:32	EPA 6020B	R-04	
Iron	ND	1250	2500	ug/L	50	05/11/21 04:32	EPA 6020B	A-01, R-04	
Molybdenum	ND	25.0	50.0	ug/L	50	05/11/21 04:32	EPA 6020B	R-04	
GR-SSE-F1-5 (A1D0469-05RE3)				Matrix: W					
Batch: 1040573									
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 04:35	EPA 6020B	R-04	
Iron	ND	1250	2500	ug/L	50	05/11/21 04:35	EPA 6020B	A-01, R-04	
Molybdenum	31.5	25.0	50.0	ug/L	50	05/11/21 04:35	EPA 6020B	J, R-04	
GR-SSE-F1-6 (A1D0469-06RE3)				Matrix: W					
Batch: 1040573									

Apex Laboratories

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Darwin Thomas, Business Development Director



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--	---	---

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
GR-SSE-F1-6 (A1D0469-06RE3)				Matrix: W					
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 04:38	EPA 6020B	R-04	
Iron	ND	1250	2500	ug/L	50	05/11/21 04:38	EPA 6020B	A-01, R-04	
Molybdenum	ND	25.0	50.0	ug/L	50	05/11/21 04:38	EPA 6020B	R-04	
GR-SSE-F1-7 (A1D0469-07RE3)				Matrix: W					
Batch: 1040573									
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 04:41	EPA 6020B	R-04	
Iron	ND	1250	2500	ug/L	50	05/11/21 04:41	EPA 6020B	A-01, R-04	
Molybdenum	ND	25.0	50.0	ug/L	50	05/11/21 04:41	EPA 6020B	R-04	
GR-SSE-F1-8 (A1D0469-08RE3)				Matrix: W					
Batch: 1040573									
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 04:44	EPA 6020B	R-04	
Iron	ND	1250	2500	ug/L	50	05/11/21 04:44	EPA 6020B	A-01, R-04	
Molybdenum	ND	25.0	50.0	ug/L	50	05/11/21 04:44	EPA 6020B	R-04	
GR-SSE-F1-9 (A1D0469-09RE3)				Matrix: W					
Batch: 1040573									
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 04:47	EPA 6020B	A-01, R-04	
Iron	ND	1250	2500	ug/L	50	05/11/21 04:47	EPA 6020B	A-01, R-04	
Molybdenum	ND	25.0	50.0	ug/L	50	05/11/21 04:47	EPA 6020B	R-04	
GR-SSE-F1-10 (A1D0469-10RE3)				Matrix: W					
Batch: 1040573									
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 04:51	EPA 6020B	A-01, R-04	
Iron	ND	1250	2500	ug/L	50	05/11/21 04:51	EPA 6020B	A-01, R-04	
Molybdenum	ND	25.0	50.0	ug/L	50	05/11/21 04:51	EPA 6020B	R-04	
GR-SSE-F1-11 (A1D0469-11RE3)				Matrix: W					
Batch: 1040573									
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 05:00	EPA 6020B	A-01, R-04	
Iron	ND	1250	2500	ug/L	50	05/11/21 05:00	EPA 6020B	A-01, R-04	
Molybdenum	ND	25.0	50.0	ug/L	50	05/11/21 05:00	EPA 6020B	R-04	
GR-SSE-F1-12 (A1D0469-12RE3)				Matrix: W					
Batch: 1040573									

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ANALYTICAL REPORT

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Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GR-SSE-F1-12 (A1D0469-12RE3)		Matrix: W						
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 05:03	EPA 6020B	A-01, R-04
Iron	ND	1250	2500	ug/L	50	05/11/21 05:03	EPA 6020B	A-01, R-04
Molybdenum	ND	25.0	50.0	ug/L	50	05/11/21 05:03	EPA 6020B	R-04
GR-SSE-F1-13 (A1D0469-13RE3)		Matrix: W						
Batch: 1040573								
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 05:06	EPA 6020B	A-01, R-04
Iron	ND	1250	2500	ug/L	50	05/11/21 05:06	EPA 6020B	A-01, R-04
Molybdenum	38.0	25.0	50.0	ug/L	50	05/11/21 05:06	EPA 6020B	J, R-04
GR-SSE-F1-14 (A1D0469-14RE3)		Matrix: W						
Batch: 1040573								
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 05:09	EPA 6020B	A-01, R-04
Iron	ND	1250	2500	ug/L	50	05/11/21 05:09	EPA 6020B	A-01, R-04
Molybdenum	ND	25.0	50.0	ug/L	50	05/11/21 05:09	EPA 6020B	R-04
GR-SSE-F1-15 (A1D0469-15RE3)		Matrix: W						
Batch: 1040573								
Arsenic	56.8	25.0	50.0	ug/L	50	05/11/21 05:12	EPA 6020B	A-01
Iron	ND	1250	2500	ug/L	50	05/11/21 05:12	EPA 6020B	A-01, R-04
Molybdenum	262	25.0	50.0	ug/L	50	05/11/21 05:12	EPA 6020B	
GR-SSE-F1-16 (A1D0469-16RE3)		Matrix: W						
Batch: 1040573								
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 05:15	EPA 6020B	A-01, R-04
Iron	2210	1250	2500	ug/L	50	05/11/21 05:15	EPA 6020B	J, A-01, R-04
Molybdenum	ND	25.0	50.0	ug/L	50	05/11/21 05:15	EPA 6020B	R-04
GR-SSE-F2-1 (A1D0469-17RE3)		Matrix: W						
Batch: 1040573								
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 03:14	EPA 6020B	R-04
Iron	6490	1250	2500	ug/L	50	05/11/21 03:14	EPA 6020B	
Molybdenum	72.7	25.0	50.0	ug/L	50	05/11/21 03:14	EPA 6020B	R-04
GR-SSE-F2-2 (A1D0469-18RE3)		Matrix: W						

Apex Laboratories

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

AMENDED REPORT

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ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
--	---	---

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GR-SSE-F2-2 (A1D0469-18RE3) Matrix: W								
Batch: 1040573								
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 03:17	EPA 6020B	R-04
Iron	3900	1250	2500	ug/L	50	05/11/21 03:17	EPA 6020B	
Molybdenum	36.2	25.0	50.0	ug/L	50	05/11/21 03:17	EPA 6020B	J, R-04
GR-SSE-F2-3 (A1D0469-19RE3) Matrix: W								
Batch: 1040573								
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 03:20	EPA 6020B	R-04
Iron	1390	1250	2500	ug/L	50	05/11/21 03:20	EPA 6020B	J, R-04
Molybdenum	36.6	25.0	50.0	ug/L	50	05/11/21 03:20	EPA 6020B	J, R-04
GR-SSE-F2-4 (A1D0469-20RE3) Matrix: W								
Batch: 1040573								
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 03:23	EPA 6020B	R-04
Iron	4220	1250	2500	ug/L	50	05/11/21 03:23	EPA 6020B	
Molybdenum	30.3	25.0	50.0	ug/L	50	05/11/21 03:23	EPA 6020B	J, R-04
GR-SSE-F2-5 (A1D0469-21RE3) Matrix: W								
Batch: 1040587								
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 03:26	EPA 6020B	R-04
Iron	ND	1250	2500	ug/L	50	05/11/21 03:26	EPA 6020B	R-04
Molybdenum	46.0	25.0	50.0	ug/L	50	05/11/21 03:26	EPA 6020B	J, R-04
GR-SSE-F2-6 (A1D0469-22RE3) Matrix: W								
Batch: 1040587								
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 03:30	EPA 6020B	R-04
Iron	3010	1250	2500	ug/L	50	05/11/21 03:30	EPA 6020B	
Molybdenum	37.3	25.0	50.0	ug/L	50	05/11/21 03:30	EPA 6020B	J, R-04
GR-SSE-F2-7 (A1D0469-23RE3) Matrix: W								
Batch: 1040587								
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 03:33	EPA 6020B	R-04
Iron	ND	1250	2500	ug/L	50	05/11/21 03:33	EPA 6020B	R-04
Molybdenum	50.9	25.0	50.0	ug/L	50	05/11/21 03:33	EPA 6020B	

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ANALYTICAL REPORT

AMENDED REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GR-SSE-F2-8 (A1D0469-24RE3) Matrix: W								
Batch: 1040587								
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 03:36	EPA 6020B	R-04
Iron	4500	1250	2500	ug/L	50	05/11/21 03:36	EPA 6020B	
Molybdenum	40.2	25.0	50.0	ug/L	50	05/11/21 03:36	EPA 6020B	J, R-04
GR-SSE-F2-9 (A1D0469-25RE3) Matrix: W								
Batch: 1040587								
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 03:39	EPA 6020B	R-04
Iron	ND	1250	2500	ug/L	50	05/11/21 03:39	EPA 6020B	R-04
Molybdenum	54.9	25.0	50.0	ug/L	50	05/11/21 03:39	EPA 6020B	
GR-SSE-F2-10 (A1D0469-26RE3) Matrix: W								
Batch: 1040587								
Arsenic	ND	25.0	50.0	ug/L	50	05/11/21 03:54	EPA 6020B	R-04
Iron	ND	1250	2500	ug/L	50	05/11/21 03:54	EPA 6020B	R-04
Molybdenum	34.1	25.0	50.0	ug/L	50	05/11/21 03:54	EPA 6020B	J, R-04
GR-SSE-F2-11 (A1D0469-27RE3) Matrix: W								
Batch: 1040587								
Arsenic	104	25.0	50.0	ug/L	50	05/11/21 03:58	EPA 6020B	
Iron	7410	1250	2500	ug/L	50	05/11/21 03:58	EPA 6020B	
Molybdenum	494	25.0	50.0	ug/L	50	05/11/21 03:58	EPA 6020B	
GR-SSE-F2-12 (A1D0469-28RE3) Matrix: W								
Batch: 1040587								
Arsenic	452	25.0	50.0	ug/L	50	05/11/21 04:01	EPA 6020B	
Iron	ND	1250	2500	ug/L	50	05/11/21 04:01	EPA 6020B	R-04
Molybdenum	35.9	25.0	50.0	ug/L	50	05/11/21 04:01	EPA 6020B	J, R-04
GR-SSE-F2-13 (A1D0469-29RE3) Matrix: W								
Batch: 1040587								
Arsenic	479	25.0	50.0	ug/L	50	05/11/21 04:04	EPA 6020B	
Iron	ND	1250	2500	ug/L	50	05/11/21 04:04	EPA 6020B	R-04
Molybdenum	182	25.0	50.0	ug/L	50	05/11/21 04:04	EPA 6020B	

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Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GR-SSE-F2-14 (A1D0469-30RE3) Matrix: W								
Batch: 1040587								
Arsenic	165	25.0	50.0	ug/L	50	05/11/21 04:07	EPA 6020B	
Iron	11000	1250	2500	ug/L	50	05/11/21 04:07	EPA 6020B	
Molybdenum	157	25.0	50.0	ug/L	50	05/11/21 04:07	EPA 6020B	
GR-SSE-F2-15 (A1D0469-31RE3) Matrix: W								
Batch: 1040587								
Arsenic	1190	25.0	50.0	ug/L	50	05/11/21 04:10	EPA 6020B	
Iron	ND	1250	2500	ug/L	50	05/11/21 04:10	EPA 6020B	R-04
Molybdenum	96.2	25.0	50.0	ug/L	50	05/11/21 04:10	EPA 6020B	
GR-SSE-F2-16 (A1D0469-32RE3) Matrix: W								
Batch: 1040587								
Arsenic	736	25.0	50.0	ug/L	50	05/11/21 04:13	EPA 6020B	
Iron	61400	1250	2500	ug/L	50	05/11/21 04:13	EPA 6020B	
Molybdenum	137	25.0	50.0	ug/L	50	05/11/21 04:13	EPA 6020B	
GR-SSE-F3-1 (A1D0469-33RE2) Matrix: W								
Batch: 1040587								
Arsenic	ND	2.50	5.00	ug/L	5	05/08/21 16:39	EPA 6020B	R-04
Iron	1270	125	250	ug/L	5	05/08/21 16:39	EPA 6020B	
Molybdenum	ND	2.50	5.00	ug/L	5	05/08/21 16:39	EPA 6020B	R-04
GR-SSE-F3-2 (A1D0469-34RE2) Matrix: W								
Batch: 1040587								
Arsenic	ND	2.50	5.00	ug/L	5	05/08/21 16:43	EPA 6020B	R-04
Iron	1310	125	250	ug/L	5	05/08/21 16:43	EPA 6020B	
Molybdenum	ND	2.50	5.00	ug/L	5	05/08/21 16:43	EPA 6020B	R-04
GR-SSE-F3-3 (A1D0469-35RE2) Matrix: W								
Batch: 1040587								
Arsenic	ND	2.50	5.00	ug/L	5	05/08/21 16:46	EPA 6020B	R-04
Iron	370	125	250	ug/L	5	05/08/21 16:46	EPA 6020B	
Molybdenum	ND	2.50	5.00	ug/L	5	05/08/21 16:46	EPA 6020B	R-04

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ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GR-SSE-F3-4 (A1D0469-36RE2) Matrix: W								
Batch: 1040587								
Arsenic	ND	2.50	5.00	ug/L	5	05/08/21 16:50	EPA 6020B	R-04
Iron	3210	125	250	ug/L	5	05/08/21 16:50	EPA 6020B	
Molybdenum	ND	2.50	5.00	ug/L	5	05/08/21 16:50	EPA 6020B	R-04
GR-SSE-F3-5 (A1D0469-37RE2) Matrix: W								
Batch: 1040587								
Arsenic	ND	2.50	5.00	ug/L	5	05/08/21 16:53	EPA 6020B	R-04
Iron	348	125	250	ug/L	5	05/08/21 16:53	EPA 6020B	
Molybdenum	ND	2.50	5.00	ug/L	5	05/08/21 16:53	EPA 6020B	R-04
GR-SSE-F3-6 (A1D0469-38RE2) Matrix: W								
Batch: 1040587								
Arsenic	ND	2.50	5.00	ug/L	5	05/08/21 16:57	EPA 6020B	R-04
Iron	3340	125	250	ug/L	5	05/08/21 16:57	EPA 6020B	
Molybdenum	ND	2.50	5.00	ug/L	5	05/08/21 16:57	EPA 6020B	R-04
GR-SSE-F3-7 (A1D0469-39RE2) Matrix: W								
Batch: 1040587								
Arsenic	ND	2.50	5.00	ug/L	5	05/08/21 17:00	EPA 6020B	R-04
Iron	311	125	250	ug/L	5	05/08/21 17:00	EPA 6020B	
Molybdenum	ND	2.50	5.00	ug/L	5	05/08/21 17:00	EPA 6020B	R-04
GR-SSE-F3-8 (A1D0469-40RE2) Matrix: W								
Batch: 1040587								
Arsenic	ND	2.50	5.00	ug/L	5	05/08/21 17:04	EPA 6020B	R-04
Iron	3400	125	250	ug/L	5	05/08/21 17:04	EPA 6020B	
Molybdenum	ND	2.50	5.00	ug/L	5	05/08/21 17:04	EPA 6020B	R-04
GR-SSE-F3-9 (A1D0469-41RE2) Matrix: W								
Batch: 1040593								
Arsenic	ND	2.50	5.00	ug/L	5	05/08/21 17:07	EPA 6020B	R-04
Iron	296	125	250	ug/L	5	05/08/21 17:07	EPA 6020B	
Molybdenum	ND	2.50	5.00	ug/L	5	05/08/21 17:07	EPA 6020B	R-04

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ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GR-SSE-F3-10 (A1D0469-42RE2) Matrix: W								
Batch: 1040593								
Arsenic	ND	2.50	5.00	ug/L	5	05/08/21 17:11	EPA 6020B	R-04
Iron	ND	125	250	ug/L	5	05/08/21 17:11	EPA 6020B	R-04
Molybdenum	ND	2.50	5.00	ug/L	5	05/08/21 17:11	EPA 6020B	R-04
GR-SSE-F3-11 (A1D0469-43RE2) Matrix: W								
Batch: 1040593								
Arsenic	3.36	2.50	5.00	ug/L	5	05/08/21 17:21	EPA 6020B	J, R-04
Iron	12900	125	250	ug/L	5	05/08/21 17:21	EPA 6020B	
Molybdenum	10.6	2.50	5.00	ug/L	5	05/08/21 17:21	EPA 6020B	
GR-SSE-F3-12 (A1D0469-44RE2) Matrix: W								
Batch: 1040593								
Arsenic	6.83	2.50	5.00	ug/L	5	05/08/21 17:25	EPA 6020B	
Iron	228	125	250	ug/L	5	05/08/21 17:25	EPA 6020B	J, R-04
Molybdenum	ND	2.50	5.00	ug/L	5	05/08/21 17:25	EPA 6020B	R-04
GR-SSE-F3-13 (A1D0469-45RE2) Matrix: W								
Batch: 1040593								
Arsenic	11.7	2.50	5.00	ug/L	5	05/08/21 17:28	EPA 6020B	
Iron	330	125	250	ug/L	5	05/08/21 17:28	EPA 6020B	
Molybdenum	ND	2.50	5.00	ug/L	5	05/08/21 17:28	EPA 6020B	R-04
GR-SSE-F3-14 (A1D0469-46RE2) Matrix: W								
Batch: 1040593								
Arsenic	2.71	2.50	5.00	ug/L	5	05/08/21 17:32	EPA 6020B	J, R-04
Iron	372	125	250	ug/L	5	05/08/21 17:32	EPA 6020B	
Molybdenum	ND	2.50	5.00	ug/L	5	05/08/21 17:32	EPA 6020B	R-04
GR-SSE-F3-15 (A1D0469-47RE2) Matrix: W								
Batch: 1040593								
Arsenic	18.1	2.50	5.00	ug/L	5	05/08/21 17:35	EPA 6020B	
Iron	521	125	250	ug/L	5	05/08/21 17:35	EPA 6020B	
Molybdenum	ND	2.50	5.00	ug/L	5	05/08/21 17:35	EPA 6020B	R-04

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ANALYTICAL REPORT

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Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GR-SSE-F3-16 (A1D0469-48RE1) Matrix: W								
Batch: 1040593								
Arsenic	ND	50.0	100	ug/L	100	04/17/21 22:57	EPA 6020B	R-04
Molybdenum	ND	50.0	100	ug/L	100	04/17/21 22:57	EPA 6020B	R-04
GR-SSE-F4-1 (A1D0469-49RE2) Matrix: W								
Batch: 1040593								
Arsenic	ND	5.00	10.0	ug/L	10	05/08/21 14:22	EPA 6020B	R-04
Iron	7750	250	500	ug/L	10	05/08/21 14:22	EPA 6020B	
Molybdenum	17.9	5.00	10.0	ug/L	10	05/08/21 14:22	EPA 6020B	
GR-SSE-F4-2 (A1D0469-50RE2) Matrix: W								
Batch: 1040593								
Arsenic	6.92	5.00	10.0	ug/L	10	05/08/21 14:25	EPA 6020B	J, R-04
Iron	15400	250	500	ug/L	10	05/08/21 14:25	EPA 6020B	
Molybdenum	8.45	5.00	10.0	ug/L	10	05/08/21 14:25	EPA 6020B	J, R-04
GR-SSE-F4-3 (A1D0469-51RE2) Matrix: W								
Batch: 1040593								
Arsenic	ND	5.00	10.0	ug/L	10	05/08/21 14:29	EPA 6020B	R-04
Iron	1080	250	500	ug/L	10	05/08/21 14:29	EPA 6020B	
Molybdenum	5.61	5.00	10.0	ug/L	10	05/08/21 14:29	EPA 6020B	J, R-04
GR-SSE-F4-4 (A1D0469-52RE2) Matrix: W								
Batch: 1040593								
Arsenic	24.9	5.00	10.0	ug/L	10	05/08/21 14:32	EPA 6020B	
Iron	58400	250	500	ug/L	10	05/08/21 14:32	EPA 6020B	
Molybdenum	21.0	5.00	10.0	ug/L	10	05/08/21 14:32	EPA 6020B	
GR-SSE-F4-5 (A1D0469-53RE2) Matrix: W								
Batch: 1040593								
Arsenic	ND	5.00	10.0	ug/L	10	05/08/21 14:36	EPA 6020B	R-04
Iron	772	250	500	ug/L	10	05/08/21 14:36	EPA 6020B	
Molybdenum	5.31	5.00	10.0	ug/L	10	05/08/21 14:36	EPA 6020B	J, R-04
GR-SSE-F4-6 (A1D0469-54RE2) Matrix: W								
Batch: 1040593								

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ANALYTICAL REPORT

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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GR-SSE-F4-6 (A1D0469-54RE2)				Matrix: W				
Arsenic	15.2	5.00	10.0	ug/L	10	05/08/21 14:39	EPA 6020B	
Iron	35600	250	500	ug/L	10	05/08/21 14:39	EPA 6020B	
Molybdenum	19.3	5.00	10.0	ug/L	10	05/08/21 14:39	EPA 6020B	
GR-SSE-F4-7 (A1D0469-55RE2)				Matrix: W				
Batch: 1040593								
Arsenic	ND	5.00	10.0	ug/L	10	05/08/21 14:43	EPA 6020B	R-04
Iron	1430	250	500	ug/L	10	05/08/21 14:43	EPA 6020B	
Molybdenum	11.6	5.00	10.0	ug/L	10	05/08/21 14:43	EPA 6020B	
GR-SSE-F4-8 (A1D0469-56RE2)				Matrix: W				
Batch: 1040593								
Arsenic	23.3	5.00	10.0	ug/L	10	05/08/21 14:46	EPA 6020B	
Iron	41800	250	500	ug/L	10	05/08/21 14:46	EPA 6020B	
Molybdenum	29.8	5.00	10.0	ug/L	10	05/08/21 14:46	EPA 6020B	
GR-SSE-F4-9 (A1D0469-57RE2)				Matrix: W				
Batch: 1040593								
Arsenic	ND	5.00	10.0	ug/L	10	05/08/21 14:50	EPA 6020B	R-04
Iron	1330	250	500	ug/L	10	05/08/21 14:50	EPA 6020B	
Molybdenum	11.4	5.00	10.0	ug/L	10	05/08/21 14:50	EPA 6020B	
GR-SSE-F4-10 (A1D0469-58RE2)				Matrix: W				
Batch: 1040593								
Arsenic	ND	5.00	10.0	ug/L	10	05/08/21 15:00	EPA 6020B	R-04
Iron	ND	250	500	ug/L	10	05/08/21 15:00	EPA 6020B	R-04
Molybdenum	ND	5.00	10.0	ug/L	10	05/08/21 15:00	EPA 6020B	R-04
GR-SSE-F4-11 (A1D0469-59RE1)				Matrix: W				
Batch: 1040593								
Molybdenum	1160	50.0	100	ug/L	100	04/17/21 23:58	EPA 6020B	
GR-SSE-F4-11 (A1D0469-59RE2)				Matrix: W				
Batch: 1040593								
Arsenic	125	5.00	10.0	ug/L	10	05/08/21 15:04	EPA 6020B	

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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GR-SSE-F4-11 (A1D0469-59RE2) Matrix: W								
Iron	462000	250	500	ug/L	10	05/08/21 15:04	EPA 6020B	
GR-SSE-F4-12 (A1D0469-60RE2) Matrix: W								
Batch: 1040593								
Arsenic	7.57	5.00	10.0	ug/L	10	05/08/21 15:08	EPA 6020B	J, R-04
Iron	1110	250	500	ug/L	10	05/08/21 15:08	EPA 6020B	
Molybdenum	6.25	5.00	10.0	ug/L	10	05/08/21 15:08	EPA 6020B	J, R-04
GR-SSE-F4-13 (A1D0469-61RE1) Matrix: W								
Batch: 1040595								
Arsenic	ND	25.0	50.0	ug/L	50	04/18/21 00:07	EPA 6020B	R-04
Iron	ND	1250	2500	ug/L	50	04/18/21 00:07	EPA 6020B	R-04
Molybdenum	ND	25.0	50.0	ug/L	50	04/18/21 00:07	EPA 6020B	R-04
GR-SSE-F4-14 (A1D0469-62RE1) Matrix: W								
Batch: 1040595								
Arsenic	47.4	25.0	50.0	ug/L	50	04/18/21 00:12	EPA 6020B	J, R-04
Iron	68900	1250	2500	ug/L	50	04/18/21 00:12	EPA 6020B	
Molybdenum	73.0	25.0	50.0	ug/L	50	04/18/21 00:12	EPA 6020B	
GR-SSE-F4-15 (A1D0469-63RE1) Matrix: W								
Batch: 1040595								
Arsenic	78.7	25.0	50.0	ug/L	50	04/18/21 00:16	EPA 6020B	
Iron	1570	1250	2500	ug/L	50	04/18/21 00:16	EPA 6020B	J, R-04
Molybdenum	126	25.0	50.0	ug/L	50	04/18/21 00:16	EPA 6020B	
GR-SSE-F4-16 (A1D0469-64RE1) Matrix: W								
Batch: 1040595								
Arsenic	106	25.0	50.0	ug/L	50	04/18/21 00:30	EPA 6020B	
Iron	444000	1250	2500	ug/L	50	04/18/21 00:30	EPA 6020B	
Molybdenum	29.1	25.0	50.0	ug/L	50	04/18/21 00:30	EPA 6020B	J, R-04
GR-SSE-F5-1 (A1D0469-65) Matrix: S								
Batch: 1040576								
Iron	1440	26.7	53.3	mg/kg	10	04/16/21 17:48	EPA 6020B	

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AMENDED REPORT

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503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GR-SSE-F5-1 (A1D0469-65RE2)				Matrix: S				
Batch: 1040576								
Arsenic	ND	0.267	0.533	mg/kg	5	05/08/21 15:29	EPA 6020B	R-04
Molybdenum	0.870	0.267	0.533	mg/kg	5	05/08/21 15:29	EPA 6020B	
GR-SSE-F5-2 (A1D0469-66)				Matrix: S				
Batch: 1040576								
Iron	420	26.9	53.8	mg/kg	10	04/16/21 17:53	EPA 6020B	
GR-SSE-F5-2 (A1D0469-66RE2)				Matrix: S				
Batch: 1040576								
Arsenic	ND	0.269	0.538	mg/kg	5	05/08/21 15:33	EPA 6020B	R-04
Molybdenum	ND	0.269	0.538	mg/kg	5	05/08/21 15:33	EPA 6020B	R-04
GR-SSE-F5-3 (A1D0469-67)				Matrix: S				
Batch: 1040576								
Iron	279	27.0	54.0	mg/kg	10	04/16/21 17:57	EPA 6020B	
GR-SSE-F5-3 (A1D0469-67RE2)				Matrix: S				
Batch: 1040576								
Arsenic	ND	0.270	0.540	mg/kg	5	05/08/21 15:36	EPA 6020B	R-04
Molybdenum	ND	0.270	0.540	mg/kg	5	05/08/21 15:36	EPA 6020B	R-04
GR-SSE-F5-4 (A1D0469-68)				Matrix: S				
Batch: 1040576								
Iron	330	27.0	54.0	mg/kg	10	04/16/21 18:02	EPA 6020B	
GR-SSE-F5-4 (A1D0469-68RE2)				Matrix: S				
Batch: 1040576								
Arsenic	0.349	0.270	0.540	mg/kg	5	05/08/21 15:40	EPA 6020B	J, R-04
Molybdenum	0.375	0.270	0.540	mg/kg	5	05/08/21 15:40	EPA 6020B	J, R-04
GR-SSE-F5-5 (A1D0469-69)				Matrix: S				
Batch: 1040576								
Iron	1210	26.5	53.0	mg/kg	10	04/16/21 18:07	EPA 6020B	
GR-SSE-F5-5 (A1D0469-69RE2)				Matrix: S				

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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GR-SSE-F5-5 (A1D0469-69RE2) Matrix: S								
Batch: 1040576								
Arsenic	ND	0.265	0.530	mg/kg	5	05/08/21 15:43	EPA 6020B	R-04
Molybdenum	1.34	0.265	0.530	mg/kg	5	05/08/21 15:43	EPA 6020B	
GR-SSE-F5-6 (A1D0469-70) Matrix: S								
Batch: 1040576								
Iron	978	26.7	53.3	mg/kg	10	04/16/21 18:11	EPA 6020B	
GR-SSE-F5-6 (A1D0469-70RE2) Matrix: S								
Batch: 1040576								
Arsenic	0.690	0.267	0.533	mg/kg	5	05/08/21 15:47	EPA 6020B	
Molybdenum	0.450	0.267	0.533	mg/kg	5	05/08/21 15:47	EPA 6020B	J, R-04
GR-SSE-F5-7 (A1D0469-71) Matrix: S								
Batch: 1040576								
Iron	2970	26.5	53.0	mg/kg	10	04/16/21 18:25	EPA 6020B	
GR-SSE-F5-7 (A1D0469-71RE2) Matrix: S								
Batch: 1040576								
Arsenic	0.362	0.265	0.530	mg/kg	5	05/08/21 15:50	EPA 6020B	J, R-04
Molybdenum	1.03	0.265	0.530	mg/kg	5	05/08/21 15:50	EPA 6020B	
GR-SSE-F5-8 (A1D0469-72) Matrix: S								
Batch: 1040576								
Iron	1220	27.0	54.0	mg/kg	10	04/16/21 18:30	EPA 6020B	
GR-SSE-F5-8 (A1D0469-72RE2) Matrix: S								
Batch: 1040576								
Arsenic	0.936	0.270	0.540	mg/kg	5	05/08/21 15:54	EPA 6020B	
Molybdenum	0.894	0.270	0.540	mg/kg	5	05/08/21 15:54	EPA 6020B	
GR-SSE-F5-9 (A1D0469-73) Matrix: S								
Batch: 1040576								
Iron	1160	26.0	52.0	mg/kg	10	04/16/21 18:34	EPA 6020B	
GR-SSE-F5-9 (A1D0469-73RE2) Matrix: S								

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Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GR-SSE-F5-9 (A1D0469-73RE2)				Matrix: S				
Batch: 1040576								
Arsenic	ND	0.260	0.520	mg/kg	5	05/08/21 15:57	EPA 6020B	R-04
Molybdenum	0.620	0.260	0.520	mg/kg	5	05/08/21 15:57	EPA 6020B	
GR-SSE-F5-11 (A1D0469-74)				Matrix: S				
Batch: 1040576								
Iron	300	26.2	52.3	mg/kg	10	04/16/21 18:39	EPA 6020B	
GR-SSE-F5-11 (A1D0469-74RE2)				Matrix: S				
Batch: 1040576								
Arsenic	ND	0.262	0.523	mg/kg	5	05/08/21 16:01	EPA 6020B	R-04
Molybdenum	3.02	0.262	0.523	mg/kg	5	05/08/21 16:01	EPA 6020B	
GR-SSE-F5-12 (A1D0469-75)				Matrix: S				
Batch: 1040576								
Iron	122	24.9	49.7	mg/kg	10	04/16/21 18:44	EPA 6020B	
GR-SSE-F5-12 (A1D0469-75RE2)				Matrix: S				
Batch: 1040576								
Arsenic	ND	0.249	0.497	mg/kg	5	05/08/21 16:11	EPA 6020B	R-04
Molybdenum	ND	0.249	0.497	mg/kg	5	05/08/21 16:11	EPA 6020B	R-04
GR-SSE-F5-13 (A1D0469-76)				Matrix: S				
Batch: 1040576								
Iron	548	26.0	52.0	mg/kg	10	04/16/21 18:48	EPA 6020B	
GR-SSE-F5-13 (A1D0469-76RE2)				Matrix: S				
Batch: 1040576								
Arsenic	0.536	0.260	0.520	mg/kg	5	05/08/21 16:15	EPA 6020B	
Molybdenum	1.22	0.260	0.520	mg/kg	5	05/08/21 16:15	EPA 6020B	
GR-SSE-F5-14 (A1D0469-77)				Matrix: S				
Batch: 1040576								
Iron	1390	26.7	53.3	mg/kg	10	04/16/21 18:53	EPA 6020B	
GR-SSE-F5-14 (A1D0469-77RE2)				Matrix: S				

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GR-SSE-F5-14 (A1D0469-77RE2)				Matrix: S				
Batch: 1040576								
Arsenic	0.492	0.267	0.533	mg/kg	5	05/08/21 16:18	EPA 6020B	J, R-04
Molybdenum	0.927	0.267	0.533	mg/kg	5	05/08/21 16:18	EPA 6020B	
GR-SSE-F5-15 (A1D0469-78)				Matrix: S				
Batch: 1040576								
Iron	1490	25.2	50.4	mg/kg	10	04/16/21 18:58	EPA 6020B	
GR-SSE-F5-15 (A1D0469-78RE2)				Matrix: S				
Batch: 1040576								
Arsenic	3.63	0.252	0.504	mg/kg	5	05/08/21 16:22	EPA 6020B	
Molybdenum	5.07	0.252	0.504	mg/kg	5	05/08/21 16:22	EPA 6020B	
GR-SSE-F5-16 (A1D0469-79)				Matrix: S				
Batch: 1040576								
Iron	9010	26.9	53.9	mg/kg	10	04/16/21 19:02	EPA 6020B	
GR-SSE-F5-16 (A1D0469-79RE2)				Matrix: S				
Batch: 1040576								
Arsenic	4.62	0.269	0.539	mg/kg	5	05/08/21 16:25	EPA 6020B	
Molybdenum	1.64	0.269	0.539	mg/kg	5	05/08/21 16:25	EPA 6020B	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1040573 - EPA 3015A						Water						
Blank (1040573-BLK1)			Prepared: 04/16/21 08:54 Analyzed: 04/16/21 12:34									
<u>EPA 6020B</u>												
Arsenic	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Iron	ND	25.0	50.0	ug/L	1	---	---	---	---	---	---	
Molybdenum	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
LCS (1040573-BS1)			Prepared: 04/16/21 08:54 Analyzed: 04/16/21 12:44									
<u>EPA 6020B</u>												
Arsenic	52.8	0.500	1.00	ug/L	1	55.6	---	95	80-120%	---	---	
Iron	2770	25.0	50.0	ug/L	1	2780	---	100	80-120%	---	---	
Molybdenum	26.7	0.500	1.00	ug/L	1	27.8	---	96	80-120%	---	---	
LCS Dup (1040573-BSD1)			Prepared: 04/16/21 08:54 Analyzed: 04/16/21 12:39									
<u>EPA 6020B</u>												
Arsenic	52.3	0.500	1.00	ug/L	1	55.6	---	94	80-120%	0.9	20%	
Iron	2770	25.0	50.0	ug/L	1	2780	---	100	80-120%	0.3	20%	
Molybdenum	26.1	0.500	1.00	ug/L	1	27.8	---	94	80-120%	2	20%	
Batch 1040576 - EPA 3051A						Solid						
Blank (1040576-BLK3)			Prepared: 04/16/21 09:12 Analyzed: 05/08/21 15:12									
<u>EPA 6020B</u>												
Arsenic	ND	0.240	0.481	mg/kg	5	---	---	---	---	---	---	Q-16
Iron	ND	12.0	24.0	mg/kg	5	---	---	---	---	---	---	Q-16
Molybdenum	ND	0.240	0.481	mg/kg	5	---	---	---	---	---	---	Q-16
LCS (1040576-BS3)			Prepared: 04/16/21 09:12 Analyzed: 05/08/21 15:19									
<u>EPA 6020B</u>												
Arsenic	48.3	0.250	0.500	mg/kg	5	50.0	---	97	80-120%	---	---	Q-16
Iron	2480	12.5	25.0	mg/kg	5	2500	---	99	80-120%	---	---	Q-16
Molybdenum	25.0	0.250	0.500	mg/kg	5	25.0	---	100	80-120%	---	---	Q-16
LCS Dup (1040576-BSD3)			Prepared: 04/16/21 09:12 Analyzed: 05/08/21 15:15									
<u>EPA 6020B</u>												
Arsenic	47.1	0.250	0.500	mg/kg	5	50.0	---	94	80-120%	3	20%	Q-16

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<p>Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219</p>	<p>Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos</p>	<p style="text-align: right;">Report ID: A1D0469 - 05 14 21 0842</p>
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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1040576 - EPA 3051A						Solid						
LCS Dup (1040576-BSD3)			Prepared: 04/16/21 09:12 Analyzed: 05/08/21 15:15									
Iron	2380	12.5	25.0	mg/kg	5	2500	---	95	80-120%	4	20%	Q-16
Molybdenum	24.1	0.250	0.500	mg/kg	5	25.0	---	96	80-120%	4	20%	Q-16

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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1040587 - EPA 3015A						Water						
Blank (1040587-BLK1)			Prepared: 04/16/21 10:39 Analyzed: 04/17/21 13:52									
<u>EPA 6020B</u>												
Arsenic	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Iron	ND	25.0	50.0	ug/L	1	---	---	---	---	---	---	
Molybdenum	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
LCS (1040587-BS1)						Prepared: 04/16/21 10:39 Analyzed: 04/17/21 14:01						
<u>EPA 6020B</u>												
Arsenic	52.3	0.500	1.00	ug/L	1	55.6	---	94	80-120%	---	---	
Iron	2760	25.0	50.0	ug/L	1	2780	---	99	80-120%	---	---	
Molybdenum	27.3	0.500	1.00	ug/L	1	27.8	---	98	80-120%	---	---	
LCS Dup (1040587-BSD1)						Prepared: 04/16/21 10:39 Analyzed: 04/17/21 13:57						
<u>EPA 6020B</u>												
Arsenic	52.1	0.500	1.00	ug/L	1	55.6	---	94	80-120%	0.4	20%	
Iron	2740	25.0	50.0	ug/L	1	2780	---	98	80-120%	0.9	20%	
Molybdenum	26.9	0.500	1.00	ug/L	1	27.8	---	97	80-120%	1	20%	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1040593 - EPA 3015A						Water						
Blank (1040593-BLK1)			Prepared: 04/16/21 11:55 Analyzed: 04/17/21 14:15									
<u>EPA 6020B</u>												
Arsenic	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	---
Iron	ND	25.0	50.0	ug/L	1	---	---	---	---	---	---	---
Molybdenum	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	---
LCS (1040593-BS1)			Prepared: 04/16/21 11:55 Analyzed: 04/17/21 14:25									
<u>EPA 6020B</u>												
Arsenic	52.0	0.500	1.00	ug/L	1	55.6	---	94	80-120%	---	---	---
Iron	2750	25.0	50.0	ug/L	1	2780	---	99	80-120%	---	---	---
Molybdenum	26.9	0.500	1.00	ug/L	1	27.8	---	97	80-120%	---	---	---
LCS Dup (1040593-BSD1)			Prepared: 04/16/21 11:55 Analyzed: 04/17/21 14:20									
<u>EPA 6020B</u>												
Arsenic	52.8	0.500	1.00	ug/L	1	55.6	---	95	80-120%	1	20%	---
Iron	2790	25.0	50.0	ug/L	1	2780	---	100	80-120%	1	20%	---
Molybdenum	27.6	0.500	1.00	ug/L	1	27.8	---	99	80-120%	2	20%	---

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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1040595 - EPA 3015A						Water						
Blank (1040595-BLK1)			Prepared: 04/16/21 12:57 Analyzed: 04/17/21 13:38									
<u>EPA 6020B</u>												
Arsenic	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	---
Iron	ND	25.0	50.0	ug/L	1	---	---	---	---	---	---	---
Molybdenum	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	---
LCS (1040595-BS1)						Prepared: 04/16/21 12:57 Analyzed: 04/17/21 13:47						
<u>EPA 6020B</u>												
Arsenic	52.0	0.500	1.00	ug/L	1	55.6	---	94	80-120%	---	---	---
Iron	2660	25.0	50.0	ug/L	1	2780	---	96	80-120%	---	---	---
Molybdenum	26.6	0.500	1.00	ug/L	1	27.8	---	96	80-120%	---	---	---
LCS Dup (1040595-BSD1)						Prepared: 04/16/21 12:57 Analyzed: 04/17/21 13:42						
<u>EPA 6020B</u>												
Arsenic	51.5	0.500	1.00	ug/L	1	55.6	---	93	80-120%	1	20%	---
Iron	2650	25.0	50.0	ug/L	1	2780	---	95	80-120%	0.4	20%	---
Molybdenum	26.6	0.500	1.00	ug/L	1	27.8	---	96	80-120%	0.04	20%	---

Apex Laboratories

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

AMENDED REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: **Grumman Road**

Project Number: **201114-05.01**

Project Manager: **Dimitri Vlassopoulos**

Report ID:

A1D0469 - 05 14 21 0842

SAMPLE PREPARATION INFORMATION

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3015A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1040573</u>							
A1D0469-01	W	EPA 6020B	04/06/21 10:00	04/16/21 08:54	45mL/50mL	45mL/50mL	1.00
A1D0469-01RE3	W	EPA 6020B	04/06/21 10:00	04/16/21 08:54	45mL/50mL	45mL/50mL	1.00
A1D0469-02RE3	W	EPA 6020B	04/06/21 10:05	04/16/21 08:54	45mL/50mL	45mL/50mL	1.00
A1D0469-03RE3	W	EPA 6020B	04/06/21 10:10	04/16/21 08:54	45mL/50mL	45mL/50mL	1.00
A1D0469-04RE3	W	EPA 6020B	04/06/21 10:15	04/16/21 08:54	45mL/50mL	45mL/50mL	1.00
A1D0469-05RE3	W	EPA 6020B	04/06/21 10:20	04/16/21 08:54	45mL/50mL	45mL/50mL	1.00
A1D0469-06RE3	W	EPA 6020B	04/06/21 10:25	04/16/21 08:54	45mL/50mL	45mL/50mL	1.00
A1D0469-07RE3	W	EPA 6020B	04/06/21 10:30	04/16/21 08:54	45mL/50mL	45mL/50mL	1.00
A1D0469-08RE3	W	EPA 6020B	04/06/21 10:35	04/16/21 08:54	45mL/50mL	45mL/50mL	1.00
A1D0469-09RE3	W	EPA 6020B	04/06/21 10:40	04/16/21 08:54	45mL/50mL	45mL/50mL	1.00
A1D0469-10RE3	W	EPA 6020B	04/06/21 10:45	04/16/21 08:54	45mL/50mL	45mL/50mL	1.00
A1D0469-11RE3	W	EPA 6020B	04/06/21 10:50	04/16/21 08:54	45mL/50mL	45mL/50mL	1.00
A1D0469-12RE3	W	EPA 6020B	04/06/21 10:55	04/16/21 08:54	45mL/50mL	45mL/50mL	1.00
A1D0469-13RE3	W	EPA 6020B	04/06/21 11:00	04/16/21 08:54	45mL/50mL	45mL/50mL	1.00
A1D0469-14RE3	W	EPA 6020B	04/06/21 11:05	04/16/21 08:54	45mL/50mL	45mL/50mL	1.00
A1D0469-15RE3	W	EPA 6020B	04/06/21 11:10	04/16/21 08:54	45mL/50mL	45mL/50mL	1.00
A1D0469-16RE3	W	EPA 6020B	04/06/21 11:15	04/16/21 08:54	45mL/50mL	45mL/50mL	1.00
A1D0469-17RE3	W	EPA 6020B	04/07/21 10:00	04/16/21 08:54	45mL/50mL	45mL/50mL	1.00
A1D0469-18RE3	W	EPA 6020B	04/08/21 10:05	04/16/21 08:54	45mL/50mL	45mL/50mL	1.00
A1D0469-19RE3	W	EPA 6020B	04/09/21 10:10	04/16/21 08:54	45mL/50mL	45mL/50mL	1.00
A1D0469-20RE3	W	EPA 6020B	04/10/21 10:15	04/16/21 08:54	45mL/50mL	45mL/50mL	1.00
<u>Batch: 1040587</u>							
A1D0469-21RE3	W	EPA 6020B	04/07/21 10:20	04/16/21 10:39	45mL/50mL	45mL/50mL	1.00
A1D0469-22RE3	W	EPA 6020B	04/07/21 10:25	04/16/21 10:39	45mL/50mL	45mL/50mL	1.00
A1D0469-23RE3	W	EPA 6020B	04/07/21 10:30	04/16/21 10:39	45mL/50mL	45mL/50mL	1.00
A1D0469-24RE3	W	EPA 6020B	04/07/21 10:35	04/16/21 10:39	45mL/50mL	45mL/50mL	1.00
A1D0469-25RE3	W	EPA 6020B	04/07/21 10:40	04/16/21 10:39	45mL/50mL	45mL/50mL	1.00
A1D0469-26RE3	W	EPA 6020B	04/07/21 10:45	04/16/21 10:39	45mL/50mL	45mL/50mL	1.00
A1D0469-27RE3	W	EPA 6020B	04/07/21 10:50	04/16/21 10:39	45mL/50mL	45mL/50mL	1.00
A1D0469-28RE3	W	EPA 6020B	04/07/21 10:55	04/16/21 10:39	45mL/50mL	45mL/50mL	1.00
A1D0469-29RE3	W	EPA 6020B	04/07/21 11:00	04/16/21 10:39	45mL/50mL	45mL/50mL	1.00
A1D0469-30RE3	W	EPA 6020B	04/07/21 11:05	04/16/21 10:39	45mL/50mL	45mL/50mL	1.00
A1D0469-31RE3	W	EPA 6020B	04/07/21 11:10	04/16/21 10:39	45mL/50mL	45mL/50mL	1.00
A1D0469-32RE3	W	EPA 6020B	04/07/21 11:15	04/16/21 10:39	45mL/50mL	45mL/50mL	1.00
A1D0469-33RE2	W	EPA 6020B	04/08/21 10:00	04/16/21 10:39	45mL/50mL	45mL/50mL	1.00
A1D0469-34RE2	W	EPA 6020B	04/08/21 10:05	04/16/21 10:39	45mL/50mL	45mL/50mL	1.00

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

AMENDED REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
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SAMPLE PREPARATION INFORMATION

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3015A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
A1D0469-35RE2	W	EPA 6020B	04/08/21 10:10	04/16/21 10:39	45mL/50mL	45mL/50mL	1.00
A1D0469-36RE2	W	EPA 6020B	04/08/21 10:15	04/16/21 10:39	45mL/50mL	45mL/50mL	1.00
A1D0469-37RE2	W	EPA 6020B	04/08/21 10:20	04/16/21 10:39	45mL/50mL	45mL/50mL	1.00
A1D0469-38RE2	W	EPA 6020B	04/08/21 10:25	04/16/21 10:39	45mL/50mL	45mL/50mL	1.00
A1D0469-39RE2	W	EPA 6020B	04/08/21 10:30	04/16/21 10:39	45mL/50mL	45mL/50mL	1.00
A1D0469-40RE2	W	EPA 6020B	04/08/21 10:35	04/16/21 10:39	45mL/50mL	45mL/50mL	1.00
Batch: 1040593							
A1D0469-41RE2	W	EPA 6020B	04/08/21 10:40	04/16/21 11:55	45mL/50mL	45mL/50mL	1.00
A1D0469-42RE2	W	EPA 6020B	04/08/21 10:45	04/16/21 11:55	45mL/50mL	45mL/50mL	1.00
A1D0469-43RE2	W	EPA 6020B	04/08/21 10:50	04/16/21 11:55	45mL/50mL	45mL/50mL	1.00
A1D0469-44RE2	W	EPA 6020B	04/08/21 10:55	04/16/21 11:55	45mL/50mL	45mL/50mL	1.00
A1D0469-45RE2	W	EPA 6020B	04/08/21 11:00	04/16/21 11:55	45mL/50mL	45mL/50mL	1.00
A1D0469-46RE2	W	EPA 6020B	04/08/21 11:05	04/16/21 11:55	45mL/50mL	45mL/50mL	1.00
A1D0469-47RE2	W	EPA 6020B	04/08/21 11:10	04/16/21 11:55	45mL/50mL	45mL/50mL	1.00
A1D0469-48RE1	W	EPA 6020B	04/08/21 11:15	04/16/21 11:55	45mL/50mL	45mL/50mL	1.00
A1D0469-49RE2	W	EPA 6020B	04/09/21 10:00	04/16/21 11:55	45mL/50mL	45mL/50mL	1.00
A1D0469-50RE2	W	EPA 6020B	04/09/21 10:05	04/16/21 11:55	45mL/50mL	45mL/50mL	1.00
A1D0469-51RE2	W	EPA 6020B	04/09/21 10:10	04/16/21 11:55	45mL/50mL	45mL/50mL	1.00
A1D0469-52RE2	W	EPA 6020B	04/09/21 10:15	04/16/21 11:55	45mL/50mL	45mL/50mL	1.00
A1D0469-53RE2	W	EPA 6020B	04/09/21 10:20	04/16/21 11:55	45mL/50mL	45mL/50mL	1.00
A1D0469-54RE2	W	EPA 6020B	04/09/21 10:25	04/16/21 11:55	45mL/50mL	45mL/50mL	1.00
A1D0469-55RE2	W	EPA 6020B	04/09/21 10:30	04/16/21 11:55	45mL/50mL	45mL/50mL	1.00
A1D0469-56RE2	W	EPA 6020B	04/09/21 10:35	04/16/21 11:55	45mL/50mL	45mL/50mL	1.00
A1D0469-57RE2	W	EPA 6020B	04/09/21 10:40	04/16/21 11:55	45mL/50mL	45mL/50mL	1.00
A1D0469-58RE2	W	EPA 6020B	04/09/21 10:45	04/16/21 11:55	45mL/50mL	45mL/50mL	1.00
A1D0469-59RE1	W	EPA 6020B	04/09/21 10:50	04/16/21 11:55	45mL/50mL	45mL/50mL	1.00
A1D0469-59RE2	W	EPA 6020B	04/09/21 10:50	04/16/21 11:55	45mL/50mL	45mL/50mL	1.00
A1D0469-60RE2	W	EPA 6020B	04/09/21 10:55	04/16/21 11:55	45mL/50mL	45mL/50mL	1.00
Batch: 1040595							
A1D0469-61RE1	W	EPA 6020B	04/09/21 11:00	04/16/21 12:57	45mL/50mL	45mL/50mL	1.00
A1D0469-62RE1	W	EPA 6020B	04/09/21 11:05	04/16/21 12:57	45mL/50mL	45mL/50mL	1.00
A1D0469-63RE1	W	EPA 6020B	04/09/21 11:10	04/16/21 12:57	45mL/50mL	45mL/50mL	1.00
A1D0469-64RE1	W	EPA 6020B	04/09/21 11:15	04/16/21 12:57	45mL/50mL	45mL/50mL	1.00

Prep: EPA 3051A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

AMENDED REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323

ORELAP ID: **OR100062**

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
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SAMPLE PREPARATION INFORMATION

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3051A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1040576</u>							
A1D0469-65	S	EPA 6020B	04/12/21 10:00	04/16/21 09:12	0.469g/50mL	0.5g/50mL	1.07
A1D0469-65RE2	S	EPA 6020B	04/12/21 10:00	04/16/21 09:12	0.469g/50mL	0.5g/50mL	1.07
A1D0469-66	S	EPA 6020B	04/12/21 10:05	04/16/21 09:12	0.465g/50mL	0.5g/50mL	1.08
A1D0469-66RE2	S	EPA 6020B	04/12/21 10:05	04/16/21 09:12	0.465g/50mL	0.5g/50mL	1.08
A1D0469-67	S	EPA 6020B	04/12/21 10:10	04/16/21 09:12	0.463g/50mL	0.5g/50mL	1.08
A1D0469-67RE2	S	EPA 6020B	04/12/21 10:10	04/16/21 09:12	0.463g/50mL	0.5g/50mL	1.08
A1D0469-68	S	EPA 6020B	04/12/21 10:15	04/16/21 09:12	0.463g/50mL	0.5g/50mL	1.08
A1D0469-68RE2	S	EPA 6020B	04/12/21 10:15	04/16/21 09:12	0.463g/50mL	0.5g/50mL	1.08
A1D0469-69	S	EPA 6020B	04/12/21 10:20	04/16/21 09:12	0.472g/50mL	0.5g/50mL	1.06
A1D0469-69RE2	S	EPA 6020B	04/12/21 10:20	04/16/21 09:12	0.472g/50mL	0.5g/50mL	1.06
A1D0469-70	S	EPA 6020B	04/12/21 10:25	04/16/21 09:12	0.469g/50mL	0.5g/50mL	1.07
A1D0469-70RE2	S	EPA 6020B	04/12/21 10:25	04/16/21 09:12	0.469g/50mL	0.5g/50mL	1.07
A1D0469-71	S	EPA 6020B	04/12/21 10:30	04/16/21 09:12	0.472g/50mL	0.5g/50mL	1.06
A1D0469-71RE2	S	EPA 6020B	04/12/21 10:30	04/16/21 09:12	0.472g/50mL	0.5g/50mL	1.06
A1D0469-72	S	EPA 6020B	04/12/21 10:35	04/16/21 09:12	0.463g/50mL	0.5g/50mL	1.08
A1D0469-72RE2	S	EPA 6020B	04/12/21 10:35	04/16/21 09:12	0.463g/50mL	0.5g/50mL	1.08
A1D0469-73	S	EPA 6020B	04/12/21 10:40	04/16/21 09:12	0.481g/50mL	0.5g/50mL	1.04
A1D0469-73RE2	S	EPA 6020B	04/12/21 10:40	04/16/21 09:12	0.481g/50mL	0.5g/50mL	1.04
A1D0469-74	S	EPA 6020B	04/12/21 10:50	04/16/21 09:12	0.478g/50mL	0.5g/50mL	1.05
A1D0469-74RE2	S	EPA 6020B	04/12/21 10:50	04/16/21 09:12	0.478g/50mL	0.5g/50mL	1.05
A1D0469-75	S	EPA 6020B	04/12/21 10:55	04/16/21 09:12	0.503g/50mL	0.5g/50mL	0.99
A1D0469-75RE2	S	EPA 6020B	04/12/21 10:55	04/16/21 09:12	0.503g/50mL	0.5g/50mL	0.99
A1D0469-76	S	EPA 6020B	04/12/21 11:00	04/16/21 09:12	0.481g/50mL	0.5g/50mL	1.04
A1D0469-76RE2	S	EPA 6020B	04/12/21 11:00	04/16/21 09:12	0.481g/50mL	0.5g/50mL	1.04
A1D0469-77	S	EPA 6020B	04/12/21 11:05	04/16/21 09:12	0.469g/50mL	0.5g/50mL	1.07
A1D0469-77RE2	S	EPA 6020B	04/12/21 11:05	04/16/21 09:12	0.469g/50mL	0.5g/50mL	1.07
A1D0469-78	S	EPA 6020B	04/12/21 11:10	04/16/21 09:12	0.496g/50mL	0.5g/50mL	1.01
A1D0469-78RE2	S	EPA 6020B	04/12/21 11:10	04/16/21 09:12	0.496g/50mL	0.5g/50mL	1.01
A1D0469-79	S	EPA 6020B	04/12/21 11:15	04/16/21 09:12	0.464g/50mL	0.5g/50mL	1.08
A1D0469-79RE2	S	EPA 6020B	04/12/21 11:15	04/16/21 09:12	0.464g/50mL	0.5g/50mL	1.08

Apex Laboratories

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ANALYTICAL REPORT

AMENDED REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
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QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- A-01** Results reported with high bias Internal standards failures due to matrix.
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- Q-16** Reanalysis of an original Batch QC sample.
- R-04** Reporting levels elevated due to preparation and/or analytical dilution necessary for analysis.

Apex Laboratories

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as "dry", "wet", or "" (blank) designation.
- "dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- "wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- "" Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to 1/2 the Reporting Limit (RL).
-For Blank hits falling between 1/2 the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

Apex Laboratories

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

AMENDED REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Table with 3 columns: Client (Anchor QEA, LLC), Project (Grumman Road), and Report ID (A1D0469 - 05 14 21 0842)

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

Signature of Darwin Thomas

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ANALYTICAL REPORT

AMENDED REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
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LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) -
EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation
<u>All reported analytes are included in Apex Laboratories' current ORELAP scope.</u>					

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

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ANALYTICAL REPORT

AMENDED REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: **Grumman Road**

Project Number: **201114-05.01**

Project Manager: **Dimitri Vlassopoulos**

Report ID:

A1D0469 - 05 14 21 0842

APEX LABS

6700 SW Sandburg St, Tigard, OR 97223 Ph: 503-718-2323

Company: Anchor QEA

Address: 6720 S Macadam Ave., Suite 125

Sampled by: Modi Raduma

CHAIN OF CUSTODY

Project Mgr: Dimitri Vlassopoulos

Project Name: Grumman

Phone: 503-924-6186

Project # 201114-05.01

Email: adalton@anchorqea.com; mraduma@anchorqea.com

Lab # A1D0469

ANALYSIS REQUEST

Total metals As, Pb, Mo

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS
GR-SSE-F1-1	4/6/2021	10:00	W	1
GR-SSE-F1-2	4/6/2021	10:05	W	1
GR-SSE-F1-3	4/6/2021	10:10	W	1
GR-SSE-F1-4	4/6/2021	10:15	W	1
GR-SSE-F1-5	4/6/2021	10:20	W	1
GR-SSE-F1-6	4/6/2021	10:25	W	1
GR-SSE-F1-7	4/6/2021	10:30	W	1
GR-SSE-F1-8	4/6/2021	10:35	W	1
GR-SSE-F1-9	4/6/2021	10:40	W	1
GR-SSE-F1-10	4/6/2021	10:45	W	1

Normal Turn Around Time (TAT) - 7-10 Business Days

TAT Requested (circle): 5 DAY 24 HR 4 DAY 72 HR Other: _____

SPECIAL INSTRUCTIONS:

Samples 0.45 um filtered.

All FA gradation - 16M Nitric Acid.

RELINQUISHED BY: Modi Raduma

Signature: [Signature]

Printed Name: Modi Raduma

Company: Anchor QEA

RECEIVED BY: [Signature]

Signature: [Signature]

Printed Name: Anchor QEA

Company: Anchor QEA

RELINQUISHED BY: [Signature]

Signature: [Signature]

Printed Name: Modi Raduma

Company: Anchor QEA

RECEIVED BY: [Signature]

Signature: [Signature]

Printed Name: Anchor QEA

Company: Anchor QEA

RELINQUISHED BY: [Signature]

Signature: [Signature]

Printed Name: Modi Raduma

Company: Anchor QEA

RECEIVED BY: [Signature]

Signature: [Signature]

Printed Name: Anchor QEA

Company: Anchor QEA

Apex Laboratories

[Signature]

Darwin Thomas, Business Development Director

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ANALYTICAL REPORT

AMENDED REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
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APEX LABS

CHAIN OF CUSTODY

Lab # A1D0469 of 8

6700 SW Sandburg St, Tigard, OR 97223 Ph: 503-718-2323

Project Name: Grumman		Project #			
Phone:		Email:			
Address: 6720 S Macadam Ave., Suite 125		Fax:			
ANALYSIS REQUEST					
SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	Total metals As, Fe, Mo
GR-SSE-F1-11	4/6/2021	10:50	W	1	✓
GR-SSE-F1-12	4/6/2021	10:55	W	1	✓
GR-SSE-F1-13	4/6/2021	11:00	W	1	✓
GR-SSE-F1-14	4/6/2021	11:05	W	1	✓
GR-SSE-F1-15	4/6/2021	11:10	W	1	✓
GR-SSE-F1-16	4/6/2021	11:15	W	1	✓
GR-SSE-F2-1	4/7/2021	10:00	W	1	✓
GR-SSE-F2-2	4/8/2021	10:05	W	1	✓
GR-SSE-F2-3	4/9/2021	10:10	W	1	✓
GR-SSE-F2-4	4/10/2021	10:15	W	1	✓

Normal Turn Around Time (TAT) = 7-10 Business Days

TAT Requested (circle): 48 HR 24 HR 72 HR Other: _____

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY: Signature: <i>[Signature]</i>	RECEIVED BY: Signature: <i>[Signature]</i>
Date: 4/12/2021	Date: 4/16/21
Printed Name: Madi Rodume	Printed Name: E.J. Joyner
Time: 1300	Time: 1514
Company: Anchor QEA	Company: APEX LABS

Apex Laboratories

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

AMENDED REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: **Grumman Road**

Project Number: **201114-05.01**

Project Manager: **Dimitri Vlassopoulos**

Report ID:

A1D0469 - 05 14 21 0842

CHAIN OF CUSTODY

Lab # **A1D0469** of **8**

APEX LABS 6700 SW Sandburg St. Tigard, OR 97223. Ph: 503-718-2323 Company: Anchor QEA			Project Mgr: _____ Project Name: Grumman Project #: _____ Email: _____ Phone: _____ Fax: _____		
ANALYSIS REQUEST					
SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	Total metals As, Fe, Mo
GR-SSE-F2-5	4/7/2021	10:20	W	1	✓
GR-SSE-F2-6	4/7/2021	10:25	W	1	✓
GR-SSE-F2-7	4/7/2021	10:30	W	1	✓
GR-SSE-F2-8	4/7/2021	10:35	W	1	✓
GR-SSE-F2-9	4/7/2021	10:40	W	1	✓
GR-SSE-F2-10	4/7/2021	10:45	W	1	✓
GR-SSE-F2-11	4/7/2021	10:50	W	1	✓
GR-SSE-F2-12	4/7/2021	10:55	W	1	✓
GR-SSE-F2-13	4/7/2021	11:00	W	1	✓
GR-SSE-F2-14	4/7/2021	11:05	W	1	✓

Normal Turn Around Time (TAT) - 7-10 Business Days

TAT Requested (circle): 34 HR 4 DAY 5 DAY (circled) 72 HR Other: _____	SPECIAL INSTRUCTIONS: 	RECEIVED BY: Signature: [Signature] Date: 4/12/2021 Printed Name: Eli Dymek Time: 1514 Company: APEX LABS
RECEIVED BY: Signature: [Signature] Date: 4/12/2021 Printed Name: Madi Raduma Time: 1300 Company: Anchor QEA	RELINQUISHED BY: Signature: _____ Date: _____ Printed Name: _____ Time: _____ Company: _____	RECEIVED BY: Signature: _____ Date: _____ Printed Name: _____ Time: _____ Company: _____

SAMPLES ARE HELD FOR 30 DAYS

Apex Laboratories

Darwin Thomas, Business Development Director

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ANALYTICAL REPORT

AMENDED REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC Project: **Grumman Road**
6720 SW Macadam Ave. Suite 125 Project Number: **201114-05.01**
Portland, OR 97219 Project Manager: **Dimitri Vlassopoulos** **Report ID:**
A1D0469 - 05 14 21 0842

CHAIN OF CUSTODY

Lab # A1D0469 of 8

APEX LABS 6700 SW Sandburg St, Tigard, OR 97223 Ph: 503-718-2323
Company: Anchor QEA

Project Name: Grumman Project #
Project Mgr: Email:
Phone: Fax:
Address: 6720 S Macadam Ave., Suite 125

Sampled by: ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	Total metals As, Pb, Mo
GR-SSE-F2-15	4/7/2021	11:10	W	1	✓
GR-SSE-F2-16	4/7/2021	11:15	W	1	✓
GR-SSE-F3-1	4/8/2021	10:00	W	1	✓
GR-SSE-F3-2	4/8/2021	10:05	W	1	✓
GR-SSE-F3-3	4/8/2021	10:10	W	1	✓
GR-SSE-F3-4	4/8/2021	10:15	W	1	✓
GR-SSE-F3-5	4/8/2021	10:20	W	1	✓
GR-SSE-F3-6	4/8/2021	10:25	W	1	✓
GR-SSE-F3-7	4/8/2021	10:30	W	1	✓
GR-SSE-F3-8	4/8/2021	10:35	W	1	✓

Normal Turn Around Time (TAT) - 7-10 Business Days

TAT Requested (circle): 5 DAY 72 HR Other: _____

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY: Signature: <i>[Signature]</i> Printed Name: <u>Max Raduno</u> Company: <u>Anchor QEA</u>	RECEIVED BY: Signature: <i>[Signature]</i> Printed Name: <u>ELI DOME</u> Company: <u>APEX LABS</u>
Date: <u>4/12/21</u> Time: <u>1300</u>	Date: <u>4/12/21</u> Time: <u>1514</u>

SPECIAL INSTRUCTIONS:

Apex Laboratories

[Signature]

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ANALYTICAL REPORT

AMENDED REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
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APEX LABS

6700 SW Sandburg St, Tigard, OR 97223 Ph: 503-718-2323

Company: Anchor QEA
Address: 6720 S Macadam Ave., Suite 125

CHAIN OF CUSTODY

Lab # A1D0469
cor-5 of 8

Project Mgr:	Project Name: Grumman	Project #	Phone:	Fac:	Email:
ANALYSIS REQUEST					
Sampled by:	DATE	TIME	MATRIX	# OF CONTAINERS	Total metals As, Fe, Mo
GR-SSE-F3-9	4/8/2021	10:40	W 1	1	✓
GR-SSE-F3-10	4/8/2021	10:45	W 1	1	✓
GR-SSE-F3-11	4/8/2021	10:50	W 1	1	✓
GR-SSE-F3-12	4/8/2021	10:55	W 1	1	✓
GR-SSE-F3-13	4/8/2021	11:00	W 1	1	✓
GR-SSE-F3-14	4/8/2021	11:05	W 1	1	✓
GR-SSE-F3-15	4/8/2021	11:10	W 1	1	✓
GR-SSE-F3-16	4/8/2021	11:15	W 1	1	✓
GR-SSE-F4-1	4/9/2021	10:00	W 1	1	✓
GR-SSE-F4-2	4/9/2021	10:05	W 1	1	✓

TAT Requested (circle) 24 HR 4 DAY 48 HR 5 DAY 72 HR Other: _____

Normal Turn Around Time (TAT) - 7-10 Business Days

RECEIVED BY: *[Signature]* **DATE:** 4/12/21 **TIME:** 1300

PRINTED NAME: Modi Raolums **COMPANY:** Anchor QEA

RECEIVED BY: *[Signature]* **DATE:** 4/16/21 **TIME:** 1514

PRINTED NAME: BU Dyan **COMPANY:** APEX LABS

Apex Laboratories

[Signature]

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ANALYTICAL REPORT

AMENDED REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
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APEX LABS

6700 SW Sandburg St, Tigard, OR 97223 Ph: 503-718-2323
Company: Anchor QEA
Address: 6720 S Macadam Ave., Suite 125

Lab # A1D0469
coc of 8

CHAIN OF CUSTODY

Project Mgr: _____ Phone: _____		Project Name: Grumman _____ Fax: _____		Project # _____ Email: _____	
ANALYSIS REQUEST					
Sampled by: _____	Total meats As, Fe, Mo	# OF CONTAINERS	MATRIX	TIME	DATE
LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	Total meats As, Fe, Mo
SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	Total meats As, Fe, Mo
GR-SSE-F4-3	4/9/2021	10:10	W	1	✓
GR-SSE-F4-4	4/9/2021	10:15	W	1	✓
GR-SSE-F4-5	4/9/2021	10:20	W	1	✓
GR-SSE-F4-6	4/9/2021	10:25	W	1	✓
GR-SSE-F4-7	4/9/2021	10:30	W	1	✓
GR-SSE-F4-8	4/9/2021	10:35	W	1	✓
GR-SSE-F4-9	4/9/2021	10:40	W	1	✓
GR-SSE-F4-10	4/9/2021	10:45	W	1	✓
GR-SSE-F4-11	4/9/2021	10:50	W	1	✓
GR-SSE-F4-12	4/9/2021	10:55	W	1	✓
Normal Turn Around Time (TAT) = 7-10 Business Days					
SPECIAL INSTRUCTIONS:					
TAT Requested (circle) <u>48 HR</u> 24 HR 4 DAY 72 HR Other: _____					
SAMPLES ARE HELD FOR 30 DAYS					
RELINQUISHED BY: _____ Signature: <u>[Signature]</u>	DATE: <u>4/12/21</u>	RELINQUISHED BY: _____ Signature: _____	DATE: <u>4/12/21</u>	RECEIVED BY: _____ Signature: _____	DATE: _____
PRINTED NAME: <u>Modi Raduems</u>	TIME: <u>1300</u>	PRINTED NAME: <u>Eric Jovan</u>	TIME: <u>1514</u>	RECEIVED BY: _____ Signature: _____	DATE: _____
COMPANY: <u>Anchor QEA</u>	COMPANY: <u>APEX LABS</u>	PRINTED NAME: _____	TIME: _____	RECEIVED BY: _____ Signature: _____	DATE: _____

Apex Laboratories

[Signature]

Darwin Thomas, Business Development Director

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ANALYTICAL REPORT

AMENDED REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
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APEX LABS

6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323
Company: Anchor QEA
Address: 6720 S Macadam Ave., Suite 125
Sampled by:

CHAIN OF CUSTODY

Lab # A1D0469 of 8 COC

Project #	Project Name: Grumman		Phone:	Project Mgr:	Fac:	Email:
ANALYSIS REQUEST						
SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	Total metals As, Pb, Mo	
GR-SSE-F4-13	4/9/2021	11:00	W	1	✓	
GR-SSE-F4-14	4/9/2021	11:05	W	1	✓	
GR-SSE-F4-15	4/9/2021	11:10	W	1	✓	
GR-SSE-F4-16	4/9/2021	11:15	W	1	✓	
GR-SSE-F5-1	4/12/2021	10:00	S	1	✓	
GR-SSE-F5-2	4/12/2021	10:05	S	1	✓	
GR-SSE-F5-3	4/12/2021	10:10	S	1	✓	
GR-SSE-F5-4	4/12/2021	10:15	S	1	✓	
GR-SSE-F5-5	4/12/2021	10:20	S	1	✓	
GR-SSE-F5-6	4/12/2021	10:25	S	1	✓	

Normal Turn Around Time (TAT) = 7-10 Business Days

TAT Requested (circle): 48 HR 24 HR 4 DAY 72 HR Other: _____

SAMPLES ARE HELD FOR 30 DAYS

RELEASING BY:	RECEIVED BY:
Signature: <u>[Signature]</u>	Signature: <u>[Signature]</u>
Date: <u>4/12/21</u>	Date: <u>4/16/21</u>
Printed Name: <u>Modi Roduma</u>	Printed Name: <u>[Name]</u>
Time: <u>1300</u>	Time: <u>1514</u>
Company: <u>Anchor QEA</u>	Company: <u>APEX LABS</u>

Apex Laboratories

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ANALYTICAL REPORT
AMENDED REPORT

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Grumman Road Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
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CHAIN OF CUSTODY <i>Lab # A1D0469</i> <i>3 of 8</i>		Project # _____ Project Name: Grumman Project Mgr: _____ Phone: _____ Email: _____		<table border="1"> <thead> <tr> <th colspan="6">ANALYSIS REQUEST</th> </tr> <tr> <th>SAMPLE ID</th> <th>DATE</th> <th>TIME</th> <th>MATRIX</th> <th># OF CONTAINERS</th> <th>Total metals As, Fe, Mo</th> </tr> </thead> <tbody> <tr><td>GR-SSE-F5-7</td><td>4/12/2021</td><td>10:30</td><td>S</td><td>1</td><td>✓</td></tr> <tr><td>GR-SSE-F5-8</td><td>4/13/2021</td><td>10:35</td><td>S</td><td>1</td><td>✓</td></tr> <tr><td>GR-SSE-F5-9</td><td>4/14/2021</td><td>10:40</td><td>S</td><td>1</td><td>✓</td></tr> <tr><td>GR-SSE-F5-10</td><td>4/15/2021</td><td>10:45</td><td>S</td><td>1</td><td>✓</td></tr> <tr><td>GR-SSE-F5-11</td><td>4/16/2021</td><td>10:50</td><td>S</td><td>1</td><td>✓</td></tr> <tr><td>GR-SSE-F5-12</td><td>4/17/2021</td><td>10:55</td><td>S</td><td>1</td><td>✓</td></tr> <tr><td>GR-SSE-F5-13</td><td>4/18/2021</td><td>11:00</td><td>S</td><td>1</td><td>✓</td></tr> <tr><td>GR-SSE-F5-14</td><td>4/19/2021</td><td>11:05</td><td>S</td><td>1</td><td>✓</td></tr> <tr><td>GR-SSE-F5-15</td><td>4/12/2021</td><td>11:10</td><td>S</td><td>1</td><td>✓</td></tr> <tr><td>GR-SSE-F5-16</td><td>4/13/2021</td><td>11:15</td><td>S</td><td>1</td><td>✓</td></tr> </tbody> </table>				ANALYSIS REQUEST						SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	Total metals As, Fe, Mo	GR-SSE-F5-7	4/12/2021	10:30	S	1	✓	GR-SSE-F5-8	4/13/2021	10:35	S	1	✓	GR-SSE-F5-9	4/14/2021	10:40	S	1	✓	GR-SSE-F5-10	4/15/2021	10:45	S	1	✓	GR-SSE-F5-11	4/16/2021	10:50	S	1	✓	GR-SSE-F5-12	4/17/2021	10:55	S	1	✓	GR-SSE-F5-13	4/18/2021	11:00	S	1	✓	GR-SSE-F5-14	4/19/2021	11:05	S	1	✓	GR-SSE-F5-15	4/12/2021	11:10	S	1	✓	GR-SSE-F5-16	4/13/2021	11:15	S	1	✓
ANALYSIS REQUEST																																																																															
SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	Total metals As, Fe, Mo																																																																										
GR-SSE-F5-7	4/12/2021	10:30	S	1	✓																																																																										
GR-SSE-F5-8	4/13/2021	10:35	S	1	✓																																																																										
GR-SSE-F5-9	4/14/2021	10:40	S	1	✓																																																																										
GR-SSE-F5-10	4/15/2021	10:45	S	1	✓																																																																										
GR-SSE-F5-11	4/16/2021	10:50	S	1	✓																																																																										
GR-SSE-F5-12	4/17/2021	10:55	S	1	✓																																																																										
GR-SSE-F5-13	4/18/2021	11:00	S	1	✓																																																																										
GR-SSE-F5-14	4/19/2021	11:05	S	1	✓																																																																										
GR-SSE-F5-15	4/12/2021	11:10	S	1	✓																																																																										
GR-SSE-F5-16	4/13/2021	11:15	S	1	✓																																																																										
Company: Anchor QEA Address: 6720 S Macadam Ave., Suite 125 Site Location: OR WA Other:		TAT Requested (circle) 24 HR 4 DAY 48 HR (5 DAY) 72 HR Other: _____		SPECIAL INSTRUCTIONS: <table border="1"> <tr> <td>RELINQUISHED BY: Signature: <i>Modi Radoms</i> Date: <i>4/12/2021</i></td> <td>RECEIVED BY: Signature: <i>[Signature]</i> Date: <i>4/12/21</i></td> </tr> <tr> <td>Printed Name: <i>Modi Radoms</i></td> <td>Date: <i>4/12/21</i></td> </tr> <tr> <td>Time: <i>1300</i></td> <td>Time: <i>1514</i></td> </tr> <tr> <td>Company: <i>Anchor QEA</i></td> <td>Company: <i>APEX LABS</i></td> </tr> </table>				RELINQUISHED BY: Signature: <i>Modi Radoms</i> Date: <i>4/12/2021</i>	RECEIVED BY: Signature: <i>[Signature]</i> Date: <i>4/12/21</i>	Printed Name: <i>Modi Radoms</i>	Date: <i>4/12/21</i>	Time: <i>1300</i>	Time: <i>1514</i>	Company: <i>Anchor QEA</i>	Company: <i>APEX LABS</i>																																																																
RELINQUISHED BY: Signature: <i>Modi Radoms</i> Date: <i>4/12/2021</i>	RECEIVED BY: Signature: <i>[Signature]</i> Date: <i>4/12/21</i>																																																																														
Printed Name: <i>Modi Radoms</i>	Date: <i>4/12/21</i>																																																																														
Time: <i>1300</i>	Time: <i>1514</i>																																																																														
Company: <i>Anchor QEA</i>	Company: <i>APEX LABS</i>																																																																														

Apex Laboratories

Darwin Thomas

Darwin Thomas, Business Development Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

ANALYTICAL REPORT

AMENDED REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

<u>Anchor QEA, LLC</u> 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: <u>Grumman Road</u> Project Number: 201114-05.01 Project Manager: Dimitri Vlassopoulos	Report ID: A1D0469 - 05 14 21 0842
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WO# A1D0469	
COC/Container Discrepancies	
COC Reads	Container Reads/Comments
D on GR-SSE-F2-2 4/8/21	4/7/21
D on GR-SSE-F2-3 4/9/21	4/7/21
D on GR-SSE-F2-4 4/10/21	4/7/21
D on GR-SSE-F5-9 4/14/21	4/12/21
D on GR-SSE-F5-11 4/16/21	4/12/21
D on GR-SSE-F5-12 4/17/21	4/12/21
D on GR-SSE-F5-13 4/18/21	4/12/21
D on GR-SSE-F5-14 4/19/21	4/12/21
D on GR-SSE-F5-16 4/13/21	4/12/21

Apex Laboratories

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ANALYTICAL REPORT

AMENDED REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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APEX LABS COOLER RECEIPT FORM

Client: Anchor QEA Element WO#: A1D0469

Project/Project #: Grumman 201114-05.01

Delivery Info:
Date/time received: 4/2/21 @ 1514 By: EJ
Delivered by: Apex Client ESS FedEx UPS Swift Servoy SDS Other

Cooler Inspection Date/time inspected: 4/2/21 @ 1635 By: EJ

Chain of Custody included? Yes No Custody seals? Yes No

Signed/dated by client? Yes No

Signed/dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>1.2</u>	<u>2.9</u>					
Received on ice? (Y/N)	<u>Y</u>	<u>Y</u>					
Temp. blanks? (Y/N)	<u>Y</u>	<u>Y</u>					
Ice type: (Gel/Real/Other)	<u>Real</u>	<u>Real</u>					
Condition:	<u>Good</u>	<u>Good</u>					

Cooler out of temp? (Y/N) Possible reason why: _____

Green dots applied to out of temperature samples? Yes No

Out of temperature samples form initiated? Yes No

Sample Inspection: Date/time inspected: 4/2/21 @ 14:50 By: WJ

All samples intact? Yes No Comments: _____

Bottle labels/COCs agree? Yes No Comments: SEE FORM

COC/container discrepancies form initiated? Yes No

Containers/volumes received appropriate for analysis? Yes No Comments: All solids have limited volume

Do VOA vials have visible headspace? Yes No NA

Comments: _____

Water samples: pH checked: Yes No NA pH appropriate? Yes No NA

Comments: _____

Additional information:

Labeled by: [Signature] Witness: [Signature] Cooler Inspected by: [Signature]

Apex Laboratories

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Darwin Thomas

Darwin Thomas, Business Development Director



March 29, 2021

Service Request No:K2102923

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Grumman Road Landfill ACM

Dear Masa,

Enclosed are the results of the sample(s) submitted to our laboratory March 24, 2021
For your reference, these analyses have been assigned our service request number **K2102923**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water

Service Request: K2102923
Date Received: 03/24/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Eighteen water samples were received for analysis at ALS Environmental on 03/24/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Noel D. O'Connell

Approved by _____

Date 03/29/2021



SAMPLE DETECTION SUMMARY

CLIENT ID: GR-COL-INF-1 **Lab ID: K2102923-001**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	172		5	21	ug/L	6010C
Boron, Dissolved	724		3	21	ug/L	6010C
Molybdenum, Dissolved	120		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-1-1 **Lab ID: K2102923-002**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	14	J	5	21	ug/L	6010C
Boron, Dissolved	668		3	21	ug/L	6010C
Molybdenum, Dissolved	53.4		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-2-1 **Lab ID: K2102923-003**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	26		5	21	ug/L	6010C
Boron, Dissolved	749		3	21	ug/L	6010C
Molybdenum, Dissolved	82.7		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-3-1 **Lab ID: K2102923-004**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	45		5	21	ug/L	6010C
Boron, Dissolved	948		3	21	ug/L	6010C
Molybdenum, Dissolved	128		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-4-1 **Lab ID: K2102923-005**

Analyte	Results	Flag	MDL	MRL	Units	Method
Boron, Dissolved	709		3	21	ug/L	6010C
Molybdenum, Dissolved	20.3		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-5-1 **Lab ID: K2102923-006**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	51		5	21	ug/L	6010C
Boron, Dissolved	779		3	21	ug/L	6010C
Molybdenum, Dissolved	181		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-6-1 **Lab ID: K2102923-007**

Analyte	Results	Flag	MDL	MRL	Units	Method
Boron, Dissolved	707		3	21	ug/L	6010C
Molybdenum, Dissolved	44.0		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-7-1 **Lab ID: K2102923-008**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	64		5	21	ug/L	6010C
Boron, Dissolved	770		3	21	ug/L	6010C
Molybdenum, Dissolved	121		2.1	8.4	ug/L	6010C



SAMPLE DETECTION SUMMARY

CLIENT ID: GR-COL-8-1 **Lab ID: K2102923-009**

Analyte	Results	Flag	MDL	MRL	Units	Method
Boron, Dissolved	697		3	21	ug/L	6010C
Molybdenum, Dissolved	7.0	J	2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-INF-5 **Lab ID: K2102923-010**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	162		5	21	ug/L	6010C
Boron, Dissolved	730		3	21	ug/L	6010C
Molybdenum, Dissolved	119		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-1-5 **Lab ID: K2102923-011**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	21		5	21	ug/L	6010C
Boron, Dissolved	687		3	21	ug/L	6010C
Molybdenum, Dissolved	104		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-2-5 **Lab ID: K2102923-012**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	30		5	21	ug/L	6010C
Boron, Dissolved	746		3	21	ug/L	6010C
Molybdenum, Dissolved	102		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-3-5 **Lab ID: K2102923-013**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	32		5	21	ug/L	6010C
Boron, Dissolved	779		3	21	ug/L	6010C
Molybdenum, Dissolved	136		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-4-5 **Lab ID: K2102923-014**

Analyte	Results	Flag	MDL	MRL	Units	Method
Boron, Dissolved	740		3	21	ug/L	6010C
Molybdenum, Dissolved	59.6		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-5-5 **Lab ID: K2102923-015**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	39		5	21	ug/L	6010C
Boron, Dissolved	750		3	21	ug/L	6010C
Molybdenum, Dissolved	162		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-6-5 **Lab ID: K2102923-016**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	12	J	5	21	ug/L	6010C
Boron, Dissolved	741		3	21	ug/L	6010C
Molybdenum, Dissolved	103		2.1	8.4	ug/L	6010C

SAMPLE DETECTION SUMMARY

CLIENT ID: GR-COL-7-5 **Lab ID: K2102923-017**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	41		5	21	ug/L	6010C
Boron, Dissolved	749		3	21	ug/L	6010C
Molybdenum, Dissolved	120		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-8-5 **Lab ID: K2102923-018**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	15	J	5	21	ug/L	6010C
Boron, Dissolved	725		3	21	ug/L	6010C
Molybdenum, Dissolved	58.5		2.1	8.4	ug/L	6010C



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM


Service Request:K2102923

SAMPLE CROSS-REFERENCE

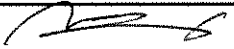
<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2102923-001	GR-COL-INF-1	3/22/2021	0730
K2102923-002	GR-COL-1-1	3/22/2021	0730
K2102923-003	GR-COL-2-1	3/22/2021	0730
K2102923-004	GR-COL-3-1	3/22/2021	0730
K2102923-005	GR-COL-4-1	3/22/2021	0730
K2102923-006	GR-COL-5-1	3/22/2021	0730
K2102923-007	GR-COL-6-1	3/22/2021	0730
K2102923-008	GR-COL-7-1	3/22/2021	0730
K2102923-009	GR-COL-8-1	3/22/2021	0730
K2102923-010	GR-COL-INF-5	3/23/2021	1000
K2102923-011	GR-COL-1-5	3/23/2021	1000
K2102923-012	GR-COL-2-5	3/23/2021	1000
K2102923-013	GR-COL-3-5	3/23/2021	1000
K2102923-014	GR-COL-4-5	3/23/2021	1000
K2102923-015	GR-COL-5-5	3/23/2021	1000
K2102923-016	GR-COL-6-5	3/23/2021	1000
K2102923-017	GR-COL-7-5	3/23/2021	1000
K2102923-018	GR-COL-8-5	3/23/2021	1000

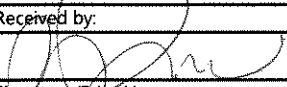
VZ102923

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: 503-972-5019					Parameters															 Jessica Goin 6720 SW Macadam Ave Suite 125 Portland OR 97219			
Date:	3/23/2021				No. of Containers Arsenic, Molybdenum, Boron (dissolved)																		
Project Name:	Grumman Road Landfill ACM																						
Project Number:	201114-05.01 Task 01																						
Project Manager:	Masa Kanematsu																						
Phone Number:	503-972-5001 (Masa Kanematsu)																						
Shipment Method:	Fedex Overnight																						
Line	Field Sample ID	Collection		Matrix	No. of Containers Arsenic, Molybdenum, Boron (dissolved)																Comments/Preservation		
		Date	Time																				
1	GR-COL-INF-5	3/23/2021	10:00	Water		1	X																HNO ₃ preserved, filtered
2	GR-COL-1-5	3/23/2021	10:00	Water		1	X																HNO ₃ preserved, filtered
3	GR-COL-2-5	3/23/2021	10:00	Water		1	X																HNO ₃ preserved, filtered
4	GR-COL-3-5	3/23/2021	10:00	Water		1	X																HNO ₃ preserved, filtered
5	GR-COL-4-5	3/23/2021	10:00	Water		1	X																HNO ₃ preserved, filtered
6	GR-COL-5-5	3/23/2021	10:00	Water		1	X																HNO ₃ preserved, filtered
7	GR-COL-6-5	3/23/2021	10:00	Water		1	X																HNO ₃ preserved, filtered
8	GR-COL-7-5	3/23/2021	10:00	Water		1	X																HNO ₃ preserved, filtered
9	GR-COL-8-5	3/23/2021	10:00	Water		1	X																HNO ₃ preserved, filtered
10																							
11																							
12																							
13																							
14																							
15																							

Notes: Please analyze all analytes with 3 day TAT. Estimated concentrations As: < 300 ug/L, Mo: < 150 ug/L, B: < 1 mg/L

Relinquished by:	Company:
Masa Kanematsu	Anchor QEA
Signature/Print Name:	Date/Time:
	3/23/2020 16:00

Received by:	Company:
	Anchor QEA
Signature/Print Name:	Date/Time:
BRICKMAN	3/24/21 10:30

Relinquished by:	Company:
Signature/Print Name:	Date/Time:

Received by:	Company:
Signature/Print Name:	Date/Time:

Distribution: A copy will be made for the laboratory and client. The Project file will retain the original.

PM MH

Cooler Receipt and Preservation Form

Client Anchor OEA Service Request K21 029123
Received: 3/24/21 Opened: 3/24/21 By: BR Unloaded: 3/24/21 By: BR

- 1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
 - 2. Samples were received in: (circle) Cooler Box Envelope Other NA
 - 3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
If present, were custody seals intact? Y N If present, were they signed and dated? Y N
 - 4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 - 5. Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N
- If applicable, tissue samples were received: Frozen Partially Thawed Thawed

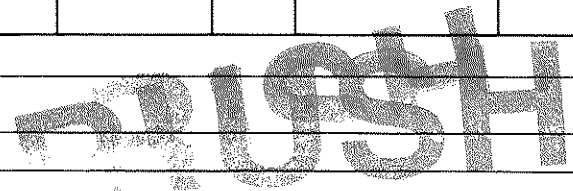
Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp Indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
<u>3.5</u>	<u>-</u>	<u>1201</u>		<u>→</u>		<u>773249102354</u>	

- 6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves _____
- 7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- 8. Were samples received in good condition (unbroken) NA Y N
- 9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- 10. Did all sample labels and tags agree with custody papers? NA Y N
- 11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- 13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
- 14. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____





Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

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Analyst Summary report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/

Service Request: K2102923

Sample Name: GR-COL-INF-1
Lab Code: K2102923-001
Sample Matrix: Water

Date Collected: 03/22/21
Date Received: 03/24/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
AMCKORNEY

Sample Name: GR-COL-1-1
Lab Code: K2102923-002
Sample Matrix: Water

Date Collected: 03/22/21
Date Received: 03/24/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
AMCKORNEY

Sample Name: GR-COL-2-1
Lab Code: K2102923-003
Sample Matrix: Water

Date Collected: 03/22/21
Date Received: 03/24/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
AMCKORNEY

Sample Name: GR-COL-3-1
Lab Code: K2102923-004
Sample Matrix: Water

Date Collected: 03/22/21
Date Received: 03/24/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
AMCKORNEY

Sample Name: GR-COL-4-1
Lab Code: K2102923-005
Sample Matrix: Water

Date Collected: 03/22/21
Date Received: 03/24/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
AMCKORNEY

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/

Service Request: K2102923

Sample Name: GR-COL-5-1
Lab Code: K2102923-006
Sample Matrix: Water

Date Collected: 03/22/21
Date Received: 03/24/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
AMCKORNEY

Sample Name: GR-COL-6-1
Lab Code: K2102923-007
Sample Matrix: Water

Date Collected: 03/22/21
Date Received: 03/24/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
AMCKORNEY

Sample Name: GR-COL-7-1
Lab Code: K2102923-008
Sample Matrix: Water

Date Collected: 03/22/21
Date Received: 03/24/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
AMCKORNEY

Sample Name: GR-COL-8-1
Lab Code: K2102923-009
Sample Matrix: Water

Date Collected: 03/22/21
Date Received: 03/24/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
AMCKORNEY

Sample Name: GR-COL-INF-5
Lab Code: K2102923-010
Sample Matrix: Water

Date Collected: 03/23/21
Date Received: 03/24/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
AMCKORNEY

ALS Group USA, Corp.
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Analyst Summary report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/

Service Request: K2102923

Sample Name: GR-COL-1-5
Lab Code: K2102923-011
Sample Matrix: Water

Date Collected: 03/23/21
Date Received: 03/24/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
AMCKORNEY

Sample Name: GR-COL-2-5
Lab Code: K2102923-012
Sample Matrix: Water

Date Collected: 03/23/21
Date Received: 03/24/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
AMCKORNEY

Sample Name: GR-COL-3-5
Lab Code: K2102923-013
Sample Matrix: Water

Date Collected: 03/23/21
Date Received: 03/24/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
AMCKORNEY

Sample Name: GR-COL-4-5
Lab Code: K2102923-014
Sample Matrix: Water

Date Collected: 03/3/21
Date Received: 03/24/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
AMCKORNEY

Sample Name: GR-COL-5-5
Lab Code: K2102923-015
Sample Matrix: Water

Date Collected: 03/23/21
Date Received: 03/24/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
AMCKORNEY

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Analyst Summary report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/

Service Request: K2102923

Sample Name: GR-COL-6-5
Lab Code: K2102923-016
Sample Matrix: Water

Date Collected: 03/23/21
Date Received: 03/24/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
AMCKORNEY

Sample Name: GR-COL-7-5
Lab Code: K2102923-017
Sample Matrix: Water

Date Collected: 03/23/21
Date Received: 03/24/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
AMCKORNEY

Sample Name: GR-COL-8-5
Lab Code: K2102923-018
Sample Matrix: Water

Date Collected: 03/23/21
Date Received: 03/24/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
AMCKORNEY



Sample Results

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Metals

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water
Sample Name: GR-COL-INF-1
Lab Code: K2102923-001

Service Request: K2102923
Date Collected: 03/22/21 07:30
Date Received: 03/24/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	172	ug/L	21	5	1	03/26/21 13:25	03/25/21	
Boron	6010C	724	ug/L	21	3	1	03/26/21 13:25	03/25/21	
Molybdenum	6010C	120	ug/L	8.4	2.1	1	03/26/21 13:25	03/25/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water
Sample Name: GR-COL-1-1
Lab Code: K2102923-002

Service Request: K2102923
Date Collected: 03/22/21 07:30
Date Received: 03/24/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	14 J	ug/L	21	5	1	03/26/21 13:35	03/25/21	
Boron	6010C	668	ug/L	21	3	1	03/26/21 13:35	03/25/21	
Molybdenum	6010C	53.4	ug/L	8.4	2.1	1	03/26/21 13:35	03/25/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water
Sample Name: GR-COL-2-1
Lab Code: K2102923-003

Service Request: K2102923
Date Collected: 03/22/21 07:30
Date Received: 03/24/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	26	ug/L	21	5	1	03/26/21 13:38	03/25/21	
Boron	6010C	749	ug/L	21	3	1	03/26/21 13:38	03/25/21	
Molybdenum	6010C	82.7	ug/L	8.4	2.1	1	03/26/21 13:38	03/25/21	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water
Sample Name: GR-COL-3-1
Lab Code: K2102923-004

Service Request: K2102923
Date Collected: 03/22/21 07:30
Date Received: 03/24/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	45	ug/L	21	5	1	03/26/21 13:41	03/25/21	
Boron	6010C	948	ug/L	21	3	1	03/26/21 13:41	03/25/21	
Molybdenum	6010C	128	ug/L	8.4	2.1	1	03/26/21 13:41	03/25/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water
Sample Name: GR-COL-4-1
Lab Code: K2102923-005

Service Request: K2102923
Date Collected: 03/22/21 07:30
Date Received: 03/24/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND U	ug/L	21	5	1	03/26/21 13:43	03/25/21	
Boron	6010C	709	ug/L	21	3	1	03/26/21 13:43	03/25/21	
Molybdenum	6010C	20.3	ug/L	8.4	2.1	1	03/26/21 13:43	03/25/21	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water
Sample Name: GR-COL-5-1
Lab Code: K2102923-006

Service Request: K2102923
Date Collected: 03/22/21 07:30
Date Received: 03/24/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	51	ug/L	21	5	1	03/26/21 13:54	03/25/21	
Boron	6010C	779	ug/L	21	3	1	03/26/21 13:54	03/25/21	
Molybdenum	6010C	181	ug/L	8.4	2.1	1	03/26/21 13:54	03/25/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water
Sample Name: GR-COL-6-1
Lab Code: K2102923-007

Service Request: K2102923
Date Collected: 03/22/21 07:30
Date Received: 03/24/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND U	ug/L	21	5	1	03/26/21 13:57	03/25/21	
Boron	6010C	707	ug/L	21	3	1	03/26/21 13:57	03/25/21	
Molybdenum	6010C	44.0	ug/L	8.4	2.1	1	03/26/21 13:57	03/25/21	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water
Sample Name: GR-COL-7-1
Lab Code: K2102923-008

Service Request: K2102923
Date Collected: 03/22/21 07:30
Date Received: 03/24/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	64	ug/L	21	5	1	03/26/21 14:00	03/25/21	
Boron	6010C	770	ug/L	21	3	1	03/26/21 14:00	03/25/21	
Molybdenum	6010C	121	ug/L	8.4	2.1	1	03/26/21 14:00	03/25/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water
Sample Name: GR-COL-8-1
Lab Code: K2102923-009

Service Request: K2102923
Date Collected: 03/22/21 07:30
Date Received: 03/24/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND U	ug/L	21	5	1	03/26/21 14:05	03/25/21	
Boron	6010C	697	ug/L	21	3	1	03/26/21 14:05	03/25/21	
Molybdenum	6010C	7.0 J	ug/L	8.4	2.1	1	03/26/21 14:05	03/25/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water
Sample Name: GR-COL-INF-5
Lab Code: K2102923-010

Service Request: K2102923
Date Collected: 03/23/21 10:00
Date Received: 03/24/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	162	ug/L	21	5	1	03/26/21 14:08	03/25/21	
Boron	6010C	730	ug/L	21	3	1	03/26/21 14:08	03/25/21	
Molybdenum	6010C	119	ug/L	8.4	2.1	1	03/26/21 14:08	03/25/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water
Sample Name: GR-COL-1-5
Lab Code: K2102923-011

Service Request: K2102923
Date Collected: 03/23/21 10:00
Date Received: 03/24/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	21	ug/L	21	5	1	03/26/21 14:10	03/25/21	
Boron	6010C	687	ug/L	21	3	1	03/26/21 14:10	03/25/21	
Molybdenum	6010C	104	ug/L	8.4	2.1	1	03/26/21 14:10	03/25/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water
Sample Name: GR-COL-2-5
Lab Code: K2102923-012

Service Request: K2102923
Date Collected: 03/23/21 10:00
Date Received: 03/24/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	30	ug/L	21	5	1	03/26/21 14:13	03/25/21	
Boron	6010C	746	ug/L	21	3	1	03/26/21 14:13	03/25/21	
Molybdenum	6010C	102	ug/L	8.4	2.1	1	03/26/21 14:13	03/25/21	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water
Sample Name: GR-COL-3-5
Lab Code: K2102923-013

Service Request: K2102923
Date Collected: 03/23/21 10:00
Date Received: 03/24/21 10:30

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	32	ug/L	21	5	1	03/26/21 14:16	03/25/21	
Boron	6010C	779	ug/L	21	3	1	03/26/21 14:16	03/25/21	
Molybdenum	6010C	136	ug/L	8.4	2.1	1	03/26/21 14:16	03/25/21	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water
Sample Name: GR-COL-4-5
Lab Code: K2102923-014

Service Request: K2102923
Date Collected: 03/03/21 10:00
Date Received: 03/24/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND U	ug/L	21	5	1	03/26/21 14:19	03/25/21	
Boron	6010C	740	ug/L	21	3	1	03/26/21 14:19	03/25/21	
Molybdenum	6010C	59.6	ug/L	8.4	2.1	1	03/26/21 14:19	03/25/21	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water
Sample Name: GR-COL-5-5
Lab Code: K2102923-015

Service Request: K2102923
Date Collected: 03/23/21 10:00
Date Received: 03/24/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	39	ug/L	21	5	1	03/26/21 14:21	03/25/21	
Boron	6010C	750	ug/L	21	3	1	03/26/21 14:21	03/25/21	
Molybdenum	6010C	162	ug/L	8.4	2.1	1	03/26/21 14:21	03/25/21	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water
Sample Name: GR-COL-6-5
Lab Code: K2102923-016

Service Request: K2102923
Date Collected: 03/23/21 10:00
Date Received: 03/24/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	12 J	ug/L	21	5	1	03/26/21 14:32	03/25/21	
Boron	6010C	741	ug/L	21	3	1	03/26/21 14:32	03/25/21	
Molybdenum	6010C	103	ug/L	8.4	2.1	1	03/26/21 14:32	03/25/21	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water
Sample Name: GR-COL-7-5
Lab Code: K2102923-017

Service Request: K2102923
Date Collected: 03/23/21 10:00
Date Received: 03/24/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	41	ug/L	21	5	1	03/26/21 14:35	03/25/21	
Boron	6010C	749	ug/L	21	3	1	03/26/21 14:35	03/25/21	
Molybdenum	6010C	120	ug/L	8.4	2.1	1	03/26/21 14:35	03/25/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water
Sample Name: GR-COL-8-5
Lab Code: K2102923-018

Service Request: K2102923
Date Collected: 03/23/21 10:00
Date Received: 03/24/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	15 J	ug/L	21	5	1	03/26/21 14:45	03/25/21	
Boron	6010C	725	ug/L	21	3	1	03/26/21 14:45	03/25/21	
Molybdenum	6010C	58.5	ug/L	8.4	2.1	1	03/26/21 14:45	03/25/21	



QC Summary Forms

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2104581-02

Service Request: K2102923
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND U	ug/L	21	5	1	03/26/21 13:20	03/25/21	
Boron	6010C	ND U	ug/L	21	3	1	03/26/21 13:20	03/25/21	
Molybdenum	6010C	ND U	ug/L	8.4	2.1	1	03/26/21 13:20	03/25/21	

ALS Group USA, Corp.
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QA/QC Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water

Service Request: K2102923
Date Collected: 03/22/21
Date Received: 03/24/21
Date Analyzed: 03/26/21
Date Extracted: 03/25/21

Matrix Spike Summary
Dissolved Metals

Sample Name: GR-COL-INF-1
Lab Code: K2102923-001
Analysis Method: 6010C
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2104581-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	172	1150	1000	98	75-125
Boron	724	1220	500	99	75-125
Molybdenum	120	1110	1000	98	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water

Service Request: K2102923
Date Collected: 03/22/21
Date Received: 03/24/21
Date Analyzed: 03/26/21

Replicate Sample Summary

Dissolved Metals

Sample Name: GR-COL-INF-1
Lab Code: K2102923-001

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate	Average	RPD	RPD Limit
					Sample KQ2104581-03 Result			
Arsenic	6010C	21	5	172	160	166	7	20
Boron	6010C	21	3	724	720	722	<1	20
Molybdenum	6010C	8.4	2.1	120	121	121	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water

Service Request: K2102923

Date Analyzed: 03/26/21

Lab Control Sample Summary
Dissolved Metals

Units:ug/L

Basis:NA

Lab Control Sample

KQ2104581-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6010C	2480	2500	99	80-120
Boron	6010C	507	500	101	80-120
Molybdenum	6010C	1010	1000	101	80-120



April 05, 2021

Service Request No:K2103161

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Grumman Road Landfill ACM

Dear Masa,

Enclosed are the results of the sample(s) submitted to our laboratory March 30, 2021
For your reference, these analyses have been assigned our service request number **K2103161**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM
Sample Matrix: Water

Service Request: K2103161
Date Received: 03/30/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Twenty seven water samples were received for analysis at ALS Environmental on 03/30/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Noel D. O'Connell

Approved by _____

Date 04/05/2021



SAMPLE DETECTION SUMMARY

CLIENT ID: GR-COL-INF-9 **Lab ID: K2103161-001**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	159		5	21	ug/L	6010C
Boron, Dissolved	724		3	42	ug/L	6010C
Molybdenum, Dissolved	120		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-1-9 **Lab ID: K2103161-002**

Analyte	Results	Flag	MDL	MRL	Units	Method
Boron, Dissolved	732		3	42	ug/L	6010C
Molybdenum, Dissolved	133		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-2-9 **Lab ID: K2103161-003**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	27		5	21	ug/L	6010C
Boron, Dissolved	765		3	42	ug/L	6010C
Molybdenum, Dissolved	117		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-3-9 **Lab ID: K2103161-004**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	26		5	21	ug/L	6010C
Boron, Dissolved	775		3	42	ug/L	6010C
Molybdenum, Dissolved	128		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-4-9 **Lab ID: K2103161-005**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	16	J	5	21	ug/L	6010C
Boron, Dissolved	765		3	42	ug/L	6010C
Molybdenum, Dissolved	88.1		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-5-9 **Lab ID: K2103161-006**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	23		5	21	ug/L	6010C
Boron, Dissolved	771		3	42	ug/L	6010C
Molybdenum, Dissolved	153		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-6-9 **Lab ID: K2103161-007**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	14	J	5	21	ug/L	6010C
Boron, Dissolved	781		3	42	ug/L	6010C
Molybdenum, Dissolved	114		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-7-9 **Lab ID: K2103161-008**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	24		5	21	ug/L	6010C
Boron, Dissolved	755		3	42	ug/L	6010C
Molybdenum, Dissolved	146		2.1	8.4	ug/L	6010C



SAMPLE DETECTION SUMMARY

CLIENT ID: GR-COL-8-9 **Lab ID: K2103161-009**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	12	J	5	21	ug/L	6010C
Boron, Dissolved	752		3	42	ug/L	6010C
Molybdenum, Dissolved	84.3		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-INF-10 **Lab ID: K2103161-010**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	166		5	21	ug/L	6010C
Boron, Dissolved	745		3	42	ug/L	6010C
Molybdenum, Dissolved	118		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-1-10 **Lab ID: K2103161-011**

Analyte	Results	Flag	MDL	MRL	Units	Method
Boron, Dissolved	713		3	42	ug/L	6010C
Molybdenum, Dissolved	132		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-2-10 **Lab ID: K2103161-012**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	37		5	21	ug/L	6010C
Boron, Dissolved	756		3	42	ug/L	6010C
Molybdenum, Dissolved	118		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-3-10 **Lab ID: K2103161-013**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	22		5	21	ug/L	6010C
Boron, Dissolved	776		3	42	ug/L	6010C
Molybdenum, Dissolved	124		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-4-10 **Lab ID: K2103161-014**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	16	J	5	21	ug/L	6010C
Boron, Dissolved	769		3	42	ug/L	6010C
Molybdenum, Dissolved	94.3		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-5-10 **Lab ID: K2103161-015**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	23		5	21	ug/L	6010C
Boron, Dissolved	773		3	42	ug/L	6010C
Molybdenum, Dissolved	141		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-6-10 **Lab ID: K2103161-016**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	22		5	21	ug/L	6010C
Boron, Dissolved	779		3	42	ug/L	6010C
Molybdenum, Dissolved	116		2.1	8.4	ug/L	6010C



SAMPLE DETECTION SUMMARY

CLIENT ID: GR-COL-7-10 **Lab ID: K2103161-017**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	19	J	5	21	ug/L	6010C
Boron, Dissolved	752		3	42	ug/L	6010C
Molybdenum, Dissolved	143		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-8-10 **Lab ID: K2103161-018**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	9	J	5	21	ug/L	6010C
Boron, Dissolved	777		3	42	ug/L	6010C
Molybdenum, Dissolved	100		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-INF-11 **Lab ID: K2103161-019**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	169		5	21	ug/L	6010C
Boron, Dissolved	747		3	42	ug/L	6010C
Molybdenum, Dissolved	118		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-1-11 **Lab ID: K2103161-020**

Analyte	Results	Flag	MDL	MRL	Units	Method
Boron, Dissolved	712		3	42	ug/L	6010C
Molybdenum, Dissolved	131		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-2-11 **Lab ID: K2103161-021**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	32		5	21	ug/L	6010C
Boron, Dissolved	745		3	42	ug/L	6010C
Molybdenum, Dissolved	118		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-3-11 **Lab ID: K2103161-022**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	23		5	21	ug/L	6010C
Boron, Dissolved	779		3	42	ug/L	6010C
Molybdenum, Dissolved	124		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-4-11 **Lab ID: K2103161-023**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	19	J	5	21	ug/L	6010C
Boron, Dissolved	785		3	42	ug/L	6010C
Molybdenum, Dissolved	103		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-5-11 **Lab ID: K2103161-024**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	16	J	5	21	ug/L	6010C
Boron, Dissolved	768		3	42	ug/L	6010C
Molybdenum, Dissolved	133		2.1	8.4	ug/L	6010C

SAMPLE DETECTION SUMMARY

CLIENT ID: GR-COL-6-11	Lab ID: K2103161-025
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	11	J	5	21	ug/L	6010C
Boron, Dissolved	775		3	42	ug/L	6010C
Molybdenum, Dissolved	113		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-7-11	Lab ID: K2103161-026
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	24		5	21	ug/L	6010C
Boron, Dissolved	756		3	42	ug/L	6010C
Molybdenum, Dissolved	131		2.1	8.4	ug/L	6010C

CLIENT ID: GR-COL-8-11	Lab ID: K2103161-027
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	11	J	5	21	ug/L	6010C
Boron, Dissolved	766		3	42	ug/L	6010C
Molybdenum, Dissolved	97.7		2.1	8.4	ug/L	6010C



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01


Service Request:K2103161

SAMPLE CROSS-REFERENCE

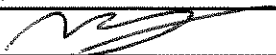
<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2103161-001	GR-COL-INF-9	3/25/2021	1530
K2103161-002	GR-COL-1-9	3/25/2021	1530
K2103161-003	GR-COL-2-9	3/25/2021	1530
K2103161-004	GR-COL-3-9	3/25/2021	1530
K2103161-005	GR-COL-4-9	3/25/2021	1530
K2103161-006	GR-COL-5-9	3/25/2021	1530
K2103161-007	GR-COL-6-9	3/25/2021	1530
K2103161-008	GR-COL-7-9	3/25/2021	1530
K2103161-009	GR-COL-8-9	3/25/2021	1530
K2103161-010	GR-COL-INF-10	3/26/2021	1230
K2103161-011	GR-COL-1-10	3/26/2021	1230
K2103161-012	GR-COL-2-10	3/26/2021	1230
K2103161-013	GR-COL-3-10	3/26/2021	1230
K2103161-014	GR-COL-4-10	3/26/2021	1230
K2103161-015	GR-COL-5-10	3/26/2021	1230
K2103161-016	GR-COL-6-10	3/26/2021	1230
K2103161-017	GR-COL-7-10	3/26/2021	1230
K2103161-018	GR-COL-8-10	3/26/2021	1230
K2103161-019	GR-COL-INF-11	3/28/2021	1535
K2103161-020	GR-COL-1-11	3/28/2021	1535
K2103161-021	GR-COL-2-11	3/28/2021	1535
K2103161-022	GR-COL-3-11	3/28/2021	1535
K2103161-023	GR-COL-4-11	3/28/2021	1535
K2103161-024	GR-COL-5-11	3/28/2021	1535
K2103161-025	GR-COL-6-11	3/28/2021	1535
K2103161-026	GR-COL-7-11	3/28/2021	1535
K2103161-027	GR-COL-8-11	3/28/2021	1535

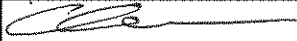
K2103161

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: 503-972-5019					Parameters													 Jessica Goin 6720 SW Macadam Ave Suite 125 Portland OR 97219				
Date:	3/29/2021																					
Project Name:	Grumman Road Landfill ACM																					
Project Number:	201114-05.01 Task 01																					
Project Manager:	Masa Kanematsu																					
Phone Number:	503-972-5001 (Masa Kanematsu)																					
Shipment Method:	Fedex Overnight				No. of Containers Arsenic, Molybdenum, Boron (dissolved)														Comments/Preservation			
Line	Field Sample ID	Collection		Matrix		No.	X															
		Date	Time																			
1	GR-COL-INF-9	3/25/2021	15:30	Water		1	X														HNO ₃ preserved, filtered	
2	GR-COL-1-9	3/25/2021	15:30	Water		1	X														HNO ₃ preserved, filtered	
3	GR-COL-2-9	3/25/2021	15:30	Water		1	X														HNO ₃ preserved, filtered	
4	GR-COL-3-9	3/25/2021	15:30	Water		1	X														HNO ₃ preserved, filtered	
5	GR-COL-4-9	3/25/2021	15:30	Water		1	X														HNO ₃ preserved, filtered	
6	GR-COL-5-9	3/25/2021	15:30	Water		1	X														HNO ₃ preserved, filtered	
7	GR-COL-6-9	3/25/2021	15:30	Water		1	X														HNO ₃ preserved, filtered	
8	GR-COL-7-9	3/25/2021	15:30	Water		1	X														HNO ₃ preserved, filtered	
9	GR-COL-8-9	3/25/2021	15:30	Water		1	X														HNO ₃ preserved, filtered	
10																						
11																						
12																						
13																						
14																						
15																						

Notes: Please analyze all analytes with 3 day TAT. Estimated concentrations As: < 300 ug/L, Mo: < 200 ug/L, B: < 1 mg/L

Relinquished by:	Company:
Masa Kanematsu	Anchor QEA
Signature/Print Name:	Date/Time:
	3/29/2020 16:00

Received by:	Company:
	ALS
Signature/Print Name:	Date/Time:
Cody Graves	3/30/21 0945


Relinquished by:	Company:
Signature/Print Name:	Date/Time:

Received by:	Company:
Signature/Print Name:	Date/Time:


Distribution: A copy will be made for the laboratory and client. The Project file will retain the original.

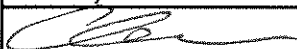
K2103161

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: 503-972-5019					Parameters										 Jessica Goin 6720 SW Macadam Ave Suite 125 Portland OR 97219										
Date:	3/29/2021				No. of Containers Arsenic, Molybdenum, Boron (dissolved)																				
Project Name:	Grumman Road Landfill ACM																								
Project Number:	201114-05.01 Task 01																								
Project Manager:	Masa Kanematsu																								
Phone Number:	503-972-5001 (Masa Kanematsu)																								
Shipment Method:	Fedex Overnight																								
Line	Field Sample ID	Collection		Matrix	No. of Containers	Parameters																	Comments/Preservation		
		Date	Time																						
1	GR-COL-INF-10	3/26/3021	12:30	Water	1	X																		HNO ₃ preserved, filtered	
2	GR-COL-1-10	3/26/3021	12:30	Water	1	X																		HNO ₃ preserved, filtered	
3	GR-COL-2-10	3/26/3021	12:30	Water	1	X																		HNO ₃ preserved, filtered	
4	GR-COL-3-10	3/26/3021	12:30	Water	1	X																		HNO ₃ preserved, filtered	
5	GR-COL-4-10	3/26/3021	12:30	Water	1	X																		HNO ₃ preserved, filtered	
6	GR-COL-5-10	3/26/3021	12:30	Water	1	X																		HNO ₃ preserved, filtered	
7	GR-COL-6-10	3/26/3021	12:30	Water	1	X																		HNO ₃ preserved, filtered	
8	GR-COL-7-10	3/26/3021	12:30	Water	1	X																		HNO ₃ preserved, filtered	
9	GR-COL-8-10	3/26/3021	12:30	Water	1	X																		HNO ₃ preserved, filtered	
10																									
11																									
12																									
13																									
14																									
15																									

Notes: Please analyze all analytes with 3 day TAT. Estimated concentrations As: < 300 ug/L, Mo: < 150 ug/L, B: < 1 mg/L

Relinquished by:	Company:
Masa Kanematsu	Anchor QEA
Signature/Print Name:	Date/Time:
	3/29/2020 16:00


Received by:	Company:
	ALS
Signature/Print Name:	Date/Time:
Cody Graves	3/30/21 0945

Relinquished by:	Company:
Signature/Print Name:	Date/Time:

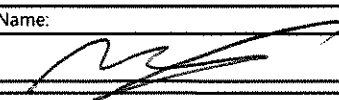
Received by:	Company:
Signature/Print Name:	Date/Time:

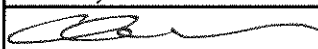
K2103161

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: 503-972-5019					Parameters													 Jessica Goin 6720 SW Macadam Ave Suite 125 Portland OR 97219		
Date:		3/29/2021			No. of Containers Arsenic, Molybdenum, Boron (dissolved)															
Project Name:		Grumman Road Landfill ACM																		
Project Number:		201114-05.01 Task 01																		
Project Manager:		Masa Kanematsu																		
Phone Number:		503-972-5001 (Masa Kanematsu)																		
Shipment Method:		Fedex Overnight																		
Line	Field Sample ID	Collection		Matrix															Comments/Preservation	
		Date	Time																	
1	GR-COL-INF-11	3/28/3021	15:35	Water	1	X														HNO ₃ preserved, filtered
2	GR-COL-1-11	3/28/3021	15:35	Water	1	X														HNO ₃ preserved, filtered
3	GR-COL-2-11	3/28/3021	15:35	Water	1	X														HNO ₃ preserved, filtered
4	GR-COL-3-11	3/28/3021	15:35	Water	1	X														HNO ₃ preserved, filtered
5	GR-COL-4-11	3/28/3021	15:35	Water	1	X														HNO ₃ preserved, filtered
6	GR-COL-5-11	3/28/3021	15:35	Water	1	X														HNO ₃ preserved, filtered
7	GR-COL-6-11	3/28/3021	15:35	Water	1	X														HNO ₃ preserved, filtered
8	GR-COL-7-11	3/28/3021	15:35	Water	1	X														HNO ₃ preserved, filtered
9	GR-COL-8-11	3/28/3021	15:35	Water	1	X														HNO ₃ preserved, filtered
10																				
11																				
12																				
13																				
14																				
15																				

Notes: Please analyze all analytes with 3 day TAT. Estimated concentrations As: < 300 ug/L, Mo: < 150 ug/L, B: < 1 mg/L

Relinquished by:		Company:	
Masa Kanematsu		Anchor QEA	
Signature/Print Name:		Date/Time:	
		3/29/2020 16:00	

Received by:		Company:	
		ALS	
Signature/Print Name:		Date/Time:	
Cody Graves		3/30/21 0945	

Cooler Receipt and Preservation Form

Client Anchor QEA

Service Request K21 03161

Received: 3/30/21 Opened: 3/30/21 By: CG Unloaded: 3/30/21 By: CG

1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
 2. Samples were received in: (circle) Cooler Box Envelope Other _____ NA
 3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
 If present, were custody seals intact? Y N If present, were they signed and dated? Y N
 4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
 If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 5. Were samples received within the method specified temperature ranges? NA Y N
 If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N
- If applicable, tissue samples were received: **Frozen Partially Thawed Thawed**

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp Indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
7.7	/	IR02	/	/	/	7732 9823 6750	

6. Packing material: **Inserts** Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
8. Were samples received in good condition (unbroken) NA Y N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
10. Did all sample labels and tags agree with custody papers? NA Y N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
13. Were VOA vials received without headspace? Indicate in the table below NA Y N
14. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
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Analyst Summary report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01

Service Request: K2103161

Sample Name: GR-COL-INF-9
Lab Code: K2103161-001
Sample Matrix: Water

Date Collected: 03/25/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

Sample Name: GR-COL-1-9
Lab Code: K2103161-002
Sample Matrix: Water

Date Collected: 03/25/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

Sample Name: GR-COL-2-9
Lab Code: K2103161-003
Sample Matrix: Water

Date Collected: 03/25/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

Sample Name: GR-COL-3-9
Lab Code: K2103161-004
Sample Matrix: Water

Date Collected: 03/25/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

Sample Name: GR-COL-4-9
Lab Code: K2103161-005
Sample Matrix: Water

Date Collected: 03/25/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

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Analyst Summary report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01

Service Request: K2103161

Sample Name: GR-COL-5-9
Lab Code: K2103161-006
Sample Matrix: Water

Date Collected: 03/25/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

Sample Name: GR-COL-6-9
Lab Code: K2103161-007
Sample Matrix: Water

Date Collected: 03/25/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

Sample Name: GR-COL-7-9
Lab Code: K2103161-008
Sample Matrix: Water

Date Collected: 03/25/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

Sample Name: GR-COL-8-9
Lab Code: K2103161-009
Sample Matrix: Water

Date Collected: 03/25/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

Sample Name: GR-COL-INF-10
Lab Code: K2103161-010
Sample Matrix: Water

Date Collected: 03/26/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

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dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01

Service Request: K2103161

Sample Name: GR-COL-1-10
Lab Code: K2103161-011
Sample Matrix: Water

Date Collected: 03/26/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

Sample Name: GR-COL-2-10
Lab Code: K2103161-012
Sample Matrix: Water

Date Collected: 03/26/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

Sample Name: GR-COL-3-10
Lab Code: K2103161-013
Sample Matrix: Water

Date Collected: 03/26/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

Sample Name: GR-COL-4-10
Lab Code: K2103161-014
Sample Matrix: Water

Date Collected: 03/26/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

Sample Name: GR-COL-5-10
Lab Code: K2103161-015
Sample Matrix: Water

Date Collected: 03/26/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
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Analyst Summary report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01

Service Request: K2103161

Sample Name: GR-COL-6-10
Lab Code: K2103161-016
Sample Matrix: Water

Date Collected: 03/26/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

Sample Name: GR-COL-7-10
Lab Code: K2103161-017
Sample Matrix: Water

Date Collected: 03/26/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

Sample Name: GR-COL-8-10
Lab Code: K2103161-018
Sample Matrix: Water

Date Collected: 03/26/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

Sample Name: GR-COL-INF-11
Lab Code: K2103161-019
Sample Matrix: Water

Date Collected: 03/28/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

Sample Name: GR-COL-1-11
Lab Code: K2103161-020
Sample Matrix: Water

Date Collected: 03/28/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

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Analyst Summary report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01

Service Request: K2103161

Sample Name: GR-COL-2-11
Lab Code: K2103161-021
Sample Matrix: Water

Date Collected: 03/28/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

Sample Name: GR-COL-3-11
Lab Code: K2103161-022
Sample Matrix: Water

Date Collected: 03/28/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

Sample Name: GR-COL-4-11
Lab Code: K2103161-023
Sample Matrix: Water

Date Collected: 03/28/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

Sample Name: GR-COL-5-11
Lab Code: K2103161-024
Sample Matrix: Water

Date Collected: 03/28/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

Sample Name: GR-COL-6-11
Lab Code: K2103161-025
Sample Matrix: Water

Date Collected: 03/28/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

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Analyst Summary report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01

Service Request: K2103161

Sample Name: GR-COL-7-11
Lab Code: K2103161-026
Sample Matrix: Water

Date Collected: 03/28/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE

Sample Name: GR-COL-8-11
Lab Code: K2103161-027
Sample Matrix: Water

Date Collected: 03/28/21
Date Received: 03/30/21

Analysis Method
6010C

Extracted/Digested By
ABOYER

Analyzed By
RMOORE



Sample Results

ALS Environmental—Kelso Laboratory
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www.alsglobal.com



Metals

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-INF-9
Lab Code: K2103161-001

Service Request: K2103161
Date Collected: 03/25/21 15:30
Date Received: 03/30/21 09:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	159	ug/L	21	5	1	04/02/21 13:39	03/31/21	
Boron	6010C	724	ug/L	42	3	1	04/02/21 13:39	03/31/21	
Molybdenum	6010C	120	ug/L	8.4	2.1	1	04/02/21 13:39	03/31/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-1-9
Lab Code: K2103161-002

Service Request: K2103161
Date Collected: 03/25/21 15:30
Date Received: 03/30/21 09:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND U	ug/L	21	5	1	04/02/21 13:53	03/31/21	
Boron	6010C	732	ug/L	42	3	1	04/02/21 13:53	03/31/21	
Molybdenum	6010C	133	ug/L	8.4	2.1	1	04/02/21 13:53	03/31/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-2-9
Lab Code: K2103161-003

Service Request: K2103161
Date Collected: 03/25/21 15:30
Date Received: 03/30/21 09:45

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	27	ug/L	21	5	1	04/02/21 13:55	03/31/21	
Boron	6010C	765	ug/L	42	3	1	04/02/21 13:55	03/31/21	
Molybdenum	6010C	117	ug/L	8.4	2.1	1	04/02/21 13:55	03/31/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-3-9
Lab Code: K2103161-004

Service Request: K2103161
Date Collected: 03/25/21 15:30
Date Received: 03/30/21 09:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	26	ug/L	21	5	1	04/02/21 13:58	03/31/21	
Boron	6010C	775	ug/L	42	3	1	04/02/21 13:58	03/31/21	
Molybdenum	6010C	128	ug/L	8.4	2.1	1	04/02/21 13:58	03/31/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-4-9
Lab Code: K2103161-005

Service Request: K2103161
Date Collected: 03/25/21 15:30
Date Received: 03/30/21 09:45

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	16 J	ug/L	21	5	1	04/02/21 14:09	03/31/21	
Boron	6010C	765	ug/L	42	3	1	04/02/21 14:09	03/31/21	
Molybdenum	6010C	88.1	ug/L	8.4	2.1	1	04/02/21 14:09	03/31/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-5-9
Lab Code: K2103161-006

Service Request: K2103161
Date Collected: 03/25/21 15:30
Date Received: 03/30/21 09:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	23	ug/L	21	5	1	04/02/21 14:12	03/31/21	
Boron	6010C	771	ug/L	42	3	1	04/02/21 14:12	03/31/21	
Molybdenum	6010C	153	ug/L	8.4	2.1	1	04/02/21 14:12	03/31/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-6-9
Lab Code: K2103161-007

Service Request: K2103161
Date Collected: 03/25/21 15:30
Date Received: 03/30/21 09:45

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	14 J	ug/L	21	5	1	04/02/21 14:14	03/31/21	
Boron	6010C	781	ug/L	42	3	1	04/02/21 14:14	03/31/21	
Molybdenum	6010C	114	ug/L	8.4	2.1	1	04/02/21 14:14	03/31/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-7-9
Lab Code: K2103161-008

Service Request: K2103161
Date Collected: 03/25/21 15:30
Date Received: 03/30/21 09:45

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	24	ug/L	21	5	1	04/02/21 14:17	03/31/21	
Boron	6010C	755	ug/L	42	3	1	04/02/21 14:17	03/31/21	
Molybdenum	6010C	146	ug/L	8.4	2.1	1	04/02/21 14:17	03/31/21	

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dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-8-9
Lab Code: K2103161-009

Service Request: K2103161
Date Collected: 03/25/21 15:30
Date Received: 03/30/21 09:45

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	12 J	ug/L	21	5	1	04/02/21 14:20	03/31/21	
Boron	6010C	752	ug/L	42	3	1	04/02/21 14:20	03/31/21	
Molybdenum	6010C	84.3	ug/L	8.4	2.1	1	04/02/21 14:20	03/31/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-INF-10
Lab Code: K2103161-010

Service Request: K2103161
Date Collected: 03/26/21 12:30
Date Received: 03/30/21 09:45

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	166	ug/L	21	5	1	04/02/21 14:23	03/31/21	
Boron	6010C	745	ug/L	42	3	1	04/02/21 14:23	03/31/21	
Molybdenum	6010C	118	ug/L	8.4	2.1	1	04/02/21 14:23	03/31/21	

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dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-1-10
Lab Code: K2103161-011

Service Request: K2103161
Date Collected: 03/26/21 12:30
Date Received: 03/30/21 09:45

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND U	ug/L	21	5	1	04/02/21 14:25	03/31/21	
Boron	6010C	713	ug/L	42	3	1	04/02/21 14:25	03/31/21	
Molybdenum	6010C	132	ug/L	8.4	2.1	1	04/02/21 14:25	03/31/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-2-10
Lab Code: K2103161-012

Service Request: K2103161
Date Collected: 03/26/21 12:30
Date Received: 03/30/21 09:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	37	ug/L	21	5	1	04/02/21 14:28	03/31/21	
Boron	6010C	756	ug/L	42	3	1	04/02/21 14:28	03/31/21	
Molybdenum	6010C	118	ug/L	8.4	2.1	1	04/02/21 14:28	03/31/21	

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dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-3-10
Lab Code: K2103161-013

Service Request: K2103161
Date Collected: 03/26/21 12:30
Date Received: 03/30/21 09:45

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	22	ug/L	21	5	1	04/02/21 14:31	03/31/21	
Boron	6010C	776	ug/L	42	3	1	04/02/21 14:31	03/31/21	
Molybdenum	6010C	124	ug/L	8.4	2.1	1	04/02/21 14:31	03/31/21	

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dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-4-10
Lab Code: K2103161-014

Service Request: K2103161
Date Collected: 03/26/21 12:30
Date Received: 03/30/21 09:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	16 J	ug/L	21	5	1	04/02/21 14:34	03/31/21	
Boron	6010C	769	ug/L	42	3	1	04/02/21 14:34	03/31/21	
Molybdenum	6010C	94.3	ug/L	8.4	2.1	1	04/02/21 14:34	03/31/21	

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dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-5-10
Lab Code: K2103161-015

Service Request: K2103161
Date Collected: 03/26/21 12:30
Date Received: 03/30/21 09:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	23	ug/L	21	5	1	04/02/21 14:51	03/31/21	
Boron	6010C	773	ug/L	42	3	1	04/02/21 14:51	03/31/21	
Molybdenum	6010C	141	ug/L	8.4	2.1	1	04/02/21 14:51	03/31/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-6-10
Lab Code: K2103161-016

Service Request: K2103161
Date Collected: 03/26/21 12:30
Date Received: 03/30/21 09:45

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	22	ug/L	21	5	1	04/02/21 14:54	03/31/21	
Boron	6010C	779	ug/L	42	3	1	04/02/21 14:54	03/31/21	
Molybdenum	6010C	116	ug/L	8.4	2.1	1	04/02/21 14:54	03/31/21	

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dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-7-10
Lab Code: K2103161-017

Service Request: K2103161
Date Collected: 03/26/21 12:30
Date Received: 03/30/21 09:45

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	19 J	ug/L	21	5	1	04/02/21 14:57	03/31/21	
Boron	6010C	752	ug/L	42	3	1	04/02/21 14:57	03/31/21	
Molybdenum	6010C	143	ug/L	8.4	2.1	1	04/02/21 14:57	03/31/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-8-10
Lab Code: K2103161-018

Service Request: K2103161
Date Collected: 03/26/21 12:30
Date Received: 03/30/21 09:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	9 J	ug/L	21	5	1	04/02/21 14:59	03/31/21	
Boron	6010C	777	ug/L	42	3	1	04/02/21 14:59	03/31/21	
Molybdenum	6010C	100	ug/L	8.4	2.1	1	04/02/21 14:59	03/31/21	

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dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-INF-11
Lab Code: K2103161-019

Service Request: K2103161
Date Collected: 03/28/21 15:35
Date Received: 03/30/21 09:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	169	ug/L	21	5	1	04/02/21 15:02	03/31/21	
Boron	6010C	747	ug/L	42	3	1	04/02/21 15:02	03/31/21	
Molybdenum	6010C	118	ug/L	8.4	2.1	1	04/02/21 15:02	03/31/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-1-11
Lab Code: K2103161-020

Service Request: K2103161
Date Collected: 03/28/21 15:35
Date Received: 03/30/21 09:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND U	ug/L	21	5	1	04/02/21 15:05	03/31/21	
Boron	6010C	712	ug/L	42	3	1	04/02/21 15:05	03/31/21	
Molybdenum	6010C	131	ug/L	8.4	2.1	1	04/02/21 15:05	03/31/21	

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dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-2-11
Lab Code: K2103161-021

Service Request: K2103161
Date Collected: 03/28/21 15:35
Date Received: 03/30/21 09:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	32	ug/L	21	5	1	04/02/21 15:13	03/31/21	
Boron	6010C	745	ug/L	42	3	1	04/02/21 15:13	03/31/21	
Molybdenum	6010C	118	ug/L	8.4	2.1	1	04/02/21 15:13	03/31/21	

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dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-3-11
Lab Code: K2103161-022

Service Request: K2103161
Date Collected: 03/28/21 15:35
Date Received: 03/30/21 09:45

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	23	ug/L	21	5	1	04/02/21 15:34	03/31/21	
Boron	6010C	779	ug/L	42	3	1	04/02/21 15:34	03/31/21	
Molybdenum	6010C	124	ug/L	8.4	2.1	1	04/02/21 15:34	03/31/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-4-11
Lab Code: K2103161-023

Service Request: K2103161
Date Collected: 03/28/21 15:35
Date Received: 03/30/21 09:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	19 J	ug/L	21	5	1	04/02/21 15:37	03/31/21	
Boron	6010C	785	ug/L	42	3	1	04/02/21 15:37	03/31/21	
Molybdenum	6010C	103	ug/L	8.4	2.1	1	04/02/21 15:37	03/31/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-5-11
Lab Code: K2103161-024

Service Request: K2103161
Date Collected: 03/28/21 15:35
Date Received: 03/30/21 09:45

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	16 J	ug/L	21	5	1	04/02/21 15:39	03/31/21	
Boron	6010C	768	ug/L	42	3	1	04/02/21 15:39	03/31/21	
Molybdenum	6010C	133	ug/L	8.4	2.1	1	04/02/21 15:39	03/31/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-6-11
Lab Code: K2103161-025

Service Request: K2103161
Date Collected: 03/28/21 15:35
Date Received: 03/30/21 09:45

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	11 J	ug/L	21	5	1	04/02/21 15:42	03/31/21	
Boron	6010C	775	ug/L	42	3	1	04/02/21 15:42	03/31/21	
Molybdenum	6010C	113	ug/L	8.4	2.1	1	04/02/21 15:42	03/31/21	

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dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-7-11
Lab Code: K2103161-026

Service Request: K2103161
Date Collected: 03/28/21 15:35
Date Received: 03/30/21 09:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	24	ug/L	21	5	1	04/02/21 15:45	03/31/21	
Boron	6010C	756	ug/L	42	3	1	04/02/21 15:45	03/31/21	
Molybdenum	6010C	131	ug/L	8.4	2.1	1	04/02/21 15:45	03/31/21	

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dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-8-11
Lab Code: K2103161-027

Service Request: K2103161
Date Collected: 03/28/21 15:35
Date Received: 03/30/21 09:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	11 J	ug/L	21	5	1	04/02/21 15:48	03/31/21	
Boron	6010C	766	ug/L	42	3	1	04/02/21 15:48	03/31/21	
Molybdenum	6010C	97.7	ug/L	8.4	2.1	1	04/02/21 15:48	03/31/21	



QC Summary Forms

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Metals

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2104977-02

Service Request: K2103161
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND U	ug/L	21	5	1	04/02/21 13:34	03/31/21	
Boron	6010C	ND U	ug/L	42	3	1	04/02/21 13:34	03/31/21	
Molybdenum	6010C	ND U	ug/L	8.4	2.1	1	04/02/21 13:34	03/31/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2104978-02

Service Request: K2103161
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND U	ug/L	21	5	1	04/02/21 15:07	03/31/21	
Boron	6010C	ND U	ug/L	42	3	1	04/02/21 15:07	03/31/21	
Molybdenum	6010C	ND U	ug/L	8.4	2.1	1	04/02/21 15:07	03/31/21	

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QA/QC Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103161
Date Collected: 03/25/21
Date Received: 03/30/21
Date Analyzed: 04/2/21
Date Extracted: 03/31/21

Matrix Spike Summary
Dissolved Metals

Sample Name: GR-COL-INF-9
Lab Code: K2103161-001
Analysis Method: 6010C
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2104977-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	159	1150	1000	99	75-125
Boron	724	1220	500	100	75-125
Molybdenum	120	1130	1000	101	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103161
Date Collected: 03/28/21
Date Received: 03/30/21
Date Analyzed: 04/2/21
Date Extracted: 03/31/21

Matrix Spike Summary
Dissolved Metals

Sample Name: GR-COL-2-11
Lab Code: K2103161-021
Analysis Method: 6010C
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2104978-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	32	1020	1000	99	75-125
Boron	745	1250	500	102	75-125
Molybdenum	118	1110	1000	99	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103161
Date Collected: 03/25/21
Date Received: 03/30/21
Date Analyzed: 04/02/21

Replicate Sample Summary
Dissolved Metals

Sample Name: GR-COL-INF-9
Lab Code: K2103161-001

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate	Average	RPD	RPD Limit
					Sample KQ2104977-03 Result			
Arsenic	6010C	21	5	159	166	163	4	20
Boron	6010C	42	3	724	730	727	<1	20
Molybdenum	6010C	8.4	2.1	120	119	120	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103161
Date Collected: 03/28/21
Date Received: 03/30/21
Date Analyzed: 04/02/21

Replicate Sample Summary

Dissolved Metals

Sample Name: GR-COL-2-11
Lab Code: K2103161-021

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate	Average	RPD	RPD Limit
					Sample KQ2104978-03			
Arsenic	6010C	21	5	32	30	31	6	20
Boron	6010C	42	3	745	758	752	2	20
Molybdenum	6010C	8.4	2.1	118	117	118	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103161
Date Analyzed: 04/02/21

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2104977-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6010C	2400	2500	96	80-120
Boron	6010C	489	500	98	80-120
Molybdenum	6010C	991	1000	99	80-120

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Grumman Road Landfill ACM/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103161
Date Analyzed: 04/02/21

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2104978-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6010C	2390	2500	96	80-120
Boron	6010C	493	500	99	80-120
Molybdenum	6010C	976	1000	98	80-120



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April 09, 2021

Analytical Report for Service Request No: K2103531

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

RE: CCR-GR / 201114-05.01 Task 01

Dear Masa,

Enclosed are the results of the sample(s) submitted to our laboratory April 07, 2021
For your reference, these analyses have been assigned our service request number **K2103531**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager



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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



Client: Anchor QEA, LLC
Project: CCR-GR
Sample Matrix: Water

Service Request: K2103531
Date Received: 04/07/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level II requested by the client.

Sample Receipt:

Nine water samples were received for analysis at ALS Environmental on 04/07/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Noel D. Dant

Approved by _____

Date 04/09/2021




Chain of Custody

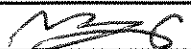
ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

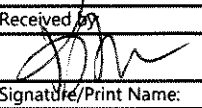
12103531

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: 503-972-5019					No. of Containers <small>Arsenic, Molybdenum, Boron (dissolved)</small>	Parameters													 ANCHOR QEA Jessica Goin 6720 SW Macadam Ave Suite 125 Portland OR 97219 Comments/Preservation			
Date:	4/6/2021					1	X															
Project Name:	CCR-GR																					
Project Number:	201114-05.01 Task 01																					
Project Manager:	Masa Kanematsu																					
Phone Number:	503-972-5001 (Masa Kanematsu)																					
Shipment Method:	Fedex Overnight																					
Line	Field Sample ID	Collection		Matrix	No. of Containers <small>Arsenic, Molybdenum, Boron (dissolved)</small>	1	X															
		Date	Time																			
1	GR-COL-INF-14	4/5/2021	14:30	Water																		HNO ₃ preserved, filtered
2	GR-COL-1-14	4/5/2021	14:30	Water																		HNO ₃ preserved, filtered
3	GR-COL-2-14	4/5/2021	14:30	Water																		HNO ₃ preserved, filtered
4	GR-COL-3-14	4/5/2021	14:30	Water																		HNO ₃ preserved, filtered
5	GR-COL-4-14	4/5/2021	14:30	Water																		HNO ₃ preserved, filtered
6	GR-COL-5-14	4/5/2021	14:30	Water																		HNO ₃ preserved, filtered
7	GR-COL-6-14	4/5/2021	14:30	Water																		HNO ₃ preserved, filtered
8	GR-COL-7-14	4/5/2021	14:30	Water																		HNO ₃ preserved, filtered
9	GR-COL-8-14	4/5/2021	14:30	Water																		HNO ₃ preserved, filtered
10																						
11																						
12																						
13																						
14																						
15																						

Notes: Please analyze all analytes with 3 day TAT on this page. Estimated concentrations As: < 300 ug/L, Mo: < 150 ug/L, B: < 1 mg/L

Relinquished by:	Company:
Masa Kanematsu	Anchor QEA
Signature/Print Name:	Date/Time:
	4/6/2020 16:00

Received by:	Company:
	ACS
Signature/Print Name:	Date/Time:
	4/7/21 10:30

Relinquished by:	Company:
Signature/Print Name:	Date/Time:

Received by:	Company:
Signature/Print Name:	Date/Time:

PM MH

Cooler Receipt and Preservation Form

Client Anchor QEA

Service Request K21 03531

Received: 4/7/21 Opened: 4/7/21 By: [Signature] Unloaded: 4/7/21 By: [Signature]

- 1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
 - 2. Samples were received in: (circle) Cooler Box Envelope Other _____ NA
 - 3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
If present, were custody seals intact? Y N If present, were they signed and dated? Y N
 - 4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 - 5. Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N
- If applicable, tissue samples were received: Frozen Partially Thawed Thawed N/A For Metals

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp Indicate with 'X'	PM Notified If out of temp	Tracking Number NA	Filed
<u>16.2</u>		<u>IR01</u>				<u>773 3 7050576</u>	

- 6. Packing material: Inserts Buggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves Melted ice
- 7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- 8. Were samples received in good condition (unbroken) NA Y N
- 9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- 10. Did all sample labels and tags agree with custody papers? NA Y N
- 11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- 13. Were VOA vials received without headspace? Indicate in the table below NA Y N
- 14. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____
RUSH



Metals

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1317 South 13th Avenue, Kelso, WA 98626
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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-INF-14
Lab Code: K2103531-001

Service Request: K2103531
Date Collected: 04/05/21 14:30
Date Received: 04/07/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	173	ug/L	42	5	1	04/09/21 10:04	04/08/21	
Boron	6010C	760	ug/L	21	3	1	04/09/21 10:04	04/08/21	
Molybdenum	6010C	123	ug/L	8.4	2.1	1	04/09/21 10:04	04/08/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-1-14
Lab Code: K2103531-002

Service Request: K2103531
Date Collected: 04/05/21 14:30
Date Received: 04/07/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	8 J	ug/L	42	5	1	04/09/21 10:17	04/08/21	
Boron	6010C	751	ug/L	21	3	1	04/09/21 10:17	04/08/21	
Molybdenum	6010C	127	ug/L	8.4	2.1	1	04/09/21 10:17	04/08/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-2-14
Lab Code: K2103531-003

Service Request: K2103531
Date Collected: 04/05/21 14:30
Date Received: 04/07/21 10:30

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	30 J	ug/L	42	5	1	04/09/21 10:20	04/08/21	
Boron	6010C	758	ug/L	21	3	1	04/09/21 10:20	04/08/21	
Molybdenum	6010C	119	ug/L	8.4	2.1	1	04/09/21 10:20	04/08/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-3-14
Lab Code: K2103531-004

Service Request: K2103531
Date Collected: 04/05/21 14:30
Date Received: 04/07/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	40 J	ug/L	42	5	1	04/09/21 10:22	04/08/21	
Boron	6010C	772	ug/L	21	3	1	04/09/21 10:22	04/08/21	
Molybdenum	6010C	120	ug/L	8.4	2.1	1	04/09/21 10:22	04/08/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-4-14
Lab Code: K2103531-005

Service Request: K2103531
Date Collected: 04/05/21 14:30
Date Received: 04/07/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	31 J	ug/L	42	5	1	04/09/21 10:25	04/08/21	
Boron	6010C	783	ug/L	21	3	1	04/09/21 10:25	04/08/21	
Molybdenum	6010C	107	ug/L	8.4	2.1	1	04/09/21 10:25	04/08/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-5-14
Lab Code: K2103531-006

Service Request: K2103531
Date Collected: 04/05/21 14:30
Date Received: 04/07/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	29 J	ug/L	42	5	1	04/09/21 10:35	04/08/21	
Boron	6010C	758	ug/L	21	3	1	04/09/21 10:35	04/08/21	
Molybdenum	6010C	130	ug/L	8.4	2.1	1	04/09/21 10:35	04/08/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-6-14
Lab Code: K2103531-007

Service Request: K2103531
Date Collected: 04/05/21 14:30
Date Received: 04/07/21 10:30

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	18 J	ug/L	42	5	1	04/09/21 10:38	04/08/21	
Boron	6010C	766	ug/L	21	3	1	04/09/21 10:38	04/08/21	
Molybdenum	6010C	118	ug/L	8.4	2.1	1	04/09/21 10:38	04/08/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-7-14
Lab Code: K2103531-008

Service Request: K2103531
Date Collected: 04/05/21 14:30
Date Received: 04/07/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	46	ug/L	42	5	1	04/09/21 10:41	04/08/21	
Boron	6010C	748	ug/L	21	3	1	04/09/21 10:41	04/08/21	
Molybdenum	6010C	123	ug/L	8.4	2.1	1	04/09/21 10:41	04/08/21	

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dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-8-14
Lab Code: K2103531-009

Service Request: K2103531
Date Collected: 04/05/21 14:30
Date Received: 04/07/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	19 J	ug/L	42	5	1	04/09/21 10:43	04/08/21	
Boron	6010C	783	ug/L	21	3	1	04/09/21 10:43	04/08/21	
Molybdenum	6010C	110	ug/L	8.4	2.1	1	04/09/21 10:43	04/08/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2105586-02

Service Request: K2103531
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND U	ug/L	42	5	1	04/09/21 09:38	04/08/21	
Boron	6010C	ND U	ug/L	21	3	1	04/09/21 09:38	04/08/21	
Molybdenum	6010C	ND U	ug/L	8.4	2.1	1	04/09/21 09:38	04/08/21	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103531
Date Collected: 04/05/21
Date Received: 04/07/21
Date Analyzed: 04/09/21

Replicate Sample Summary
Dissolved Metals

Sample Name: GR-COL-INF-14
Lab Code: K2103531-001

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate	Average	RPD	RPD Limit
					Sample KQ2105586-03 Result			
Arsenic	6010C	42	5	173	173	173	<1	20
Boron	6010C	21	3	760	741	751	3	20
Molybdenum	6010C	8.4	2.1	123	121	122	2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103531
Date Collected: 04/05/21
Date Received: 04/07/21
Date Analyzed: 04/9/21
Date Extracted: 04/8/21

Matrix Spike Summary
Dissolved Metals

Sample Name: GR-COL-INF-14
Lab Code: K2103531-001
Analysis Method: 6010C
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2105586-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	173	1170	1000	99	75-125
Boron	760	1260	500	99	75-125
Molybdenum	123	1120	1000	100	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103531
Date Analyzed: 04/09/21

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2105586-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6010C	2500	2500	100	80-120
Boron	6010C	515	500	103	80-120
Molybdenum	6010C	1000	1000	100	80-120



ALS Environmental
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April 14, 2021

Analytical Report for Service Request No: K2103530

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

RE: CCR-GR / 201114-05.01 Task 01

Dear Masa,

Enclosed are the results of the sample(s) submitted to our laboratory April 07, 2021
For your reference, these analyses have been assigned our service request number **K2103530**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager



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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Anchor QEA, LLC
Project: CCR-GR
Sample Matrix: Water

Service Request: K2103530
Date Received: 04/07/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level II requested by the client.

Sample Receipt:

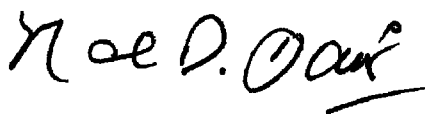
Ten water samples were received for analysis at ALS Environmental on 04/07/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by 

Date 04/14/2021




Chain of Custody


ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

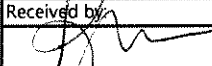
K2103530

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: 503-972-5019					Parameters													 Jessica Goin 6720 SW Macadam Ave Suite 125 Portland OR 97219 Comments/Preservation						
Date:		4/6/2021			No. of Containers	Arsenic, Molybdenum, Boron (dissolved)	Dissolved metals	Total metals (Al, Fe, Mn)	Anions	Ortho-Phosphate	Alkalinity	Total Organic Carbon	Ammonia as N											
Project Name:		CCR-GR																						
Project Number:		201114-05.01 Task 01																						
Project Manager:		Masa Kanematsu																						
Phone Number:		503-972-5001 (Masa Kanematsu)																						
Shipment Method:		Fedex Overnight																						
Line	Field Sample ID	Collection		Matrix																				
		Date	Time																					
1	GR-COL-INF-20210406	4/6/2021	13:00	Water	5		X	X	X	X	X	X	X											
2	GR-COL-INF-13	4/2/2021	14:00	Water	1	X																HNO ₃ preserved, filtered		
3	GR-COL-1-13	4/2/2021	14:00	Water	1	X																HNO ₃ preserved, filtered		
4	GR-COL-2-13	4/2/2021	14:00	Water	1	X																HNO ₃ preserved, filtered		
5	GR-COL-3-13	4/2/2021	14:00	Water	1	X																HNO ₃ preserved, filtered		
6	GR-COL-4-13	4/2/2021	14:00	Water	1	X																HNO ₃ preserved, filtered		
7	GR-COL-5-13	4/2/2021	14:00	Water	1	X																HNO ₃ preserved, filtered		
8	GR-COL-6-13	4/2/2021	14:00	Water	1	X																HNO ₃ preserved, filtered		
9	GR-COL-7-13	4/2/2021	14:00	Water	1	X																HNO ₃ preserved, filtered		
10	GR-COL-8-13	4/2/2021	14:00	Water	1	X																HNO ₃ preserved, filtered		
11																								
12																								
13																								
14																								
15																								

Notes: Please analyze all analytes with Standard TAT on this page. Estimated concentrations As: < 300 ug/L, Mo: < 200 ug/L, B: < 1 mg/L
 Dissolved metals: Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Fe, Pb, Li, Mg, Mn, Mo, Ni, K, Se, Si, Ag, Na, Ti, Zn), Anions (Cl, F, nitrate, nitrite, Sulfate)

Relinquished by:	Company:
Masa Kanematsu	Anchor QEA
Signature/Print Name:	Date/Time:
	4/6/2020 16:00

Received by:	Company:
 ACS	Anchor QEA
Signature/Print Name:	Date/Time:
	4/7/21 1030

Relinquished by:	Company:
Signature/Print Name:	Date/Time:

Received by:	Company:
Signature/Print Name:	Date/Time:

Cooler Receipt and Preservation Form

Client Anchor QEA

Service Request K2103530

Received: 4/7/21 Opened: 4/7/21 By: [Signature] Unloaded: 4/7/21 By: [Signature]

- Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
 - Samples were received in: (circle) Cooler Box Envelope Other NA
 - Were custody seals on coolers? NA Y N If yes, how many and where? _____
If present, were custody seals intact? Y N If present, were they signed and dated? Y N
 - Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 - Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N
- If applicable, tissue samples were received: Frozen Partially Thawed Thawed N/A For Metals

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
<u>16.2</u>		<u>D101</u>		<u>/</u>		<u>773 370505760</u>	

6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves Melted ice
- Were custody papers properly filled out (ink, signed, etc.)? NA Y N
 - Were samples received in good condition (unbroken) NA Y N
 - Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
 - Did all sample labels and tags agree with custody papers? NA Y N
 - Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
 - Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
 - Were VOA vials received without headspace? Indicate in the table below NA Y N
 - Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____



General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Analysis Method: 300.0
Prep Method: None

Service Request: K2103530
Date Collected: 04/6/21
Date Received: 04/7/21
Units: mg/L
Basis: NA

Chloride

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
GR-COL-INF-20210406	K2103530-001	4.41	0.20	0.02	2	04/07/21 17:19	
Method Blank	K2103530-MB	ND U	0.10	0.007	1	04/07/21 14:18	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Collected: 04/06/21
Date Received: 04/07/21
Date Analyzed: 04/07/21

Replicate Sample Summary
General Chemistry Parameters

Sample Name: GR-COL-INF-20210406
Lab Code: K2103530-001

Units: mg/L
Basis: NA

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>MRL</u>	<u>MDL</u>	<u>Sample Result</u>	<u>Duplicate Sample K2103530-001DUP Result</u>	<u>Average</u>	<u>RPD</u>	<u>RPD Limit</u>
Chloride	300.0	0.20	0.02	4.41	4.13	4.27	7	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Collected: 04/06/21
Date Received: 04/07/21
Date Analyzed: 04/7/21
Date Extracted: NA

Duplicate Matrix Spike Summary
Chloride

Sample Name: GR-COL-INF-20210406
Lab Code: K2103530-001
Analysis Method: 300.0
Prep Method: None

Units: mg/L
Basis: NA

Analyte Name	Sample Result	Result	Matrix Spike K2103530-001MS		Duplicate Matrix Spike K2103530-001DMS		% Rec Limits	RPD	RPD Limit	
			Spike Amount	% Rec	Result	Spike Amount				% Rec
Chloride	4.41	11.7	8.00	91	11.6	8.00	90	90-110	1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Analyzed: 04/07/21
Date Extracted: NA

Lab Control Sample Summary
Chloride

Analysis Method: 300.0
Prep Method: None

Units: mg/L
Basis: NA
Analysis Lot: 718939

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2103530-LCS1	5.00	5.00	100	90-110

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Collected: 04/06/21
Date Received: 04/07/21
Date Analyzed: 04/07/21

Replicate Sample Summary
General Chemistry Parameters

Sample Name: GR-COL-INF-20210406
Lab Code: K2103530-001

Units: mg/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample K2103530-001DUP Result, Average, RPD, RPD Limit. Row 1: Fluoride, 300.0, 0.20, 0.01, ND U, ND U, NC, NC, 20.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Collected: 04/06/21
Date Received: 04/07/21
Date Analyzed: 04/7/21
Date Extracted: NA

**Duplicate Matrix Spike Summary
Fluoride**

Sample Name: GR-COL-INF-20210406
Lab Code: K2103530-001
Analysis Method: 300.0
Prep Method: None

Units: mg/L
Basis: NA

Analyte Name	Sample Result	Result	Matrix Spike K2103530-001MS		Duplicate Matrix Spike K2103530-001DMS		% Rec Limits	RPD	RPD Limit	
			Spike Amount	% Rec	Result	Spike Amount				% Rec
Fluoride	ND U	8.00	8.00	100	8.00	8.00	100	90-110	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Analyzed: 04/07/21
Date Extracted: NA

Lab Control Sample Summary
Fluoride

Analysis Method: 300.0
Prep Method: None

Units: mg/L
Basis: NA
Analysis Lot: 718939

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2103530-LCS1	4.70	5.00	94	90-110

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Analysis Method: 300.0
Prep Method: None

Service Request: K2103530
Date Collected: 04/6/21
Date Received: 04/7/21
Units: mg/L
Basis: NA

Nitrite as Nitrogen

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
GR-COL-INF-20210406	K2103530-001	ND U	0.10	0.006	2	04/07/21 17:19	
Method Blank	K2103530-MB	ND U	0.050	0.003	1	04/07/21 14:18	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Collected: 04/06/21
Date Received: 04/07/21
Date Analyzed: 04/07/21

Replicate Sample Summary
General Chemistry Parameters

Sample Name: GR-COL-INF-20210406
Lab Code: K2103530-001

Units: mg/L
Basis: NA

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>MRL</u>	<u>MDL</u>	<u>Sample Result</u>	<u>Duplicate Sample K2103530-001DUP Result</u>	<u>Average</u>	<u>RPD</u>	<u>RPD Limit</u>
Nitrite as Nitrogen	300.0	0.10	0.006	ND U	ND U	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Collected: 04/06/21
Date Received: 04/07/21
Date Analyzed: 04/7/21
Date Extracted: NA

Duplicate Matrix Spike Summary
Nitrite as Nitrogen

Sample Name: GR-COL-INF-20210406
Lab Code: K2103530-001
Analysis Method: 300.0
Prep Method: None

Units: mg/L
Basis: NA

Analyte Name	Sample Result	Result	Matrix Spike K2103530-001MS		Duplicate Matrix Spike K2103530-001DMS		% Rec Limits	RPD	RPD Limit	
			Spike Amount	% Rec	Result	Spike Amount				% Rec
Nitrite as Nitrogen	ND U	7.83	8.00	98	7.87	8.00	98	90-110	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Analyzed: 04/07/21
Date Extracted: NA

Lab Control Sample Summary
Nitrite as Nitrogen

Analysis Method: 300.0
Prep Method: None

Units: mg/L
Basis: NA
Analysis Lot: 718939

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2103530-LCS1	2.44	2.50	98	90-110

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Analysis Method: 300.0
Prep Method: None

Service Request: K2103530
Date Collected: 04/6/21
Date Received: 04/7/21
Units: mg/L
Basis: NA

Nitrate as Nitrogen

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
GR-COL-INF-20210406	K2103530-001	0.04 J	0.10	0.02	2	04/07/21 17:19	
Method Blank	K2103530-MB	ND U	0.050	0.007	1	04/07/21 14:18	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Collected: 04/06/21
Date Received: 04/07/21
Date Analyzed: 04/07/21

Replicate Sample Summary
General Chemistry Parameters

Sample Name: GR-COL-INF-20210406
Lab Code: K2103530-001

Units: mg/L
Basis: NA

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>MRL</u>	<u>MDL</u>	<u>Sample Result</u>	<u>Duplicate Sample K2103530-001DUP Result</u>	<u>Average</u>	<u>RPD</u>	<u>RPD Limit</u>
Nitrate as Nitrogen	300.0	0.10	0.02	0.04 J	0.04 J	0.0419	11	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Collected: 04/06/21
Date Received: 04/07/21
Date Analyzed: 04/7/21
Date Extracted: NA

Duplicate Matrix Spike Summary
Nitrate as Nitrogen

Sample Name: GR-COL-INF-20210406
Lab Code: K2103530-001
Analysis Method: 300.0
Prep Method: None

Units: mg/L
Basis: NA

Analyte Name	Sample Result	Result	Matrix Spike K2103530-001MS		Duplicate Matrix Spike K2103530-001DMS		% Rec Limits	RPD	RPD Limit	
			Spike Amount	% Rec	Result	Spike Amount				% Rec
Nitrate as Nitrogen	0.04 J	7.75	8.00	96	7.79	8.00	97	90-110	<1	20

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Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Analyzed: 04/07/21
Date Extracted: NA

Lab Control Sample Summary
Nitrate as Nitrogen

Analysis Method: 300.0
Prep Method: None

Units: mg/L
Basis: NA
Analysis Lot: 718939

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2103530-LCS1	2.41	2.50	97	90-110

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Analysis Method: 300.0
Prep Method: None

Service Request: K2103530
Date Collected: 04/6/21
Date Received: 04/7/21
Units: mg/L
Basis: NA

Sulfate

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
GR-COL-INF-20210406	K2103530-001	71.1	2.0	0.2	10	04/08/21 09:25	
Method Blank	K2103530-MB	ND U	0.20	0.02	1	04/07/21 14:18	

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QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Analyzed: 04/07/21
Date Extracted: NA

Lab Control Sample Summary
Sulfate

Analysis Method: 300.0
Prep Method: None

Units: mg/L
Basis: NA
Analysis Lot: 718939

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2103530-LCS1	4.94	5.00	99	90-110

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Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Analysis Method: 350.1
Prep Method: Method

Service Request: K2103530
Date Collected: 04/6/21
Date Received: 04/7/21
Units: mg/L
Basis: NA

Ammonia as Nitrogen

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
GR-COL-INF-20210406	K2103530-001	0.254	0.050	1	04/08/21 12:58	4/8/21	
Method Blank	K2103530-MB	ND U	0.050	1	04/08/21 12:58	4/8/21	

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QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Analyzed: 04/08/21
Date Extracted: 04/08/21

Lab Control Sample Summary
Ammonia as Nitrogen

Analysis Method: 350.1
Prep Method: Method

Units: mg/L
Basis: NA
Analysis Lot: 719137

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2103530-LCS1	5.64	5.36	105	86-114

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Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Analysis Method: SM 2320 B
Prep Method: None

Service Request: K2103530
Date Collected: 04/6/21
Date Received: 04/7/21
Units: mg/L
Basis: NA

Alkalinity as CaCO3, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
GR-COL-INF-20210406	K2103530-001	277	15	3	1	04/12/21 13:58	
Method Blank	K2103530-MB	6 J	15	3	1	04/12/21 13:58	

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QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Analyzed: 04/12/21
Date Extracted: NA

Lab Control Sample Summary
Alkalinity as CaCO₃, Total

Analysis Method: SM 2320 B
Prep Method: None

Units: mg/L
Basis: NA
Analysis Lot: 719373

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2103530-LCS1	38.4	37	103	90-110
Lab Control Sample	K2103530-LCS2	38.3	37	103	90-110

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Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Analysis Method: SM 4500-P E
Prep Method: None

Service Request: K2103530
Date Collected: 04/6/21
Date Received: 04/7/21
Units: mg/L
Basis: NA

Orthophosphate as Phosphorus

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
GR-COL-INF-20210406	K2103530-001	ND U	0.050	0.020	1	04/08/21 09:05	
Method Blank	K2103530-MB	ND U	0.050	0.020	1	04/08/21 09:05	

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QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Collected: 04/06/21
Date Received: 04/07/21
Date Analyzed: 04/08/21

Replicate Sample Summary
General Chemistry Parameters

Sample Name: GR-COL-INF-20210406
Lab Code: K2103530-001

Units: mg/L
Basis: NA

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>MRL</u>	<u>MDL</u>	<u>Sample Result</u>	Duplicate Sample K2103530-001DUP <u>Result</u>	<u>Average</u>	<u>RPD</u>	<u>RPD Limit</u>
Orthophosphate as Phosphorus	SM 4500-P E	0.050	0.020	ND U	ND U	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Collected: 04/06/21
Date Received: 04/07/21
Date Analyzed: 04/8/21
Date Extracted: NA

Duplicate Matrix Spike Summary
Orthophosphate as Phosphorus

Sample Name: GR-COL-INF-20210406
Lab Code: K2103530-001
Analysis Method: SM 4500-P E
Prep Method: None

Units: mg/L
Basis: NA

Analyte Name	Sample Result	Matrix Spike K2103530-001MS			Duplicate Matrix Spike K2103530-001DMS			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Orthophosphate as Phosphorus	ND U	0.82	0.80	102	0.83	0.80	104	75-125	2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Analyzed: 04/08/21
Date Extracted: NA

Lab Control Sample Summary
Orthophosphate as Phosphorus

Analysis Method: SM 4500-P E
Prep Method: None

Units: mg/L
Basis: NA
Analysis Lot: 719112

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2103530-LCS1	1.45	1.57	92	85-115

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Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Analysis Method: SM 5310 C
Prep Method: None

Service Request: K2103530
Date Collected: 04/6/21
Date Received: 04/7/21
Units: mg/L
Basis: NA

Carbon, Total Organic

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
GR-COL-INF-20210406	K2103530-001	25.9	0.50	0.07	1	04/13/21 18:46	
Method Blank	K2103530-MB	ND U	0.50	0.07	1	04/13/21 18:46	

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QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Analyzed: 04/13/21
Date Extracted: NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method: SM 5310 C
Prep Method: None

Units: mg/L
Basis: NA
Analysis Lot: 719649

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2103530-LCS1	23.7	25.0	95	83-117



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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www.alsglobal.com

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Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-INF-20210406
Lab Code: K2103530-001

Service Request: K2103530
Date Collected: 04/06/21 13:00
Date Received: 04/07/21 10:30

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	59	ug/L	21	5	1	04/13/21 10:25	04/09/21	
Antimony	6010C	ND U	ug/L	21	7	1	04/13/21 10:25	04/09/21	
Arsenic	6010C	164	ug/L	21	5	1	04/13/21 10:25	04/09/21	
Barium	6010C	46.3	ug/L	4.2	0.9	1	04/13/21 10:25	04/09/21	
Beryllium	6010C	ND U	ug/L	1.1	0.3	1	04/13/21 10:25	04/09/21	
Boron	6010C	756	ug/L	21	3	1	04/13/21 10:25	04/09/21	
Cadmium	6010C	ND U	ug/L	1.1	0.4	1	04/13/21 10:25	04/09/21	
Calcium	6010C	103000	ug/L	21	3	1	04/13/21 10:25	04/09/21	
Chromium	6010C	ND U	ug/L	8.4	2.1	1	04/13/21 10:25	04/09/21	
Cobalt	6010C	ND U	ug/L	2.1	0.7	1	04/13/21 10:25	04/09/21	
Iron	6010C	1420	ug/L	21	8	1	04/13/21 10:25	04/09/21	
Lead	6010C	ND U	ug/L	11	3	1	04/13/21 10:25	04/09/21	
Lithium	6010C	ND U	ug/L	21	6	1	04/13/21 10:25	04/09/21	
Magnesium	6010C	19600	ug/L	5.3	0.4	1	04/13/21 10:25	04/09/21	
Manganese	6010C	298	ug/L	1.1	0.2	1	04/13/21 10:25	04/09/21	
Molybdenum	6010C	123	ug/L	8.4	2.1	1	04/13/21 10:25	04/09/21	
Nickel	6010C	1.4 J	ug/L	4.2	0.9	1	04/13/21 10:25	04/09/21	
Potassium	6010C	11300	ug/L	210	60	1	04/13/21 10:25	04/09/21	
Selenium	6010C	ND U	ug/L	21	7	1	04/13/21 10:25	04/09/21	
Silicon	6010C	780	ug/L	210	30	1	04/13/21 10:25	04/09/21	
Silver	6010C	ND U	ug/L	8.4	2.1	1	04/13/21 10:25	04/09/21	
Sodium	6010C	7370	ug/L	210	30	1	04/13/21 10:25	04/09/21	
Thallium	6010C	ND U	ug/L	11	4	1	04/13/21 10:25	04/09/21	
Zinc	6010C	ND U	ug/L	4.2	0.5	1	04/13/21 10:25	04/09/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-INF-20210406
Lab Code: K2103530-001

Service Request: K2103530
Date Collected: 04/06/21 13:00
Date Received: 04/07/21 10:30
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	61	ug/L	21	5	1	04/13/21 10:10	04/09/21	
Iron	6010C	1470	ug/L	21	8	1	04/13/21 10:10	04/09/21	
Manganese	6010C	298	ug/L	1.1	0.2	1	04/13/21 10:10	04/09/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-INF-13
Lab Code: K2103530-002

Service Request: K2103530
Date Collected: 04/02/21 14:00
Date Received: 04/07/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	154	ug/L	21	5	1	04/13/21 10:36	04/09/21	
Boron	6010C	721	ug/L	21	3	1	04/13/21 10:36	04/09/21	
Molybdenum	6010C	119	ug/L	8.4	2.1	1	04/13/21 10:36	04/09/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-1-13
Lab Code: K2103530-003

Service Request: K2103530
Date Collected: 04/02/21 14:00
Date Received: 04/07/21 10:30

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND U	ug/L	21	5	1	04/13/21 10:38	04/09/21	
Boron	6010C	713	ug/L	21	3	1	04/13/21 10:38	04/09/21	
Molybdenum	6010C	121	ug/L	8.4	2.1	1	04/13/21 10:38	04/09/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-2-13
Lab Code: K2103530-004

Service Request: K2103530
Date Collected: 04/02/21 14:00
Date Received: 04/07/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	32	ug/L	21	5	1	04/13/21 10:41	04/09/21	
Boron	6010C	731	ug/L	21	3	1	04/13/21 10:41	04/09/21	
Molybdenum	6010C	119	ug/L	8.4	2.1	1	04/13/21 10:41	04/09/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-3-13
Lab Code: K2103530-005

Service Request: K2103530
Date Collected: 04/02/21 14:00
Date Received: 04/07/21 10:30

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	39	ug/L	21	5	1	04/13/21 10:44	04/09/21	
Boron	6010C	747	ug/L	21	3	1	04/13/21 10:44	04/09/21	
Molybdenum	6010C	121	ug/L	8.4	2.1	1	04/13/21 10:44	04/09/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-4-13
Lab Code: K2103530-006

Service Request: K2103530
Date Collected: 04/02/21 14:00
Date Received: 04/07/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	26	ug/L	21	5	1	04/13/21 10:46	04/09/21	
Boron	6010C	746	ug/L	21	3	1	04/13/21 10:46	04/09/21	
Molybdenum	6010C	94.3	ug/L	8.4	2.1	1	04/13/21 10:46	04/09/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-5-13
Lab Code: K2103530-007

Service Request: K2103530
Date Collected: 04/02/21 14:00
Date Received: 04/07/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	32	ug/L	21	5	1	04/13/21 10:49	04/09/21	
Boron	6010C	744	ug/L	21	3	1	04/13/21 10:49	04/09/21	
Molybdenum	6010C	128	ug/L	8.4	2.1	1	04/13/21 10:49	04/09/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-6-13
Lab Code: K2103530-008

Service Request: K2103530
Date Collected: 04/02/21 14:00
Date Received: 04/07/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	7 J	ug/L	21	5	1	04/13/21 10:52	04/09/21	
Boron	6010C	749	ug/L	21	3	1	04/13/21 10:52	04/09/21	
Molybdenum	6010C	117	ug/L	8.4	2.1	1	04/13/21 10:52	04/09/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-7-13
Lab Code: K2103530-009

Service Request: K2103530
Date Collected: 04/02/21 14:00
Date Received: 04/07/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	16 J	ug/L	21	5	1	04/13/21 10:55	04/09/21	
Boron	6010C	731	ug/L	21	3	1	04/13/21 10:55	04/09/21	
Molybdenum	6010C	128	ug/L	8.4	2.1	1	04/13/21 10:55	04/09/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: GR-COL-8-13
Lab Code: K2103530-010

Service Request: K2103530
Date Collected: 04/02/21 14:00
Date Received: 04/07/21 10:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND U	ug/L	21	5	1	04/13/21 10:57	04/09/21	
Boron	6010C	745	ug/L	21	3	1	04/13/21 10:57	04/09/21	
Molybdenum	6010C	103	ug/L	8.4	2.1	1	04/13/21 10:57	04/09/21	

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Analytical Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2105589-02

Service Request: K2103530
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	ND U	ug/L	21	5	1	04/13/21 10:02	04/09/21	
Antimony	6010C	ND U	ug/L	21	7	1	04/13/21 10:02	04/09/21	
Arsenic	6010C	ND U	ug/L	21	5	1	04/13/21 10:02	04/09/21	
Barium	6010C	ND U	ug/L	4.2	0.9	1	04/13/21 10:02	04/09/21	
Beryllium	6010C	ND U	ug/L	1.1	0.3	1	04/13/21 10:02	04/09/21	
Boron	6010C	ND U	ug/L	21	3	1	04/13/21 10:02	04/09/21	
Cadmium	6010C	ND U	ug/L	1.1	0.4	1	04/13/21 10:02	04/09/21	
Calcium	6010C	ND U	ug/L	21	3	1	04/13/21 10:02	04/09/21	
Chromium	6010C	ND U	ug/L	8.4	2.1	1	04/13/21 10:02	04/09/21	
Cobalt	6010C	ND U	ug/L	2.1	0.7	1	04/13/21 10:02	04/09/21	
Iron	6010C	ND U	ug/L	21	8	1	04/13/21 10:02	04/09/21	
Lead	6010C	ND U	ug/L	11	3	1	04/13/21 10:02	04/09/21	
Lithium	6010C	ND U	ug/L	21	6	1	04/13/21 10:02	04/09/21	
Magnesium	6010C	ND U	ug/L	5.3	0.4	1	04/13/21 10:02	04/09/21	
Manganese	6010C	ND U	ug/L	1.1	0.2	1	04/13/21 10:02	04/09/21	
Molybdenum	6010C	ND U	ug/L	8.4	2.1	1	04/13/21 10:02	04/09/21	
Nickel	6010C	ND U	ug/L	4.2	0.9	1	04/13/21 10:02	04/09/21	
Potassium	6010C	ND U	ug/L	210	60	1	04/13/21 10:02	04/09/21	
Selenium	6010C	ND U	ug/L	21	7	1	04/13/21 10:02	04/09/21	
Silicon	6010C	30 J	ug/L	210	30	1	04/13/21 10:02	04/09/21	
Silver	6010C	ND U	ug/L	8.4	2.1	1	04/13/21 10:02	04/09/21	
Sodium	6010C	ND U	ug/L	210	30	1	04/13/21 10:02	04/09/21	
Thallium	6010C	6 J	ug/L	11	4	1	04/13/21 10:02	04/09/21	
Zinc	6010C	ND U	ug/L	4.2	0.5	1	04/13/21 10:02	04/09/21	

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QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Collected: 04/06/21
Date Received: 04/07/21
Date Analyzed: 04/13/21

Replicate Sample Summary
Total Metals

Sample Name: GR-COL-INF-20210406
Lab Code: K2103530-001

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate	Average	RPD	RPD Limit
					Sample KQ2105589-03 Result			
Aluminum	6010C	21	5	61	59	60	3	20
Antimony	6010C	21	7	ND U	ND U	ND	-	20
Arsenic	6010C	21	5	165	166	166	<1	20
Barium	6010C	4.2	0.9	46.1	46.1	46.1	<1	20
Beryllium	6010C	1.1	0.3	ND U	ND U	ND	-	20
Boron	6010C	21	3	729	724	727	<1	20
Cadmium	6010C	1.1	0.4	ND U	ND U	ND	-	20
Calcium	6010C	21	3	104000	104000	104000	<1	20
Chromium	6010C	8.4	2.1	ND U	ND U	ND	-	20
Cobalt	6010C	2.1	0.7	ND U	ND U	ND	-	20
Iron	6010C	21	8	1470	1460	1470	<1	20
Lead	6010C	11	3	ND U	ND U	ND	-	20
Lithium	6010C	21	6	ND U	ND U	ND	-	20
Magnesium	6010C	5.3	0.4	19500	19400	19500	<1	20
Manganese	6010C	1.1	0.2	298	298	298	<1	20
Molybdenum	6010C	8.4	2.1	120	121	121	<1	20
Nickel	6010C	4.2	0.9	1.4 J	ND U	NC	NC	20
Potassium	6010C	210	60	11200	11200	11200	<1	20
Selenium	6010C	21	7	ND U	8 J	NC	NC	20
Silicon	6010C	210	30	770	760	770	1	20
Silver	6010C	8.4	2.1	ND U	ND U	ND	-	20
Sodium	6010C	210	30	7310	7290	7300	<1	20
Thallium	6010C	11	4	ND U	ND U	ND	-	20
Zinc	6010C	4.2	0.5	0.6 J	ND U	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Collected: 04/06/21
Date Received: 04/07/21
Date Analyzed: 4/13/21

Matrix Spike Summary
Total Metals

Sample Name: GR-COL-INF-20210406
Lab Code: K2103530-001

Units: ug/L
Basis: NA

Matrix Spike
KQ2105589-04

Analyte Name	Method	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Aluminum	6010C	61	1860	2000	90	75-125
Antimony	6010C	ND U	470	500	94	75-125
Arsenic	6010C	165	1150	1000	99	75-125
Barium	6010C	46.1	1020	1000	97	75-125
Beryllium	6010C	ND U	48.2	50.0	96	75-125
Boron	6010C	729	1220	500	97	75-125
Cadmium	6010C	ND U	47.2	50.0	94	75-125
Calcium	6010C	104000	115000	10000	110 #	75-125
Chromium	6010C	ND U	196	200	98	75-125
Cobalt	6010C	ND U	479	500	96	75-125
Iron	6010C	1470	2440	1000	97	75-125
Lead	6010C	ND U	466	500	93	75-125
Lithium	6010C	ND U	9920	10000	99	75-125
Magnesium	6010C	19500	29400	10000	99	75-125
Manganese	6010C	298	787	500	98	75-125
Molybdenum	6010C	120	1140	1000	102	75-125
Nickel	6010C	1.4 J	472	500	94	75-125
Potassium	6010C	11200	21700	10000	104	75-125
Selenium	6010C	ND U	993	1000	99	75-125
Silver	6010C	ND U	47.0	50.0	94	75-125
Sodium	6010C	7310	17700	10000	104	75-125
Thallium	6010C	ND U	188	200	94	75-125
Zinc	6010C	0.6 J	471	500	94	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Collected: 04/06/21
Date Received: 04/07/21
Date Analyzed: 04/13/21
Date Extracted: 04/9/21

Matrix Spike Summary
Total Metals

Sample Name: GR-COL-INF-20210406
Lab Code: K2103530-001
Analysis Method: 6010C
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2105589-05

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Silicon	770	10800	10000	100	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Analyzed: 04/13/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2105589-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Aluminum	6010C	4960	5000	99	80-120
Iron	6010C	2430	2500	97	80-120
Manganese	6010C	1220	1250	98	80-120

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530
Date Analyzed: 04/13/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2105589-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Antimony	6010C	2050	2000	103	80-120
Arsenic	6010C	2480	2500	99	80-120
Barium	6010C	4850	5000	97	80-120
Beryllium	6010C	124	125	99	80-120
Boron	6010C	494	500	99	80-120
Cadmium	6010C	1230	1250	99	80-120
Calcium	6010C	12300	12500	98	80-120
Chromium	6010C	496	500	99	80-120
Cobalt	6010C	1210	1250	97	80-120
Lead	6010C	2430	2500	97	80-120
Lithium	6010C	9850	10000	98	80-120
Magnesium	6010C	12500	12500	100	80-120
Molybdenum	6010C	1010	1000	101	80-120
Nickel	6010C	1200	1250	96	80-120
Potassium	6010C	12700	12500	101	80-120
Selenium	6010C	2480	2500	99	80-120
Silver	6010C	598	625	96	80-120
Sodium	6010C	12500	12500	100	80-120
Thallium	6010C	2390	2500	96	80-120
Zinc	6010C	1210	1250	97	80-120

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: CCR-GR/201114-05.01 Task 01
Sample Matrix: Water

Service Request: K2103530

Date Analyzed: 04/13/21

Lab Control Sample Summary

Total Metals

Units:ug/L

Basis:NA

Lab Control Sample

KQ2105589-06

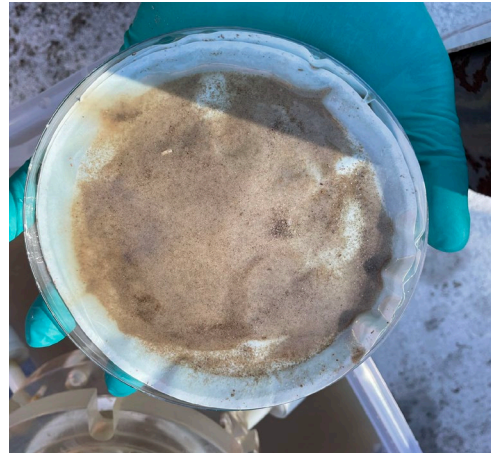
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Silicon	6010C	10000	10000	100	80-120

Appendix C

Photographs of Precipitate Samples



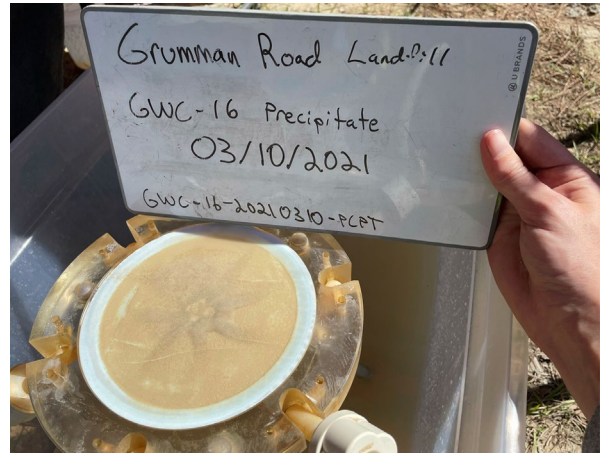
Photograph 1: Groundwater and precipitate sampling site setup showing a peristaltic pump and in-line filter stand



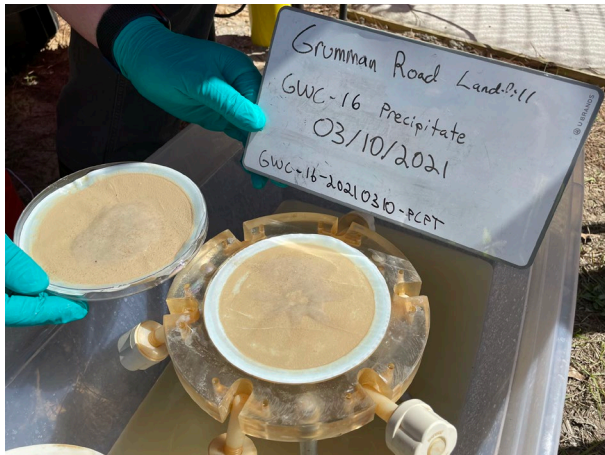
Photograph 2: Precipitate sample collected from GWC-15



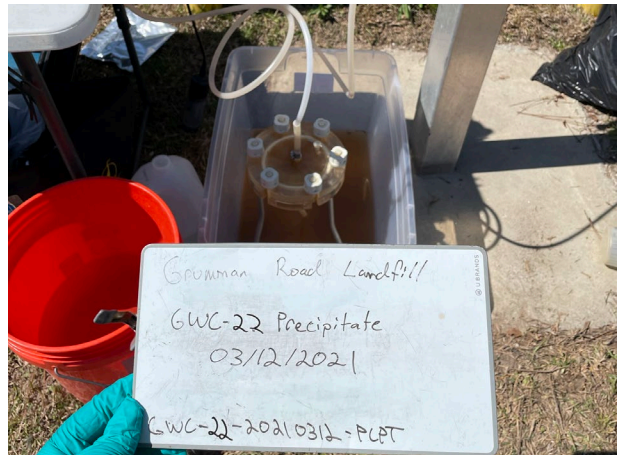
Photograph 3: Dark brown/black precipitate samples collected from GWC-15



Photograph 4: Light tan precipitate sample collected from GWC-16



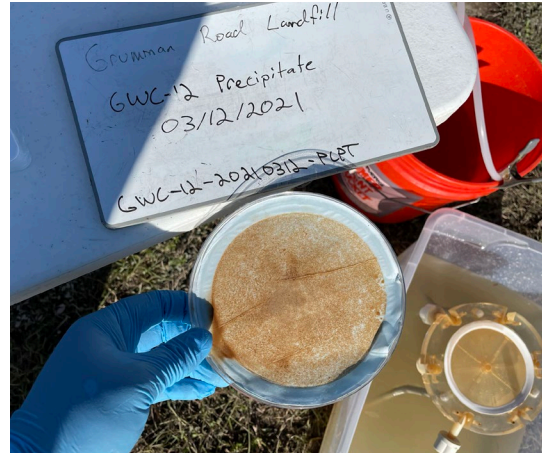
Photograph 5: Precipitate samples collected from GWC-16 side by side



Photograph 6: In-line filter stand setup at well GWC-22



Photograph 7: Red/brown precipitate sample collected from GWC-22



Photograph 8: Red/brown precipitate sample collected from GWC-12

APPENDIX D

Statistical Analyses

Grumman Road Landfill
Chatham County, Georgia
2021 Annual Groundwater Monitoring and Corrective Action Report

SEPTEMBER
2020

SEMI-ANNUAL
GROUNDWATER
STATISTICAL
ANALYSIS

FOR
GRUMMAN ROAD
LANDFILL

Prepared by:

Groundwater Stats Consulting LLC

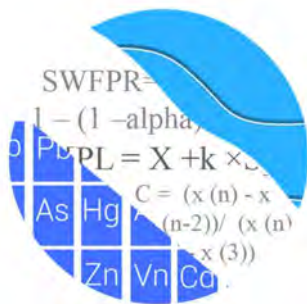


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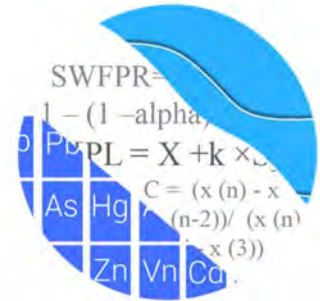
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GROUNDWATER STATS CONSULTING



February 23, 2021

Southern Company Services
Attn: Ms. Kristen Jurinko
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia 30308

Re: Plant Kraft's Grumman Road Landfill
Statistical Analysis – 1st Semi-Annual 2020 Sample Event

Dear Ms. Jurinko,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the groundwater statistical analysis of the 1st Semi-Annual 2020 sample event for Georgia Power Company's Plant Kraft's Grumman Road Landfill. The analysis complies with the Georgia Environmental Protection Division Rules for Solid Waste Management Chapter 391-3-4-.10 and follows the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling began for the CCR program in 2016, and at least 8 background samples were collected at each of the groundwater monitoring wells. Semi-annual sampling of the majority of Appendix IV constituents has been performed at most wells for several years in accordance with the Georgia Department of Natural Resources, Environmental Protection Division groundwater monitoring regulations. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** GWA-7 and GWA-8
- **Downgradient wells:** GWB-4R, GWB-5R, GWB-6R, GWC-1, GWC-2, GWC-9, GWC-11, GWC-12, GWC-13, GWC-14, GWC-15, GWC-16, GWC-17, GWC-20, GWC-21, and GWC-22

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Dr. Jim Loftis, Civil & Environmental Engineering professor emeritus at Colorado State University and Senior Advisor to Groundwater Stats Consulting.

The program monitors the constituents listed below. Georgia EPD Appendix II and CCR Appendix IV constituents overlap with the exception of vanadium and zinc which are Georgia EPD. However, the statistical analyses for the two sets of requirements are different and are discussed in separate sections of this report. The terms “parameters” and “constituents” are used interchangeably throughout.

- **Appendix I** (Detection Monitoring) – antimony, arsenic, barium, chromium, lead, selenium, and thallium
- **Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS
- **Appendix II/Appendix IV** (Assessment Monitoring) – antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lead, lithium, mercury, molybdenum, selenium, thallium, vanadium, and zinc

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A summary of well/constituent pairs with 100% nondetects follows this letter.

Time series plots for all parameters at all wells are provided for the purpose of screening data at these wells (Figure A). Additionally, a separate section of box plots is included for all constituents at upgradient and downgradient wells (Figure B). The time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells. Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graphs. A summary of flagged outliers follows this report (Figure C).

Due to varying detection limits in background data sets as a result of improved laboratory practices, a substitution of the most recent reporting limit is used for all nondetects. Of particular note is the reporting limits for metals at upgradient well GWA-7. Due to higher dilutions needed for some metal analyses for this well, the reporting limits may vary between sampling events and are sometimes considerably higher than corresponding reporting limits for other wells. On the other hand, some detected observations are recorded at extremely low concentrations, below the MCL of 0.01 mg/L for arsenic, as an example. Therefore, the same reporting limit substitution is used for this well as for all other wells.

Data at all wells were evaluated during 2019 for the following: 1) outliers; 2) trends; 3) most appropriate statistical method for parameters based on site characteristics of groundwater data upgradient of the facility; and 4) eligibility of downgradient wells when intrawell statistical methods are recommended. However, interwell methods are currently constructed in accordance with the Georgia EPD regulations and are used to evaluate compliance samples in downgradient wells. Power curves are provided following this letter and demonstrate that the selected statistical methods comply with the USEPA Unified Guidance. The EPA suggests that the selected statistical method should provide at least 55% power at 3 standard deviations or at least 80% power at 4 standard deviations.

Summary of Statistical Methods – Detection Monitoring

Georgia EPD Appendix I Constituents:

Semi-Annual Sampling

Interwell Prediction Limits with 1 of 2 resample plan

Constituents Downgradient: 8 (The remaining constituents are not recently detected.)

Downgradient wells: 16

CCR Appendix III Constituents:

Semi-Annual Sampling

Interwell Prediction Limits with 1 of 2 resample plan (boron, calcium, chloride, fluoride, pH, sulfate and TDS)

Constituents Downgradient: 7

Downgradient wells: 16

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are nondetects, a nonparametric test is utilized. While the false positive rate associated with the parametric limits is based on an annual rate of 10% (5% per semi-annual event) as recommended by the EPA Unified Guidance (2009), the false positive rate associated with the nonparametric limits is dependent upon the available background sample size, number of future comparisons, and verification resample plan. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (US EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits, along with the following methodology for handling nondetects:

- No statistical analyses are required on wells and analytes containing 100% nondetects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% nondetects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for nondetects is the practical quantification limit (PQL) as reported by the laboratory. Due to varying detection limits, the following substitutions were made for nondetects: 0.003 mg/L for antimony; 0.005 mg/L for arsenic; 0.003 mg/L for beryllium; 0.01 mg/L for chromium; and 0.01 mg/L for selenium.
- When data contain between 15-50% nondetects, the Kaplan-Meier nondetect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% nondetects.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the interwell case, prediction limits are updated with upgradient well data during each event after careful screening for any new outliers. In some cases, an earlier portion of data may require deselection prior to construction of limits to provide sensitive limits that will rapidly detect changes in groundwater quality. Even though the data are excluded from the calculation, the values will continue to be reported and shown in tables and graphs.

Summary of Background Screening – Georgia EPD Appendix I Constituents – Conducted in August 2019

Outlier Testing

Time series plots were used to identify suspected outliers, or extreme values that would result in limits that are not representative of the current background data population. Suspected outliers at all wells and parameters were formally tested using Tukey's box plot method and, when identified, flagged in the computer database with "o" and deselected prior to construction of statistical limits.

Using the Tukey's box plot method, several outliers were identified. A summary of those findings was submitted with the August 2019 report. As a general rule, when the most recent values are identified as outliers, values are not flagged in the database (except in cases where they would cause background limits to be elevated) as they may represent a

possible trend. If future values do not remain at similar concentrations, these values will be flagged as outliers and deselected. Several low values exist in the data sets and appear on the graphs as possible low outliers relative to the laboratory's Practical Quantitation Limit. However, these values are observed trace values (i.e. measurements reported by the laboratory between the Method Detection Limit and the Practical Quantitation Limit) and, therefore, were not flagged as outliers.

Additionally, values that were not identified by Tukey's test but that are much higher than the remaining measurements were flagged as appropriate in order to obtain conservative prediction limits that are capable of detecting future changes. A summary of flagged values follows this letter (Figure C). As mentioned above, when any values are flagged in the database as outliers, they are plotted in a disconnected and lighter symbol on the time series graph. The accompanying data pages display the flagged value in a lighter font as well. A substitution of the most recent reporting limit was applied when varying detection limits existed in data.

Seasonality

No obvious seasonal patterns were observed on the time series plots for any of the detected data; therefore, no deseasonalizing adjustments were made to the data. When seasonal patterns are observed, data may be deseasonalized so that the resulting limits will correctly account for the seasonality as a predictable pattern rather than random variation or a release.

Trend Testing

While trends may be identified by visual inspection, a quantification of the trend and its significance is needed. The Sen's Slope/Mann Kendall trend test, which tests for statistically significant increasing or decreasing trends, was used to evaluate data at all upgradient wells and downgradient wells with detections.

In the absence of suspected contamination, significant trending data are typically not included as part of the background data used for construction of prediction limits. This step serves to eliminate the trend and, thus, reduce variation in background. When statistically significant decreasing trends are present, all available data are evaluated to determine whether earlier concentration levels are significantly different from current reported concentrations and will be deselected as necessary. This step would apply to upgradient wells GWA-7 and GWA-8 only since pooled data from these wells are used to construct interwell prediction limits. While this was not required, when any records of data are truncated for the reasons above, a summary report will be provided to show the date

ranges used in construction of the statistical limits. A summary of the trend analyses was submitted with the screening report.

Determination of Spatial Variation

The Analysis of Variance (ANOVA) was used to statistically evaluate differences in average concentrations among upgradient wells for constituents detected in downgradient wells. The ANOVA assists in identifying the most appropriate statistical approach. Interwell tests, which compare downgradient well data to statistical limits constructed from pooled upgradient well data, are appropriate when average concentrations are similar across upgradient wells. Intrawell tests, which compare compliance data from a single well to screened historical data within the same well, are appropriate when upgradient wells exhibit spatial variation; when statistical limits constructed from upgradient wells are not representative of the current background data population; and when downgradient water quality is unimpacted compared to upgradient water quality for the same parameter.

The ANOVA identified significant differences among upgradient well data for all constituents which would suggest intrawell methods as the most appropriate statistical method. However, interwell methods are currently constructed in accordance with the Georgia EPD regulations and are used to evaluate compliance samples in downgradient wells.

Summary of Background Screening – CCR Parameters – Conducted in March 2019

Outlier and Trend Testing

Time series plots were used to identify suspected outliers, or extreme values that would result in limits that are not representative of the current background data population. Suspected outliers at all wells for Appendix III and Appendix IV parameters were formally tested using Tukey's box plot method and, when identified, flagged in the computer database with "o" and deselected prior to construction of statistical limits.

Using the Tukey box plot method, several outliers were identified. A summary of those findings was included with the screening report. When the most recent values are identified as outliers, values were not flagged in the database at this time (except in cases where they would cause background limits to be elevated) as they may represent a possible trend. If future values do not remain at similar concentrations, these values will be flagged as outliers and deselected. Several low values exist in the data sets and appear on the graphs as possible low outliers relative to the laboratory's Practical Quantitation Limit. However, these values are observed trace values (i.e. measurements reported by the

laboratory between the Method Detection Limit and the Practical Quantitation Limit) and, therefore, were not flagged as outliers.

Of the outliers identified by Tukey's method, several values were flagged in the database, and the remaining values were similar to other measurements within a given well or neighboring wells or were reported nondetects. A summary of all flagged values follows this report (Figure C).

No obvious seasonal patterns were observed on the time series plots for any of the detected data; therefore, no deseasonalizing adjustments were made to the data. When seasonal patterns are observed, data may be deseasonalized so that the resulting limits will correctly account for the seasonality as a predictable pattern rather than random variation or a release.

The results of the Sen's Slope/Mann Kendall trend analyses showed a number of statistically significant increasing and decreasing trends for the Appendix III parameters. Most of the statistically significant trends identified, particularly in upgradient wells GWA-7 and GWA-8 since those data are used in construction of the interwell prediction limits, were relatively low in magnitude when compared to average concentrations. Also, the background period is short, making it difficult to determine whether an apparent trend represents a long-term change or simply normal year-to-year variation; therefore, no adjustments were made to the data sets.

Appendix III – Determination of Spatial Variation

The ANOVA identified no variation among upgradient well data for fluoride, making interwell analyses the most appropriate statistical method for this constituent. Variation was noted for boron, calcium, chloride, pH, sulfate, and TDS which suggests the use of intrawell methods as the most appropriate statistical method. However, interwell methods are currently constructed in accordance with the Georgia EPD regulations and are used to evaluate compliance samples in downgradient wells.

Statistical Analysis of Georgia EPD Appendix I Constituents – Fall 2020

Interwell prediction limits, combined with a 1 of 2 resample plan, were constructed from carefully screened pooled upgradient well data through October 2020 for antimony, arsenic, barium, chromium, lead, selenium, vanadium, and zinc (Figure D). The most recent sample at each downgradient well is compared to these background limits.

In the event of an initial exceedance of compliance well data, the 1 of 2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When the resample confirms the initial exceedance, a statistically significant increase (SSI) is identified and further research would be required to identify the cause of the exceedance (i.e. impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered to be a false positive result and, therefore, no further action is necessary. If no resample is collected, the initial exceedance is automatically confirmed. A summary table of the interwell prediction limits follows this letter and includes a list of exceedances. Exceedances were identified for the following well/constituent pairs:

- Arsenic: GWC-15, GWC-16, and GWC-20
- Barium: GWC-20

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure E). Upgradient well data are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the site. When trends are present in upgradient wells it is an indication of natural variability in groundwater quality unrelated to practices at the site. A summary of the trend test results follows this letter. Statistically significant trends were noted for the following well/constituent pairs:

Increasing Trends:

- Arsenic: GWC-15
- Barium: GWC-20

Decreasing Trends:

- Arsenic: GWA-7 (upgradient), GWA-8 (upgradient) and GWC-16
- Barium: GWA-8 (upgradient)
- Zinc: GWA-8 (upgradient) and GWC-9

When significant trends are noted upgradient of the facility, it is an indication that groundwater concentrations are naturally changing over time. Note that while the trend test identified a statistically significant decreasing trend for arsenic in upgradient well GWA-8, the slope is displayed as zero which represents the median slope of all the possible pairwise slopes. Both a summary and complete graphical presentation of the trend test results follow this letter.

Statistical Analysis of Appendix III Parameters – Fall 2020 Sample Event

Interwell prediction limits, combined with a 1 of 2 resample plan, were constructed using pooled upgradient well data through October 2020 to develop background limits for boron, calcium, chloride, fluoride, pH, sulfate and TDS (Figure F). In the event of an initial exceedance of compliance well data, the 1 of 2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When the resample confirms the initial exceedance, a statistically significant increase (SSI) is identified and further research would be required to identify the cause of the exceedance (i.e. impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered to be a false positive result and, therefore, no further action is necessary. The most recent sample from each downgradient well is compared to the background limit to determine whether there are statistically significant increases (SSIs). Summary tables of the prediction limits follow this letter.

The following interwell prediction limit exceedances were noted:

- Calcium: GWC-1, GWC-11, GWC-12, GWC-15, GWC-16, GWC-17, GWC-20, GWC-21, GWB-4R, and GWB-5R
- pH: Upper limit – GWC-15; Lower limit – GWC-12 and GWC-17
- Sulfate: GWC-11, GWC-12, GWC-16, GWC-17, GWC-20, GWC-21, GWB-4R, GWB-5R, and GWB-6R

Trend Tests – Exceedances

Data from downgradient well/constituent pairs found to exceed their respective prediction limit were further evaluated using the Sen's Slope/Mann Kendall trend test along with upgradient wells for the same constituents (Figure G). Upgradient wells are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the site. Such patterns are an indication of natural variability in groundwater unrelated to practices at the site.

The following statistically significant increasing trends were noted:

- Calcium: GWA-8 (upgradient), GWC-1, GWC-11, and GWC-16
- Sulfate: GWC-11 and GWB-6R

The following statistically significant decreasing trends were noted:

- Calcium: GWA-7 (upgradient), GWC-12
- pH: GWA-7 (upgradient)
- Sulfate: GWC-12

Appendix II and IV – Assessment Monitoring Program

In Assessment Monitoring, confidence intervals for each Appendix II and IV parameter at downgradient wells are compared against corresponding Groundwater Protection Standards (GWPS). The GWPS are based on state regulations or on site-specific background conditions as described below.

Data from all wells for Appendix II and IV parameters are first reassessed for outliers during each analysis. In some cases, previously flagged trace values and historical nondetect values were unflagged because the measurements were similar to other measurements within the same well or due to the nondetect substitution discussed earlier which resulted in lower reporting limits.

Next interwell upper tolerance limits (UTL's) are calculated using Sanitas software, from all historical pooled upgradient well data for Appendix II and IV constituents (Figure H). The UTLs serve as site-specific background limits for each constituent. Parametric tolerance limits are used when data follow a normal or transformed-normal distribution, i.e. fluoride. When data contain greater than 50% nondetects or do not follow a normal or transformed-normal distribution, non-parametric tolerance limits are used. In all cases, a nonparametric tolerance limit was constructed to provide the most conservative approach. Particularly in the case of combined radium 226 + 228, a nonparametric tolerance limit was selected due to the transformation required for the parametric limit which resulted in an extremely high upper tolerance limit.

The background limits are then used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and Georgia EPD Rule 391-3-4-.10(6)(a). As described in 40 CFR §257.95(h) (1-3), the GWPS is:

- The maximum contaminant level (MCL) established under §141.62 and §141.66 of this title;
- The background level where an MCL has not been established for a constituent (i.e. cobalt, lead, lithium, and molybdenum); and
- The respective background level for a constituent when the background level is higher than the MCL.

For the current analysis and evaluation of the Fall 2020 sampling data, GWPS were established following the above Georgia EPD Rule requirements (Figure I).

To complete the statistical comparison of current sampling data to GWPS, confidence intervals were constructed using Sanitas software using data from 2016 through the present for each of the Appendix II and IV constituents in each downgradient well (Figure J). The confidence intervals were then compared to the State GWPS (Georgia EPD rules). Only when the entire confidence interval is above a GWPS is the downgradient well/constituent pair considered to exceed its respective standard. If there is an exceedance of the GWPS, a statistically significant level (SSL) exceedance is identified. The confidence intervals and graphical comparisons to State GWPS are presented in Figure J, with summary tables of exceedances.

The following confidence interval exceedances were noted:

- Arsenic: GWC-15, GWC-16, GWC-20
- Molybdenum: GWC-1, GWC-15, GWC-16, GWC-20, GWC-21, GWB-4R

SUMMARY

Based on the statistical analyses described in this letter, the following statistical exceedances were noted:

Prediction Limits (Detection Monitoring Parameters):

Appendix I:

- Arsenic: GWC-15, GWC-16, and GWC-20
- Barium: GWC-20

Appendix III:

- Calcium: GWC-1, GWC-11, GWC-12, GWC-15, GWC-16, GWC-17, GWC-20, GWC-21, GWB-4R, and GWB-5R
- pH: Upper limit – GWC-15; Lower limit – GWC-12 and GWC-17
- Sulfate: GWC-11, GWC-12, GWC-16, GWC-17, GWC-20, GWC-21, GWB-4R, GWB-5R, and GWB-6R

Confidence Intervals (Assessment Monitoring Parameters):

- Arsenic: GWC-15, GWC-16, GWC-20
- Molybdenum: GWC-1, GWC-15, GWC-16, GWC-20, GWC-21, GWB-4R

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Plant Kraft's Grumman Road Landfill. If you have any questions or comments, please feel free to contact me.

For Groundwater Stats Consulting,



Kristina L. Rayner
Groundwater Statistician

100% Nondetects

Date: 12/8/2020 8:25 AM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

Antimony (mg/L)

GWA-8, GWC-12, GWC-15, GWC-17

Arsenic (mg/L)

GWC-11

Beryllium (mg/L)

GWC-1, GWC-11, GWC-15, GWC-20, GWC-21

Cadmium (mg/L)

GWA-8, 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)

GWA-7, GWC-1, GWC-11, GWC-13, GWC-14, GWC-15, GWC-16, GWC-2, GWC-20, GWC-21, GWC-22, GWB-6R

Mercury (mg/L)

GWA-8, GWC-11, GWC-12, GWC-14, GWC-15, GWC-16, GWC-17, GWC-2, GWC-20, GWC-21, GWC-22, GWB-5R

Molybdenum (mg/L)

GWA-8, GWC-12, GWC-2, GWC-22, GWC-9

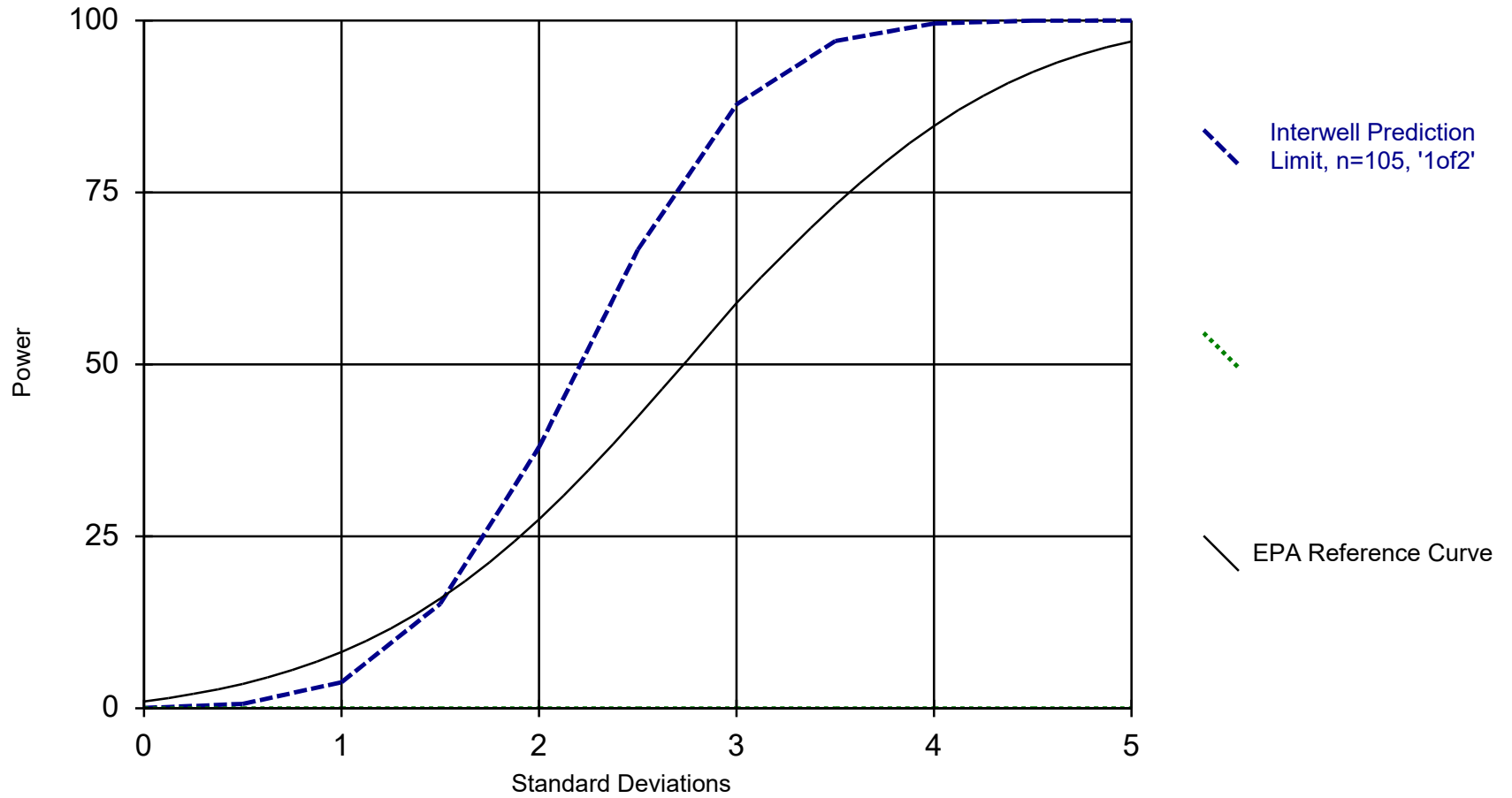
Selenium (mg/L)

GWC-13

Thallium (mg/L)

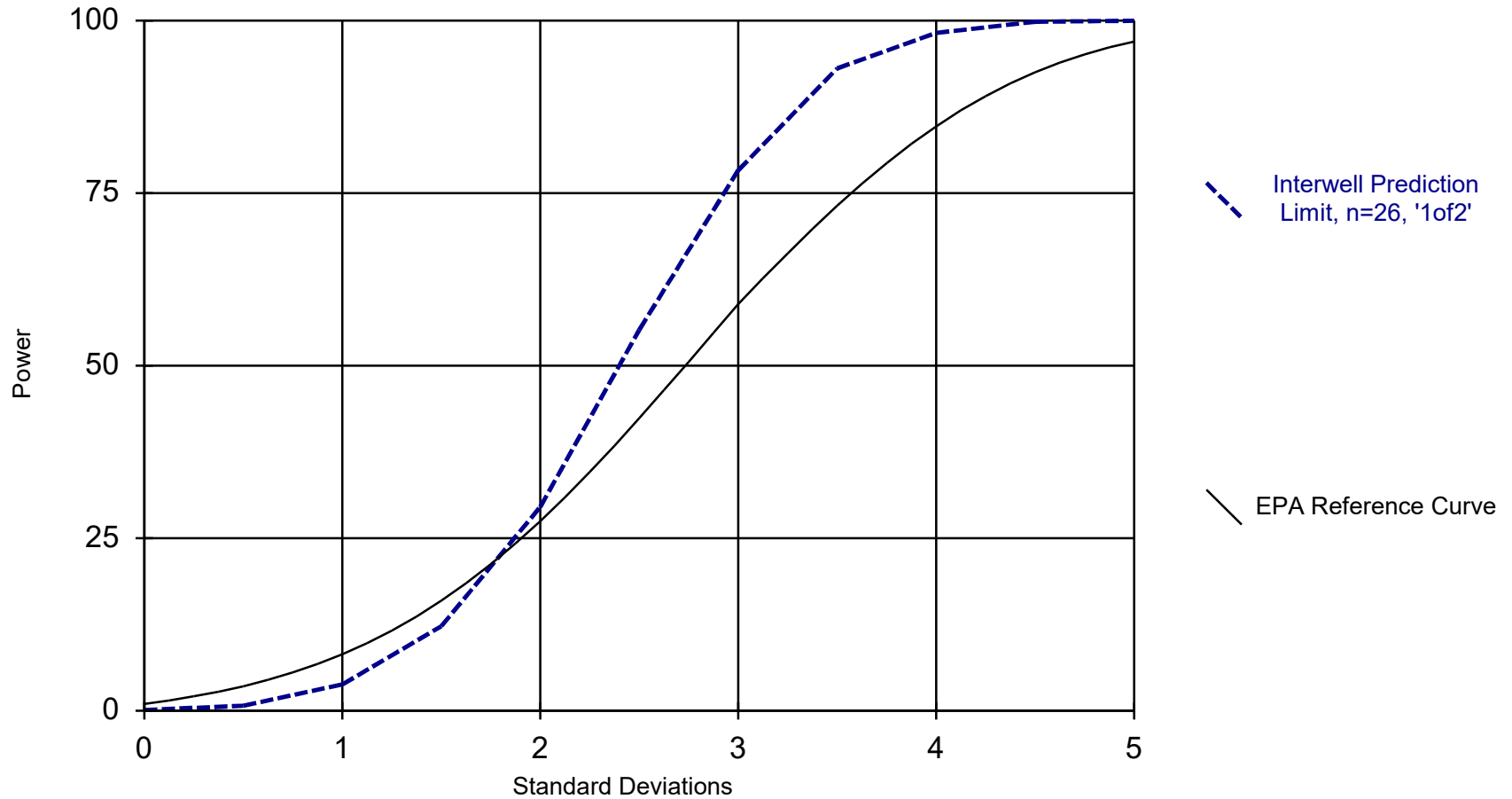
GWC-13, GWC-15, GWC-20, GWC-9, GWB-6R

Power Curve - State



Analysis Run 2/17/2021 4:31 PM View: Trend Tests - State PL Exceedances
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Power Curve - Federal



Kappa = 2.309, based on 16 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 2/17/2021 4:32 PM View: Trend Tests - State PL Exceedances
Grumman Road Landfill Client: Southern Company Data: Grumman Road

State Interwell Prediction Limits - Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:15 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	GWC-15	0.0287	9/30/2020	0.24	Yes	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-16	0.0287	9/30/2020	0.044	Yes	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-20	0.0287	9/30/2020	0.31	Yes	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Barium (mg/L)	GWC-20	0.22	9/30/2020	0.35	Yes	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2

State Interwell Prediction Limits - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:15 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	GWC-1	0.003	9/28/2020	0.00035J	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWC-11	0.003	9/29/2020	0.00051J	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWC-13	0.003	9/28/2020	0.003ND	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWC-14	0.003	9/29/2020	0.003ND	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWC-16	0.003	9/30/2020	0.003ND	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWC-2	0.003	9/29/2020	0.0016J	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWC-20	0.003	9/30/2020	0.003ND	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWC-21	0.003	9/30/2020	0.00033J	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWC-22	0.003	9/30/2020	0.0016J	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWC-9	0.003	10/1/2020	0.003ND	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWB-4R	0.003	10/1/2020	0.003ND	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWB-5R	0.003	9/30/2020	0.0003J	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWB-6R	0.003	9/30/2020	0.00059J	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-1	0.0287	9/28/2020	0.0058	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-12	0.0287	9/29/2020	0.005ND	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-13	0.0287	9/28/2020	0.005ND	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-14	0.0287	9/29/2020	0.005ND	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-15	0.0287	9/30/2020	0.24	Yes	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-16	0.0287	9/30/2020	0.044	Yes	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-17	0.0287	9/30/2020	0.0012J	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-2	0.0287	9/29/2020	0.005ND	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-20	0.0287	9/30/2020	0.31	Yes	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-21	0.0287	9/30/2020	0.0029J	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-22	0.0287	9/30/2020	0.005ND	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-9	0.0287	10/1/2020	0.005ND	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWB-4R	0.0287	10/1/2020	0.0027J	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWB-5R	0.0287	9/30/2020	0.0017J	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWB-6R	0.0287	9/30/2020	0.004J	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Barium (mg/L)	GWC-1	0.22	9/28/2020	0.051	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-11	0.22	9/29/2020	0.14	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-12	0.22	9/29/2020	0.018	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-13	0.22	9/28/2020	0.029	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-14	0.22	9/29/2020	0.026	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-15	0.22	9/30/2020	0.034	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-16	0.22	9/30/2020	0.14	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-17	0.22	9/30/2020	0.035	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-2	0.22	9/29/2020	0.049	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-20	0.22	9/30/2020	0.35	Yes	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-21	0.22	9/30/2020	0.19	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-22	0.22	9/30/2020	0.045	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-9	0.22	10/1/2020	0.15	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWB-4R	0.22	10/1/2020	0.077	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWB-5R	0.22	9/30/2020	0.16	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWB-6R	0.22	9/30/2020	0.092	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Chromium (mg/L)	GWC-1	0.068	9/28/2020	0.0024J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-11	0.068	9/29/2020	0.0011J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-12	0.068	9/29/2020	0.00085J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-13	0.068	9/28/2020	0.00062J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-14	0.068	9/29/2020	0.01ND	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-15	0.068	9/30/2020	0.0016J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2

State Interwell Prediction Limits - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:15 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Chromium (mg/L)	GWC-16	0.068	9/30/2020	0.00098J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-17	0.068	9/30/2020	0.00096J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-2	0.068	9/29/2020	0.01ND	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-20	0.068	9/30/2020	0.0013J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-21	0.068	9/30/2020	0.00067J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-22	0.068	9/30/2020	0.00064J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-9	0.068	10/1/2020	0.0012J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWB-4R	0.068	10/1/2020	0.002J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWB-5R	0.068	9/30/2020	0.0018J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWB-6R	0.068	9/30/2020	0.0045J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-1	0.013	9/28/2020	0.000043J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-11	0.013	9/29/2020	0.00032J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-12	0.013	9/29/2020	0.000037J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-13	0.013	9/28/2020	0.000064J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-14	0.013	9/29/2020	0.005ND	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-15	0.013	9/30/2020	0.000047J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-16	0.013	9/30/2020	0.000091J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-17	0.013	9/30/2020	0.00006J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-2	0.013	9/29/2020	0.005ND	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-20	0.013	9/30/2020	0.005ND	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-21	0.013	9/30/2020	0.000054J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-22	0.013	9/30/2020	0.00023J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-9	0.013	10/1/2020	0.000038J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWB-4R	0.013	10/1/2020	0.00026J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWB-5R	0.013	9/30/2020	0.0012J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWB-6R	0.013	9/30/2020	0.00008J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-1	0.0438	9/28/2020	0.01ND	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-11	0.0438	9/29/2020	0.0024J	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-12	0.0438	9/29/2020	0.01ND	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-14	0.0438	9/29/2020	0.0051J	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-15	0.0438	9/30/2020	0.01ND	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-16	0.0438	9/30/2020	0.0037J	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-17	0.0438	9/30/2020	0.01ND	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-2	0.0438	9/29/2020	0.01ND	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-20	0.0438	9/30/2020	0.01ND	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-21	0.0438	9/30/2020	0.0061J	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-22	0.0438	9/30/2020	0.01ND	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-9	0.0438	10/1/2020	0.01ND	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWB-4R	0.0438	10/1/2020	0.01ND	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWB-5R	0.0438	9/30/2020	0.01ND	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWB-6R	0.0438	9/30/2020	0.0023J	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-1	0.425	9/28/2020	0.0042J	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-11	0.425	9/29/2020	0.0023J	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-12	0.425	9/29/2020	0.0046J	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-13	0.425	9/28/2020	0.01ND	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-14	0.425	9/29/2020	0.01ND	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-15	0.425	9/30/2020	0.0028J	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-16	0.425	9/30/2020	0.0028J	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-17	0.425	9/30/2020	0.01ND	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-2	0.425	9/29/2020	0.01ND	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2

State Interwell Prediction Limits - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:15 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Vanadium (mg/L)	GWC-20	0.425	9/30/2020	0.0029J	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-21	0.425	9/30/2020	0.0029J	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-22	0.425	9/30/2020	0.01ND	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-9	0.425	10/1/2020	0.01ND	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWB-4R	0.425	10/1/2020	0.0047J	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWB-5R	0.425	9/30/2020	0.0037J	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWB-6R	0.425	9/30/2020	0.018	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Zinc (mg/L)	GWC-1	0.16	9/28/2020	0.0092J	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-11	0.16	9/29/2020	0.0031J	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-12	0.16	9/29/2020	0.0074J	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-13	0.16	9/28/2020	0.016	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-14	0.16	9/29/2020	0.01ND	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-15	0.16	9/30/2020	0.032	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-16	0.16	9/30/2020	0.0051J	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-17	0.16	9/30/2020	0.0043J	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-2	0.16	9/29/2020	0.056	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-20	0.16	9/30/2020	0.031	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-21	0.16	9/30/2020	0.0096J	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-22	0.16	9/30/2020	0.01ND	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-9	0.16	10/1/2020	0.025	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWB-4R	0.16	10/1/2020	0.0064J	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWB-5R	0.16	9/30/2020	0.01ND	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWB-6R	0.16	9/30/2020	0.01ND	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2

State Trend Test Summary - Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:28 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Arsenic (mg/L)	GWA-7 (bg)	-0.000478	-4.1	-2.58	Yes	49	57.14	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWA-8 (bg)	0	-3.216	-2.58	Yes	70	91.43	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWC-15	0.003848	7.868	2.58	Yes	50	50	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWC-16	-0.001273	-2.969	-2.58	Yes	69	0	n/a	n/a	0.01	NP
Barium (mg/L)	GWA-8 (bg)	-0.0029	-8.428	-2.58	Yes	69	0	n/a	n/a	0.01	NP
Barium (mg/L)	GWC-20	0.008044	224	139	Yes	29	0	n/a	n/a	0.01	NP
Zinc (mg/L)	GWA-8 (bg)	-0.0002021	-3.834	-2.58	Yes	62	25.81	n/a	n/a	0.01	NP
Zinc (mg/L)	GWC-9	-0.0002436	-3.281	-2.58	Yes	42	42.86	n/a	n/a	0.01	NP

State Trend Test Summary - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:28 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Arsenic (mg/L)	GWA-7 (bg)	-0.000478	-4.1	-2.58	Yes	49	57.14	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWA-8 (bg)	0	-3.216	-2.58	Yes	70	91.43	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWC-15	0.003848	7.868	2.58	Yes	50	50	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWC-16	-0.001273	-2.969	-2.58	Yes	69	0	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWC-20	0.01725	123	139	No	29	3.448	n/a	n/a	0.01	NP
Barium (mg/L)	GWA-7 (bg)	-0.0002048	-0.3474	-2.58	No	48	0	n/a	n/a	0.01	NP
Barium (mg/L)	GWA-8 (bg)	-0.0029	-8.428	-2.58	Yes	69	0	n/a	n/a	0.01	NP
Barium (mg/L)	GWC-20	0.008044	224	139	Yes	29	0	n/a	n/a	0.01	NP
Zinc (mg/L)	GWA-7 (bg)	0.001011	2.325	2.58	No	43	30.23	n/a	n/a	0.01	NP
Zinc (mg/L)	GWA-8 (bg)	-0.0002021	-3.834	-2.58	Yes	62	25.81	n/a	n/a	0.01	NP
Zinc (mg/L)	GWC-15	0	0.5524	2.58	No	46	86.96	n/a	n/a	0.01	NP
Zinc (mg/L)	GWC-2	0	-1.981	-2.58	No	42	76.19	n/a	n/a	0.01	NP
Zinc (mg/L)	GWC-20	0	16	111	No	25	80	n/a	n/a	0.01	NP
Zinc (mg/L)	GWC-9	-0.0002436	-3.281	-2.58	Yes	42	42.86	n/a	n/a	0.01	NP

Federal Interwell Prediction Limits - Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:21 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Calcium (mg/L)	GWC-1	35.8	9/28/2020	70.7	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-11	35.8	9/29/2020	123	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-12	35.8	9/29/2020	42	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-15	35.8	9/30/2020	109	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-16	35.8	9/30/2020	177	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-17	35.8	9/30/2020	53.5	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-20	35.8	9/30/2020	292	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-21	35.8	9/30/2020	98.4	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-4R	35.8	10/1/2020	48.4	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-5R	35.8	9/30/2020	70.4	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
pH (SU)	GWC-12	6.43	9/29/2020	3.95	Yes	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-15	6.43	9/30/2020	6.71	Yes	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-17	6.43	9/30/2020	4.08	Yes	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-11	160	9/29/2020	516	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-12	160	9/29/2020	237	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-16	160	9/30/2020	736	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-17	160	9/30/2020	193	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-20	160	9/30/2020	956	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-21	160	9/30/2020	306	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-4R	160	10/1/2020	178	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-5R	160	9/30/2020	339	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-6R	160	9/30/2020	339	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2

Federal Interwell Prediction Limits - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:21 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	GWC-1	21.8	9/28/2020	0.69	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-11	21.8	9/29/2020	1.2	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-12	21.8	9/29/2020	4.7	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-13	21.8	9/28/2020	0.24	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-14	21.8	9/29/2020	0.053	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-15	21.8	9/30/2020	0.86	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-16	21.8	9/30/2020	8.1	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-17	21.8	9/30/2020	0.86	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-2	21.8	9/29/2020	0.024J	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-20	21.8	9/30/2020	9.9	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-21	21.8	9/30/2020	2.3	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-22	21.8	9/30/2020	0.25	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-9	21.8	10/1/2020	0.028J	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWB-4R	21.8	10/1/2020	5.2	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWB-5R	21.8	9/30/2020	4	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWB-6R	21.8	9/30/2020	4.2	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-1	35.8	9/28/2020	70.7	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-11	35.8	9/29/2020	123	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-12	35.8	9/29/2020	42	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-13	35.8	9/28/2020	2.9	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-14	35.8	9/29/2020	30.8	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-15	35.8	9/30/2020	109	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-16	35.8	9/30/2020	177	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-17	35.8	9/30/2020	53.5	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-2	35.8	9/29/2020	0.18J	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-20	35.8	9/30/2020	292	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-21	35.8	9/30/2020	98.4	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-22	35.8	9/30/2020	20.9	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-9	35.8	10/1/2020	5.5	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-4R	35.8	10/1/2020	48.4	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-5R	35.8	9/30/2020	70.4	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-6R	35.8	9/30/2020	27.5	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-1	260	9/28/2020	13.8	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-11	260	9/29/2020	143	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-12	260	9/29/2020	24.3	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-13	260	9/28/2020	4.3	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-14	260	9/29/2020	10.6	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-15	260	9/30/2020	1.7	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-16	260	9/30/2020	39.6	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-17	260	9/30/2020	257	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-2	260	9/29/2020	5.4	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-20	260	9/30/2020	34.9	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-21	260	9/30/2020	23.7	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-22	260	9/30/2020	8.5	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-9	260	10/1/2020	16.8	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWB-4R	260	10/1/2020	15.7	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWB-5R	260	9/30/2020	24.1	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWB-6R	260	9/30/2020	53.9	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Fluoride (mg/L)	GWC-1	0.5492	9/28/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-11	0.5492	9/29/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2

Federal Interwell Prediction Limits - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:21 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	GWC-12	0.5492	9/29/2020	0.16	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-13	0.5492	9/28/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-14	0.5492	9/29/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-15	0.5492	9/30/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-16	0.5492	9/30/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-17	0.5492	9/30/2020	0.15	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-2	0.5492	9/29/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-20	0.5492	9/30/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-21	0.5492	9/30/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-22	0.5492	9/30/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-9	0.5492	10/1/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWB-4R	0.5492	10/1/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWB-5R	0.5492	9/30/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWB-6R	0.5492	9/30/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
pH (SU)	GWC-1	6.43	9/28/2020	5.79	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-11	6.43	9/29/2020	4.77	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-12	6.43	9/29/2020	3.95	Yes	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-13	6.43	9/28/2020	4.76	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-14	6.43	9/29/2020	5.69	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-15	6.43	9/30/2020	6.71	Yes	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-16	6.43	9/30/2020	5.47	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-17	6.43	9/30/2020	4.08	Yes	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-2	6.43	9/29/2020	4.6	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-20	6.43	9/30/2020	6.04	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-21	6.43	9/30/2020	5.82	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-22	6.43	9/30/2020	4.63	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-9	6.43	10/1/2020	4.42	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWB-4R	6.43	10/1/2020	5.75	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWB-5R	6.43	9/30/2020	4.99	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWB-6R	6.43	9/30/2020	5.39	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-1	160	9/28/2020	71.6	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-11	160	9/29/2020	516	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-12	160	9/29/2020	237	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-13	160	9/28/2020	25.6	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-14	160	9/29/2020	93.5	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-15	160	9/30/2020	18.5	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-16	160	9/30/2020	736	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-17	160	9/30/2020	193	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-2	160	9/29/2020	8.6	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-20	160	9/30/2020	956	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-21	160	9/30/2020	306	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-22	160	9/30/2020	65.5	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-9	160	10/1/2020	35	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-4R	160	10/1/2020	178	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-5R	160	9/30/2020	339	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-6R	160	9/30/2020	339	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-1	3660	9/28/2020	373	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-11	3660	9/29/2020	1100	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-12	3660	9/29/2020	440	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-13	3660	9/28/2020	60	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2

Federal Interwell Prediction Limits - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:21 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Total Dissolved Solids (mg/L)	GWC-14	3660	9/29/2020	187	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-15	3660	9/30/2020	434	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-16	3660	9/30/2020	1140	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-17	3660	9/30/2020	752	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-2	3660	9/29/2020	33	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-20	3660	9/30/2020	1860	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-21	3660	9/30/2020	634	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-22	3660	9/30/2020	113	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-9	3660	10/1/2020	111	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWB-4R	3660	10/1/2020	424	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWB-5R	3660	9/30/2020	652	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWB-6R	3660	9/30/2020	816	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2

Federal Trend Test Summary - Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:25 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>Xform</u>	<u>Alpha</u>	<u>Method</u>
Calcium (mg/L)	GWA-7 (bg)	-0.8582	-57	-43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWA-8 (bg)	2.404	45	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-1	7.096	46	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-11	18.54	52	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-12	-14.86	-76	-43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-16	33.97	47	43	Yes	13	0	n/a	n/a	0.01	NP
pH (SU)	GWA-7 (bg)	-0.09426	-54	-48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-11	90.66	44	43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-12	-183.6	-62	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWB-6R	29.16	44	43	Yes	13	0	n/a	n/a	0.01	NP

Federal Trend Test Summary - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:25 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Calcium (mg/L)	GWA-7 (bg)	-0.8582	-57	-43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWA-8 (bg)	2.404	45	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-1	7.096	46	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-11	18.54	52	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-12	-14.86	-76	-43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-15	0	0	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-16	33.97	47	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-17	-7.952	-22	-43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-20	13.21	22	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-21	10.66	25	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWB-4R	11.14	38	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWB-5R	7.096	39	43	No	13	0	n/a	n/a	0.01	NP
pH (SU)	GWA-7 (bg)	-0.09426	-54	-48	Yes	14	0	n/a	n/a	0.01	NP
pH (SU)	GWA-8 (bg)	-0.00534	-6	-48	No	14	0	n/a	n/a	0.01	NP
pH (SU)	GWC-12	-0.0104	-13	-53	No	15	0	n/a	n/a	0.01	NP
pH (SU)	GWC-15	0.09104	43	48	No	14	0	n/a	n/a	0.01	NP
pH (SU)	GWC-17	-0.003342	-3	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWA-7 (bg)	-4.311	-28	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWA-8 (bg)	-5.525	-22	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-11	90.66	44	43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-12	-183.6	-62	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-16	104.4	36	43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-17	-21.55	-9	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-20	8.539	4	43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-21	7.935	19	43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWB-4R	-8.849	-10	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWB-5R	24.49	24	43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWB-6R	29.16	44	43	Yes	13	0	n/a	n/a	0.01	NP

Tolerance Limit Summary Table

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/1/2021, 1:50 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Bg N</u>	<u>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	n/a	0.003	119	n/a	n/a	94.96	n/a	n/a	0.002234	NP Inter
Arsenic (mg/L)	n/a	0.0287	119	n/a	n/a	77.31	n/a	n/a	0.002234	NP Inter
Barium (mg/L)	n/a	0.22	117	n/a	n/a	0	n/a	n/a	0.002475	NP Inter
Beryllium (mg/L)	n/a	0.003	39	n/a	n/a	53.85	n/a	n/a	0.1353	NP Inter
Cadmium (mg/L)	n/a	0.0025	37	n/a	n/a	94.59	n/a	n/a	0.1499	NP Inter
Chromium (mg/L)	n/a	0.068	118	n/a	n/a	63.56	n/a	n/a	0.002352	NP Inter
Cobalt (mg/L)	n/a	0.0102	38	n/a	n/a	52.63	n/a	n/a	0.1424	NP Inter
Combined Radium 226 + 228 (pCi/L)	n/a	33.8	26	n/a	n/a	0	n/a	n/a	0.2635	NP Inter
Fluoride (mg/L)	n/a	0.49	30	n/a	n/a	23.33	n/a	n/a	0.2146	NP Inter
Lead (mg/L)	n/a	0.013	115	n/a	n/a	76.52	n/a	n/a	0.002743	NP Inter
Lithium (mg/L)	n/a	0.03	26	n/a	n/a	76.92	n/a	n/a	0.2635	NP Inter
Mercury (mg/L)	n/a	0.0002	22	n/a	n/a	86.36	n/a	n/a	0.3235	NP Inter
Molybdenum (mg/L)	n/a	0.01	26	n/a	n/a	88.46	n/a	n/a	0.2635	NP Inter
Selenium (mg/L)	n/a	0.0438	119	n/a	n/a	83.19	n/a	n/a	0.002234	NP Inter
Thallium (mg/L)	n/a	0.001	58	n/a	n/a	93.1	n/a	n/a	0.05105	NP Inter
Vanadium (mg/L)	n/a	0.425	111	n/a	n/a	64.86	n/a	n/a	0.003368	NP Inter
Zinc (mg/L)	n/a	0.16	105	n/a	n/a	27.62	n/a	n/a	0.004581	NP Inter

GRUMMAN ROAD LANDFILL GWPS			
Constituent Name	MCL	Background Limit	GWPS
Antimony, Total (mg/L)	0.006	0.003	0.006
Arsenic, Total (mg/L)	0.01	0.029	0.029
Barium, Total (mg/L)	2	0.22	2
Beryllium, Total (mg/L)	0.004	0.003	0.004
Cadmium, Total (mg/L)	0.005	0.0025	0.005
Chromium, Total (mg/L)	0.1	0.068	0.1
Cobalt, Total (mg/L)	n/a	0.01	0.01
Combined Radium, Total (pCi/L)	5	33.8	33.8
Fluoride, Total (mg/L)	4	0.49	4
Lead, Total (mg/L)	n/a	0.013	0.013
Lithium, Total (mg/L)	n/a	0.03	0.03
Mercury, Total (mg/L)	0.002	0.0002	0.002
Molybdenum, Total (mg/L)	n/a	0.01	0.01
Selenium, Total (mg/L)	0.05	0.044	0.05
Thallium, Total (mg/L)	0.002	0.001	0.002
Vanadium (mg/L)	n/a	0.43	0.43
Zinc (mg/L)	n/a	0.16	0.16

**Highlighted cells indicated Background is higher than MCLs.*

**MCL = Maximum Contaminant Level*

**GWPS - Groundwater Protection Standard*

Appendix II and IV Confidence Interval Summary Table - Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/1/2021, 1:55 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig. N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	GWC-15	0.1476	0.05755	0.029	Yes 17	0.1099	0.07879	0	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	GWC-16	0.089	0.0466	0.029	Yes 18	0.07044	0.01771	0	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-20	0.3663	0.2809	0.029	Yes 17	0.3236	0.06818	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-1	0.1716	0.07167	0.01	Yes 13	0.1216	0.06717	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-15	0.1145	0.0908	0.01	Yes 13	0.1026	0.01591	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-16	0.1953	0.1126	0.01	Yes 13	0.154	0.05558	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-20	0.2598	0.1032	0.01	Yes 13	0.1815	0.1053	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-21	0.06514	0.01913	0.01	Yes 13	0.04214	0.03094	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWB-4R	0.15	0.0209	0.01	Yes 13	0.06482	0.05453	0	None	No	0.01	NP (normality)

Appendix II and IV Confidence Interval Summary Table - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/1/2021, 1:55 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	GWA-7 (bg)	0.003	0.0017	0.006	No 17	0.002571	0.0008176	76.47	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-1	0.003	0.00061	0.006	No 17	0.002704	0.0008382	88.24	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-11	0.003	0.00051	0.006	No 17	0.001724	0.001246	47.06	None	No	0.01	NP (normality)
Antimony (mg/L)	GWC-13	0.003	0.0006	0.006	No 17	0.002859	0.0005821	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-14	0.003	0.003	0.006	No 18	0.003	0	100	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-16	0.003	0.003	0.006	No 18	0.003	0	100	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-2	0.003	0.0016	0.006	No 17	0.002818	0.0005175	88.24	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-20	0.003	0.0019	0.006	No 17	0.002935	0.0002668	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-21	0.003	0.00033	0.006	No 17	0.002843	0.0006476	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-22	0.003	0.0022	0.006	No 17	0.002573	0.0008769	76.47	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-9	0.003	0.0016	0.006	No 17	0.002761	0.0007121	88.24	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWB-4R	0.003	0.0003	0.006	No 17	0.002841	0.0006548	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWB-5R	0.003	0.00054	0.006	No 17	0.002696	0.0008579	88.24	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWB-6R	0.003	0.00059	0.006	No 17	0.002858	0.0005845	94.12	None	No	0.01	NP (NDs)
Arsenic (mg/L)	GWA-7 (bg)	0.01003	0.004246	0.029	No 17	0.008241	0.006088	23.53	Kaplan-Meierx^(1/3)		0.01	Param.
Arsenic (mg/L)	GWA-8 (bg)	0.005	0.0009	0.029	No 18	0.003569	0.002086	66.67	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-1	0.0058	0.0018	0.029	No 16	0.0046	0.006187	0	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-12	0.005	0.0009	0.029	No 17	0.004253	0.001664	82.35	None	No	0.01	NP (NDs)
Arsenic (mg/L)	GWC-13	0.005	0.0006	0.029	No 17	0.004481	0.001465	88.24	None	No	0.01	NP (NDs)
Arsenic (mg/L)	GWC-14	0.0026	0.0017	0.029	No 18	0.002363	0.001043	11.11	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-15	0.1476	0.05755	0.029	Yes 17	0.1099	0.07879	0	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	GWC-16	0.089	0.0466	0.029	Yes 18	0.07044	0.01771	0	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-17	0.005	0.0011	0.029	No 17	0.002589	0.001853	35.29	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-2	0.005	0.00094	0.029	No 17	0.004231	0.001715	82.35	None	No	0.01	NP (NDs)
Arsenic (mg/L)	GWC-20	0.3663	0.2809	0.029	Yes 17	0.3236	0.06818	0	None	No	0.01	Param.
Arsenic (mg/L)	GWC-21	0.00419	0.002641	0.029	No 17	0.004106	0.001342	35.29	Kaplan-MeierNo		0.01	Param.
Arsenic (mg/L)	GWC-22	0.005	0.0006	0.029	No 17	0.002975	0.002038	47.06	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-9	0.005	0.00084	0.029	No 17	0.004755	0.001009	94.12	None	No	0.01	NP (NDs)
Arsenic (mg/L)	GWB-4R	0.003241	0.0018	0.029	No 17	0.002521	0.00115	11.76	None	No	0.01	Param.
Arsenic (mg/L)	GWB-5R	0.005	0.001	0.029	No 17	0.002406	0.001814	23.53	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWB-6R	0.00259	0.001237	0.029	No 17	0.002943	0.001663	29.41	Kaplan-Meierx^(1/3)		0.01	Param.
Barium (mg/L)	GWA-7 (bg)	0.147	0.08279	2	No 16	0.1149	0.04934	0	None	No	0.01	Param.
Barium (mg/L)	GWA-8 (bg)	0.06557	0.05823	2	No 18	0.0619	0.006073	0	None	No	0.01	Param.
Barium (mg/L)	GWC-1	0.05709	0.05031	2	No 17	0.0537	0.005409	0	None	No	0.01	Param.
Barium (mg/L)	GWC-11	0.116	0.06249	2	No 17	0.08923	0.04267	0	None	No	0.01	Param.
Barium (mg/L)	GWC-12	0.0191	0.017	2	No 17	0.01841	0.00374	0	None	No	0.01	NP (normality)
Barium (mg/L)	GWC-13	0.02514	0.02028	2	No 17	0.02271	0.003874	0	None	No	0.01	Param.
Barium (mg/L)	GWC-14	0.038	0.0248	2	No 18	0.03612	0.01865	0	None	No	0.01	NP (normality)
Barium (mg/L)	GWC-15	0.04776	0.03849	2	No 17	0.04312	0.007403	0	None	No	0.01	Param.
Barium (mg/L)	GWC-16	0.1226	0.05782	2	No 16	0.0999	0.0697	0	None	ln(x)	0.01	Param.
Barium (mg/L)	GWC-17	0.1149	0.04739	2	No 17	0.08628	0.05882	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	GWC-2	0.057	0.049	2	No 16	0.0535	0.007975	0	None	No	0.01	NP (normality)
Barium (mg/L)	GWC-20	0.164	0.078	2	No 17	0.1374	0.09319	0	None	No	0.01	NP (normality)
Barium (mg/L)	GWC-21	0.0927	0.04919	2	No 17	0.07652	0.04397	0	None	ln(x)	0.01	Param.
Barium (mg/L)	GWC-22	0.09837	0.06303	2	No 17	0.0807	0.0282	0	None	No	0.01	Param.
Barium (mg/L)	GWC-9	0.2639	0.1907	2	No 17	0.2273	0.05839	0	None	No	0.01	Param.
Barium (mg/L)	GWB-4R	0.09313	0.07851	2	No 17	0.08629	0.01261	0	None	ln(x)	0.01	Param.
Barium (mg/L)	GWB-5R	0.1569	0.09433	2	No 17	0.1295	0.05651	0	None	x^(1/3)	0.01	Param.
Barium (mg/L)	GWB-6R	0.107	0.013	2	No 17	0.07405	0.04251	0	None	No	0.01	NP (normality)
Beryllium (mg/L)	GWA-7 (bg)	0.003	0.0003	0.004	No 13	0.001908	0.001288	53.85	None	No	0.01	NP (normality)
Beryllium (mg/L)	GWA-8 (bg)	0.00024	0.00019	0.004	No 13	0.0004169	0.0007763	7.692	None	No	0.01	NP (normality)
Beryllium (mg/L)	GWC-12	0.0008417	0.0005038	0.004	No 13	0.00068	0.000238	0	None	sqrt(x)	0.01	Param.
Beryllium (mg/L)	GWC-13	0.003	0.000058	0.004	No 13	0.002774	0.000816	92.31	None	No	0.01	NP (NDs)
Beryllium (mg/L)	GWC-14	0.003	0.00009	0.004	No 13	0.002327	0.001279	76.92	None	No	0.01	NP (NDs)
Beryllium (mg/L)	GWC-16	0.003	0.000068	0.004	No 13	0.0009827	0.0014	30.77	None	No	0.01	NP (normality)

Appendix II and IV Confidence Interval Summary Table - All Results Page 2

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/1/2021, 1:55 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Beryllium (mg/L)	GWC-17	0.002825	0.00159	0.004	No 13	0.002277	0.0009284	0	None	ln(x)	0.01	Param.
Beryllium (mg/L)	GWC-2	0.003	0.000088	0.004	No 14	0.001972	0.001433	64.29	None	No	0.01	NP (normality)
Beryllium (mg/L)	GWC-22	0.003	0.000076	0.004	No 13	0.001449	0.001495	46.15	None	No	0.01	NP (normality)
Beryllium (mg/L)	GWC-9	0.0003	0.0002	0.004	No 13	0.0002508	0.00004856	0	None	No	0.01	NP (normality)
Beryllium (mg/L)	GWB-4R	0.003	0.0001	0.004	No 13	0.001685	0.001481	53.85	None	No	0.01	NP (normality)
Beryllium (mg/L)	GWB-5R	0.003	0.000076	0.004	No 13	0.0008324	0.001238	23.08	None	No	0.01	NP (normality)
Beryllium (mg/L)	GWB-6R	0.003	0.00005	0.004	No 13	0.002546	0.001109	84.62	None	No	0.01	NP (NDs)
Cadmium (mg/L)	GWA-7 (bg)	0.0025	0.0007	0.005	No 13	0.002177	0.0007981	84.62	None	No	0.01	NP (NDs)
Cadmium (mg/L)	GWC-1	0.0025	0.0001	0.005	No 13	0.002128	0.0009069	84.62	None	No	0.01	NP (NDs)
Cadmium (mg/L)	GWC-11	0.0007867	0.000195	0.005	No 13	0.0005485	0.0006203	7.692	None	x^(1/3)	0.01	Param.
Cadmium (mg/L)	GWC-14	0.0025	0.00012	0.005	No 13	0.001245	0.001209	46.15	None	No	0.01	NP (normality)
Cadmium (mg/L)	GWC-22	0.0025	0.0001	0.005	No 13	0.0007346	0.001013	23.08	None	No	0.01	NP (normality)
Cadmium (mg/L)	GWB-4R	0.0025	0.00009	0.005	No 13	0.001775	0.001132	69.23	None	No	0.01	NP (normality)
Chromium (mg/L)	GWA-7 (bg)	0.04075	0.0199	0.1	No 16	0.03145	0.01716	0	None	sqrt(x)	0.01	Param.
Chromium (mg/L)	GWA-8 (bg)	0.01	0.00071	0.1	No 18	0.006892	0.004525	66.67	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-1	0.0024	0.0016	0.1	No 17	0.002647	0.002187	5.882	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-11	0.01	0.0007	0.1	No 17	0.004628	0.004614	35.29	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-12	0.0028	0.00085	0.1	No 17	0.002761	0.003484	17.65	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-13	0.01	0.0007	0.1	No 17	0.005192	0.004681	47.06	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-14	0.01	0.00074	0.1	No 18	0.003926	0.004425	33.33	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-15	0.01	0.0012	0.1	No 17	0.004424	0.004252	35.29	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-16	0.01	0.00098	0.1	No 18	0.004982	0.004621	38.89	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-17	0.01	0.0009	0.1	No 17	0.003953	0.004165	29.41	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-2	0.01	0.00069	0.1	No 17	0.006178	0.00471	58.82	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-20	0.01	0.00089	0.1	No 17	0.004694	0.004578	41.18	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-21	0.01	0.00065	0.1	No 17	0.005088	0.004776	41.18	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-22	0.01	0.00057	0.1	No 17	0.005022	0.004838	47.06	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-9	0.01	0.001	0.1	No 17	0.004376	0.004297	35.29	None	No	0.01	NP (normality)
Chromium (mg/L)	GWB-4R	0.0106	0.0022	0.1	No 17	0.007	0.004547	0	None	No	0.01	NP (normality)
Chromium (mg/L)	GWB-5R	0.004847	0.001087	0.1	No 17	0.008741	0.01682	23.53	Kaplan-Meier	ln(x)	0.01	Param.
Chromium (mg/L)	GWB-6R	0.006321	0.001915	0.1	No 17	0.005429	0.005535	0	None	ln(x)	0.01	Param.
Cobalt (mg/L)	GWA-7 (bg)	0.006264	0.002786	0.01	No 12	0.004525	0.002216	8.333	None	No	0.01	Param.
Cobalt (mg/L)	GWA-8 (bg)	0.005	0.0004	0.01	No 13	0.002542	0.002369	46.15	None	No	0.01	NP (normality)
Cobalt (mg/L)	GWC-11	0.005	0.0004	0.01	No 13	0.003942	0.002011	76.92	None	No	0.01	NP (NDs)
Cobalt (mg/L)	GWC-12	0.001378	0.0008286	0.01	No 13	0.001103	0.0003691	0	None	No	0.01	Param.
Cobalt (mg/L)	GWC-14	0.005	0.0003	0.01	No 13	0.004638	0.001304	92.31	None	No	0.01	NP (NDs)
Cobalt (mg/L)	GWC-17	0.006347	0.003084	0.01	No 13	0.004715	0.002194	0	None	No	0.01	Param.
Cobalt (mg/L)	GWC-2	0.005	0.00032	0.01	No 14	0.003384	0.002258	64.29	None	No	0.01	NP (normality)
Cobalt (mg/L)	GWC-22	0.005	0.0007	0.01	No 13	0.003034	0.002215	53.85	None	No	0.01	NP (normality)
Cobalt (mg/L)	GWC-9	0.0021	0.00099	0.01	No 13	0.001444	0.0003785	0	None	No	0.01	NP (normality)
Cobalt (mg/L)	GWB-4R	0.0024	0.00072	0.01	No 13	0.001371	0.001185	7.692	None	No	0.01	NP (normality)
Cobalt (mg/L)	GWB-5R	0.005	0.00053	0.01	No 13	0.00343	0.001963	53.85	None	No	0.01	NP (normality)
Cobalt (mg/L)	GWB-6R	0.005	0.00038	0.01	No 13	0.004645	0.001281	92.31	None	No	0.01	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	GWA-7 (bg)	16.53	5.477	33.8	No 13	11.79	9.412	0	None	x^(1/3)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWA-8 (bg)	2.796	1.947	33.8	No 13	2.372	0.5715	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-1	2.337	1.578	33.8	No 13	1.958	0.5104	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-11	6.68	2.756	33.8	No 13	4.718	2.638	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-12	3.043	1.816	33.8	No 13	2.43	0.8249	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-13	1.373	0.7793	33.8	No 13	1.076	0.3993	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-14	1.273	0.7216	33.8	No 13	0.9973	0.3707	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-15	1.87	1.103	33.8	No 13	1.486	0.5156	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-16	4.17	1.72	33.8	No 13	2.244	0.923	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GWC-17	4.199	2.777	33.8	No 13	3.488	0.956	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-2	1.021	0.6234	33.8	No 13	0.8223	0.2675	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-20	4.25	1.613	33.8	No 13	2.932	1.773	0	None	No	0.01	Param.

Appendix II and IV Confidence Interval Summary Table - All Results Page 3

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/1/2021, 1:55 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Combined Radium 226 + 228 (pCi/L)	GWC-21	2.454	1.093	33.8	No 13	1.774	0.9153	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-22	7.65	3	33.8	No 13	5.675	1.933	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GWC-9	4.024	2.285	33.8	No 13	3.278	1.619	0	None	ln(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWB-4R	5.1	2.32	33.8	No 13	3.512	1.207	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GWB-5R	3.897	2.048	33.8	No 13	3.048	1.498	0	None	x^(1/3)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWB-6R	4.892	2.351	33.8	No 13	3.622	1.708	0	None	No	0.01	Param.
Fluoride (mg/L)	GWA-7 (bg)	0.2394	0.0727	4	No 15	0.1826	0.1508	26.67	Kaplan-Meier	x^(1/3)	0.01	Param.
Fluoride (mg/L)	GWA-8 (bg)	0.162	0.07275	4	No 15	0.1347	0.08331	20	Kaplan-Meier	x^(1/3)	0.01	Param.
Fluoride (mg/L)	GWC-1	0.18	0.051	4	No 15	0.1061	0.0433	73.33	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWC-12	0.8352	0.2789	4	No 15	0.5571	0.4105	6.667	None	No	0.01	Param.
Fluoride (mg/L)	GWC-13	0.55	0.09	4	No 15	0.1261	0.1179	80	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWC-14	0.41	0.1	4	No 15	0.1853	0.1346	60	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWC-15	0.15	0.06	4	No 15	0.1373	0.1064	66.67	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWC-16	0.36	0.1	4	No 15	0.2013	0.2248	53.33	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWC-17	1.383	0.577	4	No 15	0.98	0.5947	6.667	None	No	0.01	Param.
Fluoride (mg/L)	GWC-2	0.17	0.07	4	No 15	0.1295	0.1381	53.33	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWC-20	0.14	0.043	4	No 15	0.08953	0.03071	73.33	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWC-21	0.1	0.071	4	No 15	0.09807	0.007488	93.33	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWC-22	0.12	0.06	4	No 15	0.09133	0.02642	60	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWC-9	0.289	0.1025	4	No 15	0.2357	0.2393	6.667	None	ln(x)	0.01	Param.
Fluoride (mg/L)	GWB-4R	0.17	0.064	4	No 15	0.185	0.292	53.33	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWB-5R	0.11	0.05	4	No 15	0.08887	0.04317	46.67	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWB-6R	0.1483	0.06391	4	No 15	0.1219	0.06612	40	Kaplan-Meier	ln(x)	0.01	Param.
Lead (mg/L)	GWA-7 (bg)	0.008665	0.003602	0.013	No 15	0.006133	0.003736	0	None	No	0.01	Param.
Lead (mg/L)	GWA-8 (bg)	0.005	0.0001	0.013	No 18	0.003372	0.002369	66.67	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-1	0.005	0.00012	0.013	No 17	0.004133	0.00193	82.35	None	No	0.01	NP (NDs)
Lead (mg/L)	GWC-11	0.00035	0.0002	0.013	No 17	0.0008112	0.001578	11.76	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-12	0.005	0.000081	0.013	No 17	0.001755	0.002298	29.41	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-13	0.005	0.00013	0.013	No 17	0.001791	0.002165	29.41	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-14	0.005	0.00051	0.013	No 18	0.003933	0.002056	77.78	None	No	0.01	NP (NDs)
Lead (mg/L)	GWC-15	0.005	0.0001	0.013	No 17	0.00244	0.002489	47.06	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-16	0.005	0.0001	0.013	No 18	0.002033	0.002436	38.89	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-17	0.005	0.0001	0.013	No 17	0.003031	0.002432	58.82	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-2	0.005	0.0002	0.013	No 17	0.003579	0.00227	70.59	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-20	0.005	0.00018	0.013	No 17	0.003566	0.002291	70.59	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-21	0.005	0.00009	0.013	No 17	0.002707	0.002508	52.94	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-22	0.001039	0.0003389	0.013	No 17	0.0009476	0.001238	5.882	None	ln(x)	0.01	Param.
Lead (mg/L)	GWC-9	0.005	0.000096	0.013	No 17	0.002735	0.00248	52.94	None	No	0.01	NP (normality)
Lead (mg/L)	GWB-4R	0.005914	0.002171	0.013	No 16	0.004042	0.002877	12.5	None	No	0.01	Param.
Lead (mg/L)	GWB-5R	0.005	0.0002	0.013	No 17	0.002211	0.002209	35.29	None	No	0.01	NP (normality)
Lead (mg/L)	GWB-6R	0.005	0.00014	0.013	No 17	0.002258	0.002376	41.18	None	No	0.01	NP (normality)
Lithium (mg/L)	GWA-8 (bg)	0.03	0.001	0.03	No 13	0.01664	0.01503	53.85	None	No	0.01	NP (normality)
Lithium (mg/L)	GWC-12	0.03	0.00091	0.03	No 13	0.01438	0.01505	46.15	None	No	0.01	NP (normality)
Lithium (mg/L)	GWC-17	0.007059	0.005156	0.03	No 13	0.006108	0.00128	0	None	No	0.01	Param.
Lithium (mg/L)	GWC-9	0.002114	0.00182	0.03	No 12	0.001967	0.0001875	0	None	No	0.01	Param.
Lithium (mg/L)	GWB-4R	0.014	0.0039	0.03	No 13	0.008254	0.004467	0	None	No	0.01	NP (normality)
Lithium (mg/L)	GWB-5R	0.03	0.0027	0.03	No 13	0.01589	0.01362	46.15	None	No	0.01	NP (normality)
Mercury (mg/L)	GWA-7 (bg)	0.0002	0.0001	0.002	No 11	0.0001736	0.00005372	72.73	None	No	0.006	NP (normality)
Mercury (mg/L)	GWC-1	0.0002	0.0002	0.002	No 11	0.0001855	0.00004824	90.91	None	No	0.006	NP (NDs)
Mercury (mg/L)	GWC-13	0.0002	0.0002	0.002	No 11	0.0001936	0.00002111	90.91	None	No	0.006	NP (NDs)
Mercury (mg/L)	GWC-9	0.0002	0.0002	0.002	No 11	0.0001864	0.00004523	90.91	None	No	0.006	NP (NDs)
Mercury (mg/L)	GWB-4R	0.0002	0.0002	0.002	No 11	0.0001863	0.00004553	90.91	None	No	0.006	NP (NDs)
Mercury (mg/L)	GWB-6R	0.0002	0.0002	0.002	No 11	0.0001857	0.00004734	90.91	None	No	0.006	NP (NDs)
Molybdenum (mg/L)	GWA-7 (bg)	0.01	0.0098	0.01	No 13	0.008646	0.003261	76.92	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	GWC-1	0.1716	0.07167	0.01	Yes 13	0.1216	0.06717	0	None	No	0.01	Param.

Appendix II and IV Confidence Interval Summary Table - All Results Page 4

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/1/2021, 1:55 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Molybdenum (mg/L)	GWC-11	0.01	0.0018	0.01	No 13	0.008659	0.00328	84.62	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	GWC-13	0.01	0.0056	0.01	No 13	0.009662	0.00122	92.31	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	GWC-14	0.028	0.0024	0.01	No 13	0.01004	0.01059	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	GWC-15	0.1145	0.0908	0.01	Yes 13	0.1026	0.01591	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-16	0.1953	0.1126	0.01	Yes 13	0.154	0.05558	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-17	0.01	0.0024	0.01	No 13	0.007309	0.003627	61.54	None	No	0.01	NP (normality)
Molybdenum (mg/L)	GWC-20	0.2598	0.1032	0.01	Yes 13	0.1815	0.1053	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-21	0.06514	0.01913	0.01	Yes 13	0.04214	0.03094	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWB-4R	0.15	0.0209	0.01	Yes 13	0.06482	0.05453	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	GWB-5R	0.01	0.0012	0.01	No 13	0.009323	0.002441	92.31	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	GWB-6R	0.01	0.001	0.01	No 13	0.008044	0.003737	76.92	None	No	0.01	NP (NDs)
Selenium (mg/L)	GWA-7 (bg)	0.031	0.0078	0.05	No 17	0.01734	0.01126	29.41	None	No	0.01	NP (normality)
Selenium (mg/L)	GWA-8 (bg)	0.01	0.0013	0.05	No 18	0.009017	0.002862	88.89	None	No	0.01	NP (NDs)
Selenium (mg/L)	GWC-1	0.0052	0.0018	0.05	No 17	0.004365	0.005511	11.76	None	No	0.01	NP (normality)
Selenium (mg/L)	GWC-11	0.009451	0.003586	0.05	No 17	0.008276	0.005737	23.53	Kaplan-Meiersqrt(x)	No	0.01	Param.
Selenium (mg/L)	GWC-12	0.01	0.0025	0.05	No 17	0.008612	0.003093	82.35	Kaplan-Meier	No	0.01	NP (NDs)
Selenium (mg/L)	GWC-14	0.004985	0.002799	0.05	No 18	0.004016	0.001997	5.556	None	sqrt(x)	0.01	Param.
Selenium (mg/L)	GWC-15	0.01	0.0029	0.05	No 17	0.008182	0.003504	52.94	None	No	0.01	NP (normality)
Selenium (mg/L)	GWC-16	0.006266	0.003664	0.05	No 18	0.004965	0.00215	5.556	None	No	0.01	Param.
Selenium (mg/L)	GWC-17	0.01	0.0013	0.05	No 17	0.006141	0.004273	52.94	None	No	0.01	NP (normality)
Selenium (mg/L)	GWC-2	0.01	0.0035	0.05	No 17	0.009147	0.002422	88.24	None	No	0.01	NP (NDs)
Selenium (mg/L)	GWC-20	0.01	0.0014	0.05	No 17	0.007465	0.004049	70.59	None	No	0.01	NP (normality)
Selenium (mg/L)	GWC-21	0.02215	0.01282	0.05	No 17	0.01748	0.007441	0	None	No	0.01	Param.
Selenium (mg/L)	GWC-22	0.01	0.0023	0.05	No 17	0.008053	0.003628	76.47	None	No	0.01	NP (NDs)
Selenium (mg/L)	GWC-9	0.01	0.01	0.05	No 17	0.01	0	100	None	No	0.01	NP (NDs)
Selenium (mg/L)	GWB-4R	0.01	0.0033	0.05	No 17	0.006294	0.003358	41.18	None	No	0.01	NP (normality)
Selenium (mg/L)	GWB-5R	0.01	0.0073	0.05	No 17	0.008965	0.002515	82.35	None	No	0.01	NP (NDs)
Selenium (mg/L)	GWB-6R	0.05	0.0033	0.05	No 17	0.01051	0.01074	70.59	None	No	0.01	NP (normality)
Thallium (mg/L)	GWA-7 (bg)	0.001	0.0005	0.002	No 13	0.0009615	0.0001387	92.31	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWA-8 (bg)	0.001	0.00006	0.002	No 13	0.0007825	0.0004134	76.92	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-1	0.001	0.000054	0.002	No 13	0.0007814	0.0004154	76.92	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-11	0.001	0.00007	0.002	No 13	0.0005306	0.0004543	46.15	None	No	0.01	NP (normality)
Thallium (mg/L)	GWC-12	0.001	0.00013	0.002	No 13	0.0004985	0.0004152	38.46	None	No	0.01	NP (normality)
Thallium (mg/L)	GWC-14	0.001	0.00007	0.002	No 13	0.0008562	0.0003511	84.62	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-16	0.001	0.00006	0.002	No 13	0.0008546	0.0003549	84.62	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-17	0.001	0.000066	0.002	No 13	0.0005768	0.000476	53.85	None	No	0.01	NP (normality)
Thallium (mg/L)	GWC-2	0.001	0.00011	0.002	No 14	0.0009364	0.0002379	92.86	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-21	0.001	0.00005	0.002	No 13	0.0009269	0.0002635	92.31	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-22	0.001	0.000065	0.002	No 13	0.0006524	0.0004584	61.54	None	No	0.01	NP (normality)
Thallium (mg/L)	GWB-4R	0.001	0.00007	0.002	No 13	0.0008569	0.0003492	84.62	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWB-5R	0.001	0.00031	0.002	No 13	0.0008744	0.0003109	84.62	None	No	0.01	NP (NDs)
Vanadium (mg/L)	GWA-7 (bg)	0.326	0.1554	0.43	No 14	0.2474	0.1235	0	None	sqrt(x)	0.01	Param.
Vanadium (mg/L)	GWA-8 (bg)	0.01	0.0014	0.43	No 15	0.008813	0.003135	86.67	None	No	0.01	NP (NDs)
Vanadium (mg/L)	GWC-1	0.006019	0.003669	0.43	No 12	0.005842	0.002371	16.67	Kaplan-Meier	No	0.01	Param.
Vanadium (mg/L)	GWC-11	0.01	0.0021	0.43	No 12	0.004258	0.003471	25	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-12	0.00535	0.00299	0.43	No 12	0.005342	0.00261	16.67	Kaplan-Meier	No	0.01	Param.
Vanadium (mg/L)	GWC-13	0.01	0.0016	0.43	No 12	0.007267	0.004003	58.33	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-14	0.01891	0.008918	0.43	No 15	0.01391	0.007371	13.33	None	No	0.01	Param.
Vanadium (mg/L)	GWC-15	0.01	0.0021	0.43	No 14	0.00555	0.004013	42.86	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-16	0.01	0.0026	0.43	No 15	0.004877	0.003229	26.67	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-17	0.01	0.0024	0.43	No 12	0.005817	0.003718	41.67	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-2	0.01	0.0024	0.43	No 12	0.009367	0.002194	91.67	None	No	0.01	NP (NDs)
Vanadium (mg/L)	GWC-20	0.01	0.0024	0.43	No 14	0.005293	0.003647	35.71	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-21	0.00373	0.002297	0.43	No 12	0.004825	0.003221	25	Kaplan-Meierln(x)	No	0.01	Param.
Vanadium (mg/L)	GWC-22	0.01	0.0014	0.43	No 12	0.006158	0.004136	50	None	No	0.01	NP (normality)

Appendix II and IV Confidence Interval Summary Table - All Results Page 5

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/1/2021, 1:55 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Vanadium (mg/L)	GWC-9	0.01	0.0015	0.43	No 12	0.008567	0.003348	83.33	None	No	0.01	NP (NDs)
Vanadium (mg/L)	GWB-4R	0.03662	0.009413	0.43	No 12	0.02302	0.01734	8.333	None	No	0.01	Param.
Vanadium (mg/L)	GWB-5R	0.0119	0.004362	0.43	No 12	0.009083	0.008257	8.333	None	ln(x)	0.01	Param.
Vanadium (mg/L)	GWB-6R	0.03198	0.006264	0.43	No 12	0.02425	0.02861	0	None	ln(x)	0.01	Param.
Zinc (mg/L)	GWA-7 (bg)	0.08526	0.01857	0.16	No 13	0.05192	0.04485	7.692	None	No	0.01	Param.
Zinc (mg/L)	GWA-8 (bg)	0.01	0.0024	0.16	No 15	0.005093	0.003237	20	None	No	0.01	NP (normality)
Zinc (mg/L)	GWC-1	0.01	0.0021	0.16	No 12	0.0082	0.003256	66.67	None	No	0.01	NP (normality)
Zinc (mg/L)	GWC-11	0.01	0.0029	0.16	No 12	0.007325	0.003446	58.33	None	No	0.01	NP (normality)
Zinc (mg/L)	GWC-12	0.0074	0.0023	0.16	No 12	0.004008	0.002446	8.333	None	No	0.01	NP (normality)
Zinc (mg/L)	GWC-13	0.047	0.0021	0.16	No 12	0.01572	0.01858	0	None	No	0.01	NP (normality)
Zinc (mg/L)	GWC-14	0.01	0.0052	0.16	No 15	0.00864	0.002895	80	None	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-15	0.032	0.0051	0.16	No 14	0.01122	0.006121	85.71	None	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-16	0.01	0.0025	0.16	No 15	0.00712	0.003725	53.33	None	No	0.01	NP (normality)
Zinc (mg/L)	GWC-17	0.01378	0.007908	0.16	No 12	0.01084	0.003739	8.333	None	No	0.01	Param.
Zinc (mg/L)	GWC-2	0.056	0.0015	0.16	No 12	0.01103	0.01462	50	None	No	0.01	NP (normality)
Zinc (mg/L)	GWC-20	0.031	0.0049	0.16	No 14	0.01066	0.006229	78.57	None	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-21	0.01	0.0016	0.16	No 12	0.00765	0.003682	58.33	None	No	0.01	NP (normality)
Zinc (mg/L)	GWC-22	0.008393	0.003302	0.16	No 12	0.007625	0.003513	33.33	Kaplan-Meier	No	0.01	Param.
Zinc (mg/L)	GWC-9	0.00774	0.002518	0.16	No 12	0.005958	0.006392	8.333	None	ln(x)	0.01	Param.
Zinc (mg/L)	GWB-4R	0.009883	0.004867	0.16	No 12	0.007375	0.003197	8.333	None	No	0.01	Param.
Zinc (mg/L)	GWB-5R	0.01	0.0022	0.16	No 12	0.007842	0.003569	66.67	None	No	0.01	NP (normality)
Zinc (mg/L)	GWB-6R	0.007346	0.001628	0.16	No 12	0.007767	0.004243	50	Kaplan-Meier	No	0.01	Param.

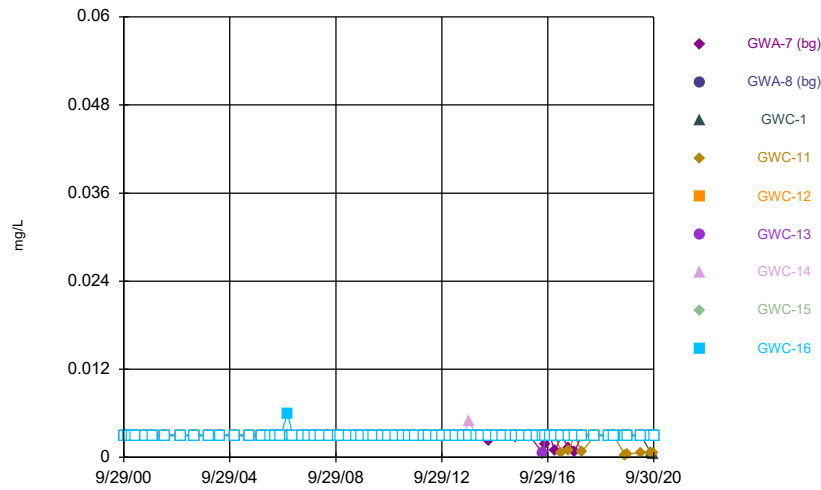
Outlier Summary

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/1/2021, 10:25 AM

Date	GWA-8 Vanadium (mg/L)	GWC-1 Vanadium (mg/L)	GWC-14 Vanadium (mg/L)	GWC-15 Vanadium (mg/L)	GWC-16 Vanadium (mg/L)	GWB-5R Vanadium (mg/L)	GWA-7 Zinc (mg/L)	GWA-8 Zinc (mg/L)	GWC-11 Zinc (mg/L)	GWC-12 Zinc (mg/L)
9/29/2000										0.38 (o)
11/21/2000										0.077 (o)
1/20/2001								0.025 (o)		0.23 (o)
3/14/2001						0.077 (o)				0.24 (o)
7/16/2001						0.12 (o)				0.053 (o)
11/1/2001						0.21 (o)				0.022 (o)
4/25/2002						0.086 (o)				1.2 (o)
11/20/2002						0.14 (o)		0.016 (o)		0.045 (o)
6/6/2003	0.017 (o)	0.16 (o)		0.019 (o)	0.082 (o)	0.12 (o)	0.69 (o)	0.032 (o)		0.042 (o)
12/12/2003	0.011 (o)			0.018 (o)			0.12 (o)	0.019 (o)		
5/26/2004						0.06 (o)				
12/7/2004									0.028 (o)	
6/21/2005										
12/12/2005										
6/27/2006										0.012 (o)
8/30/2006								0.017 (o)		
12/4/2006										
6/23/2007										0.025 (o)
12/11/2007										
6/24/2008										
12/5/2008										
7/7/2009										
12/21/2009										0.013 (o)
6/20/2010										
6/21/2010										
7/8/2011										
7/9/2012										
1/18/2013										
4/3/2014			0.077 (o)							
1/17/2016										
8/31/2016										
9/1/2016										
10/26/2016										
10/3/2017										
7/10/2018										
7/11/2018										
1/16/2019										
1/17/2019										
1/18/2019										
1/21/2019										
3/25/2019							<0.01 (o)			

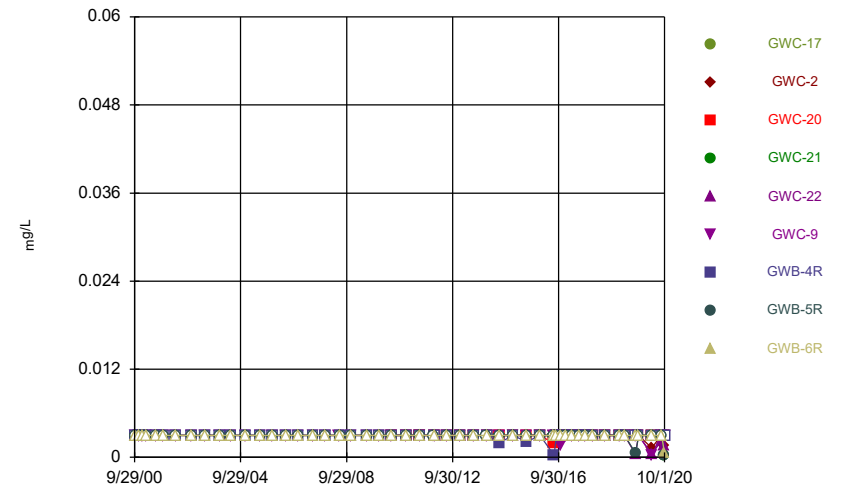
FIGURE A.

Time Series



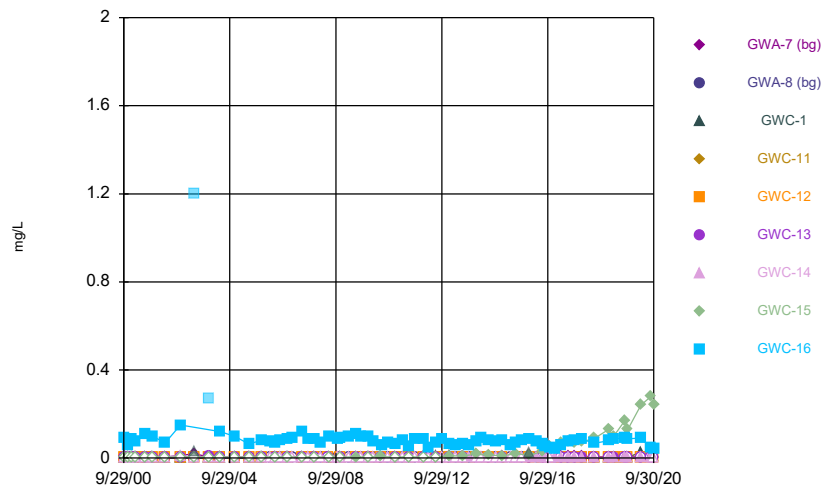
Constituent: Antimony Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



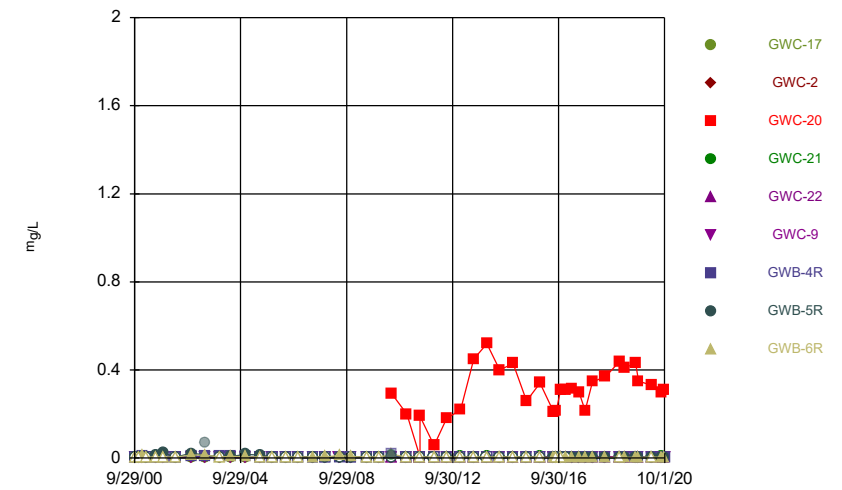
Constituent: Antimony Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



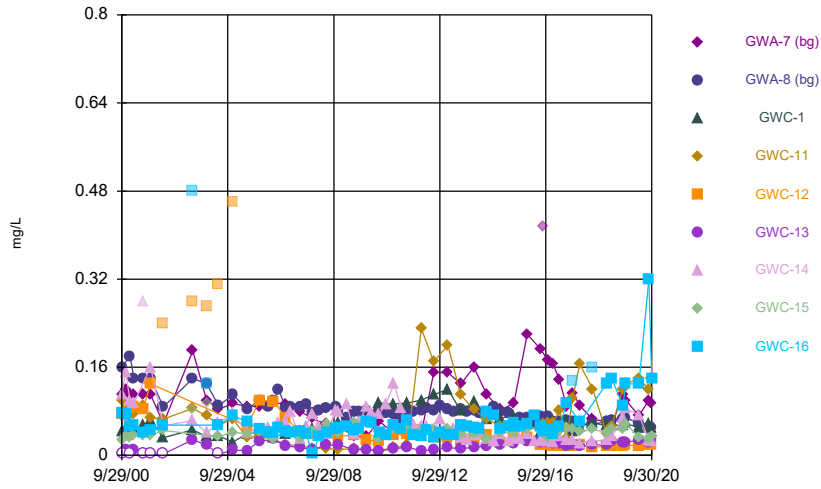
Constituent: Arsenic Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



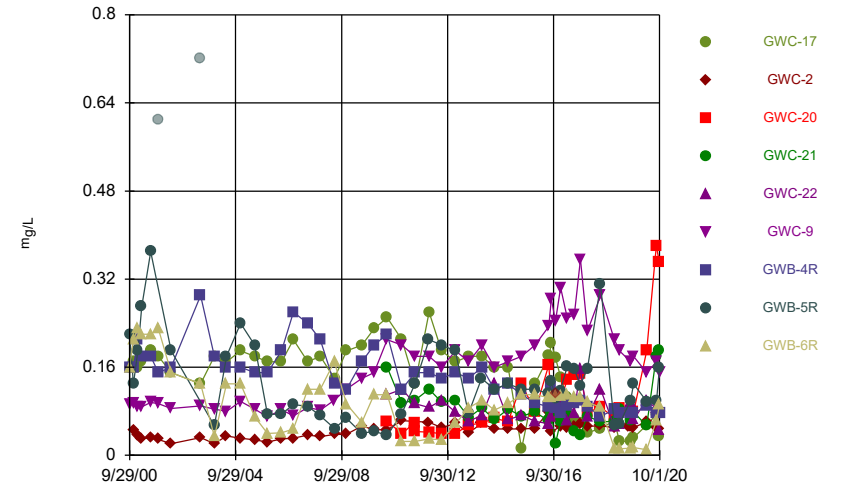
Constituent: Arsenic Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



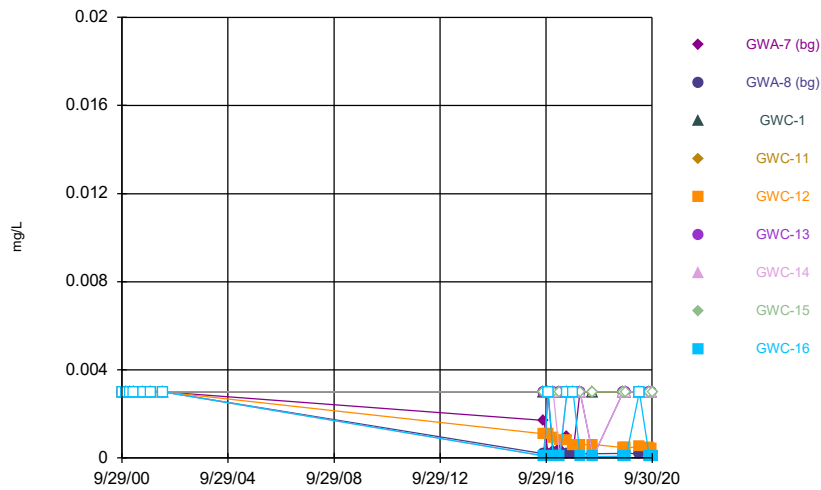
Constituent: Barium Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



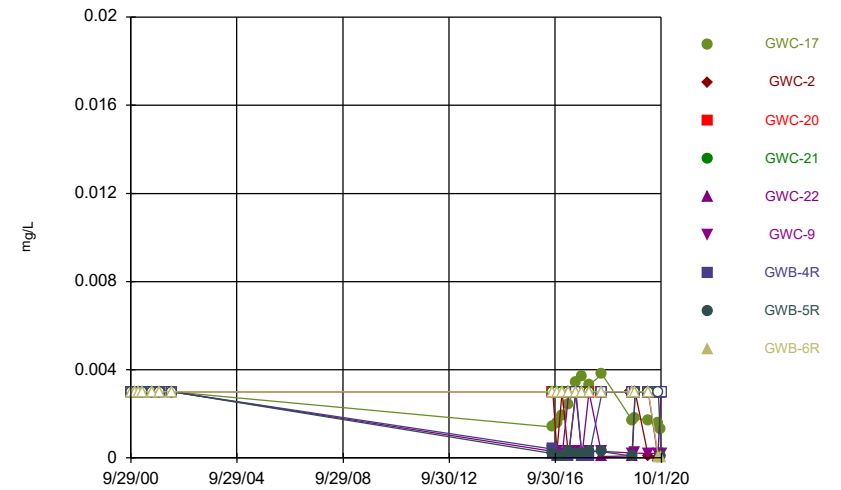
Constituent: Barium Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



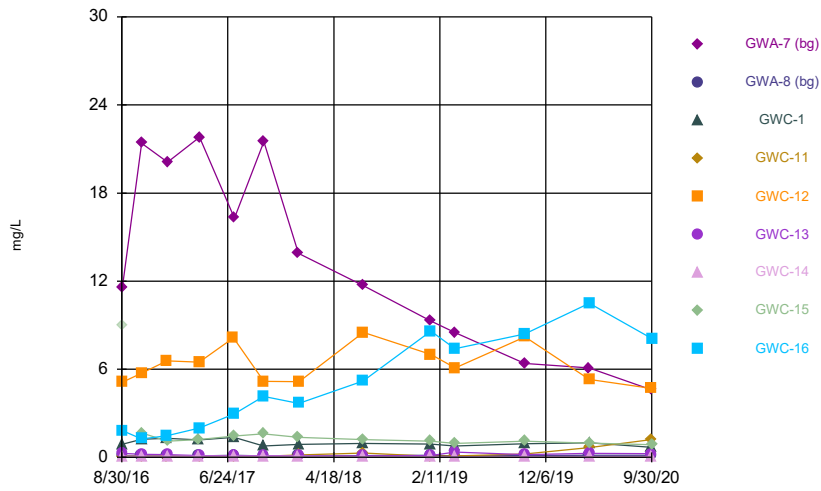
Constituent: Beryllium Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



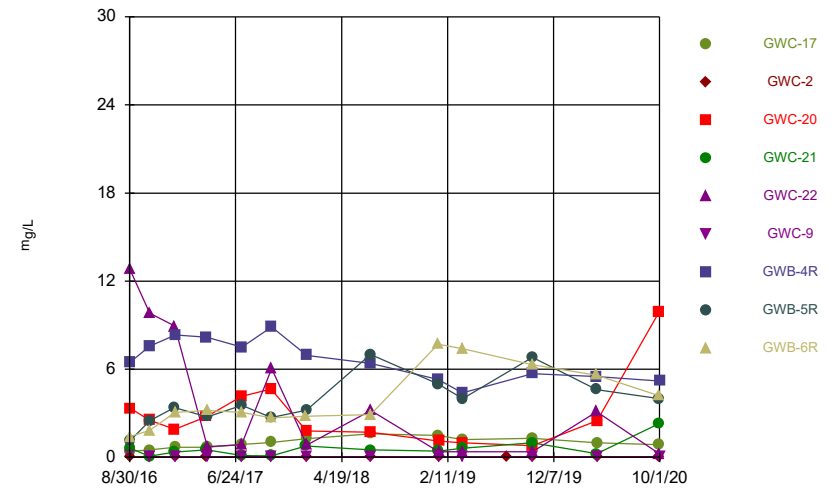
Constituent: Beryllium Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



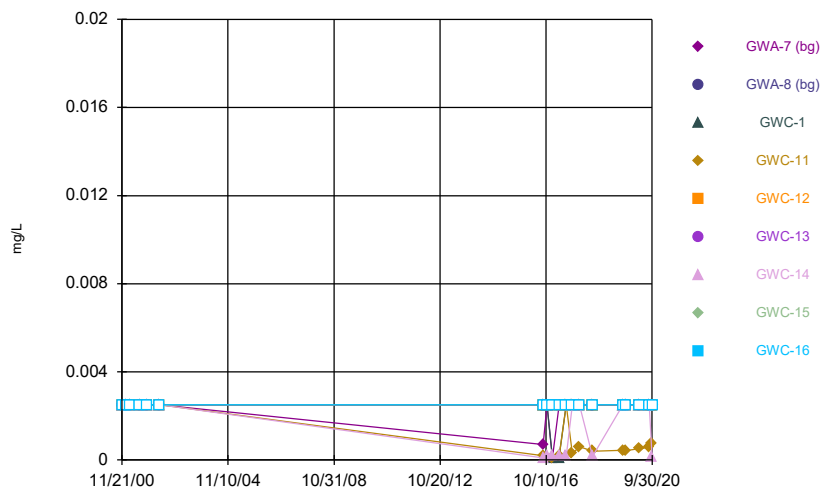
Constituent: Boron Analysis Run 2/1/2021 10:26 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



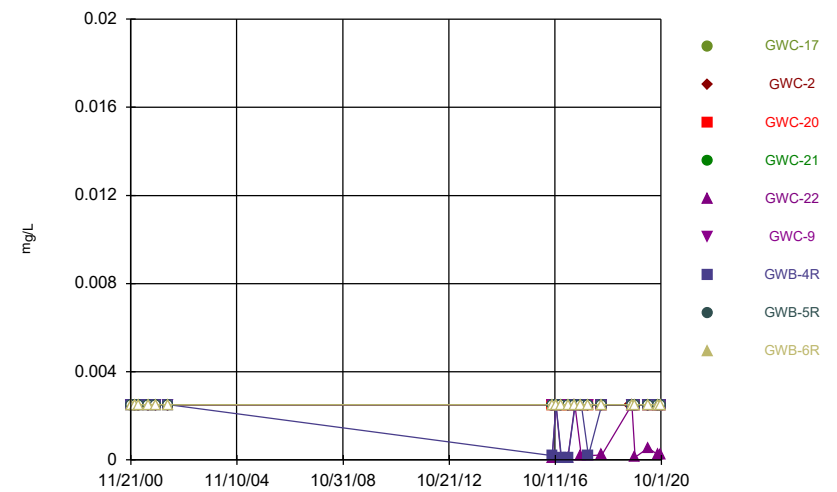
Constituent: Boron Analysis Run 2/1/2021 10:26 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



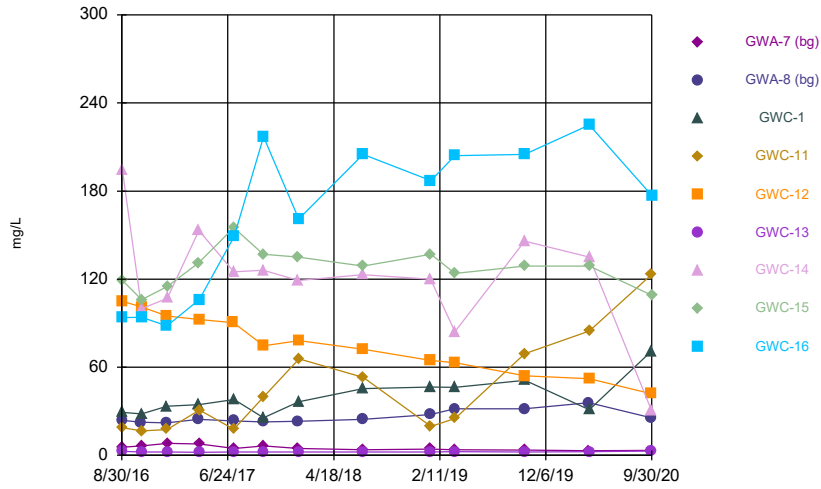
Constituent: Cadmium Analysis Run 2/1/2021 10:26 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



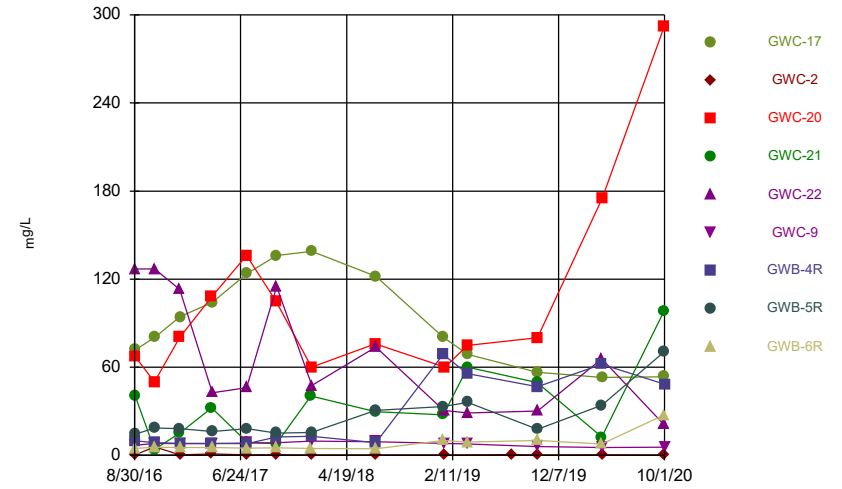
Constituent: Cadmium Analysis Run 2/1/2021 10:26 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



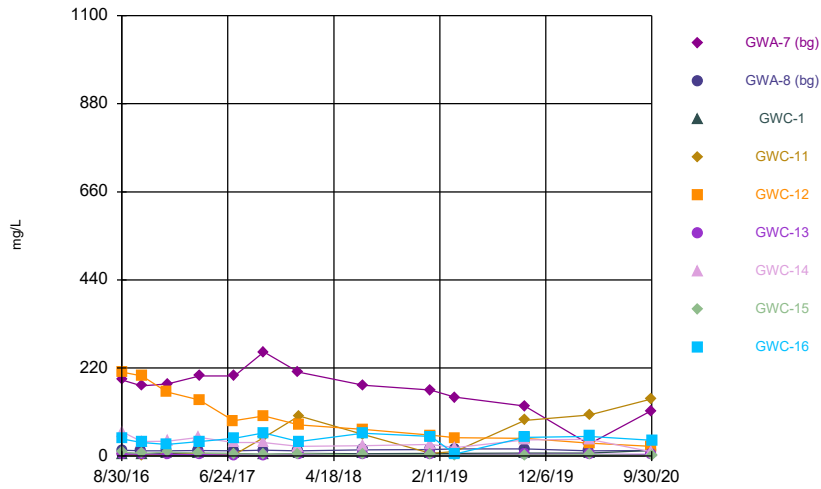
Constituent: Calcium Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



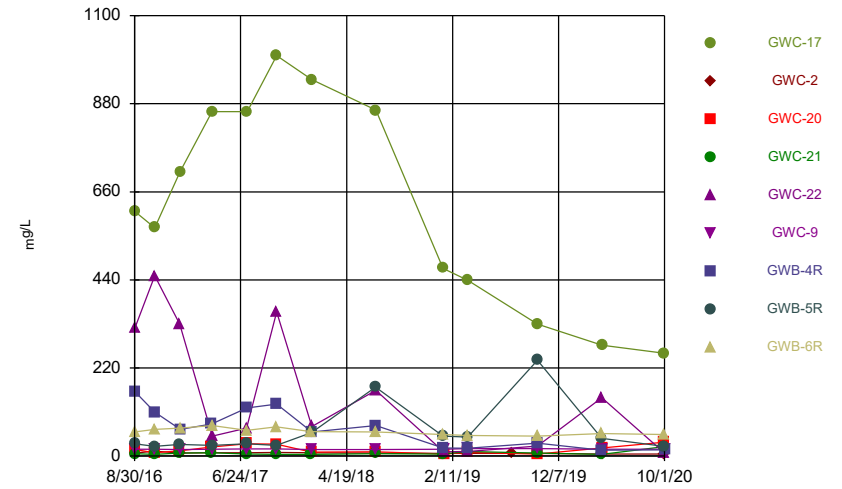
Constituent: Calcium Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



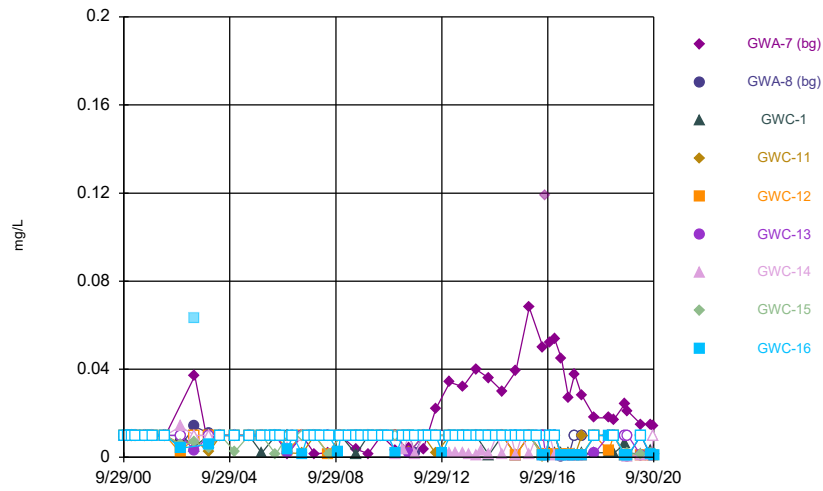
Constituent: Chloride Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



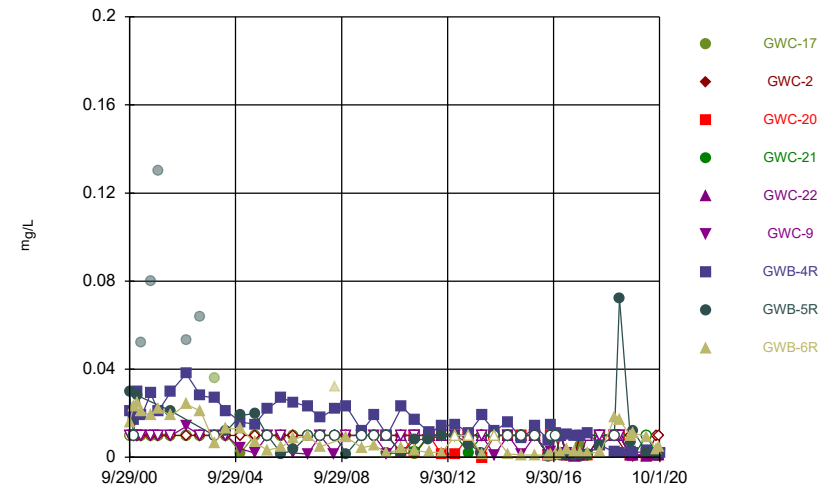
Constituent: Chloride Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



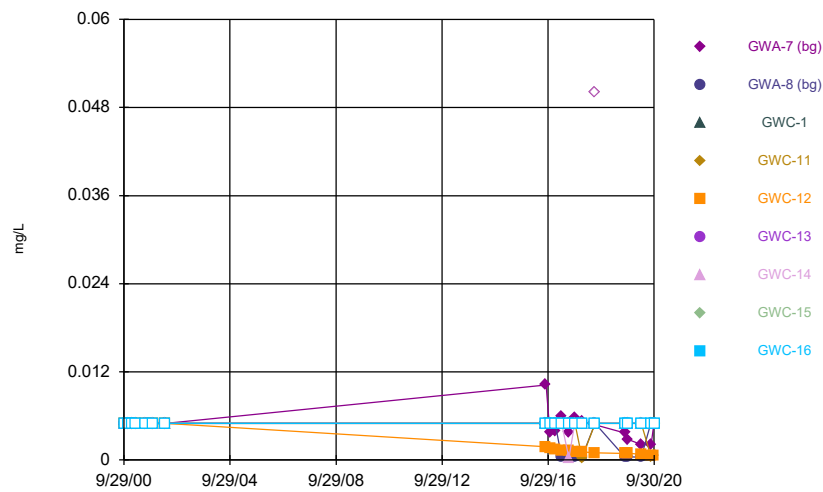
Constituent: Chromium Analysis Run 2/1/2021 10:26 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



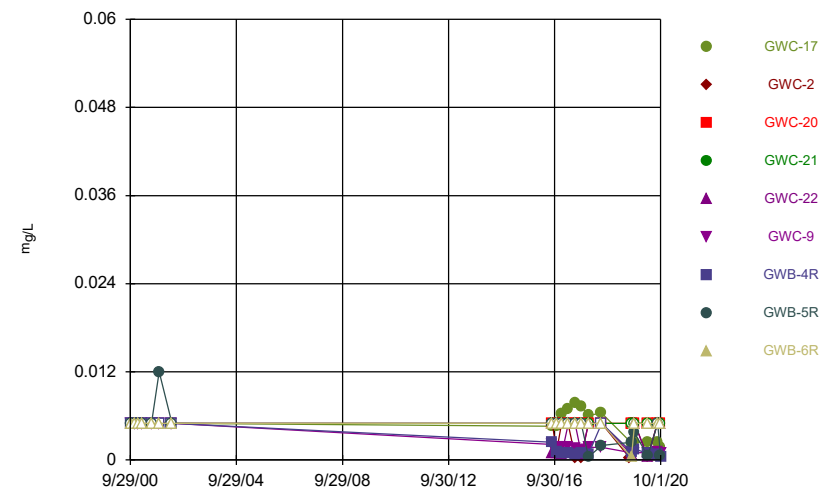
Constituent: Chromium Analysis Run 2/1/2021 10:26 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



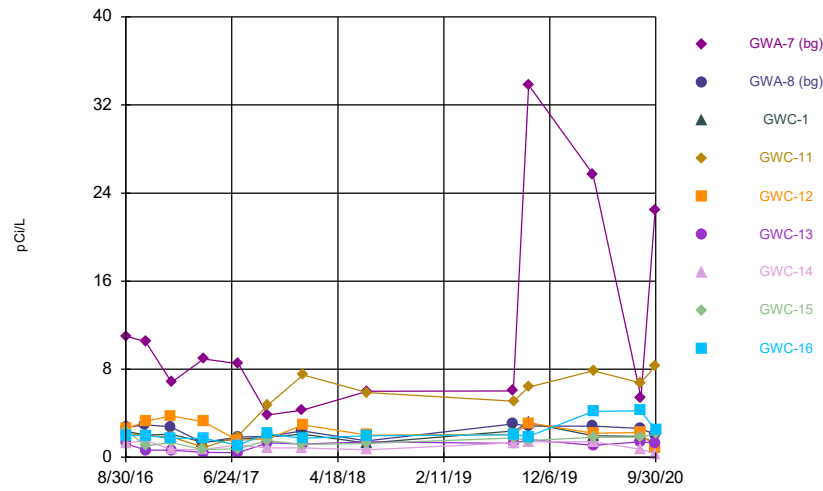
Constituent: Cobalt Analysis Run 2/1/2021 10:26 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



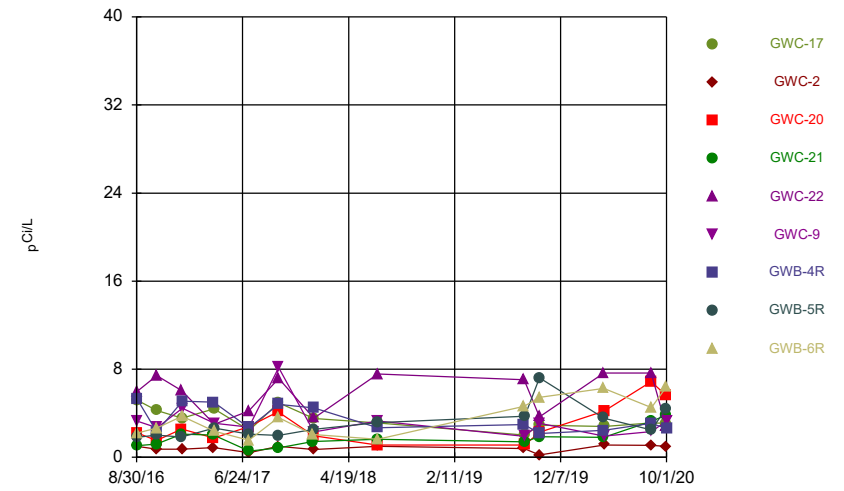
Constituent: Cobalt Analysis Run 2/1/2021 10:26 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



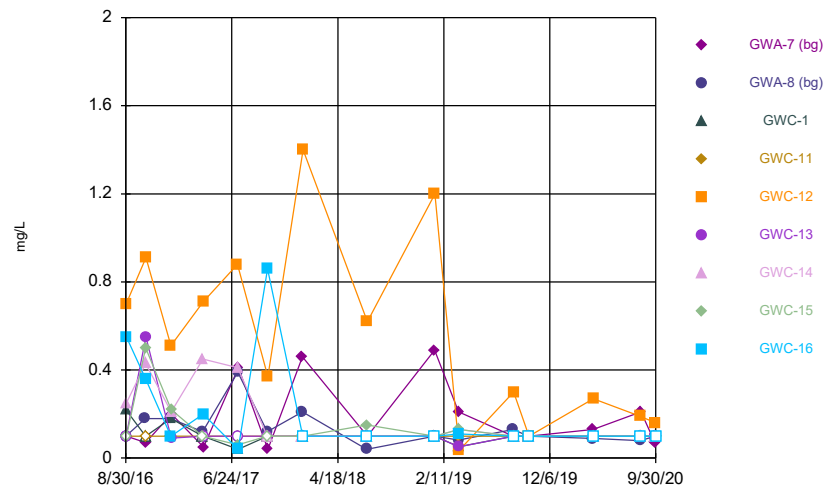
Constituent: Combined Radium 226 + 228 Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



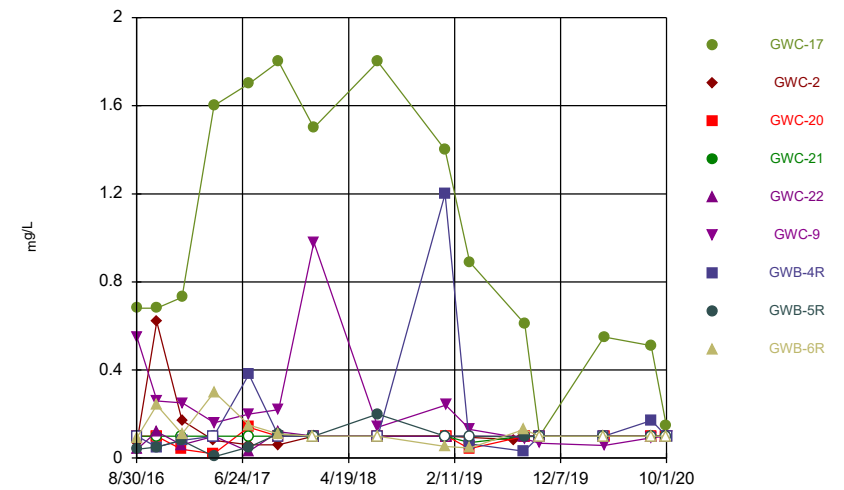
Constituent: Combined Radium 226 + 228 Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



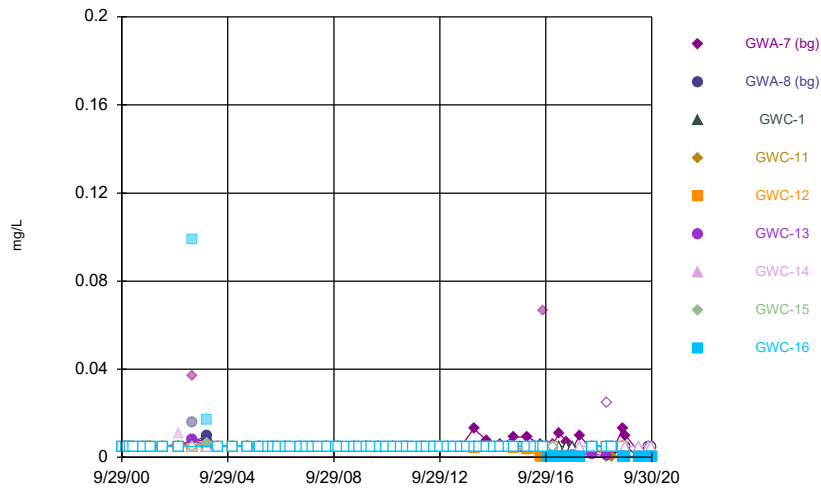
Constituent: Fluoride Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



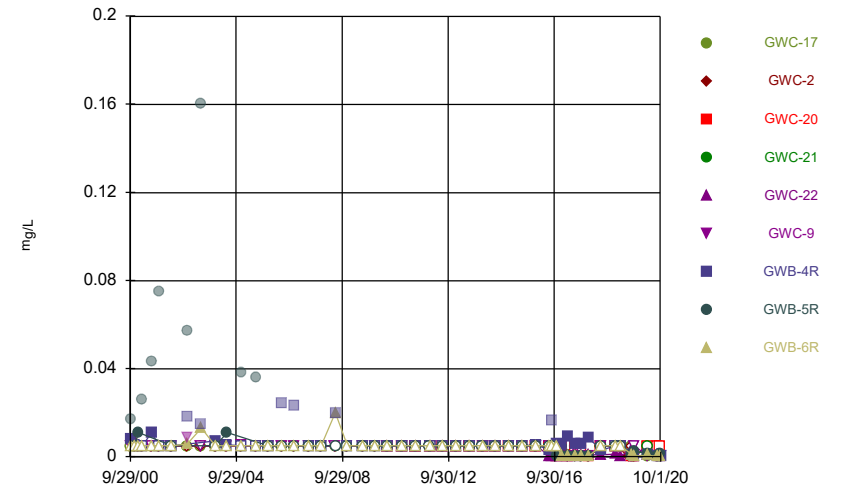
Constituent: Fluoride Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



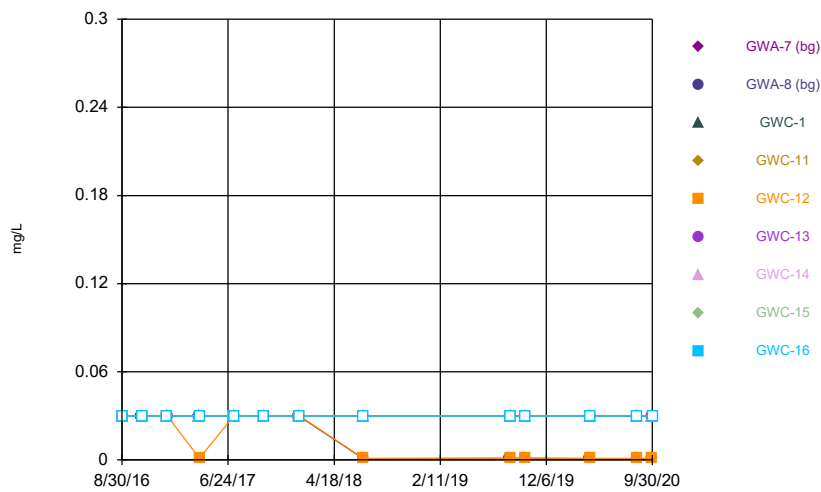
Constituent: Lead Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



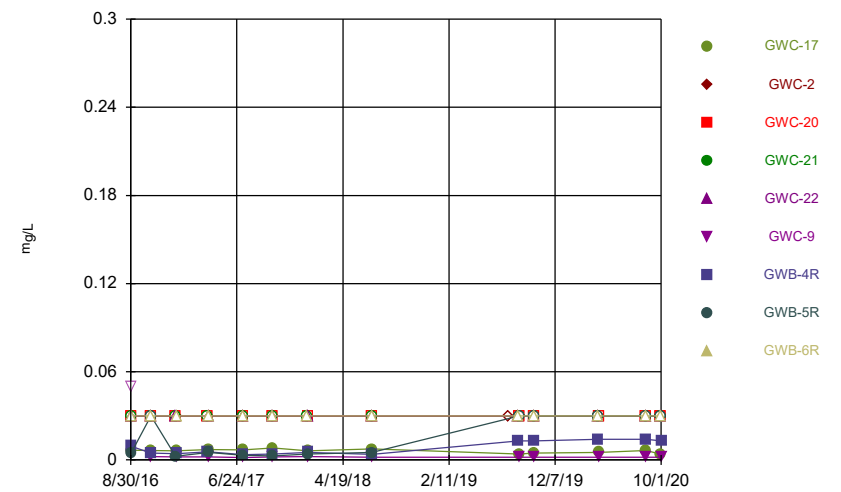
Constituent: Lead Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



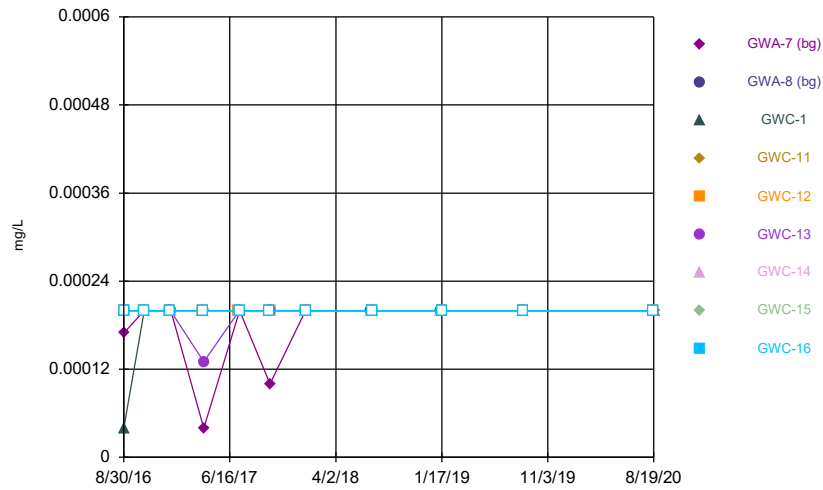
Constituent: Lithium Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



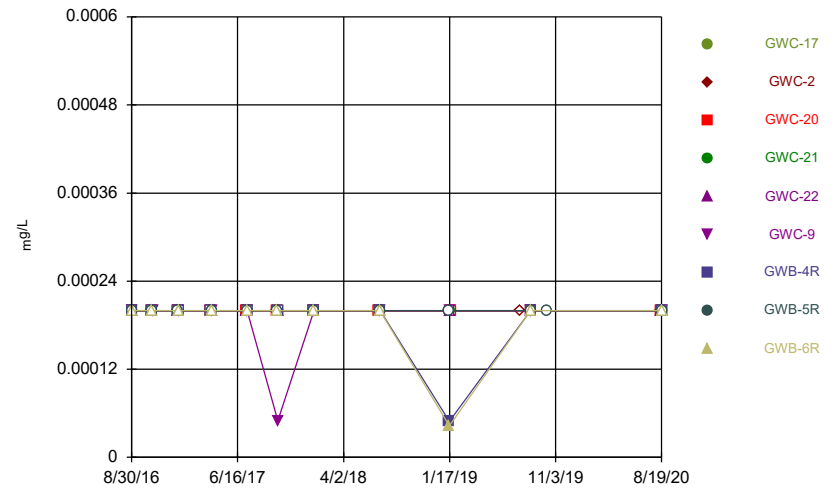
Constituent: Lithium Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



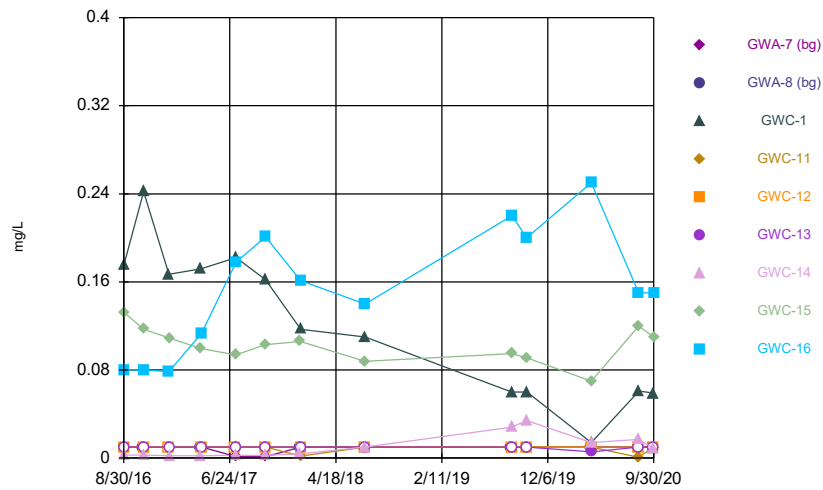
Constituent: Mercury Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



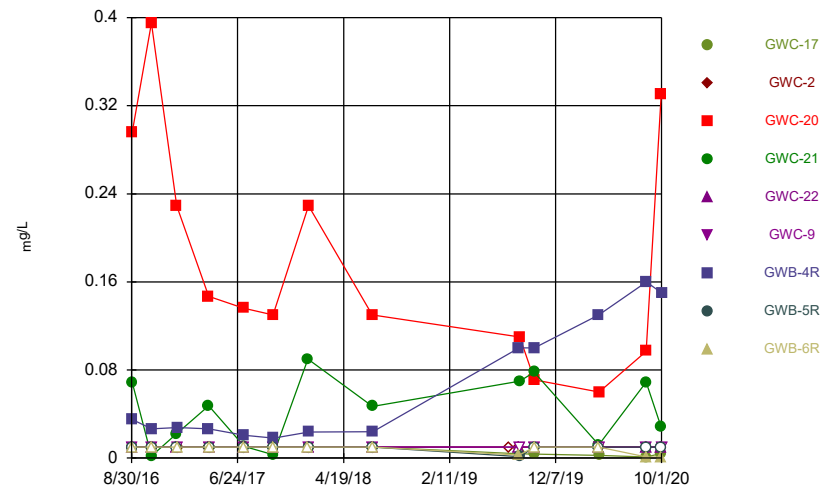
Constituent: Mercury Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



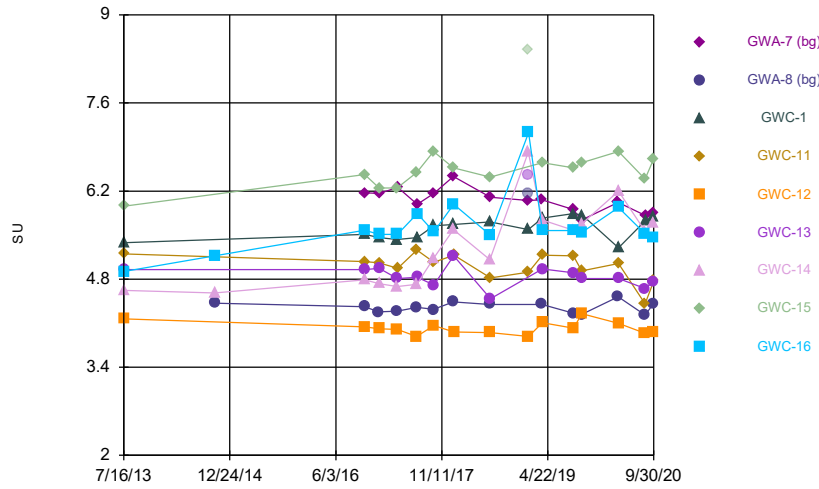
Constituent: Molybdenum Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



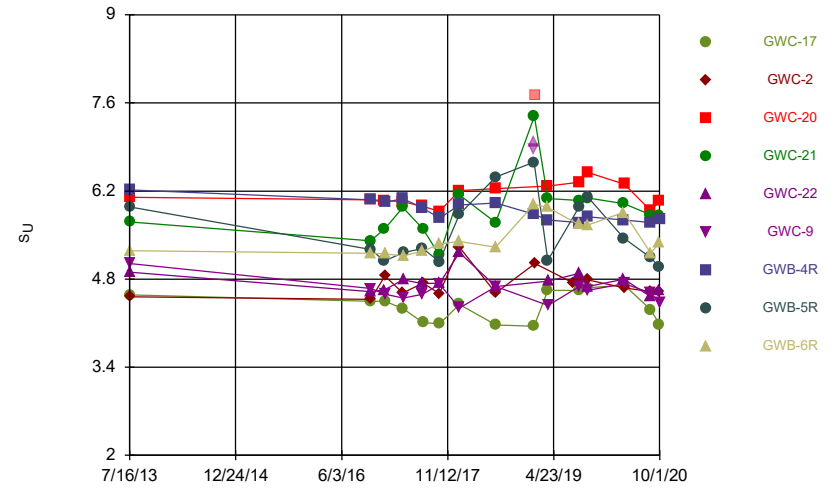
Constituent: Molybdenum Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



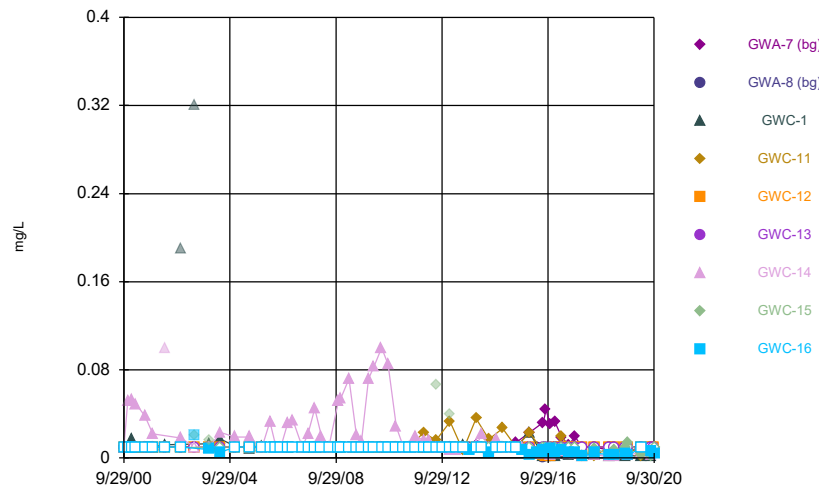
Constituent: pH Analysis Run 2/1/2021 10:26 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



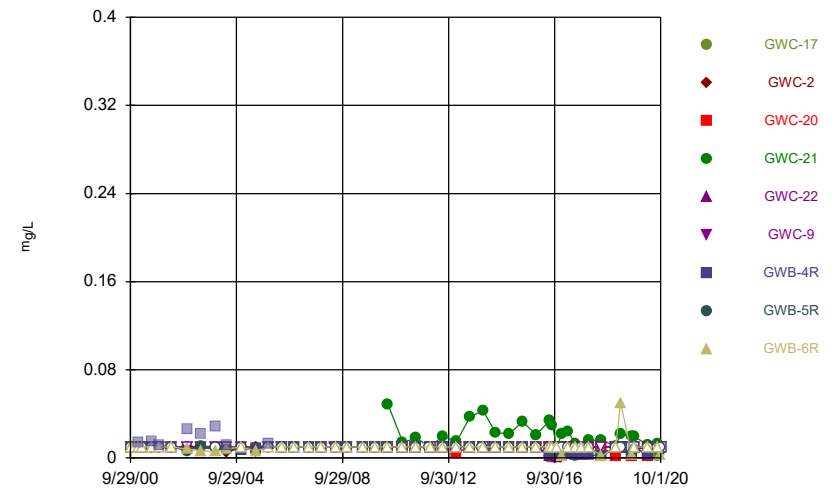
Constituent: pH Analysis Run 2/1/2021 10:26 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



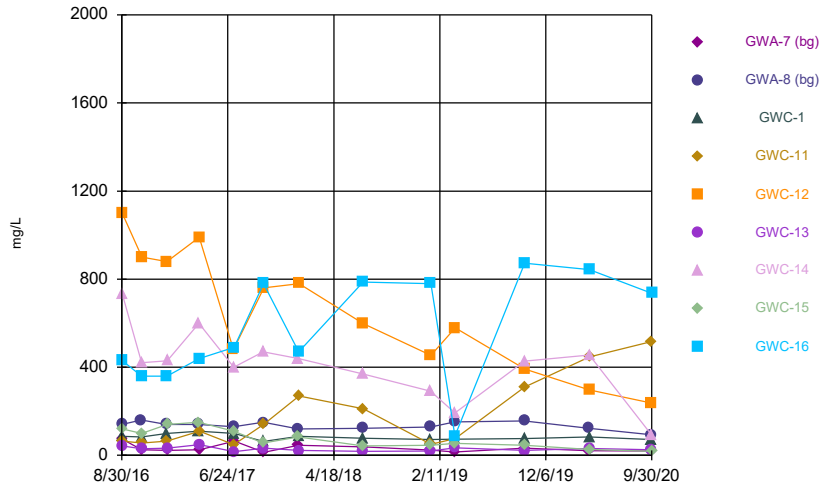
Constituent: Selenium Analysis Run 2/1/2021 10:26 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



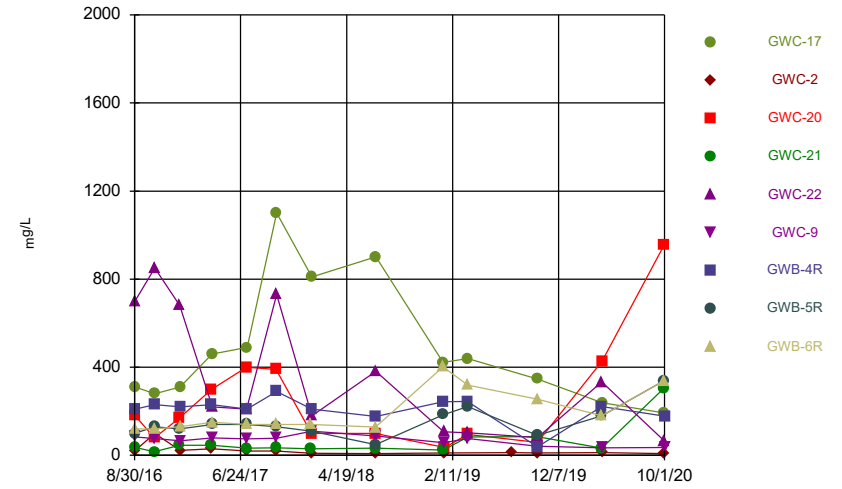
Constituent: Selenium Analysis Run 2/1/2021 10:26 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



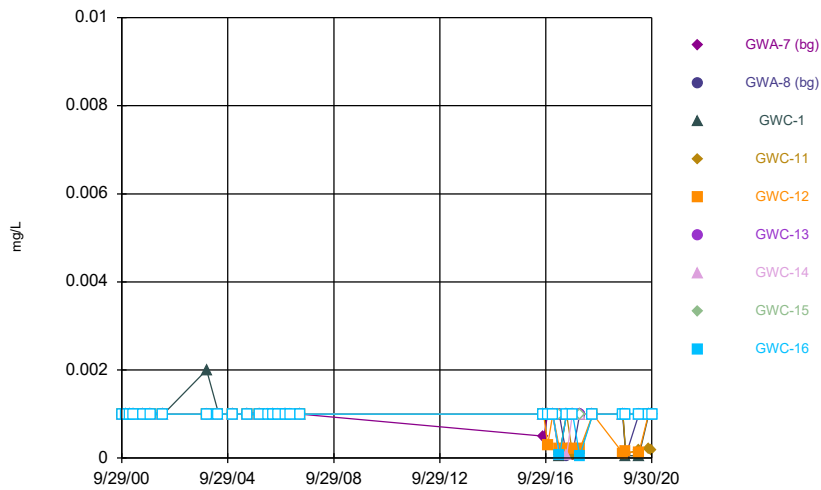
Constituent: Sulfate Analysis Run 2/1/2021 10:26 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



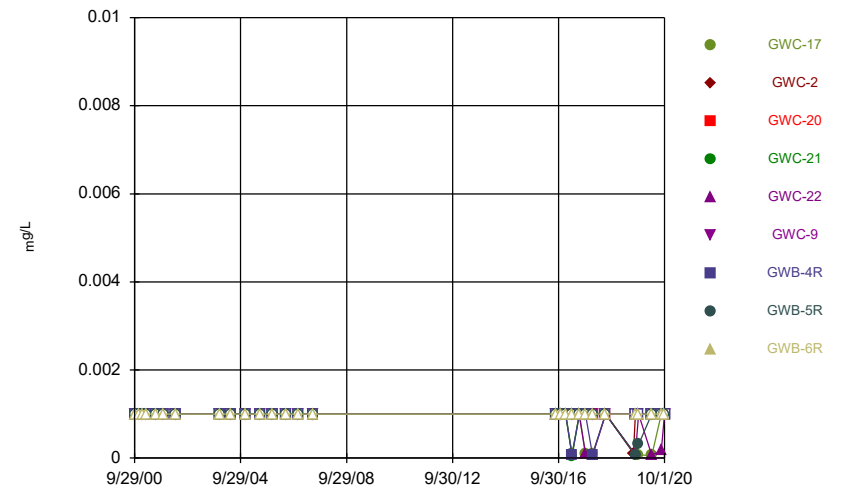
Constituent: Sulfate Analysis Run 2/1/2021 10:26 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



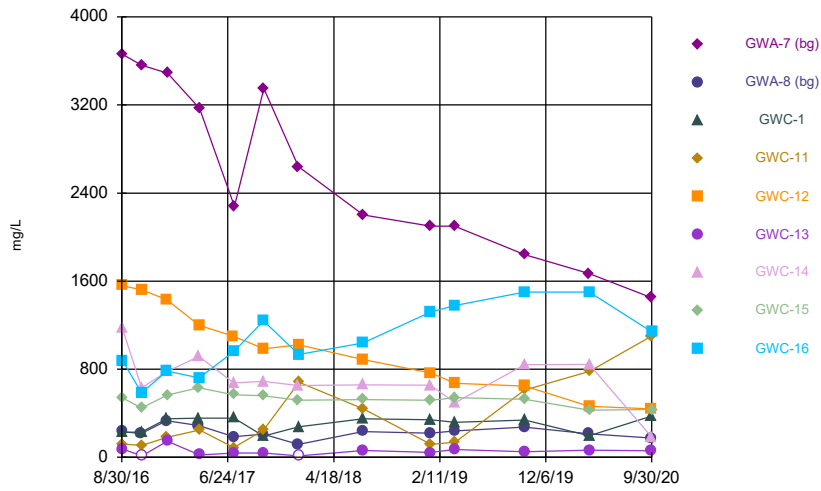
Constituent: Thallium Analysis Run 2/1/2021 10:26 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



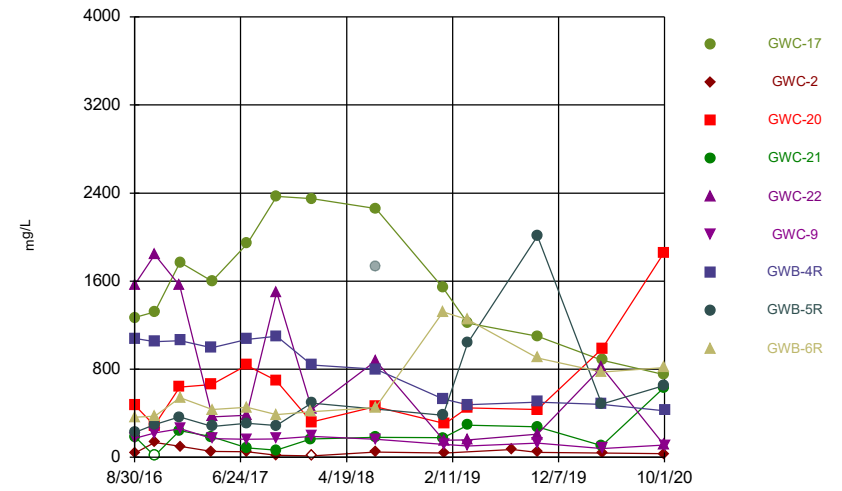
Constituent: Thallium Analysis Run 2/1/2021 10:26 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



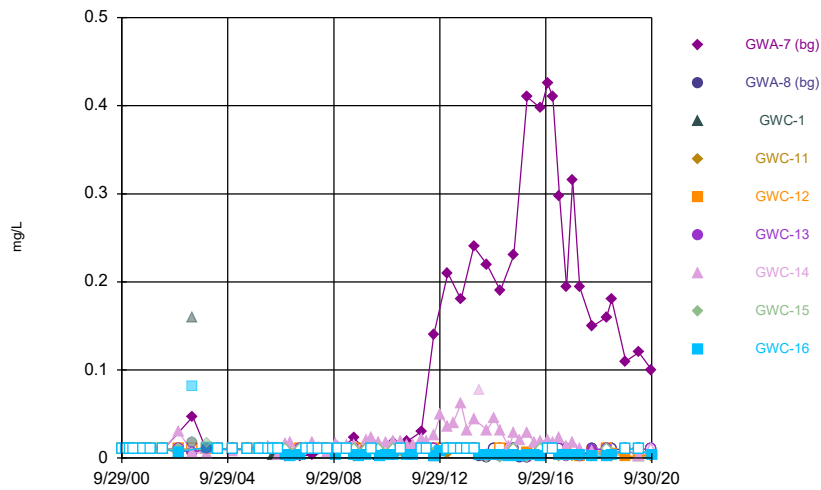
Constituent: Total Dissolved Solids Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



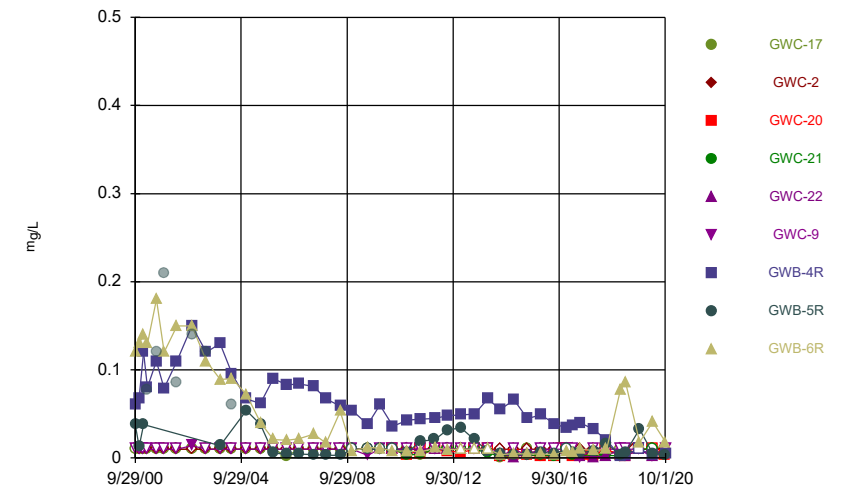
Constituent: Total Dissolved Solids Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



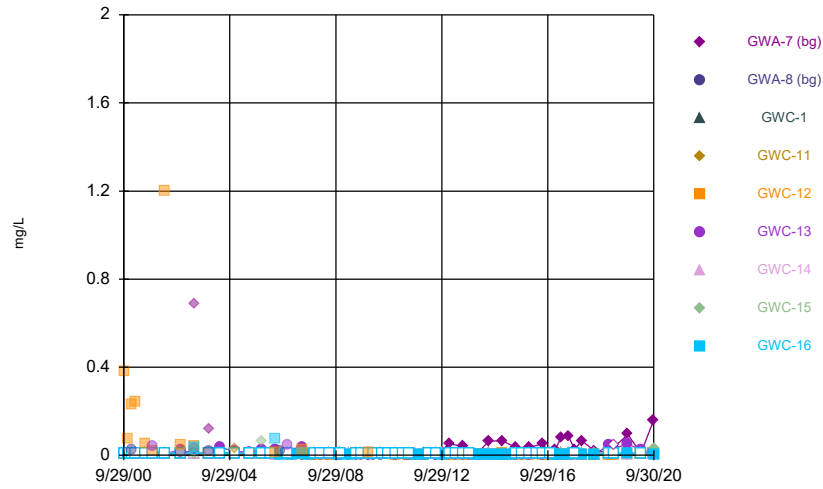
Constituent: Vanadium Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



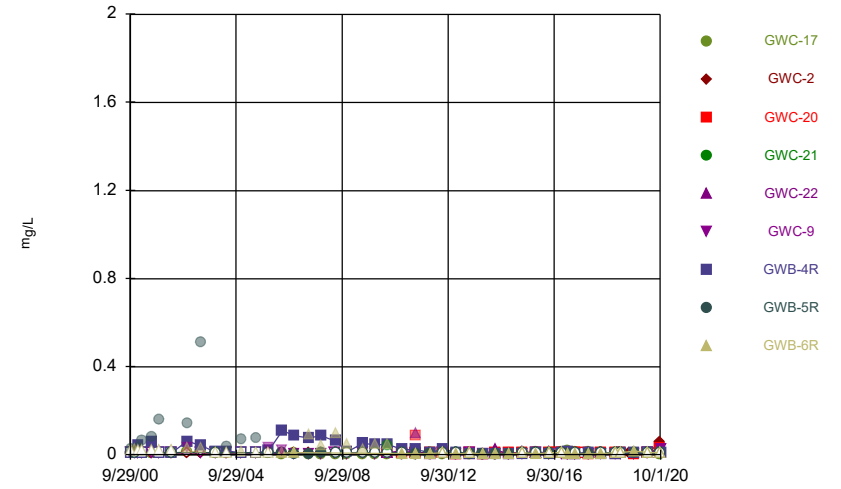
Constituent: Vanadium Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



Constituent: Zinc Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



Constituent: Zinc Analysis Run 2/1/2021 10:26 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series

Constituent: Antimony (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
9/29/2000	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
11/21/2000	<0.003		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
1/20/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
3/14/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
7/16/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
11/1/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
4/25/2002	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
11/20/2002		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
6/6/2003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
12/12/2003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
5/26/2004	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
12/7/2004	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
6/21/2005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
12/12/2005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
4/4/2006		<0.003					<0.003		<0.003
6/27/2006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
8/30/2006		<0.003					<0.003		<0.003
12/4/2006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.006
2/15/2007		<0.003					<0.003		<0.003
6/23/2007	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
9/11/2007		<0.003					<0.003		<0.003
12/11/2007	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
3/11/2008		<0.003					<0.003		<0.003
6/23/2008	<0.003	<0.003		<0.003	<0.003	<0.003			<0.003
6/24/2008			<0.003				<0.003	<0.003	<0.003
11/3/2008		<0.003					<0.003		<0.003
12/4/2008	<0.003	<0.003		<0.003	<0.003	<0.003	<0.003		<0.003
12/5/2008			<0.003					<0.003	<0.003
3/25/2009		<0.003					<0.003		<0.003
7/7/2009	<0.003	<0.003	<0.003						
7/8/2009				<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
9/14/2009		<0.003					<0.003		<0.003
12/20/2009	<0.003	<0.003	<0.003				<0.003	<0.003	<0.003
12/21/2009				<0.003	<0.003	<0.003			
3/4/2010		<0.003					<0.003		<0.003
6/20/2010	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	
6/21/2010									<0.003
9/14/2010		<0.003					<0.003		<0.003
1/6/2011			<0.003	<0.003		<0.003			
1/7/2011	<0.003	<0.003			<0.003		<0.003	<0.003	<0.003
4/15/2011		<0.003					<0.003		<0.003
7/7/2011	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
9/25/2011		<0.003					<0.003		<0.003
1/17/2012	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	
1/18/2012									<0.003
4/4/2012		<0.003					<0.003		<0.003
7/9/2012	<0.003		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	
7/10/2012		<0.003							<0.003
10/9/2012		<0.003					<0.003		<0.003
1/17/2013			<0.003	<0.003	<0.003	<0.003			
1/18/2013	<0.003	<0.003					<0.003	<0.003	<0.003
4/5/2013		<0.003					<0.003		<0.003

Time Series

Constituent: Antimony (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
7/16/2013			<0.003	<0.003	<0.003	<0.003			
7/17/2013	<0.003	<0.003					<0.003	<0.003	<0.003
10/11/2013		<0.003					0.005		<0.003
1/13/2014	<0.003		<0.003	<0.003	<0.003	<0.003		<0.003	
1/14/2014		<0.003					<0.003		<0.003
4/3/2014		<0.003					<0.003		<0.003
7/8/2014				<0.003	<0.003	<0.003			
7/9/2014	0.0022 (J)	<0.003	<0.003				<0.003	<0.003	<0.003
10/24/2014		<0.003					<0.003		<0.003
1/13/2015	<0.003		<0.003	<0.003	<0.003	<0.003		<0.003	
1/14/2015		<0.003					<0.003		<0.003
5/10/2015		<0.003					<0.003		
5/11/2015									<0.003
7/16/2015	0.0028 (J)		<0.003	<0.003	<0.003	<0.003		<0.003	<0.003
7/17/2015		<0.003					<0.003		
10/6/2015		<0.003					<0.003		<0.003
1/17/2016			<0.003				<0.003	<0.003	<0.003
1/18/2016	<0.003	<0.003			<0.003	<0.003			
1/19/2016				<0.003					
4/26/2016		<0.003					<0.003		<0.003
7/26/2016				0.0005 (J)		0.0006 (J)			
7/27/2016	<0.003		<0.003		<0.003		<0.003	<0.003	
7/28/2016		<0.003							<0.003
8/30/2016		<0.003	<0.003						
8/31/2016				<0.003	<0.003	<0.003			
9/1/2016	0.0017 (J)						<0.003	<0.003	<0.003
10/24/2016		<0.003							
10/25/2016	<0.003		<0.003				<0.003	<0.003	<0.003
10/26/2016				<0.003	<0.003	<0.003			
1/3/2017		<0.003							
1/4/2017			<0.003	<0.003	<0.003				<0.003
1/5/2017						<0.003	<0.003	<0.003	
1/6/2017	0.0009 (J)								
4/3/2017		<0.003						<0.003	
4/4/2017			<0.003				<0.003		
4/5/2017					<0.003				<0.003
4/6/2017	<0.003			0.0006 (J)		<0.003			
7/10/2017					<0.003				
7/11/2017		<0.003		0.0009 (J)			<0.003	<0.003	
7/12/2017			<0.003			<0.003			<0.003
7/13/2017	0.0013 (J)								
10/2/2017		<0.003					<0.003	<0.003	
10/3/2017			<0.003	<0.003					<0.003
10/4/2017	0.0008 (J)				<0.003	<0.003			
1/9/2018	<0.003	<0.003					<0.003	<0.003	
1/10/2018			<0.003			<0.003			<0.003
1/11/2018				0.0007 (J)	<0.003				
7/9/2018		<0.003					<0.003		
7/10/2018			<0.003					<0.003	<0.003
7/11/2018	<0.003			<0.003	<0.003	<0.003			
1/16/2019	<0.003	<0.003	<0.003			<0.003	<0.003		
1/17/2019				<0.003	<0.003			<0.003	<0.003

Time Series

Constituent: Antimony (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
3/25/2019	<0.003	<0.003							
3/26/2019			<0.003			<0.003	<0.003	<0.003	<0.003
3/27/2019				<0.003	<0.003				
8/26/2019	<0.003	<0.003							
8/27/2019			<0.003	0.00033 (J)	<0.003	<0.003	<0.003	<0.003	
8/28/2019									<0.003
10/7/2019		<0.003							
10/8/2019	<0.003			0.00046 (J)		<0.003	<0.003	<0.003	<0.003
10/9/2019			<0.003		<0.003				
4/6/2020	<0.003	<0.003							
4/7/2020			<0.003	0.00066 (J)	<0.003		<0.003	<0.003	<0.003
4/8/2020						<0.003			
8/17/2020		<0.003			<0.003	<0.003			
8/18/2020				0.00064 (J)			<0.003	<0.003	<0.003
8/19/2020	<0.003		0.00061 (J)						
9/28/2020	<0.003	<0.003	0.00035 (J)			<0.003			
9/29/2020				0.00051 (J)	<0.003		<0.003		
9/30/2020								<0.003	<0.003

Time Series

Constituent: Antimony (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
9/29/2000	<0.003					<0.003	<0.003	<0.003	<0.003
11/21/2000	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
1/20/2001	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
3/14/2001	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
7/16/2001	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
11/1/2001	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
4/25/2002	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
11/20/2002	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
6/6/2003	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
12/12/2003	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
5/26/2004	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
12/7/2004	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
6/21/2005	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
12/12/2005	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
6/27/2006	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
12/4/2006	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
6/23/2007	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
12/11/2007	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
6/23/2008						<0.003			
6/24/2008	<0.003	<0.003					<0.003	<0.003	<0.003
12/4/2008		<0.003				<0.003			
12/5/2008	<0.003						<0.003	<0.003	<0.003
7/7/2009							<0.003	<0.003	<0.003
7/8/2009	<0.003	<0.003				<0.003			
12/20/2009		<0.003							
12/21/2009	<0.003					<0.003	<0.003	<0.003	<0.003
6/20/2010		<0.003				<0.003	<0.003	<0.003	<0.003
6/21/2010	<0.003		<0.003	<0.003	<0.003		<0.003		
1/6/2011		<0.003						<0.003	
1/7/2011	<0.003		<0.003	<0.003	<0.003	<0.003	<0.003		<0.003
7/7/2011			<0.003					<0.003	<0.003
7/8/2011	<0.003		<0.003	<0.003	<0.003	<0.003	<0.003		
1/17/2012		<0.003						<0.003	
1/18/2012	<0.003		<0.003	<0.003	<0.003	<0.003	<0.003		<0.003
7/9/2012		<0.003						<0.003	
7/10/2012	<0.003		<0.003	<0.003	<0.003	<0.003	<0.003		<0.003
1/17/2013		<0.003						<0.003	
1/18/2013	<0.003		<0.003	<0.003	<0.003	<0.003	<0.003		<0.003
7/16/2013								<0.003	
7/17/2013	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003		<0.003
1/13/2014		<0.003						<0.003	
1/14/2014	<0.003		<0.003	<0.003	<0.003	<0.003	<0.003		<0.003
7/9/2014	<0.003	<0.003		<0.003	<0.003	<0.003	0.002 (J)	<0.003	<0.003
7/10/2014			<0.003		<0.003				
1/12/2015			<0.003				<0.003		
1/13/2015		<0.003						<0.003	
1/14/2015	<0.003			<0.003	<0.003	<0.003			<0.003
7/16/2015		<0.003					0.0021 (J)	<0.003	
7/17/2015				<0.003	<0.003	<0.003			<0.003
7/18/2015	<0.003		<0.003		<0.003	<0.003			
1/17/2016		<0.003	<0.003	<0.003					
1/18/2016	<0.003				<0.003	<0.003	<0.003	<0.003	<0.003

Time Series

Constituent: Antimony (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
7/27/2016		<0.003						<0.003	
7/28/2016			0.0019 (J)	<0.003		<0.003			<0.003
7/29/2016	<0.003				<0.003		0.0003 (J)		
8/30/2016								<0.003	<0.003
8/31/2016		<0.003			<0.003	<0.003			
9/1/2016	<0.003		<0.003	<0.003			<0.003		
10/25/2016			<0.003	<0.003					
10/26/2016	<0.003	<0.003			<0.003		<0.003	<0.003	<0.003
10/27/2016						0.0016 (J)			
1/3/2017								<0.003	
1/4/2017			<0.003	<0.003	<0.003				
1/5/2017	<0.003	<0.003							<0.003
1/6/2017						<0.003	<0.003		
4/4/2017		<0.003	<0.003	<0.003			<0.003		
4/5/2017	<0.003								
4/6/2017					<0.003	<0.003		<0.003	<0.003
7/11/2017			<0.003		<0.003				
7/12/2017						<0.003	<0.003	<0.003	<0.003
7/13/2017	<0.003	<0.003		<0.003					
10/2/2017			<0.003						
10/3/2017		<0.003		<0.003				<0.003	<0.003
10/4/2017	<0.003				<0.003	<0.003	<0.003		
1/9/2018				<0.003					<0.003
1/10/2018		<0.003	<0.003					<0.003	
1/11/2018	<0.003				<0.003	<0.003	<0.003		
7/9/2018			<0.003						
7/10/2018		<0.003		<0.003				<0.003	<0.003
7/11/2018	<0.003				<0.003	<0.003	<0.003		
1/16/2019	<0.003						<0.003	<0.003	<0.003
1/17/2019				<0.003					
1/18/2019					<0.003	<0.003			
1/21/2019		<0.003	<0.003						
3/25/2019			<0.003				<0.003		
3/26/2019	<0.003			<0.003				<0.003	<0.003
3/27/2019					<0.003	<0.003			
7/30/2019		<0.003							
8/27/2019		<0.003			0.00045 (J)		<0.003		<0.003
8/28/2019	<0.003		<0.003	<0.003		<0.003		0.00054 (J)	
10/8/2019				<0.003					
10/9/2019	<0.003	<0.003	<0.003		<0.003	<0.003	<0.003	<0.003	<0.003
4/7/2020				<0.003	0.00049 (J)		<0.003	<0.003	<0.003
4/8/2020	<0.003	0.0013 (J)	<0.003			0.00033 (J)			
8/18/2020	<0.003	<0.003	<0.003	<0.003	0.0022 (J)				
8/19/2020						<0.003	<0.003	<0.003	<0.003
9/29/2020		0.0016 (J)							
9/30/2020	<0.003		<0.003	0.00033 (J)	0.0016 (J)			0.0003 (J)	0.00059 (J)
10/1/2020						<0.003	<0.003		

Time Series

Constituent: Arsenic (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
9/29/2000	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.094
11/21/2000	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.059
1/20/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.087
3/14/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.075
7/16/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.11
11/1/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.098
4/25/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.071
11/20/2002		<0.005	<0.005	<0.005	<0.005	<0.005	0.011	<0.005	0.15
6/6/2003	0.02	<0.005	0.03 (o)	<0.005	<0.005	<0.005	<0.005	<0.005	1.2 (o)
12/12/2003	<0.005	<0.005	<0.005	<0.005	<0.005	0.0064	<0.005	<0.005	0.27 (o)
5/26/2004	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.12
12/7/2004	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.098
6/21/2005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.065
12/12/2005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.081
4/4/2006		<0.005					<0.005		0.077
6/27/2006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.071
8/30/2006		<0.005					<0.005		0.08
12/4/2006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.085
2/15/2007		<0.005					<0.005		0.09
6/23/2007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.12
9/11/2007		<0.005					<0.005		0.088
12/11/2007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.088
3/11/2008		<0.005					<0.005		0.071
6/23/2008	<0.005	<0.005		<0.005	<0.005	<0.005			
6/24/2008			<0.005				<0.005	<0.005	0.097
11/3/2008		<0.005					<0.005		0.089
12/4/2008	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005		
12/5/2008			<0.005					<0.005	0.092
3/25/2009		<0.005					<0.005		0.095
7/7/2009	<0.005	<0.005	<0.005						
7/8/2009				<0.005	<0.005	<0.005	<0.005	0.0052	0.11
9/14/2009		<0.005					<0.005		0.099
12/20/2009	<0.005	<0.005	<0.005				<0.005	<0.005	0.1
12/21/2009				<0.005	<0.005	<0.005			
3/4/2010		<0.005					<0.005		0.074
6/20/2010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0068	
6/21/2010									0.056
9/14/2010		<0.005					<0.005		0.067
1/6/2011			<0.005	<0.005		<0.005			
1/7/2011	<0.005	<0.005			<0.005		<0.005	<0.005	0.066
4/15/2011		<0.005					<0.005		0.08
7/7/2011	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.054
9/25/2011		<0.005					<0.005		0.085
1/17/2012	<0.005	<0.005	0.0071	<0.005	<0.005	<0.005	<0.005	<0.005	
1/18/2012									0.089
4/4/2012		<0.005					<0.005		0.0473
7/9/2012	0.0052		0.0076	<0.005	<0.005	<0.005	<0.005	<0.005	
7/10/2012		<0.005							0.07
10/9/2012		<0.005					<0.005		0.088
1/17/2013			0.0086	<0.005	<0.005	<0.005			
1/18/2013	0.0087	<0.005					<0.005	0.0089	0.063
4/5/2013		<0.005					<0.005		0.06

Time Series

Constituent: Arsenic (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
7/16/2013			<0.005	<0.005	<0.005	<0.005			
7/17/2013	0.0084	<0.005					<0.005	0.011	0.063
10/11/2013		<0.005					0.005		0.059
1/13/2014	0.009		<0.005	<0.005	<0.005	<0.005		0.017	
1/14/2014		<0.005					<0.005		0.077
4/3/2014		<0.005					<0.005		0.091
7/8/2014				<0.005	<0.005	<0.005			
7/9/2014	0.008	<0.005	0.0022 (J)				<0.005	0.014	0.08
10/24/2014		<0.005					<0.005		0.073
1/13/2015	0.0077		<0.005	<0.005	<0.005	<0.005		0.011	
1/14/2015		<0.005					<0.005		0.079
5/10/2015		<0.005					<0.005		
5/11/2015									0.058
7/16/2015	0.0077		0.0037 (J)	<0.005	<0.005	<0.005		0.02	0.068
7/17/2015		<0.005					<0.005		
10/6/2015		<0.005					<0.005		0.078
1/17/2016			0.024 (o)				0.002 (J)	0.014	0.089
1/18/2016	0.014	<0.005			<0.005	<0.005			
1/19/2016				<0.005					
4/26/2016		0.0011 (J)					0.00183 (J)		0.0731
7/26/2016				<0.005		<0.005			
7/27/2016	0.0111		0.0046 (J)		<0.005		0.0021 (J)	0.0303	
7/28/2016		<0.005							0.0627
8/30/2016		<0.005	0.0023 (J)						
8/31/2016				<0.005	<0.005	<0.005			
9/1/2016	0.0287						0.0024 (J)	0.0533	0.0551
10/24/2016		<0.005							
10/25/2016	0.0069		0.0035 (J)				<0.005	0.0551	0.0466
10/26/2016				<0.005	<0.005	<0.005			
1/3/2017		<0.005							
1/4/2017			0.0018 (J)	<0.005	<0.005				0.0444
1/5/2017									
1/6/2017	0.0097					<0.005	0.0024 (J)	0.0437	
4/3/2017		0.0006 (J)						0.0713	
4/4/2017			0.0015 (J)				0.003 (J)		
4/5/2017					0.0006 (J)				0.0591
4/6/2017	0.0104			<0.005		<0.005			
7/10/2017					0.0008 (J)				
7/11/2017		0.0006 (J)		<0.005			0.0019 (J)	0.0745	
7/12/2017			0.0015 (J)			<0.005			0.0776
7/13/2017	0.0064								
10/2/2017		0.0006 (J)					0.0026 (J)	0.0723	
10/3/2017			0.0013 (J)	<0.005					0.0813
10/4/2017	0.0078				0.0009 (J)	<0.005			
1/9/2018	0.0091 (J)	0.0009 (J)					0.0021 (J)	0.0731	
1/10/2018			0.0023 (J)			0.0006 (J)			0.085
1/11/2018				<0.005	<0.005				
7/9/2018		<0.005					0.0019 (J)		
7/10/2018			0.0031 (J)					0.09	0.067
7/11/2018	<0.005			<0.005	<0.005	<0.005			
1/16/2019	<0.005	<0.005	0.0023 (J)			<0.005	0.0016 (J)		
1/17/2019				<0.005	<0.005			0.13	0.079

Time Series

Constituent: Arsenic (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
3/25/2019	0.0029 (J)	<0.005							
3/26/2019			0.0032 (J)			0.00058 (J)	0.0023 (J)	0.1	0.089
3/27/2019				<0.005	<0.005				
8/26/2019	0.0041 (J)	<0.005							
8/27/2019			0.0022 (J)	<0.005	<0.005	<0.005	0.0017 (J)	0.17	
8/28/2019									0.091
10/7/2019		<0.005							
10/8/2019	0.003 (J)			<0.005		<0.005	0.0017 (J)	0.13	0.088
10/9/2019			0.0042 (J)		<0.005				
4/6/2020	<0.005	0.00045 (J)							
4/7/2020			0.027	<0.005	<0.005		0.0018 (J)	0.24	0.091
4/8/2020						<0.005			
8/17/2020		<0.005			<0.005	<0.005			
8/18/2020				<0.005			0.0012 (J)	0.28	0.045
8/19/2020	0.006 (J)		0.007						
9/28/2020	<0.005	<0.005	0.0058			<0.005			
9/29/2020				<0.005	<0.005		<0.005		
9/30/2020								0.24	0.044

Time Series

Constituent: Arsenic (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
9/29/2000	<0.005					<0.005	<0.005	<0.005	<0.005
11/21/2000	<0.005	<0.005				<0.005	<0.005	<0.005	<0.005
1/20/2001	<0.005	<0.005				<0.005	0.01	<0.005	0.014
3/14/2001	<0.005	<0.005				<0.005	<0.005	<0.005	<0.005
7/16/2001	<0.005	<0.005				<0.005	<0.005	0.014	<0.005
11/1/2001	<0.005	<0.005				<0.005	<0.005	0.023	<0.005
4/25/2002	<0.005	<0.005				<0.005	<0.005	<0.005	<0.005
11/20/2002	<0.005	<0.005				<0.005	0.0096	0.022	0.014
6/6/2003	<0.005	<0.005				<0.005	0.0076	0.07 (o)	0.014
12/12/2003	<0.005	<0.005				<0.005	0.0058	<0.005	<0.005
5/26/2004	<0.005	<0.005				<0.005	0.0068	0.0074	0.0082
12/7/2004	<0.005	<0.005				<0.005	0.0066	0.017	0.0062
6/21/2005	<0.005	<0.005				<0.005	<0.005	0.013	<0.005
12/12/2005	<0.005	<0.005				<0.005	<0.005	<0.005	<0.005
6/27/2006	<0.005	<0.005				<0.005	<0.005	<0.005	<0.005
12/4/2006	<0.005	<0.005				<0.005	<0.005	<0.005	<0.005
6/23/2007	<0.005	<0.005				<0.005	<0.005	<0.005	0.0053
12/11/2007	<0.005	<0.005				<0.005	<0.005	<0.005	0.0057
6/23/2008						<0.005			
6/24/2008	<0.005	<0.005					0.005	<0.005	0.012
12/4/2008		<0.005				<0.005			
12/5/2008	<0.005						<0.005	<0.005	0.0064
7/7/2009							<0.005	<0.005	<0.005
7/8/2009	<0.005	<0.005				<0.005			
12/20/2009		<0.005							
12/21/2009	<0.005					<0.005	<0.005	<0.005	<0.005
6/20/2010		<0.005				<0.005		<0.005	0.017
6/21/2010	<0.005		0.29	0.013 (o)	<0.005		0.018 (o)		
1/6/2011		<0.005						<0.005	
1/7/2011	<0.005		0.2	<0.005	<0.005	<0.005	<0.005		<0.005
7/7/2011			<0.005					<0.005	<0.005
7/8/2011	<0.005		0.19	<0.005	<0.005	<0.005	<0.005		
1/17/2012		<0.005						<0.005	
1/18/2012	<0.005		0.058	<0.005	<0.005	<0.005	<0.005		<0.005
7/9/2012		<0.005						<0.005	
7/10/2012	<0.005		0.18	<0.005	<0.005	<0.005	0.0052		<0.005
1/17/2013		<0.005						<0.005	
1/18/2013	<0.005		0.22	0.0061	<0.005	<0.005	<0.005		<0.005
7/16/2013								<0.005	
7/17/2013	<0.005	<0.005	0.45	<0.005	<0.005	<0.005	<0.005		<0.005
1/13/2014		<0.005						<0.005	
1/14/2014	<0.005		0.52	0.006	<0.005	<0.005	<0.005		<0.005
7/9/2014	<0.005	<0.005		<0.005		<0.005	0.0023 (J)	<0.005	<0.005
7/10/2014			0.4		0.0027 (J)				
1/12/2015			0.43				0.0028 (J)		
1/13/2015		<0.005						<0.005	
1/14/2015	<0.005			<0.005	<0.005	<0.005			<0.005
7/16/2015		<0.005					<0.005	<0.005	
7/17/2015				<0.005		<0.005			<0.005
7/18/2015	<0.005		0.26		<0.005				
1/17/2016		<0.005	0.34	0.0065					
1/18/2016	<0.005				<0.005	<0.005	<0.005	<0.005	<0.005

Time Series

Constituent: Arsenic (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
7/27/2016		<0.005						0.0008 (J)	
7/28/2016			0.209	<0.005		<0.005			0.0009 (J)
7/29/2016	0.0009 (J)				0.002 (J)		0.0014 (J)		
8/30/2016								<0.005	<0.005
8/31/2016		<0.005			0.0017 (J)	<0.005			
9/1/2016	<0.005		0.215	0.0039 (J)			0.0033 (J)		
10/25/2016			0.307	<0.005					
10/26/2016	<0.005	<0.005			<0.005		0.0016 (J)	<0.005	<0.005
10/27/2016						<0.005			
1/3/2017								<0.005	
1/4/2017			0.311	<0.005	<0.005				
1/5/2017	<0.005	<0.005							0.0021 (J)
1/6/2017						<0.005	<0.005		
4/4/2017		<0.005	0.317	0.0031 (J)			0.0021 (J)		
4/5/2017	0.0011 (J)								
4/6/2017					0.0006 (J)	<0.005		0.0006 (J)	0.0011 (J)
7/11/2017			0.299		0.0012 (J)				
7/12/2017						<0.005	0.0015 (J)	0.0009 (J)	0.0014 (J)
7/13/2017	0.0016 (J)	<0.005		<0.005					
10/2/2017			0.216						
10/3/2017		<0.005		<0.005				0.001 (J)	0.0014 (J)
10/4/2017	0.0019 (J)				0.0025 (J)	<0.005	0.0018 (J)		
1/9/2018				0.0033 (J)					0.0017 (J)
1/10/2018		0.0006 (J)	0.347					0.0012 (J)	
1/11/2018	0.0015 (J)				0.0006 (J)	<0.005	0.0015 (J)		
7/9/2018			0.37						
7/10/2018		<0.005		0.0027 (J)				0.0016 (J)	0.00063 (J)
7/11/2018	0.00082 (J)				0.0011 (J)	<0.005	0.00095 (J)		
1/16/2019	<0.005						0.0024 (J)	0.0011 (J)	<0.005
1/17/2019				0.0022 (J)					
1/18/2019					<0.005	<0.005			
1/21/2019		<0.005	0.44						
3/25/2019			0.41				0.0029 (J)		
3/26/2019	0.0015 (J)			0.0045 (J)				0.0014 (J)	0.0029 (J)
3/27/2019					<0.005	<0.005			
7/30/2019		0.00039 (J)							
8/27/2019		<0.005			0.00044 (J)		0.0023 (J)		0.0035 (J)
8/28/2019	0.0011 (J)		0.43	0.002 (J)		<0.005		0.0023 (J)	
10/8/2019				0.0028 (J)					
10/9/2019	0.0011 (J)	<0.005	0.35		<0.005	<0.005	0.0024 (J)	0.0053 (J)	0.0018 (J)
4/7/2020				<0.005	0.00043 (J)		0.0027 (J)	0.0011 (J)	<0.005
4/8/2020	0.0013 (J)	0.00094 (J)	0.33			0.00084 (J)			
8/18/2020	<0.005	<0.005	0.3	0.0059	<0.005				
8/19/2020						<0.005	0.0033 (J)	0.0019 (J)	0.0036 (J)
9/29/2020		<0.005							
9/30/2020	0.0012 (J)		0.31	0.0029 (J)	<0.005			0.0017 (J)	0.004 (J)
10/1/2020						<0.005	0.0027 (J)		

Time Series

Constituent: Barium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
9/29/2000	0.11	0.16	0.044	0.1	0.075	<0.005	0.11	0.028	0.076
11/21/2000	0.12		0.047	0.082	0.072	0.01	0.15	0.035	0.075
1/20/2001	0.11	0.18	0.051	0.083	0.086	<0.005	0.1	0.032	0.053
3/14/2001	0.11	0.14	0.048	0.075	0.088	0.01	0.095	0.036	0.055
7/16/2001	0.11	0.14	0.054	0.091	0.084	<0.005	0.28 (o)	0.036	0.041
11/1/2001	0.11	0.14	0.063	0.068	0.13	<0.005	0.16	0.036	0.045
4/25/2002	0.058	0.088	0.032	0.066	0.24 (o)	<0.005	0.054	0.045	0.055
6/6/2003	0.19	0.14	0.046	0.085	0.28 (o)	0.028	0.063	0.083 (o)	0.48 (o)
12/12/2003	0.1	0.13	0.034	0.072	0.27 (o)	0.019	0.041	0.094 (o)	0.13 (o)
5/26/2004	0.084	0.09	0.035	0.055	0.31 (o)	<0.005	0.059	0.034	0.055
12/7/2004	0.094	0.11	0.024	0.066	0.46 (o)	0.009	0.076	0.042	0.072
6/21/2005	0.089	0.084	0.039	0.033	0.053	0.0089	0.042	0.039	0.061
12/12/2005	0.089	0.1	0.042	0.034	0.1	0.026	0.048	0.043	0.047
4/4/2006		0.089					0.05		0.042
6/27/2006	0.096	0.1	0.033	0.029	0.098	0.029	0.036	0.031	0.042
8/30/2006		0.12					0.059		0.05
12/4/2006	0.092	0.086	0.04	0.02	0.068	0.017	0.062	0.043	0.044
2/15/2007		0.088					0.079		0.041
6/23/2007	0.08	0.089	0.044	0.017	0.042	0.014	0.03	0.031	0.044
9/11/2007		0.092					0.053		0.04
12/11/2007	0.067	0.077	0.049	0.013	0.04	0.011	0.075	0.044	0.0035
3/11/2008		0.082					0.052		0.034
6/23/2008	0.056	0.086		0.012	0.041	0.018			
6/24/2008			0.038				0.039	0.057	0.042
11/3/2008		0.088					0.082		0.049
12/4/2008	0.054	0.081		0.011	0.035	0.019	0.079		
12/5/2008			0.06					0.041	0.05
3/25/2009		0.069					0.093		0.052
7/7/2009	0.034	0.078	0.043						
7/8/2009				0.012	0.036	0.011	0.039	0.058	0.046
9/14/2009		0.079					0.061		0.048
12/20/2009	0.034	0.081	0.065				0.088	0.062	0.062
12/21/2009				0.011	0.028	0.01			
3/4/2010		0.065					0.077		0.058
6/20/2010	0.062	0.078	0.095	0.0089	0.025	0.0081	0.075	0.03	
6/21/2010									0.041
9/14/2010		0.076					0.093		0.036
1/6/2011			0.093	0.014		0.012			
1/7/2011	0.039	0.074			0.037		0.13	0.049	0.054
4/15/2011		0.065					0.086		0.049
7/7/2011	0.036	0.081	0.095	0.018	0.039	0.015	0.051	0.05	0.063
9/25/2011		0.078					0.056		0.037
1/17/2012	0.041	0.082	0.1	0.23	0.045	0.0086	0.052	0.044	
1/18/2012									0.034
4/4/2012		0.0861					0.0519		0.0446
7/9/2012	0.15		0.11	0.17	0.032	0.01	0.048	0.045	
7/10/2012		0.082							0.033
10/9/2012		0.09					0.065		0.041
1/17/2013			0.12	0.2	0.033	0.014			
1/18/2013	0.15	0.083					0.045	0.049	0.036
4/5/2013		0.078					0.047		0.036
7/16/2013			0.081	0.11	0.027	0.012			

Time Series

Constituent: Barium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
7/17/2013	0.13	0.083					0.032	0.039	0.054
10/11/2013		0.078					0.028		0.052
1/13/2014	0.16		0.096	0.083	0.027	0.015		0.038	
1/14/2014		0.081					0.036		0.051
4/3/2014		0.077					0.038		0.047
7/8/2014				0.066	0.037	0.017			
7/9/2014	0.11	0.073	0.066				0.03	0.031	0.08
10/24/2014		0.087					0.025		0.072
1/13/2015	0.083		0.068	0.053	0.023	0.019		0.041	
1/14/2015		0.079					0.04		0.047
5/10/2015		0.076					0.026		
5/11/2015									0.053
7/16/2015	0.094		0.07	0.052	0.03	0.022		0.041	0.059
7/17/2015		0.061					0.029		
10/6/2015		0.067					0.03		0.053
1/17/2016			0.062				0.038	0.048	0.056
1/18/2016	0.22	0.068			0.032	0.026			
1/19/2016				0.048					
4/26/2016		0.0596					0.025		0.0721
7/26/2016				0.051		0.0236			
7/27/2016	0.192		0.0417		0.0191		0.0248	0.0487	
7/28/2016		0.0701							0.0534
8/30/2016		0.0687	0.0545						
8/31/2016				0.0565	0.019	0.0273			
9/1/2016	0.415 (o)						0.0346	0.0403	0.0445
10/24/2016		0.07							
10/25/2016	0.173		0.0504				0.0248	0.0329	0.0464
10/26/2016				0.0591	0.0197	0.0238			
1/3/2017		0.061							
1/4/2017			0.0534	0.0598	0.0174				0.0379
1/5/2017						0.0218	0.0245	0.0392	
1/6/2017	0.167								
4/3/2017		0.0612						0.0439	
4/4/2017			0.0549				0.0342		
4/5/2017					0.0174				0.0534
4/6/2017	0.136			0.0813		0.0204			
7/10/2017					0.0172				
7/11/2017		0.0624		0.0302			0.0276	0.051	
7/12/2017			0.0614			0.0161			0.0944
7/13/2017	0.0891								
10/2/2017		0.0618					0.0274	0.047	
10/3/2017			0.0436	0.103					0.135 (o)
10/4/2017	0.113				0.0162	0.0185			
1/9/2018	0.0901	0.0574					0.0222	0.0431	
1/10/2018			0.053			0.0166			0.0603
1/11/2018				0.166	0.018				
7/9/2018		0.056					0.026		
7/10/2018			0.059					0.047	0.16 (o)
7/11/2018	0.065			0.12	0.014	0.019			
1/16/2019	0.062	0.062	0.054			0.019	0.028		
1/17/2019				0.039	0.017			0.042	0.13
3/25/2019	0.054	0.064							

Time Series

Constituent: Barium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
9/29/2000	0.16					0.093	0.16	0.22	0.16
11/21/2000	0.17	0.046				0.095	0.16	0.13	0.21
1/20/2001	0.16	0.036				0.089	0.21	0.19	0.23
3/14/2001	0.17	0.03				0.088	0.18	0.27	0.22
7/16/2001	0.19	0.032				0.096	0.18	0.37	0.22
11/1/2001	0.18	0.029				0.094	0.15	0.61 (o)	0.23
4/25/2002	0.15	0.021				0.085	0.16	0.19	0.15
6/6/2003	0.13	0.032				0.09	0.29	0.72 (o)	0.13
12/12/2003	0.18	0.021				0.084	0.18	0.054	0.034
5/26/2004	0.17	0.035				0.08	0.16	0.18	0.13
12/7/2004	0.19	0.031				0.098	0.16	0.24	0.13
6/21/2005	0.18	0.028				0.084	0.15	0.2	0.07
12/12/2005	0.17	0.024				0.07	0.15	0.074	0.04
6/27/2006	0.17	0.03				0.083	0.19	0.075	0.041
12/4/2006	0.21	0.031				0.072	0.26	0.092	0.048
6/23/2007	0.17	0.037				0.087	0.24	0.089	0.12
12/11/2007	0.18	0.034				0.082	0.21	0.072	0.12
6/23/2008						0.1			
6/24/2008	0.14	0.038					0.13	0.049	0.17
12/4/2008		0.038				0.12			
12/5/2008	0.19						0.12	0.067	0.093
7/7/2009							0.17	0.04	0.06
7/8/2009	0.2	0.053				0.14			
12/20/2009		0.047							
12/21/2009	0.23					0.15	0.2	0.044	0.11
6/20/2010		0.046				0.21		0.036	0.11
6/21/2010	0.25		0.062	0.16	0.11		0.22		
1/6/2011		0.063						0.075	
1/7/2011	0.21		0.039	0.095	0.12	0.2	0.12		0.025
7/7/2011			0.06					0.13	0.025
7/8/2011	0.13		0.043	0.1	0.094	0.18	0.15		
1/17/2012		0.06						0.21	
1/18/2012	0.26		0.042	0.12	0.087	0.18	0.15		0.03
7/9/2012		0.05						0.2	
7/10/2012	0.19		0.039	0.097	0.1	0.16	0.14		0.028
1/17/2013		0.058						0.19	
1/18/2013	0.17		0.04	0.1	0.078	0.19	0.15		0.058
7/16/2013								0.076	
7/17/2013	0.18	0.041	0.055	0.069	0.062	0.17	0.14		0.086
1/13/2014		0.058						0.14	
1/14/2014	0.18		0.059	0.086	0.073	0.2	0.16		0.1
7/9/2014	0.16	0.048		0.065		0.16	0.12	0.12	0.082
7/10/2014			0.067		0.13				
1/12/2015			0.061				0.13		
1/13/2015		0.048						0.13	
1/14/2015	0.16			0.084	0.065	0.17			0.094
7/16/2015		0.048					0.11	0.12	
7/17/2015				0.071		0.18			0.11
7/18/2015	0.012		0.13		0.073				
1/17/2016		0.049	0.08	0.079					
1/18/2016	0.13				0.062	0.2	0.095	0.12	0.11
7/27/2016		0.0796						0.112	

Time Series

Constituent: Barium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
7/28/2016			0.164	0.0626		0.234			0.105
7/29/2016	0.181				0.0575		0.0883		
8/30/2016								0.135	0.106
8/31/2016		0.0429			0.0693	0.284			
9/1/2016	0.203		0.0976	0.077			0.123		
10/25/2016			0.0702	0.0217					
10/26/2016	0.177	0.113 (o)			0.0966		0.0863	0.103	0.107
10/27/2016						0.244			
1/3/2017								0.118	
1/4/2017			0.0999	0.0617	0.0975				
1/5/2017	0.142	0.0526							0.107
1/6/2017						0.305	0.0758		
4/4/2017		0.0503	0.136	0.0761			0.091		
4/5/2017	0.106								
4/6/2017					0.064	0.249		0.162	0.111
7/11/2017			0.145		0.0778				
7/12/2017						0.256	0.0941	0.157	0.106
7/13/2017	0.0686	0.0529		0.0428					
10/2/2017			0.148						
10/3/2017		0.057		0.0376				0.127	0.105
10/4/2017	0.0589				0.156	0.356	0.0994		
1/9/2018				0.0704					0.0969
1/10/2018		0.0527	0.0788					0.158	
1/11/2018	0.0412				0.0702	0.226	0.088		
7/9/2018			0.087						
7/10/2018		0.054		0.061				0.31	0.087
7/11/2018	0.049				0.12	0.29	0.071		
1/16/2019	0.063						0.083	0.054	0.013 (J)
1/17/2019				0.061					
1/18/2019					0.052	0.21			
1/21/2019		0.05	0.069						
3/25/2019			0.085				0.077		
3/26/2019	0.025			0.084				0.057	0.012 (J)
3/27/2019					0.057	0.19			
7/30/2019		0.052							
8/27/2019		0.053			0.097		0.076		0.013
8/28/2019	0.026		0.078	0.063		0.17		0.1	
10/8/2019				0.079					
10/9/2019	0.032	0.05	0.078		0.065	0.18	0.076	0.13	0.014 (J)
4/7/2020				0.054	0.1		0.09	0.098	0.01 (J)
4/8/2020	0.055	0.061	0.19			0.15			
8/18/2020	0.074	0.05	0.38	0.18	0.085				
8/19/2020						0.17	0.076	0.1	0.064
9/29/2020		0.049							
9/30/2020	0.035		0.35	0.19	0.045			0.16	0.092
10/1/2020						0.15	0.077		

Time Series

Constituent: Beryllium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
9/29/2000	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
11/21/2000	<0.003		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
1/20/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
3/14/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
7/16/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
11/1/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
4/25/2002	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
8/30/2016		0.0002 (J)	<0.003						
8/31/2016				<0.003	0.0011 (J)	<0.003			
9/1/2016	0.0017 (J)						0.0001 (J)	<0.003	0.0001 (J)
10/24/2016		<0.003							
10/25/2016	0.0002 (J)		<0.003				<0.003	<0.003	<0.003
10/26/2016				<0.003	0.0011 (J)	<0.003			
1/3/2017		0.0002 (J)							
1/4/2017			<0.003	<0.003	0.0009 (J)				9E-05 (J)
1/5/2017						<0.003	<0.003	<0.003	
1/6/2017	0.0003 (J)								
4/3/2017		0.0002 (J)						<0.003	
4/4/2017			<0.003				9E-05 (J)		
4/5/2017					0.0008 (J)				9E-05 (J)
4/6/2017	0.0004 (J)			<0.003		<0.003			
7/10/2017					0.0008 (J)				
7/11/2017		0.0002 (J)		<0.003			<0.003	<0.003	
7/12/2017			<0.003			<0.003			<0.003
7/13/2017	0.001 (J)								
10/2/2017		0.0002 (J)					<0.003	<0.003	
10/3/2017			<0.003	<0.003					<0.003
10/4/2017	0.0002 (J)				0.0006 (J)	<0.003			
1/9/2018	<0.003	0.0002 (J)					<0.003	<0.003	
1/10/2018			<0.003			<0.003			0.0001 (J)
1/11/2018				<0.003	0.0006 (J)				
7/9/2018		0.0002 (J)					6.2E-05 (J)		
7/10/2018			<0.003					<0.003	6E-05 (J)
7/11/2018	<0.003			<0.003	0.00061 (J)	5.8E-05 (J)			
8/26/2019	<0.003	0.00021 (J)							
8/27/2019			<0.003	<0.003	0.00047 (J)	<0.003	<0.003	<0.003	
8/28/2019									8E-05 (J)
10/7/2019		0.00024 (J)							
10/8/2019	<0.003			<0.003		<0.003	<0.003	<0.003	9.8E-05 (J)
10/9/2019			<0.003		0.00046 (J)				
4/6/2020	<0.003	0.00017 (J)							
4/7/2020			<0.003	<0.003	0.00051 (J)		<0.003	<0.003	<0.003
4/8/2020						<0.003			
8/17/2020		0.00019 (J)			0.00046 (J)	<0.003			
8/18/2020				<0.003			<0.003	<0.003	6.8E-05 (J)
8/19/2020	<0.003		<0.003						
9/28/2020	<0.003	0.00021 (J)	<0.003			<0.003			
9/29/2020				<0.003	0.00043 (J)		<0.003		
9/30/2020							<0.003		8.9E-05 (J)

Time Series

Constituent: Beryllium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
9/29/2000	<0.003					<0.003	<0.003	<0.003	<0.003
11/21/2000	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
1/20/2001	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
3/14/2001	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
7/16/2001	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
11/1/2001	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
4/25/2002	<0.003	<0.003				<0.003	<0.003	<0.003	<0.003
8/30/2016								0.0002 (J)	<0.003
8/31/2016		<0.003			0.0002 (J)	0.0003 (J)			
9/1/2016	0.0014 (J)		<0.003	<0.003			0.0004 (J)		
10/25/2016			<0.003	<0.003					
10/26/2016	0.0016 (J)	0.0003 (J)			0.0002 (J)		0.0001 (J)	0.0001 (J)	<0.003
10/27/2016						0.0003 (J)			
1/3/2017								0.0001 (J)	
1/4/2017			<0.003	<0.003	0.0001 (J)				
1/5/2017	0.0019 (J)	<0.003							<0.003
1/6/2017						0.0002 (J)	0.0001 (J)		
4/4/2017		9E-05 (J)	<0.003	<0.003			0.0001 (J)		
4/5/2017	0.0024 (J)								
4/6/2017					<0.003	0.0003 (J)		0.0003 (J)	<0.003
7/11/2017			<0.003		<0.003				
7/12/2017						0.0003 (J)	<0.003	0.0002 (J)	<0.003
7/13/2017	0.0034	<0.003		<0.003					
10/2/2017			<0.003						
10/3/2017		<0.003		<0.003				0.0002 (J)	<0.003
10/4/2017	0.0037				0.0001 (J)	0.0002 (J)	0.0001 (J)		
1/9/2018				<0.003					<0.003
1/10/2018		<0.003	<0.003					0.0003 (J)	
1/11/2018	0.0033				<0.003	0.0003 (J)	0.0001 (J)		
7/9/2018			<0.003						
7/10/2018		<0.003		<0.003				0.00028 (J)	<0.003
7/11/2018	0.0038				7E-05 (J)	0.0003 (J)	<0.003		
7/30/2019		<0.003							
8/27/2019		<0.003			9E-05 (J)		<0.003		<0.003
8/28/2019	0.0017 (J)		<0.003	<0.003		0.00022 (J)		7.6E-05 (J)	
10/8/2019				<0.003					
10/9/2019	0.0018 (J)	<0.003	<0.003		<0.003	0.00023 (J)	<0.003	<0.003	<0.003
4/7/2020				<0.003	<0.003		<0.003	<0.003	<0.003
4/8/2020	0.0017 (J)	8.8E-05 (J)	<0.003			0.00019 (J)			
8/18/2020	0.0016 (J)	5.1E-05 (J)	<0.003	<0.003	7.6E-05 (J)				
8/19/2020						0.00022 (J)	<0.003	<0.003	5E-05 (J)
9/29/2020		7.5E-05 (J)							
9/30/2020	0.0013 (J)		<0.003	<0.003	<0.003			6.5E-05 (J)	4.6E-05 (J)
10/1/2020						0.0002 (J)	<0.003		

Time Series

Constituent: Boron (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
8/30/2016		0.117	0.875						
8/31/2016				0.0688 (J)	5.1	0.261			
9/1/2016	11.6						0.071 (J)	9.01 (o)	1.82
10/24/2016		0.126							
10/25/2016	21.4		1.22				0.0819 (J)	1.66	1.26
10/26/2016				0.083 (J)	5.74	0.211			
1/3/2017		0.124							
1/4/2017			1.3	0.0738	6.56				1.46
1/5/2017						0.179	0.0813	1.1	
1/6/2017	20.1								
4/3/2017		0.105						1.21	
4/4/2017			1.19				0.0723		
4/5/2017					6.49				2
4/6/2017	21.8			0.0754		0.112			
7/10/2017					8.13				
7/11/2017		0.136		0.0614			0.0734	1.44	
7/12/2017			1.37			0.0882			2.95
7/13/2017	16.3								
10/2/2017		0.107					0.0748	1.59	
10/3/2017			0.765	0.0838					4.15
10/4/2017	21.5				5.18	0.116			
1/9/2018	13.9	0.123					0.0679	1.35	
1/10/2018			0.876			0.101			3.68
1/11/2018				0.169	5.16				
7/9/2018		0.11					0.061		
7/10/2018			0.94					1.2	5.2
7/11/2018	11.7			0.3	8.5	0.098			
1/16/2019	9.3	0.13	0.91			0.11	0.046		
1/17/2019				0.065	7			1.1	8.6
3/25/2019	8.5	0.098							
3/26/2019			0.77			0.35	0.037 (J)	0.95	7.4
3/27/2019				0.089	6.1				
10/7/2019		0.12							
10/8/2019	6.4			0.22		0.18	0.048	1.1	8.4
10/9/2019			0.93		8.2				
4/6/2020	6.1	0.14							
4/7/2020			1	0.67	5.3		0.061 (J)	0.96	10.5
4/8/2020						0.28			
9/28/2020	4.6	0.15	0.69			0.24			
9/29/2020				1.2	4.7		0.053		
9/30/2020								0.86	8.1

Time Series

Constituent: Boron (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
8/30/2016								1.09	1.41
8/31/2016		0.0196 (J)			12.8	0.096 (J,o)			
9/1/2016	0.408		3.34	0.62			6.48		
10/25/2016			2.54	0.0658 (J)					
10/26/2016	0.5	0.05 (J)			9.81		7.57	2.5	1.83
10/27/2016						0.0281 (J)			
1/3/2017								3.39	
1/4/2017			1.91	0.36	8.94				
1/5/2017	0.676	0.0162 (J)							3.07
1/6/2017						0.0189 (J)	8.34		
4/4/2017		0.019 (J)	2.77	0.509			8.18		
4/5/2017	0.69								
4/6/2017					0.733	0.0181 (J)		2.76	3.19
7/11/2017			4.14		0.852				
7/12/2017						0.0211 (J)	7.51	3.55	3.06
7/13/2017	0.888	0.023 (J)		0.126					
10/2/2017			4.65						
10/3/2017		0.0266 (J)		0.1				2.72	2.69
10/4/2017	1.02				6.05	0.0254 (J)	8.88		
1/9/2018				0.783					2.81
1/10/2018		0.0203 (J)	1.79					3.21	
1/11/2018	1.28				0.838	0.018 (J)	6.95		
7/9/2018			1.7						
7/10/2018		0.026 (J)		0.5				7	2.9
7/11/2018	1.6				3.2	0.02 (J)	6.4		
1/16/2019	1.5						5.3	5	7.7
1/17/2019				0.43					
1/18/2019					0.37	0.018 (J)			
1/21/2019		0.018 (J)	1.1						
3/25/2019			1				4.4		
3/26/2019	1.2			0.61				4	7.4
3/27/2019					0.37	0.016 (J)			
7/30/2019		0.02 (J)							
10/8/2019				1					
10/9/2019	1.3	0.024 (J)	0.79		0.39	0.019 (J)	5.7	6.8	6.3
4/7/2020				0.24	3.1		5.5	4.6	5.6
4/8/2020	0.99	0.031 (J)	2.5			0.023 (J)			
9/29/2020		0.024 (J)							
9/30/2020	0.86		9.9	2.3	0.25			4	4.2
10/1/2020						0.028 (J)	5.2		

Time Series

Constituent: Cadmium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
11/21/2000	<0.0025		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
1/20/2001	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
3/14/2001	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
7/16/2001	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
11/1/2001	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
4/25/2002	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
8/30/2016		<0.0025	<0.0025						
8/31/2016				0.0002 (J)	<0.0025	<0.0025			
9/1/2016	0.0007 (J)						0.0001 (J)	<0.0025	<0.0025
10/24/2016		<0.0025							
10/25/2016	<0.0025		<0.0025				0.0002 (J)	<0.0025	<0.0025
10/26/2016				0.0001 (J)	<0.0025	<0.0025			
1/3/2017		<0.0025							
1/4/2017			0.0001 (J)	0.0001 (J)	<0.0025				<0.0025
1/5/2017						<0.0025	0.0002 (J)	<0.0025	
1/6/2017	0.0001 (J)								
4/3/2017		<0.0025						<0.0025	
4/4/2017			7E-05 (J)				0.0002 (J)		
4/5/2017					<0.0025				<0.0025
4/6/2017	<0.0025			0.0002 (J)		<0.0025			
7/10/2017					<0.0025				
7/11/2017		<0.0025		<0.0025			0.0002 (J)	<0.0025	
7/12/2017			<0.0025			<0.0025			<0.0025
7/13/2017	<0.0025								
10/2/2017		<0.0025					<0.0025	<0.0025	
10/3/2017			<0.0025	0.0003 (J)					<0.0025
10/4/2017	<0.0025				<0.0025	<0.0025			
1/9/2018	<0.0025	<0.0025					<0.0025	<0.0025	
1/10/2018			<0.0025			<0.0025			<0.0025
1/11/2018				0.0006 (J)	<0.0025				
7/9/2018		<0.0025					0.00017 (J)		
7/10/2018			<0.0025					<0.0025	<0.0025
7/11/2018	<0.0025			0.0004 (J)	<0.0025	<0.0025			
8/26/2019	<0.0025	<0.0025							
8/27/2019			<0.0025	0.00044 (J)	<0.0025	<0.0025	<0.0025	<0.0025	
8/28/2019									<0.0025
10/7/2019		<0.0025							
10/8/2019	<0.0025			0.00043 (J)		<0.0025	<0.0025	<0.0025	<0.0025
10/9/2019			<0.0025		<0.0025				
4/6/2020	<0.0025	<0.0025							
4/7/2020			<0.0025	0.00051 (J)	<0.0025		<0.0025	<0.0025	<0.0025
4/8/2020						<0.0025			
8/17/2020		<0.0025			<0.0025	<0.0025			
8/18/2020				0.00058 (J)			<0.0025	<0.0025	<0.0025
8/19/2020	<0.0025		<0.0025						
9/28/2020	<0.0025	<0.0025	<0.0025			<0.0025			
9/29/2020				0.00077 (J)	<0.0025		0.00012 (J)		
9/30/2020								<0.0025	<0.0025

Time Series

Constituent: Cadmium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
11/21/2000	<0.0025	<0.0025				<0.0025	<0.0025	<0.0025	<0.0025
1/20/2001	<0.0025	<0.0025				<0.0025	<0.0025	<0.0025	<0.0025
3/14/2001	<0.0025	<0.0025				<0.0025	<0.0025	<0.0025	<0.0025
7/16/2001	<0.0025	<0.0025				<0.0025	<0.0025	<0.0025	<0.0025
11/1/2001	<0.0025	<0.0025				<0.0025	<0.0025	<0.0025	<0.0025
4/25/2002	<0.0025	<0.0025				<0.0025	<0.0025	<0.0025	<0.0025
8/30/2016								<0.0025	<0.0025
8/31/2016		<0.0025			8E-05 (J)	<0.0025			
9/1/2016	<0.0025		<0.0025	<0.0025			0.0002 (J)		
10/25/2016			<0.0025	<0.0025					
10/26/2016	<0.0025	<0.0025			<0.0025		<0.0025	<0.0025	<0.0025
10/27/2016						<0.0025			
1/3/2017								<0.0025	
1/4/2017			<0.0025	<0.0025	0.0001 (J)				
1/5/2017	<0.0025	<0.0025							<0.0025
1/6/2017						<0.0025	9E-05 (J)		
4/4/2017		<0.0025	<0.0025	<0.0025			9E-05 (J)		
4/5/2017	<0.0025								
4/6/2017					0.0001 (J)	<0.0025		<0.0025	<0.0025
7/11/2017			<0.0025		<0.0025				
7/12/2017						<0.0025	<0.0025	<0.0025	<0.0025
7/13/2017	<0.0025	<0.0025		<0.0025					
10/2/2017			<0.0025						
10/3/2017		<0.0025		<0.0025				<0.0025	<0.0025
10/4/2017	<0.0025				0.0002 (J)	<0.0025	<0.0025		
1/9/2018				<0.0025					<0.0025
1/10/2018		<0.0025	<0.0025					<0.0025	
1/11/2018	<0.0025				0.0002 (J)	<0.0025	0.0002 (J)		
7/9/2018			<0.0025						
7/10/2018		<0.0025		<0.0025				<0.0025	<0.0025
7/11/2018	<0.0025				0.00023 (J)	<0.0025	<0.0025		
7/30/2019		<0.0025							
8/27/2019		<0.0025			<0.0025		<0.0025		<0.0025
8/28/2019	<0.0025		<0.0025	<0.0025		<0.0025		<0.0025	
10/8/2019				<0.0025					
10/9/2019	<0.0025	<0.0025	<0.0025		0.00012 (J)	<0.0025	<0.0025	<0.0025	<0.0025
4/7/2020				<0.0025	0.00054 (J)		<0.0025	<0.0025	<0.0025
4/8/2020	<0.0025	<0.0025	<0.0025			<0.0025			
8/18/2020	<0.0025	<0.0025	<0.0025	<0.0025	0.00024 (J)				
8/19/2020						<0.0025	<0.0025	<0.0025	<0.0025
9/29/2020		<0.0025							
9/30/2020	<0.0025		<0.0025	<0.0025	0.00024 (J)			<0.0025	<0.0025
10/1/2020						<0.0025	<0.0025		

Time Series

Constituent: Calcium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
8/30/2016		23.8	29.4						
8/31/2016				18.8	105	2.77			
9/1/2016	5.59						194	119	93.8
10/24/2016		22.5							
10/25/2016	6.43		28.3				100	106	94.1
10/26/2016				16.6	101	2.25			
1/3/2017		22.1							
1/4/2017			33.4	17.6	94.9				88.2
1/5/2017						2.27	107	115	
1/6/2017	8.13								
4/3/2017		24.6 (J)						131	
4/4/2017			34.6				153		
4/5/2017					92.5				106
4/6/2017	7.72			30.9		2.04			
7/10/2017					90.3				
7/11/2017		23.5		17.7			125	155	
7/12/2017			38			2.25			149
7/13/2017	4.57								
10/2/2017		22.7					126	137	
10/3/2017			25.5	39.8					217
10/4/2017	6.41				74.6	2.19			
1/9/2018	4.68	23.2					119	135	
1/10/2018			36.5			2.28			161
1/11/2018				65.6	78.1				
7/9/2018		24.6 (J)					123		
7/10/2018			45.5					129	205
7/11/2018	3.9			53	72.2	2.3			
1/16/2019	4.3	27.7	46.5			2.3	120		
1/17/2019				19.8 (J)	64.7			137	187
3/25/2019	3.9	31.7							
3/26/2019			46.3			2.4	84.2	124	204
3/27/2019				25.1	63.1				
10/7/2019		31.6							
10/8/2019	3.5			69.2		2.3	146	129	205
10/9/2019			51.2		54.2				
4/6/2020	3.1	35.8							
4/7/2020			31.1	84.7	52.1		135	129	225
4/8/2020						2.5			
9/28/2020	3.3	25.6	70.7			2.9			
9/29/2020				123	42		30.8		
9/30/2020								109	177

Time Series

Constituent: Calcium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
8/30/2016								14.3	4.68
8/31/2016		0.371 (J)			127	6.9			
9/1/2016	71.9		67.2	40.5			9.91		
10/25/2016			50.1	3.91					
10/26/2016	80.3	5.84			127		8.56	18.6	5.45
10/27/2016						8.2			
1/3/2017								18.1	
1/4/2017			80.4	15.2	113				
1/5/2017	94.4	0.379 (J)							5.35
1/6/2017						7.97	8.18		
4/4/2017		0.993	108	32.3			8.12		
4/5/2017	104								
4/6/2017					42.7	7.95		16.2	5.41
7/11/2017			136		46				
7/12/2017						8.37	8	18.1	4.81
7/13/2017	124	0.388 (J)		8.92					
10/2/2017			105						
10/3/2017		0.251 (J)		7.88				15.2	5.17
10/4/2017	136				115	8.57	12.5		
1/9/2018				40.5					4.73
1/10/2018		0.177 (J)	60.1					15.5	
1/11/2018	139				47.6	9.78	12.9		
7/9/2018			75.9						
7/10/2018		0.17 (J)		29.8				30.6	4.5
7/11/2018	122				73.7	9.2	8.6		
1/16/2019	80.5						68.8	33.3	10.1
1/17/2019				27.6					
1/18/2019					30.6	8.1			
1/21/2019		0.19 (J)	60						
3/25/2019			74.8				55.6		
3/26/2019	68.8			60.1				36.1	9
3/27/2019					28.8	7.7			
7/30/2019		0.43							
10/8/2019				49.5					
10/9/2019	56.6	0.18	80.1		30.1	6	46.7	17.7	10.1
4/7/2020				12.5	65.7		62.1	34.1	7.8
4/8/2020	53.1	0.24 (J)	175			5.3			
9/29/2020		0.18 (J)							
9/30/2020	53.5		292	98.4	20.9			70.4	27.5
10/1/2020						5.5	48.4		

Time Series

Constituent: Chloride (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
8/30/2016		15	5.5						
8/31/2016				3.5	210	4.3			
9/1/2016	190						60	10	43
10/24/2016		13							
10/25/2016	175 (D)		5.1				36	6.5	34
10/26/2016				2.5	200	4.9			
1/3/2017		13							
1/4/2017			6.9	3.8	160				29
1/5/2017						4.1	37	10	
1/6/2017	180								
4/3/2017		14						7.3	
4/4/2017			6.5				47		
4/5/2017					140				36
4/6/2017	200			7.1		3.7			
7/10/2017					88				
7/11/2017		13		3.1			34	5.7	
7/12/2017			6.5			2.6			44
7/13/2017	200								
10/2/2017		15					34	4.4	
10/3/2017			4.5	46					58
10/4/2017	260				100	3			
1/9/2018	210	13					24	5.7	
1/10/2018			6.9			3.4			36
1/11/2018				100	78				
7/9/2018		15.4					25.9		
7/10/2018			6.2					3.1	57
7/11/2018	177			53.7	66.9	3.2			
1/16/2019	165	16	6.6			3.8	29.2		
1/17/2019				6.6	52			3.2	48.9
3/25/2019	147	17.7							
3/26/2019			7			3.2	21.1	3	5.1
3/27/2019				11.9	45.6				
10/7/2019		18							
10/8/2019	125			89		4	40.2	2.9	46.4
10/9/2019			7.2		44.1				
4/6/2020	30.2	13.5							
4/7/2020			7.7	103	32.5		41.6	3.4	49.3
4/8/2020						4.5			
9/28/2020	113	13.7	13.8			4.3			
9/29/2020				143	24.3		10.6		
9/30/2020								1.7	39.6

Time Series

Constituent: Chloride (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
8/30/2016								31	60
8/31/2016		7.8			320	17			
9/1/2016	610		16	5.9			160		
10/25/2016			8.1	4.4					
10/26/2016	570	12			450		110	24	67
10/27/2016						17			
1/3/2017								29	
1/4/2017			13	7.7	330				
1/5/2017	710	7.4							70
1/6/2017						16	67		
4/4/2017		8.7	23	8			80		
4/5/2017	860								
4/6/2017					50	17		27	76
7/11/2017			31		70				
7/12/2017						18	120	31	64
7/13/2017	860	8.3		5.4					
10/2/2017			30						
10/3/2017		9		4.4				27	73
10/4/2017	1000				360	18	130		
1/9/2018				4.4					61
1/10/2018		8.2	9.7					59	
1/11/2018	940				74	16	60		
7/9/2018			10.8						
7/10/2018		7.3		6.3				172	60.2
7/11/2018	864				164	16.2	75.9		
1/16/2019	469						20.2	49.7	54.1
1/17/2019				5.4					
1/18/2019					11	17.5			
1/21/2019		6.9	5.1						
3/25/2019			9.4				19.7		
3/26/2019	439			11.9				47.9	51.8
3/27/2019					11.5	18.9			
7/30/2019		7.1							
10/8/2019				7.8					
10/9/2019	330	7	5.4		25.3	19	32.1	239	49.7
4/7/2020				4.7	146		14.5	44.3	56.4
4/8/2020	277	5.2	20.2			16.9			
9/29/2020		5.4							
9/30/2020	257		34.9	23.7	8.5			24.1	53.9
10/1/2020						16.8	15.7		

Time Series

Constituent: Chromium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
9/29/2000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/21/2000	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1/20/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
3/14/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
7/16/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/1/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4/25/2002	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/20/2002		0.0051	<0.01	0.006	0.002	<0.01	0.014	0.0058	0.0041
6/6/2003	0.037	0.014	0.005	0.0082	<0.01	0.003	<0.01	0.0068	0.063 (o)
12/12/2003	0.0044	0.011	<0.01	0.0023	<0.01	<0.01	<0.01	0.0041	0.0059
5/26/2004	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
12/7/2004	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0026	<0.01
6/21/2005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
12/12/2005	<0.01	<0.01	0.002	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4/4/2006		<0.01					<0.01		<0.01
6/27/2006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0013	<0.01
8/30/2006		<0.01					<0.01		<0.01
12/4/2006	0.0015	<0.01	<0.01	0.0021	0.0032	0.0017	0.0042	<0.01	0.0036
2/15/2007		<0.01					<0.01		<0.01
6/23/2007	<0.01	<0.01	<0.01	0.0017	<0.01	<0.01	<0.01	<0.01	0.0016
9/11/2007		<0.01					<0.01		<0.01
12/11/2007	0.0016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
3/11/2008		<0.01					<0.01		<0.01
6/23/2008	0.0019	<0.01		<0.01	0.0016	<0.01			<0.01
6/24/2008			<0.01				<0.01	0.0014	<0.01
11/3/2008		<0.01					<0.01		0.0025
12/4/2008	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01		
12/5/2008			<0.01					<0.01	<0.01
3/25/2009		<0.01					<0.01		<0.01
7/7/2009	0.0037	<0.01	0.0013						
7/8/2009				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
9/14/2009		<0.01					<0.01		<0.01
12/20/2009	0.0016	<0.01	<0.01				<0.01	<0.01	<0.01
12/21/2009				<0.01	<0.01	<0.01			
3/4/2010		<0.01					<0.01		<0.01
6/20/2010	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
6/21/2010									<0.01
9/14/2010		<0.01					<0.01		<0.01
1/6/2011			<0.01	<0.01		<0.01			
1/7/2011	0.0033	<0.01			<0.01		0.0016	<0.01	0.0018
4/15/2011		<0.01					0.0034		<0.01
7/7/2011	0.0044	<0.01	<0.01	0.0023	<0.01	0.0019	<0.01	<0.01	<0.01
9/25/2011		0.0021					0.0013		<0.01
1/17/2012	0.0038	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
1/18/2012									<0.01
4/4/2012		<0.01					<0.01		<0.01
7/9/2012	0.022		<0.01	0.0017	<0.01	<0.01	<0.01	<0.01	
7/10/2012		<0.01							<0.01
10/9/2012		<0.01					0.0019		0.0018
1/17/2013			<0.01	<0.01	<0.01	<0.01			
1/18/2013	0.034	<0.01					0.0017	<0.01	<0.01
4/5/2013		<0.01					0.0019		<0.01

Time Series

Constituent: Chromium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
7/16/2013			<0.01	<0.01	<0.01	<0.01			
7/17/2013	0.032	<0.01					0.0017	<0.01	<0.01
10/11/2013		<0.01					0.0013		<0.01
1/13/2014	0.04		<0.01	<0.01	<0.01	<0.01		<0.01	
1/14/2014		<0.01					0.001		<0.01
4/3/2014		<0.01					0.0031		<0.01
7/8/2014				<0.01	<0.01	<0.01			
7/9/2014	0.036	<0.01	0.0011 (J)				0.0012 (J)	<0.01	<0.01
10/24/2014		<0.01					<0.01		<0.01
1/13/2015	0.03		<0.01	<0.01	<0.01	<0.01		<0.01	
1/14/2015		<0.01					0.0013		<0.01
5/10/2015		<0.01					<0.01		
5/11/2015									<0.01
7/16/2015	0.039		0.0011 (J)	<0.01	0.001 (J)	<0.01		<0.01	<0.01
7/17/2015		<0.01					0.001 (J)		
10/6/2015		<0.01					<0.01		<0.01
1/17/2016			<0.01				0.0012 (J)	<0.01	<0.01
1/18/2016	0.068	<0.01			<0.01	<0.01			
1/19/2016				<0.01					
4/26/2016		<0.01					<0.01		<0.01
7/26/2016				0.0005 (J)		<0.01			
7/27/2016	0.05		0.0016 (J)		0.0014 (J)		0.0008 (J)	0.0007 (J)	
7/28/2016		<0.01							0.0006 (J)
8/30/2016		<0.01	0.0015 (J)						
8/31/2016				0.001 (J)	0.0012 (J)	0.0011 (J)			
9/1/2016	0.119 (o)						0.0015 (J)	0.0011 (J)	0.0011 (J)
10/24/2016		<0.01							
10/25/2016	0.0519		0.0018 (J)				<0.01	<0.01	<0.01
10/26/2016				<0.01	0.0012 (J)	<0.01			
1/3/2017		<0.01							
1/4/2017			0.0021 (J)	<0.01	0.0012 (J)				<0.01
1/5/2017						<0.01	0.001 (J)	<0.01	
1/6/2017	0.0536								
4/3/2017		0.0004 (J)						0.0015 (J)	
4/4/2017			0.002 (J)				0.001 (J)		
4/5/2017					0.0013 (J)				0.001 (J)
4/6/2017	0.0447 (J)			0.0007 (J)		0.0011 (J)			
7/10/2017					0.0014 (J)				
7/11/2017		0.0006 (J)		0.0006 (J)			0.0008 (J)	0.0013 (J)	
7/12/2017			0.0021 (J)			0.0007 (J)			0.0011 (J)
7/13/2017	0.0269								
10/2/2017		<0.01					0.0009 (J)	0.0013 (J)	
10/3/2017			0.0014 (J)	0.0007 (J)					0.0009 (J)
10/4/2017	0.0378				0.0011 (J)	0.0008 (J)			
1/9/2018	0.0283 (J)	<0.01					0.0006 (J)	0.0012 (J)	
1/10/2018			0.0017 (J)			0.0007 (J)			0.0007 (J)
1/11/2018				0.0098 (J)	0.001 (J)				
7/9/2018		<0.01					<0.01		
7/10/2018			0.0021 (J)					<0.01	<0.01
7/11/2018	0.018 (J)			<0.01	<0.01	0.0019 (J)			
1/16/2019	0.018 (J)	<0.01	0.0021 (J)			<0.01	<0.01		
1/17/2019				<0.01	0.0028 (J)			<0.01	0.01 (J)

Time Series

Constituent: Chromium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
3/25/2019	0.017 (J)	<0.01							
3/26/2019			0.0018 (J)			<0.01	<0.01	<0.01	<0.01
3/27/2019				<0.01	<0.01				
8/26/2019	0.024 (J)	0.001 (J)							
8/27/2019			0.0062 (J)	0.00092 (J)	0.00085 (J)	<0.01	0.001 (J)	0.0016 (J)	
8/28/2019									0.0011 (J)
10/7/2019		0.00052 (J)							
10/8/2019	0.021 (J)			0.00091 (J)		<0.01	0.00053 (J)	0.0017 (J)	0.00099 (J)
10/9/2019			0.0019 (J)		0.00081 (J)				
4/6/2020	0.015 (J)	<0.01							
4/7/2020			0.0015 (J)	0.00094 (J)	0.00082 (J)		0.00074 (J)	0.0014 (J)	<0.01
4/8/2020						0.00058 (J)			
8/17/2020		0.00082 (J)			0.001 (J)	0.00077 (J)			
8/18/2020				0.0015 (J)			0.00059 (J)	0.0018 (J)	0.0012 (J)
8/19/2020	0.015 (J)		0.0028 (J)						
9/28/2020	0.014 (J)	0.00071 (J)	0.0024 (J)			0.00062 (J)			
9/29/2020				0.0011 (J)	0.00085 (J)		<0.01		
9/30/2020								0.0016 (J)	0.00098 (J)

Time Series

Constituent: Chromium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
9/29/2000	<0.01					<0.01	0.021	0.03	0.016
11/21/2000	<0.01	<0.01				<0.01	0.017	<0.01	0.023
1/20/2001	<0.01	<0.01				<0.01	0.03	0.028	0.025
3/14/2001	<0.01	<0.01				<0.01	0.019	0.052 (o)	0.021
7/16/2001	<0.01	<0.01				<0.01	0.029	0.08 (o)	0.019
11/1/2001	<0.01	<0.01				<0.01	0.021	0.13 (o)	0.022
4/25/2002	<0.01	<0.01				<0.01	0.03	0.021	0.019
11/20/2002	<0.01	<0.01				0.014	0.038	0.053 (o)	0.024
6/6/2003	<0.01	<0.01				<0.01	0.028	0.064 (o)	0.021
12/12/2003	0.036 (o)	<0.01				<0.01	0.027	<0.01	0.0066
5/26/2004	<0.01	<0.01				<0.01	0.021	0.012	0.013
12/7/2004	0.0021	<0.01				0.0039	0.016	0.019	0.013
6/21/2005	<0.01	<0.01				0.002	0.015	0.02	0.0067
12/12/2005	<0.01	<0.01				<0.01	0.022	<0.01	0.0033
6/27/2006	<0.01	<0.01				<0.01	0.027	0.0015	0.0047
12/4/2006	<0.01	<0.01				0.0019	0.025	0.0034	0.0084
6/23/2007	<0.01	<0.01				0.0015	0.023	<0.01	0.01
12/11/2007	<0.01	<0.01				<0.01	0.018	<0.01	0.0049
6/23/2008						0.0015			
6/24/2008	<0.01	<0.01					0.022	<0.01	0.032 (o)
12/4/2008		<0.01				<0.01			
12/5/2008	<0.01						0.023	0.0016	0.009
7/7/2009							0.012	<0.01	0.0044
7/8/2009	<0.01	<0.01				<0.01			
12/20/2009		<0.01							
12/21/2009	<0.01					<0.01	0.019	<0.01	0.0055
6/20/2010		<0.01				0.0015		<0.01	0.002
6/21/2010	<0.01		<0.01	0.0019	<0.01		0.01		
1/6/2011		<0.01						0.0017	
1/7/2011	<0.01		0.0018	0.0017	<0.01	<0.01	0.023		0.0039
7/7/2011			<0.01					0.008	0.0031
7/8/2011	0.0013		0.0019	0.0023	<0.01	<0.01	0.017		
1/17/2012		<0.01						0.0082	
1/18/2012	<0.01		<0.01	<0.01	<0.01	<0.01	0.0114		0.0023
7/9/2012		<0.01						0.01	
7/10/2012	<0.01		0.0013	<0.01	<0.01	<0.01	0.014		0.0022
1/17/2013		<0.01						0.01	
1/18/2013	<0.01		0.0015	<0.01	<0.01	<0.01	0.015		<0.01
7/16/2013								0.0061	
7/17/2013	<0.01	<0.01	<0.01	0.0019	<0.01	<0.01	0.011		<0.01
1/13/2014		<0.01						0.002	
1/14/2014	<0.01		0	<0.01	<0.01	<0.01	0.019		0.0013
7/9/2014	<0.01	<0.01		<0.01		0.0011 (J)	0.012	<0.01	<0.01
7/10/2014			<0.01		<0.01				
1/12/2015			<0.01				0.016		
1/13/2015		<0.01						<0.01	
1/14/2015	<0.01			<0.01	<0.01	<0.01			0.0015
7/16/2015		<0.01					0.0084	<0.01	
7/17/2015				<0.01		0.0013			0.0011 (J)
7/18/2015	<0.01		<0.01	<0.01	<0.01				
1/17/2016		<0.01	<0.01	<0.01					
1/18/2016	<0.01				<0.01	<0.01	0.014	<0.01	0.0011 (J)

Time Series

Constituent: Chromium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
7/27/2016		0.0008 (J)						0.0006 (J)	
7/28/2016			0.0007 (J)	0.0005 (J)		0.0011 (J)			0.001 (J)
7/29/2016	0.0009 (J)				0.0007 (J)		0.0077 (J)		
8/30/2016								<0.01	0.0013 (J)
8/31/2016		<0.01			<0.01	0.0024 (J)			
9/1/2016	0.0011 (J)		<0.01	<0.01			0.015		
10/25/2016			<0.01	<0.01					
10/26/2016	<0.01	0.001 (J)			<0.01		0.0106	<0.01	0.0014 (J)
10/27/2016						<0.01			
1/3/2017								0.001 (J)	
1/4/2017			<0.01	<0.01	<0.01				
1/5/2017	0.0012 (J)	<0.01							0.002 (J)
1/6/2017						<0.01	0.0098 (J)		
4/4/2017		0.0008 (J)	0.0011 (J)	0.0008 (J)			0.0101		
4/5/2017	0.0015 (J)								
4/6/2017					0.0006 (J)	0.0019 (J)		0.0013 (J)	0.0034 (J)
7/11/2017			0.0009 (J)		0.0005 (J)				
7/12/2017						0.0011 (J)	0.0096 (J)	0.0011 (J)	0.0024 (J)
7/13/2017	0.0012 (J)	0.0006 (J)		0.0006 (J)					
10/2/2017			0.0009 (J)						
10/3/2017		<0.01		0.0005 (J)				0.0012 (J)	0.0022 (J)
10/4/2017	0.0055 (J)				0.0006 (J)	0.0011 (J)	0.0097 (J)		
1/9/2018				0.0007 (J)					0.0019 (J)
1/10/2018		<0.01	0.0008 (J)					0.0016 (J)	
1/11/2018	0.0009 (J)				<0.01	0.001 (J)	0.0109		
7/9/2018			<0.01						
7/10/2018		<0.01		<0.01				0.0055 (J)	0.0023 (J)
7/11/2018	<0.01				<0.01	<0.01	0.0055 (J)		
1/16/2019	<0.01						0.0024 (J)	<0.01	0.018 (J)
1/17/2019				0.01					
1/18/2019					<0.01	<0.01			
1/21/2019		<0.01	<0.01						
3/25/2019			<0.01				0.002 (J)		
3/26/2019	<0.01			<0.01				0.072	0.017 (J)
3/27/2019					<0.01	<0.01			
7/30/2019		0.00065 (J)							
8/27/2019		<0.01			0.00057 (J)		0.0027 (J)		0.0097 (J)
8/28/2019	0.0013 (J)		0.00089 (J)	0.00087 (J)		0.00089 (J)		0.0071 (J)	
10/8/2019				0.00065 (J)					
10/9/2019	0.00081 (J)	0.00049 (J)	0.0011 (J)		0.00072 (J)	0.0009 (J)	0.002 (J)	0.012 (J)	0.011 (J)
4/7/2020				<0.01	0.00049 (J)		0.0028 (J)	0.0022 (J)	0.0094 (J)
4/8/2020	0.00073 (J)	0.00069 (J)	0.001 (J)			0.0015 (J)			
8/18/2020	0.0011 (J)	<0.01	0.0011 (J)	0.0012 (J)	0.00056 (J)				
8/19/2020						0.0013 (J)	0.0022 (J)	0.0012 (J)	0.0037 (J)
9/29/2020		<0.01							
9/30/2020	0.00096 (J)		0.0013 (J)	0.00067 (J)	0.00064 (J)			0.0018 (J)	0.0045 (J)
10/1/2020						0.0012 (J)	0.002 (J)		

Time Series

Constituent: Cobalt (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
9/29/2000	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
11/21/2000	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1/20/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
3/14/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
7/16/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
11/1/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4/25/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
8/30/2016		<0.005	<0.005						
8/31/2016				<0.005	0.0018 (J)	<0.005			
9/1/2016	0.0102						<0.005	<0.005	<0.005
10/24/2016		<0.005							
10/25/2016	0.0037 (J)		<0.005				<0.005	<0.005	<0.005
10/26/2016				<0.005	0.0016 (J)	<0.005			
1/3/2017		<0.005							
1/4/2017			<0.005	<0.005	0.0014 (J)				<0.005
1/5/2017						<0.005	<0.005	<0.005	
1/6/2017	0.0039 (J)								
4/3/2017		0.0005 (J)						<0.005	
4/4/2017			<0.005				<0.005		
4/5/2017					0.0013 (J)				<0.005
4/6/2017	0.006 (J)			<0.005		<0.005			
7/10/2017					0.0013 (J)				
7/11/2017		0.0005 (J)		<0.005			0.0003 (J)	<0.005	
7/12/2017			<0.005			<0.005			<0.005
7/13/2017	0.0037 (J)								
10/2/2017		0.0004 (J)					<0.005	<0.005	
10/3/2017			<0.005	<0.005					<0.005
10/4/2017	0.0058 (J)				0.0011 (J)	<0.005			
1/9/2018	0.0053 (J)	0.0004 (J)					<0.005	<0.005	
1/10/2018			<0.005			<0.005			<0.005
1/11/2018				0.0003 (J)	0.0011 (J)				
7/9/2018		<0.005					<0.005		
7/10/2018			<0.005					<0.005	<0.005
7/11/2018	<0.05 (o)			<0.005	0.00096 (J)	<0.005			
8/26/2019	0.0037 (J)	0.00042 (J)							
8/27/2019			<0.005	<0.005	0.0009 (J)	<0.005	<0.005	<0.005	
8/28/2019									<0.005
10/7/2019		0.00046 (J)							
10/8/2019	0.0028 (J)			<0.005		<0.005	<0.005	<0.005	<0.005
10/9/2019			<0.005		0.00094 (J)				
4/6/2020	0.0021 (J)	0.00036 (J)							
4/7/2020			<0.005	<0.005	0.00077 (J)		<0.005	<0.005	<0.005
4/8/2020						<0.005			
8/17/2020		<0.005			0.0006 (J)	<0.005			
8/18/2020				0.0004 (J)			<0.005	<0.005	<0.005
8/19/2020	0.0021 (J)		<0.005						
9/28/2020	<0.005	<0.005	<0.005			<0.005			
9/29/2020				0.00055 (J)	0.00057 (J)		<0.005		
9/30/2020							<0.005	<0.005	<0.005

Time Series

Constituent: Cobalt (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
9/29/2000	<0.005					<0.005	<0.005	<0.005	<0.005
11/21/2000	<0.005	<0.005				<0.005	<0.005	<0.005	<0.005
1/20/2001	<0.005	<0.005				<0.005	<0.005	<0.005	<0.005
3/14/2001	<0.005	<0.005				<0.005	<0.005	<0.005	<0.005
7/16/2001	<0.005	<0.005				<0.005	<0.005	<0.005	<0.005
11/1/2001	<0.005	<0.005				<0.005	<0.005	0.012	<0.005
4/25/2002	<0.005	<0.005				<0.005	<0.005	<0.005	<0.005
8/30/2016								<0.005	<0.005
8/31/2016		<0.005			0.001 (J)	0.0021 (J)			
9/1/2016	0.0046 (J)		<0.005	<0.005			0.0024 (J)		
10/25/2016			<0.005	<0.005					
10/26/2016	0.0046 (J)	0.0011 (J)			0.0009 (J)		0.0011 (J)	<0.005	<0.005
10/27/2016						0.0017 (J)			
1/3/2017								<0.005	
1/4/2017			<0.005	<0.005	0.0007 (J)				
1/5/2017	0.0062 (J)	<0.005							<0.005
1/6/2017						0.0017 (J)	0.001 (J)		
4/4/2017		<0.005	<0.005	<0.005			0.001 (J)		
4/5/2017	0.007 (J)								
4/6/2017					<0.005	0.0017 (J)		<0.005	<0.005
7/11/2017			<0.005		<0.005				
7/12/2017						0.0016 (J)	0.0008 (J)	<0.005	<0.005
7/13/2017	0.0077 (J)	0.0003 (J)		<0.005					
10/2/2017			<0.005						
10/3/2017		0.0003 (J)		<0.005				<0.005	<0.005
10/4/2017	0.0073 (J)				0.0007 (J)	0.0015 (J)	0.001 (J)		
1/9/2018				<0.005					<0.005
1/10/2018		<0.005	<0.005					0.0004 (J)	
1/11/2018	0.0061 (J)				<0.005	0.0017 (J)	0.0008 (J)		
7/9/2018			<0.005						
7/10/2018		<0.005		<0.005				0.002 (J)	<0.005
7/11/2018	0.0064 (J)				<0.005	0.0017 (J)	<0.005		
7/30/2019		0.00032 (J)							
8/27/2019		<0.005			0.00077 (J)		0.0011 (J)		0.00038 (J)
8/28/2019	0.0023 (J)		<0.005	<0.005		0.00099 (J)		0.0024 (J)	
10/8/2019				<0.005					
10/9/2019	0.0024 (J)	<0.005	<0.005		<0.005	0.00099 (J)	0.0015 (J)	0.0037 (J)	<0.005
4/7/2020				<0.005	0.00037 (J)		0.0009 (J)	0.00053 (J)	<0.005
4/8/2020	0.0024 (J)	0.00036 (J)	<0.005			0.001 (J)			
8/18/2020	0.0025 (J)	<0.005	<0.005	<0.005	<0.005				
8/19/2020						0.0011 (J)	0.00072 (J)	<0.005	<0.005
9/29/2020		<0.005							
9/30/2020	0.0018 (J)		<0.005	<0.005	<0.005			0.00056 (J)	<0.005
10/1/2020						0.00099 (J)	0.0005 (J)		

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
8/30/2016		2.72	2.36						
8/31/2016				2.2	2.61	1.23			
9/1/2016	11						1.28	2.45	1.99
10/24/2016		2.96							
10/25/2016	10.5		2.02				1.54	1.04 (U)	1.98
10/26/2016				1.96	3.28	0.641 (U)			
1/3/2017		2.76							
1/4/2017			2.1	1.88	3.77				1.72
1/5/2017						0.657 (U)	0.715 (U)	1.36	
1/6/2017	6.81								
4/3/2017		1.36						0.697 (U)	
4/4/2017			1.39 (U)				0.699 (U)		
4/5/2017					3.25				1.72
4/6/2017	8.93					0.439 (U)			
4/8/2017				0.893 (U)					
7/10/2017					1.55				
7/11/2017		1.85		1.89			1.12	0.754 (U)	
7/12/2017			1.63			0.414 (U)			1.11
7/13/2017	8.51								
10/2/2017		1.9					0.855 (U)	1.52	
10/3/2017			1.84	4.73					2.13
10/4/2017	3.85				1.68	1.33			
1/9/2018	4.28	2.39					0.861 (U)	1.17	
1/10/2018			2.11			1.21			1.74
1/11/2018				7.49	2.94				
7/9/2018		1.49					0.693 (U)		
7/10/2018			1.29					1.26	1.97
7/11/2018	5.99			5.88	2.03	1.4 (U)			
8/26/2019	6.03	3.03							
8/27/2019			2.41	5.09	2.09	1.27	1.32	1.75	
8/28/2019									2.04
10/7/2019		2.83							
10/8/2019	33.8			6.39		1.62	1.41	1.52	1.89
10/9/2019			3.13		3.11				
4/6/2020	25.7	2.83							
4/7/2020			1.97	7.87	2.18		1.41	1.82	4.17
4/8/2020						1.08 (U)			
8/17/2020		2.63			2.25	1.42			
8/18/2020				6.76			0.731 (U)	1.84	4.24
8/19/2020	5.45		1.91						
9/28/2020	22.4	2.08	1.29			1.28			
9/29/2020				8.3	0.845 (U)		0.331 (U)		
9/30/2020								2.14	2.47

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
8/30/2016								1.81	2.19
8/31/2016		1.01			5.96	3.3			
9/1/2016	5.19		2.21	1.05			5.27		
10/25/2016			1.51 (U)	1.2					
10/26/2016	4.25	0.725 (U)			7.42		2.32	2.03	2.67
10/27/2016						2.7			
1/3/2017								1.85	
1/4/2017			2.56	2.11	6.07				
1/5/2017	3.55	0.735 (U)							3.74
1/6/2017						4.45	5.1		
4/4/2017		0.87 (U)	1.77	2.02			5		
4/5/2017	4.39								
4/6/2017					3	3.1		2.66	2.36
7/11/2017			2.76		4.2				
7/12/2017						2.73	2.69	2.1	1.54
7/13/2017	2.44	0.42 (U)		0.576 (U)					
10/2/2017			4.15						
10/3/2017		0.995 (U)		0.86				2	3.63
10/4/2017	4.95				7.16	8.16	4.82		
1/9/2018				1.43					2.07
1/10/2018		0.698 (U)	1.96					2.55	
1/11/2018	3.53				3.57	2.31	4.48		
7/9/2018			1.11						
7/10/2018		1.01		1.63				3.14	1.63
7/11/2018	3.13				7.57	3.31	2.69		
8/27/2019		0.787 (U)			7.04		2.97		4.63
8/28/2019	2.01		1.13 (U)	1.4 (U)		1.91		3.74	
10/8/2019				1.88					
10/9/2019	2.91	0.22 (U)	2.28		3.68	3.09	2.17	7.23	5.45
4/7/2020				1.8	7.66		2.44	3.57	6.25
4/8/2020	2.79	1.13 (U)	4.19			1.92			
8/18/2020	3.11	1.09 (U)	6.86	3.27	7.65				
8/19/2020						2.34	3.1	2.49	4.53
9/29/2020		1 (U)							
9/30/2020	3.09		5.62	3.83	2.79			4.45	6.39
10/1/2020						3.3	2.6		

Time Series

Constituent: Fluoride (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
8/30/2016		0.1 (J)	0.22 (J)						
8/31/2016				<0.1	0.7	<0.1			
9/1/2016	<0.1						0.25 (J)	<0.1	0.55
10/24/2016		0.18 (J)							
10/25/2016	0.07 (J)		<0.1				0.43	0.5	0.36
10/26/2016				<0.1	0.91	0.55			
1/3/2017		0.18 (J)							
1/4/2017			0.18 (J)	<0.1	0.51				0.1 (J)
1/5/2017						0.09 (J)	0.21 (J)	0.22 (J)	
1/6/2017	0.2 (J)								
4/3/2017		0.12 (J)						<0.1	
4/4/2017			<0.1				0.45		
4/5/2017					0.71				0.2 (J)
4/6/2017	0.05 (J)			<0.1		<0.1			
7/10/2017					0.88				
7/11/2017		0.39		<0.1			0.41	0.06 (J)	
7/12/2017			0.04 (J)			<0.1			0.04 (J)
7/13/2017	0.41								
10/2/2017		0.12 (J)					<0.1	<0.1	
10/3/2017			<0.1	<0.1					0.86
10/4/2017	0.04 (J)				0.37	<0.1			
1/9/2018	0.46	0.21 (J)					<0.1	<0.1	
1/10/2018			<0.1			<0.1			<0.1
1/11/2018				<0.1	1.4				
7/9/2018		0.04 (J)					<0.1		
7/10/2018			<0.1					0.15 (J)	<0.1
7/11/2018	<0.1			<0.1	0.62	<0.1			
1/16/2019	0.49	<0.1	<0.1			<0.1	<0.1		
1/17/2019				<0.1	1.2			<0.1	<0.1
3/25/2019	0.21 (J)	0.082 (J)							
3/26/2019			0.051 (J)			0.052 (J)	0.13 (J)	0.13 (J)	0.11 (J)
3/27/2019				<0.1	0.036 (J)				
8/26/2019	<0.1	0.13							
8/27/2019			<0.1	<0.1	0.3	<0.1	<0.1	<0.1	
8/28/2019									<0.1
10/7/2019		<0.1							
10/8/2019	<0.1			<0.1		<0.1	<0.1	<0.1	<0.1
10/9/2019			<0.1		<0.1				
4/6/2020	0.13 (J)	0.089 (J)							
4/7/2020			<0.1	<0.1	0.27 (J)		<0.1	<0.1	<0.1
4/8/2020						<0.1			
8/17/2020		0.079 (J)			0.19	<0.1			
8/18/2020				<0.1			<0.1	<0.1	<0.1
8/19/2020	0.21		<0.1						
9/28/2020	0.069 (J)	<0.1	<0.1			<0.1			
9/29/2020				<0.1	0.16		<0.1		
9/30/2020								<0.1	<0.1

Time Series

Constituent: Fluoride (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
8/30/2016								0.04 (J)	0.09 (J)
8/31/2016		0.07 (J)			0.04 (J)	0.55			
9/1/2016	0.68		<0.1	<0.1			<0.1		
10/25/2016			<0.1	<0.1					
10/26/2016	0.68	0.62			0.12 (J)		0.05 (J)	0.05 (J)	0.24 (J)
10/27/2016						0.26 (J)			
1/3/2017								0.08 (J)	
1/4/2017			0.04 (J)	<0.1	0.06 (J)				
1/5/2017	0.73	0.17 (J)							0.11 (J)
1/6/2017						0.25 (J)	0.08 (J)		
4/4/2017		0.08 (J)	0.02 (J)	<0.1			<0.1		
4/5/2017	1.6								
4/6/2017					<0.1	0.16 (J)		0.006 (J)	0.3
7/11/2017			0.14 (J)		0.03 (J)				
7/12/2017						0.2 (J)	0.38	0.05 (J)	0.15 (J)
7/13/2017	1.7	0.06 (J)		<0.1					
10/2/2017			<0.1						
10/3/2017		0.06 (J)		<0.1				0.11 (J)	0.11 (J)
10/4/2017	1.8				0.12 (J)	0.22 (J)	<0.1		
1/9/2018				<0.1					<0.1
1/10/2018		<0.1	<0.1					<0.1	
1/11/2018	1.5				<0.1	0.98	<0.1		
7/9/2018			<0.1						
7/10/2018		<0.1		<0.1				0.2 (J)	<0.1
7/11/2018	1.8				<0.1	0.14 (J)	<0.1		
1/16/2019	1.4						1.2	<0.1	0.053 (J)
1/17/2019				<0.1					
1/18/2019					<0.1	0.24 (J)			
1/21/2019		<0.1	<0.1						
3/25/2019			0.043 (J)				0.064 (J)		
3/26/2019	0.89			0.071 (J)				<0.1	0.046 (J)
3/27/2019					<0.1	0.13 (J)			
7/30/2019		0.083 (J)							
8/27/2019		<0.1			0.1		0.031 (J)		0.13 (J)
8/28/2019	0.61		<0.1	<0.1		0.088 (J)		0.097 (J)	
10/8/2019				<0.1					
10/9/2019	<0.1	<0.1	<0.1		<0.1	0.068 (J)	<0.1	<0.1	<0.1
4/7/2020				<0.1	<0.1		<0.1	<0.1	<0.1
4/8/2020	0.55	<0.1	<0.1			0.058 (J)			
8/18/2020	0.51	<0.1	<0.1	<0.1	<0.1				
8/19/2020						0.092 (J)	0.17	<0.1	<0.1
9/29/2020		<0.1							
9/30/2020	0.15		<0.1	<0.1	<0.1			<0.1	<0.1
10/1/2020						<0.1	<0.1		

Time Series

Constituent: Lead (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
9/29/2000	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
11/21/2000	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1/20/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
3/14/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
7/16/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
11/1/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4/25/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
11/20/2002		<0.005	<0.005	<0.005	<0.005	<0.005	0.011 (o)	<0.005	<0.005
6/6/2003	0.037 (o)	0.016 (o)	<0.005	0.0068	<0.005	0.0078	<0.005	<0.005	0.099 (o)
12/12/2003	0.008	0.0095	<0.005	<0.005	<0.005	0.0055	<0.005	0.0065	0.017 (o)
5/26/2004	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
12/7/2004	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
6/21/2005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
12/12/2005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4/4/2006		<0.005					<0.005		<0.005
6/27/2006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
8/30/2006		<0.005					<0.005		<0.005
12/4/2006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2/15/2007		<0.005					<0.005		<0.005
6/23/2007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
9/11/2007		<0.005					<0.005		<0.005
12/11/2007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
3/11/2008		<0.005					<0.005		<0.005
6/23/2008	<0.005	<0.005		<0.005	<0.005	<0.005			<0.005
6/24/2008			<0.005				<0.005	<0.005	<0.005
11/3/2008		<0.005					<0.005		<0.005
12/4/2008	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005		<0.005
12/5/2008			<0.005					<0.005	<0.005
3/25/2009		<0.005					<0.005		<0.005
7/7/2009	<0.005	<0.005	<0.005						<0.005
7/8/2009				<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
9/14/2009		<0.005					<0.005		<0.005
12/20/2009	<0.005	<0.005	<0.005				<0.005	<0.005	<0.005
12/21/2009				<0.005	<0.005	<0.005			<0.005
3/4/2010		<0.005					<0.005		<0.005
6/20/2010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
6/21/2010									<0.005
9/14/2010		<0.005					<0.005		<0.005
1/6/2011			<0.005	<0.005		<0.005			<0.005
1/7/2011	<0.005	<0.005			<0.005		<0.005	<0.005	<0.005
4/15/2011		<0.005					<0.005		<0.005
7/7/2011	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
9/25/2011		<0.005					<0.005		<0.005
1/17/2012	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1/18/2012									<0.005
4/4/2012		<0.005					<0.005		<0.005
7/9/2012	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
7/10/2012		<0.005							<0.005
10/9/2012		<0.005					<0.005		<0.005
1/17/2013			<0.005	<0.005	<0.005	<0.005			<0.005
1/18/2013	<0.005	<0.005					<0.005	<0.005	<0.005
4/5/2013		<0.005					<0.005		<0.005

Time Series

Constituent: Lead (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
7/16/2013			<0.005	<0.005	<0.005	<0.005			
7/17/2013	<0.005	<0.005					<0.005	<0.005	<0.005
10/11/2013		<0.005					<0.005		<0.005
1/13/2014	0.013		<0.005	<0.005	0.004	<0.005		<0.005	
1/14/2014		<0.005					<0.005		<0.005
4/3/2014		<0.005					<0.005		<0.005
7/8/2014				<0.005	<0.005	<0.005			
7/9/2014	0.0076 (J)	<0.005	<0.005				<0.005	<0.005	<0.005
10/24/2014		<0.005					<0.005		<0.005
1/13/2015	0.0057 (J)		<0.005	<0.005	<0.005	<0.005		<0.005	
1/14/2015		<0.005					<0.005		<0.005
5/10/2015		<0.005					<0.005		
5/11/2015									<0.005
7/16/2015	0.009 (J)		<0.005	<0.005	0.0044 (J)	<0.005		<0.005	<0.005
7/17/2015		<0.005					<0.005		
10/6/2015		<0.005							
1/17/2016			<0.005				<0.005	<0.005	<0.005
1/18/2016	0.0094 (J)	<0.005			0.0034 (J)	<0.005			
1/19/2016				<0.005					
4/26/2016		<0.005					<0.005		<0.005
7/26/2016				0.0001 (J)		<0.005			
7/27/2016	0.0058		<0.005		0.0001 (J)		<0.005	<0.005	
7/28/2016		<0.005							<0.005
8/30/2016		<0.005	<0.005						
8/31/2016				0.0002 (J)	0.0001 (J)	<0.005			
9/1/2016	0.0663 (o)						<0.005	<0.005	<0.005
10/24/2016		<0.005							
10/25/2016	0.0003 (J)		<0.005				<0.005	<0.005	0.0002 (J)
10/26/2016				0.0001 (J)	0.0001 (J)	<0.005			
1/3/2017		0.0001 (J)							
1/4/2017			<0.005	0.0002 (J)	<0.005				0.0001 (J)
1/5/2017						0.0002 (J)	<0.005	<0.005	
1/6/2017	0.006								
4/3/2017		0.0002 (J)						0.0003 (J)	
4/4/2017			<0.005				0.0001 (J)		
4/5/2017					0.0003 (J)				0.0002 (J)
4/6/2017	0.0109			0.0003 (J)		0.0005 (J)			
7/10/2017					0.0003 (J)				
7/11/2017		0.0001 (J)		0.0002 (J)			8E-05 (J)	0.0001 (J)	
7/12/2017			<0.005			0.0005 (J)			0.0001 (J)
7/13/2017	0.007								
10/2/2017		0.0001 (J)					0.0001 (J)	0.0002 (J)	
10/3/2017			<0.005	0.0003 (J)					0.0001 (J)
10/4/2017	0.0042 (J)				0.0001 (J)	0.0007 (J)			
1/9/2018	0.0098	0.0001 (J)					<0.005	0.0002 (J)	
1/10/2018			0.0001 (J)			0.0009 (J)			0.0002 (J)
1/11/2018				0.0003 (J)	0.0002 (J)				
7/9/2018		<0.005					<0.005		
7/10/2018			<0.005					<0.005	<0.005
7/11/2018	0.0028 (J)			<0.005	<0.005	0.0015 (J)			
1/16/2019	<0.025 (o)	<0.005	<0.005			0.00061 (J)	<0.005		
1/17/2019				0.00028 (J)	<0.005			<0.005	<0.005

Time Series

Constituent: Lead (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
3/25/2019	0.0019 (J)	<0.005							
3/26/2019			<0.005			<0.005	<0.005	<0.005	<0.005
3/27/2019				0.00029 (J)	<0.005				
8/26/2019	0.013 (J)	<0.005							
8/27/2019			<0.005	0.00021 (J)	<0.005	0.0001 (J)	0.00051 (J)	0.00033 (J)	
8/28/2019									0.0001 (J)
10/7/2019		<0.005							
10/8/2019	0.0098 (J)			0.00028 (J)		0.00013 (J)	<0.005	0.00012 (J)	0.0001 (J)
10/9/2019			<0.005		6.6E-05 (J)				
4/6/2020	0.0024 (J)	0.0001 (J)							
4/7/2020			0.00012 (J)	0.00036 (J)	8.1E-05 (J)		<0.005	8.6E-05 (J)	0.00023 (J)
4/8/2020						0.00017 (J)			
8/17/2020		<0.005			4.9E-05 (J)	7.6E-05 (J)			
8/18/2020				0.00035 (J)			<0.005	9E-05 (J)	0.00017 (J)
8/19/2020	0.0044 (J)		<0.005						
9/28/2020	0.0043 (J)	<0.005	4.3E-05 (J)			6.4E-05 (J)			
9/29/2020				0.00032 (J)	3.7E-05 (J)		<0.005		
9/30/2020								4.7E-05 (J)	9.1E-05 (J)

Time Series

Constituent: Lead (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
9/29/2000	<0.005					<0.005	0.0083	0.017 (o)	<0.005
11/21/2000	<0.005	0.0069				<0.005	0.0052	<0.005	<0.005
1/20/2001	<0.005	<0.005				<0.005	<0.005	0.011	<0.005
3/14/2001	<0.005	<0.005				<0.005	<0.005	0.026 (o)	<0.005
7/16/2001	<0.005	<0.005				<0.005	0.011	0.043 (o)	<0.005
11/1/2001	<0.005	<0.005				<0.005	<0.005	0.075 (o)	<0.005
4/25/2002	<0.005	<0.005				<0.005	<0.005	<0.005	<0.005
11/20/2002	<0.005	<0.005				0.0086 (o)	0.018 (o)	0.057 (o)	0.0057 (J)
6/6/2003	<0.005	<0.005				<0.005	0.015 (o)	0.16 (o)	0.013
12/12/2003	<0.005	<0.005				<0.005	0.0072	<0.005	<0.005
5/26/2004	<0.005	<0.005				<0.005	0.0055	0.011	<0.005
12/7/2004	<0.005	<0.005				0.0051	<0.005	0.038 (o)	<0.005
6/21/2005	<0.005	<0.005				<0.005	<0.005	0.036 (o)	<0.005
12/12/2005	<0.005	<0.005				<0.005	<0.005	<0.005	<0.005
6/27/2006	<0.005	<0.005				<0.005	0.024 (o)	<0.005	<0.005
12/4/2006	<0.005	<0.005				<0.005	0.023 (o)	<0.005	<0.005
6/23/2007	<0.005	<0.005				<0.005	<0.005	<0.005	<0.005
12/11/2007	<0.005	<0.005				<0.005	<0.005	<0.005	<0.005
6/23/2008						<0.005			
6/24/2008	<0.005	<0.005					0.02 (o)	<0.005	0.02
12/4/2008		<0.005				<0.005			
12/5/2008	<0.005						<0.005	<0.005	<0.005
7/7/2009							<0.005	<0.005	<0.005
7/8/2009	<0.005	<0.005				<0.005			
12/20/2009		<0.005							
12/21/2009	<0.005					<0.005	<0.005	<0.005	<0.005
6/20/2010		<0.005				<0.005	<0.005	<0.005	<0.005
6/21/2010	<0.005		<0.005	<0.005	<0.005		<0.005		
1/6/2011		<0.005						<0.005	
1/7/2011	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
7/7/2011			<0.005					<0.005	<0.005
7/8/2011	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005		
1/17/2012		<0.005						<0.005	
1/18/2012	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
7/9/2012		<0.005						<0.005	
7/10/2012	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
1/17/2013		<0.005						<0.005	
1/18/2013	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
7/16/2013								<0.005	
7/17/2013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
1/13/2014		<0.005						<0.005	
1/14/2014	<0.005		<0.005	<0.005	<0.005	<0.005	0.005		<0.005
7/9/2014	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
7/10/2014			<0.005		<0.005				
1/12/2015			<0.005				<0.005		
1/13/2015		<0.005						<0.005	
1/14/2015	<0.005			<0.005	<0.005	<0.005			<0.005
7/16/2015		<0.005					<0.005	<0.005	
7/17/2015				<0.005		<0.005			<0.005
7/18/2015	<0.005		<0.005		<0.005				
1/17/2016		<0.005	<0.005	<0.005					
1/18/2016	<0.005				<0.005	<0.005	0.0055 (J)	<0.005	<0.005

Time Series

Constituent: Lead (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
7/27/2016		<0.005						<0.005	
7/28/2016			<0.005	<0.005		<0.005			<0.005
7/29/2016	<0.005				0.0004 (J)		0.003 (J)		
8/30/2016								<0.005	<0.005
8/31/2016		<0.005			0.0003 (J)	0.0007 (J)			
9/1/2016	<0.005		<0.005	<0.005			0.0166 (a)		
10/25/2016			0.0001 (J)	<0.005					
10/26/2016	<0.005	<0.005			0.0003 (J)		0.0057	0.0002 (J)	<0.005
10/27/2016						<0.005			
1/3/2017								0.0001 (J)	
1/4/2017			<0.005	<0.005	0.0003 (J)				
1/5/2017	<0.005	<0.005							0.0003 (J)
1/6/2017						<0.005	0.0053		
4/4/2017		0.0002 (J)	7E-05 (J)	9E-05 (J)			0.0092		
4/5/2017	0.0009 (J)								
4/6/2017					0.0003 (J)	0.0001 (J)		0.0003 (J)	0.0002 (J)
7/11/2017			<0.005		0.0002 (J)				
7/12/2017						<0.005	0.006	0.0002 (J)	0.0002 (J)
7/13/2017	<0.005	0.0003 (J)		7E-05 (J)					
10/2/2017			<0.005						
10/3/2017		<0.005		0.0001 (J)				0.0002 (J)	0.0001 (J)
10/4/2017	0.0001 (J)				0.0008 (J)	9E-05 (J)	0.0057		
1/9/2018				9E-05 (J)					0.0003 (J)
1/10/2018		8E-05 (J)	0.0002 (J)					0.0003 (J)	
1/11/2018	0.0001 (J)				0.0009 (J)	0.0002 (J)	0.0085		
7/9/2018			<0.005						
7/10/2018		<0.005		<0.005				<0.005	<0.005
7/11/2018	<0.005				0.001 (J)	<0.005	0.0029 (J)		
1/16/2019	<0.005						<0.005	<0.005	<0.005
1/17/2019				<0.005					
1/18/2019					0.0012 (J)	<0.005			
1/21/2019		<0.005	<0.005						
3/25/2019			<0.005				<0.005		
3/26/2019	<0.005			<0.005				<0.005	<0.005
3/27/2019					0.00047 (J)	<0.005			
7/30/2019		0.0002 (J)							
8/27/2019		<0.005			0.003 (J)		0.001 (J)		0.0011 (J)
8/28/2019	<0.005		6.5E-05 (J)	0.00018 (J)		6.1E-05 (J)		0.0011 (J)	
10/8/2019				0.00016 (J)					
10/9/2019	0.00015 (J)	6.4E-05 (J)	0.00018 (J)		0.00032 (J)	<0.005	0.00041 (J)	0.0025 (J)	0.00033 (J)
4/7/2020				<0.005	0.00067 (J)		0.00073 (J)	0.0014 (J)	0.00063 (J)
4/8/2020	8.4E-05 (J)	<0.005	<0.005			0.00021 (J)			
8/18/2020	0.00014 (J)	<0.005	<0.005	0.00027 (J)	0.00072 (J)				
8/19/2020						9.6E-05 (J)	0.00048 (J)	7.9E-05 (J)	0.00014 (J)
9/29/2020		<0.005							
9/30/2020	6E-05 (J)		<0.005	5.4E-05 (J)	0.00023 (J)			0.0012 (J)	8E-05 (J)
10/1/2020						3.8E-05 (J)	0.00026 (J)		

Time Series

Constituent: Lithium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
8/30/2016		<0.03	<0.03						
8/31/2016				<0.03	<0.03	<0.03			
9/1/2016	<0.03						<0.03	<0.03	<0.03
10/24/2016		<0.03							
10/25/2016	<0.03		<0.03				<0.03	<0.03	<0.03
10/26/2016				<0.03	<0.03	<0.03			
1/3/2017		<0.03							
1/4/2017			<0.03	<0.03	<0.03				<0.03
1/5/2017						<0.03	<0.03	<0.03	
1/6/2017	<0.03								
4/3/2017		<0.03						<0.03	
4/4/2017			<0.03				<0.03		
4/5/2017					0.0012 (J)				<0.03
4/6/2017	<0.03			<0.03		<0.03			
7/10/2017					<0.03				
7/11/2017		<0.03		<0.03			<0.03	<0.03	
7/12/2017			<0.03			<0.03			<0.03
7/13/2017	<0.03								
10/2/2017		<0.03					<0.03	<0.03	
10/3/2017			<0.03	<0.03					<0.03
10/4/2017	<0.03				<0.03	<0.03			
1/9/2018	<0.03	<0.03					<0.03	<0.03	
1/10/2018			<0.03			<0.03			<0.03
1/11/2018				<0.03	<0.03				
7/9/2018		0.001 (J)					<0.03		
7/10/2018			<0.03					<0.03	<0.03
7/11/2018	<0.03			<0.03	0.00098 (J)	<0.03			
8/26/2019	<0.03	0.0012 (J)							
8/27/2019			<0.03	<0.03	0.00094 (J)	<0.03	<0.03	<0.03	
8/28/2019									<0.03
10/7/2019		0.0012 (J)							
10/8/2019	<0.03			<0.03		<0.03	<0.03	<0.03	<0.03
10/9/2019			<0.03		0.0011 (J)				
4/6/2020	<0.03	0.00086 (J)							
4/7/2020			<0.03	<0.03	0.00094 (J)		<0.03	<0.03	<0.03
4/8/2020						<0.03			
8/17/2020		0.001 (J)			0.00091 (J)	<0.03			
8/18/2020				<0.03			<0.03	<0.03	<0.03
8/19/2020	<0.03		<0.03						
9/28/2020	<0.03	0.001 (J)	<0.03			<0.03			
9/29/2020				<0.03	0.00086 (J)		<0.03		
9/30/2020								<0.03	<0.03

Time Series

Constituent: Lithium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
8/30/2016								0.0042 (J)	<0.03
8/31/2016		<0.03			<0.03	<0.05 (o)			
9/1/2016	0.0066 (J)		<0.03	<0.03			0.0092 (J)		
10/25/2016			<0.03	<0.03					
10/26/2016	0.0065 (J)	<0.03			<0.03		0.0046 (J)	<0.03	<0.03
10/27/2016						0.0023 (J)			
1/3/2017								0.0024 (J)	
1/4/2017			<0.03	<0.03	<0.03				
1/5/2017	0.0062 (J)	<0.03							<0.03
1/6/2017						0.0021 (J)	0.0042 (J)		
4/4/2017		<0.03	<0.03	<0.03			0.0056 (J)		
4/5/2017	0.007 (J)								
4/6/2017					<0.03	0.0021 (J)		0.0051 (J)	<0.03
7/11/2017			<0.03		<0.03				
7/12/2017						0.0017 (J)	0.0035 (J)	0.0031 (J)	<0.03
7/13/2017	0.0069 (J)	<0.03		<0.03					
10/2/2017			<0.03						
10/3/2017		<0.03		<0.03				0.0027 (J)	<0.03
10/4/2017	0.0082 (J)				<0.03	0.0021 (J)	0.0041 (J)		
1/9/2018				<0.03					<0.03
1/10/2018		<0.03	<0.03					0.0041 (J)	
1/11/2018	0.0061 (J)				<0.03	0.0022 (J)	0.0052 (J)		
7/9/2018			<0.03						
7/10/2018		<0.03		<0.03				0.005 (J)	<0.03
7/11/2018	0.0075 (J)				<0.03	0.0019 (J)	0.0039 (J)		
7/30/2019		<0.03							
8/27/2019		<0.03			<0.03		0.013 (J)		<0.03
8/28/2019	0.0041 (J)		<0.03	<0.03		0.0018 (J)		<0.03	
10/8/2019				<0.03					
10/9/2019	0.0046 (J)	<0.03	<0.03		<0.03	0.0018 (J)	0.013 (J)	<0.03	<0.03
4/7/2020				<0.03	<0.03		0.014 (J)	<0.03	<0.03
4/8/2020	0.0051 (J)	<0.03	<0.03			0.0018 (J)			
8/18/2020	0.0065 (J)	<0.03	<0.03	<0.03	<0.03				
8/19/2020						0.0019 (J)	0.014 (J)	<0.03	<0.03
9/29/2020		<0.03							
9/30/2020	0.0041 (J)		<0.03	<0.03	<0.03			<0.03	<0.03
10/1/2020						0.0019 (J)	0.013 (J)		

Time Series

Constituent: Mercury (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
8/30/2016		<0.0002	4E-05 (J)						
8/31/2016				<0.0002	<0.0002	<0.0002			
9/1/2016	0.00017 (J)						<0.0002	<0.0002	<0.0002
10/24/2016		<0.0002							
10/25/2016	<0.0002		<0.0002				<0.0002	<0.0002	<0.0002
10/26/2016				<0.0002	<0.0002	<0.0002			
1/3/2017		<0.0002							
1/4/2017			<0.0002	<0.0002	<0.0002				<0.0002
1/5/2017						<0.0002	<0.0002	<0.0002	
1/6/2017	<0.0002								
4/3/2017		<0.0002						<0.0002	
4/4/2017			<0.0002				<0.0002		
4/5/2017					<0.0002				<0.0002
4/6/2017	4E-05 (J)			<0.0002		0.00013 (J)			
7/10/2017					<0.0002				
7/11/2017		<0.0002		<0.0002			<0.0002	<0.0002	
7/12/2017			<0.0002			<0.0002			<0.0002
7/13/2017	<0.0002								
10/2/2017		<0.0002					<0.0002	<0.0002	
10/3/2017			<0.0002	<0.0002					<0.0002
10/4/2017	0.0001 (J)				<0.0002	<0.0002			
1/9/2018	<0.0002	<0.0002					<0.0002	<0.0002	
1/10/2018			<0.0002			<0.0002			<0.0002
1/11/2018				<0.0002	<0.0002				
7/9/2018		<0.0002					<0.0002		
7/10/2018			<0.0002					<0.0002	<0.0002
7/11/2018	<0.0002			<0.0002	<0.0002	<0.0002			
1/16/2019	<0.0002	<0.0002	<0.0002			<0.0002	<0.0002		
1/17/2019				<0.0002	<0.0002			<0.0002	<0.0002
8/26/2019	<0.0002	<0.0002							
8/27/2019			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
8/28/2019									<0.0002
8/17/2020		<0.0002			<0.0002	<0.0002			
8/18/2020				<0.0002			<0.0002	<0.0002	<0.0002
8/19/2020	<0.0002		<0.0002						

Time Series

Constituent: Mercury (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
8/30/2016								<0.0002	<0.0002
8/31/2016		<0.0002			<0.0002	<0.0002			
9/1/2016	<0.0002		<0.0002	<0.0002			<0.0002		
10/25/2016			<0.0002	<0.0002					
10/26/2016	<0.0002	<0.0002			<0.0002		<0.0002	<0.0002	<0.0002
10/27/2016						<0.0002			
1/3/2017								<0.0002	
1/4/2017			<0.0002	<0.0002	<0.0002				
1/5/2017	<0.0002	<0.0002							<0.0002
1/6/2017						<0.0002	<0.0002		
4/4/2017		<0.0002	<0.0002	<0.0002			<0.0002		
4/5/2017	<0.0002								
4/6/2017					<0.0002	<0.0002		<0.0002	<0.0002
7/11/2017			<0.0002		<0.0002				
7/12/2017						<0.0002	<0.0002	<0.0002	<0.0002
7/13/2017	<0.0002	<0.0002		<0.0002					
10/2/2017			<0.0002						
10/3/2017		<0.0002		<0.0002				<0.0002	<0.0002
10/4/2017	<0.0002				<0.0002	5E-05 (J)	<0.0002		
1/9/2018				<0.0002					<0.0002
1/10/2018		<0.0002	<0.0002					<0.0002	
1/11/2018	<0.0002				<0.0002	<0.0002	<0.0002		
7/9/2018			<0.0002						
7/10/2018		<0.0002		<0.0002				<0.0002	<0.0002
7/11/2018	<0.0002				<0.0002	<0.0002	<0.0002		
1/16/2019	<0.0002						4.9E-05 (J)	<0.0002	4.3E-05 (J)
1/17/2019				<0.0002					
1/18/2019					<0.0002	<0.0002			
1/21/2019		<0.0002	<0.0002						
7/30/2019		<0.0002							
8/27/2019		<0.0002			<0.0002		<0.0002		<0.0002
8/28/2019	<0.0002		<0.0002	<0.0002		<0.0002		<0.0002	
10/9/2019								<0.0002	
8/18/2020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
8/19/2020						<0.0002	<0.0002	<0.0002	<0.0002

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
8/30/2016		<0.01	0.175						
8/31/2016				<0.01	<0.01	<0.01			
9/1/2016	0.0098 (J)						0.0027 (J)	0.132	0.08
10/24/2016		<0.01							
10/25/2016	<0.01		0.242				0.0028 (J)	0.117	0.08
10/26/2016				<0.01	<0.01	<0.01			
1/3/2017		<0.01							
1/4/2017			0.167	<0.01	<0.01				0.0786
1/5/2017						<0.01	0.0022 (J)	0.109	
1/6/2017	<0.01								
4/3/2017		<0.01						0.0994	
4/4/2017			0.172				0.0022 (J)		
4/5/2017					<0.01				0.113
4/6/2017	<0.01			<0.01		<0.01			
7/10/2017					<0.01				
7/11/2017		<0.01		<0.01			0.0024 (J)	0.0938	
7/12/2017			0.182			<0.01			0.178
7/13/2017	0.0013 (J)								
10/2/2017		<0.01					0.0025 (J)	0.103	
10/3/2017			0.162	<0.01					0.201
10/4/2017	0.0013 (J)				<0.01	<0.01			
1/9/2018	<0.01	<0.01					0.0038 (J)	0.106	
1/10/2018			0.117			<0.01			0.161
1/11/2018				0.0018 (J)	<0.01				
7/9/2018		<0.01					0.01		
7/10/2018			0.11					0.088	0.14
7/11/2018	<0.01			<0.01	<0.01	<0.01			
8/26/2019	<0.01	<0.01							
8/27/2019			0.06	<0.01	<0.01	<0.01	0.028	0.095	
8/28/2019									0.22
10/7/2019		<0.01							
10/8/2019	<0.01			<0.01		<0.01	0.034	0.091	0.2
10/9/2019			0.06		<0.01				
4/6/2020	<0.01	<0.01							
4/7/2020			0.014	<0.01	<0.01		0.014	0.07	0.25
4/8/2020						0.0056 (J)			
8/17/2020		<0.01			<0.01	<0.01			
8/18/2020				0.00077 (J)			0.017	0.12	0.15
8/19/2020	<0.01		0.061						
9/28/2020	<0.01	<0.01	0.059			<0.01			
9/29/2020				<0.01	<0.01		0.0089 (J)		
9/30/2020								0.11	0.15

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
8/30/2016								<0.01	<0.01
8/31/2016		<0.01			<0.01	<0.01			
9/1/2016	<0.01		0.296	0.0686			0.035		
10/25/2016			0.395	0.0018 (J)					
10/26/2016	<0.01	<0.01			<0.01		0.0267	<0.01	<0.01
10/27/2016						<0.01			
1/3/2017								<0.01	
1/4/2017			0.229	0.0222	<0.01				
1/5/2017	<0.01	<0.01							<0.01
1/6/2017						<0.01	0.0278		
4/4/2017		<0.01	0.147	0.0476			0.0265		
4/5/2017	<0.01								
4/6/2017					<0.01	<0.01		<0.01	<0.01
7/11/2017			0.136		<0.01				
7/12/2017						<0.01	0.0209	<0.01	<0.01
7/13/2017	<0.01	<0.01		0.0105					
10/2/2017			0.13						
10/3/2017		<0.01		0.0031 (J)				<0.01	<0.01
10/4/2017	<0.01				<0.01	<0.01	0.0181		
1/9/2018				0.09					<0.01
1/10/2018		<0.01	0.229					<0.01	
1/11/2018	<0.01				<0.01	<0.01	0.0237		
7/9/2018			0.13						
7/10/2018		<0.01		0.047				<0.01	<0.01
7/11/2018	<0.01				<0.01	<0.01	0.024		
7/30/2019		<0.01							
8/27/2019		<0.01			<0.01		0.1		0.0026 (J)
8/28/2019	0.004 (J)		0.11	0.07		<0.01		0.0012 (J)	
10/8/2019				0.078					
10/9/2019	0.0036 (J)	<0.01	0.071		<0.01	<0.01	0.1	<0.01	<0.01
4/7/2020				0.012	<0.01		0.13	<0.01	<0.01
4/8/2020	0.0024 (J)	<0.01	0.06			<0.01			
8/18/2020	0.00092 (J)	<0.01	0.097	0.069	<0.01				
8/19/2020						<0.01	0.16	<0.01	0.001 (J)
9/29/2020		<0.01							
9/30/2020	0.0041 (J)		0.33	0.028	<0.01			<0.01	0.00097 (J)
10/1/2020						<0.01	0.15		

Time Series

Constituent: pH (SU) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
7/16/2013			5.38	5.2	4.17	4.95	4.62	5.96	4.92
10/11/2014		4.42					4.58		5.17
10/24/2016		4.36							
10/25/2016	6.17		5.51				4.79	6.46	5.58
10/26/2016				5.08	4.04	4.95			
1/3/2017		4.28							
1/4/2017			5.46	5.06	4.01				5.51
1/5/2017						4.97	4.73	6.25	
1/6/2017	6.16								
4/3/2017		4.29						6.25	
4/4/2017			5.43				4.68		
4/5/2017					4	4.81			5.51
4/6/2017	6.26			4.97					
7/10/2017					3.89				
7/11/2017		4.35		5.26			4.72	6.5	
7/12/2017			5.46			4.83			5.84
7/13/2017	5.99								
10/2/2017		4.32					5.13	6.83	
10/3/2017			5.65	5.07					5.55
10/4/2017	6.16				4.06	4.71			
1/9/2018	6.43	4.44					5.59	6.57	
1/10/2018			5.67			5.17			5.99
1/11/2018				5.18	3.96				
7/9/2018		4.4					5.11		
7/10/2018			5.71					6.42	5.5
7/11/2018	6.1			4.82	3.95	4.49			
1/16/2019	6.05	6.16 (o)	5.59			6.45 (o)	6.82		
1/17/2019				4.91	3.89			8.44 (o)	7.13
3/25/2019	6.06	4.4							
3/26/2019			5.77			4.96	5.74	6.65	5.57
3/27/2019				5.18	4.11				
8/26/2019	5.91	4.26							
8/27/2019			5.84	5.17	4.02	4.9	5.58	6.57	
8/28/2019									5.57
10/7/2019		4.24							
10/8/2019	5.74			4.93		4.81	5.68	6.65	5.54
10/9/2019			5.82		4.25				
4/6/2020	6.02	4.52							
4/7/2020			5.3	5.05	4.1		6.2	6.83	5.94
4/8/2020						4.81			
8/17/2020		4.23			3.94	4.65			
8/18/2020				4.41			5.56	6.39	5.52
8/19/2020	5.81 (D)		5.73						
9/28/2020	5.86	4.41	5.79			4.76			
9/29/2020				4.77	3.95		5.69		
9/30/2020								6.71	5.47

Time Series

Constituent: pH (SU) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
7/16/2013	4.55	4.52	6.1	5.71	4.91	5.05	6.22	5.95	5.25
10/25/2016			6.06	5.41					
10/26/2016	4.45	4.48			4.6		6.06	5.27	5.21
10/27/2016						4.65			
1/3/2017								5.09	
1/4/2017			6.05	5.6	4.63				
1/5/2017	4.45	4.85							5.2
1/6/2017						4.56	6.02		
4/4/2017		4.58	6.03	5.94			6.08		
4/5/2017	4.33								
4/6/2017					4.79	4.5		5.22	5.17
7/11/2017			5.96		4.73				
7/12/2017						4.56	5.93	5.29	5.24
7/13/2017	4.11	4.74		5.6					
10/2/2017			5.88						
10/3/2017		4.57		5.18				5.08	5.36
10/4/2017	4.09				4.74	4.72	5.77		
1/9/2018				6.14					5.4
1/10/2018		5.31	6.21					5.83	
1/11/2018	4.4				5.22	4.34	5.98		
7/9/2018			6.24						
7/10/2018		4.58		5.7				6.42	5.31
7/11/2018	4.07				4.68	4.68	6.01		
1/16/2019	4.05						5.83	6.66	5.99
1/17/2019				7.39					
1/18/2019					6.98 (o)	6.87 (o)			
1/21/2019		5.05	7.73 (o)						
3/25/2019			6.28				5.74		
3/26/2019	4.62			6.08				5.1	5.94
3/27/2019					4.77	4.38			
7/30/2019		4.74							
8/27/2019		4.77			4.89		5.7		5.67
8/28/2019	4.62		6.34	6.05		4.68		5.95	
10/8/2019				6.09					
10/9/2019	4.66	4.79	6.5		4.68	4.62	5.79	6.11	5.66
4/7/2020				6	4.8		5.74	5.45	5.86
4/8/2020	4.71	4.66	6.31			4.73			
8/18/2020	4.31	4.6	5.89	5.82	4.52				
8/19/2020						4.58	5.7	5.14 (D)	5.21
9/29/2020		4.6							
9/30/2020	4.08		6.04	5.82	4.63			4.99	5.39
10/1/2020						4.42	5.75		

Time Series

Constituent: Selenium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
9/29/2000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/21/2000	<0.01		<0.01	<0.01	<0.01	<0.01	0.052	<0.01	<0.01
1/20/2001	<0.01	<0.01	0.017	<0.01	<0.01	<0.01	0.053	<0.01	<0.01
3/14/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.049	<0.01	<0.01
7/16/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.038	<0.01	<0.01
11/1/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.022	<0.01	<0.01
4/25/2002	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	0.1 (o)	<0.01	<0.01
11/20/2002		<0.01	0.19 (o)	<0.01	<0.01	<0.01	0.018	0.0094	<0.01
6/6/2003	<0.01	<0.01	0.32 (o)	<0.01	<0.01	<0.01	<0.01	0.021 (o)	0.021 (o)
12/12/2003	<0.01	<0.01	0.013	<0.01	<0.01	<0.01	<0.01	0.016 (o)	0.0078
5/26/2004	<0.01	<0.01	0.017	<0.01	<0.01	<0.01	0.023	<0.01	0.0053
12/7/2004	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	0.019	<0.01	<0.01
6/21/2005	<0.01	<0.01	0.0088	<0.01	<0.01	<0.01	0.019	<0.01	<0.01
12/12/2005	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	0.0095	<0.01	<0.01
4/4/2006		<0.01					0.033		<0.01
6/27/2006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
8/30/2006		<0.01					<0.01		<0.01
12/4/2006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.032	<0.01	<0.01
2/15/2007		<0.01					0.034		<0.01
6/23/2007	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
9/11/2007		<0.01					0.022		<0.01
12/11/2007	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.045	<0.01	<0.01
3/11/2008		<0.01					0.02		<0.01
6/23/2008	<0.01	<0.01		<0.01	<0.01	<0.01			
6/24/2008			<0.01				<0.01	<0.01	<0.01
11/3/2008		<0.01					0.052		<0.01
12/4/2008	<0.01	<0.01		<0.01	<0.01	<0.01	0.054		
12/5/2008			<0.01					<0.01	<0.01
3/25/2009		<0.01					0.072		<0.01
7/7/2009	<0.01	<0.01	<0.01						
7/8/2009				<0.01	<0.01	<0.01	0.021	<0.01	<0.01
9/14/2009		<0.01					0.015		<0.01
12/20/2009	<0.01	<0.01	<0.01				0.072	<0.01	<0.01
12/21/2009				<0.01	<0.01	<0.01			
3/4/2010		<0.01					0.083		<0.01
6/20/2010	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.1	<0.01	
6/21/2010									<0.01
9/14/2010		<0.01					0.085		<0.01
1/6/2011			<0.01	<0.01		<0.01			
1/7/2011	<0.01	<0.01			<0.01		0.028	<0.01	<0.01
4/15/2011		<0.01					<0.01		<0.01
7/7/2011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
9/25/2011		<0.01					0.02		<0.01
1/17/2012	<0.01	<0.01	<0.01	0.023	<0.01	<0.01	0.016	<0.01	
1/18/2012									<0.01
4/4/2012		<0.01					0.0156		<0.01
7/9/2012	<0.01		<0.01	0.016	<0.01	<0.01	<0.01	0.066 (o)	
7/10/2012		<0.01							<0.01
10/9/2012		<0.01					0.0094		<0.01
1/17/2013			<0.01	0.033	<0.01	<0.01			
1/18/2013	0.009	<0.01					0.0067	0.04 (o)	<0.01
4/5/2013		<0.01					0.0077		<0.01

Time Series

Constituent: Selenium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
7/16/2013			0.012	0.0068	<0.01	<0.01			
7/17/2013	0.011	<0.01					0.01	<0.01	<0.01
10/11/2013		<0.01					0.0087		0.0069
1/13/2014	0.012		<0.01	0.036	<0.01	<0.01		<0.01	
1/14/2014		<0.01					0.012		<0.01
4/3/2014		<0.01					0.022		<0.01
7/8/2014				0.017	<0.01	<0.01			
7/9/2014	0.011	<0.01	<0.01				0.0089	<0.01	0.005
10/24/2014		<0.01					0.017		<0.01
1/13/2015	0.0092		<0.01	0.027	<0.01	<0.01		<0.01	
1/14/2015		<0.01					<0.01		<0.01
5/10/2015		<0.01					<0.01		
5/11/2015									<0.01
7/16/2015	0.014		<0.01	<0.01	<0.01	<0.01		<0.01	<0.01
7/17/2015		<0.01					<0.01		
10/6/2015		<0.01					<0.01		0.0073
1/17/2016			0.023				<0.01	<0.01	0.0031 (J)
1/18/2016	0.023	<0.01			<0.01	<0.01			
1/19/2016				0.023					
4/26/2016		<0.01					0.00428 (J)		0.00497 (J)
7/26/2016				0.0056 (J)		<0.01			
7/27/2016	0.0323		0.002 (J)		0.0025 (J)		0.0038 (J)	<0.01	
7/28/2016		0.001 (J)							0.0076 (J)
8/30/2016		<0.01	0.002 (J)						
8/31/2016				0.0084 (J)	0.0019 (J)	<0.01			
9/1/2016	0.0438						0.0056 (J)	<0.01	0.0052 (J)
10/24/2016		0.0013 (J)							
10/25/2016	0.031		0.0022 (J)				0.0023 (J)	<0.01	0.0085 (J)
10/26/2016				0.0052 (J)	0.002 (J)	<0.01			
1/3/2017		<0.01							
1/4/2017			0.0016 (J)	0.0062 (J)	<0.01				0.0048 (J)
1/5/2017									
1/6/2017	0.0324					<0.01	0.0038 (J)	<0.01	
4/3/2017		<0.01						<0.01	
4/4/2017			0.0052 (J)				0.0064 (J)		
4/5/2017					<0.01				0.0068 (J)
4/6/2017	0.0188 (J)			0.0195		<0.01			
7/10/2017					<0.01				
7/11/2017		<0.01		<0.01			0.0044 (J)	<0.01	
7/12/2017			0.0024 (J)			<0.01			0.0048 (J)
7/13/2017	0.0118								
10/2/2017		<0.01					0.004 (J)	<0.01	
10/3/2017			<0.01	0.0079 (J)					0.0051 (J)
10/4/2017	0.0195				<0.01	<0.01			
1/9/2018	<0.01	<0.01					0.0019 (J)	0.0019 (J)	
1/10/2018			0.0018 (J)			<0.01			0.0018 (J)
1/11/2018				0.0054 (J)	<0.01				
7/9/2018		<0.01					0.0029 (J)		
7/10/2018			0.0026 (J)					0.0086 (J)	0.0045 (J)
7/11/2018	<0.01			0.0022 (J)	<0.01	<0.01			
1/16/2019	0.0071 (J)	<0.01	0.0018 (J)			<0.01	0.0016 (J)		
1/17/2019				<0.01	<0.01			0.0029 (J)	0.0031 (J)

Time Series

Constituent: Selenium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
3/25/2019	<0.01	<0.01							
3/26/2019			0.0023 (J)			<0.01	0.0022 (J)	0.0074 (J)	0.0033 (J)
3/27/2019				0.01 (J)	<0.01				
8/26/2019	<0.01	<0.01							
8/27/2019			0.0016 (J)	<0.01	<0.01	<0.01	0.0035 (J)	0.0092 (J)	
8/28/2019									0.004 (J)
10/7/2019		<0.01							
10/8/2019	0.0072 (J)			<0.01		<0.01	0.0026 (J)	0.014	0.0023 (J)
10/9/2019			0.0024 (J)		<0.01				
4/6/2020	0.0078 (J)	<0.01							
4/7/2020			0.0013 (J)	0.0021 (J)	<0.01		0.005 (J)	0.0029 (J)	<0.01
4/8/2020						<0.01			
8/17/2020		<0.01			<0.01	<0.01			
8/18/2020				0.0028 (J)			0.0029 (J)	0.0022 (J)	0.0058 (J)
8/19/2020	<0.01		0.002 (J)						
9/28/2020	0.01 (J)	<0.01	<0.01			<0.01			
9/29/2020				0.0024 (J)	<0.01		0.0051 (J)		
9/30/2020								<0.01	0.0037 (J)

Time Series

Constituent: Selenium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
9/29/2000	<0.01					<0.01	<0.01	<0.01	<0.01
11/21/2000	<0.01	<0.01				<0.01	<0.01	<0.01	<0.01
1/20/2001	<0.01	<0.01				<0.01	0.014 (o)	<0.01	<0.01
3/14/2001	<0.01	<0.01				<0.01	<0.01	<0.01	<0.01
7/16/2001	<0.01	<0.01				<0.01	0.015 (o)	<0.01	<0.01
11/1/2001	<0.01	<0.01				<0.01	0.012 (o)	<0.01	<0.01
4/25/2002	<0.01	<0.01				<0.01	0.01	<0.01	<0.01
11/20/2002	<0.01	<0.01				<0.01	0.026 (o)	0.0064	0.008
6/6/2003	<0.01	<0.01				<0.01	0.022 (o)	0.011	0.0066
12/12/2003	<0.01	<0.01				<0.01	0.028 (o)	<0.01	0.0056
5/26/2004	<0.01	0.005				<0.01	0.012 (o)	0.007	0.0084
12/7/2004	<0.01	<0.01				<0.01	0.0073	<0.01	<0.01
6/21/2005	<0.01	<0.01				0.0062	0.0087	0.0063	0.0062
12/12/2005	<0.01	<0.01				<0.01	0.013 (o)	<0.01	<0.01
6/27/2006	<0.01	<0.01				<0.01	<0.01	<0.01	<0.01
12/4/2006	<0.01	<0.01				<0.01	<0.01	<0.01	<0.01
6/23/2007	<0.01	<0.01				<0.01	<0.01	<0.01	<0.01
12/11/2007	<0.01	<0.01				<0.01	<0.01	<0.01	<0.01
6/23/2008						<0.01			
6/24/2008	<0.01	<0.01					<0.01	<0.01	<0.01
12/4/2008		<0.01				<0.01			
12/5/2008	<0.01						<0.01	<0.01	<0.01
7/7/2009							<0.01	<0.01	<0.01
7/8/2009	<0.01	<0.01				<0.01			
12/20/2009		<0.01							
12/21/2009	<0.01					<0.01	<0.01	<0.01	<0.01
6/20/2010		<0.01				<0.01		<0.01	<0.01
6/21/2010	<0.01		<0.01	0.048	<0.01		<0.01		
1/6/2011		<0.01						<0.01	
1/7/2011	<0.01		<0.01	0.014	<0.01	<0.01	<0.01		<0.01
7/7/2011			<0.01					<0.01	<0.01
7/8/2011	<0.01		<0.01	0.018	<0.01	<0.01	<0.01		
1/17/2012		<0.01						<0.01	
1/18/2012	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01		<0.01
7/9/2012		<0.01						<0.01	
7/10/2012	<0.01		<0.01	0.02	<0.01	<0.01	<0.01		<0.01
1/17/2013		<0.01						<0.01	
1/18/2013	<0.01		0.005	0.015	<0.01	<0.01	<0.01		<0.01
7/16/2013								<0.01	
7/17/2013	<0.01	<0.01	<0.01	0.037	<0.01	<0.01	<0.01		<0.01
1/13/2014		<0.01						<0.01	
1/14/2014	<0.01		<0.01	0.043	<0.01	<0.01	<0.01		<0.01
7/9/2014	<0.01	<0.01		0.023		<0.01	<0.01	<0.01	<0.01
7/10/2014			<0.01		<0.01				
1/12/2015			<0.01				<0.01		
1/13/2015		<0.01						<0.01	
1/14/2015	<0.01			0.022	<0.01	<0.01			<0.01
7/16/2015		<0.01					<0.01	<0.01	
7/17/2015				0.033		<0.01			<0.01
7/18/2015	<0.01		<0.01		<0.01				
1/17/2016		<0.01	<0.01	0.021					
1/18/2016	<0.01				<0.01	<0.01	<0.01	<0.01	<0.01

Time Series

Constituent: Selenium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
7/27/2016		0.002 (J)						<0.01	
7/28/2016			<0.01	0.0341		<0.01			<0.01
7/29/2016	0.0011 (J)				0.0022 (J)		0.0036 (J)		
8/30/2016								<0.01	<0.01
8/31/2016		<0.01			0.0014 (J)	<0.01			
9/1/2016	0.0012 (J)		<0.01	0.0297			0.0067 (J)		
10/25/2016			0.0014 (J)	0.0095 (J)					
10/26/2016	0.0013 (J)	0.0035 (J)			0.001 (J)		0.0042 (J)	<0.01	<0.01
10/27/2016						<0.01			
1/3/2017								<0.01	
1/4/2017			0.0014 (J)	0.022	<0.01				
1/5/2017	0.0012 (J)	<0.01							0.0014 (J)
1/6/2017						<0.01	0.0042 (J)		
4/4/2017		<0.01	<0.01	0.0236			0.0043 (J)		
4/5/2017	<0.01								
4/6/2017					<0.01	<0.01		<0.01	<0.01
7/11/2017			<0.01		<0.01				
7/12/2017						<0.01	0.0033 (J)	<0.01	<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)				<0.01	<0.01
10/4/2017	0.0042 (J)				0.0023 (J)	<0.01	0.0038 (J)		
1/9/2018				0.0162					<0.01
1/10/2018		<0.01	<0.01					<0.01	
1/11/2018	<0.01				<0.01	<0.01	0.0029 (J)		
7/9/2018			<0.01						
7/10/2018		<0.01		0.016				0.0018 (J)	0.0016 (J)
7/11/2018	0.0016 (J)				<0.01	<0.01	0.0015 (J)		
1/16/2019	<0.01						<0.01	<0.01	<0.01
1/17/2019				0.011					
1/18/2019					<0.01	<0.01			
1/21/2019		<0.01	0.0014 (J)						
3/25/2019			<0.01				<0.01		
3/26/2019	<0.01			0.022				<0.01	0.05 (J)
3/27/2019					<0.01	<0.01			
7/30/2019		<0.01							
8/27/2019		<0.01			<0.01		<0.01		0.0033 (J)
8/28/2019	<0.01		0.0014 (J)	0.019		<0.01		0.0033 (J)	
10/8/2019				0.019					
10/9/2019	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	0.0073 (J)	<0.01
4/7/2020				0.012	<0.01		0.0025 (J)	<0.01	<0.01
4/8/2020	<0.01	<0.01	0.0013 (J)			<0.01			
8/18/2020	0.002 (J)	<0.01	<0.01	0.013	<0.01				
8/19/2020						<0.01	<0.01	<0.01	<0.01
9/29/2020		<0.01							
9/30/2020	<0.01		<0.01	0.0061 (J)	<0.01			<0.01	0.0023 (J)
10/1/2020						<0.01	<0.01		

Time Series

Constituent: Sulfate (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
8/30/2016		140	87						
8/31/2016				64	1100	43			
9/1/2016	73						730	120	430
10/24/2016		160							
10/25/2016	26		83				420	100	360
10/26/2016				56	900	29			
1/3/2017		140							
1/4/2017			99	65	880				360
1/5/2017						32	430	140	
1/6/2017	23								
4/3/2017		140						150	
4/4/2017			110				600		
4/5/2017					990				440
4/6/2017	25			110		49			
7/10/2017					480				
7/11/2017		130		49			400	110	
7/12/2017			100			16			490
7/13/2017	65								
10/2/2017		150					470	56	
10/3/2017			63	140					780
10/4/2017	13				760	33			
1/9/2018	45	120					440	84	
1/10/2018			86			22			470
1/11/2018				270	780				
7/9/2018		123					369		
7/10/2018			77.7					43	787
7/11/2018	37.7			211	598	17.8			
1/16/2019	24.5	129	71.2			20.2	291		
1/17/2019				50.3	454			45.2	780
3/25/2019	14.7	152							
3/26/2019			73.8			33.6	192	54	87.9
3/27/2019				76.8	579				
10/7/2019		156							
10/8/2019	32.8			310		22	428	45.8	872
10/9/2019			76.3		392				
4/6/2020	20.3	123							
4/7/2020			83	446	297		456	26.9	844
4/8/2020						30.7			
9/28/2020	20	93.6	71.6			25.6			
9/29/2020				516	237		93.5		
9/30/2020								18.5	736

Time Series

Constituent: Sulfate (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
8/30/2016								100	120
8/31/2016		21			700	84			
9/1/2016	310		180	36			210		
10/25/2016			79	16					
10/26/2016	280	100			850		230	130	120
10/27/2016						76			
1/3/2017								120	
1/4/2017			170	45	680				
1/5/2017	310	22							130
1/6/2017						66	220		
4/4/2017		29	300	46			230		
4/5/2017	460								
4/6/2017					220	79		140	150
7/11/2017			400		210				
7/12/2017						75	210	140	140
7/13/2017	490	20		33					
10/2/2017			390						
10/3/2017		20		34				130	140
10/4/2017	1100				730	78	290		
1/9/2018				29					140
1/10/2018		9.5	99					110	
1/11/2018	810				180	110	210		
7/9/2018			99.2						
7/10/2018		8.5		33.2				48.1	128
7/11/2018	902				381	87.4	177		
1/16/2019	422						244	184	402
1/17/2019				24.1					
1/18/2019					107	56.9			
1/21/2019		10.2	35.5						
3/25/2019			95.6				245		
3/26/2019	439			83.9				222	319
3/27/2019					103	76.2			
7/30/2019		12.3							
10/8/2019				85.6					
10/9/2019	346	10.1	58.5		80.2	41.1	38.5	90.8	255
4/7/2020				33.2	333		221	180	180
4/8/2020	239	12.9	428			34.2			
9/29/2020		8.6							
9/30/2020	193		956	306	65.5			339	339
10/1/2020						35	178		

Time Series

Constituent: Thallium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
9/29/2000	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
11/21/2000	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1/20/2001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
3/14/2001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
7/16/2001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
11/1/2001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
4/25/2002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
12/12/2003	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
5/26/2004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
12/7/2004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
6/21/2005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
12/12/2005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
4/4/2006		<0.001					<0.001		<0.001
6/27/2006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/30/2006		<0.001					<0.001		<0.001
12/4/2006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
2/15/2007		<0.001					<0.001		<0.001
6/23/2007	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/30/2016		<0.001	<0.001						
8/31/2016				<0.001	<0.001	<0.001			
9/1/2016	0.0005 (J)						<0.001	<0.001	<0.001
10/24/2016		<0.001							
10/25/2016	<0.001		<0.001				<0.001	<0.001	<0.001
10/26/2016				<0.001	0.0003 (J)	<0.001			
1/3/2017		<0.001							
1/4/2017			<0.001	<0.001	<0.001				<0.001
1/5/2017						<0.001	<0.001	<0.001	
1/6/2017	<0.001								
4/3/2017		<0.001						<0.001	
4/4/2017			5E-05 (J)				7E-05 (J)		
4/5/2017					0.0002 (J)				6E-05 (J)
4/6/2017	<0.001			6E-05 (J)		<0.001			
7/10/2017					0.0002 (J)				
7/11/2017		5E-05 (J)		<0.001			6E-05 (J)	<0.001	
7/12/2017			<0.001			<0.001			<0.001
7/13/2017	<0.001								
10/2/2017		6E-05 (J)					<0.001	<0.001	
10/3/2017			<0.001	7E-05 (J)					<0.001
10/4/2017	<0.001				0.0002 (J)	<0.001			
1/9/2018	<0.001	<0.001					<0.001	<0.001	
1/10/2018			<0.001			<0.001			5E-05 (J)
1/11/2018				0.0001 (J)	0.0002 (J)				
7/9/2018		<0.001					<0.001		
7/10/2018			<0.001					<0.001	<0.001
7/11/2018	<0.001			<0.001	<0.001	<0.001			
8/26/2019	<0.001	<0.001							
8/27/2019			<0.001	<0.001	0.00011 (J)	<0.001	<0.001	<0.001	
8/28/2019									<0.001
10/7/2019		6.2E-05 (J)							
10/8/2019	<0.001			9.8E-05 (J)		<0.001	<0.001	<0.001	<0.001
10/9/2019			5.4E-05 (J)		0.00014 (J)				
4/6/2020	<0.001	<0.001							

Time Series

Constituent: Thallium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
4/7/2020			5.4E-05 (J)	0.00019 (J)	0.00013 (J)		<0.001	<0.001	<0.001
4/8/2020						<0.001			
8/17/2020		<0.001			<0.001	<0.001			
8/18/2020				0.00021 (J)			<0.001	<0.001	<0.001
8/19/2020	<0.001		<0.001						
9/28/2020	<0.001	<0.001	<0.001			<0.001			
9/29/2020				0.00017 (J)	<0.001		<0.001		
9/30/2020								<0.001	<0.001

Time Series

Constituent: Thallium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
9/29/2000	<0.001					<0.001	<0.001	<0.001	<0.001
11/21/2000	<0.001	<0.001				<0.001	<0.001	<0.001	<0.001
1/20/2001	<0.001	<0.001				<0.001	<0.001	<0.001	<0.001
3/14/2001	<0.001	<0.001				<0.001	<0.001	<0.001	<0.001
7/16/2001	<0.001	<0.001				<0.001	<0.001	<0.001	<0.001
11/1/2001	<0.001	<0.001				<0.001	<0.001	<0.001	<0.001
4/25/2002	<0.001	<0.001				<0.001	<0.001	<0.001	<0.001
12/12/2003	<0.001	<0.001				<0.001	<0.001	<0.001	<0.001
5/26/2004	<0.001	<0.001				<0.001	<0.001	<0.001	<0.001
12/7/2004	<0.001	<0.001				<0.001	<0.001	<0.001	<0.001
6/21/2005	<0.001	<0.001				<0.001	<0.001	<0.001	<0.001
12/12/2005	<0.001	<0.001				<0.001	<0.001	<0.001	<0.001
6/27/2006	<0.001	<0.001				<0.001	<0.001	<0.001	<0.001
12/4/2006	<0.001	<0.001				<0.001	<0.001	<0.001	<0.001
6/23/2007	<0.001	<0.001				<0.001	<0.001	<0.001	<0.001
8/30/2016								<0.001	<0.001
8/31/2016		<0.001			<0.001	<0.001			
9/1/2016	<0.001		<0.001	<0.001			<0.001		
10/25/2016			<0.001	<0.001					
10/26/2016	<0.001	<0.001			<0.001		<0.001	<0.001	<0.001
10/27/2016						<0.001			
1/3/2017								<0.001	
1/4/2017			<0.001	<0.001	<0.001				
1/5/2017	<0.001	<0.001							<0.001
1/6/2017						<0.001	<0.001		
4/4/2017		<0.001	<0.001	5E-05 (J)			7E-05 (J)		
4/5/2017	0.0001 (J)								
4/6/2017					<0.001	<0.001		<0.001	<0.001
7/11/2017			<0.001		<0.001				
7/12/2017						<0.001	<0.001	<0.001	<0.001
7/13/2017	<0.001	<0.001		<0.001					
10/2/2017			<0.001						
10/3/2017		<0.001		<0.001				<0.001	<0.001
10/4/2017	0.0001 (J)				0.0001 (J)	<0.001	<0.001		
1/9/2018				<0.001					<0.001
1/10/2018		<0.001	<0.001					<0.001	
1/11/2018	0.0001 (J)				6E-05 (J)	<0.001	7E-05 (J)		
7/9/2018			<0.001						
7/10/2018		<0.001		<0.001				<0.001	<0.001
7/11/2018	<0.001				<0.001	<0.001	<0.001		
7/30/2019		0.00011 (J)							
8/27/2019		<0.001			8.6E-05 (J)		<0.001		<0.001
8/28/2019	6.6E-05 (J)		<0.001	<0.001		<0.001		5.7E-05 (J)	
10/8/2019				<0.001					
10/9/2019	7.6E-05 (J)	<0.001	<0.001		<0.001	<0.001	<0.001	0.00031 (J)	<0.001
4/7/2020				<0.001	6.5E-05 (J)		<0.001	<0.001	<0.001
4/8/2020	5.6E-05 (J)	<0.001	<0.001			<0.001			
8/18/2020	<0.001	<0.001	<0.001	<0.001	0.00017 (J)				
8/19/2020						<0.001	<0.001	<0.001	<0.001
9/29/2020		<0.001							
9/30/2020	<0.001		<0.001	<0.001	<0.001			<0.001	<0.001
10/1/2020						<0.001	<0.001		

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
8/30/2016		234	225						
8/31/2016				119	1560	77			
9/1/2016	3660						1170	539	878
10/24/2016		216							
10/25/2016	3560		230				633	449	585
10/26/2016				108	1520	<25			
1/3/2017		333							
1/4/2017			349	182	1430				783
1/5/2017						146	781	565	
1/6/2017	3490								
4/3/2017		288						632	
4/4/2017			356				916		
4/5/2017					1200				722
4/6/2017	3170			248		23 (J)			
7/10/2017					1100				
7/11/2017		188		88			675	569	
7/12/2017			357			39			962
7/13/2017	2280								
10/2/2017		210					689	559	
10/3/2017			192	248					1240
10/4/2017	3350				986	38			
1/9/2018	2640	118					653	520	
1/10/2018			277			<25			935
1/11/2018				681	1020				
7/9/2018		235					659		
7/10/2018			349					524	1040
7/11/2018	2200			440	888	63			
1/16/2019	2100	219	341			44	656		
1/17/2019				118	765			518 (D)	1320
3/25/2019	2100	240							
3/26/2019			317			72	496	541	1380
3/27/2019				138	673				
10/7/2019		275							
10/8/2019	1840			613		51	841	526	1500
10/9/2019			338		647				
4/6/2020	1670	214							
4/7/2020			195	780	464		843	428	1500
4/8/2020						65			
9/28/2020	1450	175	373			60			
9/29/2020				1100	440		187		
9/30/2020								434	1140

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
8/30/2016								224	365
8/31/2016		39			1570	173			
9/1/2016	1270		470	184			1080		
10/25/2016			289	<25					
10/26/2016	1320	135			1840		1050	297	373
10/27/2016						221			
1/3/2017								366	
1/4/2017			639	242	1560				
1/5/2017	1770	99							543
1/6/2017						259	1060		
4/4/2017		54	660	187			994		
4/5/2017	1600								
4/6/2017					368	169		279	434
7/11/2017			836		383				
7/12/2017						163	1070	308	454
7/13/2017	1940	50		86					
10/2/2017			698						
10/3/2017		18 (J)		66				288	389
10/4/2017	2370				1500	168	1100		
1/9/2018				167					415
1/10/2018		<25	322					493	
1/11/2018	2350				438	190	838		
7/9/2018			461						
7/10/2018		49		180				1730 (o)	453
7/11/2018	2260				876	165	799		
1/16/2019	1540						530	382	1320
1/17/2019				178					
1/18/2019					154	118			
1/21/2019		39	307						
3/25/2019			449				479		
3/26/2019	1220			292				1040	1250
3/27/2019					158	104			
7/30/2019		70							
10/8/2019				278					
10/9/2019	1100	46	434		211	128	502	2010	903
4/7/2020				106	819		482	483	775
4/8/2020	881	38	986			80			
9/29/2020		33							
9/30/2020	752		1860	634	113			652	816
10/1/2020						111	424		

Time Series

Constituent: Vanadium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
9/29/2000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/21/2000	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1/20/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
3/14/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
7/16/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/1/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4/25/2002	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/20/2002		<0.01	0.0069	0.0071	<0.01	<0.01	0.03	0.0099	0.0069
6/6/2003	0.047	0.017 (o)	0.16 (o)	0.0098	<0.01	0.0063	0.0065	0.019 (o)	0.082 (o)
12/12/2003	0.0086	0.011 (o)	<0.01	0.0074	<0.01	<0.01	0.0052	0.018 (o)	0.012
5/26/2004	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
12/7/2004	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0074	<0.01	<0.01
6/21/2005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01
12/12/2005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4/4/2006		<0.01					0.013		<0.01
6/27/2006	<0.01	<0.01	0.0029	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
8/30/2006		<0.01					0.0039		<0.01
12/4/2006	0.0027	<0.01	0.0047	<0.01	<0.01	<0.01	0.016	<0.01	0.0031
2/15/2007		<0.01					0.017		0.0025
6/23/2007	0.0027	<0.01	0.0029	0.0036	<0.01	<0.01	0.0076	<0.01	0.0032
9/11/2007		<0.01					0.012		<0.01
12/11/2007	0.0033	<0.01	<0.01	<0.01	<0.01	<0.01	0.017	<0.01	<0.01
3/11/2008		<0.01					0.012		<0.01
6/23/2008	0.0074	<0.01		<0.01	<0.01	<0.01			
6/24/2008			<0.01				0.0069	<0.01	<0.01
11/3/2008		<0.01					0.016		0.0032
12/4/2008	0.0084	<0.01		<0.01	<0.01	<0.01	0.013		
12/5/2008			<0.01					<0.01	<0.01
3/25/2009		<0.01					0.014		<0.01
7/7/2009	0.023	<0.01	<0.01						
7/8/2009				0.0026	<0.01	<0.01	0.014	<0.01	0.0036
9/14/2009		<0.01					0.0072		0.0026
12/20/2009	0.007	<0.01	<0.01				0.02	<0.01	0.0031
12/21/2009				<0.01	<0.01	<0.01			
3/4/2010		<0.01					0.023		<0.01
6/20/2010	0.0047	<0.01	0.0037	<0.01	<0.01	<0.01	0.017	<0.01	
6/21/2010									0.0025
9/14/2010		<0.01					0.018		0.0035
1/6/2011			<0.01	0.003		0.0028			
1/7/2011	0.018	<0.01			<0.01		0.019	<0.01	0.0036
4/15/2011		<0.01					0.019		<0.01
7/7/2011	0.019	<0.01	0.0045	0.004	<0.01	<0.01	0.014	0.0036	0.003
9/25/2011		<0.01					0.015		0.0037
1/17/2012	0.0298	<0.01	<0.01	<0.01	<0.01	<0.01	0.021	<0.01	
1/18/2012									<0.01
4/4/2012		<0.01					0.0191		<0.01
7/9/2012	0.14		0.0026	0.005	<0.01	<0.01	0.026	0.0059	
7/10/2012		<0.01							0.0026
10/9/2012		<0.01					0.049		0.007
1/17/2013			<0.01	0.005	<0.01	<0.01			
1/18/2013	0.21	<0.01					0.036	<0.01	<0.01
4/5/2013		<0.01					0.04		<0.01

Time Series

Constituent: Vanadium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
7/16/2013			<0.01	<0.01	<0.01	<0.01			
7/17/2013	0.18	<0.01					0.062	<0.01	<0.01
10/11/2013		<0.01					0.032		<0.01
1/13/2014	0.24		<0.01	<0.01	<0.01	<0.01		<0.01	
1/14/2014		<0.01					0.044		<0.01
4/3/2014		0.0015 (J)					0.077 (o)		0.0032 (J)
7/8/2014				0.0024 (J)	0.0034 (J)	0.002 (J)			
7/9/2014	0.22	0.0012 (J)	0.0041 (J)				0.032	0.0012 (J)	0.0031 (J)
10/24/2014		<0.01					0.045		0.0028 (J)
1/13/2015	0.19		0.0029 (J)	0.0023 (J)	<0.01	0.0015 (J)		0.0013 (J)	
1/14/2015		<0.01					0.031		0.0034 (J)
5/10/2015		<0.01					0.013		
5/11/2015									0.0026 (J)
7/16/2015	0.23		0.0034 (J)	0.002 (J)	0.0049 (J)	<0.01		<0.01	0.0028 (J)
7/17/2015		<0.01					0.028		
10/6/2015		0.0012 (J)					0.02		0.0016 (J)
1/17/2016			0.0046 (J)				0.028	0.0013 (J)	0.0029 (J)
1/18/2016	0.41	0.00079 (J)			0.0058	0.0011 (J)			
1/19/2016				0.0025 (J)					
4/26/2016		<0.01					0.0181		0.00296 (J)
7/26/2016				0.0027 (J)		<0.01			
7/27/2016	0.397		0.0064 (J)		0.0058 (J)		0.0189	<0.01	
7/28/2016		<0.01							0.0026 (J)
10/24/2016		<0.01							
10/25/2016	0.425						0.0206	<0.01	<0.01
1/3/2017		<0.01							
1/4/2017			<0.01	<0.01	<0.01				<0.01
1/5/2017						<0.01	0.0172	<0.01	
1/6/2017	0.41								
4/3/2017		<0.01						0.002 (J)	
4/4/2017			0.0061 (J)				0.0235		
4/5/2017					0.0039 (J)				0.0033 (J)
4/6/2017	0.297			0.0025 (J)		<0.01			
7/10/2017					0.0062 (J)				
7/11/2017		<0.01		0.0027 (J)			0.0136	0.0022 (J)	
7/12/2017			0.0067 (J)			0.0016 (J)			0.0037 (J)
7/13/2017	0.194								
10/2/2017		<0.01					0.0175	0.0022 (J)	
10/3/2017									0.0036 (J)
10/4/2017	0.316								
1/9/2018	0.194	0.0014 (J)					0.0103	0.0021 (J)	
1/10/2018			0.0056 (J)			0.0019 (J)			0.0029 (J)
1/11/2018				0.0019 (J)	0.0025 (J)				
7/9/2018		<0.01					0.0078 (J)		
7/10/2018			0.0056 (J)					0.0025 (J)	0.0025 (J)
7/11/2018	0.15			0.0021 (J)	0.0059 (J)	0.0097 (J)			
1/16/2019	0.16	<0.01	0.0043 (J)			<0.01	0.0043 (J)		
1/17/2019		<0.01		0.0021 (J)	<0.01			<0.01	0.0021 (J)
3/25/2019	0.18	<0.01							
3/26/2019			0.0051 (J)			0.0029 (J)	0.0063 (J)	0.0026 (J)	0.0038 (J)
3/27/2019				0.0023 (J)	0.0049 (J)				
10/7/2019		<0.01							

Time Series

Constituent: Vanadium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
10/8/2019	0.11			<0.01		<0.01	<0.01	<0.01	<0.01
10/9/2019			<0.01		0.0021 (J)				
4/6/2020	0.12	<0.01							
4/7/2020			0.0015 (J)	<0.01	0.0024 (J)		0.0026 (J)	<0.01	<0.01
4/8/2020						<0.01			
9/28/2020	0.1	<0.01	0.0042 (J)			<0.01			
9/29/2020				0.0023 (J)	0.0046 (J)		<0.01		
9/30/2020								0.0028 (J)	0.0028 (J)

Time Series

Constituent: Vanadium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
9/29/2000	<0.01					<0.01	0.06	0.038	0.12
11/21/2000	<0.01	<0.01				<0.01	0.068	0.013	0.13
1/20/2001	<0.01	<0.01				<0.01	0.12	0.038	0.14
3/14/2001	<0.01	<0.01				<0.01	0.08	0.077 (o)	0.13
7/16/2001	<0.01	<0.01				<0.01	0.11	0.12 (o)	0.18
11/1/2001	<0.01	<0.01				<0.01	0.079	0.21 (o)	0.12
4/25/2002	<0.01	<0.01				<0.01	0.11	0.086 (o)	0.15
11/20/2002	<0.01	<0.01				0.014	0.15	0.14 (o)	0.15
6/6/2003	<0.01	<0.01				<0.01	0.12	0.12 (o)	0.11
12/12/2003	<0.01	<0.01				<0.01	0.13	0.014	0.089
5/26/2004	<0.01	<0.01				<0.01	0.095	0.06 (o)	0.09
12/7/2004	<0.01	<0.01				<0.01	0.067	0.054	0.072
6/21/2005	<0.01	<0.01				<0.01	0.062	0.038	0.04
12/12/2005	<0.01	<0.01				<0.01	0.09	0.0056	0.021
6/27/2006	0.0025	<0.01				<0.01	0.083	0.0043	0.02
12/4/2006	<0.01	<0.01				<0.01	0.084	0.0044	0.022
6/23/2007	<0.01	<0.01				<0.01	0.081	0.0039	0.027
12/11/2007	<0.01	<0.01				<0.01	0.067	0.0029	0.017
6/23/2008						<0.01			
6/24/2008	<0.01	<0.01					0.059	0.003	0.053
12/4/2008		<0.01				<0.01			
12/5/2008	<0.01						0.054	<0.01	0.0078
7/7/2009							0.038	<0.01	0.012
7/8/2009	<0.01	<0.01				0.0029			
12/20/2009		<0.01							
12/21/2009	<0.01					<0.01	0.06	<0.01	0.011
6/20/2010		<0.01				<0.01		<0.01	0.0083
6/21/2010	<0.01		<0.01	<0.01	<0.01		0.036		
1/6/2011		<0.01						0.0067	
1/7/2011	<0.01		0.0029	0.0031	<0.01	<0.01	0.043		0.0079
7/7/2011			<0.01					0.019	0.007
7/8/2011	0.0031		0.0046	0.0048	<0.01	<0.01	0.044		
1/17/2012		<0.01						0.021	
1/18/2012	<0.01		<0.01	<0.01	<0.01	<0.01	0.045		0.0116
7/9/2012		<0.01						0.032	
7/10/2012	<0.01		0.0081	<0.01	<0.01	<0.01	0.048		0.0096
1/17/2013		<0.01						0.034	
1/18/2013	<0.01		0.0063	<0.01	<0.01	<0.01	0.049		<0.01
7/16/2013								0.021	
7/17/2013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05		<0.01
1/13/2014		<0.01						0.008	
1/14/2014	<0.01		<0.01	0.006	<0.01	<0.01	0.067		<0.01
7/9/2014	0.0012 (J)	<0.01		0.0019 (J)		0.0016 (J)	0.055	0.0052	0.0039 (J)
7/10/2014			0.0026 (J)		0.0053				
1/12/2015			0.0031 (J)				0.066		
1/13/2015		<0.01						0.0036 (J)	
1/14/2015	0.002 (J)			0.0037 (J)	0.0013 (J)	<0.01			0.005
7/16/2015		<0.01					0.045	0.004 (J)	
7/17/2015				0.0028 (J)		0.0029 (J)			0.0045 (J)
7/18/2015	<0.01		0.003 (J)		0.0043 (J)				
1/17/2016		<0.01	0.0025 (J)	0.0039 (J)					
1/18/2016	0.0019 (J)				<0.01	<0.01	0.049	0.0069	0.0044 (J)

Time Series

Constituent: Vanadium (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
7/27/2016		<0.01							
7/28/2016			0.0024 (J)	0.0022 (J)		<0.01		0.0046 (J)	0.0038 (J)
7/29/2016	0.0031 (J)				0.0052 (J)		0.0388		
10/25/2016			<0.01						
1/3/2017								<0.01	
1/4/2017			<0.01	<0.01	<0.01				
1/5/2017	<0.01	<0.01							0.0077 (J)
1/6/2017						<0.01	0.0341		
4/4/2017		<0.01	0.0024 (J)	0.003 (J)			0.0371		
4/5/2017	0.0029 (J)								
4/6/2017					<0.01	<0.01		0.0063 (J)	0.0069 (J)
7/11/2017			0.003 (J)		0.0016 (J)				
7/12/2017						0.0013 (J)	0.0399	0.0064 (J)	0.0098 (J)
7/13/2017	0.0037 (J)	<0.01		0.0019 (J)					
10/2/2017			0.0028 (J)						
1/9/2018				0.0046 (J)					0.0086 (J)
1/10/2018		<0.01	0.0026 (J)					0.0077 (J)	
1/11/2018	0.0026 (J)				0.0012 (J)	<0.01	0.0327		
7/9/2018			<0.01						
7/10/2018		<0.01		0.0031 (J)				0.016	0.0098 (J)
7/11/2018	0.0032 (J)				0.0025 (J)	<0.01	0.02		
1/16/2019	<0.01						0.0022 (J)	0.0033 (J)	0.077
1/17/2019				0.0022 (J)					
1/18/2019					<0.01	<0.01			
1/21/2019		0.0024 (J)	0.0031 (J)						
3/25/2019			0.0024 (J)				0.004 (J)		
3/26/2019	0.0024 (J)			0.0041 (J)				0.0058 (J)	0.086
3/27/2019					0.002 (J)	<0.01			
7/30/2019		<0.01							
10/8/2019				<0.01					
10/9/2019	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	0.033 (J)	0.018 (J)
4/7/2020				<0.01	0.0014 (J)		0.0037 (J)	0.0053 (J)	0.041 (J)
4/8/2020	<0.01	<0.01	<0.01			0.0015 (J)			
9/29/2020		<0.01							
9/30/2020	<0.01		0.0029 (J)	0.0029 (J)	<0.01			0.0037 (J)	0.018
10/1/2020						<0.01	0.0047 (J)		

Time Series

Constituent: Zinc (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
9/29/2000	<0.01	<0.01	<0.01	<0.01	0.38 (o)	<0.01	<0.01	<0.01	<0.01
11/21/2000	<0.01		<0.01	<0.01	0.077 (o)	<0.01	<0.01	<0.01	<0.01
1/20/2001	<0.01	0.025 (o)	<0.01	<0.01	0.23 (o)	<0.01	<0.01	<0.01	<0.01
3/14/2001	<0.01	<0.01	<0.01	<0.01	0.24 (o)	<0.01	<0.01	<0.01	<0.01
7/16/2001	<0.01	<0.01	<0.01	<0.01	0.053 (o)	<0.01	<0.01	<0.01	<0.01
11/1/2001	<0.01	<0.01	<0.01	<0.01	0.022 (o)	0.044 (o)	<0.01	<0.01	<0.01
4/25/2002	<0.01	<0.01	<0.01	<0.01	1.2 (o)	<0.01	<0.01	<0.01	<0.01
11/20/2002		0.016 (o)	<0.01	<0.01	0.045 (o)	0.023	<0.01	<0.01	<0.01
6/6/2003	0.69 (o)	0.032 (o)	0.011	<0.01	0.042 (o)	<0.01	<0.01	<0.01	0.035 (o)
12/12/2003	0.12 (o)	0.019 (o)	<0.01	0.013	<0.01	<0.01	<0.01	<0.01	<0.01
5/26/2004	0.013	<0.01	<0.01	<0.01	<0.01	0.035	<0.01	<0.01	<0.01
12/7/2004	<0.01	<0.01	<0.01	0.028 (o)	<0.01	0.018	<0.01	<0.01	<0.01
6/21/2005	<0.01	<0.01	<0.01	<0.01	<0.01	0.014	<0.01	<0.01	<0.01
12/12/2005	0.014	0.01	<0.01	<0.01	<0.01	0.023	0.011	0.064 (o)	<0.01
4/4/2006		<0.01					<0.01		<0.01
6/27/2006	0.01	0.0043	<0.01	0.0028	0.012 (o)	0.023	0.0045	0.011	0.077 (o)
8/30/2006		0.017 (o)					<0.01		0.0027
12/4/2006	0.0065	0.0053	<0.01	0.0028	0.0067	0.046 (o)	<0.01	0.0033	<0.01
2/15/2007		0.0045					<0.01		0.0032
6/23/2007	0.0049	0.0043	<0.01	0.0063	0.025 (o)	0.036	<0.01	0.0029	0.0058
9/11/2007		0.004					<0.01		0.0033
12/11/2007	0.0043	0.0048	<0.01	<0.01	0.0038	0.011	<0.01	<0.01	<0.01
3/11/2008		0.0043					<0.01		<0.01
6/23/2008	0.0025	0.0037		<0.01	0.0051	0.0091			
6/24/2008			<0.01				<0.01	<0.01	<0.01
11/3/2008		0.0032					<0.01		0.0025
12/4/2008	0.0025	0.0029		<0.01	<0.01	0.0038	<0.01		
12/5/2008			<0.01					<0.01	<0.01
3/25/2009		0.0055					<0.01		0.0025
7/7/2009	<0.01	0.0028	<0.01						
7/8/2009				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
9/14/2009		0.0027					<0.01		<0.01
12/20/2009	0.0031	0.0029	<0.01				<0.01	<0.01	<0.01
12/21/2009				<0.01	0.013 (o)	0.0032			
3/4/2010		0.0042					<0.01		<0.01
6/20/2010	<0.01	0.0027	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
6/21/2010									<0.01
9/14/2010		<0.01					<0.01		<0.01
1/6/2011			<0.01	<0.01		0.004			
1/7/2011	<0.01	0.0032			0.004		<0.01	<0.01	<0.01
4/15/2011		<0.01					<0.01		<0.01
7/7/2011	0.0031	0.005	0.0025	<0.01	0.0028	0.0037	<0.01	<0.01	<0.01
9/25/2011		0.0041					<0.01		0.0028
1/17/2012	0.004	0.0043	<0.01	0.0043	0.0043	0.0031	<0.01	<0.01	
1/18/2012									0.0029
4/4/2012		<0.01					<0.01		<0.01
7/9/2012	0.0096		<0.01	<0.01	<0.01	0.003	<0.01	<0.01	
7/10/2012		0.0028							<0.01
10/9/2012		0.0033					<0.01		0.0027
1/17/2013			<0.01	0.0025	0.0033	<0.01			
1/18/2013	0.051	0.0038					<0.01	<0.01	<0.01
4/5/2013		0.0026					<0.01		<0.01

Time Series

Constituent: Zinc (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
7/16/2013			<0.01	<0.01	0.0028	0.0029			
7/17/2013	0.042	<0.01					<0.01	<0.01	<0.01
10/11/2013		0.0046					<0.01		<0.01
1/13/2014	0.0025		0.0025	0.0025	0.0025	0.0025		0.0025	
1/14/2014		0.0025					0.0025		0.0025
4/3/2014		0.0029					0.0014 (J)		0.0015 (J)
7/8/2014				0.0011 (J)	0.002 (J)	0.0018 (J)			
7/9/2014	0.064	0.002 (J)	<0.01				0.00086 (J)	<0.01	0.0012 (J)
10/24/2014		0.0031					0.00083 (J)		0.0013 (J)
1/13/2015	0.066		0.0025	0.0021 (J)	0.0079	0.0028		<0.01	
1/14/2015		0.003					<0.01		0.0017 (J)
5/10/2015		0.0028					<0.01		
5/11/2015									0.0015 (J)
7/16/2015	0.036		<0.01	<0.01	0.0026	0.0018 (J)		<0.01	<0.01
7/17/2015		0.0018 (J)					<0.01		
10/6/2015		0.0018 (J)					<0.01		<0.01
1/17/2016			<0.01				<0.01	<0.01	<0.01
1/18/2016	0.035	0.0028			0.0025	0.0017 (J)			
1/19/2016				0.0029					
4/26/2016		<0.01					<0.01		<0.01
7/26/2016				<0.01		0.0028 (J)			
7/27/2016	0.0529		<0.01		0.0021 (J)		<0.01	<0.01	
7/28/2016		0.0018 (J)							<0.01
10/24/2016		0.0024 (J)							
10/25/2016	0.0035 (J)						<0.01	<0.01	<0.01
1/3/2017		0.0035 (J)							
1/4/2017			<0.01	<0.01	0.0025 (J)				0.0025 (J)
1/5/2017						0.0021 (J)	<0.01	<0.01	
1/6/2017	0.0235								
4/3/2017		0.0041 (J)						<0.01	
4/4/2017			<0.01				<0.01		
4/5/2017					0.0026 (J)				0.0025 (J)
4/6/2017	0.0829			0.004 (J)		0.0027 (J)			
7/10/2017					0.0023 (J)				
7/11/2017		0.0029 (J)		<0.01			<0.01	<0.01	
7/12/2017			<0.01			0.0043 (J)			0.002 (J)
7/13/2017	0.0853								
10/2/2017		0.0026 (J)					0.0026 (J)	<0.01	
10/3/2017									<0.01
10/4/2017	0.0263								
1/9/2018	0.0665	0.0035 (J)					0.0018 (J)	<0.01	
1/10/2018			0.0014 (J)			0.0021 (J)			0.0016 (J)
1/11/2018				0.0018 (J)	0.0031 (J)				
7/9/2018		0.0022 (J)					<0.01		
7/10/2018			0.0021 (J)					<0.01	0.0031 (J)
7/11/2018	0.02 (J)			<0.01	0.0036 (J)	0.0039 (J)			
1/16/2019	0.014 (J)	0.0037 (J)	<0.01			0.047	<0.01		
1/17/2019				<0.01	0.0032 (J)			<0.01	<0.01
3/25/2019	<0.05 (o)	<0.01							
3/26/2019			<0.01			0.03	<0.01	<0.01	<0.01
3/27/2019				<0.01	0.0031 (J)				
10/7/2019		0.0077 (J)							

Time Series

Constituent: Zinc (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-1	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
10/8/2019	0.095			0.0061 (J)		0.053	0.0052 (J)	0.0051 (J)	0.01
10/9/2019			0.0057 (J)		0.0057 (J)				
4/6/2020	<0.01	<0.01							
4/7/2020			<0.01	<0.01	<0.01		<0.01	<0.01	<0.01
4/8/2020						0.023			
9/28/2020	0.16	0.0092 (J)	0.0092 (J)			0.016			
9/29/2020				0.0031 (J)	0.0074 (J)		<0.01		
9/30/2020								0.032	0.0051 (J)

Time Series

Constituent: Zinc (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
9/29/2000	<0.01					<0.01	<0.01	0.026 (o)	<0.02 (o)
11/21/2000	<0.01	0.021 (o)				<0.01	<0.01	<0.01	0.024 (o)
1/20/2001	<0.01	<0.01				<0.01	0.041	0.031 (o)	<0.02 (o)
3/14/2001	<0.01	<0.01				<0.01	<0.01	0.063 (o)	<0.02 (o)
7/16/2001	<0.01	<0.01				<0.01	0.059	0.08 (o)	<0.02 (o)
11/1/2001	<0.01	<0.01				<0.01	<0.01	0.16 (o)	<0.02 (o)
4/25/2002	<0.01	<0.01				<0.01	<0.01	<0.01	<0.02 (o)
11/20/2002	0.014	<0.01				0.033 (o)	0.061	0.14 (o)	0.028 (o)
6/6/2003	0.012	<0.01				<0.01	0.041	0.51 (o)	0.032 (o)
12/12/2003	<0.01	<0.01				<0.01	0.012	<0.01	<0.01 (o)
5/26/2004	<0.01	<0.01				<0.01	0.016	0.036 (o)	<0.01 (o)
12/7/2004	<0.01	<0.01				<0.01	<0.01	0.069 (o)	0.012 (o)
6/21/2005	<0.01	<0.01				<0.01	<0.01	0.076 (o)	<0.01 (o)
12/12/2005	<0.01	0.012				0.032 (o)	0.017	<0.01	<0.01 (o)
6/27/2006	0.0046	<0.01				0.018 (o)	0.11	0.01	0.0071
12/4/2006	0.0071	<0.01				0.0044	0.086	0.0035	0.0096
6/23/2007	0.005	<0.01				0.0041	0.076	0.0032	0.094 (o)
12/11/2007	0.0033	<0.01				0.0039	0.087	0.0079	0.042 (o)
6/23/2008						<0.01			
6/24/2008	0.0037	<0.01					0.062	<0.01	0.098 (o)
12/4/2008		<0.01				0.0039			
12/5/2008	0.0027						0.014	<0.01	0.047 (o)
7/7/2009							0.052	<0.01	0.024 (o)
7/8/2009	0.0048	<0.01				<0.01			
12/20/2009		<0.01							
12/21/2009	0.0032					0.004	0.046	<0.01	0.049 (o)
6/20/2010		<0.01				<0.01		<0.01	0.045 (o)
6/21/2010	0.0028		<0.01	0.04 (o)	<0.01		0.045		
1/6/2011		<0.01						<0.01	
1/7/2011	0.003		<0.01	<0.01	0.019	0.0032	0.024		0.0044
7/7/2011			<0.01					0.0027	0.003
7/8/2011	0.0034		0.086 (J,o)	0.0044	0.1 (o)	0.0025	0.023		
1/17/2012		<0.01						0.0039	
1/18/2012	0.0049		<0.01	<0.01	0.0051	0.0045	0.011		0.0048
7/9/2012		<0.01						<0.01	
7/10/2012	0.0039		<0.01	<0.01	0.01	<0.01	0.024		<0.01
1/17/2013		<0.01						<0.01	
1/18/2013	0.0043		0.0032	<0.01	0.0036	0.0029	0.011		0.0028
7/16/2013								0.0032	
7/17/2013	0.0035	<0.01	<0.01	<0.01	0.0025	<0.01	0.0029		<0.01
1/13/2014		0.0025						0.0025	
1/14/2014	0.0025		0.0025	0.0025	0.0025	0.0025	0.0025		0.0025
7/9/2014	0.0033	0.00058 (J)		0.00084 (J)		0.0016 (J)	0.0051	0.00076 (J)	0.00093 (J)
7/10/2014			<0.01		0.024				
1/12/2015			<0.01				0.0023 (J)		
1/13/2015		0.0024 (J)						0.0036	
1/14/2015	0.0067			0.0018 (J)	0.0016 (J)	0.0024 (J)			0.0023 (J)
7/16/2015		<0.01					0.0021 (J)	<0.01	
7/17/2015				<0.01		0.0031			<0.01
7/18/2015	<0.01		<0.01	<0.01	0.014				
1/17/2016		<0.01	<0.01	<0.01					
1/18/2016	0.012				<0.01	0.0059	0.0092	<0.01	0.0029

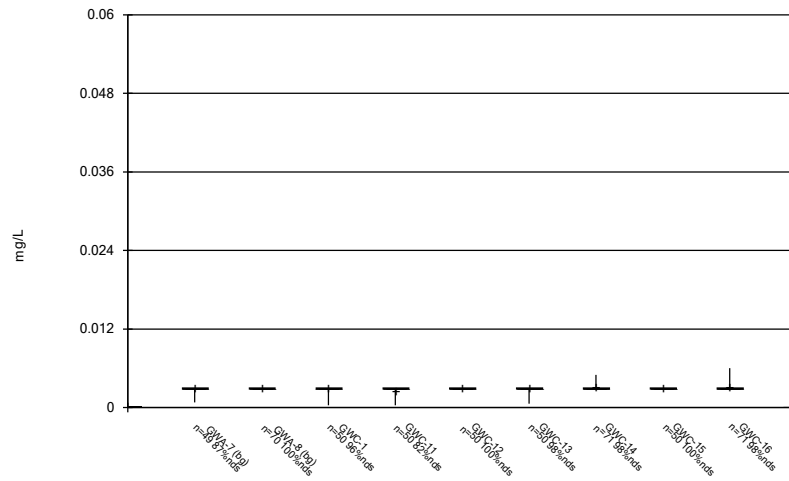
Time Series

Constituent: Zinc (mg/L) Analysis Run 2/1/2021 11:56 AM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWB-4R	GWB-5R	GWB-6R
7/27/2016		0.0018 (J)						0.0015 (J)	
7/28/2016			<0.01	<0.01		0.0019 (J)			<0.01
7/29/2016	0.0086 (J)				0.0129		0.003 (J)		
10/25/2016			<0.01						
1/3/2017								<0.01	
1/4/2017			<0.01	<0.01	0.006 (J)				
1/5/2017	0.016	<0.01							<0.01
1/6/2017						0.0026 (J)	0.0104		
4/4/2017		0.0015 (J)	<0.01	0.0015 (J)			0.0132		
4/5/2017	0.0175								
4/6/2017					0.0031 (J)	0.0047 (J)		0.0023 (J)	0.0032 (J)
7/11/2017			<0.01		0.0029 (J)				
7/12/2017						0.003 (J)	0.0046 (J)	<0.01	0.002 (J)
7/13/2017	0.0126	0.0014 (J)		0.002 (J)					
10/2/2017			<0.01						
1/9/2018				0.0016 (J)					0.0036 (J)
1/10/2018		<0.01	0.0034 (J)					0.0022 (J)	
1/11/2018	0.012				0.0106	0.0046 (J)	0.0095 (J)		
7/9/2018			<0.01						
7/10/2018		<0.01		<0.01				<0.01	0.0055 (J)
7/11/2018	0.011				0.0057 (J)	0.0033 (J)	0.0028 (J)		
1/16/2019	0.0094 (J)						0.0052 (J)	<0.01	<0.01
1/17/2019				<0.01					
1/18/2019					0.0024 (J)	0.0025 (J)			
1/21/2019		<0.01	<0.01						
3/25/2019			<0.01				0.0078 (J)		
3/26/2019	0.0057 (J)			<0.01				<0.01	<0.01
3/27/2019					<0.01	0.0026 (J)			
7/30/2019		0.0067 (J)							
10/8/2019				0.0071 (J)					
10/9/2019	0.011	0.005 (J)	0.0049 (J)		0.0079 (J)	0.0054 (J)	0.0064 (J)	0.0081 (J)	0.016 (J)
4/7/2020				<0.01	<0.01		<0.01	<0.01	<0.01
4/8/2020	<0.01	<0.01	<0.01			<0.01			
9/29/2020		0.056							
9/30/2020	0.0043 (J)		0.031	0.0096 (J)	<0.01			<0.01	<0.01
10/1/2020						0.025	0.0064 (J)		

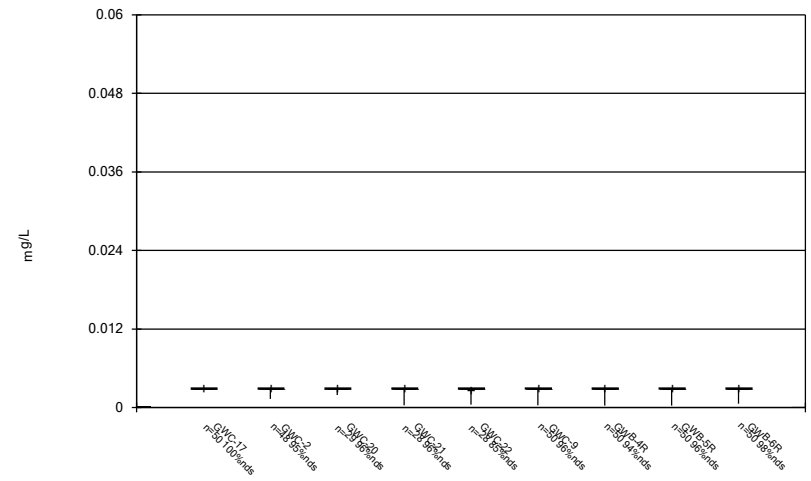
FIGURE B.

Box & Whiskers Plot



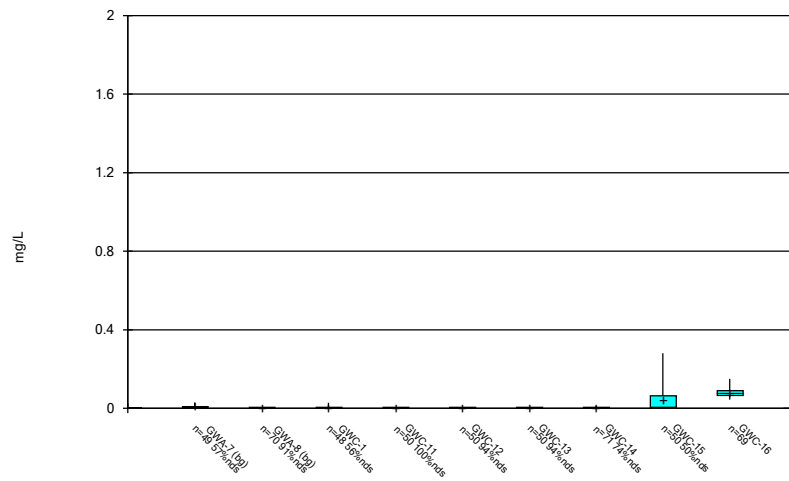
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



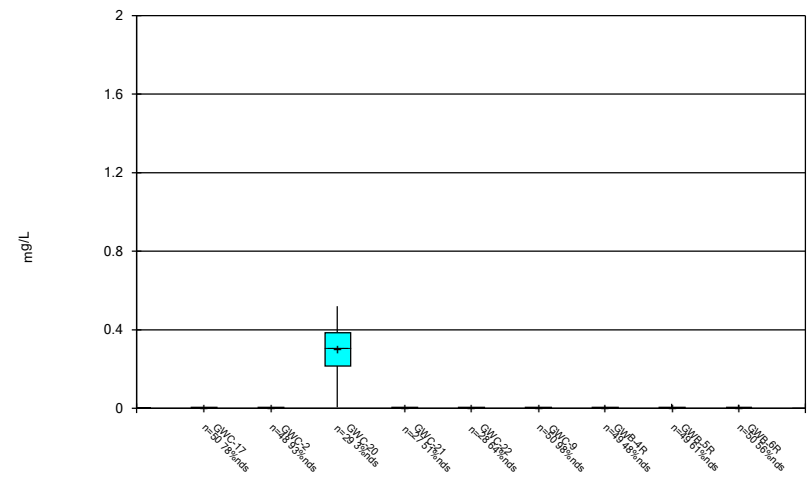
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



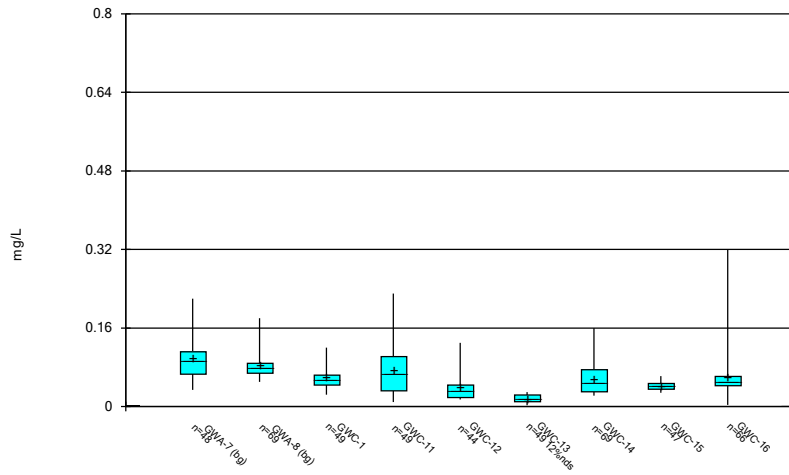
Constituent: Arsenic Analysis Run 2/1/2021 1:19 PM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



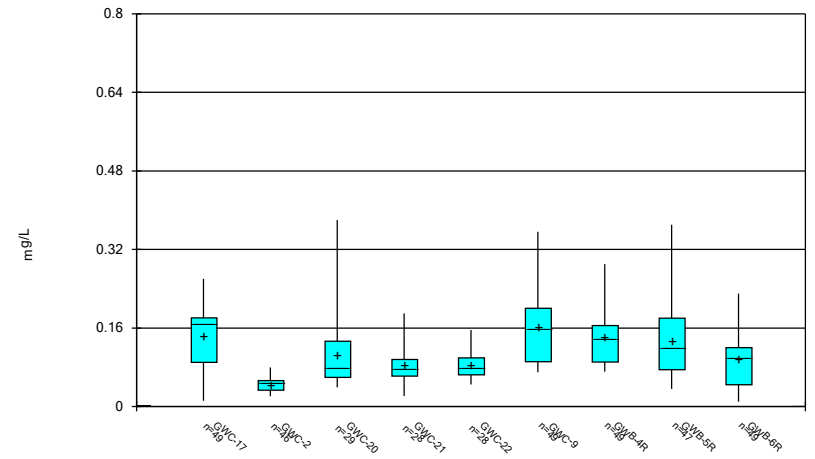
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



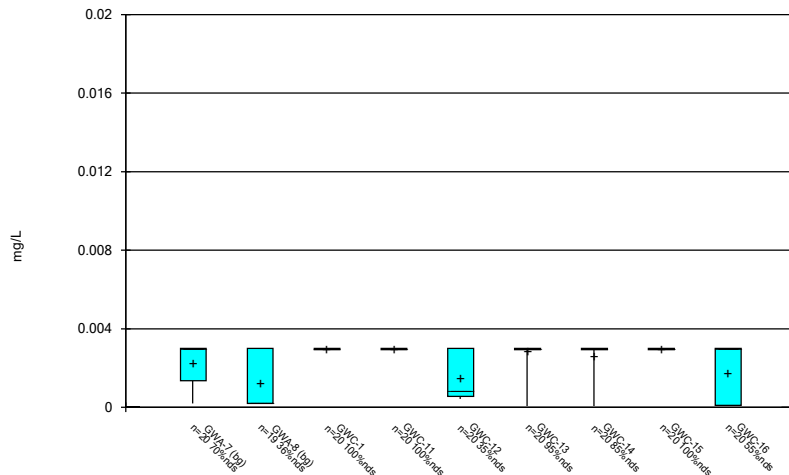
Constituent: Barium Analysis Run 2/1/2021 1:19 PM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



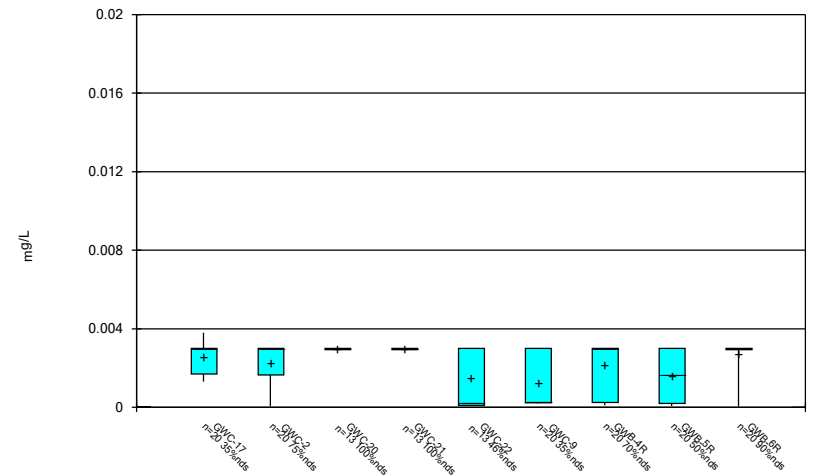
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



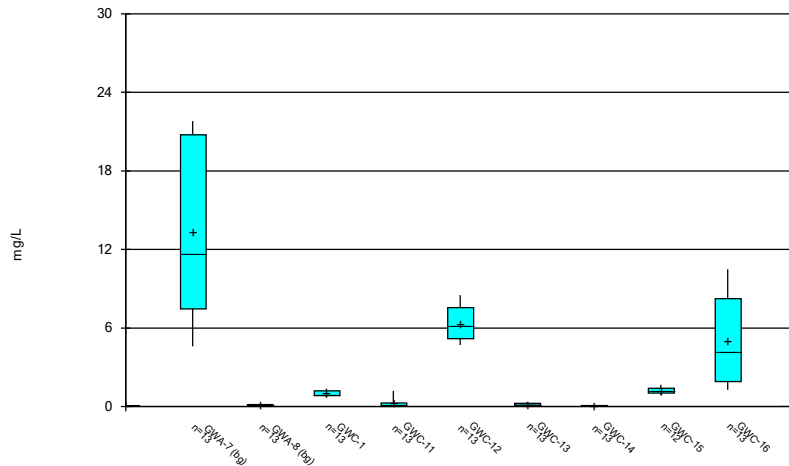
Constituent: Beryllium Analysis Run 2/1/2021 1:19 PM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



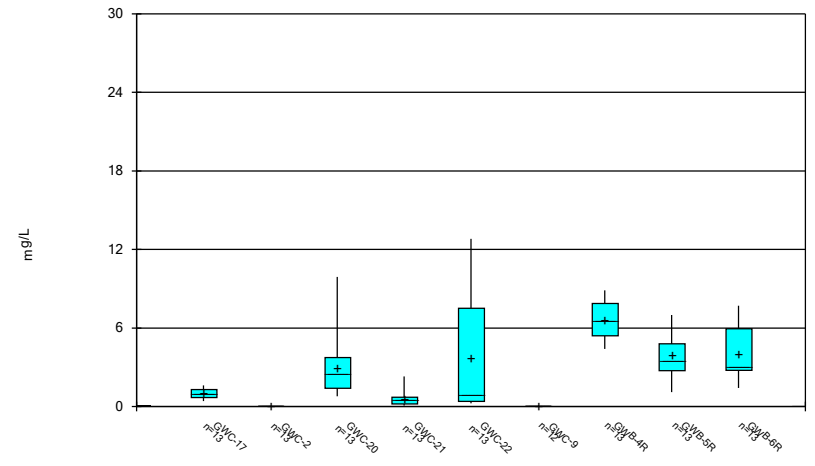
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



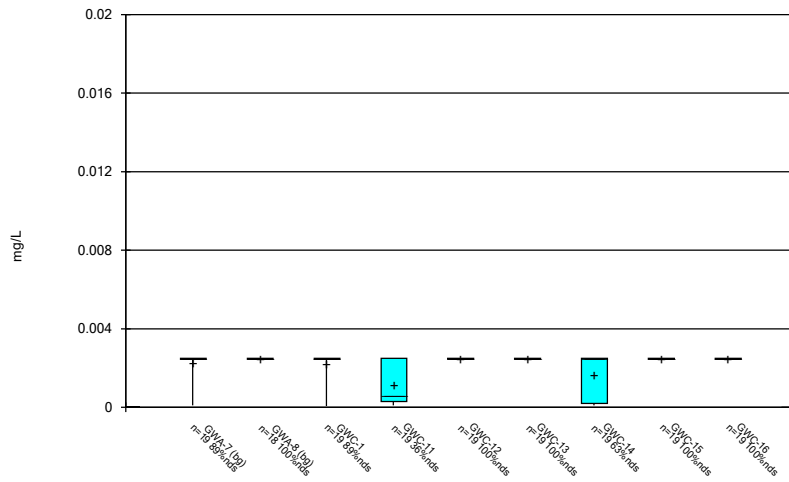
Constituent: Boron Analysis Run 2/1/2021 1:19 PM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



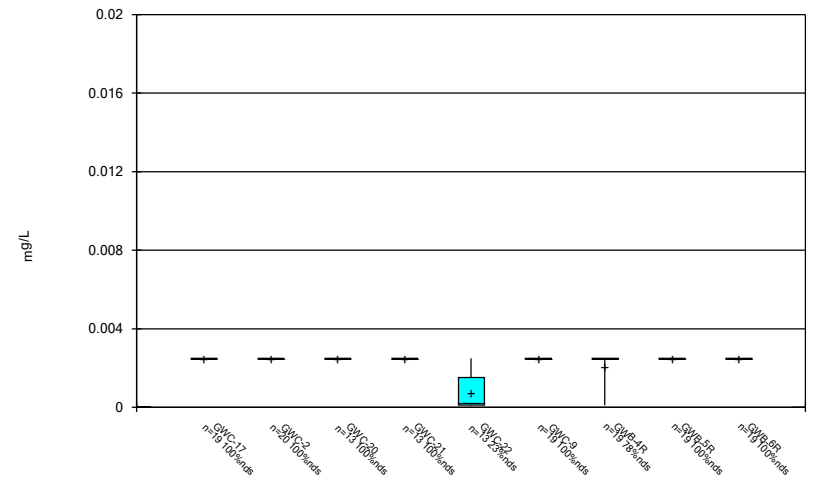
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



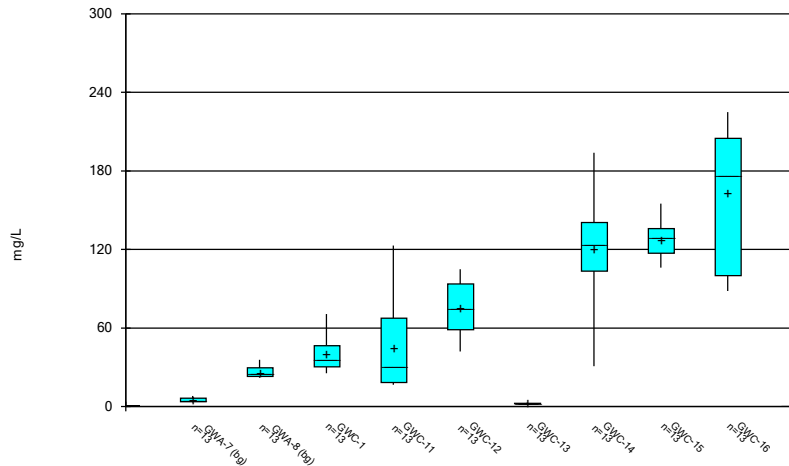
Constituent: Cadmium Analysis Run 2/1/2021 1:19 PM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



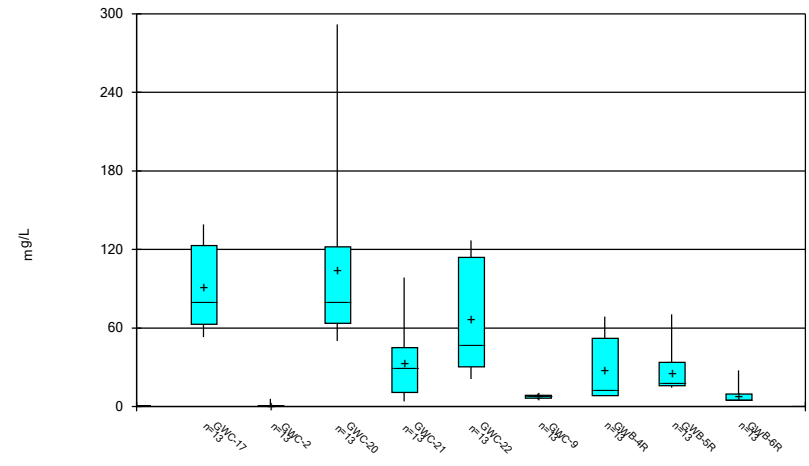
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



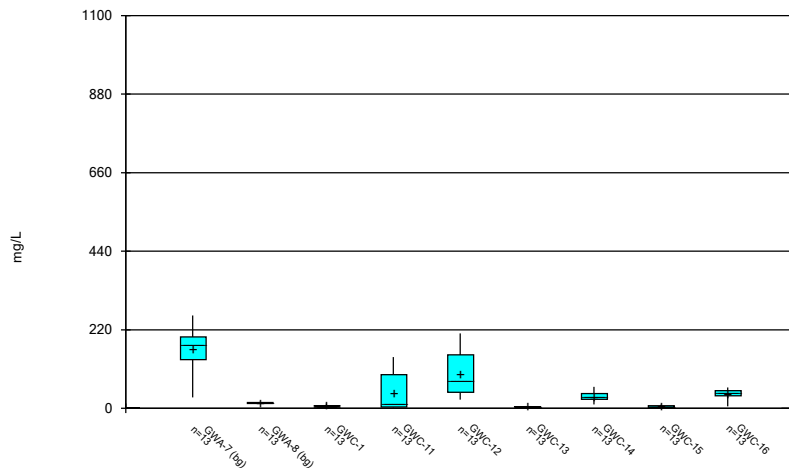
Constituent: Calcium Analysis Run 2/1/2021 1:19 PM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



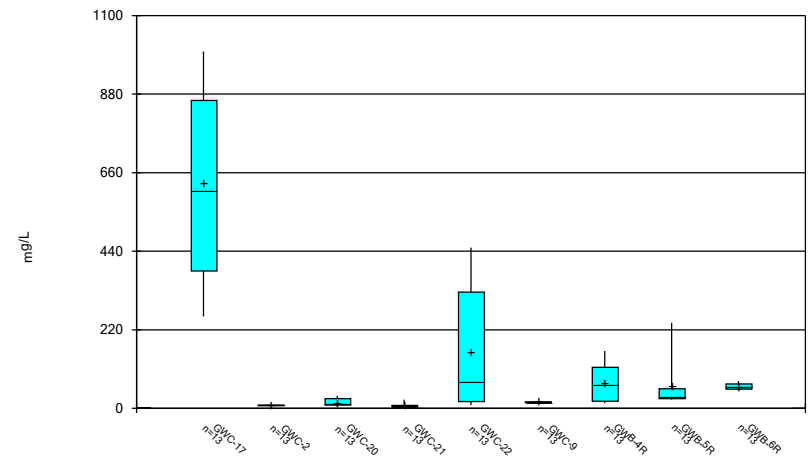
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



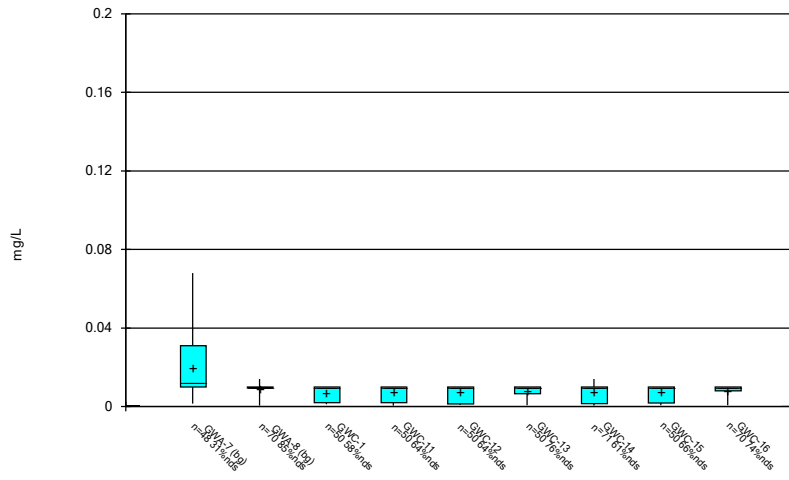
Constituent: Chloride Analysis Run 2/1/2021 1:19 PM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



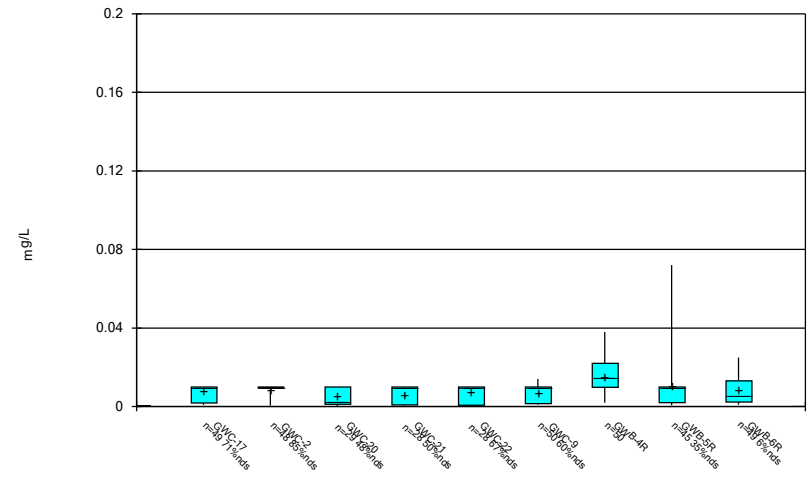
Constituent: Chloride Analysis Run 2/1/2021 1:19 PM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



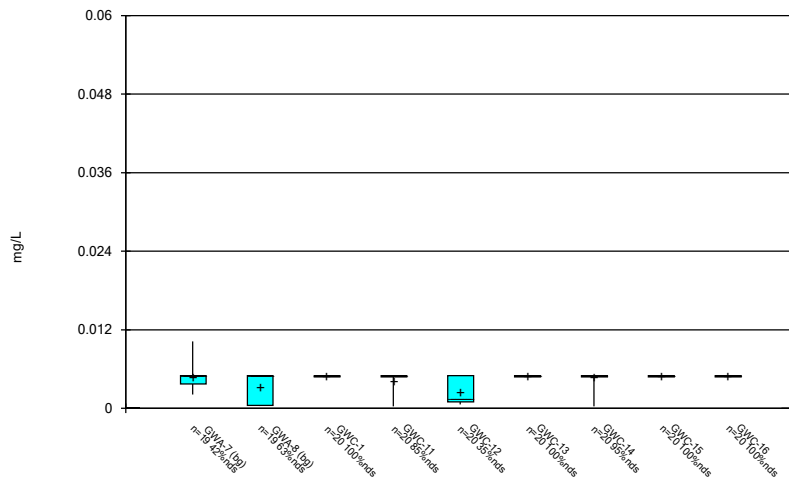
Constituent: Chromium Analysis Run 2/1/2021 1:19 PM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



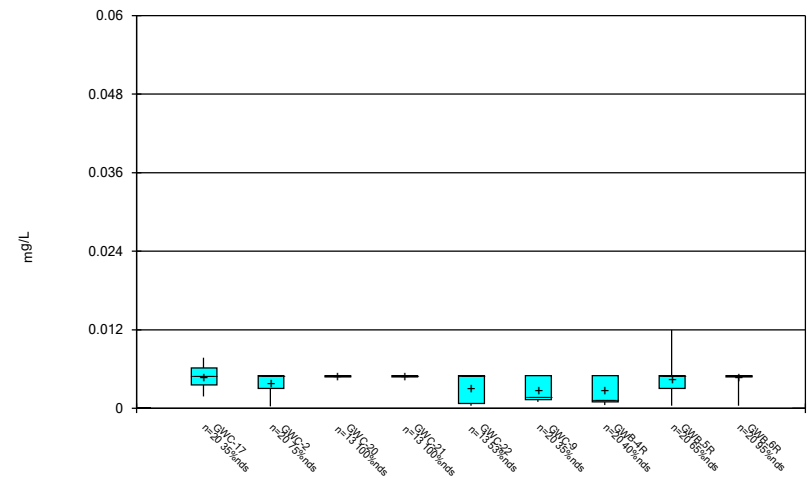
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



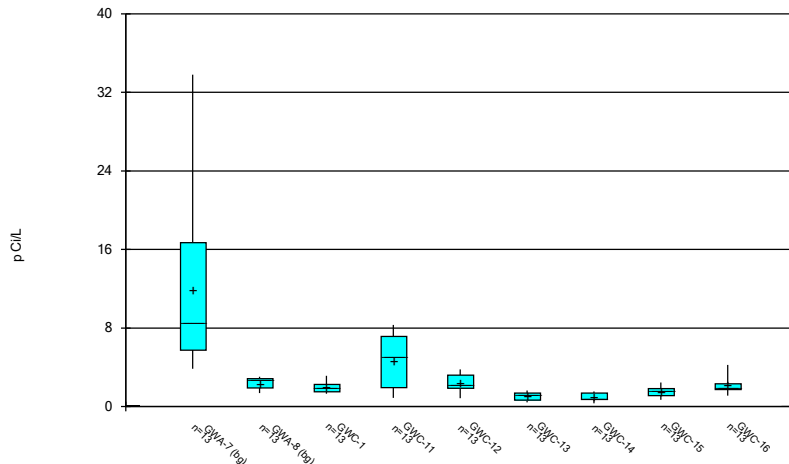
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



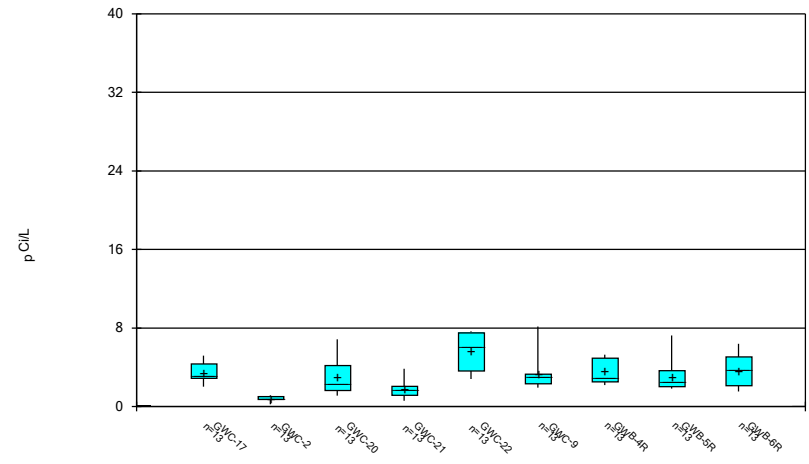
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



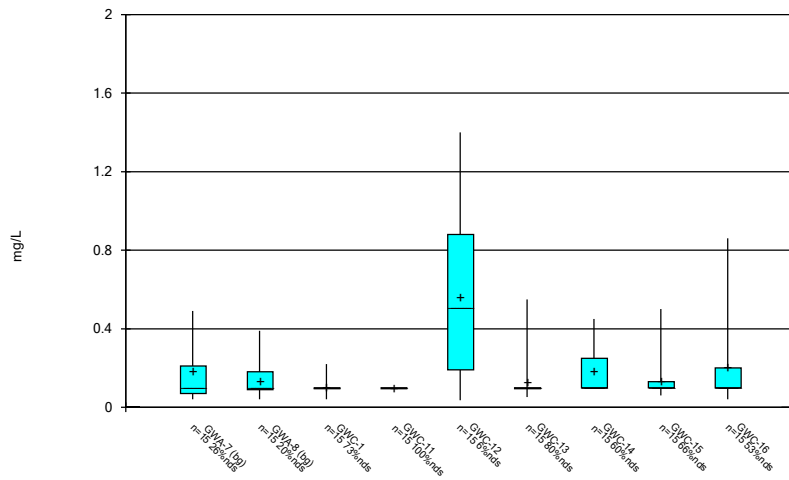
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



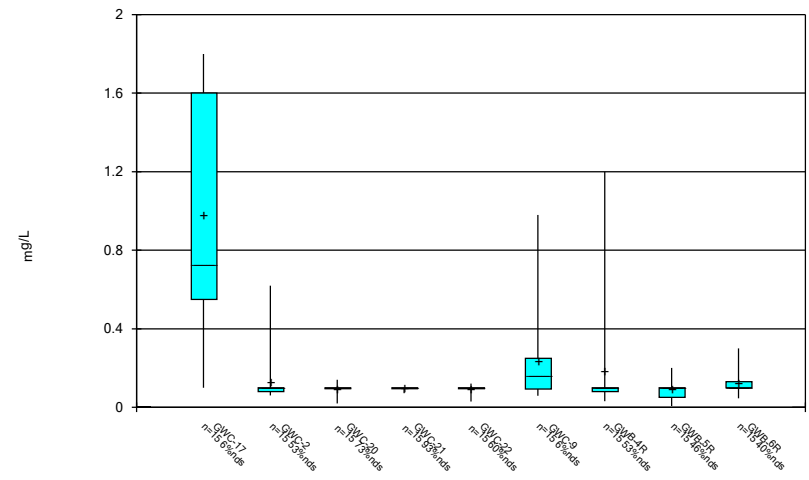
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



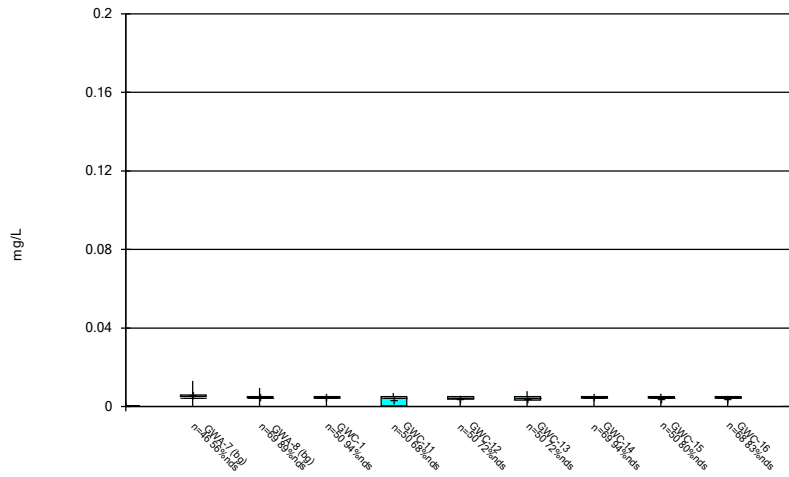
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



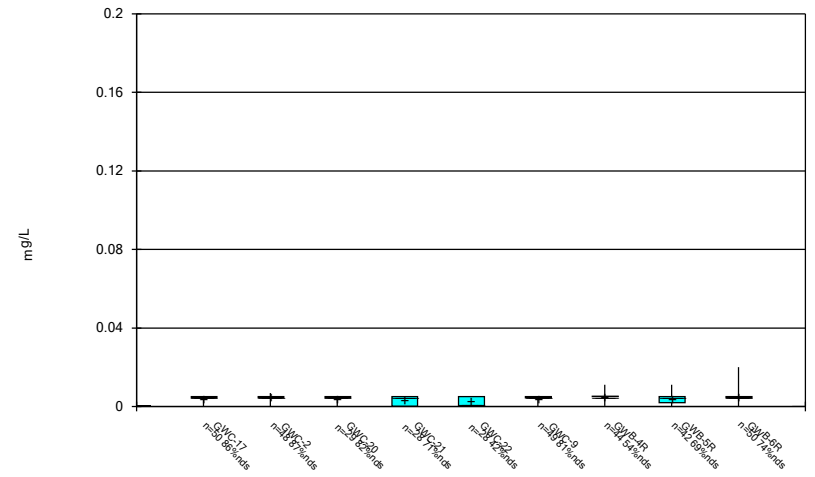
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



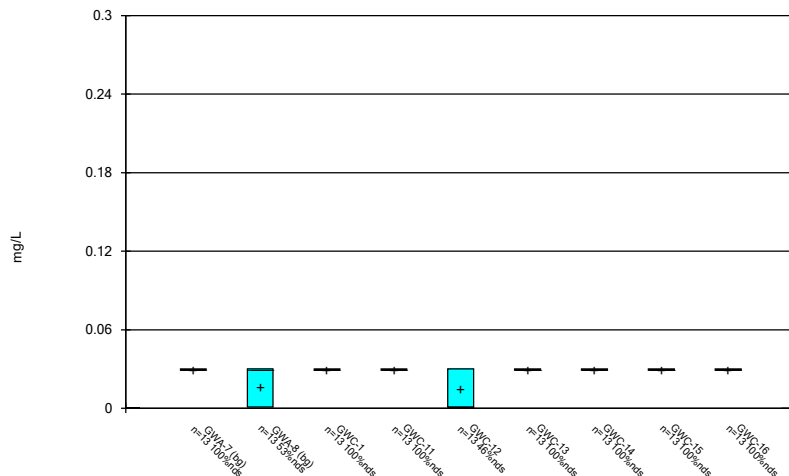
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



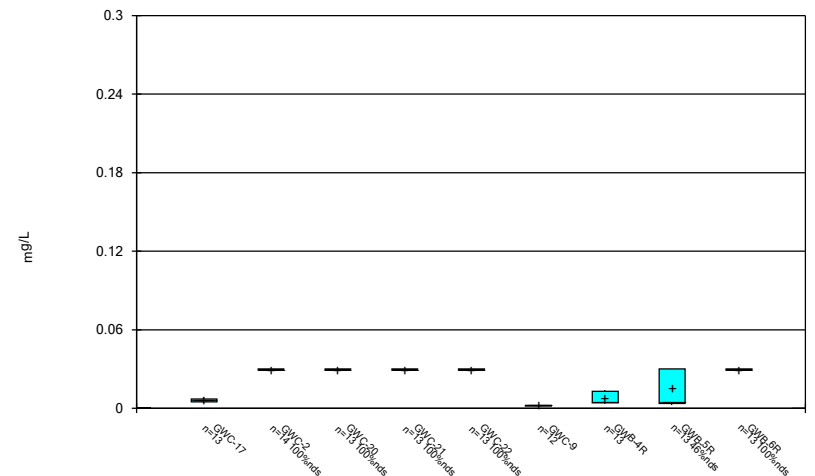
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



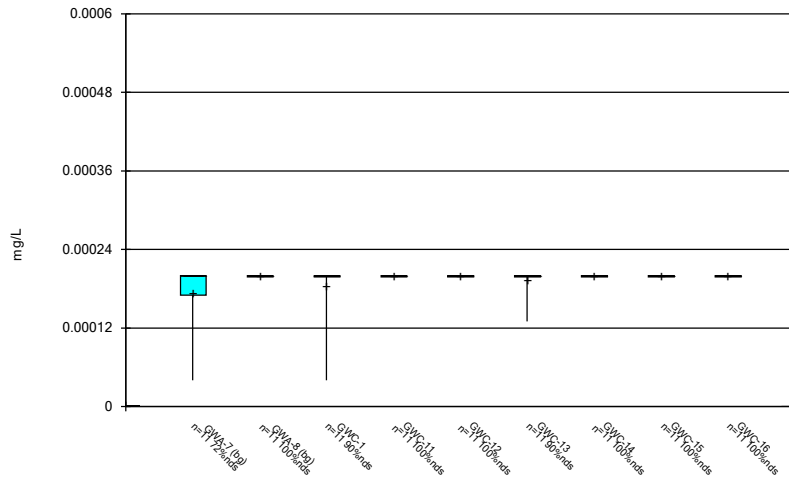
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



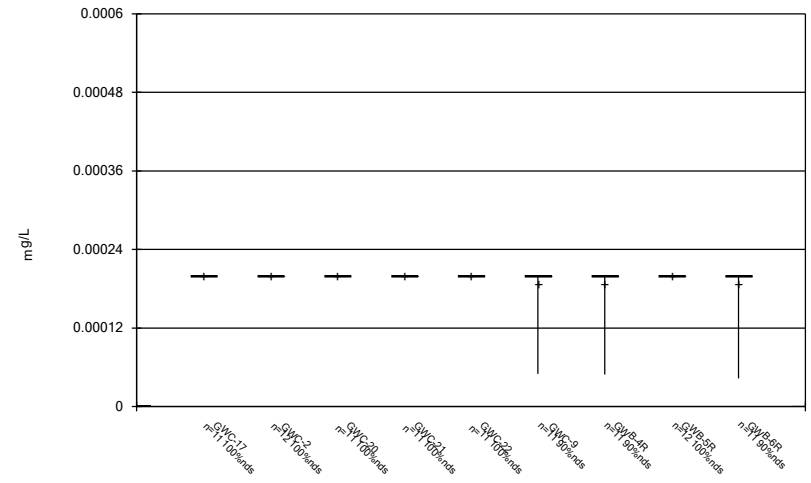
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



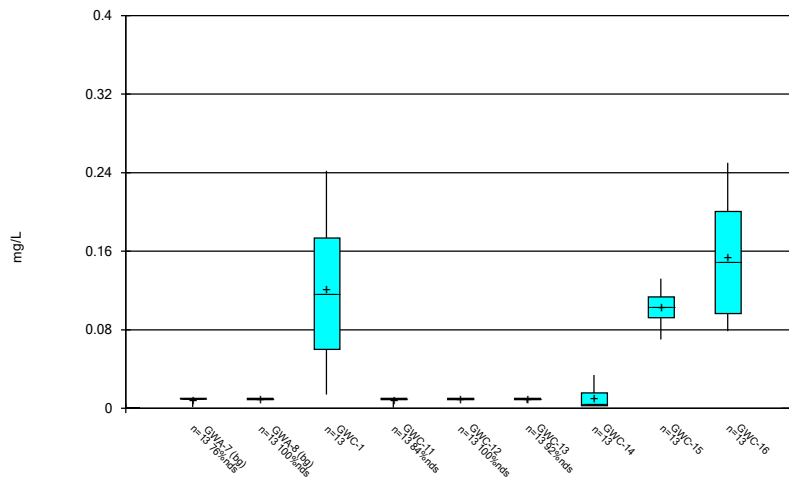
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



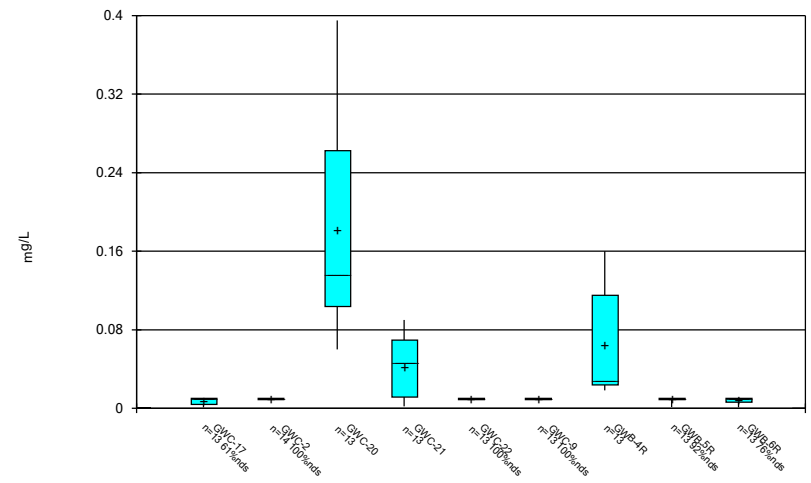
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



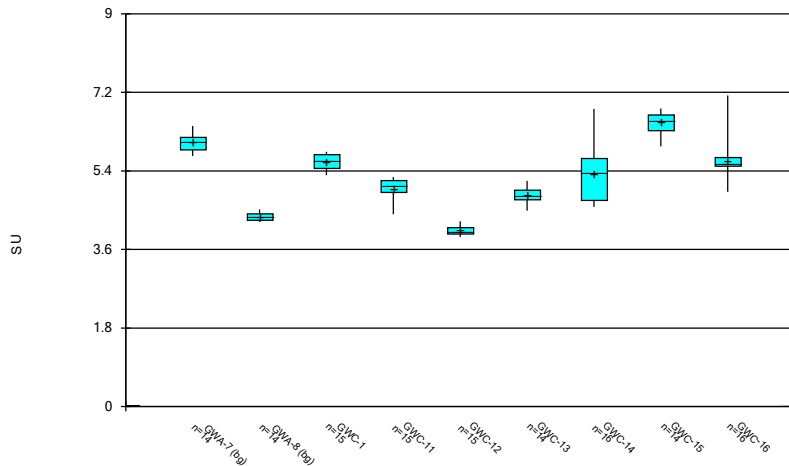
Constituent: Molybdenum Analysis Run 2/1/2021 1:19 PM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



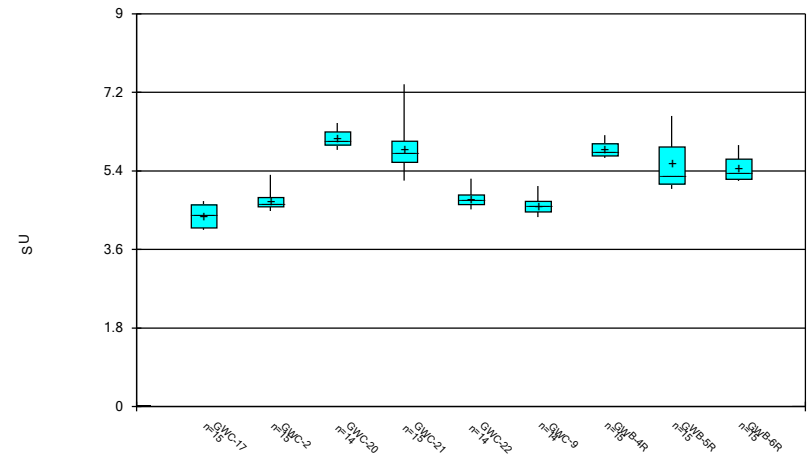
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



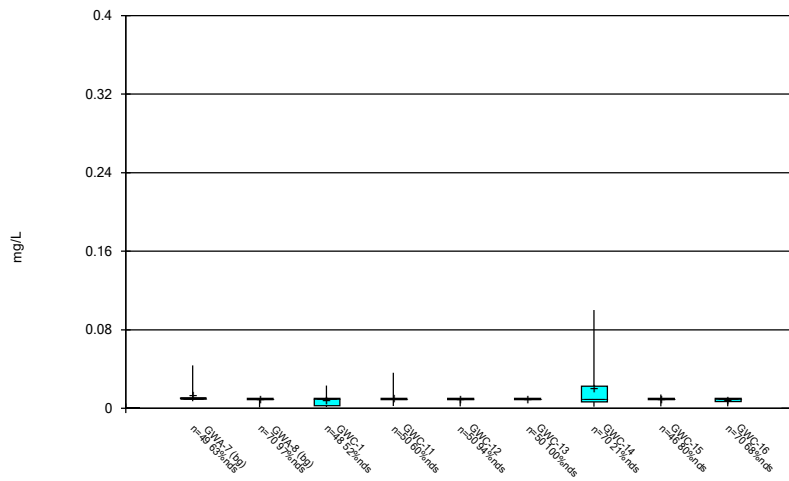
Constituent: pH Analysis Run 2/1/2021 1:19 PM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



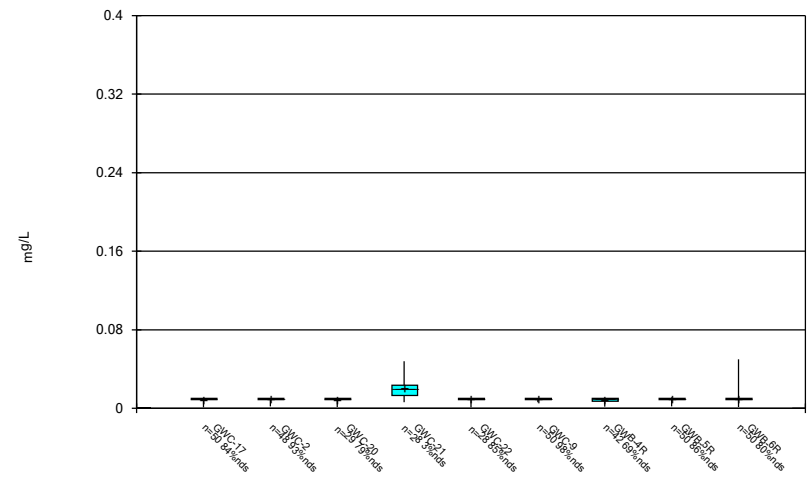
Constituent: pH Analysis Run 2/1/2021 1:19 PM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



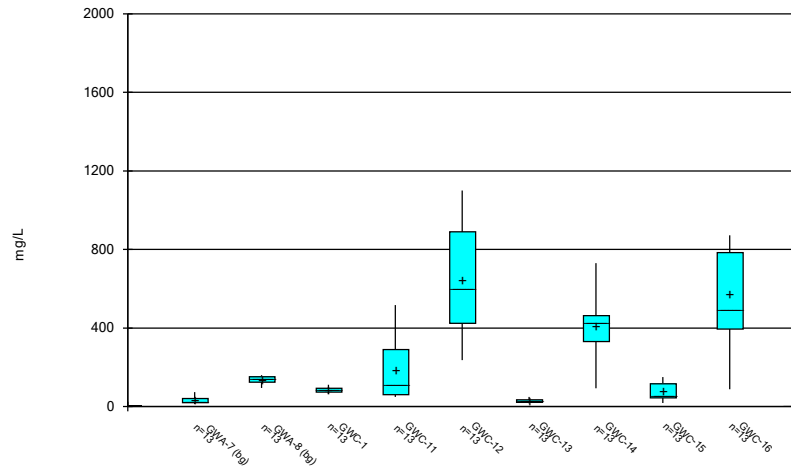
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



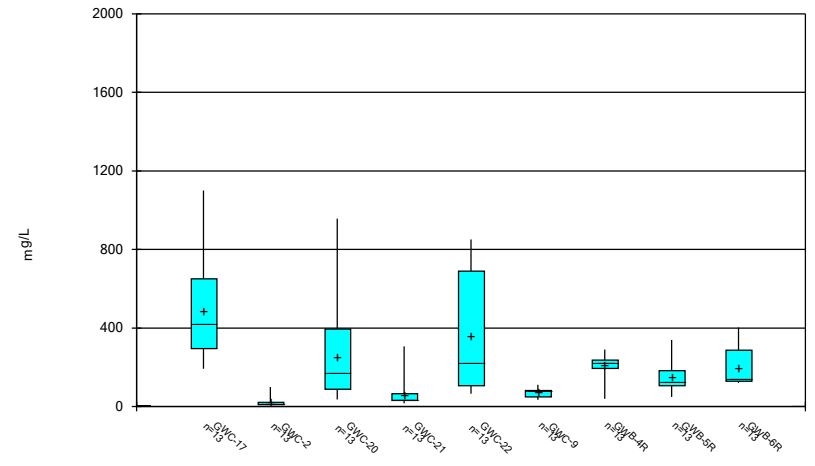
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



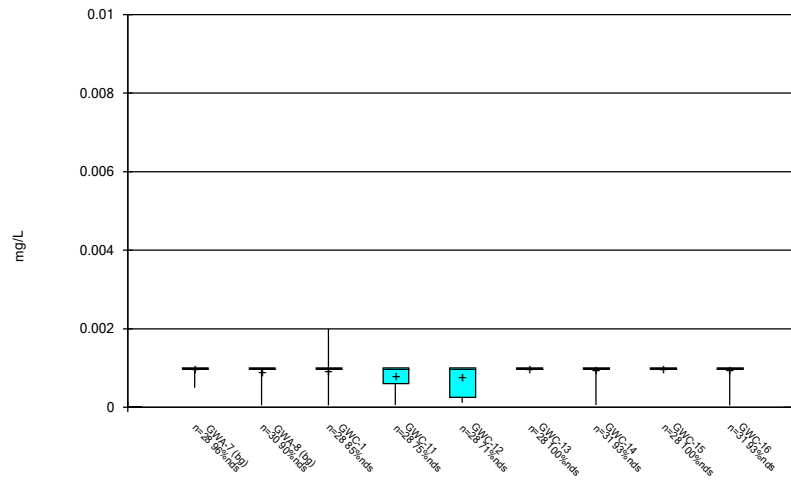
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



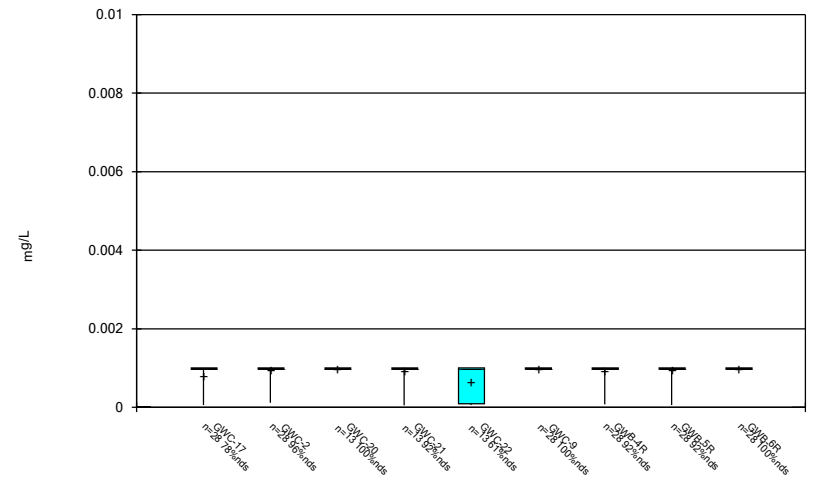
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



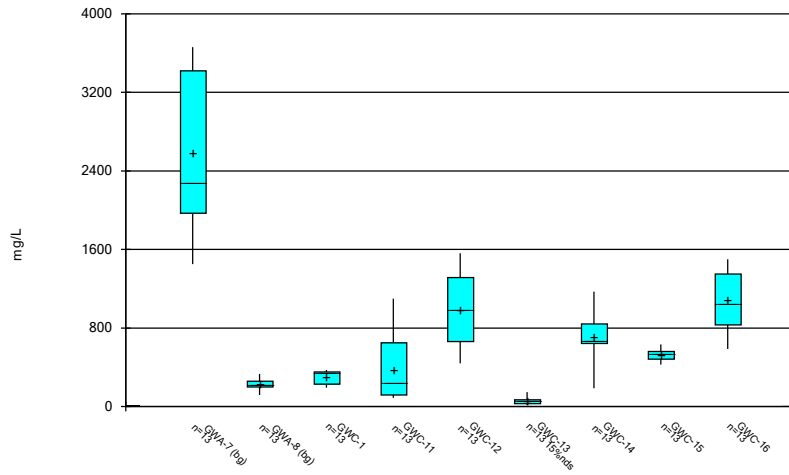
Constituent: Thallium Analysis Run 2/1/2021 1:19 PM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



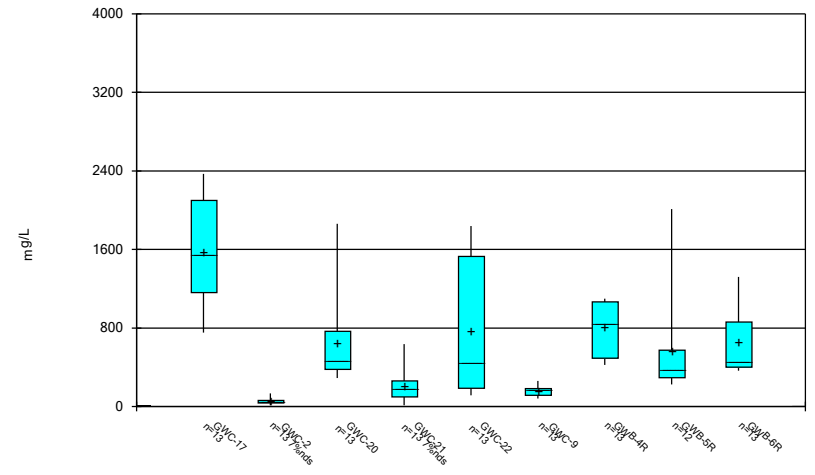
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



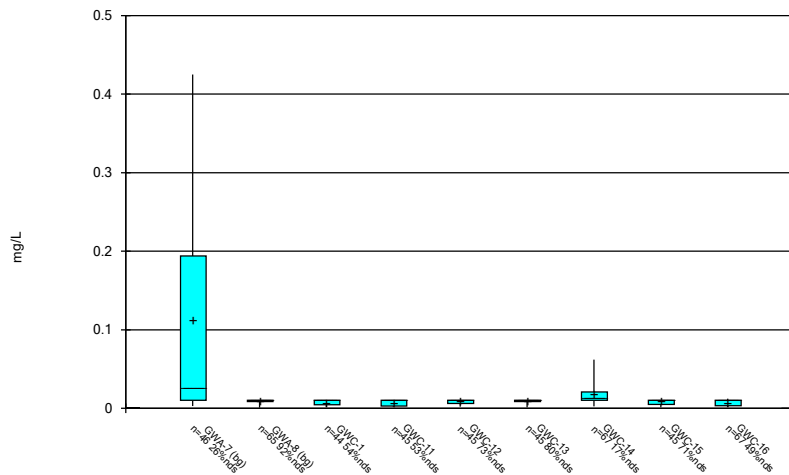
Constituent: Total Dissolved Solids Analysis Run 2/1/2021 1:19 PM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



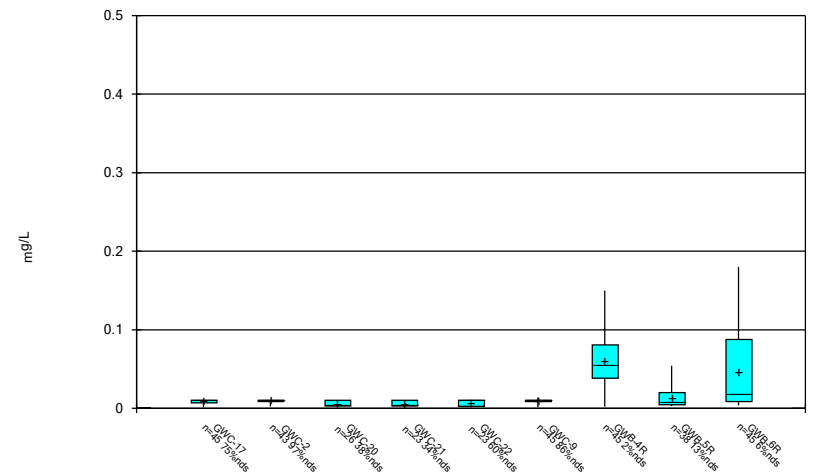
Constituent: Total Dissolved Solids Analysis Run 2/1/2021 1:19 PM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



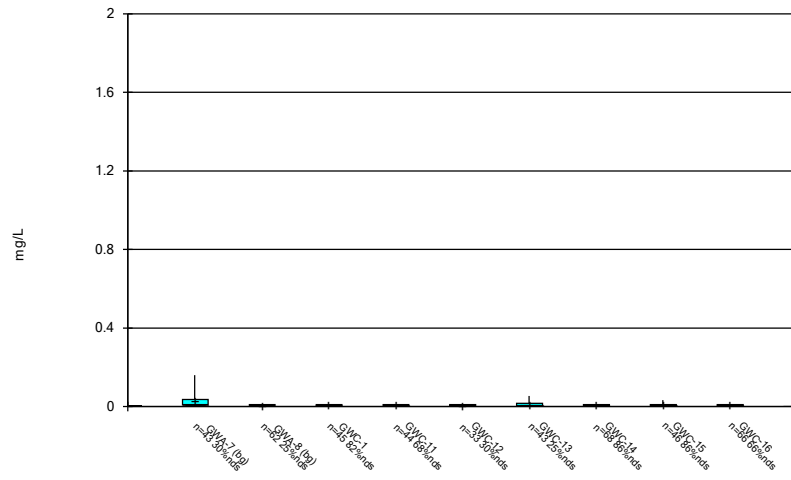
Constituent: Vanadium Analysis Run 2/1/2021 1:19 PM View: Descriptive
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



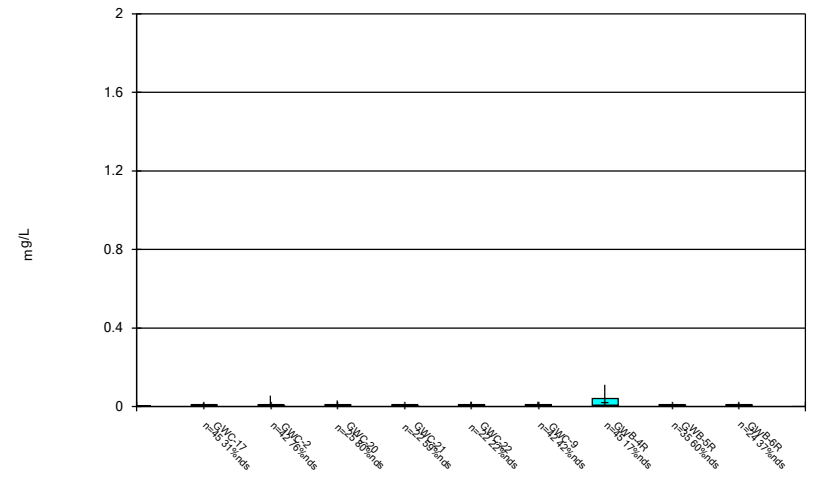
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



Constituent: Zinc Analysis Run 2/1/2021 1:20 PM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



Constituent: Zinc Analysis Run 2/1/2021 1:20 PM View: Descriptive
Grumman Road Landfill Client: Southern Company Data: Grumman Road

FIGURE C.

Outlier Summary

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/1/2021, 10:25 AM

Date	GWA-8 Vanadium (mg/L)	GWC-1 Vanadium (mg/L)	GWC-14 Vanadium (mg/L)	GWC-15 Vanadium (mg/L)	GWC-16 Vanadium (mg/L)	GWB-5R Vanadium (mg/L)	GWA-7 Zinc (mg/L)	GWA-8 Zinc (mg/L)	GWC-11 Zinc (mg/L)	GWC-12 Zinc (mg/L)
9/29/2000										0.38 (o)
11/21/2000										0.077 (o)
1/20/2001								0.025 (o)		0.23 (o)
3/14/2001						0.077 (o)				0.24 (o)
7/16/2001						0.12 (o)				0.053 (o)
11/1/2001						0.21 (o)				0.022 (o)
4/25/2002						0.086 (o)				1.2 (o)
11/20/2002						0.14 (o)		0.016 (o)		0.045 (o)
6/6/2003	0.017 (o)	0.16 (o)		0.019 (o)	0.082 (o)	0.12 (o)	0.69 (o)	0.032 (o)		0.042 (o)
12/12/2003	0.011 (o)			0.018 (o)			0.12 (o)	0.019 (o)		
5/26/2004						0.06 (o)				
12/7/2004									0.028 (o)	
6/21/2005										
12/12/2005										
6/27/2006										0.012 (o)
8/30/2006								0.017 (o)		
12/4/2006										
6/23/2007										0.025 (o)
12/11/2007										
6/24/2008										
12/5/2008										
7/7/2009										
12/21/2009										0.013 (o)
6/20/2010										
6/21/2010										
7/8/2011										
7/9/2012										
1/18/2013										
4/3/2014			0.077 (o)							
1/17/2016										
8/31/2016										
9/1/2016										
10/26/2016										
10/3/2017										
7/10/2018										
7/11/2018										
1/16/2019										
1/17/2019										
1/18/2019										
1/21/2019										
3/25/2019							<0.01 (o)			

FIGURE D.

State Interwell Prediction Limits - Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:15 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	GWC-15	0.0287	9/30/2020	0.24	Yes	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-16	0.0287	9/30/2020	0.044	Yes	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-20	0.0287	9/30/2020	0.31	Yes	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Barium (mg/L)	GWC-20	0.22	9/30/2020	0.35	Yes	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2

State Interwell Prediction Limits - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:15 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	GWC-1	0.003	9/28/2020	0.00035J	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWC-11	0.003	9/29/2020	0.00051J	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWC-13	0.003	9/28/2020	0.003ND	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWC-14	0.003	9/29/2020	0.003ND	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWC-16	0.003	9/30/2020	0.003ND	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWC-2	0.003	9/29/2020	0.0016J	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWC-20	0.003	9/30/2020	0.003ND	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWC-21	0.003	9/30/2020	0.00033J	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWC-22	0.003	9/30/2020	0.0016J	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWC-9	0.003	10/1/2020	0.003ND	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWB-4R	0.003	10/1/2020	0.003ND	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWB-5R	0.003	9/30/2020	0.0003J	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Antimony (mg/L)	GWB-6R	0.003	9/30/2020	0.00059J	No	119	n/a	n/a	94.96	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-1	0.0287	9/28/2020	0.0058	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-12	0.0287	9/29/2020	0.005ND	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-13	0.0287	9/28/2020	0.005ND	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-14	0.0287	9/29/2020	0.005ND	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-15	0.0287	9/30/2020	0.24	Yes	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-16	0.0287	9/30/2020	0.044	Yes	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-17	0.0287	9/30/2020	0.0012J	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-2	0.0287	9/29/2020	0.005ND	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-20	0.0287	9/30/2020	0.31	Yes	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-21	0.0287	9/30/2020	0.0029J	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-22	0.0287	9/30/2020	0.005ND	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-9	0.0287	10/1/2020	0.005ND	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWB-4R	0.0287	10/1/2020	0.0027J	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWB-5R	0.0287	9/30/2020	0.0017J	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWB-6R	0.0287	9/30/2020	0.004J	No	119	n/a	n/a	77.31	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Barium (mg/L)	GWC-1	0.22	9/28/2020	0.051	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-11	0.22	9/29/2020	0.14	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-12	0.22	9/29/2020	0.018	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-13	0.22	9/28/2020	0.029	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-14	0.22	9/29/2020	0.026	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-15	0.22	9/30/2020	0.034	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-16	0.22	9/30/2020	0.14	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-17	0.22	9/30/2020	0.035	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-2	0.22	9/29/2020	0.049	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-20	0.22	9/30/2020	0.35	Yes	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-21	0.22	9/30/2020	0.19	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-22	0.22	9/30/2020	0.045	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-9	0.22	10/1/2020	0.15	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWB-4R	0.22	10/1/2020	0.077	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWB-5R	0.22	9/30/2020	0.16	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Barium (mg/L)	GWB-6R	0.22	9/30/2020	0.092	No	117	n/a	n/a	0	n/a	n/a	0.0001427	NP Inter (normality) 1 of 2
Chromium (mg/L)	GWC-1	0.068	9/28/2020	0.0024J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-11	0.068	9/29/2020	0.0011J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-12	0.068	9/29/2020	0.00085J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-13	0.068	9/28/2020	0.00062J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-14	0.068	9/29/2020	0.01ND	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-15	0.068	9/30/2020	0.0016J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2

State Interwell Prediction Limits - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:15 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Chromium (mg/L)	GWC-16	0.068	9/30/2020	0.00098J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-17	0.068	9/30/2020	0.00096J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-2	0.068	9/29/2020	0.01ND	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-20	0.068	9/30/2020	0.0013J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-21	0.068	9/30/2020	0.00067J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-22	0.068	9/30/2020	0.00064J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-9	0.068	10/1/2020	0.0012J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWB-4R	0.068	10/1/2020	0.002J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWB-5R	0.068	9/30/2020	0.0018J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWB-6R	0.068	9/30/2020	0.0045J	No	118	n/a	n/a	63.56	n/a	n/a	0.0001399	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-1	0.013	9/28/2020	0.000043J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-11	0.013	9/29/2020	0.00032J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-12	0.013	9/29/2020	0.000037J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-13	0.013	9/28/2020	0.000064J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-14	0.013	9/29/2020	0.005ND	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-15	0.013	9/30/2020	0.000047J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-16	0.013	9/30/2020	0.000091J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-17	0.013	9/30/2020	0.00006J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-2	0.013	9/29/2020	0.005ND	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-20	0.013	9/30/2020	0.005ND	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-21	0.013	9/30/2020	0.000054J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-22	0.013	9/30/2020	0.00023J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWC-9	0.013	10/1/2020	0.000038J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWB-4R	0.013	10/1/2020	0.00026J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWB-5R	0.013	9/30/2020	0.0012J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Lead (mg/L)	GWB-6R	0.013	9/30/2020	0.00008J	No	115	n/a	n/a	76.52	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-1	0.0438	9/28/2020	0.01ND	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-11	0.0438	9/29/2020	0.0024J	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-12	0.0438	9/29/2020	0.01ND	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-14	0.0438	9/29/2020	0.0051J	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-15	0.0438	9/30/2020	0.01ND	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-16	0.0438	9/30/2020	0.0037J	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-17	0.0438	9/30/2020	0.01ND	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-2	0.0438	9/29/2020	0.01ND	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-20	0.0438	9/30/2020	0.01ND	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-21	0.0438	9/30/2020	0.0061J	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-22	0.0438	9/30/2020	0.01ND	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-9	0.0438	10/1/2020	0.01ND	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWB-4R	0.0438	10/1/2020	0.01ND	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWB-5R	0.0438	9/30/2020	0.01ND	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWB-6R	0.0438	9/30/2020	0.0023J	No	119	n/a	n/a	83.19	n/a	n/a	0.000137	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-1	0.425	9/28/2020	0.0042J	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-11	0.425	9/29/2020	0.0023J	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-12	0.425	9/29/2020	0.0046J	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-13	0.425	9/28/2020	0.01ND	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-14	0.425	9/29/2020	0.01ND	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-15	0.425	9/30/2020	0.0028J	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-16	0.425	9/30/2020	0.0028J	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-17	0.425	9/30/2020	0.01ND	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-2	0.425	9/29/2020	0.01ND	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2

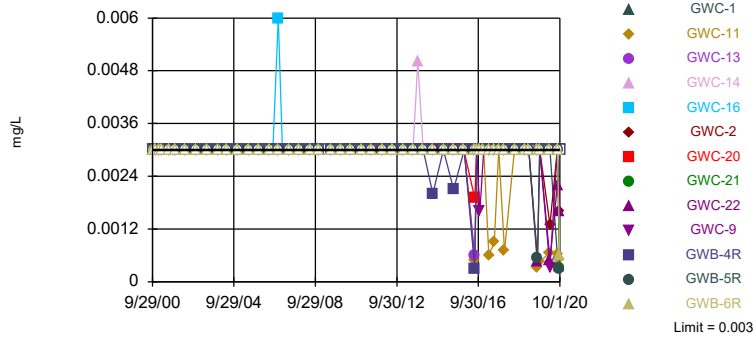
State Interwell Prediction Limits - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:15 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Vanadium (mg/L)	GWC-20	0.425	9/30/2020	0.0029J	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-21	0.425	9/30/2020	0.0029J	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-22	0.425	9/30/2020	0.01ND	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-9	0.425	10/1/2020	0.01ND	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWB-4R	0.425	10/1/2020	0.0047J	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWB-5R	0.425	9/30/2020	0.0037J	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWB-6R	0.425	9/30/2020	0.018	No	111	n/a	n/a	64.86	n/a	n/a	0.0001599	NP Inter (NDs) 1 of 2
Zinc (mg/L)	GWC-1	0.16	9/28/2020	0.0092J	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-11	0.16	9/29/2020	0.0031J	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-12	0.16	9/29/2020	0.0074J	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-13	0.16	9/28/2020	0.016	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-14	0.16	9/29/2020	0.01ND	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-15	0.16	9/30/2020	0.032	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-16	0.16	9/30/2020	0.0051J	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-17	0.16	9/30/2020	0.0043J	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-2	0.16	9/29/2020	0.056	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-20	0.16	9/30/2020	0.031	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-21	0.16	9/30/2020	0.0096J	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-22	0.16	9/30/2020	0.01ND	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-9	0.16	10/1/2020	0.025	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWB-4R	0.16	10/1/2020	0.0064J	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWB-5R	0.16	9/30/2020	0.01ND	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWB-6R	0.16	9/30/2020	0.01ND	No	105	n/a	n/a	27.62	n/a	n/a	0.0001771	NP Inter (normality) 1 of 2

Within Limit

Prediction Limit
Interwell Non-parametric

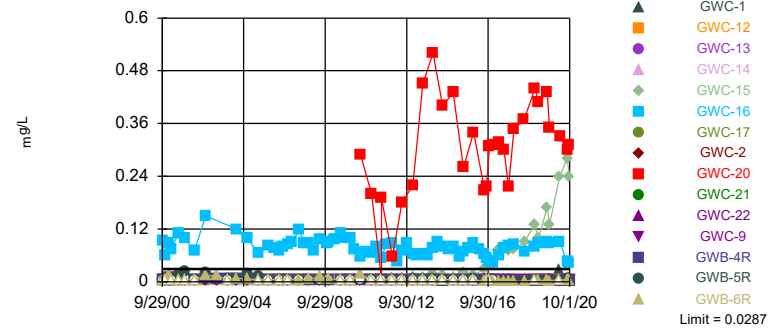


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 119 background values. 94.96% NDs. Annual per-constituent alpha = 0.004375. Individual comparison alpha = 0.000137 (1 of 2). Comparing 13 points to limit. Assumes 3 future values.

Constituent: Antimony Analysis Run 2/17/2021 4:00 PM View: PL's State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit: GWC-15, GWC-16, GWC-20

Prediction Limit
Interwell Non-parametric

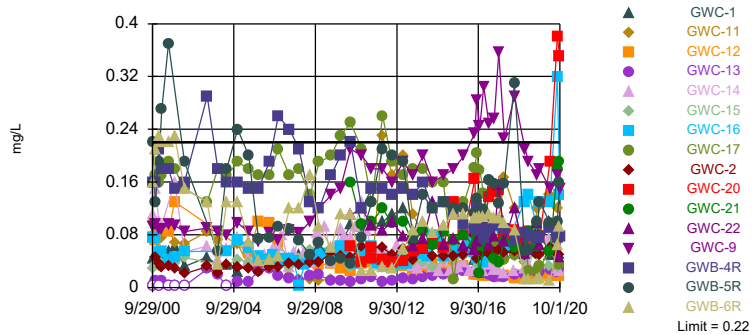


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 119 background values. 77.31% NDs. Annual per-constituent alpha = 0.004375. Individual comparison alpha = 0.000137 (1 of 2). Comparing 15 points to limit. Assumes 1 future value.

Constituent: Arsenic Analysis Run 2/17/2021 4:00 PM View: PL's State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit: GWC-20

Prediction Limit
Interwell Non-parametric

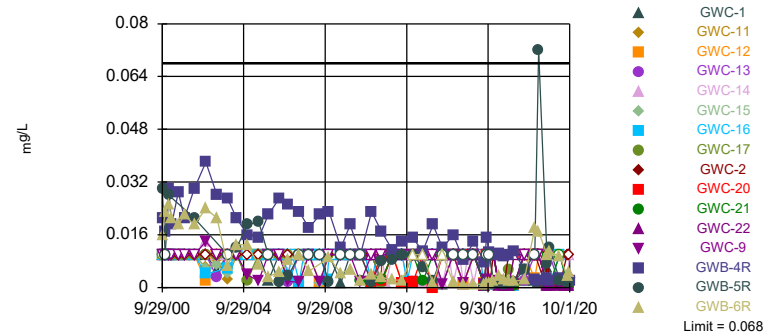


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 117 background values. Annual per-constituent alpha = 0.004557. Individual comparison alpha = 0.0001427 (1 of 2). Comparing 16 points to limit.

Constituent: Barium Analysis Run 2/17/2021 4:00 PM View: PL's State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Prediction Limit
Interwell Non-parametric

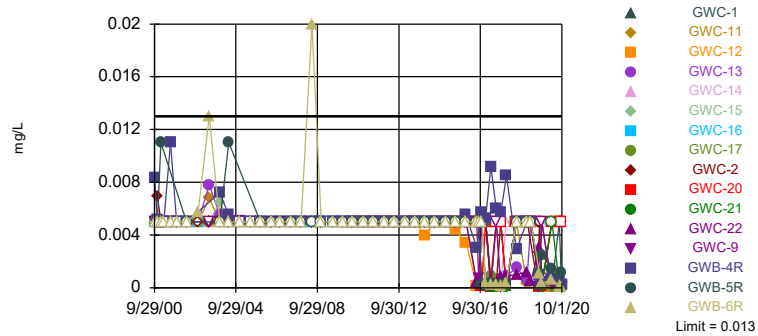


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 118 background values. 63.56% NDs. Annual per-constituent alpha = 0.004466. Individual comparison alpha = 0.0001399 (1 of 2). Comparing 16 points to limit.

Constituent: Chromium Analysis Run 2/17/2021 4:00 PM View: PL's State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Prediction Limit
Interwell Non-parametric

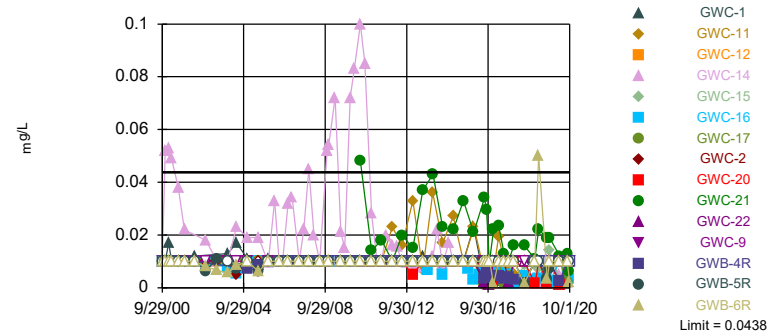


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 115 background values. 76.52% NDs. Annual per-constituent alpha = 0.004739. Individual comparison alpha = 0.0001484 (1 of 2). Comparing 16 points to limit.

Constituent: Lead Analysis Run 2/17/2021 4:00 PM View: PL's State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Prediction Limit
Interwell Non-parametric

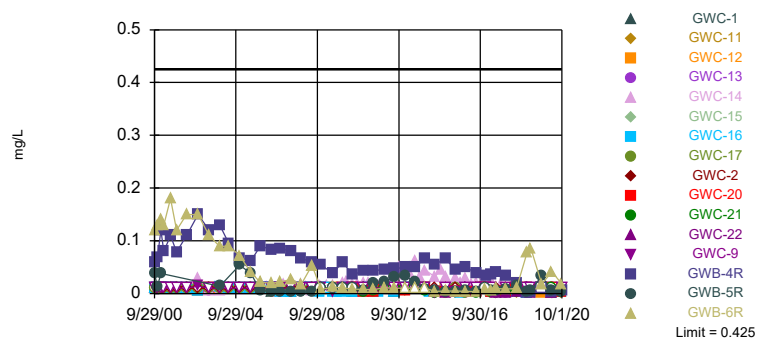


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 119 background values. 83.19% NDs. Annual per-constituent alpha = 0.004375. Individual comparison alpha = 0.000137 (1 of 2). Comparing 15 points to limit. Assumes 1 future value.

Constituent: Selenium Analysis Run 2/17/2021 4:00 PM View: PL's State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Prediction Limit
Interwell Non-parametric

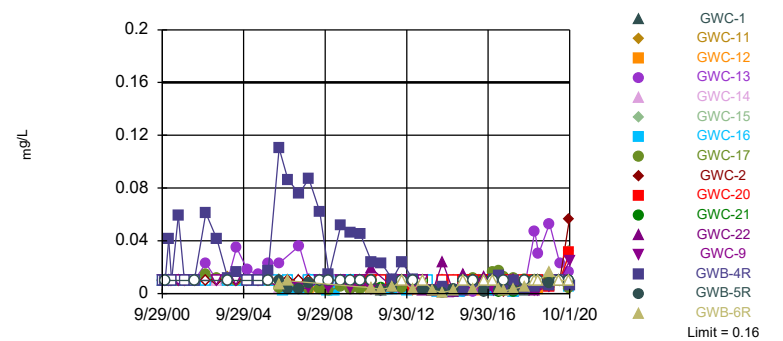


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 111 background values. 64.86% NDs. Annual per-constituent alpha = 0.005104. Individual comparison alpha = 0.0001599 (1 of 2). Comparing 16 points to limit.

Constituent: Vanadium Analysis Run 2/17/2021 4:00 PM View: PL's State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Prediction Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 105 background values. 27.62% NDs. Annual per-constituent alpha = 0.005651. Individual comparison alpha = 0.0001771 (1 of 2). Comparing 16 points to limit.

Constituent: Zinc Analysis Run 2/17/2021 4:00 PM View: PL's State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Prediction Limit

Constituent: Antimony (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-14	GWC-13	GWC-11	GWC-9	GWB-4R	GWC-1	GWB-5R	GWA-8 (bg)
9/29/2000	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
11/21/2000	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
1/20/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
3/14/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
7/16/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
11/1/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
4/25/2002	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
11/20/2002		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
6/6/2003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
12/12/2003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
5/26/2004	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
12/7/2004	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
6/21/2005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
12/12/2005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
4/4/2006		<0.003							<0.003
6/27/2006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
8/30/2006		<0.003							<0.003
12/4/2006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
2/15/2007		<0.003							<0.003
6/23/2007	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
9/11/2007		<0.003							<0.003
12/11/2007	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
3/11/2008		<0.003							<0.003
6/23/2008	<0.003		<0.003	<0.003	<0.003				<0.003
6/24/2008		<0.003				<0.003	<0.003	<0.003	
11/3/2008		<0.003							<0.003
12/4/2008	<0.003	<0.003	<0.003	<0.003	<0.003				<0.003
12/5/2008						<0.003	<0.003	<0.003	
3/25/2009		<0.003							<0.003
7/7/2009	<0.003					<0.003	<0.003	<0.003	<0.003
7/8/2009		<0.003	<0.003	<0.003	<0.003				
9/14/2009		<0.003							<0.003
12/20/2009	<0.003	<0.003					<0.003		<0.003
12/21/2009			<0.003	<0.003	<0.003	<0.003		<0.003	
3/4/2010		<0.003							<0.003
6/20/2010	<0.003	<0.003	<0.003	<0.003	<0.003		<0.003	<0.003	<0.003
6/21/2010						<0.003			
9/14/2010		<0.003							<0.003
1/6/2011			<0.003	<0.003			<0.003	<0.003	
1/7/2011	<0.003	<0.003			<0.003	<0.003			<0.003
4/15/2011		<0.003							<0.003
7/7/2011	<0.003	<0.003	<0.003	<0.003			<0.003	<0.003	<0.003
7/8/2011					<0.003	<0.003			
9/25/2011		<0.003							<0.003
1/17/2012	<0.003	<0.003	<0.003	<0.003			<0.003	<0.003	<0.003
1/18/2012					<0.003	<0.003			
4/4/2012		<0.003							<0.003
7/9/2012	<0.003	<0.003	<0.003	<0.003			<0.003	<0.003	
7/10/2012					<0.003	<0.003			<0.003
10/9/2012		<0.003							<0.003
1/17/2013			<0.003	<0.003			<0.003	<0.003	
1/18/2013	<0.003	<0.003			<0.003	<0.003			<0.003

Prediction Limit

Constituent: Antimony (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-14	GWC-13	GWC-11	GWC-9	GWB-4R	GWC-1	GWB-5R	GWA-8 (bg)
4/5/2013		<0.003							<0.003
7/16/2013			<0.003	<0.003			<0.003	<0.003	
7/17/2013	<0.003	<0.003			<0.003	<0.003			<0.003
10/11/2013		0.005							<0.003
1/13/2014	<0.003		<0.003	<0.003			<0.003	<0.003	
1/14/2014		<0.003			<0.003	<0.003			<0.003
4/3/2014		<0.003							<0.003
7/8/2014			<0.003	<0.003					
7/9/2014	0.0022 (J)	<0.003			<0.003	0.002 (J)	<0.003	<0.003	<0.003
7/10/2014									
10/24/2014		<0.003							<0.003
1/12/2015						<0.003			
1/13/2015	<0.003		<0.003	<0.003			<0.003	<0.003	
1/14/2015		<0.003			<0.003				<0.003
5/10/2015		<0.003							<0.003
5/11/2015									
7/16/2015	0.0028 (J)		<0.003	<0.003		0.0021 (J)	<0.003	<0.003	
7/17/2015		<0.003			<0.003				<0.003
7/18/2015									
10/6/2015		<0.003							<0.003
1/17/2016		<0.003					<0.003		
1/18/2016	<0.003		<0.003		<0.003	<0.003		<0.003	<0.003
1/19/2016				<0.003					
4/26/2016		<0.003							<0.003
7/26/2016			0.0006 (J)	0.0005 (J)					
7/27/2016	<0.003	<0.003					<0.003	<0.003	
7/28/2016					<0.003				<0.003
7/29/2016						0.0003 (J)			
8/30/2016							<0.003	<0.003	<0.003
8/31/2016			<0.003	<0.003	<0.003				
9/1/2016	0.0017 (J)	<0.003				<0.003			
10/24/2016									<0.003
10/25/2016	<0.003	<0.003					<0.003		
10/26/2016			<0.003	<0.003		<0.003		<0.003	
10/27/2016					0.0016 (J)				
1/3/2017								<0.003	<0.003
1/4/2017				<0.003			<0.003		
1/5/2017		<0.003	<0.003						
1/6/2017	0.0009 (J)				<0.003	<0.003			
4/3/2017									<0.003
4/4/2017		<0.003				<0.003	<0.003		
4/5/2017									
4/6/2017	<0.003		<0.003	0.0006 (J)	<0.003			<0.003	
7/11/2017		<0.003		0.0009 (J)					<0.003
7/12/2017			<0.003		<0.003	<0.003	<0.003	<0.003	
7/13/2017	0.0013 (J)								
10/2/2017		<0.003							<0.003
10/3/2017				<0.003			<0.003	<0.003	
10/4/2017	0.0008 (J)		<0.003		<0.003	<0.003			
1/9/2018	<0.003	<0.003							<0.003
1/10/2018			<0.003				<0.003	<0.003	
1/11/2018				0.0007 (J)	<0.003	<0.003			

Prediction Limit

Constituent: Antimony (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-14	GWC-13	GWC-11	GWC-9	GWB-4R	GWC-1	GWB-5R	GWA-8 (bg)
7/9/2018		<0.003							<0.003
7/10/2018							<0.003	<0.003	
7/11/2018	<0.003		<0.003	<0.003	<0.003	<0.003			
1/16/2019	<0.003	<0.003	<0.003			<0.003	<0.003	<0.003	<0.003
1/17/2019				<0.003					
1/18/2019					<0.003				
1/21/2019									
3/25/2019	<0.003					<0.003			<0.003
3/26/2019		<0.003	<0.003				<0.003	<0.003	
3/27/2019				<0.003	<0.003				
7/30/2019									
8/26/2019	<0.003								<0.003
8/27/2019		<0.003	<0.003	0.00033 (J)		<0.003	<0.003		
8/28/2019					<0.003			0.00054 (J)	
10/7/2019									<0.003
10/8/2019	<0.003	<0.003	<0.003	0.00046 (J)					
10/9/2019					<0.003	<0.003	<0.003	<0.003	
4/6/2020	<0.003								<0.003
4/7/2020		<0.003		0.00066 (J)		<0.003	<0.003	<0.003	
4/8/2020			<0.003		0.00033 (J)				
8/17/2020			<0.003						<0.003
8/18/2020		<0.003		0.00064 (J)					
8/19/2020	<0.003				<0.003	<0.003	0.00061 (J)	<0.003	
9/28/2020	<0.003		<0.003				0.00035 (J)		<0.003
9/29/2020		<0.003		0.00051 (J)					
9/30/2020								0.0003 (J)	
10/1/2020					<0.003	<0.003			

Prediction Limit

Constituent: Antimony (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-6R	GWC-16	GWC-2	GWC-20	GWC-22	GWC-21
9/29/2000	<0.003	<0.003				
11/21/2000	<0.003	<0.003	<0.003			
1/20/2001	<0.003	<0.003	<0.003			
3/14/2001	<0.003	<0.003	<0.003			
7/16/2001	<0.003	<0.003	<0.003			
11/1/2001	<0.003	<0.003	<0.003			
4/25/2002	<0.003	<0.003	<0.003			
11/20/2002	<0.003	<0.003	<0.003			
6/6/2003	<0.003	<0.003	<0.003			
12/12/2003	<0.003	<0.003	<0.003			
5/26/2004	<0.003	<0.003	<0.003			
12/7/2004	<0.003	<0.003	<0.003			
6/21/2005	<0.003	<0.003	<0.003			
12/12/2005	<0.003	<0.003	<0.003			
4/4/2006		<0.003				
6/27/2006	<0.003	<0.003	<0.003			
8/30/2006		<0.003				
12/4/2006	<0.003	0.006	<0.003			
2/15/2007		<0.003				
6/23/2007	<0.003	<0.003	<0.003			
9/11/2007		<0.003				
12/11/2007	<0.003	<0.003	<0.003			
3/11/2008		<0.003				
6/23/2008		<0.003				
6/24/2008	<0.003	<0.003	<0.003			
11/3/2008		<0.003				
12/4/2008			<0.003			
12/5/2008	<0.003	<0.003				
3/25/2009		<0.003				
7/7/2009	<0.003					
7/8/2009		<0.003	<0.003			
9/14/2009		<0.003				
12/20/2009		<0.003	<0.003			
12/21/2009	<0.003					
3/4/2010		<0.003				
6/20/2010	<0.003		<0.003			
6/21/2010		<0.003		<0.003	<0.003	<0.003
9/14/2010		<0.003				
1/6/2011			<0.003			
1/7/2011	<0.003	<0.003		<0.003	<0.003	<0.003
4/15/2011		<0.003				
7/7/2011	<0.003	<0.003		<0.003		
7/8/2011				<0.003	<0.003	<0.003
9/25/2011		<0.003				
1/17/2012			<0.003			
1/18/2012	<0.003	<0.003		<0.003	<0.003	<0.003
4/4/2012		<0.003				
7/9/2012			<0.003			
7/10/2012	<0.003	<0.003		<0.003	<0.003	<0.003
10/9/2012		<0.003				
1/17/2013			<0.003			
1/18/2013	<0.003	<0.003		<0.003	<0.003	<0.003

Prediction Limit

Constituent: Antimony (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-6R	GWC-16	GWC-2	GWC-20	GWC-22	GWC-21
4/5/2013		<0.003				
7/16/2013						
7/17/2013	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
10/11/2013		<0.003				
1/13/2014			<0.003			
1/14/2014	<0.003	<0.003		<0.003	<0.003	<0.003
4/3/2014		<0.003				
7/8/2014						
7/9/2014	<0.003	<0.003	<0.003			<0.003
7/10/2014				<0.003	<0.003	
10/24/2014		<0.003				
1/12/2015				<0.003		
1/13/2015			<0.003			
1/14/2015	<0.003	<0.003			<0.003	<0.003
5/10/2015						
5/11/2015		<0.003				
7/16/2015		<0.003	<0.003			
7/17/2015	<0.003					<0.003
7/18/2015				<0.003	<0.003	
10/6/2015		<0.003				
1/17/2016		<0.003	<0.003	<0.003		<0.003
1/18/2016	<0.003				<0.003	
1/19/2016						
4/26/2016		<0.003				
7/26/2016						
7/27/2016			<0.003			
7/28/2016	<0.003	<0.003		0.0019 (J)		<0.003
7/29/2016					<0.003	
8/30/2016	<0.003					
8/31/2016			<0.003		<0.003	
9/1/2016		<0.003		<0.003		<0.003
10/24/2016						
10/25/2016		<0.003		<0.003		<0.003
10/26/2016	<0.003		<0.003		<0.003	
10/27/2016						
1/3/2017						
1/4/2017		<0.003		<0.003	<0.003	<0.003
1/5/2017	<0.003		<0.003			
1/6/2017						
4/3/2017						
4/4/2017			<0.003	<0.003		<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				
7/13/2017			<0.003			<0.003
10/2/2017				<0.003		
10/3/2017	<0.003	<0.003	<0.003			<0.003
10/4/2017					<0.003	
1/9/2018	<0.003					<0.003
1/10/2018		<0.003	<0.003	<0.003		
1/11/2018					<0.003	

Prediction Limit

Constituent: Antimony (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-6R	GWC-16	GWC-2	GWC-20	GWC-22	GWC-21
7/9/2018				<0.003		
7/10/2018	<0.003	<0.003	<0.003			<0.003
7/11/2018					<0.003	
1/16/2019	<0.003					
1/17/2019		<0.003				<0.003
1/18/2019					<0.003	
1/21/2019			<0.003	<0.003		
3/25/2019				<0.003		
3/26/2019	<0.003	<0.003				<0.003
3/27/2019					<0.003	
7/30/2019			<0.003			
8/26/2019						
8/27/2019	<0.003		<0.003		0.00045 (J)	
8/28/2019		<0.003		<0.003		<0.003
10/7/2019						
10/8/2019		<0.003				<0.003
10/9/2019	<0.003		<0.003	<0.003	<0.003	
4/6/2020						
4/7/2020	<0.003	<0.003			0.00049 (J)	<0.003
4/8/2020			0.0013 (J)	<0.003		
8/17/2020						
8/18/2020		<0.003	<0.003	<0.003	0.0022 (J)	<0.003
8/19/2020	<0.003					
9/28/2020						
9/29/2020			0.0016 (J)			
9/30/2020	0.00059 (J)	<0.003		<0.003	0.0016 (J)	0.00033 (J)
10/1/2020						

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWB-6R	GWB-4R	GWC-9	GWC-12	GWA-8 (bg)	GWC-13	GWC-17	GWC-14
9/29/2000	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
11/21/2000	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1/20/2001	<0.005	0.014	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
3/14/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
7/16/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
11/1/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4/25/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
11/20/2002		0.014	0.0096	<0.005	<0.005	<0.005	<0.005	<0.005	0.011
6/6/2003	0.02	0.014	0.0076	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
12/12/2003	<0.005	<0.005	0.0058	<0.005	<0.005	<0.005	0.0064	<0.005	<0.005
5/26/2004	<0.005	0.0082	0.0068	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
12/7/2004	<0.005	0.0062	0.0066	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
6/21/2005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
12/12/2005	<0.005	<0.005	<0.005	<0.005	<0.005	<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	<0.005	<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	<0.005	<0.005	<0.005	<0.005	<0.005
2/15/2007						<0.005			<0.005
6/23/2007	<0.005	0.0053	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
9/11/2007						<0.005			<0.005
12/11/2007	<0.005	0.0057	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
3/11/2008						<0.005			<0.005
6/23/2008	<0.005			<0.005	<0.005	<0.005	<0.005		
6/24/2008		0.012	0.005					<0.005	<0.005
11/3/2008						<0.005			<0.005
12/4/2008	<0.005			<0.005	<0.005	<0.005	<0.005		<0.005
12/5/2008		0.0064	<0.005					<0.005	
3/25/2009						<0.005			<0.005
7/7/2009	<0.005	<0.005	<0.005			<0.005			
7/8/2009				<0.005	<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	<0.005	<0.005	<0.005		<0.005	<0.005	
3/4/2010						<0.005			<0.005
6/20/2010	<0.005	0.017		<0.005	<0.005	<0.005	<0.005		<0.005
6/21/2010			0.018 (o)					<0.005	
9/14/2010						<0.005			<0.005
1/6/2011							<0.005		
1/7/2011	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005
4/15/2011						<0.005			<0.005
7/7/2011	<0.005	<0.005			<0.005	<0.005	<0.005		<0.005
7/8/2011			<0.005	<0.005				<0.005	
9/25/2011						<0.005			<0.005
1/17/2012	<0.005				<0.005	<0.005	<0.005		<0.005
1/18/2012		<0.005	<0.005	<0.005				<0.005	
4/4/2012						<0.005			<0.005
7/9/2012	0.0052				<0.005		<0.005		<0.005
7/10/2012		<0.005	0.0052	<0.005		<0.005		<0.005	
10/9/2012						<0.005			<0.005
1/17/2013					<0.005		<0.005		
1/18/2013	0.0087	<0.005	<0.005	<0.005		<0.005		<0.005	<0.005

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWB-6R	GWB-4R	GWC-9	GWC-12	GWA-8 (bg)	GWC-13	GWC-17	GWC-14
4/5/2013						<0.005			<0.005
7/16/2013					<0.005		<0.005		
7/17/2013	0.0084	<0.005	<0.005	<0.005		<0.005		<0.005	<0.005
10/11/2013						<0.005			0.005
1/13/2014	0.009				<0.005		<0.005		
1/14/2014		<0.005	<0.005	<0.005		<0.005		<0.005	<0.005
4/3/2014						<0.005			<0.005
7/8/2014					<0.005		<0.005		
7/9/2014	0.008	<0.005	0.0023 (J)	<0.005		<0.005		<0.005	<0.005
7/10/2014									
10/24/2014						<0.005			<0.005
1/12/2015			0.0028 (J)						
1/13/2015	0.0077				<0.005		<0.005		
1/14/2015		<0.005		<0.005		<0.005		<0.005	<0.005
5/10/2015						<0.005			<0.005
5/11/2015									
7/16/2015	0.0077		<0.005		<0.005		<0.005		
7/17/2015		<0.005		<0.005		<0.005			<0.005
7/18/2015								<0.005	
10/6/2015						<0.005			<0.005
1/17/2016									0.002 (J)
1/18/2016	0.014	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
4/26/2016						0.0011 (J)			0.00183 (J)
7/26/2016							<0.005		
7/27/2016	0.0111				<0.005				0.0021 (J)
7/28/2016		0.0009 (J)		<0.005		<0.005			
7/29/2016			0.0014 (J)					0.0009 (J)	
8/30/2016		<0.005				<0.005			
8/31/2016				<0.005	<0.005		<0.005		
9/1/2016	0.0287		0.0033 (J)					<0.005	0.0024 (J)
10/24/2016						<0.005			
10/25/2016	0.0069								<0.005
10/26/2016		<0.005	0.0016 (J)		<0.005		<0.005	<0.005	
10/27/2016				<0.005					
1/3/2017						<0.005			
1/4/2017					<0.005				
1/5/2017		0.0021 (J)					<0.005	<0.005	0.0024 (J)
1/6/2017	0.0097		<0.005	<0.005					
4/3/2017						0.0006 (J)			
4/4/2017			0.0021 (J)						0.003 (J)
4/5/2017					0.0006 (J)			0.0011 (J)	
4/6/2017	0.0104	0.0011 (J)		<0.005			<0.005		
7/10/2017					0.0008 (J)				
7/11/2017						0.0006 (J)			0.0019 (J)
7/12/2017		0.0014 (J)	0.0015 (J)	<0.005			<0.005		
7/13/2017	0.0064							0.0016 (J)	
10/2/2017						0.0006 (J)			0.0026 (J)
10/3/2017		0.0014 (J)							
10/4/2017	0.0078		0.0018 (J)	<0.005	0.0009 (J)		<0.005	0.0019 (J)	
1/9/2018	0.0091 (J)	0.0017 (J)				0.0009 (J)			0.0021 (J)
1/10/2018							0.0006 (J)		
1/11/2018			0.0015 (J)	<0.005	<0.005			0.0015 (J)	

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWB-6R	GWB-4R	GWC-9	GWC-12	GWA-8 (bg)	GWC-13	GWC-17	GWC-14
7/9/2018						<0.005			0.0019 (J)
7/10/2018		0.00063 (J)							
7/11/2018	<0.005		0.00095 (J)	<0.005	<0.005		<0.005	0.00082 (J)	
1/16/2019	<0.005	<0.005	0.0024 (J)			<0.005	<0.005	<0.005	0.0016 (J)
1/17/2019					<0.005				
1/18/2019				<0.005					
1/21/2019									
3/25/2019	0.0029 (J)		0.0029 (J)			<0.005			
3/26/2019		0.0029 (J)					0.00058 (J)	0.0015 (J)	0.0023 (J)
3/27/2019				<0.005	<0.005				
7/30/2019									
8/26/2019	0.0041 (J)					<0.005			
8/27/2019		0.0035 (J)	0.0023 (J)		<0.005		<0.005		0.0017 (J)
8/28/2019				<0.005				0.0011 (J)	
10/7/2019						<0.005			
10/8/2019	0.003 (J)						<0.005		0.0017 (J)
10/9/2019		0.0018 (J)	0.0024 (J)	<0.005	<0.005			0.0011 (J)	
4/6/2020	<0.005					0.00045 (J)			
4/7/2020		<0.005	0.0027 (J)		<0.005				0.0018 (J)
4/8/2020				0.00084 (J)			<0.005	0.0013 (J)	
8/17/2020					<0.005	<0.005	<0.005		
8/18/2020								<0.005	0.0012 (J)
8/19/2020	0.006 (J)	0.0036 (J)	0.0033 (J)	<0.005					
9/28/2020	<0.005					<0.005	<0.005		
9/29/2020					<0.005				<0.005
9/30/2020		0.004 (J)						0.0012 (J)	
10/1/2020			0.0027 (J)	<0.005					

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-5R	GWC-1	GWC-15	GWC-16	GWC-2	GWC-22	GWC-20	GWC-21
9/29/2000	<0.005	<0.005	<0.005	0.094				
11/21/2000	<0.005	<0.005	<0.005	0.059	<0.005			
1/20/2001	<0.005	<0.005	<0.005	0.087	<0.005			
3/14/2001	<0.005	<0.005	<0.005	0.075	<0.005			
7/16/2001	0.014	<0.005	<0.005	0.11	<0.005			
11/1/2001	0.023	<0.005	<0.005	0.098	<0.005			
4/25/2002	<0.005	<0.005	<0.005	0.071	<0.005			
11/20/2002	0.022	<0.005	<0.005	0.15	<0.005			
6/6/2003	0.07 (o)	0.03 (o)	<0.005	1.2 (o)	<0.005			
12/12/2003	<0.005	<0.005	<0.005	0.27 (o)	<0.005			
5/26/2004	0.0074	<0.005	<0.005	0.12	<0.005			
12/7/2004	0.017	<0.005	<0.005	0.098	<0.005			
6/21/2005	0.013	<0.005	<0.005	0.065	<0.005			
12/12/2005	<0.005	<0.005	<0.005	0.081	<0.005			
4/4/2006				0.077				
6/27/2006	<0.005	<0.005	<0.005	0.071	<0.005			
8/30/2006				0.08				
12/4/2006	<0.005	<0.005	<0.005	0.085	<0.005			
2/15/2007				0.09				
6/23/2007	<0.005	<0.005	<0.005	0.12	<0.005			
9/11/2007				0.088				
12/11/2007	<0.005	<0.005	<0.005	0.088	<0.005			
3/11/2008				0.071				
6/23/2008								
6/24/2008	<0.005	<0.005	<0.005	0.097	<0.005			
11/3/2008				0.089				
12/4/2008							<0.005	
12/5/2008	<0.005	<0.005	<0.005	0.092				
3/25/2009				0.095				
7/7/2009	<0.005	<0.005						
7/8/2009			0.0052	0.11	<0.005			
9/14/2009				0.099				
12/20/2009		<0.005	<0.005	0.1	<0.005			
12/21/2009	<0.005							
3/4/2010				0.074				
6/20/2010	<0.005	<0.005	0.0068		<0.005			
6/21/2010				0.056		<0.005	0.29	0.013 (o)
9/14/2010				0.067				
1/6/2011	<0.005	<0.005			<0.005			
1/7/2011			<0.005	0.066		<0.005	0.2	<0.005
4/15/2011				0.08				
7/7/2011	<0.005	<0.005	<0.005	0.054			<0.005	
7/8/2011						<0.005	0.19	<0.005
9/25/2011				0.085				
1/17/2012	<0.005	0.0071	<0.005		<0.005			
1/18/2012				0.089		<0.005	0.058	<0.005
4/4/2012				0.0473				
7/9/2012	<0.005	0.0076	<0.005		<0.005			
7/10/2012				0.07		<0.005	0.18	<0.005
10/9/2012				0.088				
1/17/2013	<0.005	0.0086			<0.005			
1/18/2013			0.0089	0.063		<0.005	0.22	0.0061

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-5R	GWC-1	GWC-15	GWC-16	GWC-2	GWC-22	GWC-20	GWC-21
4/5/2013				0.06				
7/16/2013	<0.005	<0.005						
7/17/2013			0.011	0.063	<0.005	<0.005	0.45	<0.005
10/11/2013				0.059				
1/13/2014	<0.005	<0.005	0.017		<0.005			
1/14/2014				0.077		<0.005	0.52	0.006
4/3/2014				0.091				
7/8/2014								
7/9/2014	<0.005	0.0022 (J)	0.014	0.08	<0.005			<0.005
7/10/2014						0.0027 (J)	0.4	
10/24/2014				0.073				
1/12/2015							0.43	
1/13/2015	<0.005	<0.005	0.011		<0.005			
1/14/2015				0.079		<0.005		<0.005
5/10/2015								
5/11/2015				0.058				
7/16/2015	<0.005	0.0037 (J)	0.02	0.068	<0.005			
7/17/2015								<0.005
7/18/2015						<0.005	0.26	
10/6/2015				0.078				
1/17/2016		0.024 (o)	0.014	0.089	<0.005		0.34	0.0065
1/18/2016	<0.005					<0.005		
4/26/2016				0.0731				
7/26/2016								
7/27/2016	0.0008 (J)	0.0046 (J)	0.0303		<0.005			
7/28/2016				0.0627			0.209	<0.005
7/29/2016						0.002 (J)		
8/30/2016	<0.005	0.0023 (J)						
8/31/2016					<0.005	0.0017 (J)		
9/1/2016			0.0533	0.0551			0.215	0.0039 (J)
10/24/2016								
10/25/2016		0.0035 (J)	0.0551	0.0466			0.307	<0.005
10/26/2016	<0.005				<0.005	<0.005		
10/27/2016								
1/3/2017	<0.005							
1/4/2017		0.0018 (J)		0.0444		<0.005	0.311	<0.005
1/5/2017			0.0437		<0.005			
1/6/2017								
4/3/2017			0.0713					
4/4/2017		0.0015 (J)			<0.005		0.317	0.0031 (J)
4/5/2017				0.0591				
4/6/2017	0.0006 (J)					0.0006 (J)		
7/10/2017								
7/11/2017			0.0745			0.0012 (J)	0.299	
7/12/2017	0.0009 (J)	0.0015 (J)		0.0776				
7/13/2017					<0.005			<0.005
10/2/2017			0.0723				0.216	
10/3/2017	0.001 (J)	0.0013 (J)		0.0813	<0.005			<0.005
10/4/2017						0.0025 (J)		
1/9/2018			0.0731					0.0033 (J)
1/10/2018	0.0012 (J)	0.0023 (J)		0.085	0.0006 (J)		0.347	
1/11/2018						0.0006 (J)		

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-1	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16	GWC-17	GWA-8 (bg)
9/29/2000	0.11	0.044	0.075	<0.005	0.11	0.028	0.076	0.16	0.16
11/21/2000	0.12	0.047	0.072	0.01	0.15	0.035	0.075	0.17	
1/20/2001	0.11	0.051	0.086	<0.005	0.1	0.032	0.053	0.16	0.18
3/14/2001	0.11	0.048	0.088	0.01	0.095	0.036	0.055	0.17	0.14
7/16/2001	0.11	0.054	0.084	<0.005	0.28 (o)	0.036	0.041	0.19	0.14
11/1/2001	0.11	0.063	0.13	<0.005	0.16	0.036	0.045	0.18	0.14
4/25/2002	0.058	0.032	0.24 (o)	<0.005	0.054	0.045	0.055	0.15	0.088
6/6/2003	0.19	0.046	0.28 (o)	0.028	0.063	0.083 (o)	0.48 (o)	0.13	0.14
12/12/2003	0.1	0.034	0.27 (o)	0.019	0.041	0.094 (o)	0.13 (o)	0.18	0.13
5/26/2004	0.084	0.035	0.31 (o)	<0.005	0.059	0.034	0.055	0.17	0.09
12/7/2004	0.094	0.024	0.46 (o)	0.009	0.076	0.042	0.072	0.19	0.11
6/21/2005	0.089	0.039	0.053	0.0089	0.042	0.039	0.061	0.18	0.084
12/12/2005	0.089	0.042	0.1	0.026	0.048	0.043	0.047	0.17	0.1
4/4/2006					0.05		0.042		0.089
6/27/2006	0.096	0.033	0.098	0.029	0.036	0.031	0.042	0.17	0.1
8/30/2006					0.059		0.05		0.12
12/4/2006	0.092	0.04	0.068	0.017	0.062	0.043	0.044	0.21	0.086
2/15/2007					0.079		0.041		0.088
6/23/2007	0.08	0.044	0.042	0.014	0.03	0.031	0.044	0.17	0.089
9/11/2007					0.053		0.04		0.092
12/11/2007	0.067	0.049	0.04	0.011	0.075	0.044	0.0035	0.18	0.077
3/11/2008					0.052		0.034		0.082
6/23/2008	0.056		0.041	0.018					0.086
6/24/2008		0.038			0.039	0.057	0.042	0.14	
11/3/2008					0.082		0.049		0.088
12/4/2008	0.054		0.035	0.019	0.079				0.081
12/5/2008		0.06				0.041	0.05	0.19	
3/25/2009					0.093		0.052		0.069
7/7/2009	0.034	0.043							0.078
7/8/2009			0.036	0.011	0.039	0.058	0.046	0.2	
9/14/2009					0.061		0.048		0.079
12/20/2009	0.034	0.065			0.088	0.062	0.062		0.081
12/21/2009			0.028	0.01				0.23	
3/4/2010					0.077		0.058		0.065
6/20/2010	0.062	0.095	0.025	0.0081	0.075	0.03			0.078
6/21/2010							0.041	0.25	
9/14/2010					0.093		0.036		0.076
1/6/2011		0.093		0.012					
1/7/2011	0.039		0.037		0.13	0.049	0.054	0.21	0.074
4/15/2011					0.086		0.049		0.065
7/7/2011	0.036	0.095	0.039	0.015	0.051	0.05	0.063		0.081
7/8/2011								0.13	
9/25/2011					0.056		0.037		0.078
1/17/2012	0.041	0.1	0.045	0.0086	0.052	0.044			0.082
1/18/2012							0.034	0.26	
4/4/2012					0.0519		0.0446		0.0861
7/9/2012	0.15	0.11	0.032	0.01	0.048	0.045			
7/10/2012							0.033	0.19	0.082
10/9/2012					0.065		0.041		0.09
1/17/2013		0.12	0.033	0.014					
1/18/2013	0.15				0.045	0.049	0.036	0.17	0.083
4/5/2013					0.047		0.036		0.078

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-1	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16	GWC-17	GWA-8 (bg)
7/16/2013		0.081	0.027	0.012					
7/17/2013	0.13				0.032	0.039	0.054	0.18	0.083
10/11/2013					0.028		0.052		0.078
1/13/2014	0.16	0.096	0.027	0.015		0.038			
1/14/2014					0.036		0.051	0.18	0.081
4/3/2014					0.038		0.047		0.077
7/8/2014			0.037	0.017					
7/9/2014	0.11	0.066			0.03	0.031	0.08	0.16	0.073
7/10/2014									
10/24/2014					0.025		0.072		0.087
1/12/2015									
1/13/2015	0.083	0.068	0.023	0.019		0.041			
1/14/2015					0.04		0.047	0.16	0.079
5/10/2015					0.026				0.076
5/11/2015							0.053		
7/16/2015	0.094	0.07	0.03	0.022		0.041	0.059		
7/17/2015					0.029				0.061
7/18/2015								0.012	
10/6/2015					0.03		0.053		0.067
1/17/2016		0.062			0.038	0.048	0.056		
1/18/2016	0.22		0.032	0.026				0.13	0.068
1/19/2016									
4/26/2016					0.025		0.0721		0.0596
7/26/2016				0.0236					
7/27/2016	0.192	0.0417	0.0191		0.0248	0.0487			
7/28/2016							0.0534		0.0701
7/29/2016								0.181	
8/30/2016		0.0545							0.0687
8/31/2016			0.019	0.0273					
9/1/2016	0.415 (o)				0.0346	0.0403	0.0445	0.203	
10/24/2016									0.07
10/25/2016	0.173	0.0504			0.0248	0.0329	0.0464		
10/26/2016			0.0197	0.0238				0.177	
10/27/2016									
1/3/2017									0.061
1/4/2017		0.0534	0.0174				0.0379		
1/5/2017				0.0218	0.0245	0.0392		0.142	
1/6/2017	0.167								
4/3/2017						0.0439			0.0612
4/4/2017		0.0549			0.0342		0.0534	0.106	
4/5/2017			0.0174						
4/6/2017	0.136			0.0204					
7/10/2017			0.0172						
7/11/2017					0.0276	0.051			0.0624
7/12/2017		0.0614		0.0161			0.0944		
7/13/2017	0.0891							0.0686	
10/2/2017					0.0274	0.047			0.0618
10/3/2017		0.0436					0.135 (o)		
10/4/2017	0.113		0.0162	0.0185				0.0589	
1/9/2018	0.0901				0.0222	0.0431			0.0574
1/10/2018		0.053		0.0166			0.0603		
1/11/2018			0.018					0.0412	

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWB-4R	GWB-5R	GWB-6R	GWC-11	GWC-2	GWC-21	GWC-22	GWC-20
7/16/2013			0.076		0.11				
7/17/2013	0.17	0.14		0.086		0.041	0.069	0.062	0.055
10/11/2013									
1/13/2014			0.14		0.083	0.058			
1/14/2014	0.2	0.16		0.1			0.086	0.073	0.059
4/3/2014									
7/8/2014					0.066				
7/9/2014	0.16	0.12	0.12	0.082		0.048	0.065		
7/10/2014								0.13	0.067
10/24/2014									
1/12/2015		0.13							0.061
1/13/2015			0.13		0.053	0.048			
1/14/2015	0.17			0.094			0.084	0.065	
5/10/2015									
5/11/2015									
7/16/2015		0.11	0.12		0.052	0.048			
7/17/2015	0.18			0.11			0.071		
7/18/2015								0.073	0.13
10/6/2015									
1/17/2016						0.049	0.079		0.08
1/18/2016	0.2	0.095	0.12	0.11				0.062	
1/19/2016					0.048				
4/26/2016									
7/26/2016					0.051				
7/27/2016			0.112			0.0796			
7/28/2016	0.234			0.105			0.0626		0.164
7/29/2016		0.0883						0.0575	
8/30/2016			0.135	0.106					
8/31/2016	0.284				0.0565	0.0429		0.0693	
9/1/2016		0.123					0.077		0.0976
10/24/2016									
10/25/2016							0.0217		0.0702
10/26/2016		0.0863	0.103	0.107	0.0591	0.113 (o)		0.0966	
10/27/2016	0.244								
1/3/2017			0.118						
1/4/2017					0.0598		0.0617	0.0975	0.0999
1/5/2017				0.107		0.0526			
1/6/2017	0.305	0.0758							
4/3/2017									
4/4/2017		0.091				0.0503	0.0761		0.136
4/5/2017									
4/6/2017	0.249		0.162	0.111	0.0813			0.064	
7/10/2017									
7/11/2017					0.0302			0.0778	0.145
7/12/2017	0.256	0.0941	0.157	0.106					
7/13/2017						0.0529	0.0428		
10/2/2017									0.148
10/3/2017			0.127	0.105	0.103	0.057	0.0376		
10/4/2017	0.356	0.0994						0.156	
1/9/2018				0.0969			0.0704		
1/10/2018			0.158			0.0527			0.0788
1/11/2018	0.226	0.088			0.166			0.0702	

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWB-4R	GWB-5R	GWB-6R	GWC-11	GWC-2	GWC-21	GWC-22	GWC-20
7/9/2018									0.087
7/10/2018			0.31	0.087		0.054	0.061		
7/11/2018	0.29	0.071			0.12			0.12	
1/16/2019		0.083	0.054	0.013 (J)					
1/17/2019					0.039		0.061		
1/18/2019	0.21							0.052	
1/21/2019						0.05			0.069
3/25/2019		0.077							0.085
3/26/2019			0.057	0.012 (J)			0.084		
3/27/2019	0.19				0.053			0.057	
7/30/2019						0.052			
8/26/2019									
8/27/2019		0.076		0.013	0.12	0.053		0.097	
8/28/2019	0.17		0.1				0.063		0.078
10/7/2019									
10/8/2019					0.13		0.079		
10/9/2019	0.18	0.076	0.13	0.014 (J)		0.05		0.065	0.078
4/6/2020									
4/7/2020		0.09	0.098	0.01 (J)	0.14		0.054	0.1	
4/8/2020	0.15					0.061			0.19
8/17/2020									
8/18/2020					0.12	0.05	0.18	0.085	0.38
8/19/2020	0.17	0.076	0.1	0.064					
9/28/2020									
9/29/2020					0.14	0.049			
9/30/2020			0.16	0.092			0.19	0.045	0.35
10/1/2020	0.15	0.077							

Prediction Limit

Constituent: Chromium (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16	GWC-17
9/29/2000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/21/2000	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1/20/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
3/14/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
7/16/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/1/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4/25/2002	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/20/2002		0.0051	0.006	0.002	<0.01	0.014	0.0058	0.0041	<0.01
6/6/2003	0.037	0.014	0.0082	<0.01	0.003	<0.01	0.0068	0.063 (o)	<0.01
12/12/2003	0.0044	0.011	0.0023	<0.01	<0.01	<0.01	0.0041	0.0059	0.036 (o)
5/26/2004	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
12/7/2004	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0026	<0.01	0.0021
6/21/2005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
12/12/2005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4/4/2006		<0.01				<0.01		<0.01	
6/27/2006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0013	<0.01	<0.01
8/30/2006		<0.01				<0.01		<0.01	
12/4/2006	0.0015	<0.01	0.0021	0.0032	0.0017	0.0042	<0.01	0.0036	<0.01
2/15/2007		<0.01				<0.01		<0.01	
6/23/2007	<0.01	<0.01	0.0017	<0.01	<0.01	<0.01	<0.01	0.0016	<0.01
9/11/2007		<0.01				<0.01		<0.01	
12/11/2007	0.0016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
3/11/2008		<0.01				<0.01		<0.01	
6/23/2008	0.0019	<0.01	<0.01	0.0016	<0.01			<0.01	
6/24/2008						<0.01	0.0014	<0.01	<0.01
11/3/2008		<0.01				<0.01		0.0025	
12/4/2008	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
12/5/2008							<0.01	<0.01	<0.01
3/25/2009		<0.01				<0.01		<0.01	
7/7/2009	0.0037	<0.01							
7/8/2009			<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
9/14/2009		<0.01				<0.01		<0.01	
12/20/2009	0.0016	<0.01				<0.01	<0.01	<0.01	
12/21/2009			<0.01	<0.01	<0.01				<0.01
3/4/2010		<0.01				<0.01		<0.01	
6/20/2010	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
6/21/2010								<0.01	<0.01
9/14/2010		<0.01				<0.01		<0.01	
1/6/2011			<0.01		<0.01				
1/7/2011	0.0033	<0.01		<0.01		0.0016	<0.01	0.0018	<0.01
4/15/2011		<0.01				0.0034		<0.01	
7/7/2011	0.0044	<0.01	0.0023	<0.01	0.0019	<0.01	<0.01	<0.01	
7/8/2011									0.0013
9/25/2011		0.0021				0.0013		<0.01	
1/17/2012	0.0038	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
1/18/2012								<0.01	<0.01
4/4/2012		<0.01				<0.01		<0.01	
7/9/2012	0.022		0.0017	<0.01	<0.01	<0.01	<0.01		
7/10/2012		<0.01						<0.01	<0.01
10/9/2012		<0.01				0.0019		0.0018	
1/17/2013			<0.01	<0.01	<0.01				
1/18/2013	0.034	<0.01				0.0017	<0.01	<0.01	<0.01

Prediction Limit

Constituent: Chromium (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16	GWC-17
4/5/2013		<0.01				0.0019		<0.01	
7/16/2013			<0.01	<0.01	<0.01				
7/17/2013	0.032	<0.01				0.0017	<0.01	<0.01	<0.01
10/11/2013		<0.01				0.0013		<0.01	
1/13/2014	0.04		<0.01	<0.01	<0.01		<0.01		
1/14/2014		<0.01				0.001		<0.01	<0.01
4/3/2014		<0.01				0.0031		<0.01	
7/8/2014			<0.01	<0.01	<0.01				
7/9/2014	0.036	<0.01				0.0012 (J)	<0.01	<0.01	<0.01
7/10/2014									
10/24/2014		<0.01				<0.01		<0.01	
1/12/2015									
1/13/2015	0.03		<0.01	<0.01	<0.01		<0.01		
1/14/2015		<0.01				0.0013		<0.01	<0.01
5/10/2015		<0.01				<0.01			
5/11/2015								<0.01	
7/16/2015	0.039		<0.01	0.001 (J)	<0.01		<0.01	<0.01	
7/17/2015		<0.01				0.001 (J)			
7/18/2015									<0.01
10/6/2015		<0.01				<0.01		<0.01	
1/17/2016						0.0012 (J)	<0.01	<0.01	
1/18/2016	0.068	<0.01		<0.01	<0.01				<0.01
1/19/2016			<0.01						
4/26/2016		<0.01				<0.01		<0.01	
7/26/2016			0.0005 (J)		<0.01				
7/27/2016	0.05			0.0014 (J)		0.0008 (J)	0.0007 (J)		
7/28/2016		<0.01						0.0006 (J)	
7/29/2016									0.0009 (J)
8/30/2016		<0.01							
8/31/2016			0.001 (J)	0.0012 (J)	0.0011 (J)				
9/1/2016	0.119 (o)					0.0015 (J)	0.0011 (J)	0.0011 (J)	0.0011 (J)
10/24/2016		<0.01							
10/25/2016	0.0519					<0.01	<0.01	<0.01	
10/26/2016			<0.01	0.0012 (J)	<0.01				<0.01
10/27/2016									
1/3/2017		<0.01							
1/4/2017			<0.01	0.0012 (J)				<0.01	
1/5/2017					<0.01	0.001 (J)	<0.01		0.0012 (J)
1/6/2017	0.0536								
4/3/2017		0.0004 (J)					0.0015 (J)		
4/4/2017						0.001 (J)			
4/5/2017				0.0013 (J)				0.001 (J)	0.0015 (J)
4/6/2017	0.0447 (J)		0.0007 (J)		0.0011 (J)				
7/10/2017				0.0014 (J)					
7/11/2017		0.0006 (J)	0.0006 (J)			0.0008 (J)	0.0013 (J)		
7/12/2017					0.0007 (J)			0.0011 (J)	
7/13/2017	0.0269								0.0012 (J)
10/2/2017		<0.01				0.0009 (J)	0.0013 (J)		
10/3/2017			0.0007 (J)					0.0009 (J)	
10/4/2017	0.0378			0.0011 (J)	0.0008 (J)				0.0055 (J)
1/9/2018	0.0283 (J)	<0.01				0.0006 (J)	0.0012 (J)		
1/10/2018					0.0007 (J)			0.0007 (J)	

Prediction Limit

Constituent: Chromium (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWB-4R	GWC-1	GWB-5R	GWB-6R	GWC-2	GWC-20	GWC-22	GWC-21
9/29/2000	<0.01	0.021	<0.01	0.03	0.016				
11/21/2000	<0.01	0.017	<0.01	<0.01	0.023	<0.01			
1/20/2001	<0.01	0.03	<0.01	0.028	0.025	<0.01			
3/14/2001	<0.01	0.019	<0.01	0.052 (o)	0.021	<0.01			
7/16/2001	<0.01	0.029	<0.01	0.08 (o)	0.019	<0.01			
11/1/2001	<0.01	0.021	<0.01	0.13 (o)	0.022	<0.01			
4/25/2002	<0.01	0.03	<0.01	0.021	0.019	<0.01			
11/20/2002	0.014	0.038	<0.01	0.053 (o)	0.024	<0.01			
6/6/2003	<0.01	0.028	0.005	0.064 (o)	0.021	<0.01			
12/12/2003	<0.01	0.027	<0.01	<0.01	0.0066	<0.01			
5/26/2004	<0.01	0.021	<0.01	0.012	0.013	<0.01			
12/7/2004	0.0039	0.016	<0.01	0.019	0.013	<0.01			
6/21/2005	0.002	0.015	<0.01	0.02	0.0067	<0.01			
12/12/2005	<0.01	0.022	0.002	<0.01	0.0033	<0.01			
4/4/2006									
6/27/2006	<0.01	0.027	<0.01	0.0015	0.0047	<0.01			
8/30/2006									
12/4/2006	0.0019	0.025	<0.01	0.0034	0.0084	<0.01			
2/15/2007									
6/23/2007	0.0015	0.023	<0.01	<0.01	0.01	<0.01			
9/11/2007									
12/11/2007	<0.01	0.018	<0.01	<0.01	0.0049	<0.01			
3/11/2008									
6/23/2008	0.0015								
6/24/2008		0.022	<0.01	<0.01	0.032 (o)	<0.01			
11/3/2008									
12/4/2008	<0.01					<0.01			
12/5/2008		0.023	<0.01	0.0016	0.009				
3/25/2009									
7/7/2009		0.012	0.0013	<0.01	0.0044				
7/8/2009	<0.01					<0.01			
9/14/2009									
12/20/2009			<0.01			<0.01			
12/21/2009	<0.01	0.019		<0.01	0.0055				
3/4/2010									
6/20/2010	0.0015		<0.01	<0.01	0.002	<0.01			
6/21/2010		0.01					<0.01	<0.01	0.0019
9/14/2010									
1/6/2011			<0.01	0.0017		<0.01			
1/7/2011	<0.01	0.023			0.0039		0.0018	<0.01	0.0017
4/15/2011									
7/7/2011			<0.01	0.008	0.0031		<0.01		
7/8/2011	<0.01	0.017					0.0019	<0.01	0.0023
9/25/2011									
1/17/2012			<0.01	0.0082		<0.01			
1/18/2012	<0.01	0.0114			0.0023		<0.01	<0.01	<0.01
4/4/2012									
7/9/2012			<0.01	0.01		<0.01			
7/10/2012	<0.01	0.014			0.0022		0.0013	<0.01	<0.01
10/9/2012									
1/17/2013			<0.01	0.01		<0.01			
1/18/2013	<0.01	0.015			<0.01		0.0015	<0.01	<0.01

Prediction Limit

Constituent: Chromium (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWB-4R	GWC-1	GWB-5R	GWB-6R	GWC-2	GWC-20	GWC-22	GWC-21
4/5/2013									
7/16/2013			<0.01	0.0061					
7/17/2013	<0.01	0.011			<0.01	<0.01	<0.01	<0.01	0.0019
10/11/2013									
1/13/2014			<0.01	0.002		<0.01			
1/14/2014	<0.01	0.019			0.0013		0	<0.01	<0.01
4/3/2014									
7/8/2014									
7/9/2014	0.0011 (J)	0.012	0.0011 (J)	<0.01	<0.01	<0.01			<0.01
7/10/2014							<0.01	<0.01	
10/24/2014									
1/12/2015		0.016					<0.01		
1/13/2015			<0.01	<0.01		<0.01			
1/14/2015	<0.01				0.0015			<0.01	<0.01
5/10/2015									
5/11/2015									
7/16/2015		0.0084	0.0011 (J)	<0.01		<0.01			
7/17/2015	0.0013				0.0011 (J)				<0.01
7/18/2015							<0.01	<0.01	
10/6/2015									
1/17/2016			<0.01			<0.01	<0.01		<0.01
1/18/2016	<0.01	0.014		<0.01	0.0011 (J)			<0.01	
1/19/2016									
4/26/2016									
7/26/2016									
7/27/2016			0.0016 (J)	0.0006 (J)		0.0008 (J)			
7/28/2016	0.0011 (J)				0.001 (J)		0.0007 (J)		0.0005 (J)
7/29/2016		0.0077 (J)						0.0007 (J)	
8/30/2016			0.0015 (J)	<0.01	0.0013 (J)				
8/31/2016	0.0024 (J)					<0.01		<0.01	
9/1/2016		0.015					<0.01		<0.01
10/24/2016									
10/25/2016			0.0018 (J)				<0.01		<0.01
10/26/2016		0.0106		<0.01	0.0014 (J)	0.001 (J)		<0.01	
10/27/2016	<0.01								
1/3/2017				0.001 (J)					
1/4/2017			0.0021 (J)				<0.01	<0.01	<0.01
1/5/2017					0.002 (J)	<0.01			
1/6/2017	<0.01	0.0098 (J)							
4/3/2017									
4/4/2017		0.0101	0.002 (J)			0.0008 (J)	0.0011 (J)		0.0008 (J)
4/5/2017									
4/6/2017	0.0019 (J)			0.0013 (J)	0.0034 (J)			0.0006 (J)	
7/10/2017									
7/11/2017							0.0009 (J)	0.0005 (J)	
7/12/2017	0.0011 (J)	0.0096 (J)	0.0021 (J)	0.0011 (J)	0.0024 (J)				
7/13/2017						0.0006 (J)			0.0006 (J)
10/2/2017							0.0009 (J)		
10/3/2017			0.0014 (J)	0.0012 (J)	0.0022 (J)	<0.01			0.0005 (J)
10/4/2017	0.0011 (J)	0.0097 (J)						0.0006 (J)	
1/9/2018					0.0019 (J)				0.0007 (J)
1/10/2018			0.0017 (J)	0.0016 (J)		<0.01	0.0008 (J)		

Prediction Limit

Constituent: Chromium (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWB-4R	GWC-1	GWB-5R	GWB-6R	GWC-2	GWC-20	GWC-22	GWC-21
1/11/2018	0.001 (J)	0.0109						<0.01	
7/9/2018							<0.01		
7/10/2018			0.0021 (J)	0.0055 (J)	0.0023 (J)	<0.01			<0.01
7/11/2018	<0.01	0.0055 (J)						<0.01	
1/16/2019		0.0024 (J)	0.0021 (J)	<0.01	0.018 (J)				
1/17/2019									0.01
1/18/2019	<0.01							<0.01	
1/21/2019						<0.01	<0.01		
3/25/2019		0.002 (J)					<0.01		
3/26/2019			0.0018 (J)	0.072	0.017 (J)				<0.01
3/27/2019	<0.01							<0.01	
7/30/2019						0.00065 (J)			
8/26/2019									
8/27/2019		0.0027 (J)	0.0062 (J)		0.0097 (J)	<0.01		0.00057 (J)	
8/28/2019	0.00089 (J)			0.0071 (J)			0.00089 (J)		0.00087 (J)
10/7/2019									
10/8/2019									0.00065 (J)
10/9/2019	0.0009 (J)	0.002 (J)	0.0019 (J)	0.012 (J)	0.011 (J)	0.00049 (J)	0.0011 (J)	0.00072 (J)	
4/6/2020									
4/7/2020		0.0028 (J)	0.0015 (J)	0.0022 (J)	0.0094 (J)			0.00049 (J)	<0.01
4/8/2020	0.0015 (J)					0.00069 (J)	0.001 (J)		
8/17/2020									
8/18/2020						<0.01	0.0011 (J)	0.00056 (J)	0.0012 (J)
8/19/2020	0.0013 (J)	0.0022 (J)	0.0028 (J)	0.0012 (J)	0.0037 (J)				
9/28/2020			0.0024 (J)						
9/29/2020						<0.01			
9/30/2020				0.0018 (J)	0.0045 (J)		0.0013 (J)	0.00064 (J)	0.00067 (J)
10/1/2020	0.0012 (J)	0.002 (J)							

Prediction Limit

Constituent: Lead (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWB-6R	GWB-4R	GWC-9	GWC-17	GWC-15	GWC-14	GWC-13	GWC-12
4/5/2013							<0.005		
7/16/2013								<0.005	<0.005
7/17/2013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
10/11/2013							<0.005		
1/13/2014	0.013							<0.005	0.004
1/14/2014		<0.005	0.005	<0.005	<0.005		<0.005		
4/3/2014							<0.005		
7/8/2014								<0.005	<0.005
7/9/2014	0.0076 (J)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
7/10/2014									
10/24/2014							<0.005		
1/12/2015			<0.005						
1/13/2015	0.0057 (J)					<0.005		<0.005	<0.005
1/14/2015		<0.005		<0.005	<0.005		<0.005		
5/10/2015							<0.005		
5/11/2015									
7/16/2015	0.009 (J)		<0.005			<0.005		<0.005	0.0044 (J)
7/17/2015		<0.005		<0.005			<0.005		
7/18/2015					<0.005				
10/6/2015									
1/17/2016						<0.005	<0.005		
1/18/2016	0.0094 (J)	<0.005	0.0055 (J)	<0.005	<0.005			<0.005	0.0034 (J)
1/19/2016									
4/26/2016							<0.005		
7/26/2016								<0.005	
7/27/2016	0.0058					<0.005	<0.005		0.0001 (J)
7/28/2016		<0.005		<0.005					
7/29/2016			0.003 (J)		<0.005				
8/30/2016		<0.005							
8/31/2016				0.0007 (J)				<0.005	0.0001 (J)
9/1/2016	0.0663 (o)		0.0166 (o)		<0.005	<0.005	<0.005		
10/24/2016									
10/25/2016	0.0003 (J)					<0.005	<0.005		
10/26/2016		<0.005	0.0057		<0.005			<0.005	0.0001 (J)
10/27/2016				<0.005					
1/3/2017									
1/4/2017									<0.005
1/5/2017		0.0003 (J)			<0.005	<0.005	<0.005	0.0002 (J)	
1/6/2017	0.006		0.0053	<0.005					
4/3/2017						0.0003 (J)			
4/4/2017			0.0092				0.0001 (J)		
4/5/2017					0.0009 (J)				0.0003 (J)
4/6/2017	0.0109	0.0002 (J)		0.0001 (J)				0.0005 (J)	
7/10/2017									0.0003 (J)
7/11/2017						0.0001 (J)	8E-05 (J)		
7/12/2017		0.0002 (J)	0.006	<0.005				0.0005 (J)	
7/13/2017	0.007				<0.005				
10/2/2017						0.0002 (J)	0.0001 (J)		
10/3/2017		0.0001 (J)							
10/4/2017	0.0042 (J)		0.0057	9E-05 (J)	0.0001 (J)			0.0007 (J)	0.0001 (J)
1/9/2018	0.0098	0.0003 (J)				0.0002 (J)	<0.005		
1/10/2018								0.0009 (J)	

Prediction Limit

Constituent: Lead (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWB-6R	GWB-4R	GWC-9	GWC-17	GWC-15	GWC-14	GWC-13	GWC-12
1/11/2018			0.0085	0.0002 (J)	0.0001 (J)				0.0002 (J)
7/9/2018							<0.005		
7/10/2018		<0.005				<0.005			
7/11/2018	0.0028 (J)		0.0029 (J)	<0.005	<0.005			0.0015 (J)	<0.005
1/16/2019	<0.025 (o)	<0.005	<0.005		<0.005		<0.005	0.00061 (J)	
1/17/2019						<0.005			<0.005
1/18/2019				<0.005					
1/21/2019									
3/25/2019	0.0019 (J)		<0.005						
3/26/2019		<0.005			<0.005	<0.005	<0.005	<0.005	
3/27/2019				<0.005					<0.005
7/30/2019									
8/26/2019	0.013 (J)								
8/27/2019		0.0011 (J)	0.001 (J)			0.00033 (J)	0.00051 (J)	0.0001 (J)	<0.005
8/28/2019				6.1E-05 (J)	<0.005				
10/7/2019									
10/8/2019	0.0098 (J)					0.00012 (J)	<0.005	0.00013 (J)	
10/9/2019		0.00033 (J)	0.00041 (J)	<0.005	0.00015 (J)				6.6E-05 (J)
4/6/2020	0.0024 (J)								
4/7/2020		0.00063 (J)	0.00073 (J)			8.6E-05 (J)	<0.005		8.1E-05 (J)
4/8/2020				0.00021 (J)	8.4E-05 (J)			0.00017 (J)	
8/17/2020								7.6E-05 (J)	4.9E-05 (J)
8/18/2020					0.00014 (J)	9E-05 (J)	<0.005		
8/19/2020	0.0044 (J)	0.00014 (J)	0.00048 (J)	9.6E-05 (J)					
9/28/2020	0.0043 (J)							6.4E-05 (J)	
9/29/2020							<0.005		3.7E-05 (J)
9/30/2020		8E-05 (J)			6E-05 (J)	4.7E-05 (J)			
10/1/2020			0.00026 (J)	3.8E-05 (J)					

Prediction Limit

Constituent: Lead (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-1	GWA-8 (bg)	GWC-16	GWC-2	GWB-5R	GWC-21	GWC-22	GWC-20
9/29/2000	<0.005	<0.005	<0.005	<0.005		0.017 (o)			
11/21/2000	<0.005	<0.005		<0.005	0.0069	<0.005			
1/20/2001	<0.005	<0.005	<0.005	<0.005	<0.005	0.011			
3/14/2001	<0.005	<0.005	<0.005	<0.005	<0.005	0.026 (o)			
7/16/2001	<0.005	<0.005	<0.005	<0.005	<0.005	0.043 (o)			
11/1/2001	<0.005	<0.005	<0.005	<0.005	<0.005	0.075 (o)			
4/25/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			
11/20/2002	<0.005	<0.005	<0.005	<0.005	<0.005	0.057 (o)			
6/6/2003	0.0068	<0.005	0.016 (o)	0.099 (o)	<0.005	0.16 (o)			
12/12/2003	<0.005	<0.005	0.0095	0.017 (o)	<0.005	<0.005			
5/26/2004	<0.005	<0.005	<0.005	<0.005	<0.005	0.011			
12/7/2004	<0.005	<0.005	<0.005	<0.005	<0.005	0.038 (o)			
6/21/2005	<0.005	<0.005	<0.005	<0.005	<0.005	0.036 (o)			
12/12/2005	<0.005	<0.005	<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	<0.005	<0.005			
8/30/2006			<0.005	<0.005					
12/4/2006	<0.005	<0.005	<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	<0.005	<0.005			
9/11/2007			<0.005	<0.005					
12/11/2007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			
3/11/2008			<0.005	<0.005					
6/23/2008	<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		<0.005		<0.005				
12/5/2008		<0.005		<0.005		<0.005			
3/25/2009			<0.005	<0.005					
7/7/2009		<0.005	<0.005			<0.005			
7/8/2009	<0.005			<0.005	<0.005				
9/14/2009			<0.005	<0.005					
12/20/2009		<0.005	<0.005	<0.005	<0.005				
12/21/2009	<0.005					<0.005			
3/4/2010			<0.005	<0.005					
6/20/2010	<0.005	<0.005	<0.005		<0.005	<0.005			
6/21/2010				<0.005		<0.005	<0.005	<0.005	<0.005
9/14/2010			<0.005	<0.005					
1/6/2011	<0.005	<0.005			<0.005	<0.005			
1/7/2011			<0.005	<0.005			<0.005	<0.005	<0.005
4/15/2011			<0.005	<0.005					
7/7/2011	<0.005	<0.005	<0.005	<0.005		<0.005			<0.005
7/8/2011							<0.005	<0.005	<0.005
9/25/2011			<0.005	<0.005					
1/17/2012	<0.005	<0.005	<0.005		<0.005	<0.005			
1/18/2012				<0.005			<0.005	<0.005	<0.005
4/4/2012			<0.005	<0.005					
7/9/2012	<0.005	<0.005			<0.005	<0.005			
7/10/2012			<0.005	<0.005			<0.005	<0.005	<0.005
10/9/2012			<0.005	<0.005					
1/17/2013	<0.005	<0.005			<0.005	<0.005			
1/18/2013			<0.005	<0.005			<0.005	<0.005	<0.005

Prediction Limit

Constituent: Lead (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-1	GWA-8 (bg)	GWC-16	GWC-2	GWB-5R	GWC-21	GWC-22	GWC-20
4/5/2013			<0.005	<0.005					
7/16/2013	<0.005	<0.005				<0.005			
7/17/2013			<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
10/11/2013			<0.005	<0.005					
1/13/2014	<0.005	<0.005			<0.005	<0.005			
1/14/2014			<0.005	<0.005			<0.005	<0.005	<0.005
4/3/2014			<0.005	<0.005					
7/8/2014	<0.005								
7/9/2014		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
7/10/2014								<0.005	<0.005
10/24/2014			<0.005	<0.005					
1/12/2015									<0.005
1/13/2015	<0.005	<0.005			<0.005	<0.005			
1/14/2015			<0.005	<0.005			<0.005	<0.005	
5/10/2015			<0.005						
5/11/2015				<0.005					
7/16/2015	<0.005	<0.005		<0.005	<0.005	<0.005			
7/17/2015			<0.005				<0.005		
7/18/2015								<0.005	<0.005
10/6/2015			<0.005						
1/17/2016		<0.005		<0.005	<0.005		<0.005		<0.005
1/18/2016			<0.005			<0.005		<0.005	
1/19/2016	<0.005								
4/26/2016			<0.005	<0.005					
7/26/2016	0.0001 (J)								
7/27/2016		<0.005			<0.005	<0.005			
7/28/2016			<0.005	<0.005			<0.005		<0.005
7/29/2016								0.0004 (J)	
8/30/2016		<0.005	<0.005			<0.005			
8/31/2016	0.0002 (J)				<0.005			0.0003 (J)	
9/1/2016				<0.005			<0.005		<0.005
10/24/2016			<0.005						
10/25/2016		<0.005		0.0002 (J)			<0.005		0.0001 (J)
10/26/2016	0.0001 (J)				<0.005	0.0002 (J)		0.0003 (J)	
10/27/2016									
1/3/2017			0.0001 (J)			0.0001 (J)			
1/4/2017	0.0002 (J)	<0.005		0.0001 (J)			<0.005	0.0003 (J)	<0.005
1/5/2017					<0.005				
1/6/2017									
4/3/2017			0.0002 (J)						
4/4/2017		<0.005			0.0002 (J)		9E-05 (J)		7E-05 (J)
4/5/2017				0.0002 (J)					
4/6/2017	0.0003 (J)					0.0003 (J)		0.0003 (J)	
7/10/2017									
7/11/2017	0.0002 (J)		0.0001 (J)					0.0002 (J)	<0.005
7/12/2017		<0.005		0.0001 (J)		0.0002 (J)			
7/13/2017					0.0003 (J)		7E-05 (J)		
10/2/2017			0.0001 (J)						<0.005
10/3/2017	0.0003 (J)	<0.005		0.0001 (J)	<0.005	0.0002 (J)	0.0001 (J)		
10/4/2017								0.0008 (J)	
1/9/2018			0.0001 (J)				9E-05 (J)		
1/10/2018		0.0001 (J)		0.0002 (J)	8E-05 (J)	0.0003 (J)			0.0002 (J)

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-16	GWC-14	GWC-17	GWC-12	GWC-11	GWC-9	GWC-1	GWB-4R
9/29/2000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/21/2000	<0.01	<0.01	0.052	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1/20/2001	<0.01	<0.01	0.053	<0.01	<0.01	<0.01	<0.01	0.017	0.014 (o)
3/14/2001	<0.01	<0.01	0.049	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
7/16/2001	<0.01	<0.01	0.038	<0.01	<0.01	<0.01	<0.01	<0.01	0.015 (o)
11/1/2001	<0.01	<0.01	0.022	<0.01	<0.01	<0.01	<0.01	<0.01	0.012 (o)
4/25/2002	<0.01	<0.01	0.1 (o)	<0.01	<0.01	<0.01	<0.01	0.012	0.01
11/20/2002		<0.01	0.018	<0.01	<0.01	<0.01	<0.01	0.19 (o)	0.026 (o)
6/6/2003	<0.01	0.021 (o)	<0.01	<0.01	<0.01	<0.01	<0.01	0.32 (o)	0.022 (o)
12/12/2003	<0.01	0.0078	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	0.028 (o)
5/26/2004	<0.01	0.0053	0.023	<0.01	<0.01	<0.01	<0.01	0.017	0.012 (o)
12/7/2004	<0.01	<0.01	0.019	<0.01	<0.01	<0.01	<0.01	0.011	0.0073
6/21/2005	<0.01	<0.01	0.019	<0.01	<0.01	<0.01	0.0062	0.0088	0.0087
12/12/2005	<0.01	<0.01	0.0095	<0.01	<0.01	<0.01	<0.01	0.011	0.013 (o)
4/4/2006		<0.01	0.033						
6/27/2006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
8/30/2006		<0.01	<0.01						
12/4/2006	<0.01	<0.01	0.032	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
2/15/2007		<0.01	0.034						
6/23/2007	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
9/11/2007		<0.01	0.022						
12/11/2007	<0.01	<0.01	0.045	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
3/11/2008		<0.01	0.02						
6/23/2008	<0.01				<0.01	<0.01	<0.01		
6/24/2008		<0.01	<0.01	<0.01				<0.01	<0.01
11/3/2008		<0.01	0.052						
12/4/2008	<0.01		0.054		<0.01	<0.01	<0.01		
12/5/2008		<0.01		<0.01				<0.01	<0.01
3/25/2009		<0.01	0.072						
7/7/2009	<0.01							<0.01	<0.01
7/8/2009		<0.01	0.021	<0.01	<0.01	<0.01	<0.01		
9/14/2009		<0.01	0.015						
12/20/2009	<0.01	<0.01	0.072					<0.01	
12/21/2009				<0.01	<0.01	<0.01	<0.01		<0.01
3/4/2010		<0.01	0.083						
6/20/2010	<0.01		0.1		<0.01	<0.01	<0.01	<0.01	
6/21/2010		<0.01		<0.01					<0.01
9/14/2010		<0.01	0.085						
1/6/2011						<0.01		<0.01	
1/7/2011	<0.01	<0.01	0.028	<0.01	<0.01		<0.01		<0.01
4/15/2011		<0.01	<0.01						
7/7/2011	<0.01	<0.01	<0.01		<0.01	<0.01		<0.01	
7/8/2011				<0.01			<0.01		<0.01
9/25/2011		<0.01	0.02						
1/17/2012	<0.01		0.016		<0.01	0.023		<0.01	
1/18/2012		<0.01		<0.01			<0.01		<0.01
4/4/2012		<0.01	0.0156						
7/9/2012	<0.01		<0.01		<0.01	0.016		<0.01	
7/10/2012		<0.01		<0.01			<0.01		<0.01
10/9/2012		<0.01	0.0094						
1/17/2013					<0.01	0.033		<0.01	
1/18/2013	0.009	<0.01	0.0067	<0.01			<0.01		<0.01

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-16	GWC-14	GWC-17	GWC-12	GWC-11	GWC-9	GWC-1	GWB-4R
4/5/2013		<0.01	0.0077						
7/16/2013					<0.01	0.0068		0.012	
7/17/2013	0.011	<0.01	0.01	<0.01			<0.01		<0.01
10/11/2013		0.0069	0.0087						
1/13/2014	0.012				<0.01	0.036		<0.01	
1/14/2014		<0.01	0.012	<0.01			<0.01		<0.01
4/3/2014		<0.01	0.022						
7/8/2014					<0.01	0.017			
7/9/2014	0.011	0.005	0.0089	<0.01			<0.01	<0.01	<0.01
7/10/2014									
10/24/2014		<0.01	0.017						
1/12/2015									<0.01
1/13/2015	0.0092				<0.01	0.027		<0.01	
1/14/2015		<0.01	<0.01	<0.01			<0.01		
5/10/2015			<0.01						
5/11/2015		<0.01							
7/16/2015	0.014	<0.01			<0.01	<0.01		<0.01	<0.01
7/17/2015			<0.01				<0.01		
7/18/2015				<0.01					
10/6/2015		0.0073	<0.01						
1/17/2016		0.0031 (J)	<0.01					0.023	
1/18/2016	0.023			<0.01	<0.01		<0.01		<0.01
1/19/2016						0.023			
4/26/2016		0.00497 (J)	0.00428 (J)						
7/26/2016						0.0056 (J)			
7/27/2016	0.0323		0.0038 (J)		0.0025 (J)			0.002 (J)	
7/28/2016		0.0076 (J)					<0.01		
7/29/2016				0.0011 (J)					0.0036 (J)
8/30/2016								0.002 (J)	
8/31/2016					0.0019 (J)	0.0084 (J)	<0.01		
9/1/2016	0.0438	0.0052 (J)	0.0056 (J)	0.0012 (J)					0.0067 (J)
10/24/2016									
10/25/2016	0.031	0.0085 (J)	0.0023 (J)					0.0022 (J)	
10/26/2016				0.0013 (J)	0.002 (J)	0.0052 (J)			0.0042 (J)
10/27/2016							<0.01		
1/3/2017									
1/4/2017		0.0048 (J)			<0.01	0.0062 (J)		0.0016 (J)	
1/5/2017			0.0038 (J)	0.0012 (J)					
1/6/2017	0.0324						<0.01		0.0042 (J)
4/3/2017									
4/4/2017			0.0064 (J)					0.0052 (J)	0.0043 (J)
4/5/2017		0.0068 (J)		<0.01	<0.01				
4/6/2017	0.0188 (J)					0.0195	<0.01		
7/10/2017					<0.01				
7/11/2017			0.0044 (J)			<0.01			
7/12/2017		0.0048 (J)					<0.01	0.0024 (J)	0.0033 (J)
7/13/2017	0.0118			0.0018 (J)					
10/2/2017			0.004 (J)						
10/3/2017		0.0051 (J)				0.0079 (J)		<0.01	
10/4/2017	0.0195			0.0042 (J)	<0.01		<0.01		0.0038 (J)
1/9/2018	<0.01		0.0019 (J)						
1/10/2018		0.0018 (J)						0.0018 (J)	

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-16	GWC-14	GWC-17	GWC-12	GWC-11	GWC-9	GWC-1	GWB-4R
1/11/2018				<0.01	<0.01	0.0054 (J)	<0.01		0.0029 (J)
7/9/2018			0.0029 (J)						
7/10/2018		0.0045 (J)						0.0026 (J)	
7/11/2018	<0.01			0.0016 (J)	<0.01	0.0022 (J)	<0.01		0.0015 (J)
1/16/2019	0.0071 (J)		0.0016 (J)	<0.01				0.0018 (J)	<0.01
1/17/2019		0.0031 (J)			<0.01	<0.01			
1/18/2019							<0.01		
1/21/2019									
3/25/2019	<0.01								<0.01
3/26/2019		0.0033 (J)	0.0022 (J)	<0.01				0.0023 (J)	
3/27/2019					<0.01	0.01 (J)	<0.01		
7/30/2019									
8/26/2019	<0.01								
8/27/2019			0.0035 (J)		<0.01	<0.01		0.0016 (J)	<0.01
8/28/2019		0.004 (J)		<0.01			<0.01		
10/7/2019									
10/8/2019	0.0072 (J)	0.0023 (J)	0.0026 (J)			<0.01			
10/9/2019				<0.01	<0.01		<0.01	0.0024 (J)	<0.01
4/6/2020	0.0078 (J)								
4/7/2020		<0.01	0.005 (J)		<0.01	0.0021 (J)		0.0013 (J)	0.0025 (J)
4/8/2020				<0.01			<0.01		
8/17/2020					<0.01				
8/18/2020		0.0058 (J)	0.0029 (J)	0.002 (J)		0.0028 (J)			
8/19/2020	<0.01						<0.01	0.002 (J)	<0.01
9/28/2020	0.01 (J)							<0.01	
9/29/2020			0.0051 (J)		<0.01	0.0024 (J)			
9/30/2020		0.0037 (J)		<0.01					
10/1/2020							<0.01		<0.01

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-5R	GWA-8 (bg)	GWB-6R	GWC-15	GWC-2	GWC-20	GWC-21	GWC-22
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	<0.01			
3/14/2001	<0.01	<0.01	<0.01	<0.01	<0.01			
7/16/2001	<0.01	<0.01	<0.01	<0.01	<0.01			
11/1/2001	<0.01	<0.01	<0.01	<0.01	<0.01			
4/25/2002	<0.01	<0.01	<0.01	<0.01	<0.01			
11/20/2002	0.0064	<0.01	0.008	0.0094	<0.01			
6/6/2003	0.011	<0.01	0.0066	0.021 (o)	<0.01			
12/12/2003	<0.01	<0.01	0.0056	0.016 (o)	<0.01			
5/26/2004	0.007	<0.01	0.0084	<0.01	0.005			
12/7/2004	<0.01	<0.01	<0.01	<0.01	<0.01			
6/21/2005	0.0063	<0.01	0.0062	<0.01	<0.01			
12/12/2005	<0.01	<0.01	<0.01	<0.01	<0.01			
4/4/2006		<0.01						
6/27/2006	<0.01	<0.01	<0.01	<0.01	<0.01			
8/30/2006		<0.01						
12/4/2006	<0.01	<0.01	<0.01	<0.01	<0.01			
2/15/2007		<0.01						
6/23/2007	<0.01	<0.01	<0.01	<0.01	<0.01			
9/11/2007		<0.01						
12/11/2007	<0.01	<0.01	<0.01	<0.01	<0.01			
3/11/2008		<0.01						
6/23/2008		<0.01						
6/24/2008	<0.01		<0.01	<0.01	<0.01			
11/3/2008		<0.01						
12/4/2008		<0.01					<0.01	
12/5/2008	<0.01		<0.01	<0.01				
3/25/2009		<0.01						
7/7/2009	<0.01	<0.01	<0.01					
7/8/2009				<0.01	<0.01			
9/14/2009		<0.01						
12/20/2009		<0.01		<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	<0.01			
6/21/2010						<0.01	0.048	<0.01
9/14/2010		<0.01						
1/6/2011	<0.01				<0.01			
1/7/2011		<0.01	<0.01	<0.01		<0.01	0.014	<0.01
4/15/2011		<0.01						
7/7/2011	<0.01	<0.01	<0.01	<0.01		<0.01		
7/8/2011						<0.01	0.018	<0.01
9/25/2011		<0.01						
1/17/2012	<0.01	<0.01		<0.01	<0.01			
1/18/2012			<0.01			<0.01	<0.01	<0.01
4/4/2012		<0.01						
7/9/2012	<0.01			0.066 (o)	<0.01			
7/10/2012		<0.01	<0.01			<0.01	0.02	<0.01
10/9/2012		<0.01						
1/17/2013	<0.01				<0.01			
1/18/2013		<0.01	<0.01	0.04 (o)		0.005	0.015	<0.01

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-5R	GWA-8 (bg)	GWB-6R	GWC-15	GWC-2	GWC-20	GWC-21	GWC-22
4/5/2013		<0.01						
7/16/2013	<0.01							
7/17/2013		<0.01	<0.01	<0.01	<0.01	<0.01	0.037	<0.01
10/11/2013		<0.01						
1/13/2014	<0.01			<0.01	<0.01			
1/14/2014		<0.01	<0.01			<0.01	0.043	<0.01
4/3/2014		<0.01						
7/8/2014								
7/9/2014	<0.01	<0.01	<0.01	<0.01	<0.01		0.023	
7/10/2014						<0.01		<0.01
10/24/2014		<0.01						
1/12/2015						<0.01		
1/13/2015	<0.01			<0.01	<0.01			
1/14/2015		<0.01	<0.01				0.022	<0.01
5/10/2015		<0.01						
5/11/2015								
7/16/2015	<0.01			<0.01	<0.01			
7/17/2015		<0.01	<0.01				0.033	
7/18/2015						<0.01		<0.01
10/6/2015		<0.01						
1/17/2016				<0.01	<0.01	<0.01	0.021	
1/18/2016	<0.01	<0.01	<0.01					<0.01
1/19/2016								
4/26/2016		<0.01						
7/26/2016								
7/27/2016	<0.01			<0.01	0.002 (J)			
7/28/2016		0.001 (J)	<0.01			<0.01	0.0341	
7/29/2016								0.0022 (J)
8/30/2016	<0.01	<0.01	<0.01					
8/31/2016					<0.01			0.0014 (J)
9/1/2016				<0.01		<0.01	0.0297	
10/24/2016		0.0013 (J)						
10/25/2016				<0.01		0.0014 (J)	0.0095 (J)	
10/26/2016	<0.01		<0.01		0.0035 (J)			0.001 (J)
10/27/2016								
1/3/2017	<0.01	<0.01						
1/4/2017						0.0014 (J)	0.022	<0.01
1/5/2017			0.0014 (J)	<0.01	<0.01			
1/6/2017								
4/3/2017		<0.01		<0.01				
4/4/2017					<0.01	<0.01	0.0236	
4/5/2017								
4/6/2017	<0.01		<0.01					<0.01
7/10/2017								
7/11/2017		<0.01		<0.01		<0.01		<0.01
7/12/2017	<0.01		<0.01					
7/13/2017					<0.01		0.013	
10/2/2017		<0.01		<0.01		<0.01		
10/3/2017	<0.01		<0.01		<0.01		0.01 (J)	
10/4/2017								0.0023 (J)
1/9/2018		<0.01	<0.01	0.0019 (J)			0.0162	
1/10/2018	<0.01				<0.01	<0.01		

Prediction Limit

Constituent: Vanadium (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-12	GWC-13	GWC-1	GWC-14	GWC-15	GWC-16	GWC-17	GWA-8 (bg)
9/29/2000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/21/2000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1/20/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
3/14/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
7/16/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/1/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4/25/2002	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/20/2002		<0.01	<0.01	0.0069	0.03	0.0099	0.0069	<0.01	<0.01
6/6/2003	0.047	<0.01	0.0063	0.16 (o)	0.0065	0.019 (o)	0.082 (o)	<0.01	0.017 (o)
12/12/2003	0.0086	<0.01	<0.01	<0.01	0.0052	0.018 (o)	0.012	<0.01	0.011 (o)
5/26/2004	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
12/7/2004	<0.01	<0.01	<0.01	<0.01	0.0074	<0.01	<0.01	<0.01	<0.01
6/21/2005	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01
12/12/2005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4/4/2006					0.013		<0.01		<0.01
6/27/2006	<0.01	<0.01	<0.01	0.0029	<0.01	<0.01	<0.01	0.0025	<0.01
8/30/2006					0.0039		<0.01		<0.01
12/4/2006	0.0027	<0.01	<0.01	0.0047	0.016	<0.01	0.0031	<0.01	<0.01
2/15/2007					0.017		0.0025		<0.01
6/23/2007	0.0027	<0.01	<0.01	0.0029	0.0076	<0.01	0.0032	<0.01	<0.01
9/11/2007					0.012		<0.01		<0.01
12/11/2007	0.0033	<0.01	<0.01	<0.01	0.017	<0.01	<0.01	<0.01	<0.01
3/11/2008					0.012		<0.01		<0.01
6/23/2008	0.0074	<0.01	<0.01						<0.01
6/24/2008				<0.01	0.0069	<0.01	<0.01	<0.01	
11/3/2008					0.016		0.0032		<0.01
12/4/2008	0.0084	<0.01	<0.01		0.013				<0.01
12/5/2008				<0.01		<0.01	<0.01	<0.01	
3/25/2009					0.014		<0.01		<0.01
7/7/2009	0.023			<0.01					<0.01
7/8/2009		<0.01	<0.01		0.014	<0.01	0.0036	<0.01	
9/14/2009					0.0072		0.0026		<0.01
12/20/2009	0.007			<0.01	0.02	<0.01	0.0031		<0.01
12/21/2009		<0.01	<0.01					<0.01	
3/4/2010					0.023		<0.01		<0.01
6/20/2010	0.0047	<0.01	<0.01	0.0037	0.017	<0.01			<0.01
6/21/2010							0.0025	<0.01	
9/14/2010					0.018		0.0035		<0.01
1/6/2011			0.0028	<0.01					
1/7/2011	0.018	<0.01			0.019	<0.01	0.0036	<0.01	<0.01
4/15/2011					0.019		<0.01		<0.01
7/7/2011	0.019	<0.01	<0.01	0.0045	0.014	0.0036	0.003		<0.01
7/8/2011								0.0031	
9/25/2011					0.015		0.0037		<0.01
1/17/2012	0.0298	<0.01	<0.01	<0.01	0.021	<0.01			<0.01
1/18/2012							<0.01	<0.01	
4/4/2012					0.0191		<0.01		<0.01
7/9/2012	0.14	<0.01	<0.01	0.0026	0.026	0.0059			
7/10/2012							0.0026	<0.01	<0.01
10/9/2012					0.049		0.007		<0.01
1/17/2013		<0.01	<0.01	<0.01					
1/18/2013	0.21				0.036	<0.01	<0.01	<0.01	<0.01

Prediction Limit

Constituent: Vanadium (mg/L) Analysis Run 2/17/2021 4:15 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-12	GWC-13	GWC-1	GWC-14	GWC-15	GWC-16	GWC-17	GWA-8 (bg)
4/5/2013					0.04		<0.01		<0.01
7/16/2013		<0.01	<0.01	<0.01					
7/17/2013	0.18				0.062	<0.01	<0.01	<0.01	<0.01
10/11/2013					0.032		<0.01		<0.01
1/13/2014	0.24	<0.01	<0.01	<0.01		<0.01			
1/14/2014					0.044		<0.01	<0.01	<0.01
4/3/2014					0.077 (o)		0.0032 (J)		0.0015 (J)
7/8/2014		0.0034 (J)	0.002 (J)						
7/9/2014	0.22			0.0041 (J)	0.032	0.0012 (J)	0.0031 (J)	0.0012 (J)	0.0012 (J)
7/10/2014									
10/24/2014					0.045		0.0028 (J)		<0.01
1/12/2015									
1/13/2015	0.19	<0.01	0.0015 (J)	0.0029 (J)		0.0013 (J)			
1/14/2015					0.031		0.0034 (J)	0.002 (J)	<0.01
5/10/2015					0.013				<0.01
5/11/2015							0.0026 (J)		
7/16/2015	0.23	0.0049 (J)	<0.01	0.0034 (J)		<0.01	0.0028 (J)		
7/17/2015					0.028				<0.01
7/18/2015								<0.01	
10/6/2015					0.02		0.0016 (J)		0.0012 (J)
1/17/2016				0.0046 (J)	0.028	0.0013 (J)	0.0029 (J)		
1/18/2016	0.41	0.0058	0.0011 (J)					0.0019 (J)	0.00079 (J)
1/19/2016									
4/26/2016					0.0181		0.00296 (J)		<0.01
7/26/2016			<0.01						
7/27/2016	0.397	0.0058 (J)		0.0064 (J)	0.0189	<0.01			
7/28/2016							0.0026 (J)		<0.01
7/29/2016								0.0031 (J)	
10/24/2016									<0.01
10/25/2016	0.425				0.0206	<0.01	<0.01		
1/3/2017									<0.01
1/4/2017		<0.01		<0.01			<0.01		
1/5/2017			<0.01		0.0172	<0.01		<0.01	
1/6/2017	0.41								
4/3/2017									<0.01
4/4/2017				0.0061 (J)	0.0235				
4/5/2017		0.0039 (J)					0.0033 (J)	0.0029 (J)	
4/6/2017	0.297		<0.01						
7/10/2017		0.0062 (J)							
7/11/2017					0.0136	0.0022 (J)			<0.01
7/12/2017			0.0016 (J)	0.0067 (J)			0.0037 (J)		
7/13/2017	0.194							0.0037 (J)	
10/2/2017					0.0175	0.0022 (J)			<0.01
10/3/2017							0.0036 (J)		
10/4/2017	0.316								
1/9/2018	0.194				0.0103	0.0021 (J)			0.0014 (J)
1/10/2018			0.0019 (J)	0.0056 (J)			0.0029 (J)		
1/11/2018		0.0025 (J)						0.0026 (J)	
7/9/2018					0.0078 (J)				<0.01
7/10/2018				0.0056 (J)		0.0025 (J)	0.0025 (J)		
7/11/2018	0.15	0.0059 (J)	0.0097 (J)					0.0032 (J)	
1/16/2019	0.16		<0.01	0.0043 (J)	0.0043 (J)			<0.01	<0.01

Prediction Limit

Constituent: Vanadium (mg/L) Analysis Run 2/17/2021 4:16 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWB-4R	GWB-5R	GWB-6R	GWC-11	GWC-2	GWC-21	GWC-22	GWC-20
9/29/2000	<0.01	0.06	0.038	0.12	<0.01				
11/21/2000	<0.01	0.068	0.013	0.13	<0.01	<0.01			
1/20/2001	<0.01	0.12	0.038	0.14	<0.01	<0.01			
3/14/2001	<0.01	0.08	0.077 (o)	0.13	<0.01	<0.01			
7/16/2001	<0.01	0.11	0.12 (o)	0.18	<0.01	<0.01			
11/1/2001	<0.01	0.079	0.21 (o)	0.12	<0.01	<0.01			
4/25/2002	<0.01	0.11	0.086 (o)	0.15	<0.01	<0.01			
11/20/2002	0.014	0.15	0.14 (o)	0.15	0.0071	<0.01			
6/6/2003	<0.01	0.12	0.12 (o)	0.11	0.0098	<0.01			
12/12/2003	<0.01	0.13	0.014	0.089	0.0074	<0.01			
5/26/2004	<0.01	0.095	0.06 (o)	0.09	<0.01	<0.01			
12/7/2004	<0.01	0.067	0.054	0.072	<0.01	<0.01			
6/21/2005	<0.01	0.062	0.038	0.04	<0.01	<0.01			
12/12/2005	<0.01	0.09	0.0056	0.021	<0.01	<0.01			
4/4/2006									
6/27/2006	<0.01	0.083	0.0043	0.02	<0.01	<0.01			
8/30/2006									
12/4/2006	<0.01	0.084	0.0044	0.022	<0.01	<0.01			
2/15/2007									
6/23/2007	<0.01	0.081	0.0039	0.027	0.0036	<0.01			
9/11/2007									
12/11/2007	<0.01	0.067	0.0029	0.017	<0.01	<0.01			
3/11/2008									
6/23/2008	<0.01				<0.01				
6/24/2008		0.059	0.003	0.053		<0.01			
11/3/2008									
12/4/2008	<0.01				<0.01	<0.01			
12/5/2008		0.054	<0.01	0.0078					
3/25/2009									
7/7/2009		0.038	<0.01	0.012					
7/8/2009	0.0029				0.0026	<0.01			
9/14/2009									
12/20/2009						<0.01			
12/21/2009	<0.01	0.06	<0.01	0.011	<0.01				
3/4/2010									
6/20/2010	<0.01		<0.01	0.0083	<0.01	<0.01			
6/21/2010		0.036					<0.01	<0.01	<0.01
9/14/2010									
1/6/2011			0.0067		0.003	<0.01			
1/7/2011	<0.01	0.043		0.0079			0.0031	<0.01	0.0029
4/15/2011									
7/7/2011			0.019	0.007	0.004				<0.01
7/8/2011	<0.01	0.044					0.0048	<0.01	0.0046
9/25/2011									
1/17/2012			0.021		<0.01	<0.01			
1/18/2012	<0.01	0.045		0.0116			<0.01	<0.01	<0.01
4/4/2012									
7/9/2012			0.032		0.005	<0.01			
7/10/2012	<0.01	0.048		0.0096			<0.01	<0.01	0.0081
10/9/2012									
1/17/2013			0.034		0.005	<0.01			
1/18/2013	<0.01	0.049		<0.01			<0.01	<0.01	0.0063

Prediction Limit

Constituent: Vanadium (mg/L) Analysis Run 2/17/2021 4:16 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWB-4R	GWB-5R	GWB-6R	GWC-11	GWC-2	GWC-21	GWC-22	GWC-20
4/5/2013									
7/16/2013			0.021		<0.01				
7/17/2013	<0.01	0.05		<0.01		<0.01	<0.01	<0.01	<0.01
10/11/2013									
1/13/2014			0.008		<0.01	<0.01			
1/14/2014	<0.01	0.067		<0.01			0.006	<0.01	<0.01
4/3/2014									
7/8/2014					0.0024 (J)				
7/9/2014	0.0016 (J)	0.055	0.0052	0.0039 (J)		<0.01	0.0019 (J)		
7/10/2014								0.0053	0.0026 (J)
10/24/2014									
1/12/2015		0.066							0.0031 (J)
1/13/2015			0.0036 (J)		0.0023 (J)	<0.01			
1/14/2015	<0.01			0.005			0.0037 (J)	0.0013 (J)	
5/10/2015									
5/11/2015									
7/16/2015		0.045	0.004 (J)		0.002 (J)	<0.01			
7/17/2015	0.0029 (J)			0.0045 (J)			0.0028 (J)		
7/18/2015								0.0043 (J)	0.003 (J)
10/6/2015									
1/17/2016						<0.01	0.0039 (J)		0.0025 (J)
1/18/2016	<0.01	0.049	0.0069	0.0044 (J)				<0.01	
1/19/2016					0.0025 (J)				
4/26/2016									
7/26/2016					0.0027 (J)				
7/27/2016			0.0046 (J)			<0.01			
7/28/2016	<0.01			0.0038 (J)			0.0022 (J)		0.0024 (J)
7/29/2016		0.0388						0.0052 (J)	
10/24/2016									
10/25/2016									<0.01
1/3/2017			<0.01						
1/4/2017					<0.01		<0.01	<0.01	<0.01
1/5/2017				0.0077 (J)		<0.01			
1/6/2017	<0.01	0.0341							
4/3/2017									
4/4/2017		0.0371				<0.01	0.003 (J)		0.0024 (J)
4/5/2017									
4/6/2017	<0.01		0.0063 (J)	0.0069 (J)	0.0025 (J)			<0.01	
7/10/2017									
7/11/2017					0.0027 (J)			0.0016 (J)	0.003 (J)
7/12/2017	0.0013 (J)	0.0399	0.0064 (J)	0.0098 (J)					
7/13/2017						<0.01	0.0019 (J)		
10/2/2017									0.0028 (J)
10/3/2017									
10/4/2017									
1/9/2018				0.0086 (J)			0.0046 (J)		
1/10/2018			0.0077 (J)			<0.01			0.0026 (J)
1/11/2018	<0.01	0.0327			0.0019 (J)			0.0012 (J)	
7/9/2018									<0.01
7/10/2018			0.016	0.0098 (J)		<0.01	0.0031 (J)		
7/11/2018	<0.01	0.02			0.0021 (J)			0.0025 (J)	
1/16/2019		0.0022 (J)	0.0033 (J)	0.077					

Prediction Limit

Constituent: Vanadium (mg/L) Analysis Run 2/17/2021 4:16 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWB-4R	GWB-5R	GWB-6R	GWC-11	GWC-2	GWC-21	GWC-22	GWC-20
1/17/2019					0.0021 (J)		0.0022 (J)		
1/18/2019	<0.01							<0.01	
1/21/2019						0.0024 (J)			0.0031 (J)
3/25/2019		0.004 (J)							0.0024 (J)
3/26/2019			0.0058 (J)	0.086			0.0041 (J)		
3/27/2019	<0.01				0.0023 (J)			0.002 (J)	
7/30/2019						<0.01			
10/7/2019									
10/8/2019					<0.01		<0.01		
10/9/2019	<0.01	<0.01	0.033 (J)	0.018 (J)		<0.01		<0.01	<0.01
4/6/2020									
4/7/2020		0.0037 (J)	0.0053 (J)	0.041 (J)	<0.01		<0.01	0.0014 (J)	
4/8/2020	0.0015 (J)					<0.01			<0.01
9/28/2020									
9/29/2020					0.0023 (J)	<0.01			
9/30/2020			0.0037 (J)	0.018			0.0029 (J)	<0.01	0.0029 (J)
10/1/2020	<0.01	0.0047 (J)							

Prediction Limit

Constituent: Zinc (mg/L) Analysis Run 2/17/2021 4:16 PM View: PL's State

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWB-4R	GWC-17	GWC-16	GWC-15	GWC-14	GWC-13	GWC-11	GWC-1
9/29/2000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/21/2000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1/20/2001	<0.01	0.041	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
3/14/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
7/16/2001	<0.01	0.059	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/1/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.044 (o)	<0.01	<0.01
4/25/2002	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/20/2002		0.061	0.014	<0.01	<0.01	<0.01	0.023	<0.01	<0.01
6/6/2003	0.69 (o)	0.041	0.012	0.035 (o)	<0.01	<0.01	<0.01	<0.01	0.011
12/12/2003	0.12 (o)	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	<0.01
5/26/2004	0.013	0.016	<0.01	<0.01	<0.01	<0.01	0.035	<0.01	<0.01
12/7/2004	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.018	0.028 (o)	<0.01
6/21/2005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.014	<0.01	<0.01
12/12/2005	0.014	0.017	<0.01	<0.01	0.064 (o)	0.011	0.023	<0.01	<0.01
4/4/2006				<0.01		<0.01			
6/27/2006	0.01	0.11	0.0046	0.077 (o)	0.011	0.0045	0.023	0.0028	<0.01
8/30/2006				0.0027		<0.01			
12/4/2006	0.0065	0.086	0.0071	<0.01	0.0033	<0.01	0.046 (o)	0.0028	<0.01
2/15/2007				0.0032		<0.01			
6/23/2007	0.0049	0.076	0.005	0.0058	0.0029	<0.01	0.036	0.0063	<0.01
9/11/2007				0.0033		<0.01			
12/11/2007	0.0043	0.087	0.0033	<0.01	<0.01	<0.01	0.011	<0.01	<0.01
3/11/2008				<0.01		<0.01			
6/23/2008	0.0025						0.0091	<0.01	
6/24/2008		0.062	0.0037	<0.01	<0.01	<0.01			<0.01
11/3/2008				0.0025		<0.01			
12/4/2008	0.0025					<0.01	0.0038	<0.01	
12/5/2008		0.014	0.0027	<0.01	<0.01				<0.01
3/25/2009				0.0025		<0.01			
7/7/2009	<0.01	0.052							<0.01
7/8/2009			0.0048	<0.01	<0.01	<0.01	<0.01	<0.01	
9/14/2009				<0.01		<0.01			
12/20/2009	0.0031			<0.01	<0.01	<0.01			<0.01
12/21/2009		0.046	0.0032				0.0032	<0.01	
3/4/2010				<0.01		<0.01			
6/20/2010	<0.01				<0.01	<0.01	<0.01	<0.01	<0.01
6/21/2010		0.045	0.0028	<0.01					
9/14/2010				<0.01		<0.01			
1/6/2011							0.004	<0.01	<0.01
1/7/2011	<0.01	0.024	0.003	<0.01	<0.01	<0.01			
4/15/2011				<0.01		<0.01			
7/7/2011	0.0031			<0.01	<0.01	<0.01	0.0037	<0.01	0.0025
7/8/2011		0.023	0.0034						
9/25/2011				0.0028		<0.01			
1/17/2012	0.004				<0.01	<0.01	0.0031	0.0043	<0.01
1/18/2012		0.011	0.0049	0.0029					
4/4/2012				<0.01		<0.01			
7/9/2012	0.0096				<0.01	<0.01	0.003	<0.01	<0.01
7/10/2012		0.024	0.0039	<0.01					
10/9/2012				0.0027		<0.01			
1/17/2013							<0.01	0.0025	<0.01
1/18/2013	0.051	0.011	0.0043	<0.01	<0.01	<0.01			

Prediction Limit

Constituent: Zinc (mg/L) Analysis Run 2/17/2021 4:16 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWB-4R	GWC-17	GWC-16	GWC-15	GWC-14	GWC-13	GWC-11	GWC-1
4/5/2013				<0.01		<0.01			
7/16/2013							0.0029	<0.01	<0.01
7/17/2013	0.042	0.0029	0.0035	<0.01	<0.01	<0.01			
10/11/2013				<0.01		<0.01			
1/13/2014	0.0025				0.0025		0.0025	0.0025	0.0025
1/14/2014		0.0025	0.0025	0.0025		0.0025			
4/3/2014				0.0015 (J)		0.0014 (J)			
7/8/2014							0.0018 (J)	0.0011 (J)	
7/9/2014	0.064	0.0051	0.0033	0.0012 (J)	<0.01	0.00086 (J)			<0.01
7/10/2014									
10/24/2014				0.0013 (J)		0.00083 (J)			
1/12/2015		0.0023 (J)							
1/13/2015	0.066				<0.01		0.0028	0.0021 (J)	0.0025
1/14/2015			0.0067	0.0017 (J)		<0.01			
5/10/2015						<0.01			
5/11/2015				0.0015 (J)					
7/16/2015	0.036	0.0021 (J)		<0.01	<0.01		0.0018 (J)	<0.01	<0.01
7/17/2015						<0.01			
7/18/2015			<0.01						
10/6/2015				<0.01		<0.01			
1/17/2016				<0.01	<0.01	<0.01			<0.01
1/18/2016	0.035	0.0092	0.012				0.0017 (J)		
1/19/2016								0.0029	
4/26/2016				<0.01		<0.01			
7/26/2016							0.0028 (J)	<0.01	
7/27/2016	0.0529				<0.01	<0.01			<0.01
7/28/2016				<0.01					
7/29/2016		0.003 (J)	0.0086 (J)						
10/24/2016									
10/25/2016	0.0035 (J)			<0.01	<0.01	<0.01			
1/3/2017									
1/4/2017				0.0025 (J)				<0.01	<0.01
1/5/2017			0.016		<0.01	<0.01	0.0021 (J)		
1/6/2017	0.0235	0.0104							
4/3/2017					<0.01				
4/4/2017		0.0132				<0.01			<0.01
4/5/2017			0.0175	0.0025 (J)					
4/6/2017	0.0829						0.0027 (J)	0.004 (J)	
7/10/2017									
7/11/2017					<0.01	<0.01		<0.01	
7/12/2017		0.0046 (J)		0.002 (J)			0.0043 (J)		<0.01
7/13/2017	0.0853		0.0126						
10/2/2017					<0.01	0.0026 (J)			
10/3/2017				<0.01					
10/4/2017	0.0263								
1/9/2018	0.0665				<0.01	0.0018 (J)			
1/10/2018				0.0016 (J)			0.0021 (J)		0.0014 (J)
1/11/2018		0.0095 (J)	0.012					0.0018 (J)	
7/9/2018						<0.01			
7/10/2018				0.0031 (J)	<0.01				0.0021 (J)
7/11/2018	0.02 (J)	0.0028 (J)	0.011				0.0039 (J)	<0.01	
1/16/2019	0.014 (J)	0.0052 (J)	0.0094 (J)			<0.01	0.047		<0.01

Prediction Limit

Constituent: Zinc (mg/L) Analysis Run 2/17/2021 4:16 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWB-4R	GWC-17	GWC-16	GWC-15	GWC-14	GWC-13	GWC-11	GWC-1
1/17/2019				<0.01	<0.01			<0.01	
1/18/2019									
1/21/2019									
3/25/2019	<0.05 (o)	0.0078 (J)							
3/26/2019			0.0057 (J)	<0.01	<0.01	<0.01	0.03		<0.01
3/27/2019								<0.01	
7/30/2019									
10/7/2019									
10/8/2019	0.095			0.01	0.0051 (J)	0.0052 (J)	0.053	0.0061 (J)	
10/9/2019		0.0064 (J)	0.011						0.0057 (J)
4/6/2020	<0.01								
4/7/2020		<0.01		<0.01	<0.01	<0.01		<0.01	<0.01
4/8/2020			<0.01				0.023		
9/28/2020	0.16						0.016		0.0092 (J)
9/29/2020						<0.01		0.0031 (J)	
9/30/2020			0.0043 (J)	0.0051 (J)	0.032				
10/1/2020		0.0064 (J)							

Prediction Limit

Constituent: Zinc (mg/L) Analysis Run 2/17/2021 4:16 PM View: PL's State

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-8 (bg)	GWC-9	GWB-5R	GWC-2	GWC-12	GWB-6R	GWC-20	GWC-22	GWC-21
9/29/2000	<0.01	<0.01	0.026 (o)		0.38 (o)	<0.02 (o)			
11/21/2000		<0.01	<0.01	0.021 (o)	0.077 (o)	0.024 (o)			
1/20/2001	0.025 (o)	<0.01	0.031 (o)	<0.01	0.23 (o)	<0.02 (o)			
3/14/2001	<0.01	<0.01	0.063 (o)	<0.01	0.24 (o)	<0.02 (o)			
7/16/2001	<0.01	<0.01	0.08 (o)	<0.01	0.053 (o)	<0.02 (o)			
11/1/2001	<0.01	<0.01	0.16 (o)	<0.01	0.022 (o)	<0.02 (o)			
4/25/2002	<0.01	<0.01	<0.01	<0.01	1.2 (o)	<0.02 (o)			
11/20/2002	0.016 (o)	0.033 (o)	0.14 (o)	<0.01	0.045 (o)	0.028 (o)			
6/6/2003	0.032 (o)	<0.01	0.51 (o)	<0.01	0.042 (o)	0.032 (o)			
12/12/2003	0.019 (o)	<0.01	<0.01	<0.01	<0.01	<0.01 (o)			
5/26/2004	<0.01	<0.01	0.036 (o)	<0.01	<0.01	<0.01 (o)			
12/7/2004	<0.01	<0.01	0.069 (o)	<0.01	<0.01	0.012 (o)			
6/21/2005	<0.01	<0.01	0.076 (o)	<0.01	<0.01	<0.01 (o)			
12/12/2005	0.01	0.032 (o)	<0.01	0.012	<0.01	<0.01 (o)			
4/4/2006	<0.01								
6/27/2006	0.0043	0.018 (o)	0.01	<0.01	0.012 (o)	0.0071			
8/30/2006	0.017 (o)								
12/4/2006	0.0053	0.0044	0.0035	<0.01	0.0067	0.0096			
2/15/2007	0.0045								
6/23/2007	0.0043	0.0041	0.0032	<0.01	0.025 (o)	0.094 (o)			
9/11/2007	0.004								
12/11/2007	0.0048	0.0039	0.0079	<0.01	0.0038	0.042 (o)			
3/11/2008	0.0043								
6/23/2008	0.0037	<0.01			0.0051				
6/24/2008			<0.01	<0.01		0.098 (o)			
11/3/2008	0.0032								
12/4/2008	0.0029	0.0039		<0.01	<0.01				
12/5/2008			<0.01			0.047 (o)			
3/25/2009	0.0055								
7/7/2009	0.0028		<0.01			0.024 (o)			
7/8/2009		<0.01		<0.01	<0.01				
9/14/2009	0.0027								
12/20/2009	0.0029			<0.01					
12/21/2009		0.004	<0.01		0.013 (o)	0.049 (o)			
3/4/2010	0.0042								
6/20/2010	0.0027	<0.01	<0.01	<0.01	<0.01	0.045 (o)			
6/21/2010							<0.01	<0.01	0.04 (o)
9/14/2010	<0.01								
1/6/2011			<0.01	<0.01					
1/7/2011	0.0032	0.0032			0.004	0.0044	<0.01	0.019	<0.01
4/15/2011	<0.01								
7/7/2011	0.005		0.0027		0.0028	0.003	<0.01		
7/8/2011		0.0025					0.086 (J,o)	0.1 (o)	0.0044
9/25/2011	0.0041								
1/17/2012	0.0043		0.0039	<0.01	0.0043				
1/18/2012		0.0045				0.0048	<0.01	0.0051	<0.01
4/4/2012	<0.01								
7/9/2012			<0.01	<0.01	<0.01				
7/10/2012	0.0028	<0.01				<0.01	<0.01	0.01	<0.01
10/9/2012	0.0033								
1/17/2013			<0.01	<0.01	0.0033				
1/18/2013	0.0038	0.0029				0.0028	0.0032	0.0036	<0.01

Prediction Limit

Constituent: Zinc (mg/L) Analysis Run 2/17/2021 4:16 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-8 (bg)	GWC-9	GWB-5R	GWC-2	GWC-12	GWB-6R	GWC-20	GWC-22	GWC-21
4/5/2013	0.0026								
7/16/2013			0.0032		0.0028				
7/17/2013	<0.01	<0.01		<0.01		<0.01	<0.01	0.0025	<0.01
10/11/2013	0.0046								
1/13/2014			0.0025	0.0025	0.0025				
1/14/2014	0.0025	0.0025				0.0025	0.0025	0.0025	0.0025
4/3/2014	0.0029								
7/8/2014					0.002 (J)				
7/9/2014	0.002 (J)	0.0016 (J)	0.00076 (J)	0.00058 (J)		0.00093 (J)			0.00084 (J)
7/10/2014							<0.01	0.024	
10/24/2014	0.0031								
1/12/2015							<0.01		
1/13/2015			0.0036	0.0024 (J)	0.0079				
1/14/2015	0.003	0.0024 (J)				0.0023 (J)		0.0016 (J)	0.0018 (J)
5/10/2015	0.0028								
5/11/2015									
7/16/2015			<0.01	<0.01	0.0026				
7/17/2015	0.0018 (J)	0.0031				<0.01			<0.01
7/18/2015							<0.01	0.014	
10/6/2015	0.0018 (J)								
1/17/2016				<0.01			<0.01		<0.01
1/18/2016	0.0028	0.0059	<0.01		0.0025	0.0029		<0.01	
1/19/2016									
4/26/2016	<0.01								
7/26/2016									
7/27/2016			0.0015 (J)	0.0018 (J)	0.0021 (J)				
7/28/2016	0.0018 (J)	0.0019 (J)				<0.01	<0.01		<0.01
7/29/2016								0.0129	
10/24/2016	0.0024 (J)								
10/25/2016							<0.01		
1/3/2017	0.0035 (J)		<0.01						
1/4/2017					0.0025 (J)		<0.01	0.006 (J)	<0.01
1/5/2017				<0.01		<0.01			
1/6/2017		0.0026 (J)							
4/3/2017	0.0041 (J)								
4/4/2017				0.0015 (J)			<0.01		0.0015 (J)
4/5/2017					0.0026 (J)				
4/6/2017		0.0047 (J)	0.0023 (J)			0.0032 (J)		0.0031 (J)	
7/10/2017					0.0023 (J)				
7/11/2017	0.0029 (J)						<0.01	0.0029 (J)	
7/12/2017		0.003 (J)	<0.01			0.002 (J)			
7/13/2017				0.0014 (J)					0.002 (J)
10/2/2017	0.0026 (J)						<0.01		
10/3/2017									
10/4/2017									
1/9/2018	0.0035 (J)					0.0036 (J)			0.0016 (J)
1/10/2018			0.0022 (J)	<0.01			0.0034 (J)		
1/11/2018		0.0046 (J)			0.0031 (J)			0.0106	
7/9/2018	0.0022 (J)						<0.01		
7/10/2018			<0.01	<0.01		0.0055 (J)			<0.01
7/11/2018		0.0033 (J)			0.0036 (J)			0.0057 (J)	
1/16/2019	0.0037 (J)		<0.01			<0.01			

Prediction Limit

Constituent: Zinc (mg/L) Analysis Run 2/17/2021 4:16 PM View: PL's State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-8 (bg)	GWC-9	GWB-5R	GWC-2	GWC-12	GWB-6R	GWC-20	GWC-22	GWC-21
1/17/2019					0.0032 (J)				<0.01
1/18/2019		0.0025 (J)						0.0024 (J)	
1/21/2019				<0.01			<0.01		
3/25/2019	<0.01						<0.01		
3/26/2019			<0.01			<0.01			<0.01
3/27/2019		0.0026 (J)			0.0031 (J)			<0.01	
7/30/2019				0.0067 (J)					
10/7/2019	0.0077 (J)								
10/8/2019									0.0071 (J)
10/9/2019		0.0054 (J)	0.0081 (J)	0.005 (J)	0.0057 (J)	0.016 (J)	0.0049 (J)	0.0079 (J)	
4/6/2020	<0.01								
4/7/2020			<0.01		<0.01	<0.01		<0.01	<0.01
4/8/2020		<0.01		<0.01			<0.01		
9/28/2020	0.0092 (J)								
9/29/2020				0.056	0.0074 (J)				
9/30/2020			<0.01			<0.01	0.031	<0.01	0.0096 (J)
10/1/2020		0.025							

FIGURE E.

State Trend Test Summary - Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:28 PM

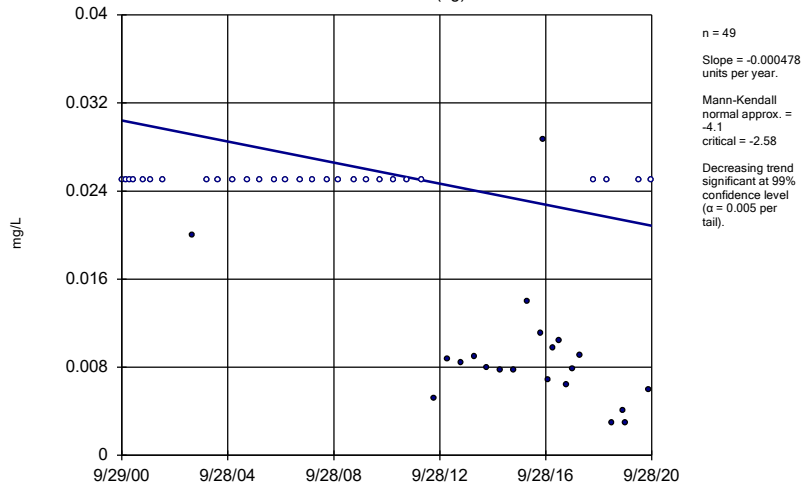
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Arsenic (mg/L)	GWA-7 (bg)	-0.000478	-4.1	-2.58	Yes	49	57.14	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWA-8 (bg)	0	-3.216	-2.58	Yes	70	91.43	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWC-15	0.003848	7.868	2.58	Yes	50	50	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWC-16	-0.001273	-2.969	-2.58	Yes	69	0	n/a	n/a	0.01	NP
Barium (mg/L)	GWA-8 (bg)	-0.0029	-8.428	-2.58	Yes	69	0	n/a	n/a	0.01	NP
Barium (mg/L)	GWC-20	0.008044	224	139	Yes	29	0	n/a	n/a	0.01	NP
Zinc (mg/L)	GWA-8 (bg)	-0.0002021	-3.834	-2.58	Yes	62	25.81	n/a	n/a	0.01	NP
Zinc (mg/L)	GWC-9	-0.0002436	-3.281	-2.58	Yes	42	42.86	n/a	n/a	0.01	NP

State Trend Test Summary - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:28 PM

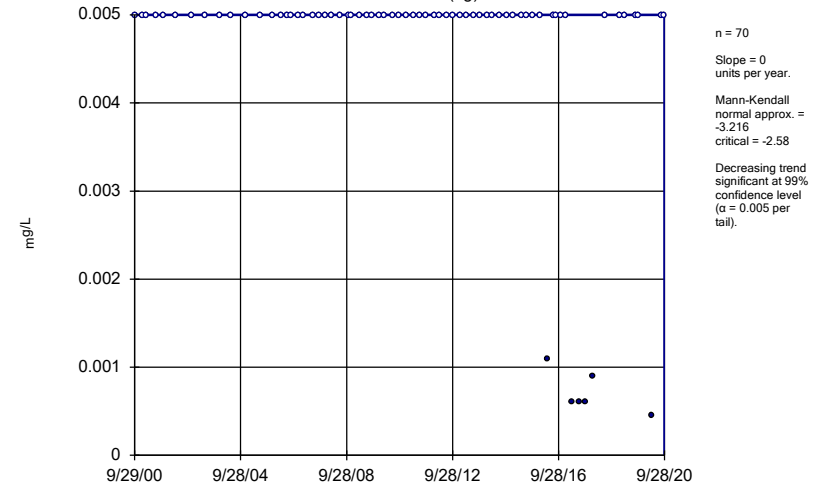
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Arsenic (mg/L)	GWA-7 (bg)	-0.000478	-4.1	-2.58	Yes	49	57.14	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWA-8 (bg)	0	-3.216	-2.58	Yes	70	91.43	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWC-15	0.003848	7.868	2.58	Yes	50	50	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWC-16	-0.001273	-2.969	-2.58	Yes	69	0	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWC-20	0.01725	123	139	No	29	3.448	n/a	n/a	0.01	NP
Barium (mg/L)	GWA-7 (bg)	-0.0002048	-0.3474	-2.58	No	48	0	n/a	n/a	0.01	NP
Barium (mg/L)	GWA-8 (bg)	-0.0029	-8.428	-2.58	Yes	69	0	n/a	n/a	0.01	NP
Barium (mg/L)	GWC-20	0.008044	224	139	Yes	29	0	n/a	n/a	0.01	NP
Zinc (mg/L)	GWA-7 (bg)	0.001011	2.325	2.58	No	43	30.23	n/a	n/a	0.01	NP
Zinc (mg/L)	GWA-8 (bg)	-0.0002021	-3.834	-2.58	Yes	62	25.81	n/a	n/a	0.01	NP
Zinc (mg/L)	GWC-15	0	0.5524	2.58	No	46	86.96	n/a	n/a	0.01	NP
Zinc (mg/L)	GWC-2	0	-1.981	-2.58	No	42	76.19	n/a	n/a	0.01	NP
Zinc (mg/L)	GWC-20	0	16	111	No	25	80	n/a	n/a	0.01	NP
Zinc (mg/L)	GWC-9	-0.0002436	-3.281	-2.58	Yes	42	42.86	n/a	n/a	0.01	NP

Sen's Slope Estimator
 GWA-7 (bg)



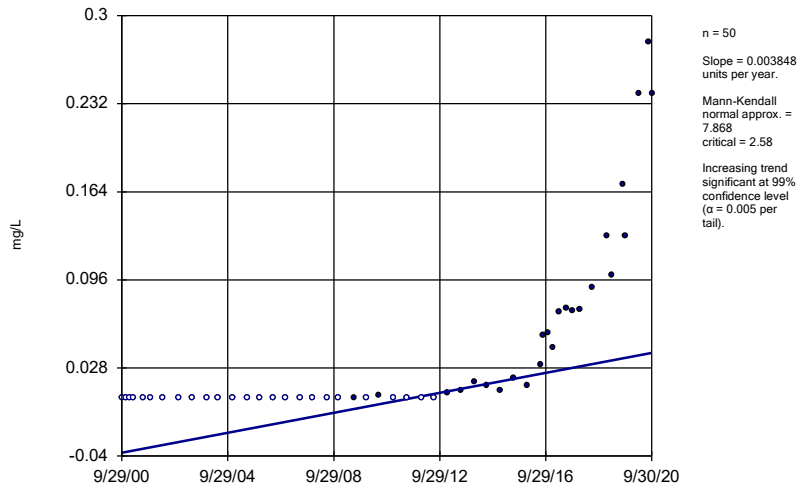
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
 GWA-8 (bg)



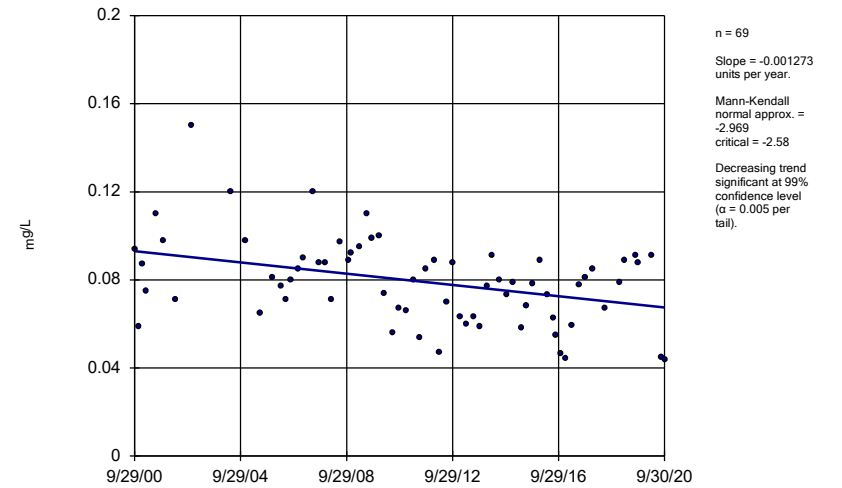
Constituent: Arsenic Analysis Run 2/17/2021 4:26 PM View: Trend Tests - State PL Exceedances
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
 GWC-15



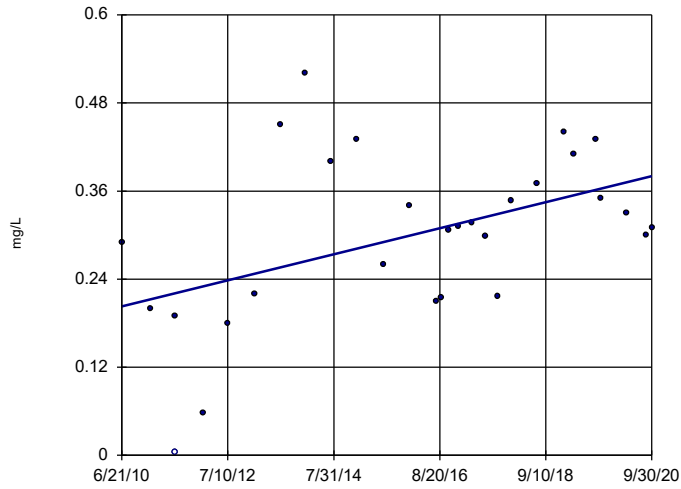
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
 GWC-16



Constituent: Arsenic Analysis Run 2/17/2021 4:26 PM View: Trend Tests - State PL Exceedances
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

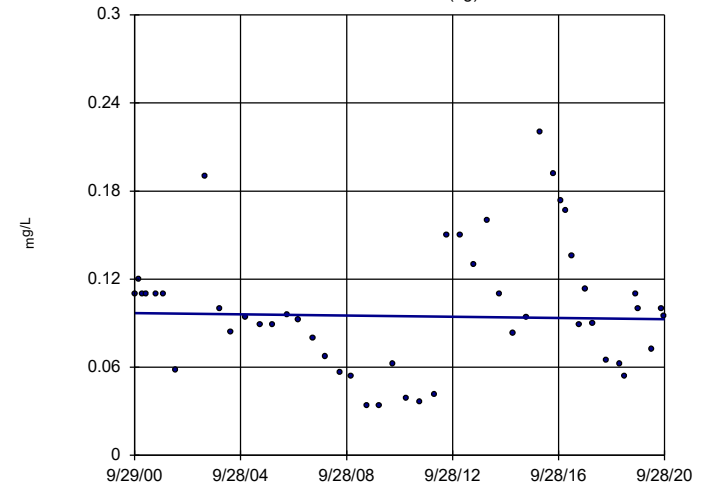
Sen's Slope Estimator
 GWC-20



n = 29
 Slope = 0.01725
 units per year.
 Mann-Kendall
 statistic = 123
 critical = 139
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Arsenic Analysis Run 2/17/2021 4:26 PM View: Trend Tests - State PL Exceedances
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

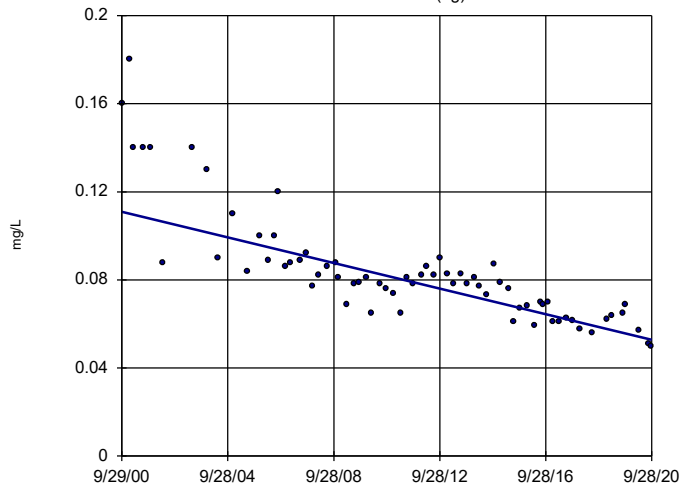
Sen's Slope Estimator
 GWA-7 (bg)



n = 48
 Slope = -0.0002048
 units per year.
 Mann-Kendall
 normal approx. =
 -0.3474
 critical = -2.58
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Barium Analysis Run 2/17/2021 4:26 PM View: Trend Tests - State PL Exceedances
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

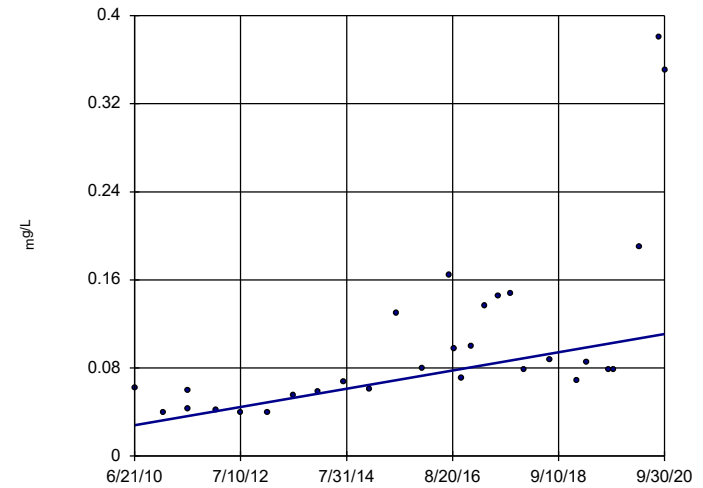
Sen's Slope Estimator
 GWA-8 (bg)



n = 69
 Slope = -0.0029
 units per year.
 Mann-Kendall
 normal approx. =
 -8.428
 critical = -2.58
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Barium Analysis Run 2/17/2021 4:26 PM View: Trend Tests - State PL Exceedances
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

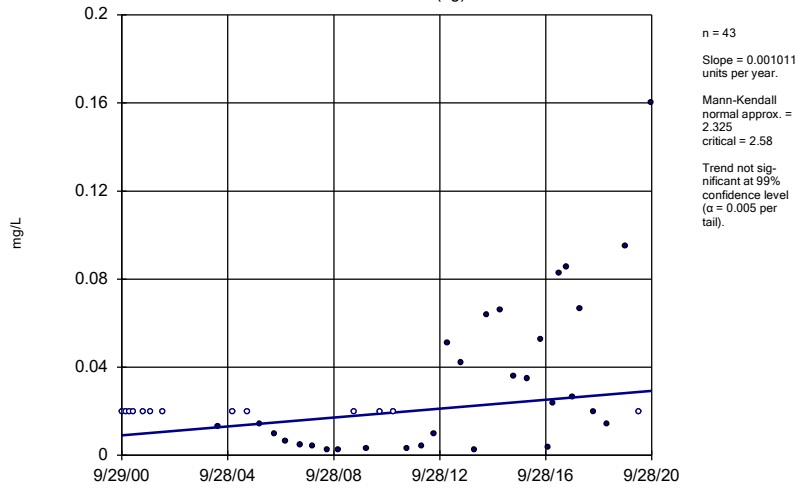
Sen's Slope Estimator
 GWC-20



n = 29
 Slope = 0.008044
 units per year.
 Mann-Kendall
 statistic = 224
 critical = 139
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

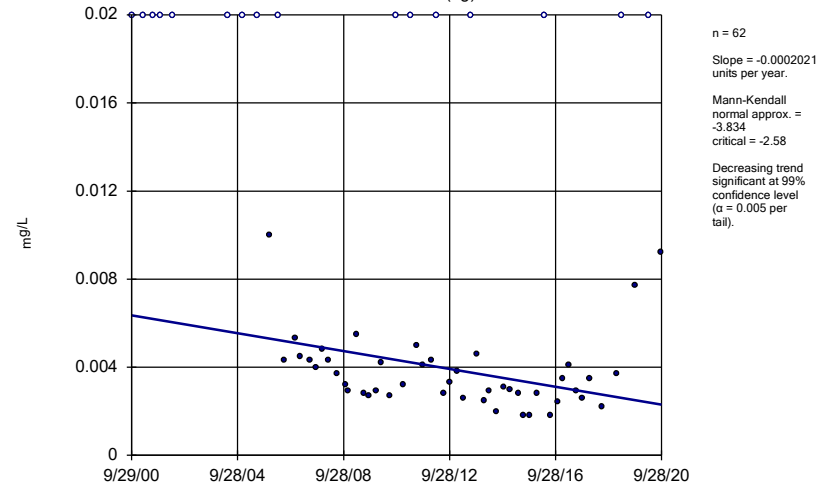
Constituent: Barium Analysis Run 2/17/2021 4:26 PM View: Trend Tests - State PL Exceedances
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWA-7 (bg)



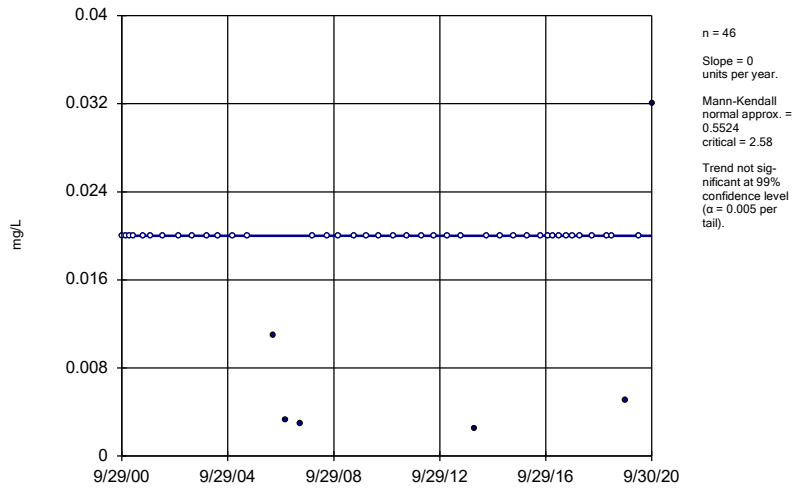
Constituent: Zinc Analysis Run 2/17/2021 4:27 PM View: Trend Tests - State PL Exceedances
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWA-8 (bg)



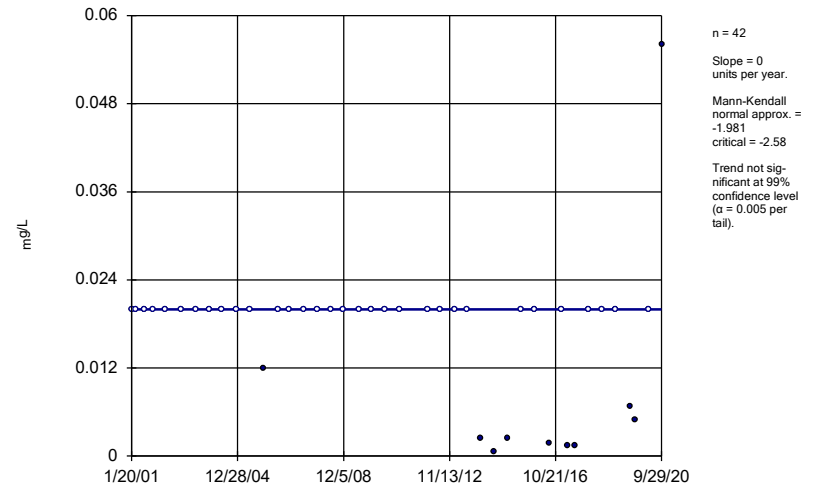
Constituent: Zinc Analysis Run 2/17/2021 4:27 PM View: Trend Tests - State PL Exceedances
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWC-15



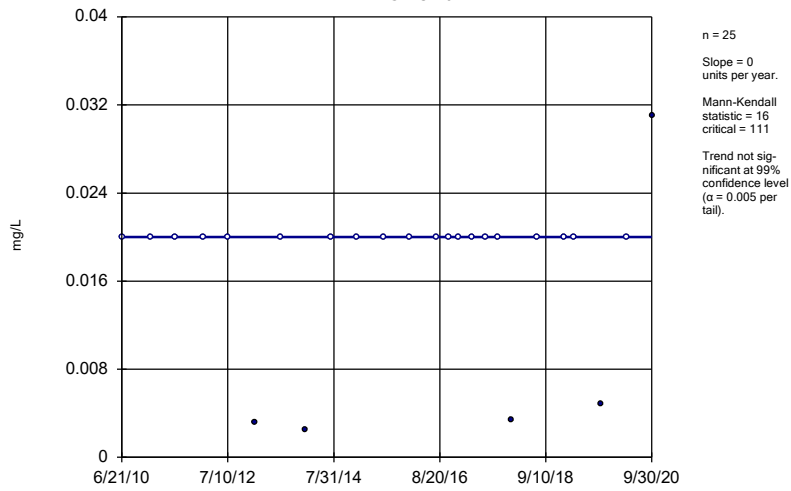
Constituent: Zinc Analysis Run 2/17/2021 4:27 PM View: Trend Tests - State PL Exceedances
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWC-2



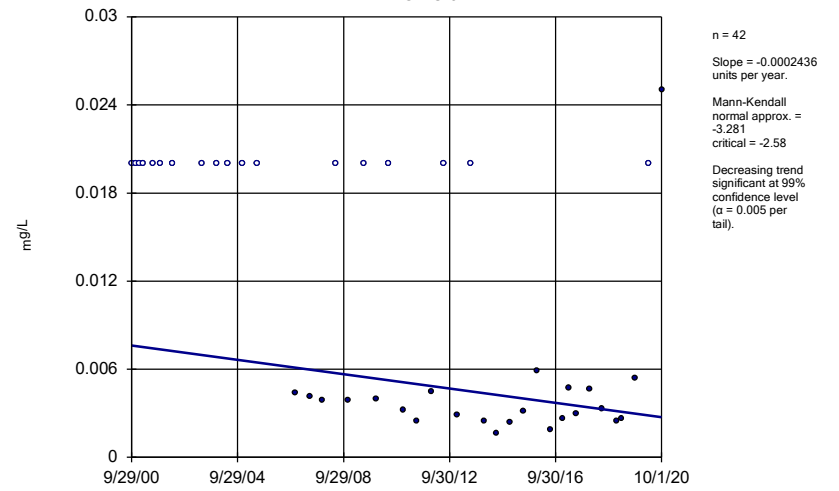
Constituent: Zinc Analysis Run 2/17/2021 4:27 PM View: Trend Tests - State PL Exceedances
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWC-20



Constituent: Zinc Analysis Run 2/17/2021 4:27 PM View: Trend Tests - State PL Exceedances
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWC-9



Constituent: Zinc Analysis Run 2/17/2021 4:27 PM View: Trend Tests - State PL Exceedances
Grumman Road Landfill Client: Southern Company Data: Grumman Road

FIGURE F.

Federal Interwell Prediction Limits - Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:21 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Calcium (mg/L)	GWC-1	35.8	9/28/2020	70.7	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-11	35.8	9/29/2020	123	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-12	35.8	9/29/2020	42	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-15	35.8	9/30/2020	109	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-16	35.8	9/30/2020	177	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-17	35.8	9/30/2020	53.5	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-20	35.8	9/30/2020	292	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-21	35.8	9/30/2020	98.4	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-4R	35.8	10/1/2020	48.4	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-5R	35.8	9/30/2020	70.4	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
pH (SU)	GWC-12	6.43	9/29/2020	3.95	Yes	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-15	6.43	9/30/2020	6.71	Yes	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-17	6.43	9/30/2020	4.08	Yes	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-11	160	9/29/2020	516	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-12	160	9/29/2020	237	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-16	160	9/30/2020	736	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-17	160	9/30/2020	193	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-20	160	9/30/2020	956	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-21	160	9/30/2020	306	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-4R	160	10/1/2020	178	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-5R	160	9/30/2020	339	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-6R	160	9/30/2020	339	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2

Federal Interwell Prediction Limits - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:21 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	GWC-1	21.8	9/28/2020	0.69	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-11	21.8	9/29/2020	1.2	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-12	21.8	9/29/2020	4.7	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-13	21.8	9/28/2020	0.24	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-14	21.8	9/29/2020	0.053	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-15	21.8	9/30/2020	0.86	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-16	21.8	9/30/2020	8.1	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-17	21.8	9/30/2020	0.86	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-2	21.8	9/29/2020	0.024J	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-20	21.8	9/30/2020	9.9	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-21	21.8	9/30/2020	2.3	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-22	21.8	9/30/2020	0.25	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-9	21.8	10/1/2020	0.028J	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWB-4R	21.8	10/1/2020	5.2	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWB-5R	21.8	9/30/2020	4	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Boron (mg/L)	GWB-6R	21.8	9/30/2020	4.2	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-1	35.8	9/28/2020	70.7	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-11	35.8	9/29/2020	123	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-12	35.8	9/29/2020	42	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-13	35.8	9/28/2020	2.9	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-14	35.8	9/29/2020	30.8	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-15	35.8	9/30/2020	109	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-16	35.8	9/30/2020	177	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-17	35.8	9/30/2020	53.5	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-2	35.8	9/29/2020	0.18J	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-20	35.8	9/30/2020	292	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-21	35.8	9/30/2020	98.4	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-22	35.8	9/30/2020	20.9	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-9	35.8	10/1/2020	5.5	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-4R	35.8	10/1/2020	48.4	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-5R	35.8	9/30/2020	70.4	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-6R	35.8	9/30/2020	27.5	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-1	260	9/28/2020	13.8	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-11	260	9/29/2020	143	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-12	260	9/29/2020	24.3	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-13	260	9/28/2020	4.3	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-14	260	9/29/2020	10.6	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-15	260	9/30/2020	1.7	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-16	260	9/30/2020	39.6	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-17	260	9/30/2020	257	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-2	260	9/29/2020	5.4	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-20	260	9/30/2020	34.9	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-21	260	9/30/2020	23.7	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-22	260	9/30/2020	8.5	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-9	260	10/1/2020	16.8	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWB-4R	260	10/1/2020	15.7	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWB-5R	260	9/30/2020	24.1	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWB-6R	260	9/30/2020	53.9	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Fluoride (mg/L)	GWC-1	0.5492	9/28/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-11	0.5492	9/29/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2

Federal Interwell Prediction Limits - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:21 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	GWC-12	0.5492	9/29/2020	0.16	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-13	0.5492	9/28/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-14	0.5492	9/29/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-15	0.5492	9/30/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-16	0.5492	9/30/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-17	0.5492	9/30/2020	0.15	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-2	0.5492	9/29/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-20	0.5492	9/30/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-21	0.5492	9/30/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-22	0.5492	9/30/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-9	0.5492	10/1/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWB-4R	0.5492	10/1/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWB-5R	0.5492	9/30/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWB-6R	0.5492	9/30/2020	0.1ND	No	30	-2.25	0.7283	23.33	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
pH (SU)	GWC-1	6.43	9/28/2020	5.79	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-11	6.43	9/29/2020	4.77	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-12	6.43	9/29/2020	3.95	Yes	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-13	6.43	9/28/2020	4.76	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-14	6.43	9/29/2020	5.69	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-15	6.43	9/30/2020	6.71	Yes	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-16	6.43	9/30/2020	5.47	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-17	6.43	9/30/2020	4.08	Yes	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-2	6.43	9/29/2020	4.6	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-20	6.43	9/30/2020	6.04	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-21	6.43	9/30/2020	5.82	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-22	6.43	9/30/2020	4.63	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWC-9	6.43	10/1/2020	4.42	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWB-4R	6.43	10/1/2020	5.75	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWB-5R	6.43	9/30/2020	4.99	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
pH (SU)	GWB-6R	6.43	9/30/2020	5.39	No	28	n/a	n/a	0	n/a	n/a	0.004098	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-1	160	9/28/2020	71.6	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-11	160	9/29/2020	516	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-12	160	9/29/2020	237	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-13	160	9/28/2020	25.6	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-14	160	9/29/2020	93.5	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-15	160	9/30/2020	18.5	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-16	160	9/30/2020	736	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-17	160	9/30/2020	193	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-2	160	9/29/2020	8.6	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-20	160	9/30/2020	956	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-21	160	9/30/2020	306	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-22	160	9/30/2020	65.5	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-9	160	10/1/2020	35	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-4R	160	10/1/2020	178	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-5R	160	9/30/2020	339	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-6R	160	9/30/2020	339	Yes	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-1	3660	9/28/2020	373	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-11	3660	9/29/2020	1100	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-12	3660	9/29/2020	440	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-13	3660	9/28/2020	60	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2

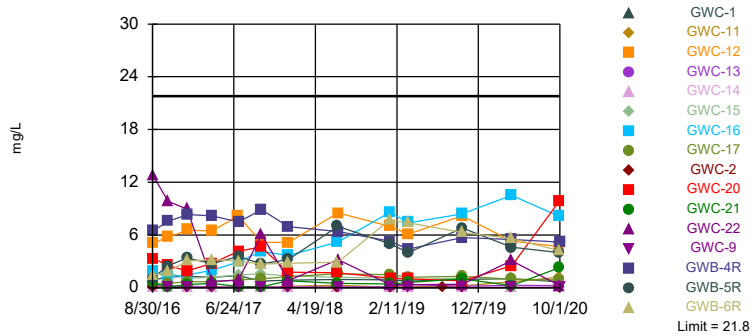
Federal Interwell Prediction Limits - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:21 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Total Dissolved Solids (mg/L)	GWC-14	3660	9/29/2020	187	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-15	3660	9/30/2020	434	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-16	3660	9/30/2020	1140	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-17	3660	9/30/2020	752	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-2	3660	9/29/2020	33	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-20	3660	9/30/2020	1860	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-21	3660	9/30/2020	634	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-22	3660	9/30/2020	113	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-9	3660	10/1/2020	111	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWB-4R	3660	10/1/2020	424	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWB-5R	3660	9/30/2020	652	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWB-6R	3660	9/30/2020	816	No	26	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2

Within Limit

Prediction Limit Interwell Non-parametric

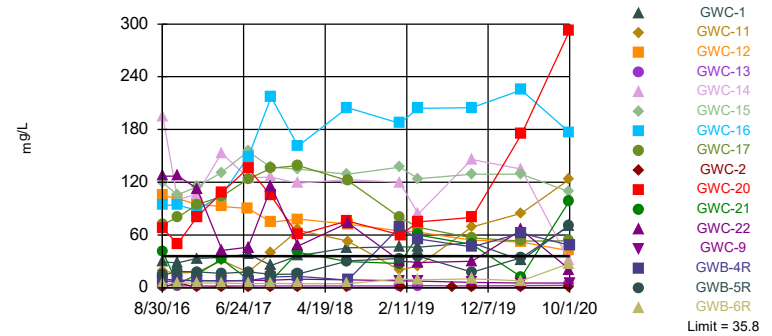


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 26 background values. Annual per-constituent alpha = 0.07127. Individual comparison alpha = 0.002308 (1 of 2). Comparing 16 points to limit.

Constituent: Boron Analysis Run 2/17/2021 4:18 PM View: PL's Interwell Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit: GWC-1, GWC-11, GWC-12, GWC-15, GWC-16, GWC-17, GWC-20, GWC-21, GWB-4R, GWB-5R

Prediction Limit Interwell Non-parametric

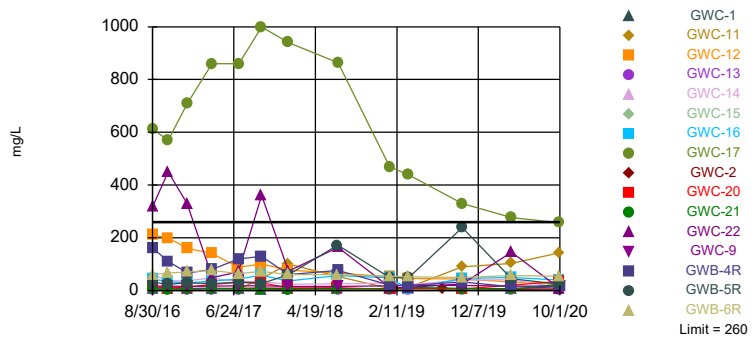


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 26 background values. Annual per-constituent alpha = 0.07127. Individual comparison alpha = 0.002308 (1 of 2). Comparing 16 points to limit.

Constituent: Calcium Analysis Run 2/17/2021 4:18 PM View: PL's Interwell Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Prediction Limit Interwell Non-parametric

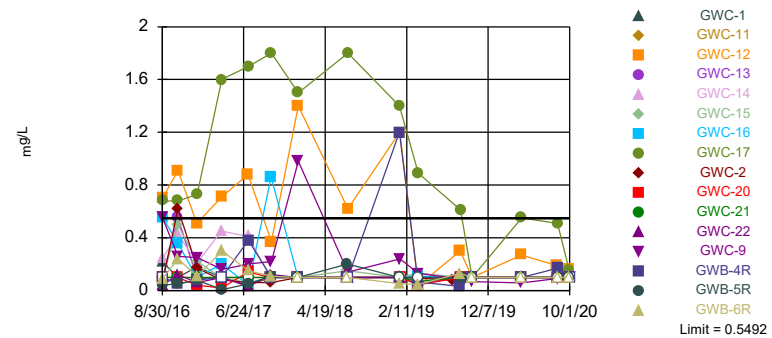


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 26 background values. Annual per-constituent alpha = 0.07127. Individual comparison alpha = 0.002308 (1 of 2). Comparing 16 points to limit.

Constituent: Chloride Analysis Run 2/17/2021 4:18 PM View: PL's Interwell Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Prediction Limit Interwell Parametric

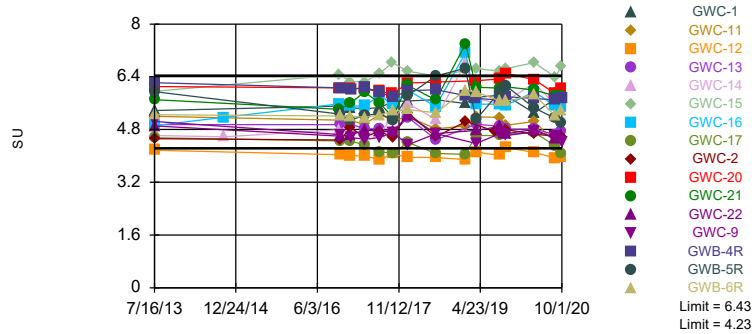


Background Data Summary (based on natural log transformation) (after Kaplan-Meier Adjustment): Mean=-2.25, Std. Dev.=0.7283, n=30, 23.33% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9352, critical = 0.9. Kappa = 2.266 (c=7, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0004702. Comparing 16 points to limit.

Constituent: Fluoride Analysis Run 2/17/2021 4:18 PM View: PL's Interwell Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limits: GWC-12, GWC-15, GWC-17

Prediction Limit
Interwell Non-parametric

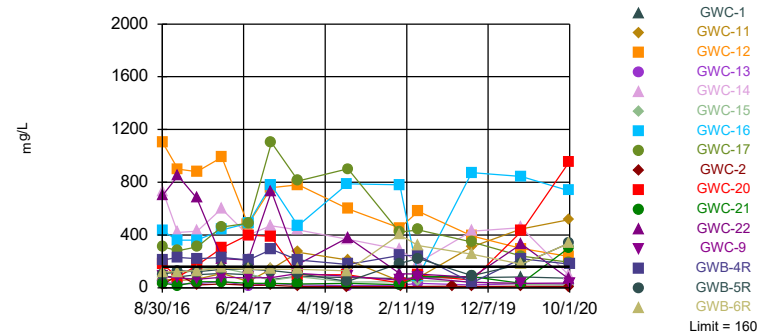


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 28 background values. Annual per-constituent alpha = 0.127. Individual comparison alpha = 0.004098 (1 of 2). Comparing 16 points to limit.

Constituent: pH Analysis Run 2/17/2021 4:18 PM View: PL's Interwell Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit: GWC-11, GWC-12, GWC-16, GWC-17, GWC-20, GWC-21, GWC-4R, GWC-5R, GWC-6R

Prediction Limit
Interwell Non-parametric



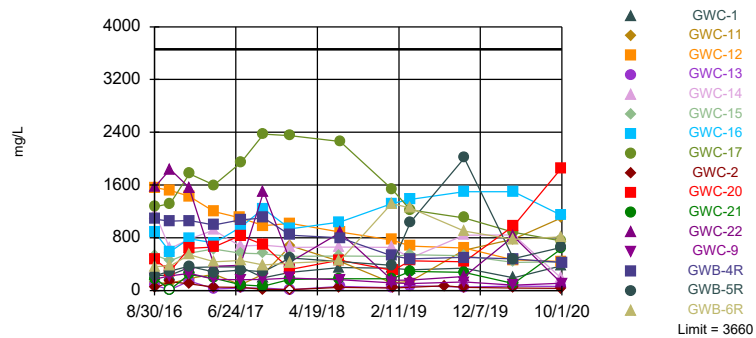
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 26 background values. Annual per-constituent alpha = 0.07127. Individual comparison alpha = 0.002308 (1 of 2). Comparing 16 points to limit.

Constituent: Sulfate Analysis Run 2/17/2021 4:18 PM View: PL's Interwell Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Hollow symbols indicate censored values.

Within Limit

Prediction Limit
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 26 background values. Annual per-constituent alpha = 0.07127. Individual comparison alpha = 0.002308 (1 of 2). Comparing 16 points to limit.

Constituent: Total Dissolved Solids Analysis Run 2/17/2021 4:18 PM View: PL's Interwell Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 2/17/2021 4:21 PM View: PL's Interwell Federal

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-1	GWB-6R	GWA-8 (bg)	GWB-5R	GWC-11	GWC-13	GWC-9	GWC-12	GWC-22
8/30/2016	0.22 (J)	0.09 (J)	0.1 (J)	0.04 (J)					
8/31/2016					<0.1	<0.1	0.55	0.7	0.04 (J)
9/1/2016									
10/24/2016			0.18 (J)						
10/25/2016	<0.1								
10/26/2016		0.24 (J)		0.05 (J)	<0.1	0.55		0.91	0.12 (J)
10/27/2016							0.26 (J)		
1/3/2017			0.18 (J)	0.08 (J)					
1/4/2017	0.18 (J)				<0.1			0.51	0.06 (J)
1/5/2017		0.11 (J)				0.09 (J)			
1/6/2017							0.25 (J)		
4/3/2017			0.12 (J)						
4/4/2017	<0.1								
4/5/2017								0.71	
4/6/2017		0.3		0.006 (J)	<0.1	<0.1	0.16 (J)		<0.1
7/10/2017								0.88	
7/11/2017			0.39		<0.1				0.03 (J)
7/12/2017	0.04 (J)	0.15 (J)		0.05 (J)		<0.1	0.2 (J)		
7/13/2017									
10/2/2017			0.12 (J)						
10/3/2017	<0.1	0.11 (J)		0.11 (J)	<0.1				
10/4/2017						<0.1	0.22 (J)	0.37	0.12 (J)
1/9/2018		<0.1	0.21 (J)						
1/10/2018	<0.1			<0.1		<0.1			
1/11/2018					<0.1		0.98	1.4	<0.1
7/9/2018			0.04 (J)						
7/10/2018	<0.1	<0.1		0.2 (J)					
7/11/2018					<0.1	<0.1	0.14 (J)	0.62	<0.1
1/16/2019	<0.1	0.053 (J)	<0.1	<0.1		<0.1			
1/17/2019					<0.1			1.2	
1/18/2019							0.24 (J)		<0.1
1/21/2019									
3/25/2019			0.082 (J)						
3/26/2019	0.051 (J)	0.046 (J)		<0.1		0.052 (J)			
3/27/2019					<0.1		0.13 (J)	0.036 (J)	<0.1
7/30/2019									
8/26/2019			0.13						
8/27/2019	<0.1	0.13 (J)			<0.1	<0.1		0.3	0.1
8/28/2019				0.097 (J)			0.088 (J)		
10/7/2019			<0.1						
10/8/2019					<0.1	<0.1			
10/9/2019	<0.1	<0.1		<0.1			0.068 (J)	<0.1	<0.1
4/6/2020			0.089 (J)						
4/7/2020	<0.1	<0.1		<0.1	<0.1			0.27 (J)	<0.1
4/8/2020						<0.1	0.058 (J)		
8/17/2020			0.079 (J)			<0.1		0.19	
8/18/2020					<0.1				<0.1
8/19/2020	<0.1	<0.1		<0.1			0.092 (J)		
9/28/2020	<0.1		<0.1			<0.1			
9/29/2020					<0.1			0.16	
9/30/2020		<0.1		<0.1					<0.1
10/1/2020							<0.1		

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 2/17/2021 4:21 PM View: PL's Interwell Federal
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-2	GWA-7 (bg)	GWC-20	GWC-17	GWC-16	GWC-15	GWC-21	GWB-4R	GWC-14
8/30/2016									
8/31/2016	0.07 (J)								
9/1/2016		<0.1	<0.1	0.68	0.55	<0.1	<0.1	<0.1	0.25 (J)
10/24/2016									
10/25/2016		0.07 (J)	<0.1		0.36	0.5	<0.1		0.43
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)		<0.1		
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						<0.1			
4/4/2017	0.08 (J)		0.02 (J)				<0.1	<0.1	0.45
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					0.04 (J)			0.38	
7/13/2017	0.06 (J)	0.41		1.7			<0.1		
10/2/2017			<0.1			<0.1			<0.1
10/3/2017	0.06 (J)				0.86		<0.1		
10/4/2017		0.04 (J)		1.8				<0.1	
1/9/2018		0.46				<0.1	<0.1		<0.1
1/10/2018	<0.1		<0.1		<0.1				
1/11/2018				1.5				<0.1	
7/9/2018			<0.1						<0.1
7/10/2018	<0.1				<0.1	0.15 (J)	<0.1		
7/11/2018		<0.1		1.8				<0.1	
1/16/2019		0.49		1.4				1.2	<0.1
1/17/2019					<0.1	<0.1	<0.1		
1/18/2019									
1/21/2019	<0.1		<0.1						
3/25/2019		0.21 (J)	0.043 (J)					0.064 (J)	
3/26/2019				0.89	0.11 (J)	0.13 (J)	0.071 (J)		0.13 (J)
3/27/2019									
7/30/2019	0.083 (J)								
8/26/2019		<0.1							
8/27/2019	<0.1					<0.1		0.031 (J)	<0.1
8/28/2019			<0.1	0.61	<0.1		<0.1		
10/7/2019									
10/8/2019		<0.1			<0.1	<0.1	<0.1		<0.1
10/9/2019	<0.1		<0.1	<0.1				<0.1	
4/6/2020		0.13 (J)							
4/7/2020					<0.1	<0.1	<0.1	<0.1	<0.1
4/8/2020	<0.1		<0.1	0.55					
8/17/2020									
8/18/2020	<0.1		<0.1	0.51	<0.1	<0.1	<0.1		<0.1
8/19/2020		0.21						0.17	
9/28/2020		0.069 (J)							
9/29/2020	<0.1								<0.1
9/30/2020			<0.1	0.15	<0.1	<0.1	<0.1		
10/1/2020								<0.1	

Prediction Limit

Constituent: pH (SU) Analysis Run 2/17/2021 4:21 PM View: PL's Interwell Federal
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-14	GWC-22	GWB-4R	GWC-21	GWC-11	GWC-20	GWC-1	GWC-17	GWB-5R
7/16/2013	4.62	4.91	6.22	5.71	5.2	6.1	5.38	4.55	5.95
10/11/2014	4.58								
10/24/2016									
10/25/2016	4.79			5.41		6.06	5.51		
10/26/2016		4.6	6.06		5.08			4.45	5.27
10/27/2016									
1/3/2017									5.09
1/4/2017		4.63		5.6	5.06	6.05	5.46		
1/5/2017	4.73							4.45	
1/6/2017			6.02						
4/3/2017									
4/4/2017	4.68		6.08	5.94		6.03	5.43		
4/5/2017								4.33	
4/6/2017		4.79			4.97				5.22
7/10/2017									
7/11/2017	4.72	4.73			5.26	5.96			
7/12/2017			5.93				5.46		5.29
7/13/2017				5.6				4.11	
10/2/2017	5.13					5.88			
10/3/2017				5.18	5.07		5.65		5.08
10/4/2017		4.74	5.77					4.09	
1/9/2018	5.59			6.14					
1/10/2018						6.21	5.67		5.83
1/11/2018		5.22	5.98		5.18			4.4	
7/9/2018	5.11					6.24			
7/10/2018				5.7			5.71		6.42
7/11/2018		4.68	6.01		4.82			4.07	
1/16/2019	6.82		5.83				5.59	4.05	6.66
1/17/2019				7.39	4.91				
1/18/2019		6.98 (o)							
1/21/2019						7.73 (o)			
3/25/2019			5.74			6.28			
3/26/2019	5.74			6.08			5.77	4.62	5.1
3/27/2019		4.77			5.18				
7/30/2019									
8/26/2019									
8/27/2019	5.58	4.89	5.7		5.17		5.84		
8/28/2019				6.05		6.34		4.62	5.95
10/7/2019									
10/8/2019	5.68			6.09	4.93				
10/9/2019		4.68	5.79			6.5	5.82	4.66	6.11
4/6/2020									
4/7/2020	6.2	4.8	5.74	6	5.05		5.3		5.45
4/8/2020						6.31		4.71	
8/17/2020									
8/18/2020	5.56	4.52		5.82	4.41	5.89		4.31	
8/19/2020			5.7				5.73		5.14 (D)
9/28/2020							5.79		
9/29/2020	5.69				4.77				
9/30/2020		4.63		5.82		6.04		4.08	4.99
10/1/2020			5.75						

Prediction Limit

Constituent: pH (SU) Analysis Run 2/17/2021 4:21 PM View: PL's Interwell Federal
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-2	GWC-16	GWB-6R	GWC-13	GWC-15	GWC-12	GWC-9	GWA-8 (bg)	GWA-7 (bg)
7/16/2013	4.52	4.92	5.25	4.95	5.96	4.17	5.05		
10/11/2014		5.17						4.42	
10/24/2016								4.36	
10/25/2016		5.58			6.46				6.17
10/26/2016	4.48		5.21	4.95		4.04			
10/27/2016							4.65		
1/3/2017								4.28	
1/4/2017		5.51				4.01			
1/5/2017	4.85		5.2	4.97	6.25				
1/6/2017							4.56		6.16
4/3/2017					6.25			4.29	
4/4/2017	4.58								
4/5/2017		5.51		4.81		4			
4/6/2017			5.17				4.5		6.26
7/10/2017						3.89			
7/11/2017					6.5			4.35	
7/12/2017		5.84	5.24	4.83			4.56		
7/13/2017	4.74								5.99
10/2/2017					6.83			4.32	
10/3/2017	4.57	5.55	5.36						
10/4/2017				4.71		4.06	4.72		6.16
1/9/2018			5.4		6.57			4.44	6.43
1/10/2018	5.31	5.99		5.17					
1/11/2018						3.96	4.34		
7/9/2018								4.4	
7/10/2018	4.58	5.5	5.31		6.42				
7/11/2018				4.49		3.95	4.68		6.1
1/16/2019			5.99	6.45 (o)				6.16 (o)	6.05
1/17/2019		7.13			8.44 (o)	3.89			
1/18/2019							6.87 (o)		
1/21/2019	5.05								
3/25/2019								4.4	6.06
3/26/2019		5.57	5.94	4.96	6.65				
3/27/2019						4.11	4.38		
7/30/2019	4.74								
8/26/2019								4.26	5.91
8/27/2019	4.77		5.67	4.9	6.57	4.02			
8/28/2019		5.57					4.68		
10/7/2019								4.24	
10/8/2019		5.54		4.81	6.65				5.74
10/9/2019	4.79		5.66			4.25	4.62		
4/6/2020								4.52	6.02
4/7/2020		5.94	5.86		6.83	4.1			
4/8/2020	4.66			4.81			4.73		
8/17/2020				4.65		3.94		4.23	
8/18/2020	4.6	5.52			6.39				
8/19/2020			5.21				4.58		5.81 (D)
9/28/2020				4.76				4.41	5.86
9/29/2020	4.6					3.95			
9/30/2020		5.47	5.39		6.71				
10/1/2020							4.42		

FIGURE G.

Federal Trend Test Summary - Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:25 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>Xform</u>	<u>Alpha</u>	<u>Method</u>
Calcium (mg/L)	GWA-7 (bg)	-0.8582	-57	-43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWA-8 (bg)	2.404	45	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-1	7.096	46	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-11	18.54	52	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-12	-14.86	-76	-43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-16	33.97	47	43	Yes	13	0	n/a	n/a	0.01	NP
pH (SU)	GWA-7 (bg)	-0.09426	-54	-48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-11	90.66	44	43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-12	-183.6	-62	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWB-6R	29.16	44	43	Yes	13	0	n/a	n/a	0.01	NP

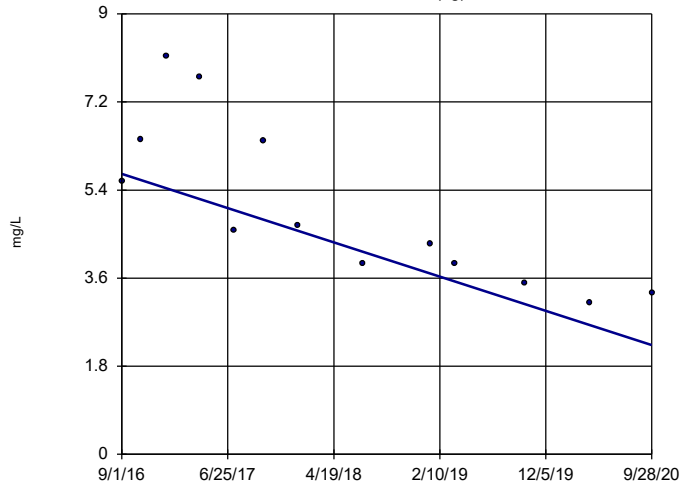
Federal Trend Test Summary - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/17/2021, 4:25 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Calcium (mg/L)	GWA-7 (bg)	-0.8582	-57	-43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWA-8 (bg)	2.404	45	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-1	7.096	46	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-11	18.54	52	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-12	-14.86	-76	-43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-15	0	0	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-16	33.97	47	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-17	-7.952	-22	-43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-20	13.21	22	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-21	10.66	25	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWB-4R	11.14	38	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWB-5R	7.096	39	43	No	13	0	n/a	n/a	0.01	NP
pH (SU)	GWA-7 (bg)	-0.09426	-54	-48	Yes	14	0	n/a	n/a	0.01	NP
pH (SU)	GWA-8 (bg)	-0.00534	-6	-48	No	14	0	n/a	n/a	0.01	NP
pH (SU)	GWC-12	-0.0104	-13	-53	No	15	0	n/a	n/a	0.01	NP
pH (SU)	GWC-15	0.09104	43	48	No	14	0	n/a	n/a	0.01	NP
pH (SU)	GWC-17	-0.003342	-3	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWA-7 (bg)	-4.311	-28	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWA-8 (bg)	-5.525	-22	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-11	90.66	44	43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-12	-183.6	-62	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-16	104.4	36	43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-17	-21.55	-9	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-20	8.539	4	43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-21	7.935	19	43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWB-4R	-8.849	-10	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWB-5R	24.49	24	43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWB-6R	29.16	44	43	Yes	13	0	n/a	n/a	0.01	NP

Sen's Slope Estimator

GWA-7 (bg)

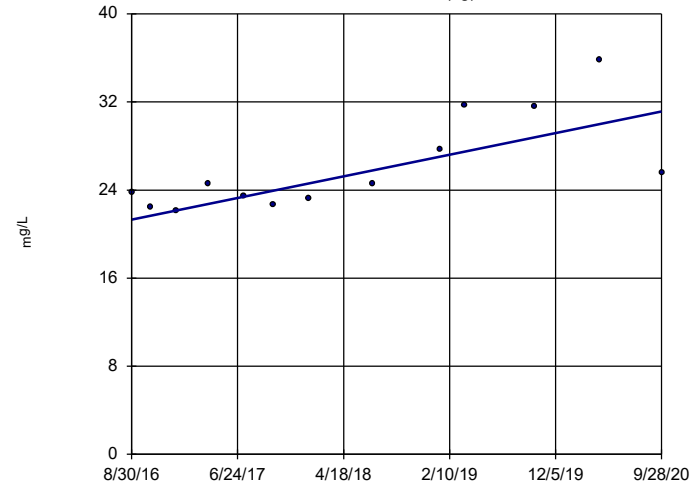


n = 13
 Slope = -0.8582
 units per year.
 Mann-Kendall
 statistic = -57
 critical = -43
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 2/17/2021 4:23 PM View: Trend Tests - PL Exceedances Federal
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator

GWA-8 (bg)

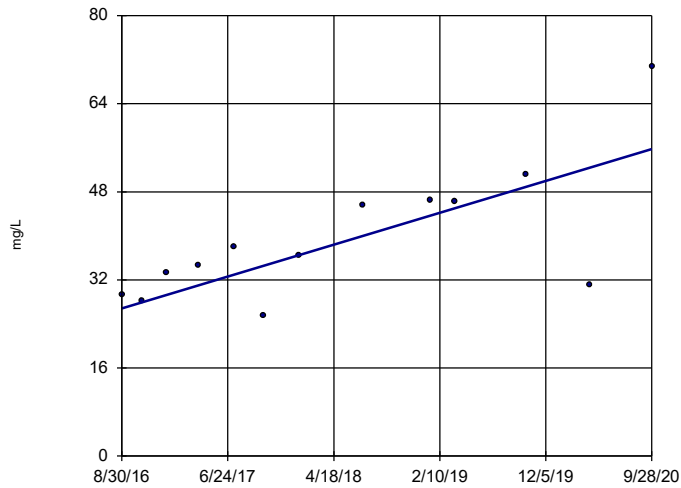


n = 13
 Slope = 2.404
 units per year.
 Mann-Kendall
 statistic = 45
 critical = 43
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 2/17/2021 4:23 PM View: Trend Tests - PL Exceedances Federal
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator

GWC-1

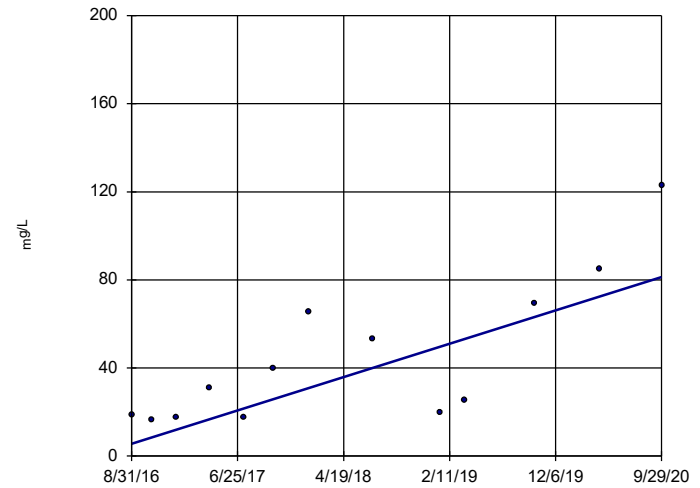


n = 13
 Slope = 7.096
 units per year.
 Mann-Kendall
 statistic = 46
 critical = 43
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 2/17/2021 4:23 PM View: Trend Tests - PL Exceedances Federal
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator

GWC-11

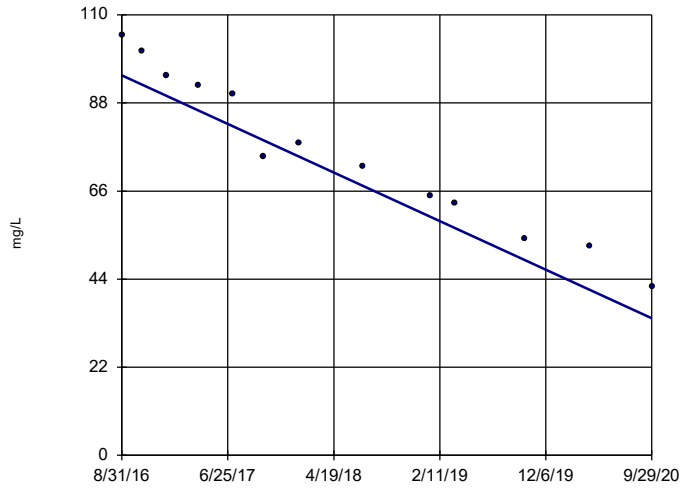


n = 13
 Slope = 18.54
 units per year.
 Mann-Kendall
 statistic = 52
 critical = 43
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 2/17/2021 4:23 PM View: Trend Tests - PL Exceedances Federal
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator

GWC-12

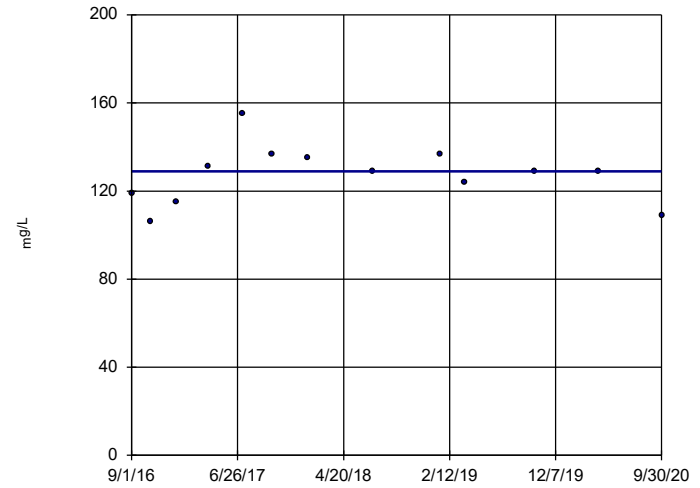


n = 13
 Slope = -14.86
 units per year.
 Mann-Kendall
 statistic = -76
 critical = -43
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 2/17/2021 4:23 PM View: Trend Tests - PL Exceedances Federal
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator

GWC-15

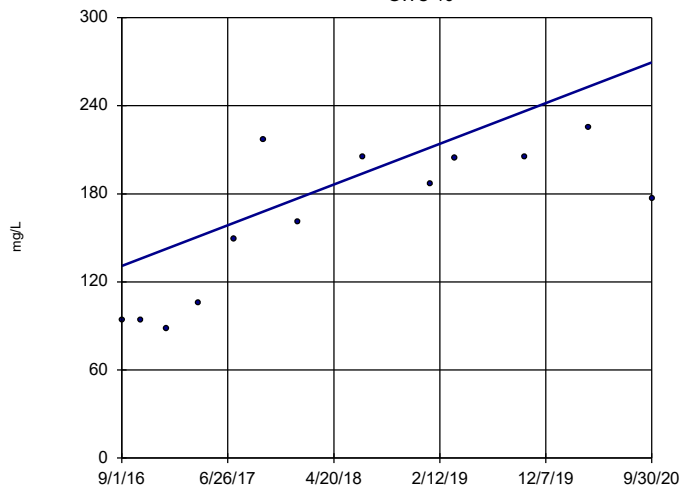


n = 13
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = 0
 critical = 43
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 2/17/2021 4:23 PM View: Trend Tests - PL Exceedances Federal
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator

GWC-16

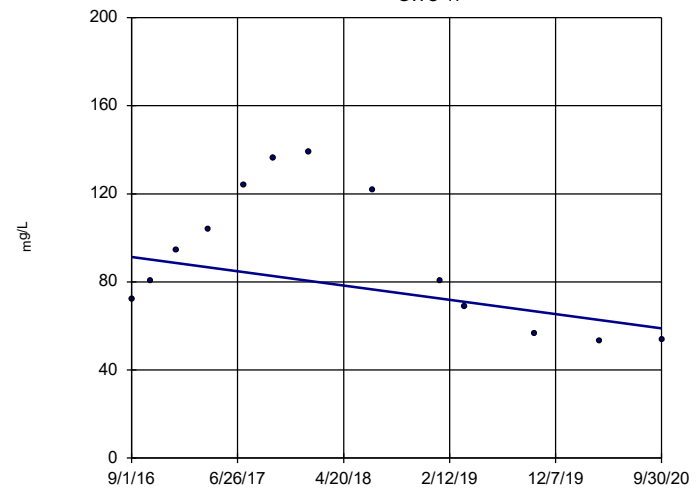


n = 13
 Slope = 33.97
 units per year.
 Mann-Kendall
 statistic = 47
 critical = 43
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 2/17/2021 4:23 PM View: Trend Tests - PL Exceedances Federal
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator

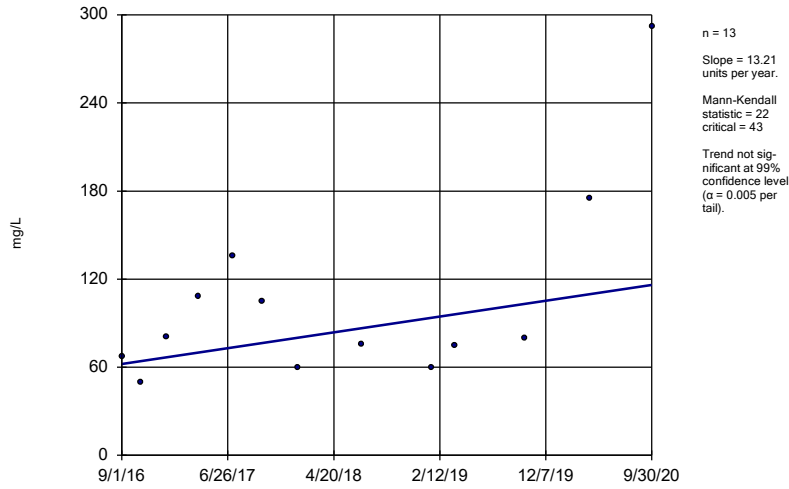
GWC-17



n = 13
 Slope = -7.952
 units per year.
 Mann-Kendall
 statistic = -22
 critical = -43
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

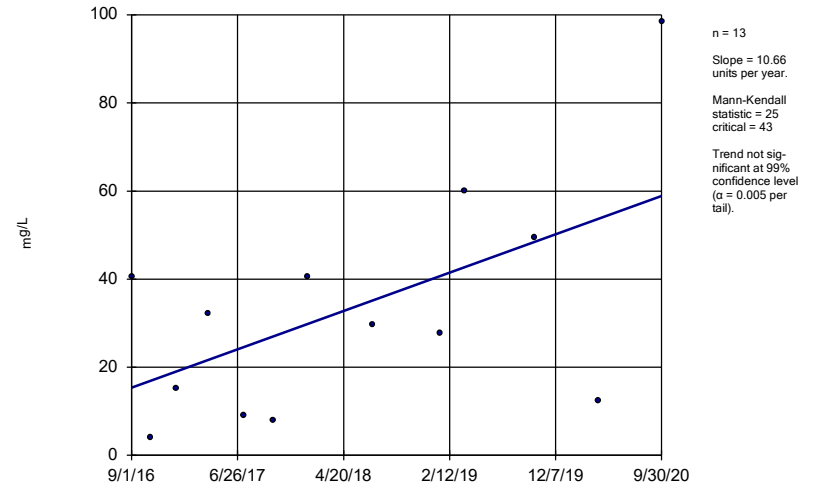
Constituent: Calcium Analysis Run 2/17/2021 4:23 PM View: Trend Tests - PL Exceedances Federal
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWC-20



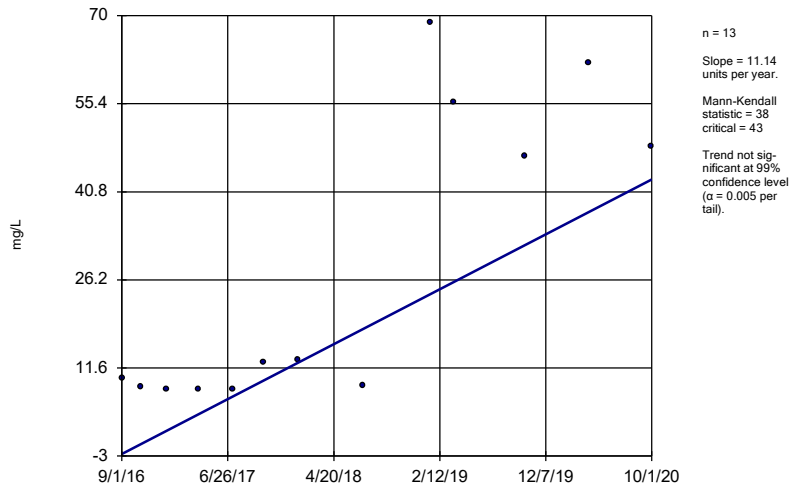
Constituent: Calcium Analysis Run 2/17/2021 4:23 PM View: Trend Tests - PL Exceedances Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWC-21



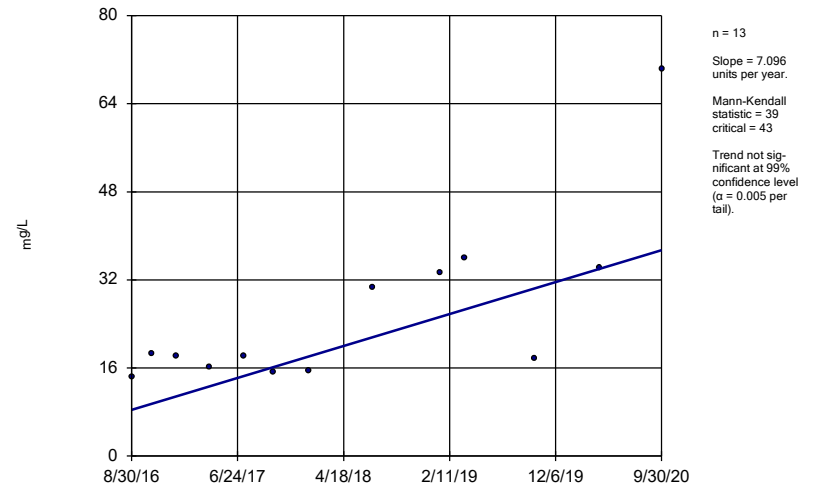
Constituent: Calcium Analysis Run 2/17/2021 4:23 PM View: Trend Tests - PL Exceedances Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWB-4R



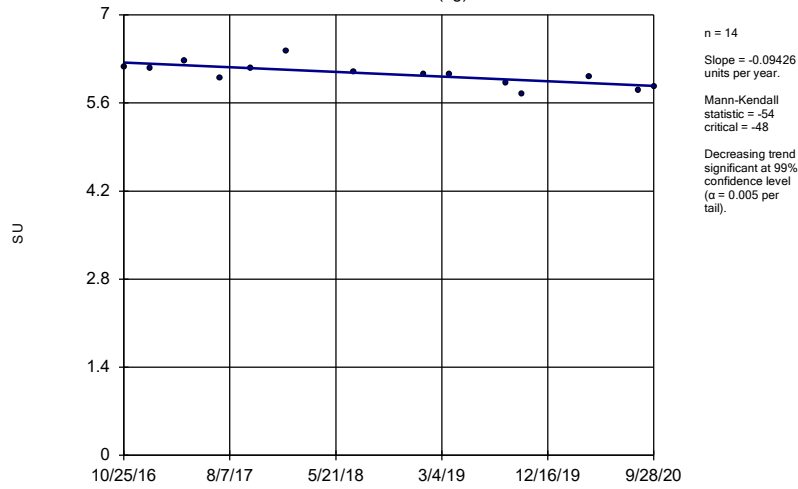
Constituent: Calcium Analysis Run 2/17/2021 4:23 PM View: Trend Tests - PL Exceedances Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWB-5R



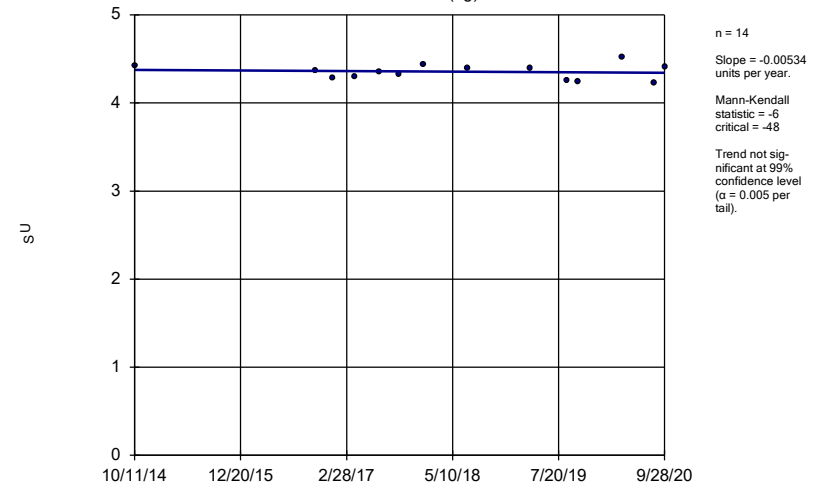
Constituent: Calcium Analysis Run 2/17/2021 4:23 PM View: Trend Tests - PL Exceedances Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWA-7 (bg)



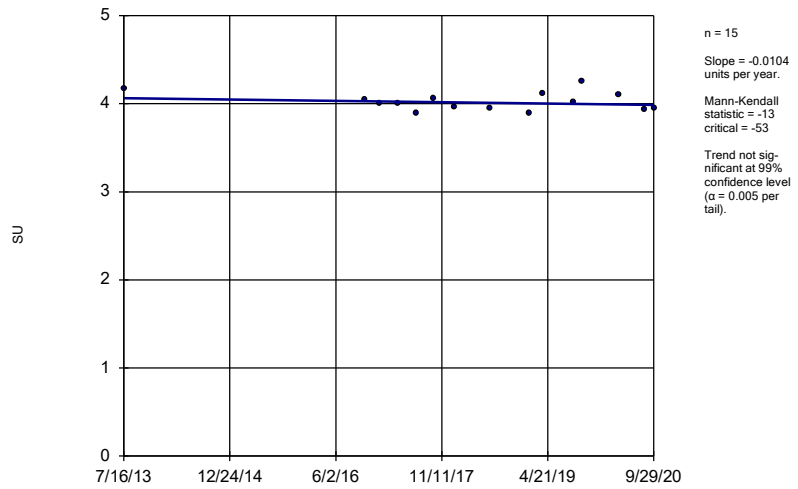
Constituent: pH Analysis Run 2/17/2021 4:23 PM View: Trend Tests - PL Exceedances Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWA-8 (bg)



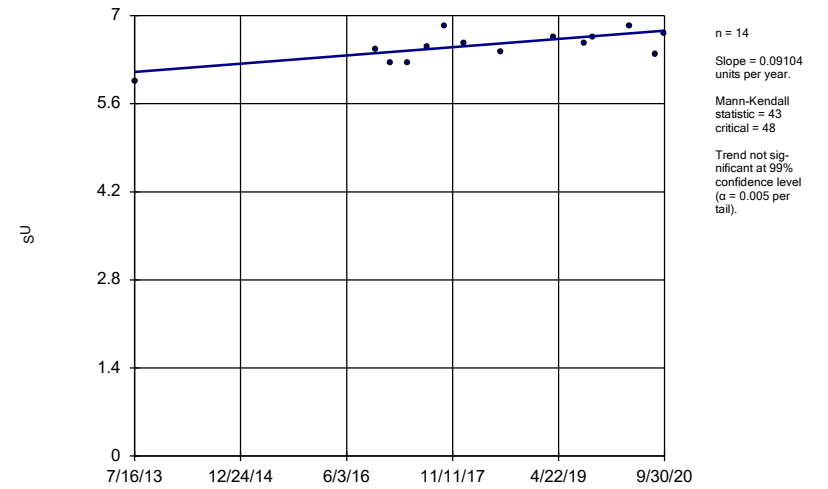
Constituent: pH Analysis Run 2/17/2021 4:23 PM View: Trend Tests - PL Exceedances Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWC-12



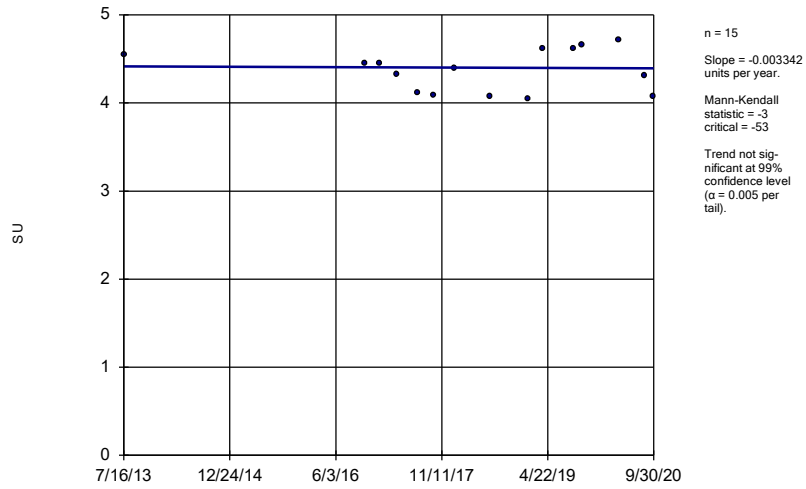
Constituent: pH Analysis Run 2/17/2021 4:23 PM View: Trend Tests - PL Exceedances Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWC-15



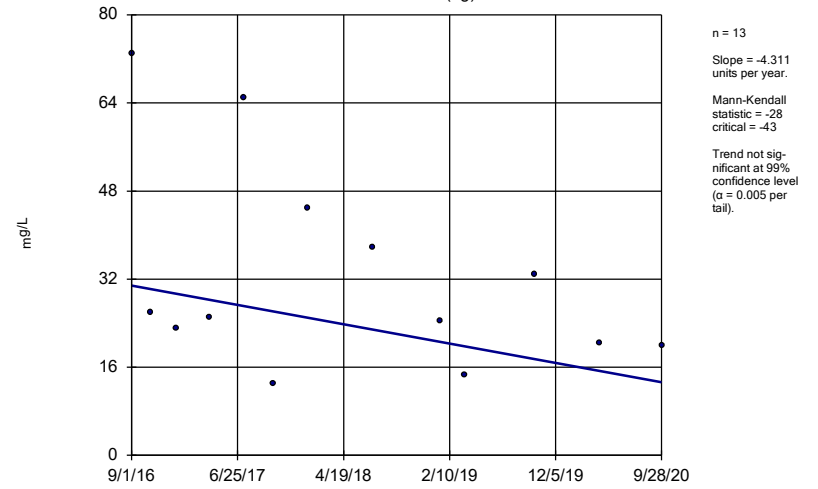
Constituent: pH Analysis Run 2/17/2021 4:23 PM View: Trend Tests - PL Exceedances Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWC-17



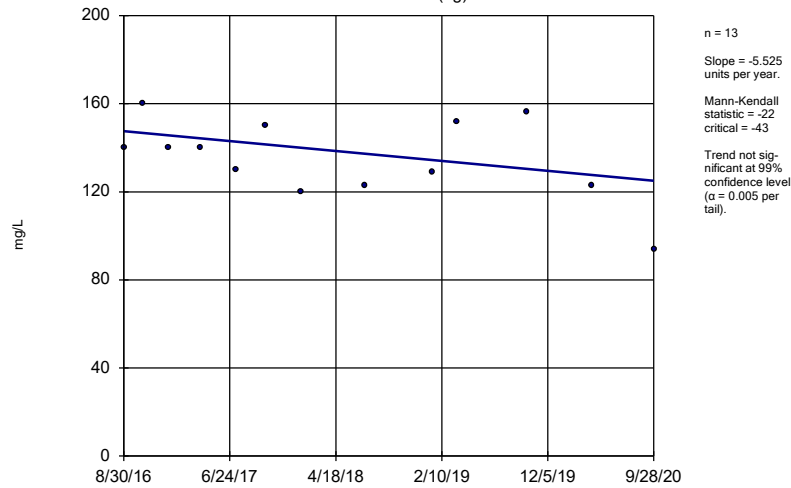
Constituent: pH Analysis Run 2/17/2021 4:24 PM View: Trend Tests - PL Exceedances Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWA-7 (bg)



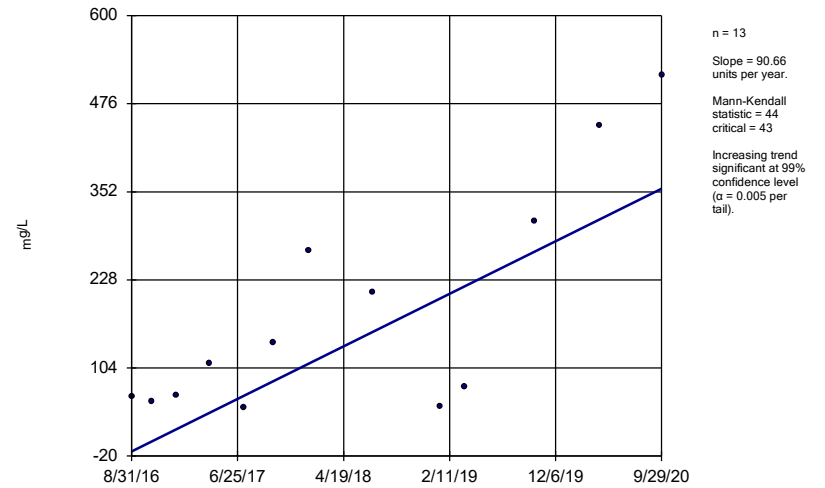
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWA-8 (bg)



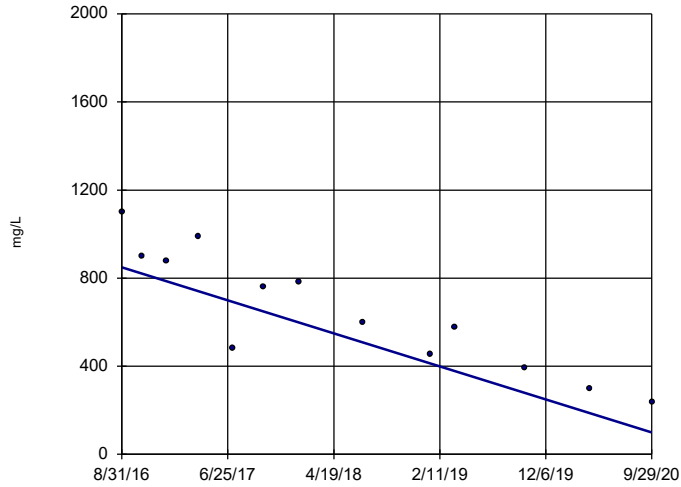
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWC-11



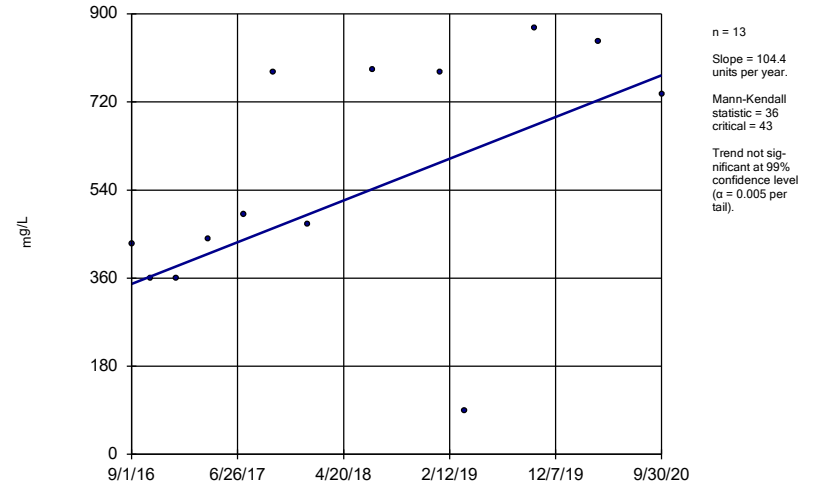
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWC-12



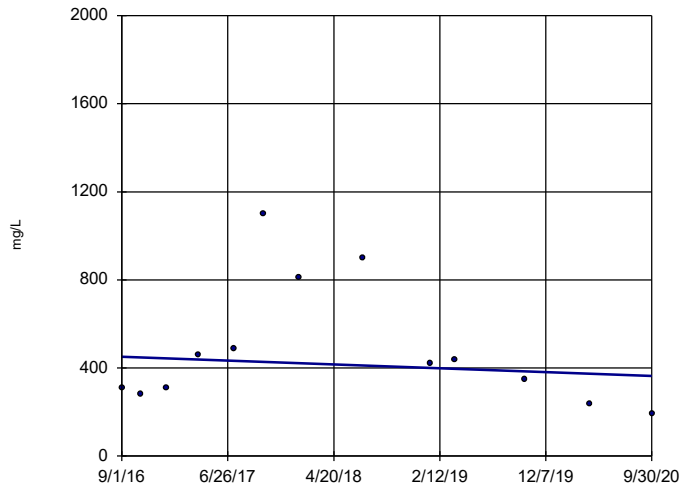
Constituent: Sulfate Analysis Run 2/17/2021 4:24 PM View: Trend Tests - PL Exceedances Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWC-16



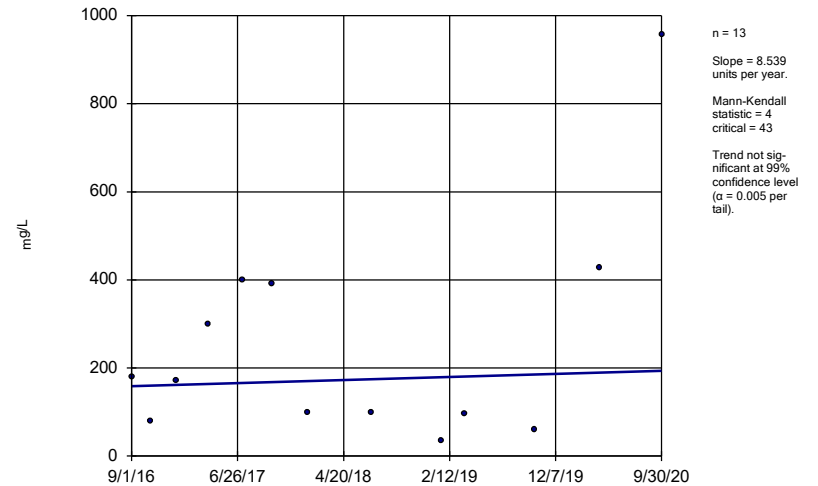
Constituent: Sulfate Analysis Run 2/17/2021 4:24 PM View: Trend Tests - PL Exceedances Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWC-17



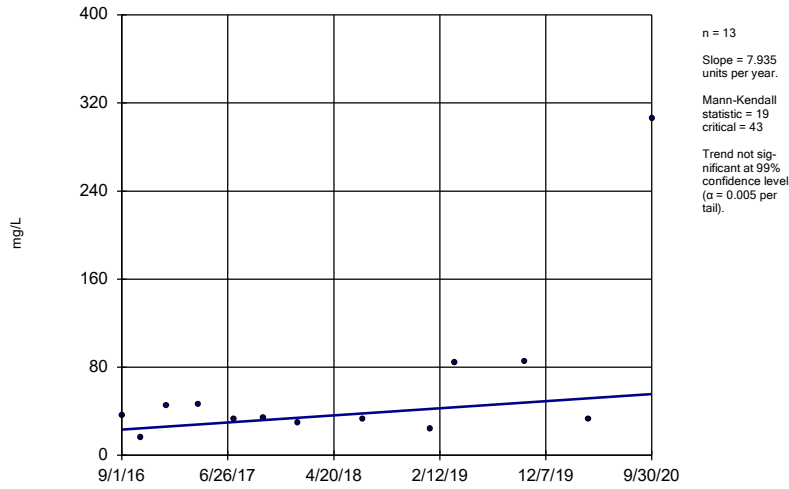
Constituent: Sulfate Analysis Run 2/17/2021 4:24 PM View: Trend Tests - PL Exceedances Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWC-20



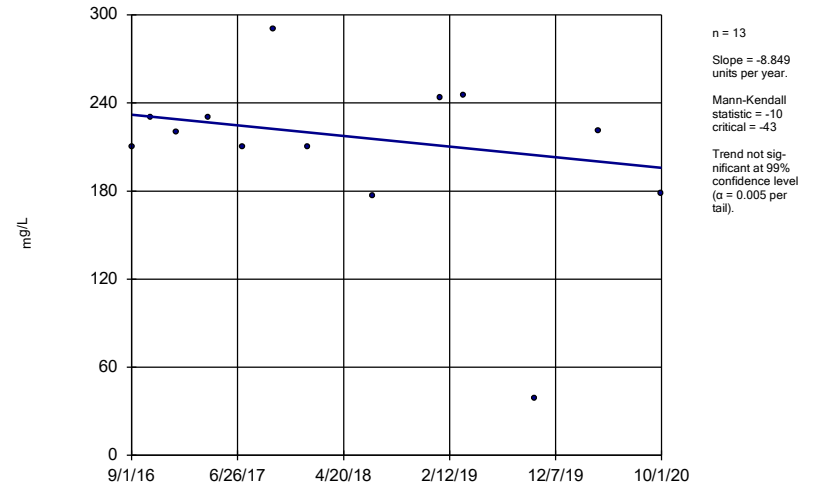
Constituent: Sulfate Analysis Run 2/17/2021 4:24 PM View: Trend Tests - PL Exceedances Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWC-21



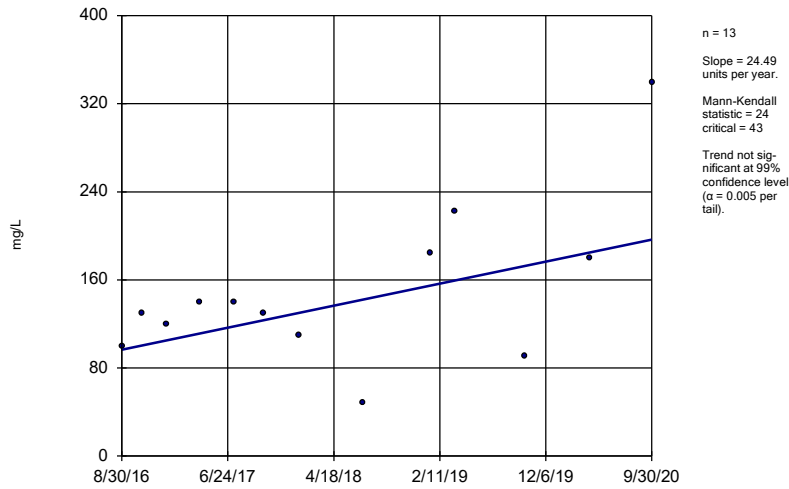
Constituent: Sulfate Analysis Run 2/17/2021 4:24 PM View: Trend Tests - PL Exceedances Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWB-4R



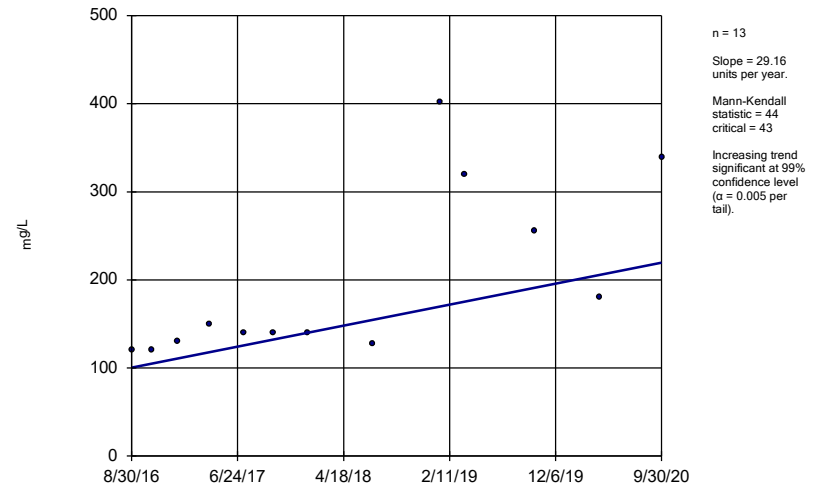
Constituent: Sulfate Analysis Run 2/17/2021 4:24 PM View: Trend Tests - PL Exceedances Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWB-5R



Constituent: Sulfate Analysis Run 2/17/2021 4:24 PM View: Trend Tests - PL Exceedances Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWB-6R



Constituent: Sulfate Analysis Run 2/17/2021 4:24 PM View: Trend Tests - PL Exceedances Federal
Grumman Road Landfill Client: Southern Company Data: Grumman Road

FIGURE H.

Tolerance Limit Summary Table

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/1/2021, 1:50 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Bg N</u>	<u>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	n/a	0.003	119	n/a	n/a	94.96	n/a	n/a	0.002234	NP Inter
Arsenic (mg/L)	n/a	0.0287	119	n/a	n/a	77.31	n/a	n/a	0.002234	NP Inter
Barium (mg/L)	n/a	0.22	117	n/a	n/a	0	n/a	n/a	0.002475	NP Inter
Beryllium (mg/L)	n/a	0.003	39	n/a	n/a	53.85	n/a	n/a	0.1353	NP Inter
Cadmium (mg/L)	n/a	0.0025	37	n/a	n/a	94.59	n/a	n/a	0.1499	NP Inter
Chromium (mg/L)	n/a	0.068	118	n/a	n/a	63.56	n/a	n/a	0.002352	NP Inter
Cobalt (mg/L)	n/a	0.0102	38	n/a	n/a	52.63	n/a	n/a	0.1424	NP Inter
Combined Radium 226 + 228 (pCi/L)	n/a	33.8	26	n/a	n/a	0	n/a	n/a	0.2635	NP Inter
Fluoride (mg/L)	n/a	0.49	30	n/a	n/a	23.33	n/a	n/a	0.2146	NP Inter
Lead (mg/L)	n/a	0.013	115	n/a	n/a	76.52	n/a	n/a	0.002743	NP Inter
Lithium (mg/L)	n/a	0.03	26	n/a	n/a	76.92	n/a	n/a	0.2635	NP Inter
Mercury (mg/L)	n/a	0.0002	22	n/a	n/a	86.36	n/a	n/a	0.3235	NP Inter
Molybdenum (mg/L)	n/a	0.01	26	n/a	n/a	88.46	n/a	n/a	0.2635	NP Inter
Selenium (mg/L)	n/a	0.0438	119	n/a	n/a	83.19	n/a	n/a	0.002234	NP Inter
Thallium (mg/L)	n/a	0.001	58	n/a	n/a	93.1	n/a	n/a	0.05105	NP Inter
Vanadium (mg/L)	n/a	0.425	111	n/a	n/a	64.86	n/a	n/a	0.003368	NP Inter
Zinc (mg/L)	n/a	0.16	105	n/a	n/a	27.62	n/a	n/a	0.004581	NP Inter

FIGURE I.

GRUMMAN ROAD LANDFILL GWPS			
Constituent Name	MCL	Background Limit	GWPS
Antimony, Total (mg/L)	0.006	0.003	0.006
Arsenic, Total (mg/L)	0.01	0.029	0.029
Barium, Total (mg/L)	2	0.22	2
Beryllium, Total (mg/L)	0.004	0.003	0.004
Cadmium, Total (mg/L)	0.005	0.0025	0.005
Chromium, Total (mg/L)	0.1	0.068	0.1
Cobalt, Total (mg/L)	n/a	0.01	0.01
Combined Radium, Total (pCi/L)	5	33.8	33.8
Fluoride, Total (mg/L)	4	0.49	4
Lead, Total (mg/L)	n/a	0.013	0.013
Lithium, Total (mg/L)	n/a	0.03	0.03
Mercury, Total (mg/L)	0.002	0.0002	0.002
Molybdenum, Total (mg/L)	n/a	0.01	0.01
Selenium, Total (mg/L)	0.05	0.044	0.05
Thallium, Total (mg/L)	0.002	0.001	0.002
Vanadium (mg/L)	n/a	0.43	0.43
Zinc (mg/L)	n/a	0.16	0.16

**Highlighted cells indicated Background is higher than MCLs.*

**MCL = Maximum Contaminant Level*

**GWPS - Groundwater Protection Standard*

FIGURE J.

Appendix II and IV Confidence Interval Summary Table - Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/1/2021, 1:55 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	GWC-15	0.1476	0.05755	0.029	Yes 17	0.1099	0.07879	0	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	GWC-16	0.089	0.0466	0.029	Yes 18	0.07044	0.01771	0	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-20	0.3663	0.2809	0.029	Yes 17	0.3236	0.06818	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-1	0.1716	0.07167	0.01	Yes 13	0.1216	0.06717	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-15	0.1145	0.0908	0.01	Yes 13	0.1026	0.01591	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-16	0.1953	0.1126	0.01	Yes 13	0.154	0.05558	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-20	0.2598	0.1032	0.01	Yes 13	0.1815	0.1053	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-21	0.06514	0.01913	0.01	Yes 13	0.04214	0.03094	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWB-4R	0.15	0.0209	0.01	Yes 13	0.06482	0.05453	0	None	No	0.01	NP (normality)

Appendix II and IV Confidence Interval Summary Table - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/1/2021, 1:55 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	GWA-7 (bg)	0.003	0.0017	0.006	No 17	0.002571	0.0008176	76.47	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-1	0.003	0.00061	0.006	No 17	0.002704	0.0008382	88.24	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-11	0.003	0.00051	0.006	No 17	0.001724	0.001246	47.06	None	No	0.01	NP (normality)
Antimony (mg/L)	GWC-13	0.003	0.0006	0.006	No 17	0.002859	0.0005821	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-14	0.003	0.003	0.006	No 18	0.003	0	100	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-16	0.003	0.003	0.006	No 18	0.003	0	100	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-2	0.003	0.0016	0.006	No 17	0.002818	0.0005175	88.24	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-20	0.003	0.0019	0.006	No 17	0.002935	0.0002668	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-21	0.003	0.00033	0.006	No 17	0.002843	0.0006476	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-22	0.003	0.0022	0.006	No 17	0.002573	0.0008769	76.47	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-9	0.003	0.0016	0.006	No 17	0.002761	0.0007121	88.24	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWB-4R	0.003	0.0003	0.006	No 17	0.002841	0.0006548	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWB-5R	0.003	0.00054	0.006	No 17	0.002696	0.0008579	88.24	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWB-6R	0.003	0.00059	0.006	No 17	0.002858	0.0005845	94.12	None	No	0.01	NP (NDs)
Arsenic (mg/L)	GWA-7 (bg)	0.01003	0.004246	0.029	No 17	0.008241	0.006088	23.53	Kaplan-Meierx^(1/3)		0.01	Param.
Arsenic (mg/L)	GWA-8 (bg)	0.005	0.0009	0.029	No 18	0.003569	0.002086	66.67	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-1	0.0058	0.0018	0.029	No 16	0.0046	0.006187	0	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-12	0.005	0.0009	0.029	No 17	0.004253	0.001664	82.35	None	No	0.01	NP (NDs)
Arsenic (mg/L)	GWC-13	0.005	0.0006	0.029	No 17	0.004481	0.001465	88.24	None	No	0.01	NP (NDs)
Arsenic (mg/L)	GWC-14	0.0026	0.0017	0.029	No 18	0.002363	0.001043	11.11	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-15	0.1476	0.05755	0.029	Yes 17	0.1099	0.07879	0	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	GWC-16	0.089	0.0466	0.029	Yes 18	0.07044	0.01771	0	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-17	0.005	0.0011	0.029	No 17	0.002589	0.001853	35.29	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-2	0.005	0.00094	0.029	No 17	0.004231	0.001715	82.35	None	No	0.01	NP (NDs)
Arsenic (mg/L)	GWC-20	0.3663	0.2809	0.029	Yes 17	0.3236	0.06818	0	None	No	0.01	Param.
Arsenic (mg/L)	GWC-21	0.00419	0.002641	0.029	No 17	0.004106	0.001342	35.29	Kaplan-MeierNo		0.01	Param.
Arsenic (mg/L)	GWC-22	0.005	0.0006	0.029	No 17	0.002975	0.002038	47.06	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-9	0.005	0.00084	0.029	No 17	0.004755	0.001009	94.12	None	No	0.01	NP (NDs)
Arsenic (mg/L)	GWB-4R	0.003241	0.0018	0.029	No 17	0.002521	0.00115	11.76	None	No	0.01	Param.
Arsenic (mg/L)	GWB-5R	0.005	0.001	0.029	No 17	0.002406	0.001814	23.53	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWB-6R	0.00259	0.001237	0.029	No 17	0.002943	0.001663	29.41	Kaplan-Meierx^(1/3)		0.01	Param.
Barium (mg/L)	GWA-7 (bg)	0.147	0.08279	2	No 16	0.1149	0.04934	0	None	No	0.01	Param.
Barium (mg/L)	GWA-8 (bg)	0.06557	0.05823	2	No 18	0.0619	0.006073	0	None	No	0.01	Param.
Barium (mg/L)	GWC-1	0.05709	0.05031	2	No 17	0.0537	0.005409	0	None	No	0.01	Param.
Barium (mg/L)	GWC-11	0.116	0.06249	2	No 17	0.08923	0.04267	0	None	No	0.01	Param.
Barium (mg/L)	GWC-12	0.0191	0.017	2	No 17	0.01841	0.00374	0	None	No	0.01	NP (normality)
Barium (mg/L)	GWC-13	0.02514	0.02028	2	No 17	0.02271	0.003874	0	None	No	0.01	Param.
Barium (mg/L)	GWC-14	0.038	0.0248	2	No 18	0.03612	0.01865	0	None	No	0.01	NP (normality)
Barium (mg/L)	GWC-15	0.04776	0.03849	2	No 17	0.04312	0.007403	0	None	No	0.01	Param.
Barium (mg/L)	GWC-16	0.1226	0.05782	2	No 16	0.0999	0.0697	0	None	ln(x)	0.01	Param.
Barium (mg/L)	GWC-17	0.1149	0.04739	2	No 17	0.08628	0.05882	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	GWC-2	0.057	0.049	2	No 16	0.0535	0.007975	0	None	No	0.01	NP (normality)
Barium (mg/L)	GWC-20	0.164	0.078	2	No 17	0.1374	0.09319	0	None	No	0.01	NP (normality)
Barium (mg/L)	GWC-21	0.0927	0.04919	2	No 17	0.07652	0.04397	0	None	ln(x)	0.01	Param.
Barium (mg/L)	GWC-22	0.09837	0.06303	2	No 17	0.0807	0.0282	0	None	No	0.01	Param.
Barium (mg/L)	GWC-9	0.2639	0.1907	2	No 17	0.2273	0.05839	0	None	No	0.01	Param.
Barium (mg/L)	GWB-4R	0.09313	0.07851	2	No 17	0.08629	0.01261	0	None	ln(x)	0.01	Param.
Barium (mg/L)	GWB-5R	0.1569	0.09433	2	No 17	0.1295	0.05651	0	None	x^(1/3)	0.01	Param.
Barium (mg/L)	GWB-6R	0.107	0.013	2	No 17	0.07405	0.04251	0	None	No	0.01	NP (normality)
Beryllium (mg/L)	GWA-7 (bg)	0.003	0.0003	0.004	No 13	0.001908	0.001288	53.85	None	No	0.01	NP (normality)
Beryllium (mg/L)	GWA-8 (bg)	0.00024	0.00019	0.004	No 13	0.0004169	0.0007763	7.692	None	No	0.01	NP (normality)
Beryllium (mg/L)	GWC-12	0.0008417	0.0005038	0.004	No 13	0.00068	0.000238	0	None	sqrt(x)	0.01	Param.
Beryllium (mg/L)	GWC-13	0.003	0.000058	0.004	No 13	0.002774	0.000816	92.31	None	No	0.01	NP (NDs)
Beryllium (mg/L)	GWC-14	0.003	0.00009	0.004	No 13	0.002327	0.001279	76.92	None	No	0.01	NP (NDs)
Beryllium (mg/L)	GWC-16	0.003	0.000068	0.004	No 13	0.0009827	0.0014	30.77	None	No	0.01	NP (normality)

Appendix II and IV Confidence Interval Summary Table - All Results Page 2

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/1/2021, 1:55 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Beryllium (mg/L)	GWC-17	0.002825	0.00159	0.004	No 13	0.002277	0.0009284	0	None	ln(x)	0.01	Param.
Beryllium (mg/L)	GWC-2	0.003	0.000088	0.004	No 14	0.001972	0.001433	64.29	None	No	0.01	NP (normality)
Beryllium (mg/L)	GWC-22	0.003	0.000076	0.004	No 13	0.001449	0.001495	46.15	None	No	0.01	NP (normality)
Beryllium (mg/L)	GWC-9	0.0003	0.0002	0.004	No 13	0.0002508	0.00004856	0	None	No	0.01	NP (normality)
Beryllium (mg/L)	GWB-4R	0.003	0.0001	0.004	No 13	0.001685	0.001481	53.85	None	No	0.01	NP (normality)
Beryllium (mg/L)	GWB-5R	0.003	0.000076	0.004	No 13	0.0008324	0.001238	23.08	None	No	0.01	NP (normality)
Beryllium (mg/L)	GWB-6R	0.003	0.00005	0.004	No 13	0.002546	0.001109	84.62	None	No	0.01	NP (NDs)
Cadmium (mg/L)	GWA-7 (bg)	0.0025	0.0007	0.005	No 13	0.002177	0.0007981	84.62	None	No	0.01	NP (NDs)
Cadmium (mg/L)	GWC-1	0.0025	0.0001	0.005	No 13	0.002128	0.0009069	84.62	None	No	0.01	NP (NDs)
Cadmium (mg/L)	GWC-11	0.0007867	0.000195	0.005	No 13	0.0005485	0.0006203	7.692	None	x^(1/3)	0.01	Param.
Cadmium (mg/L)	GWC-14	0.0025	0.00012	0.005	No 13	0.001245	0.001209	46.15	None	No	0.01	NP (normality)
Cadmium (mg/L)	GWC-22	0.0025	0.0001	0.005	No 13	0.0007346	0.001013	23.08	None	No	0.01	NP (normality)
Cadmium (mg/L)	GWB-4R	0.0025	0.00009	0.005	No 13	0.001775	0.001132	69.23	None	No	0.01	NP (normality)
Chromium (mg/L)	GWA-7 (bg)	0.04075	0.0199	0.1	No 16	0.03145	0.01716	0	None	sqrt(x)	0.01	Param.
Chromium (mg/L)	GWA-8 (bg)	0.01	0.00071	0.1	No 18	0.006892	0.004525	66.67	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-1	0.0024	0.0016	0.1	No 17	0.002647	0.002187	5.882	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-11	0.01	0.0007	0.1	No 17	0.004628	0.004614	35.29	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-12	0.0028	0.00085	0.1	No 17	0.002761	0.003484	17.65	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-13	0.01	0.0007	0.1	No 17	0.005192	0.004681	47.06	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-14	0.01	0.00074	0.1	No 18	0.003926	0.004425	33.33	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-15	0.01	0.0012	0.1	No 17	0.004424	0.004252	35.29	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-16	0.01	0.00098	0.1	No 18	0.004982	0.004621	38.89	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-17	0.01	0.0009	0.1	No 17	0.003953	0.004165	29.41	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-2	0.01	0.00069	0.1	No 17	0.006178	0.00471	58.82	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-20	0.01	0.00089	0.1	No 17	0.004694	0.004578	41.18	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-21	0.01	0.00065	0.1	No 17	0.005088	0.004776	41.18	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-22	0.01	0.00057	0.1	No 17	0.005022	0.004838	47.06	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-9	0.01	0.001	0.1	No 17	0.004376	0.004297	35.29	None	No	0.01	NP (normality)
Chromium (mg/L)	GWB-4R	0.0106	0.0022	0.1	No 17	0.007	0.004547	0	None	No	0.01	NP (normality)
Chromium (mg/L)	GWB-5R	0.004847	0.001087	0.1	No 17	0.008741	0.01682	23.53	Kaplan-Meier	ln(x)	0.01	Param.
Chromium (mg/L)	GWB-6R	0.006321	0.001915	0.1	No 17	0.005429	0.005535	0	None	ln(x)	0.01	Param.
Cobalt (mg/L)	GWA-7 (bg)	0.006264	0.002786	0.01	No 12	0.004525	0.002216	8.333	None	No	0.01	Param.
Cobalt (mg/L)	GWA-8 (bg)	0.005	0.0004	0.01	No 13	0.002542	0.002369	46.15	None	No	0.01	NP (normality)
Cobalt (mg/L)	GWC-11	0.005	0.0004	0.01	No 13	0.003942	0.002011	76.92	None	No	0.01	NP (NDs)
Cobalt (mg/L)	GWC-12	0.001378	0.0008286	0.01	No 13	0.001103	0.0003691	0	None	No	0.01	Param.
Cobalt (mg/L)	GWC-14	0.005	0.0003	0.01	No 13	0.004638	0.001304	92.31	None	No	0.01	NP (NDs)
Cobalt (mg/L)	GWC-17	0.006347	0.003084	0.01	No 13	0.004715	0.002194	0	None	No	0.01	Param.
Cobalt (mg/L)	GWC-2	0.005	0.00032	0.01	No 14	0.003384	0.002258	64.29	None	No	0.01	NP (normality)
Cobalt (mg/L)	GWC-22	0.005	0.0007	0.01	No 13	0.003034	0.002215	53.85	None	No	0.01	NP (normality)
Cobalt (mg/L)	GWC-9	0.0021	0.00099	0.01	No 13	0.001444	0.0003785	0	None	No	0.01	NP (normality)
Cobalt (mg/L)	GWB-4R	0.0024	0.00072	0.01	No 13	0.001371	0.001185	7.692	None	No	0.01	NP (normality)
Cobalt (mg/L)	GWB-5R	0.005	0.00053	0.01	No 13	0.00343	0.001963	53.85	None	No	0.01	NP (normality)
Cobalt (mg/L)	GWB-6R	0.005	0.00038	0.01	No 13	0.004645	0.001281	92.31	None	No	0.01	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	GWA-7 (bg)	16.53	5.477	33.8	No 13	11.79	9.412	0	None	x^(1/3)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWA-8 (bg)	2.796	1.947	33.8	No 13	2.372	0.5715	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-1	2.337	1.578	33.8	No 13	1.958	0.5104	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-11	6.68	2.756	33.8	No 13	4.718	2.638	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-12	3.043	1.816	33.8	No 13	2.43	0.8249	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-13	1.373	0.7793	33.8	No 13	1.076	0.3993	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-14	1.273	0.7216	33.8	No 13	0.9973	0.3707	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-15	1.87	1.103	33.8	No 13	1.486	0.5156	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-16	4.17	1.72	33.8	No 13	2.244	0.923	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GWC-17	4.199	2.777	33.8	No 13	3.488	0.956	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-2	1.021	0.6234	33.8	No 13	0.8223	0.2675	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-20	4.25	1.613	33.8	No 13	2.932	1.773	0	None	No	0.01	Param.

Appendix II and IV Confidence Interval Summary Table - All Results Page 3

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/1/2021, 1:55 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Combined Radium 226 + 228 (pCi/L)	GWC-21	2.454	1.093	33.8	No 13	1.774	0.9153	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-22	7.65	3	33.8	No 13	5.675	1.933	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GWC-9	4.024	2.285	33.8	No 13	3.278	1.619	0	None	ln(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWB-4R	5.1	2.32	33.8	No 13	3.512	1.207	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GWB-5R	3.897	2.048	33.8	No 13	3.048	1.498	0	None	x^(1/3)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWB-6R	4.892	2.351	33.8	No 13	3.622	1.708	0	None	No	0.01	Param.
Fluoride (mg/L)	GWA-7 (bg)	0.2394	0.0727	4	No 15	0.1826	0.1508	26.67	Kaplan-Meier	x^(1/3)	0.01	Param.
Fluoride (mg/L)	GWA-8 (bg)	0.162	0.07275	4	No 15	0.1347	0.08331	20	Kaplan-Meier	x^(1/3)	0.01	Param.
Fluoride (mg/L)	GWC-1	0.18	0.051	4	No 15	0.1061	0.0433	73.33	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWC-12	0.8352	0.2789	4	No 15	0.5571	0.4105	6.667	None	No	0.01	Param.
Fluoride (mg/L)	GWC-13	0.55	0.09	4	No 15	0.1261	0.1179	80	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWC-14	0.41	0.1	4	No 15	0.1853	0.1346	60	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWC-15	0.15	0.06	4	No 15	0.1373	0.1064	66.67	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWC-16	0.36	0.1	4	No 15	0.2013	0.2248	53.33	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWC-17	1.383	0.577	4	No 15	0.98	0.5947	6.667	None	No	0.01	Param.
Fluoride (mg/L)	GWC-2	0.17	0.07	4	No 15	0.1295	0.1381	53.33	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWC-20	0.14	0.043	4	No 15	0.08953	0.03071	73.33	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWC-21	0.1	0.071	4	No 15	0.09807	0.007488	93.33	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWC-22	0.12	0.06	4	No 15	0.09133	0.02642	60	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWC-9	0.289	0.1025	4	No 15	0.2357	0.2393	6.667	None	ln(x)	0.01	Param.
Fluoride (mg/L)	GWB-4R	0.17	0.064	4	No 15	0.185	0.292	53.33	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWB-5R	0.11	0.05	4	No 15	0.08887	0.04317	46.67	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWB-6R	0.1483	0.06391	4	No 15	0.1219	0.06612	40	Kaplan-Meier	ln(x)	0.01	Param.
Lead (mg/L)	GWA-7 (bg)	0.008665	0.003602	0.013	No 15	0.006133	0.003736	0	None	No	0.01	Param.
Lead (mg/L)	GWA-8 (bg)	0.005	0.0001	0.013	No 18	0.003372	0.002369	66.67	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-1	0.005	0.00012	0.013	No 17	0.004133	0.00193	82.35	None	No	0.01	NP (NDs)
Lead (mg/L)	GWC-11	0.00035	0.0002	0.013	No 17	0.0008112	0.001578	11.76	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-12	0.005	0.000081	0.013	No 17	0.001755	0.002298	29.41	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-13	0.005	0.00013	0.013	No 17	0.001791	0.002165	29.41	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-14	0.005	0.00051	0.013	No 18	0.003933	0.002056	77.78	None	No	0.01	NP (NDs)
Lead (mg/L)	GWC-15	0.005	0.0001	0.013	No 17	0.00244	0.002489	47.06	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-16	0.005	0.0001	0.013	No 18	0.002033	0.002436	38.89	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-17	0.005	0.0001	0.013	No 17	0.003031	0.002432	58.82	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-2	0.005	0.0002	0.013	No 17	0.003579	0.00227	70.59	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-20	0.005	0.00018	0.013	No 17	0.003566	0.002291	70.59	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-21	0.005	0.00009	0.013	No 17	0.002707	0.002508	52.94	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-22	0.001039	0.0003389	0.013	No 17	0.0009476	0.001238	5.882	None	ln(x)	0.01	Param.
Lead (mg/L)	GWC-9	0.005	0.000096	0.013	No 17	0.002735	0.00248	52.94	None	No	0.01	NP (normality)
Lead (mg/L)	GWB-4R	0.005914	0.002171	0.013	No 16	0.004042	0.002877	12.5	None	No	0.01	Param.
Lead (mg/L)	GWB-5R	0.005	0.0002	0.013	No 17	0.002211	0.002209	35.29	None	No	0.01	NP (normality)
Lead (mg/L)	GWB-6R	0.005	0.00014	0.013	No 17	0.002258	0.002376	41.18	None	No	0.01	NP (normality)
Lithium (mg/L)	GWA-8 (bg)	0.03	0.001	0.03	No 13	0.01664	0.01503	53.85	None	No	0.01	NP (normality)
Lithium (mg/L)	GWC-12	0.03	0.00091	0.03	No 13	0.01438	0.01505	46.15	None	No	0.01	NP (normality)
Lithium (mg/L)	GWC-17	0.007059	0.005156	0.03	No 13	0.006108	0.00128	0	None	No	0.01	Param.
Lithium (mg/L)	GWC-9	0.002114	0.00182	0.03	No 12	0.001967	0.0001875	0	None	No	0.01	Param.
Lithium (mg/L)	GWB-4R	0.014	0.0039	0.03	No 13	0.008254	0.004467	0	None	No	0.01	NP (normality)
Lithium (mg/L)	GWB-5R	0.03	0.0027	0.03	No 13	0.01589	0.01362	46.15	None	No	0.01	NP (normality)
Mercury (mg/L)	GWA-7 (bg)	0.0002	0.0001	0.002	No 11	0.0001736	0.00005372	72.73	None	No	0.006	NP (normality)
Mercury (mg/L)	GWC-1	0.0002	0.0002	0.002	No 11	0.0001855	0.00004824	90.91	None	No	0.006	NP (NDs)
Mercury (mg/L)	GWC-13	0.0002	0.0002	0.002	No 11	0.0001936	0.00002111	90.91	None	No	0.006	NP (NDs)
Mercury (mg/L)	GWC-9	0.0002	0.0002	0.002	No 11	0.0001864	0.00004523	90.91	None	No	0.006	NP (NDs)
Mercury (mg/L)	GWB-4R	0.0002	0.0002	0.002	No 11	0.0001863	0.00004553	90.91	None	No	0.006	NP (NDs)
Mercury (mg/L)	GWB-6R	0.0002	0.0002	0.002	No 11	0.0001857	0.00004734	90.91	None	No	0.006	NP (NDs)
Molybdenum (mg/L)	GWA-7 (bg)	0.01	0.0098	0.01	No 13	0.008646	0.003261	76.92	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	GWC-1	0.1716	0.07167	0.01	Yes 13	0.1216	0.06717	0	None	No	0.01	Param.

Appendix II and IV Confidence Interval Summary Table - All Results Page 4

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/1/2021, 1:55 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Molybdenum (mg/L)	GWC-11	0.01	0.0018	0.01	No 13	0.008659	0.00328	84.62	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	GWC-13	0.01	0.0056	0.01	No 13	0.009662	0.00122	92.31	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	GWC-14	0.028	0.0024	0.01	No 13	0.01004	0.01059	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	GWC-15	0.1145	0.0908	0.01	Yes 13	0.1026	0.01591	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-16	0.1953	0.1126	0.01	Yes 13	0.154	0.05558	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-17	0.01	0.0024	0.01	No 13	0.007309	0.003627	61.54	None	No	0.01	NP (normality)
Molybdenum (mg/L)	GWC-20	0.2598	0.1032	0.01	Yes 13	0.1815	0.1053	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-21	0.06514	0.01913	0.01	Yes 13	0.04214	0.03094	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWB-4R	0.15	0.0209	0.01	Yes 13	0.06482	0.05453	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	GWB-5R	0.01	0.0012	0.01	No 13	0.009323	0.002441	92.31	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	GWB-6R	0.01	0.001	0.01	No 13	0.008044	0.003737	76.92	None	No	0.01	NP (NDs)
Selenium (mg/L)	GWA-7 (bg)	0.031	0.0078	0.05	No 17	0.01734	0.01126	29.41	None	No	0.01	NP (normality)
Selenium (mg/L)	GWA-8 (bg)	0.01	0.0013	0.05	No 18	0.009017	0.002862	88.89	None	No	0.01	NP (NDs)
Selenium (mg/L)	GWC-1	0.0052	0.0018	0.05	No 17	0.004365	0.005511	11.76	None	No	0.01	NP (normality)
Selenium (mg/L)	GWC-11	0.009451	0.003586	0.05	No 17	0.008276	0.005737	23.53	Kaplan-Meiersqrt(x)	No	0.01	Param.
Selenium (mg/L)	GWC-12	0.01	0.0025	0.05	No 17	0.008612	0.003093	82.35	Kaplan-Meier	No	0.01	NP (NDs)
Selenium (mg/L)	GWC-14	0.004985	0.002799	0.05	No 18	0.004016	0.001997	5.556	None	sqrt(x)	0.01	Param.
Selenium (mg/L)	GWC-15	0.01	0.0029	0.05	No 17	0.008182	0.003504	52.94	None	No	0.01	NP (normality)
Selenium (mg/L)	GWC-16	0.006266	0.003664	0.05	No 18	0.004965	0.00215	5.556	None	No	0.01	Param.
Selenium (mg/L)	GWC-17	0.01	0.0013	0.05	No 17	0.006141	0.004273	52.94	None	No	0.01	NP (normality)
Selenium (mg/L)	GWC-2	0.01	0.0035	0.05	No 17	0.009147	0.002422	88.24	None	No	0.01	NP (NDs)
Selenium (mg/L)	GWC-20	0.01	0.0014	0.05	No 17	0.007465	0.004049	70.59	None	No	0.01	NP (normality)
Selenium (mg/L)	GWC-21	0.02215	0.01282	0.05	No 17	0.01748	0.007441	0	None	No	0.01	Param.
Selenium (mg/L)	GWC-22	0.01	0.0023	0.05	No 17	0.008053	0.003628	76.47	None	No	0.01	NP (NDs)
Selenium (mg/L)	GWC-9	0.01	0.01	0.05	No 17	0.01	0	100	None	No	0.01	NP (NDs)
Selenium (mg/L)	GWB-4R	0.01	0.0033	0.05	No 17	0.006294	0.003358	41.18	None	No	0.01	NP (normality)
Selenium (mg/L)	GWB-5R	0.01	0.0073	0.05	No 17	0.008965	0.002515	82.35	None	No	0.01	NP (NDs)
Selenium (mg/L)	GWB-6R	0.05	0.0033	0.05	No 17	0.01051	0.01074	70.59	None	No	0.01	NP (normality)
Thallium (mg/L)	GWA-7 (bg)	0.001	0.0005	0.002	No 13	0.0009615	0.0001387	92.31	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWA-8 (bg)	0.001	0.00006	0.002	No 13	0.0007825	0.0004134	76.92	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-1	0.001	0.000054	0.002	No 13	0.0007814	0.0004154	76.92	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-11	0.001	0.00007	0.002	No 13	0.0005306	0.0004543	46.15	None	No	0.01	NP (normality)
Thallium (mg/L)	GWC-12	0.001	0.00013	0.002	No 13	0.0004985	0.0004152	38.46	None	No	0.01	NP (normality)
Thallium (mg/L)	GWC-14	0.001	0.00007	0.002	No 13	0.0008562	0.0003511	84.62	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-16	0.001	0.00006	0.002	No 13	0.0008546	0.0003549	84.62	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-17	0.001	0.000066	0.002	No 13	0.0005768	0.000476	53.85	None	No	0.01	NP (normality)
Thallium (mg/L)	GWC-2	0.001	0.00011	0.002	No 14	0.0009364	0.0002379	92.86	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-21	0.001	0.00005	0.002	No 13	0.0009269	0.0002635	92.31	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-22	0.001	0.000065	0.002	No 13	0.0006524	0.0004584	61.54	None	No	0.01	NP (normality)
Thallium (mg/L)	GWB-4R	0.001	0.00007	0.002	No 13	0.0008569	0.0003492	84.62	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWB-5R	0.001	0.00031	0.002	No 13	0.0008744	0.0003109	84.62	None	No	0.01	NP (NDs)
Vanadium (mg/L)	GWA-7 (bg)	0.326	0.1554	0.43	No 14	0.2474	0.1235	0	None	sqrt(x)	0.01	Param.
Vanadium (mg/L)	GWA-8 (bg)	0.01	0.0014	0.43	No 15	0.008813	0.003135	86.67	None	No	0.01	NP (NDs)
Vanadium (mg/L)	GWC-1	0.006019	0.003669	0.43	No 12	0.005842	0.002371	16.67	Kaplan-Meier	No	0.01	Param.
Vanadium (mg/L)	GWC-11	0.01	0.0021	0.43	No 12	0.004258	0.003471	25	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-12	0.00535	0.00299	0.43	No 12	0.005342	0.00261	16.67	Kaplan-Meier	No	0.01	Param.
Vanadium (mg/L)	GWC-13	0.01	0.0016	0.43	No 12	0.007267	0.004003	58.33	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-14	0.01891	0.008918	0.43	No 15	0.01391	0.007371	13.33	None	No	0.01	Param.
Vanadium (mg/L)	GWC-15	0.01	0.0021	0.43	No 14	0.00555	0.004013	42.86	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-16	0.01	0.0026	0.43	No 15	0.004877	0.003229	26.67	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-17	0.01	0.0024	0.43	No 12	0.005817	0.003718	41.67	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-2	0.01	0.0024	0.43	No 12	0.009367	0.002194	91.67	None	No	0.01	NP (NDs)
Vanadium (mg/L)	GWC-20	0.01	0.0024	0.43	No 14	0.005293	0.003647	35.71	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-21	0.00373	0.002297	0.43	No 12	0.004825	0.003221	25	Kaplan-Meierln(x)	No	0.01	Param.
Vanadium (mg/L)	GWC-22	0.01	0.0014	0.43	No 12	0.006158	0.004136	50	None	No	0.01	NP (normality)

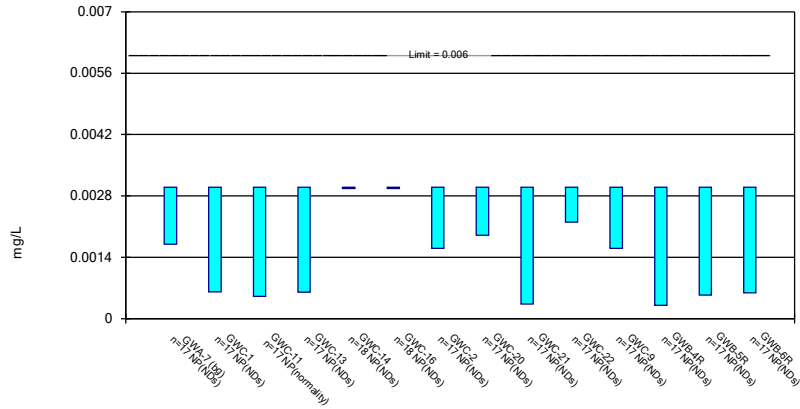
Appendix II and IV Confidence Interval Summary Table - All Results Page 5

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 2/1/2021, 1:55 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Vanadium (mg/L)	GWC-9	0.01	0.0015	0.43	No 12	0.008567	0.003348	83.33	None	No	0.01	NP (NDs)
Vanadium (mg/L)	GWB-4R	0.03662	0.009413	0.43	No 12	0.02302	0.01734	8.333	None	No	0.01	Param.
Vanadium (mg/L)	GWB-5R	0.0119	0.004362	0.43	No 12	0.009083	0.008257	8.333	None	ln(x)	0.01	Param.
Vanadium (mg/L)	GWB-6R	0.03198	0.006264	0.43	No 12	0.02425	0.02861	0	None	ln(x)	0.01	Param.
Zinc (mg/L)	GWA-7 (bg)	0.08526	0.01857	0.16	No 13	0.05192	0.04485	7.692	None	No	0.01	Param.
Zinc (mg/L)	GWA-8 (bg)	0.01	0.0024	0.16	No 15	0.005093	0.003237	20	None	No	0.01	NP (normality)
Zinc (mg/L)	GWC-1	0.01	0.0021	0.16	No 12	0.0082	0.003256	66.67	None	No	0.01	NP (normality)
Zinc (mg/L)	GWC-11	0.01	0.0029	0.16	No 12	0.007325	0.003446	58.33	None	No	0.01	NP (normality)
Zinc (mg/L)	GWC-12	0.0074	0.0023	0.16	No 12	0.004008	0.002446	8.333	None	No	0.01	NP (normality)
Zinc (mg/L)	GWC-13	0.047	0.0021	0.16	No 12	0.01572	0.01858	0	None	No	0.01	NP (normality)
Zinc (mg/L)	GWC-14	0.01	0.0052	0.16	No 15	0.00864	0.002895	80	None	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-15	0.032	0.0051	0.16	No 14	0.01122	0.006121	85.71	None	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-16	0.01	0.0025	0.16	No 15	0.00712	0.003725	53.33	None	No	0.01	NP (normality)
Zinc (mg/L)	GWC-17	0.01378	0.007908	0.16	No 12	0.01084	0.003739	8.333	None	No	0.01	Param.
Zinc (mg/L)	GWC-2	0.056	0.0015	0.16	No 12	0.01103	0.01462	50	None	No	0.01	NP (normality)
Zinc (mg/L)	GWC-20	0.031	0.0049	0.16	No 14	0.01066	0.006229	78.57	None	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-21	0.01	0.0016	0.16	No 12	0.00765	0.003682	58.33	None	No	0.01	NP (normality)
Zinc (mg/L)	GWC-22	0.008393	0.003302	0.16	No 12	0.007625	0.003513	33.33	Kaplan-Meier	No	0.01	Param.
Zinc (mg/L)	GWC-9	0.00774	0.002518	0.16	No 12	0.005958	0.006392	8.333	None	ln(x)	0.01	Param.
Zinc (mg/L)	GWB-4R	0.009883	0.004867	0.16	No 12	0.007375	0.003197	8.333	None	No	0.01	Param.
Zinc (mg/L)	GWB-5R	0.01	0.0022	0.16	No 12	0.007842	0.003569	66.67	None	No	0.01	NP (normality)
Zinc (mg/L)	GWB-6R	0.007346	0.001628	0.16	No 12	0.007767	0.004243	50	Kaplan-Meier	No	0.01	Param.

Non-Parametric Confidence Interval

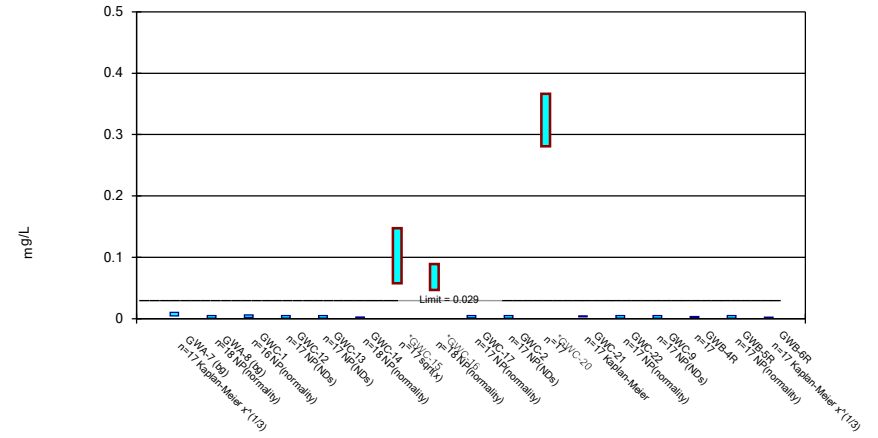
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Antimony Analysis Run 2/1/2021 1:52 PM View: Confidence Interval - State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

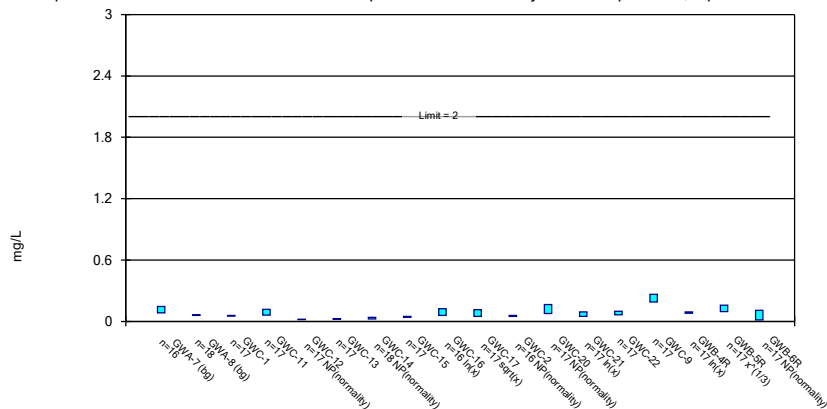
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 2/1/2021 1:52 PM View: Confidence Interval - State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

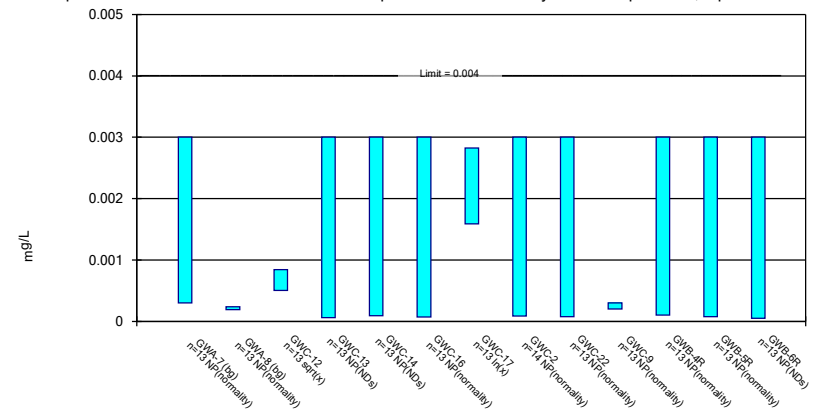
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 2/1/2021 1:52 PM View: Confidence Interval - State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

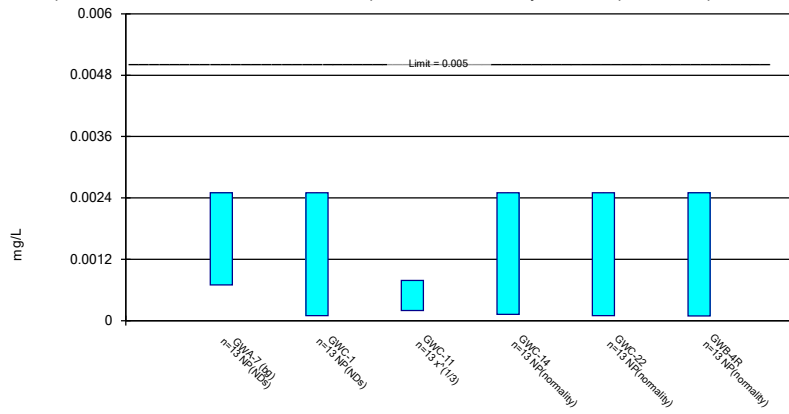
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Beryllium Analysis Run 2/1/2021 1:52 PM View: Confidence Interval - State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

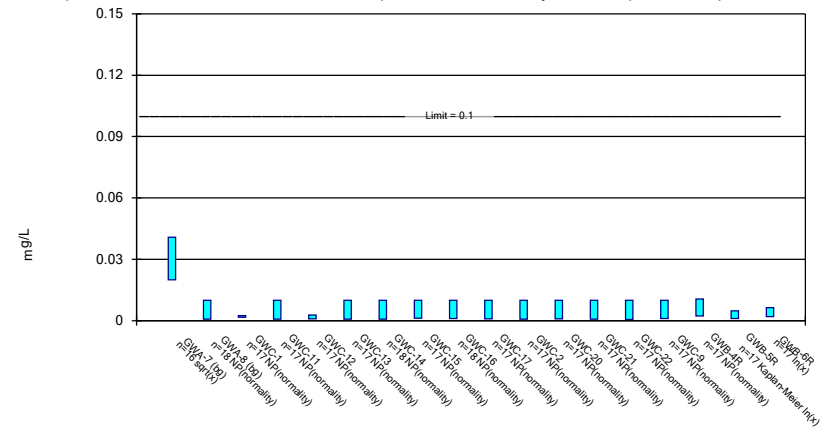
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 2/1/2021 1:52 PM View: Confidence Interval - State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

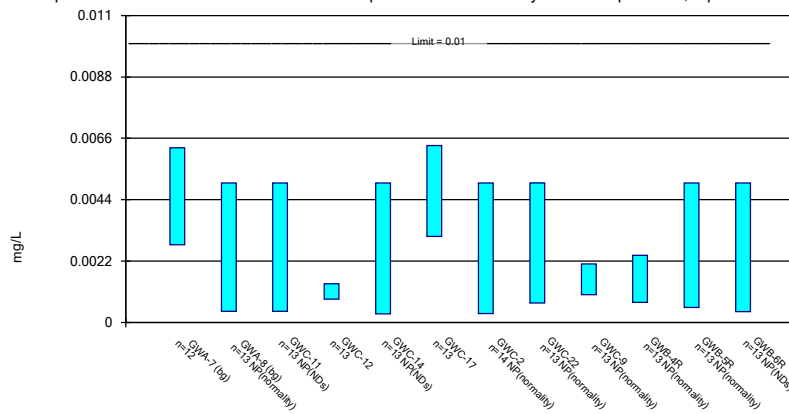
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chromium Analysis Run 2/1/2021 1:52 PM View: Confidence Interval - State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

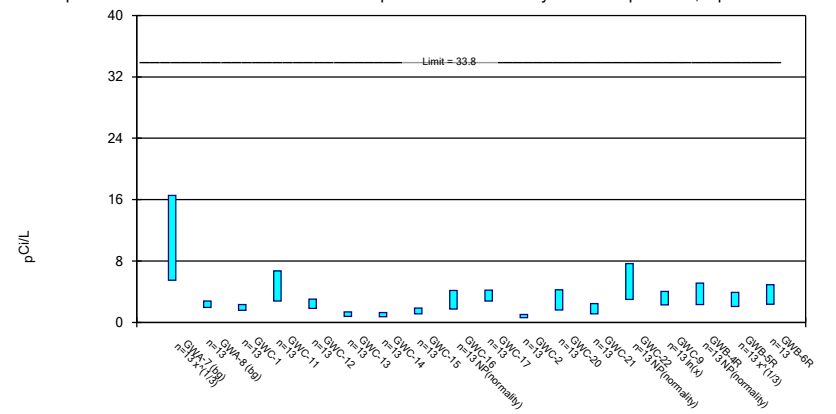
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 2/1/2021 1:52 PM View: Confidence Interval - State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

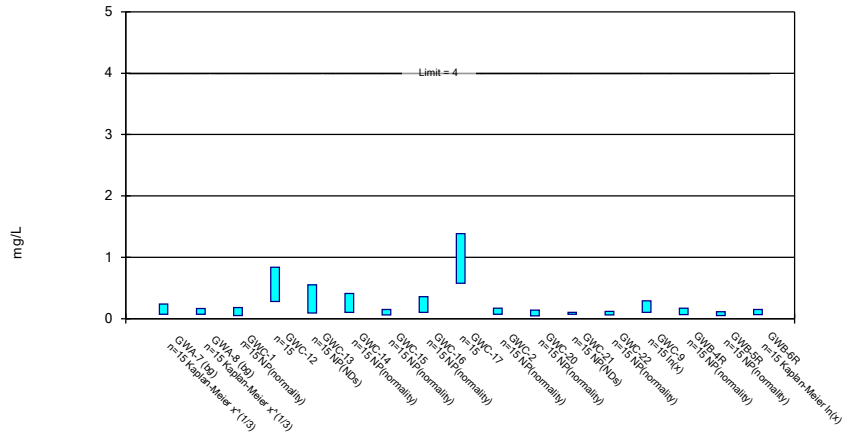
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 2/1/2021 1:52 PM View: Confidence Interval - State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

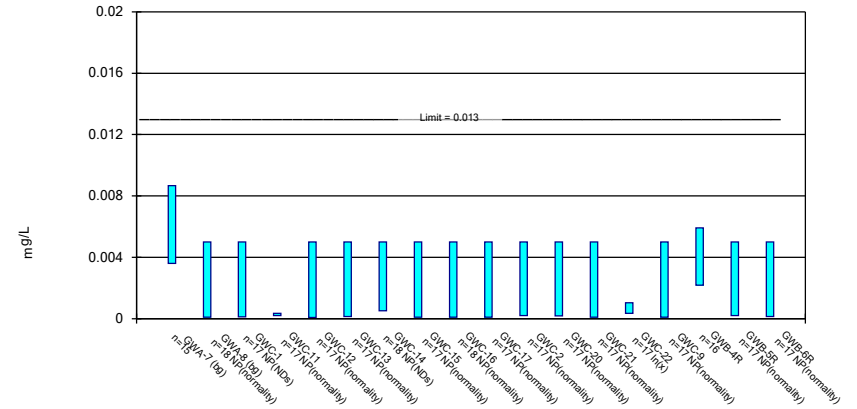
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 2/1/2021 1:52 PM View: Confidence Interval - State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

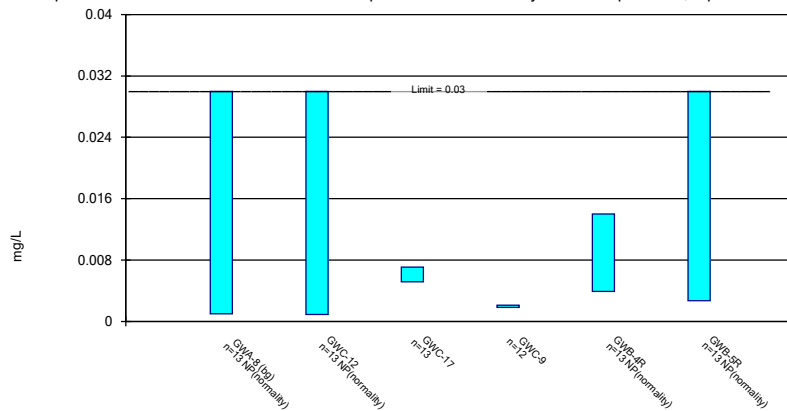
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 2/1/2021 1:52 PM View: Confidence Interval - State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

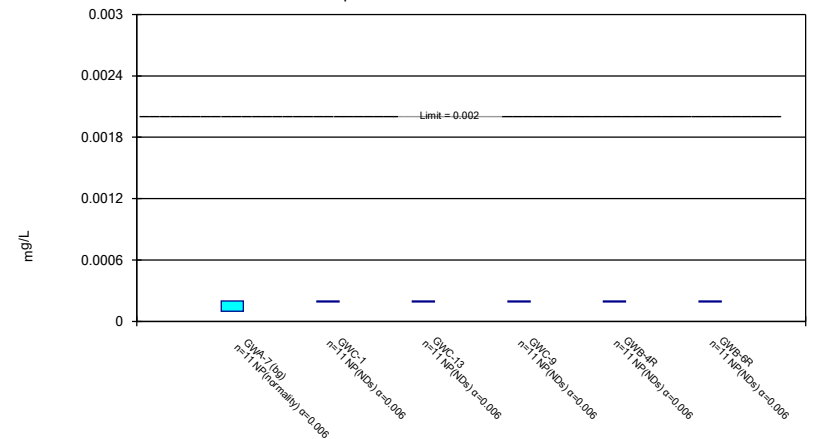
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 2/1/2021 1:52 PM View: Confidence Interval - State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Non-Parametric Confidence Interval

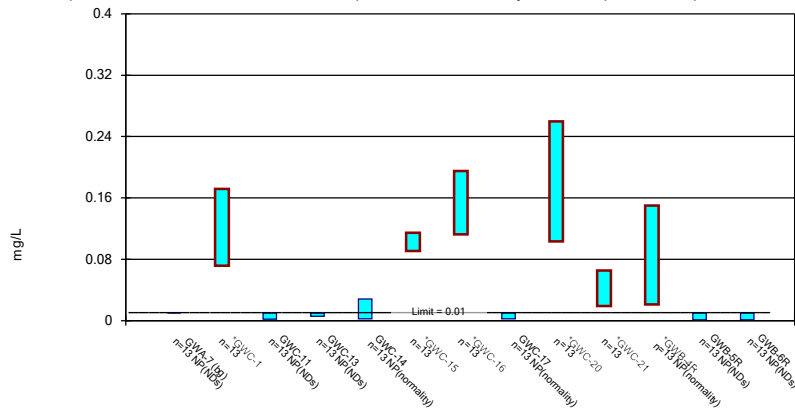
Compliance Limit is not exceeded.



Constituent: Mercury Analysis Run 2/1/2021 1:52 PM View: Confidence Interval - State
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

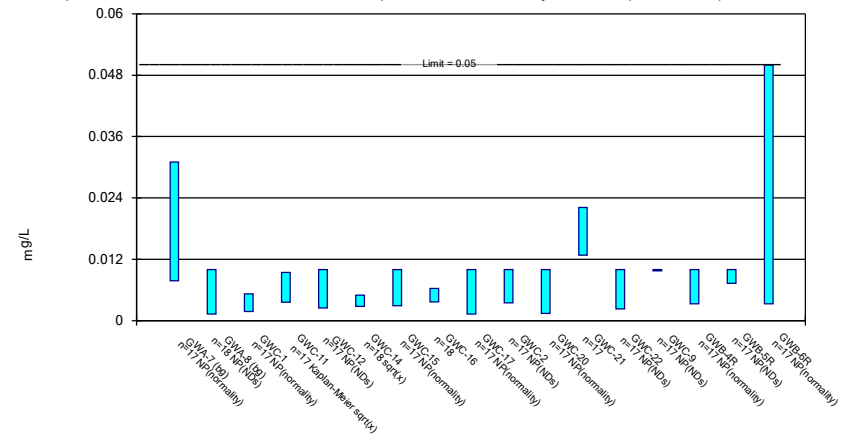
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 2/1/2021 1:52 PM View: Confidence Interval - State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

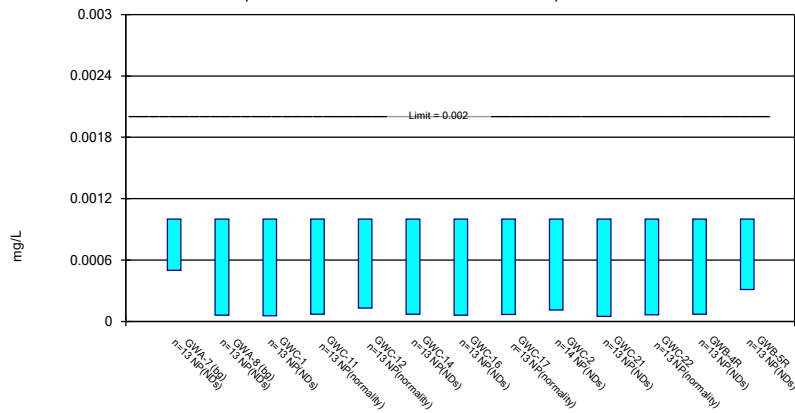
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 2/1/2021 1:52 PM View: Confidence Interval - State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Non-Parametric Confidence Interval

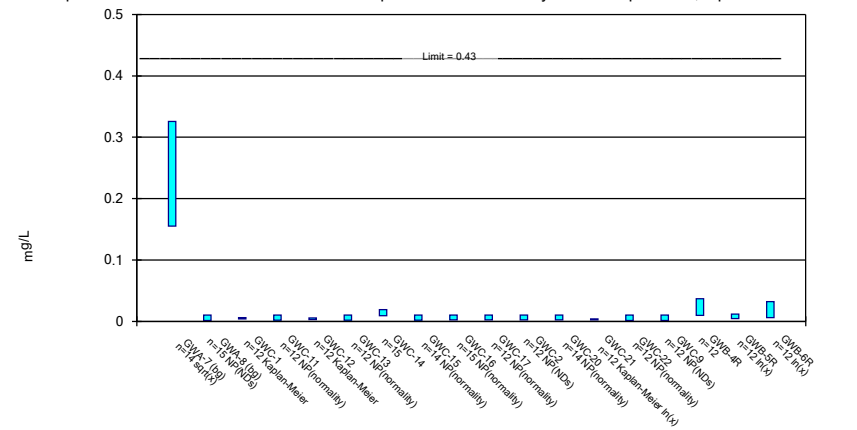
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Thallium Analysis Run 2/1/2021 1:53 PM View: Confidence Interval - State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

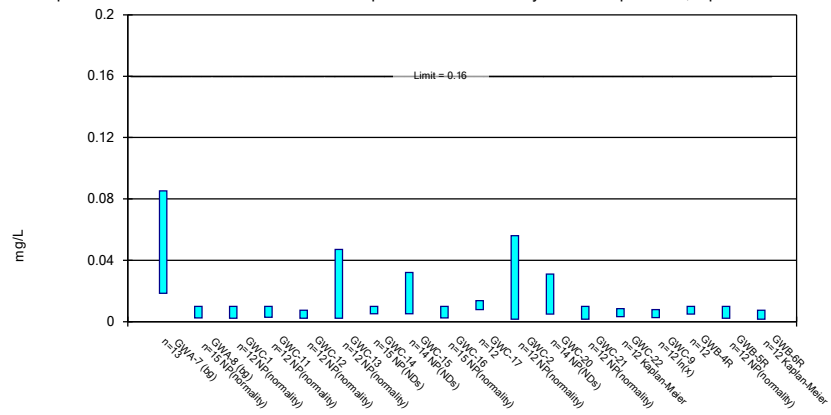
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Vanadium Analysis Run 2/1/2021 1:53 PM View: Confidence Interval - State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

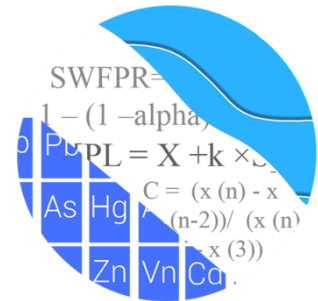


Constituent: Zinc Analysis Run 2/1/2021 1:53 PM View: Confidence Interval - State
Grumman Road Landfill Client: Southern Company Data: Grumman Road

GROUNDWATER STATS CONSULTING

July 27, 2021

Southern Company Services
Attn: Ms. Kristen Jurinko
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia 30308



Re: Plant Kraft's Grumman Road Landfill
Statistical Analysis – March 2021 Sample Event

Dear Ms. Jurinko,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the groundwater statistical analysis of the March 2021 sample event for Georgia Power Company's Plant Kraft's Grumman Road Landfill. The analysis complies with the Georgia Environmental Protection Division (EPD) Rules for Solid Waste Management Chapter 391-3-4-.10 and follows the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling began for the CCR program in 2016, and at least 8 background samples were collected at each of the groundwater monitoring wells. Semi-annual sampling of the majority of Appendix IV constituents has been performed at most wells for several years in accordance with the Georgia Department of Natural Resources, Environmental Protection Division groundwater monitoring regulations. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** GWA-7 and GWA-8
- **Downgradient wells:** GWB-4R, GWB-5R, GWB-6R, GWC-1, GWC-2, GWC-9, GWC-11, GWC-12, GWC-13, GWC-14, GWC-15, GWC-16, GWC-17, GWC-20, GWC-21, and GWC-22
- **Delineation wells:** MW-23D, MW-24D, MW-25D, MW-26D, and MW-27D

Delineation wells were installed in late 2020 and were first sampled in early 2021 for all constituents except mercury, which was not detected during the August 2020 Scan event nor sampled during the September 2020 or March 2021 sampling events, as described below. These wells currently have a maximum of 2 samples and will be evaluated with confidence intervals once they have at least 4 samples.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Dr. Jim Loftis, Civil & Environmental Engineering professor emeritus at Colorado State University and Senior Advisor to Groundwater Stats Consulting.

The program monitors the constituents listed below. Georgia EPD Appendix II and CCR Appendix IV constituents overlap with the exception of vanadium and zinc, which are Georgia EPD. However, the statistical analyses for the two sets of requirements are different and are discussed in separate sections of this report. The terms “parameters” and “constituents” are used interchangeably throughout.

- **Georgia EPD Appendix I** (Detection Monitoring) – antimony, arsenic, barium, chromium, lead, selenium, vanadium, and zinc
- **CCR Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS
- **Georgia EPD Appendix II/CCR Appendix IV** (Assessment Monitoring) – antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lead, lithium, mercury, molybdenum, selenium, thallium, vanadium, and zinc

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A summary of well/constituent pairs with 100% non-detects follows this letter. Additionally, when Appendix IV constituents are not detected during a scheduled Scan event, no statistical analyses are required during the semi-annual sample event. During the annual Scan event conducted in August 2020, mercury was not detected, and therefore, was not required to be sampled during the September 2020 and March 2021 events. While no statistical analyses were required, data for mercury was plotted on the time series graphs and box plots.

Time series plots for all parameters at all wells are provided for the purpose of screening data at these wells (Figure A). Additionally, time series plots of all parameters at upgradient wells are included to more easily display concentrations upgradient of the facility (Figure A). A separate section of box plots is included for all constituents at upgradient and downgradient wells (Figure B). The time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation

of variation within individual wells and between all wells. Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graphs. A summary of flagged outliers follows this report (Figure C).

Due to varying detection limits in background data sets as a result of improved laboratory practices, a substitution of the most recent reporting limit is used for all non-detects. Of particular note is the reporting limits for metals at upgradient well GWA-7. Due to higher dilutions needed for some metal analyses for this well, the reporting limits may vary between sampling events and are sometimes considerably higher than corresponding reporting limits for other wells. On the other hand, some detected observations are recorded at extremely low concentrations, below the MCL of 0.01 mg/L for arsenic, as an example. Therefore, the same reporting limit substitution is used for this well as for all other wells.

Data at all wells were evaluated during 2019 for the following: 1) outliers; 2) trends; 3) most appropriate statistical method for parameters based on site characteristics of groundwater data upgradient of the facility; and 4) eligibility of downgradient wells when intrawell statistical methods are recommended. However, interwell methods are currently constructed in accordance with the Georgia EPD regulations and are used to evaluate compliance samples in downgradient wells. Power curves were provided along with the previous analysis to demonstrate that the selected statistical methods comply with the USEPA Unified Guidance. The EPA suggests that the selected statistical method should provide at least 55% power at 3 standard deviations or at least 80% power at 4 standard deviations.

Summary of Statistical Methods – Detection Monitoring

Georgia EPD Appendix I Constituents:

Semi-Annual Sampling

Interwell Prediction Limits with 1 of 2 resample plan

Constituents Downgradient: 6 (Antimony and lead were not recently detected)

Downgradient wells: 16

CCR Appendix III Constituents:

Semi-Annual Sampling

Interwell Prediction Limits with 1 of 2 resample plan (boron, calcium, chloride, fluoride, pH, sulfate and TDS)

Constituents Downgradient: 7

Downgradient wells: 16

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are non-detects, a nonparametric test is utilized. While the false positive rate associated with the parametric limits is based on an annual rate of 10% (5% per semi-annual event) as recommended by the EPA Unified Guidance (2009), the false positive rate associated with the nonparametric limits is dependent upon the available background sample size, number of future comparisons, and verification resample plan. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (US EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits, along with the following methodology for handling non-detects:

- No statistical analyses are required on wells and analytes containing 100% non-detects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory. Due to varying detection limits, the following substitutions were made for non-detects: 0.003 mg/L for antimony; 0.005 mg/L for arsenic; 0.003 mg/L for beryllium; 0.01 mg/L for chromium; 0.03 mg/L for lithium and 0.01 mg/L for selenium.
- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the interwell case, prediction limits are updated with upgradient well data during each event after careful screening for any new outliers. In some cases, an earlier portion of data may require deselection prior to construction of limits to provide sensitive limits that will rapidly detect changes in groundwater quality. Even though the data are excluded from the calculation, the values will continue to be reported and shown in tables and graphs.

Summary of Background Screening – Georgia EPD Appendix I Constituents – Conducted in August 2019

Outlier Testing

Time series plots were used to identify suspected outliers, or extreme values that would result in limits that are not representative of the current background data population. Suspected outliers at all wells and parameters were formally tested using Tukey's box plot method and, when identified, flagged in the computer database with "o" and deselected prior to construction of statistical limits.

Using the Tukey's box plot method, several outliers were identified. A summary of those findings was submitted with the August 2019 report. As a general rule, when the most recent values are identified as outliers, values are not flagged in the database (except in cases where they would cause background limits to be elevated) as they may represent a possible trend. If future values do not remain at similar concentrations, these values will be flagged as outliers and deselected. Several low values exist in the data sets and appear on the graphs as possible low outliers relative to the laboratory's Practical Quantitation Limit. However, these values are observed trace values (i.e. measurements reported by the laboratory between the Method Detection Limit and the Practical Quantitation Limit) and, therefore, were not flagged as outliers.

Additionally, values that were not identified by Tukey's test but that are much higher than the remaining measurements were flagged as appropriate in order to obtain conservative prediction limits that are capable of detecting future changes. A summary of flagged values follows this letter (Figure C). As mentioned above, when any values are flagged in the database as outliers, they are plotted in a disconnected and lighter symbol on the time series graph. The accompanying data pages display the flagged value in a lighter font as well.

Seasonality

No obvious seasonal patterns were observed on the time series plots for any of the detected data; therefore, no deseasonalizing adjustments were made to the data. When seasonal patterns are observed, data may be deseasonalized so that the resulting limits will correctly account for the seasonality as a predictable pattern rather than random variation or a release.

Trend Testing

While trends may be identified by visual inspection, a quantification of the trend and its significance is needed. The Sen's Slope/Mann Kendall trend test, which tests for statistically significant increasing or decreasing trends, was used to evaluate data at all upgradient wells and downgradient wells with detections.

In the absence of suspected contamination, significant trending data are typically not included as part of the background data used for construction of prediction limits. This step serves to eliminate the trend and, thus, reduce variation in background. When statistically significant decreasing trends are present, all available data are evaluated to determine whether earlier concentration levels are significantly different from current reported concentrations and will be deselected as necessary. This step would apply to upgradient wells GWA-7 and GWA-8 only since pooled data from these wells are used to construct interwell prediction limits. While this was not required, when any records of data are truncated for the reasons above, a summary report will be provided to show the date ranges used in construction of the statistical limits. A summary of the trend analyses was submitted with the screening report.

Determination of Spatial Variation

The Analysis of Variance (ANOVA) was used to statistically evaluate differences in average concentrations among upgradient wells for constituents detected in downgradient wells. The ANOVA assists in identifying the most appropriate statistical approach. Interwell tests, which compare downgradient well data to statistical limits constructed from pooled upgradient well data, are appropriate when average concentrations are similar across upgradient wells. Intrawell tests, which compare compliance data from a single well to screened historical data within the same well, are appropriate when upgradient wells exhibit spatial variation; when statistical limits constructed from upgradient wells are not representative of the current background data population; and when downgradient water quality is unimpacted compared to upgradient water quality for the same parameter.

The ANOVA identified significant differences among upgradient well data for all constituents which would suggest intrawell methods as the most appropriate statistical method. However, interwell methods are currently constructed in accordance with the Georgia EPD regulations and are used to evaluate compliance samples in downgradient wells.

Summary of Background Screening – CCR Appendices III and IV Parameters – Conducted in March 2019

Outlier and Trend Testing

Time series plots were used to identify suspected outliers, or extreme values that would result in limits that are not representative of the current background data population. Suspected outliers at all wells for Appendix III and Appendix IV parameters were formally tested using Tukey's box plot method and, when identified, flagged in the computer database with "o" and deselected prior to construction of statistical limits.

Using the Tukey box plot method, several outliers were identified. A summary of those findings was included with the screening report. When the most recent values are identified as outliers, values were not flagged in the database at this time (except in cases where they would cause background limits to be elevated) as they may represent a possible trend. If future values do not remain at similar concentrations, these values will be flagged as outliers and deselected. Several low values exist in the data sets and appear on the graphs as possible low outliers relative to the laboratory's Practical Quantitation Limit. However, these values are observed trace values (i.e. measurements reported by the laboratory between the Method Detection Limit and the Practical Quantitation Limit) and, therefore, were not flagged as outliers.

Of the outliers identified by Tukey's method, several values were flagged in the database, and the remaining values were similar to other measurements within a given well or neighboring wells or were reported non-detects. A summary of all flagged values follows this report (Figure C).

No obvious seasonal patterns were observed on the time series plots for any of the detected data; therefore, no deseasonalizing adjustments were made to the data. When seasonal patterns are observed, data may be deseasonalized so that the resulting limits will correctly account for the seasonality as a predictable pattern rather than random variation or a release.

The results of the Sen's Slope/Mann Kendall trend analyses showed a number of statistically significant increasing and decreasing trends for the Appendix III parameters. Most of the statistically significant trends identified, particularly those in upgradient wells GWA-7 and GWA-8 from which data are used in construction of the interwell prediction limits, were relatively low in magnitude when compared to average concentrations. Also, the background period was short in 2019, making it difficult to determine whether an

apparent trend represents a long-term change or simply normal year-to-year variation; therefore, no adjustments were made to the data sets.

Appendix III – Determination of Spatial Variation

The ANOVA identified no variation among upgradient well data for fluoride, making interwell analyses the most appropriate statistical method for this constituent. Variation was noted for boron, calcium, chloride, pH, sulfate, and TDS which suggests the use of intrawell methods as the most appropriate statistical method. However, interwell methods are currently constructed in accordance with the Georgia EPD regulations and are used to evaluate compliance samples in downgradient wells.

Statistical Analysis of Georgia EPD Appendix I Constituents – March 2021

Interwell prediction limits, combined with a 1 of 2 resample plan, were constructed from carefully screened pooled upgradient well data through March 2021 for arsenic, barium, chromium, selenium, vanadium, and zinc (Figure D). Antimony and lead did not have prediction limits constructed since they did not have any detections in any downgradient wells above the PQL during the March 2021 event. The most recent sample at each downgradient well is compared to these background limits.

In the event of an initial exceedance of compliance well data, the 1 of 2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When the resample confirms the initial exceedance, a statistically significant increase (SSI) is identified and further research would be required to identify the cause of the exceedance (i.e. impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered to be a false positive result, and therefore, no further action is necessary. If no resample is collected, the initial exceedance is automatically confirmed. A summary table and complete graphical results of the interwell prediction limits follow this letter and include a list of exceedances. Exceedances were identified for the following well/constituent pairs:

- Arsenic: GWC-15, GWC-16, and GWC-20
- Barium: GWC-20

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure E). Upgradient well data are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the

site. When trends are present in upgradient wells it is an indication of natural variability in groundwater quality unrelated to practices at the site. Statistically significant trends were noted for the following well/constituent pairs:

Increasing Trends:

- Arsenic: GWC-15
- Barium: GWC-20

Decreasing Trends:

- Arsenic: GWA-8 (upgradient) and GWC-16
- Barium: GWA-8 (upgradient)

Note that while the trend test identified a statistically significant decreasing trend for arsenic in upgradient well GWA-8, the slope is displayed as zero which represents the median slope of all the possible pairwise slopes. The zero median slope results from the large number of nondetects in the record, and the negative test statistic results from a few trace values being recorded in the latter part of the record. Both a summary and complete graphical presentation of the trend test results follow this letter.

Statistical Analysis of CCR Appendix III Parameters – March 2021

Interwell prediction limits, combined with a 1 of 2 resample plan, were constructed using pooled upgradient well data through March 2021 to develop background limits for boron, calcium, chloride, fluoride, pH, sulfate and TDS (Figure F). In the event of an initial exceedance of compliance well data, the 1 of 2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When the resample confirms the initial exceedance, a statistically significant increase (SSI) is identified and further research would be required to identify the cause of the exceedance (i.e. impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered to be a false positive result and, therefore, no further action is necessary. The most recent sample from each downgradient well is compared to the background limit to determine whether there are statistically significant increases (SSIs). Summary tables of the prediction limits follow this letter. Exceedances were identified for the following well/constituent pairs:

- Calcium: GWB-4R, GWB-5R, GWB-6R, GWC-1, GWC-11, GWC-12, GWC-15, GWC-16, GWC-17, GWC-20, and GWC-21
- Chloride: GWC-17
- pH: Lower limit – GWC-12

- Sulfate: GWB-5R, GWB-6R, GWC-11, GWC-12, GWC-16, GWC-17, GWB-20, and GWC-21

Trend Tests – Exceedances

Data from downgradient well/constituent pairs found to exceed their respective prediction limit were further evaluated using the Sen’s Slope/Mann Kendall trend test along with upgradient wells for the same constituents (Figure G). Upgradient wells are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the site. Such patterns are an indication of natural variability in groundwater unrelated to practices at the site. Statistically significant trends were noted for the following well/constituent pairs:

Increasing trends:

- Calcium: GWB-4R, GWB-5R, GWC-1, GWC-11, and GWC-16
- Sulfate: GWC-11 and GWB-6R

Decreasing trends:

- Calcium: GWA-7 (upgradient) and GWC-12
- Chloride: GWA-7 (upgradient)
- pH: GWA-7 (upgradient)
- Sulfate: GWC-12

Statistical Analysis of Georgia EPD Appendix II and CCR Appendix IV – March 2021

In Assessment Monitoring, confidence intervals for each Appendix II and IV parameter at downgradient wells are compared against corresponding Groundwater Protection Standards (GWPS). The GWPS are based on state regulations or on site-specific background conditions as described below.

Data from all wells for Appendix II and IV parameters are first reassessed for outliers during each analysis. In some cases, previously flagged trace values and historical non-detect values were unflagged because the measurements were similar to other measurements within the same well or due to the non-detect substitution discussed earlier which resulted in lower reporting limits. Additionally, values that were previously flagged but are below or slightly above the most recent PQL were unflagged. Outliers were flagged conservatively in downgradient wells in the sense that most flagged values were in groups that appeared very early in the record, suggesting a data quality issue or were isolated values that were extremely different from surrounding observations and from current concentration levels.

Next interwell upper tolerance limits (UTL's) are calculated using Sanitas software, from all historical pooled upgradient well data for Appendix II and IV constituents (Figure H). The UTLs serve as site-specific background limits for each constituent. Parametric tolerance limits are used when data follow a normal or transformed-normal distribution, i.e. fluoride. When data contain greater than 50% non-detects or do not follow a normal or transformed-normal distribution, non-parametric tolerance limits are used. In all cases, a nonparametric tolerance limit was constructed to provide the most conservative approach. Particularly in the case of combined radium 226 + 228, a nonparametric tolerance limit was selected due to the transformation required for the parametric limit which resulted in an extremely high upper tolerance limit.

The background limits are then used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and Georgia EPD Rule 391-3-4-.10(6)(a). As described in 40 CFR §257.95(h) (1-3), the GWPS is:

- The maximum contaminant level (MCL) established under §141.62 and §141.66 of this title;
- The background level where an MCL has not been established for a constituent (i.e. cobalt, lead, lithium, and molybdenum); and
- The respective background level for a constituent when the background level is higher than the MCL.

For the current analysis and evaluation of the March 2021 sampling data, GWPS were established following the above Georgia EPD Rule requirements (Figure I).

To complete the statistical comparison of current sampling data to GWPS, confidence intervals were constructed using Sanitas software using data from 2016 through the present for each of the Appendix II and IV constituents in each downgradient well (Figure J). As mentioned above, mercury and any well/constituent pairs with 100% non-detects since 2016 were not required for statistical analyses. The confidence intervals were then compared to the State GWPS (Georgia EPD rules). Only when the entire confidence interval is above a GWPS is the downgradient well/constituent pair considered to exceed its respective standard. If there is an exceedance of the GWPS, a statistically significant level (SSL) exceedance is identified. The confidence intervals and graphical comparisons to State GWPS are presented in Figure J, with summary tables of exceedances.

The following confidence interval exceedances were noted:

- Arsenic: GWC-15, GWC-16, and GWC-20
- Molybdenum: GWB-4R, GWC-1, GWC-15, GWC-16, GWC-20, and GWC-21

SUMMARY

Based on the statistical analyses described in this letter, the following statistical exceedances were noted:

Prediction Limits (Detection Monitoring Parameters)

Georgia EPD Appendix I:

- Arsenic: GWC-15, GWC-16, and GWC-20
- Barium: GWC-20

CCR Appendix III:

- Calcium: GWB-4R, GWB-5R, GWB-6R, GWC-1, GWC-11, GWC-12, GWC-15, GWC-16, GWC-17, GWC-20, and GWC-21
- Chloride: GWC-17
- pH: Lower limit – GWC-12
- Sulfate: GWB-5R, GWB-6R, GWC-11, GWC-12, GWC-16, GWC-17, GWC-20, and GWC-21

Confidence Intervals (Assessment Monitoring Parameters)

Georgia EPD Appendix II and CCR Appendix IV:

- Arsenic: GWC-15, GWC-16, and GWC-20
- Molybdenum: GWB-4R, GWC-1, GWC-15, GWC-16, GWC-20, and GWC-21

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Plant Kraft's Grumman Road Landfill. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,



Andrew T. Collins
Project Manager



Kristina L. Rayner
Groundwater Statistician

100% Non-Detects: Appendix I

Analysis Run 4/9/2021 11:11 AM View: Appendix I

Grumman Road Landfill Client: Southern Company Data: Grumman Road

Antimony (mg/L)
GWA-8

Arsenic (mg/L)
GWC-11

Selenium (mg/L)
GWC-13

100% Non-Detects: Appendix II and IV since 2016

Analysis Run 4/15/2021 10:59 AM View: Confidence Intervals
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Antimony (mg/L)
GWC-14, GWC-16

Arsenic (mg/L)
GWC-11

Beryllium (mg/L)
GWC-1, GWC-15, GWC-20, GWC-21

Cadmium (mg/L)
GWB-5R, GWB-6R, GWC-12, GWC-13, GWC-15, GWC-16, GWC-17, GWC-2, GWC-21, GWC-9

Cobalt (mg/L)
GWC-1, GWC-13, GWC-15, GWC-16, GWC-20, GWC-21

Fluoride (mg/L)
GWC-11

Lithium (mg/L)
GWB-6R, GWC-1, GWC-11, GWC-13, GWC-14, GWC-15, GWC-16, GWC-2, GWC-20, GWC-21, GWC-22

Mercury (mg/L)
GWB-5R, GWC-11, GWC-12, GWC-14, GWC-15, GWC-16, GWC-17, GWC-2, GWC-20, GWC-21, GWC-22

Molybdenum (mg/L)
GWC-12, GWC-2, GWC-22, GWC-9

Selenium (mg/L)
GWC-13, GWC-9

Thallium (mg/L)
GWB-6R, GWC-13, GWC-15, GWC-20, GWC-9

Appendix I Interwell Prediction Limits - Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/19/2021, 1:53 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg.N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	GWC-15	0.0287	n/a	3/12/2021	0.16	Yes	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-16	0.0287	n/a	3/16/2021	0.064	Yes	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-20	0.0287	n/a	3/12/2021	0.27	Yes	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Barium (mg/L)	GWC-20	0.22	n/a	3/12/2021	0.34	Yes	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2

Appendix I Interwell Prediction Limits - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/19/2021, 1:53 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	GWB-4R	0.0287	n/a	3/10/2021	0.0025J	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWB-5R	0.0287	n/a	3/10/2021	0.0019J	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWB-6R	0.0287	n/a	3/10/2021	0.0054	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-1	0.0287	n/a	3/10/2021	0.0055	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-11	0.0287	n/a	3/10/2021	0.005ND	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-12	0.0287	n/a	3/10/2021	0.005ND	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-13	0.0287	n/a	3/15/2021	0.005ND	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-14	0.0287	n/a	3/16/2021	0.005ND	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-15	0.0287	n/a	3/12/2021	0.16	Yes	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-16	0.0287	n/a	3/16/2021	0.064	Yes	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-17	0.0287	n/a	3/11/2021	0.0009J	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-2	0.0287	n/a	3/15/2021	0.005ND	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-20	0.0287	n/a	3/12/2021	0.27	Yes	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-21	0.0287	n/a	3/16/2021	0.0098	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-22	0.0287	n/a	3/10/2021	0.005ND	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-9	0.0287	n/a	3/10/2021	0.005ND	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Barium (mg/L)	GWB-4R	0.22	n/a	3/10/2021	0.07	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWB-5R	0.22	n/a	3/10/2021	0.096	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWB-6R	0.22	n/a	3/10/2021	0.027	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-1	0.22	n/a	3/10/2021	0.052	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-11	0.22	n/a	3/10/2021	0.13	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-12	0.22	n/a	3/10/2021	0.028	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-13	0.22	n/a	3/15/2021	0.034	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-14	0.22	n/a	3/16/2021	0.037	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-15	0.22	n/a	3/12/2021	0.038	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-16	0.22	n/a	3/16/2021	0.16	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-17	0.22	n/a	3/11/2021	0.044	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-2	0.22	n/a	3/15/2021	0.053	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-20	0.22	n/a	3/12/2021	0.34	Yes	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-21	0.22	n/a	3/16/2021	0.18	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-22	0.22	n/a	3/10/2021	0.049	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-9	0.22	n/a	3/10/2021	0.15	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Chromium (mg/L)	GWB-4R	0.068	n/a	3/10/2021	0.003J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWB-5R	0.068	n/a	3/10/2021	0.001J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWB-6R	0.068	n/a	3/10/2021	0.006	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-1	0.068	n/a	3/10/2021	0.0023J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-11	0.068	n/a	3/10/2021	0.0013J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-12	0.068	n/a	3/10/2021	0.00091J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-13	0.068	n/a	3/15/2021	0.01ND	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-14	0.068	n/a	3/16/2021	0.01ND	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-15	0.068	n/a	3/12/2021	0.0031J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-16	0.068	n/a	3/16/2021	0.0012J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-17	0.068	n/a	3/11/2021	0.0009J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-2	0.068	n/a	3/15/2021	0.0011J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-20	0.068	n/a	3/12/2021	0.0014J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-21	0.068	n/a	3/16/2021	0.00075J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-22	0.068	n/a	3/10/2021	0.01ND	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-9	0.068	n/a	3/10/2021	0.0011J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWB-4R	0.0438	n/a	3/10/2021	0.0021J	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWB-5R	0.0438	n/a	3/10/2021	0.006	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWB-6R	0.0438	n/a	3/10/2021	0.0049J	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-1	0.0438	n/a	3/10/2021	0.0026J	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-11	0.0438	n/a	3/10/2021	0.0044J	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-12	0.0438	n/a	3/10/2021	0.003J	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-13	0.0438	n/a	3/15/2021	0.01ND	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-14	0.0438	n/a	3/16/2021	0.0034J	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2

Appendix I Interwell Prediction Limits - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/19/2021, 1:53 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Selenium (mg/L)	GWC-15	0.0438	n/a	3/12/2021	0.0064	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-16	0.0438	n/a	3/16/2021	0.0044J	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-17	0.0438	n/a	3/11/2021	0.0016J	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-2	0.0438	n/a	3/15/2021	0.01ND	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-20	0.0438	n/a	3/12/2021	0.01ND	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-21	0.0438	n/a	3/16/2021	0.0055	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-22	0.0438	n/a	3/10/2021	0.01ND	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-9	0.0438	n/a	3/10/2021	0.01ND	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWB-4R	0.425	n/a	3/10/2021	0.0054J	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWB-5R	0.425	n/a	3/10/2021	0.0026J	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWB-6R	0.425	n/a	3/10/2021	0.027	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-1	0.425	n/a	3/10/2021	0.005J	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-11	0.425	n/a	3/10/2021	0.0023J	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-12	0.425	n/a	3/10/2021	0.0055J	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-13	0.425	n/a	3/15/2021	0.01ND	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-14	0.425	n/a	3/16/2021	0.01ND	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-15	0.425	n/a	3/12/2021	0.0037J	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-16	0.425	n/a	3/16/2021	0.0034J	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-17	0.425	n/a	3/11/2021	0.01ND	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-2	0.425	n/a	3/15/2021	0.01ND	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-20	0.425	n/a	3/12/2021	0.0038J	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-21	0.425	n/a	3/16/2021	0.003J	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-22	0.425	n/a	3/10/2021	0.01ND	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-9	0.425	n/a	3/10/2021	0.01ND	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Zinc (mg/L)	GWB-4R	0.16	n/a	3/10/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWB-5R	0.16	n/a	3/10/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWB-6R	0.16	n/a	3/10/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-1	0.16	n/a	3/10/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-11	0.16	n/a	3/10/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-12	0.16	n/a	3/10/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-13	0.16	n/a	3/15/2021	0.039	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-14	0.16	n/a	3/16/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-15	0.16	n/a	3/12/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-16	0.16	n/a	3/16/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-17	0.16	n/a	3/11/2021	0.0056J	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-2	0.16	n/a	3/15/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-20	0.16	n/a	3/12/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-21	0.16	n/a	3/16/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-22	0.16	n/a	3/10/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-9	0.16	n/a	3/10/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2

Appendix I Trend Tests - Prediction Limit Exceedances -Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/9/2021, 1:51 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Arsenic (mg/L)	GWA-8 (bg)	0	-3.107	-2.58	Yes	71	91.55	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWC-15	0.004128	7.971	2.58	Yes	51	49.02	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWC-16	-0.001278	-3.094	-2.58	Yes	70	0	n/a	n/a	0.01	NP
Barium (mg/L)	GWA-8 (bg)	-0.002912	-8.579	-2.58	Yes	70	0	n/a	n/a	0.01	NP
Barium (mg/L)	GWC-20	0.01009	249	146	Yes	30	0	n/a	n/a	0.01	NP

Appendix I Trend Tests - Prediction Limit Exceedances - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/9/2021, 1:51 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Arsenic (mg/L)	GWA-7 (bg)	0	1.394	2.58	No	50	56	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWA-8 (bg)	0	-3.107	-2.58	Yes	71	91.55	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWC-15	0.004128	7.971	2.58	Yes	51	49.02	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWC-16	-0.001278	-3.094	-2.58	Yes	70	0	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWC-20	0.01404	114	146	No	30	3.333	n/a	n/a	0.01	NP
Barium (mg/L)	GWA-7 (bg)	-0.0005107	-0.5269	-2.58	No	49	0	n/a	n/a	0.01	NP
Barium (mg/L)	GWA-8 (bg)	-0.002912	-8.579	-2.58	Yes	70	0	n/a	n/a	0.01	NP
Barium (mg/L)	GWC-20	0.01009	249	146	Yes	30	0	n/a	n/a	0.01	NP

Appendix III Interwell Prediction Limits - Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/9/2021, 11:09 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Calcium (mg/L)	GWB-4R	35.8	n/a	3/10/2021	263	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-5R	35.8	n/a	3/10/2021	134	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-6R	35.8	n/a	3/10/2021	55.9	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-1	35.8	n/a	3/10/2021	67.2	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-11	35.8	n/a	3/10/2021	126	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-12	35.8	n/a	3/10/2021	53.1	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-15	35.8	n/a	3/12/2021	101	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-16	35.8	n/a	3/16/2021	188	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-17	35.8	n/a	3/11/2021	67	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-20	35.8	n/a	3/12/2021	241	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-21	35.8	n/a	3/16/2021	104	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-17	260	n/a	3/11/2021	334	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
pH (SU)	GWC-12	6.43	4.23	3/10/2021	4.08	Yes	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-5R	160	n/a	3/10/2021	572	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-6R	160	n/a	3/10/2021	1160	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-11	160	n/a	3/10/2021	687	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-12	160	n/a	3/10/2021	282	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-16	160	n/a	3/16/2021	821	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-17	160	n/a	3/11/2021	244	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-20	160	n/a	3/12/2021	933	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-21	160	n/a	3/16/2021	343	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2

Appendix III Interwell Prediction Limits - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/9/2021, 11:09 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	GWB-4R	21.8	n/a	3/10/2021	4.9	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWB-5R	21.8	n/a	3/10/2021	3.9	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWB-6R	21.8	n/a	3/10/2021	6.9	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-1	21.8	n/a	3/10/2021	0.63	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-11	21.8	n/a	3/10/2021	1.8	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-12	21.8	n/a	3/10/2021	6.1	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-13	21.8	n/a	3/15/2021	0.31	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-14	21.8	n/a	3/16/2021	0.08	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-15	21.8	n/a	3/12/2021	0.81	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-16	21.8	n/a	3/16/2021	10	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-17	21.8	n/a	3/11/2021	0.85	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-2	21.8	n/a	3/15/2021	0.084	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-20	21.8	n/a	3/12/2021	15.6	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-21	21.8	n/a	3/16/2021	3.5	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-22	21.8	n/a	3/10/2021	0.32	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-9	21.8	n/a	3/10/2021	0.022J	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-4R	35.8	n/a	3/10/2021	263	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-5R	35.8	n/a	3/10/2021	134	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-6R	35.8	n/a	3/10/2021	55.9	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-1	35.8	n/a	3/10/2021	67.2	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-11	35.8	n/a	3/10/2021	126	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-12	35.8	n/a	3/10/2021	53.1	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-13	35.8	n/a	3/15/2021	2.4	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-14	35.8	n/a	3/16/2021	34.4	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-15	35.8	n/a	3/12/2021	101	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-16	35.8	n/a	3/16/2021	188	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-17	35.8	n/a	3/11/2021	67	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-2	35.8	n/a	3/15/2021	0.22J	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-20	35.8	n/a	3/12/2021	241	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-21	35.8	n/a	3/16/2021	104	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-22	35.8	n/a	3/10/2021	18.7	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-9	35.8	n/a	3/10/2021	5.3	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWB-4R	260	n/a	3/10/2021	16	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWB-5R	260	n/a	3/10/2021	25.7	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWB-6R	260	n/a	3/10/2021	42.4	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-1	260	n/a	3/10/2021	8.5	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-11	260	n/a	3/10/2021	188	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-12	260	n/a	3/10/2021	48.7	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-13	260	n/a	3/15/2021	7.6	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-14	260	n/a	3/16/2021	15.8	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-15	260	n/a	3/12/2021	2.3	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-16	260	n/a	3/16/2021	44.9	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-17	260	n/a	3/11/2021	334	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-2	260	n/a	3/15/2021	6.4	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-20	260	n/a	3/12/2021	31.9	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-21	260	n/a	3/16/2021	25.3	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-22	260	n/a	3/10/2021	48.2	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-9	260	n/a	3/10/2021	18.3	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Fluoride (mg/L)	GWB-4R	0.5074	n/a	3/10/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWB-5R	0.5074	n/a	3/10/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWB-6R	0.5074	n/a	3/10/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-1	0.5074	n/a	3/10/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-11	0.5074	n/a	3/10/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-12	0.5074	n/a	3/10/2021	0.14	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-13	0.5074	n/a	3/15/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-14	0.5074	n/a	3/16/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2

Appendix III Interwell Prediction Limits - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/9/2021, 11:09 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	GWC-15	0.5074	n/a	3/12/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-16	0.5074	n/a	3/16/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-17	0.5074	n/a	3/11/2021	0.42	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-2	0.5074	n/a	3/15/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-20	0.5074	n/a	3/12/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-21	0.5074	n/a	3/16/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-22	0.5074	n/a	3/10/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-9	0.5074	n/a	3/10/2021	0.066J	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
pH (SU)	GWB-4R	6.43	4.23	3/10/2021	5.23	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWB-5R	6.43	4.23	3/10/2021	4.73	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWB-6R	6.43	4.23	3/10/2021	5.69	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-1	6.43	4.23	3/10/2021	5.42	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-11	6.43	4.23	3/10/2021	4.97	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-12	6.43	4.23	3/10/2021	4.08	Yes	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-13	6.43	4.23	3/15/2021	4.74	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-14	6.43	4.23	3/16/2021	5.53	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-15	6.43	4.23	3/12/2021	6.21	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-16	6.43	4.23	3/16/2021	5.67	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-17	6.43	4.23	3/11/2021	5.2	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-2	6.43	4.23	3/15/2021	4.56	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-20	6.43	4.23	3/12/2021	5.86	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-21	6.43	4.23	3/16/2021	5.74	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-22	6.43	4.23	3/10/2021	4.82	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-9	6.43	4.23	3/10/2021	4.55	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-4R	160	n/a	3/10/2021	160	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-5R	160	n/a	3/10/2021	572	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-6R	160	n/a	3/10/2021	1160	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-1	160	n/a	3/10/2021	61.2	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-11	160	n/a	3/10/2021	687	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-12	160	n/a	3/10/2021	282	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-13	160	n/a	3/15/2021	30.6	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-14	160	n/a	3/16/2021	92	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-15	160	n/a	3/12/2021	21.1	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-16	160	n/a	3/16/2021	821	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-17	160	n/a	3/11/2021	244	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-2	160	n/a	3/15/2021	10	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-20	160	n/a	3/12/2021	933	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-21	160	n/a	3/16/2021	343	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-22	160	n/a	3/10/2021	101	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-9	160	n/a	3/10/2021	38.7	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWB-4R	3660	n/a	3/10/2021	434	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWB-5R	3660	n/a	3/10/2021	1040	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWB-6R	3660	n/a	3/10/2021	2120	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-1	3660	n/a	3/10/2021	329	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-11	3660	n/a	3/10/2021	1240	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-12	3660	n/a	3/10/2021	566	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-13	3660	n/a	3/15/2021	5ND	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-14	3660	n/a	3/16/2021	137	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-15	3660	n/a	3/12/2021	353	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-16	3660	n/a	3/16/2021	980	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-17	3660	n/a	3/11/2021	705	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-2	3660	n/a	3/15/2021	11	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-20	3660	n/a	3/12/2021	1730	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-21	3660	n/a	3/16/2021	454	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-22	3660	n/a	3/10/2021	210	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-9	3660	n/a	3/10/2021	89	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2

Appendix III Trend Tests - Prediction Limit Exceedances - Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/9/2021, 1:56 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>Xform</u>	<u>Alpha</u>	<u>Method</u>
Calcium (mg/L)	GWA-7 (bg)	-0.8066	-70	-48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWB-4R	13.98	51	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWB-5R	8.091	52	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-1	8.001	57	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-11	20.6	65	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-12	-14.41	-85	-48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-16	25.25	50	48	Yes	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GWA-7 (bg)	-23.17	-50	-48	Yes	14	0	n/a	n/a	0.01	NP
pH (SU)	GWA-7 (bg)	-0.09169	-64	-53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWB-6R	51.25	57	48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-11	111.8	57	48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-12	-175	-73	-48	Yes	14	0	n/a	n/a	0.01	NP

Appendix III Trend Tests - Prediction Limit Exceedances - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/9/2021, 1:56 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Calcium (mg/L)	GWA-7 (bg)	-0.8066	-70	-48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWA-8 (bg)	1.352	32	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWB-4R	13.98	51	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWB-5R	8.091	52	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWB-6R	1.869	42	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-1	8.001	57	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-11	20.6	65	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-12	-14.41	-85	-48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-15	-1.606	-13	-48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-16	25.25	50	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-17	-7.019	-29	-48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-20	28.6	33	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-21	14.18	38	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-9	-0.5668	-32	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GWA-7 (bg)	-23.17	-50	-48	Yes	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GWA-8 (bg)	0.2573	28	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GWC-17	-118.7	-38	-48	No	14	0	n/a	n/a	0.01	NP
pH (SU)	GWA-7 (bg)	-0.09169	-64	-53	Yes	15	0	n/a	n/a	0.01	NP
pH (SU)	GWA-8 (bg)	0.01272	8	53	No	15	0	n/a	n/a	0.01	NP
pH (SU)	GWC-12	-0.005903	-6	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWA-7 (bg)	-5.236	-41	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWA-8 (bg)	-7.472	-33	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWB-5R	35.28	37	48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWB-6R	51.25	57	48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-11	111.8	57	48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-12	-175	-73	-48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-16	97.68	45	48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-17	-22.13	-18	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-20	42.47	15	48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-21	16.98	32	48	No	14	0	n/a	n/a	0.01	NP

Tolerance Limits Summary Table

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/19/2021, 1:57 PM

<u>Constituent</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	0.003	n/a	n/a	121	n/a	n/a	95.04	n/a	n/a	0.002016	NP Inter
Arsenic (mg/L)	0.0287	n/a	n/a	121	n/a	n/a	76.86	n/a	n/a	0.002016	NP Inter
Barium (mg/L)	0.22	n/a	n/a	119	n/a	n/a	0	n/a	n/a	0.002234	NP Inter
Beryllium (mg/L)	0.003	n/a	n/a	41	n/a	n/a	51.22	n/a	n/a	0.1221	NP Inter
Cadmium (mg/L)	0.0007	n/a	n/a	39	n/a	n/a	94.87	n/a	n/a	0.1353	NP Inter
Chromium (mg/L)	0.068	n/a	n/a	120	n/a	n/a	62.5	n/a	n/a	0.002122	NP Inter
Cobalt (mg/L)	0.0102	n/a	n/a	40	n/a	n/a	50	n/a	n/a	0.1285	NP Inter
Combined Radium 226 + 228 (pCi/L)	33.8	n/a	n/a	28	n/a	n/a	0	n/a	n/a	0.2378	NP Inter
Fluoride (mg/L)	0.49	n/a	n/a	32	n/a	n/a	25	n/a	n/a	0.1937	NP Inter
Lead (mg/L)	0.013	n/a	n/a	117	n/a	n/a	75.21	n/a	n/a	0.002475	NP Inter
Lithium (mg/L)	0.03	n/a	n/a	28	n/a	n/a	75	n/a	n/a	0.2378	NP Inter
Mercury (mg/L)	0.0002	n/a	n/a	22	n/a	n/a	86.36	n/a	n/a	0.3235	NP Inter
Molybdenum (mg/L)	0.01	n/a	n/a	28	n/a	n/a	89.29	n/a	n/a	0.2378	NP Inter
Selenium (mg/L)	0.0438	n/a	n/a	121	n/a	n/a	83.47	n/a	n/a	0.002016	NP Inter
Thallium (mg/L)	0.001	n/a	n/a	60	n/a	n/a	93.33	n/a	n/a	0.04607	NP Inter
Vanadium (mg/L)	0.425	n/a	n/a	115	n/a	n/a	63.48	n/a	n/a	0.002743	NP Inter
Zinc (mg/L)	0.16	n/a	n/a	113	n/a	n/a	25.66	n/a	n/a	0.003039	NP Inter

GRUMMAN ROAD LANDFILL GWPS			
Constituent Name	MCL	Background Limit	GWPS
Antimony, Total (mg/L)	0.006	0.003	0.006
Arsenic, Total (mg/L)	0.01	0.029	0.029
Barium, Total (mg/L)	2	0.22	2
Beryllium, Total (mg/L)	0.004	0.003	0.004
Cadmium, Total (mg/L)	0.005	0.0007	0.005
Chromium, Total (mg/L)	0.1	0.068	0.1
Cobalt, Total (mg/L)	n/a	0.01	0.01
Combined Radium, Total (pCi/L)	5	33.8	33.8
Fluoride, Total (mg/L)	4	0.49	4
Lead, Total (mg/L)	n/a	0.013	0.013
Lithium, Total (mg/L)	n/a	0.03	0.03
Mercury, Total (mg/L)	0.002	0.0002	0.002
Molybdenum, Total (mg/L)	n/a	0.01	0.01
Selenium, Total (mg/L)	0.05	0.044	0.05
Thallium, Total (mg/L)	0.002	0.001	0.002
Vanadium, Total (mg/L)	n/a	0.43	0.43
Zinc, Total (mg/L)	n/a	0.16	0.16

**Highlighted cells indicated Background is higher than MCLs*

**MCL = Maximum Contaminant Level*

**GWPS = Groundwater Protection Standard*

Confidence Intervals - Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/15/2021, 11:10 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	GWC-15	0.1488	0.06159	0.029	Yes18	0.1126	0.07735	0	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	GWC-16	0.088	0.0466	0.029	Yes19	0.0701	0.01728	0	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-20	0.3614	0.2799	0.029	Yes18	0.3206	0.06734	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWB-4R	0.13	0.0237	0.01	Yes14	0.06876	0.05443	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	GWC-1	0.1643	0.06968	0.01	Yes14	0.117	0.06681	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-15	0.1132	0.09144	0.01	Yes14	0.1023	0.01534	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-16	0.2131	0.1171	0.01	Yes14	0.1651	0.06775	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-20	0.3038	0.109	0.01	Yes14	0.2064	0.1375	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-21	0.06218	0.01951	0.01	Yes14	0.04084	0.03012	0	None	No	0.01	Param.

Confidence Intervals - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/15/2021, 11:10 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	GWB-4R	0.003	0.0003	0.006	No 18	0.00285	0.0006364	94.44	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWB-5R	0.003	0.00054	0.006	No 18	0.002713	0.0008353	88.89	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWB-6R	0.003	0.00059	0.006	No 18	0.002716	0.0008295	88.89	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-1	0.003	0.00069	0.006	No 18	0.002592	0.0009415	83.33	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-11	0.003	0.00051	0.006	No 18	0.00167	0.00123	44.44	None	No	0.01	NP (normality)
Antimony (mg/L)	GWC-12	0.003	0.0003	0.006	No 18	0.00285	0.0006364	94.44	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-13	0.003	0.0006	0.006	No 18	0.002867	0.0005657	94.44	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-15	0.003	0.0018	0.006	No 18	0.002933	0.0002828	94.44	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-17	0.003	0.00039	0.006	No 18	0.002855	0.0006152	94.44	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-2	0.003	0.0016	0.006	No 18	0.002828	0.0005039	88.89	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-20	0.003	0.0019	0.006	No 18	0.002808	0.0005976	88.89	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-21	0.003	0.00033	0.006	No 18	0.002852	0.0006293	94.44	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-22	0.003	0.0016	0.006	No 18	0.002452	0.000993	72.22	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-9	0.003	0.0016	0.006	No 18	0.002774	0.0006932	88.89	None	No	0.01	NP (NDs)
Arsenic (mg/L)	GWB-4R	0.003088	0.001819	0.029	No 18	0.002519	0.001115	11.11	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	GWB-5R	0.005	0.001	0.029	No 18	0.002378	0.001764	22.22	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWB-6R	0.005	0.0014	0.029	No 18	0.003079	0.001714	27.78	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-1	0.005206	0.002059	0.029	No 17	0.004653	0.005994	0	None	ln(x)	0.01	Param.
Arsenic (mg/L)	GWC-12	0.005	0.0009	0.029	No 18	0.004294	0.001624	83.33	None	No	0.01	NP (NDs)
Arsenic (mg/L)	GWC-13	0.005	0.0006	0.029	No 18	0.00451	0.001426	88.89	None	No	0.01	NP (NDs)
Arsenic (mg/L)	GWC-14	0.003	0.0018	0.029	No 19	0.002502	0.00118	15.79	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-15	0.1488	0.06159	0.029	Yes18	0.1126	0.07735	0	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	GWC-16	0.088	0.0466	0.029	Yes19	0.0701	0.01728	0	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-17	0.005	0.0011	0.029	No 18	0.002496	0.001841	33.33	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-2	0.005	0.00094	0.029	No 18	0.004274	0.001673	83.33	None	No	0.01	NP (NDs)
Arsenic (mg/L)	GWC-20	0.3614	0.2799	0.029	Yes18	0.3206	0.06734	0	None	No	0.01	Param.
Arsenic (mg/L)	GWC-21	0.004635	0.002674	0.029	No 18	0.004422	0.00187	33.33	Kaplan-Meier	sqrt(x)	0.01	Param.
Arsenic (mg/L)	GWC-22	0.005	0.0006	0.029	No 18	0.003087	0.002034	50	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-9	0.005	0.00084	0.029	No 18	0.004769	0.0009805	94.44	None	No	0.01	NP (NDs)
Barium (mg/L)	GWB-4R	0.0924	0.07768	2	No 18	0.08538	0.01282	0	None	x^(1/3)	0.01	Param.
Barium (mg/L)	GWB-5R	0.153	0.09438	2	No 18	0.1276	0.05539	0	None	x^(1/3)	0.01	Param.
Barium (mg/L)	GWB-6R	0.107	0.013	2	No 18	0.07144	0.04271	0	None	No	0.01	NP (normality)
Barium (mg/L)	GWC-1	0.05679	0.05042	2	No 18	0.05361	0.005262	0	None	No	0.01	Param.
Barium (mg/L)	GWC-11	0.1172	0.06578	2	No 18	0.09149	0.0425	0	None	No	0.01	Param.
Barium (mg/L)	GWC-12	0.0191	0.017	2	No 18	0.01894	0.004275	0	None	No	0.01	NP (normality)
Barium (mg/L)	GWC-13	0.02612	0.02055	2	No 18	0.02334	0.004605	0	None	No	0.01	Param.
Barium (mg/L)	GWC-14	0.038	0.025	2	No 19	0.03616	0.01812	0	None	No	0.01	NP (normality)
Barium (mg/L)	GWC-15	0.04725	0.03843	2	No 18	0.04284	0.007282	0	None	No	0.01	Param.
Barium (mg/L)	GWC-16	0.1318	0.06155	2	No 17	0.1034	0.06904	0	None	x^(1/3)	0.01	Param.
Barium (mg/L)	GWC-17	0.1103	0.04704	2	No 18	0.08393	0.05792	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	GWC-2	0.054	0.049	2	No 17	0.05347	0.007723	0	None	No	0.01	NP (normality)
Barium (mg/L)	GWC-20	0.19	0.078	2	No 18	0.1487	0.1022	0	None	No	0.01	NP (normality)
Barium (mg/L)	GWC-21	0.099	0.05137	2	No 18	0.08227	0.04914	0	None	ln(x)	0.01	Param.
Barium (mg/L)	GWC-22	0.09364	0.0616	2	No 18	0.07894	0.02836	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	GWC-9	0.259	0.187	2	No 18	0.223	0.05951	0	None	No	0.01	Param.
Beryllium (mg/L)	GWB-4R	0.003	0.0001	0.004	No 14	0.001779	0.001466	57.14	None	No	0.01	NP (NDs)
Beryllium (mg/L)	GWB-5R	0.003	0.000082	0.004	No 14	0.0007788	0.001207	21.43	None	No	0.01	NP (normality)
Beryllium (mg/L)	GWB-6R	0.003	0.00005	0.004	No 14	0.002578	0.001072	85.71	None	No	0.01	NP (NDs)
Beryllium (mg/L)	GWC-11	0.003	0.000047	0.004	No 14	0.002789	0.0007892	92.86	None	No	0.01	NP (NDs)
Beryllium (mg/L)	GWC-12	0.0008176	0.0005067	0.004	No 14	0.00067	0.0002317	0	None	sqrt(x)	0.01	Param.
Beryllium (mg/L)	GWC-13	0.003	0.000058	0.004	No 14	0.00279	0.0007863	92.86	None	No	0.01	NP (NDs)
Beryllium (mg/L)	GWC-14	0.003	0.0001	0.004	No 14	0.002375	0.001242	78.57	None	No	0.01	NP (NDs)
Beryllium (mg/L)	GWC-16	0.003	0.00008	0.004	No 14	0.001127	0.001449	35.71	None	No	0.01	NP (normality)
Beryllium (mg/L)	GWC-17	0.002704	0.001532	0.004	No 14	0.0022	0.0009373	0	None	ln(x)	0.01	Param.
Beryllium (mg/L)	GWC-2	0.003	0.000075	0.004	No 15	0.001845	0.001465	60	None	No	0.01	NP (NDs)

Confidence Intervals - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/15/2021, 11:10 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Beryllium (mg/L)	GWC-22	0.003	0.00009	0.004	No 14	0.00156	0.001495	50	None	No	0.01	NP (normality)
Beryllium (mg/L)	GWC-9	0.0003	0.00019	0.004	No 14	0.0002464	0.0000494	0	None	No	0.01	NP (normality)
Cadmium (mg/L)	GWB-4R	0.0005	0.0002	0.005	No 14	0.0003986	0.0001692	71.43	None	No	0.01	NP (NDs)
Cadmium (mg/L)	GWC-1	0.0005	0.0001	0.005	No 14	0.0004407	0.0001508	85.71	None	No	0.01	NP (NDs)
Cadmium (mg/L)	GWC-11	0.0005998	0.0002616	0.005	No 14	0.0004307	0.0002387	7.143	None	No	0.01	Param.
Cadmium (mg/L)	GWC-14	0.0005	0.00017	0.005	No 14	0.000335	0.0001737	50	None	No	0.01	NP (normality)
Cadmium (mg/L)	GWC-20	0.0005	0.00018	0.005	No 14	0.0004771	0.00008552	92.86	None	No	0.01	NP (NDs)
Cadmium (mg/L)	GWC-22	0.0002218	0.00009636	0.005	No 14	0.0002893	0.0001774	28.57	Kaplan-Meier	ln(x)	0.01	Param.
Chromium (mg/L)	GWB-4R	0.0106	0.0022	0.1	No 18	0.006778	0.00451	0	None	No	0.01	NP (normality)
Chromium (mg/L)	GWB-5R	0.01	0.0011	0.1	No 18	0.008311	0.01642	22.22	None	No	0.01	NP (normality)
Chromium (mg/L)	GWB-6R	0.006307	0.002039	0.1	No 18	0.005461	0.005371	0	None	ln(x)	0.01	Param.
Chromium (mg/L)	GWC-1	0.0024	0.0016	0.1	No 18	0.002628	0.002124	5.556	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-11	0.01	0.0007	0.1	No 18	0.004443	0.004544	33.33	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-12	0.0028	0.00085	0.1	No 18	0.002658	0.003408	16.67	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-13	0.01	0.0007	0.1	No 18	0.005459	0.004681	50	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-14	0.01	0.00074	0.1	No 19	0.004245	0.004521	36.84	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-15	0.01	0.0013	0.1	No 18	0.00435	0.004137	33.33	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-16	0.01	0.00098	0.1	No 19	0.004783	0.004574	36.84	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-17	0.01	0.0009	0.1	No 18	0.003783	0.004104	27.78	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-2	0.01	0.00069	0.1	No 18	0.005896	0.004723	55.56	None	No	0.01	NP (NDs)
Chromium (mg/L)	GWC-20	0.01	0.0009	0.1	No 18	0.004511	0.004509	38.89	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-21	0.01	0.00065	0.1	No 18	0.004847	0.004745	38.89	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-22	0.01	0.00057	0.1	No 18	0.005299	0.004838	50	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-9	0.01	0.001	0.1	No 18	0.004194	0.00424	33.33	None	No	0.01	NP (normality)
Cobalt (mg/L)	GWB-4R	0.0015	0.00072	0.01	No 14	0.001322	0.001153	7.143	None	No	0.01	NP (normality)
Cobalt (mg/L)	GWB-5R	0.0057	0.00056	0.01	No 14	0.003592	0.001982	50	None	No	0.01	NP (normality)
Cobalt (mg/L)	GWB-6R	0.005	0.00038	0.01	No 14	0.00467	0.001235	92.86	None	No	0.01	NP (NDs)
Cobalt (mg/L)	GWC-11	0.005	0.00055	0.01	No 14	0.003719	0.002104	71.43	None	No	0.01	NP (NDs)
Cobalt (mg/L)	GWC-12	0.001337	0.000813	0.01	No 14	0.001075	0.0003699	0	None	No	0.01	Param.
Cobalt (mg/L)	GWC-14	0.005	0.0003	0.01	No 14	0.004664	0.001256	92.86	None	No	0.01	NP (NDs)
Cobalt (mg/L)	GWC-17	0.007	0.0023	0.01	No 14	0.004514	0.002238	0	None	No	0.01	NP (normality)
Cobalt (mg/L)	GWC-2	0.005	0.00032	0.01	No 15	0.003492	0.002215	66.67	None	No	0.01	NP (NDs)
Cobalt (mg/L)	GWC-22	0.005	0.0007	0.01	No 14	0.003174	0.002192	57.14	None	No	0.01	NP (NDs)
Cobalt (mg/L)	GWC-9	0.0017	0.00099	0.01	No 14	0.001409	0.000386	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GWB-4R	5	2.32	33.8	No 14	3.411	1.219	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GWB-5R	4.048	2.152	33.8	No 14	3.164	1.503	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWB-6R	4.87	2.515	33.8	No 14	3.692	1.663	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-1	2.29	1.589	33.8	No 14	1.939	0.4952	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-11	6.794	3.046	33.8	No 14	4.92	2.645	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-12	2.958	1.807	33.8	No 14	2.383	0.8119	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-13	1.332	0.7764	33.8	No 14	1.054	0.3923	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-14	1.238	0.6261	33.8	No 14	0.932	0.4319	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-15	1.812	1.035	33.8	No 14	1.423	0.5483	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-16	2.47	1.72	33.8	No 14	2.237	0.8871	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GWC-17	4.101	2.772	33.8	No 14	3.436	0.9383	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-2	1.003	0.6389	33.8	No 14	0.821	0.2571	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-20	4.37	1.813	33.8	No 14	3.091	1.805	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-21	2.51	1.195	33.8	No 14	1.853	0.9278	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-22	7.57	3	33.8	No 14	5.45	2.039	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GWC-9	3.31	2.08	33.8	No 14	3.193	1.588	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWB-4R	0.17	0.064	4	No 16	0.1797	0.2829	56.25	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWB-5R	0.11	0.05	4	No 16	0.08956	0.04179	50	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWB-6R	0.15	0.09	4	No 16	0.1206	0.06411	43.75	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWC-1	0.18	0.051	4	No 16	0.1057	0.04186	75	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWC-12	0.7978	0.2642	4	No 16	0.531	0.4101	6.25	None	No	0.01	Param.

Confidence Intervals - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/15/2021, 11:10 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	GWC-13	0.55	0.09	4	No 16	0.1245	0.1141	81.25	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWC-14	0.41	0.1	4	No 16	0.18	0.1318	62.5	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWC-15	0.15	0.06	4	No 16	0.135	0.1032	68.75	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWC-16	0.36	0.1	4	No 16	0.195	0.2186	56.25	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWC-17	1.33	0.5603	4	No 16	0.945	0.5913	6.25	None	No	0.01	Param.
Fluoride (mg/L)	GWC-2	0.17	0.07	4	No 16	0.1277	0.1336	56.25	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWC-20	0.14	0.043	4	No 16	0.09019	0.02979	75	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWC-21	0.1	0.071	4	No 16	0.09819	0.00725	93.75	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWC-22	0.12	0.06	4	No 16	0.09188	0.02562	62.5	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWC-9	0.2687	0.09779	4	No 16	0.2251	0.2351	6.25	None	ln(x)	0.01	Param.
Lead (mg/L)	GWB-4R	0.006	0.00048	0.013	No 17	0.003352	0.003028	11.76	None	No	0.01	NP (normality)
Lead (mg/L)	GWB-5R	0.0005196	0.00008849	0.013	No 18	0.0007573	0.0006351	33.33	Kaplan-Meier	x^(1/3)	0.01	Param.
Lead (mg/L)	GWB-6R	0.001	0.00014	0.013	No 18	0.000582	0.0004147	38.89	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-1	0.001	0.00012	0.013	No 18	0.0007979	0.0003892	77.78	None	No	0.01	NP (NDs)
Lead (mg/L)	GWC-11	0.00036	0.0002	0.013	No 18	0.000345	0.0002525	11.11	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-12	0.0001814	0.00005146	0.013	No 18	0.0005501	0.0008187	27.78	Kaplan-Meier	ln(x)	0.01	Param.
Lead (mg/L)	GWC-13	0.001	0.00013	0.013	No 18	0.0005878	0.0004423	27.78	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-14	0.001	0.00051	0.013	No 19	0.0008311	0.0003467	78.95	None	No	0.01	NP (NDs)
Lead (mg/L)	GWC-15	0.001	0.00009	0.013	No 18	0.0005292	0.0004394	44.44	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-16	0.001	0.0001	0.013	No 19	0.000456	0.0004291	36.84	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-17	0.001	0.0001	0.013	No 18	0.0006513	0.0004394	55.56	None	No	0.01	NP (NDs)
Lead (mg/L)	GWC-2	0.001	0.0002	0.013	No 18	0.0007158	0.0004172	66.67	None	No	0.01	NP (NDs)
Lead (mg/L)	GWC-20	0.001	0.00018	0.013	No 18	0.0007564	0.0004054	72.22	None	No	0.01	NP (NDs)
Lead (mg/L)	GWC-21	0.001	0.00009	0.013	No 18	0.0006119	0.0004489	55.56	None	No	0.01	NP (NDs)
Lead (mg/L)	GWC-22	0.0007979	0.000319	0.013	No 18	0.0006817	0.0006622	5.556	None	ln(x)	0.01	Param.
Lead (mg/L)	GWC-9	0.001	0.000096	0.013	No 18	0.0005897	0.0004446	50	None	No	0.01	NP (normality)
Lithium (mg/L)	GWB-4R	0.014	0.0041	0.03	No 14	0.008521	0.004407	0	None	No	0.01	NP (normality)
Lithium (mg/L)	GWB-5R	0.03	0.0031	0.03	No 14	0.0169	0.01361	50	None	No	0.01	NP (normality)
Lithium (mg/L)	GWC-12	0.03	0.00091	0.03	No 14	0.01342	0.0149	42.86	None	No	0.01	NP (normality)
Lithium (mg/L)	GWC-17	0.00692	0.004937	0.03	No 14	0.005929	0.0014	0	None	No	0.01	Param.
Lithium (mg/L)	GWC-9	0.002092	0.001816	0.03	No 13	0.001954	0.0001854	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWB-4R	0.13	0.0237	0.01	Yes14	0.06876	0.05443	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	GWB-5R	0.01	0.0012	0.01	No 14	0.009371	0.002352	92.86	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	GWB-6R	0.01	0.0013	0.01	No 14	0.007562	0.004017	71.43	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	GWC-1	0.1643	0.06968	0.01	Yes14	0.117	0.06681	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-11	0.01	0.0018	0.01	No 14	0.008755	0.003171	85.71	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	GWC-13	0.01	0.0056	0.01	No 14	0.009686	0.001176	92.86	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	GWC-14	0.0122	0.003014	0.01	No 14	0.009707	0.01025	0	None	ln(x)	0.01	Param.
Molybdenum (mg/L)	GWC-15	0.1132	0.09144	0.01	Yes14	0.1023	0.01534	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-16	0.2131	0.1171	0.01	Yes14	0.1651	0.06775	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-17	0.01	0.0036	0.01	No 14	0.007059	0.003609	57.14	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	GWC-20	0.3038	0.109	0.01	Yes14	0.2064	0.1375	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-21	0.06218	0.01951	0.01	Yes14	0.04084	0.03012	0	None	No	0.01	Param.
Selenium (mg/L)	GWB-4R	0.01	0.0029	0.05	No 18	0.006061	0.003404	38.89	None	No	0.01	NP (normality)
Selenium (mg/L)	GWB-5R	0.01	0.0073	0.05	No 18	0.0088	0.002538	77.78	None	No	0.01	NP (NDs)
Selenium (mg/L)	GWB-6R	0.05	0.0033	0.05	No 18	0.01019	0.0105	66.67	None	No	0.01	NP (NDs)
Selenium (mg/L)	GWC-1	0.0052	0.0018	0.05	No 18	0.004267	0.005362	11.11	None	No	0.01	NP (normality)
Selenium (mg/L)	GWC-11	0.0091	0.003637	0.05	No 18	0.008061	0.00564	22.22	Kaplan-Meier	sqrt(x)	0.01	Param.
Selenium (mg/L)	GWC-12	0.01	0.003	0.05	No 18	0.0083	0.00328	77.78	Kaplan-Meier	No	0.01	NP (NDs)
Selenium (mg/L)	GWC-14	0.004887	0.002834	0.05	No 19	0.003983	0.001946	5.263	None	sqrt(x)	0.01	Param.
Selenium (mg/L)	GWC-15	0.01	0.0029	0.05	No 18	0.008083	0.003425	50	None	No	0.01	NP (normality)
Selenium (mg/L)	GWC-16	0.006161	0.003709	0.05	No 19	0.004935	0.002093	5.263	None	No	0.01	Param.
Selenium (mg/L)	GWC-17	0.01	0.0013	0.05	No 18	0.005889	0.004281	50	None	No	0.01	NP (normality)
Selenium (mg/L)	GWC-2	0.01	0.0035	0.05	No 18	0.009194	0.002359	88.89	None	No	0.01	NP (NDs)
Selenium (mg/L)	GWC-20	0.01	0.0014	0.05	No 18	0.007606	0.003973	72.22	None	No	0.01	NP (NDs)

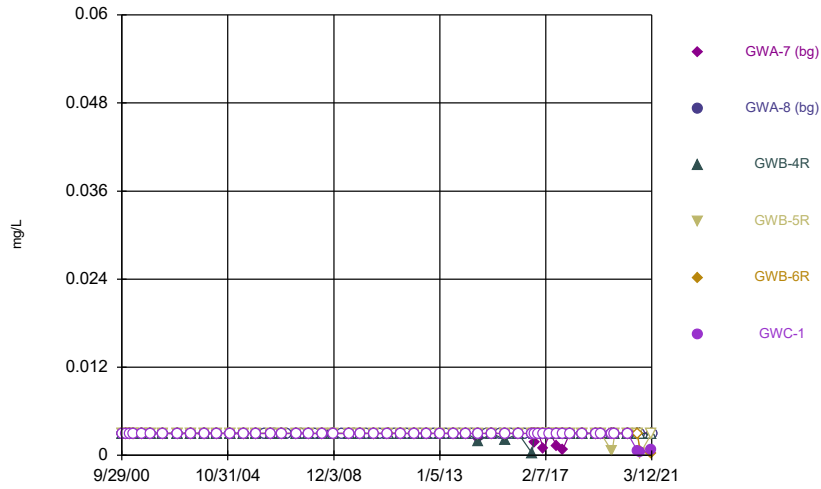
Confidence Intervals - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/15/2021, 11:10 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Selenium (mg/L)	GWC-21	0.02151	0.01213	0.05	No 18	0.01682	0.007752	0	None	No	0.01	Param.
Selenium (mg/L)	GWC-22	0.01	0.0023	0.05	No 18	0.008161	0.00355	77.78	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWB-4R	0.001	0.00007	0.002	No 14	0.0008671	0.0003377	85.71	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWB-5R	0.001	0.00031	0.002	No 14	0.0008834	0.0003006	85.71	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-1	0.001	0.000054	0.002	No 14	0.000797	0.0004034	78.57	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-11	0.001	0.000098	0.002	No 14	0.0005084	0.0004443	42.86	None	No	0.01	NP (normality)
Thallium (mg/L)	GWC-12	0.001	0.00014	0.002	No 14	0.0005343	0.0004208	42.86	None	No	0.01	NP (normality)
Thallium (mg/L)	GWC-14	0.001	0.00007	0.002	No 14	0.0008664	0.0003395	85.71	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-16	0.001	0.00006	0.002	No 14	0.000865	0.0003432	85.71	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-17	0.001	0.000076	0.002	No 14	0.000607	0.0004711	57.14	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-2	0.001	0.00011	0.002	No 15	0.0009407	0.0002298	93.33	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-21	0.001	0.00005	0.002	No 14	0.0009321	0.0002539	92.86	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-22	0.001	0.000086	0.002	No 14	0.0006772	0.0004501	64.29	None	No	0.01	NP (NDs)
Vanadium (mg/L)	GWB-4R	0.0399	0.0037	0.43	No 13	0.02166	0.0173	7.692	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWB-5R	0.011	0.004035	0.43	No 13	0.008585	0.008107	7.692	None	ln(x)	0.01	Param.
Vanadium (mg/L)	GWB-6R	0.03572	0.006872	0.43	No 13	0.02446	0.0274	0	None	x^(1/3)	0.01	Param.
Vanadium (mg/L)	GWC-1	0.005927	0.003821	0.43	No 13	0.005777	0.002282	15.38	Kaplan-Meier	No	0.01	Param.
Vanadium (mg/L)	GWC-11	0.01	0.0021	0.43	No 13	0.004108	0.003367	23.08	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-12	0.005419	0.003217	0.43	No 13	0.005354	0.002499	15.38	Kaplan-Meier	No	0.01	Param.
Vanadium (mg/L)	GWC-13	0.01	0.0016	0.43	No 13	0.007477	0.003906	61.54	None	No	0.01	NP (NDs)
Vanadium (mg/L)	GWC-14	0.01778	0.007775	0.43	No 16	0.01367	0.007188	18.75	Kaplan-Meier	No	0.01	Param.
Vanadium (mg/L)	GWC-15	0.01	0.0021	0.43	No 15	0.005427	0.003897	40	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-16	0.01	0.0026	0.43	No 16	0.004785	0.003142	25	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-17	0.01	0.0024	0.43	No 13	0.006138	0.003744	46.15	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-2	0.01	0.0024	0.43	No 13	0.009415	0.002108	92.31	None	No	0.01	NP (NDs)
Vanadium (mg/L)	GWC-20	0.01	0.0024	0.43	No 15	0.005193	0.003536	33.33	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-21	0.01	0.0022	0.43	No 13	0.004685	0.003125	23.08	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-22	0.01	0.0014	0.43	No 13	0.006454	0.004101	53.85	None	No	0.01	NP (NDs)
Vanadium (mg/L)	GWC-9	0.01	0.0015	0.43	No 13	0.008677	0.00323	84.62	None	No	0.01	NP (NDs)
Zinc (mg/L)	GWB-4R	0.009085	0.004399	0.16	No 13	0.007577	0.003146	15.38	Kaplan-Meier	No	0.01	Param.
Zinc (mg/L)	GWB-5R	0.01	0.0022	0.16	No 13	0.008008	0.003469	69.23	Kaplan-Meier	No	0.01	NP (NDs)
Zinc (mg/L)	GWB-6R	0.016	0.0029	0.16	No 13	0.007938	0.004109	53.85	Kaplan-Meier	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-1	0.01	0.0021	0.16	No 13	0.008338	0.003157	69.23	Kaplan-Meier	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-11	0.01	0.0029	0.16	No 13	0.007531	0.003381	61.54	Kaplan-Meier	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-12	0.0074	0.0023	0.16	No 13	0.004469	0.002872	15.38	None	No	0.01	NP (normality)
Zinc (mg/L)	GWC-13	0.047	0.0021	0.16	No 13	0.01751	0.01893	0	None	No	0.01	NP (normality)
Zinc (mg/L)	GWC-14	0.01	0.0052	0.16	No 16	0.008725	0.002817	81.25	None	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-15	0.032	0.0051	0.16	No 15	0.01114	0.005907	86.67	None	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-16	0.01	0.0025	0.16	No 16	0.0073	0.00367	56.25	None	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-17	0.01331	0.007565	0.16	No 13	0.01044	0.003864	7.692	None	No	0.01	Param.
Zinc (mg/L)	GWC-2	0.056	0.0015	0.16	No 13	0.01095	0.014	53.85	None	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-20	0.031	0.0049	0.16	No 15	0.01062	0.006005	80	None	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-21	0.01	0.0016	0.16	No 13	0.007831	0.003585	61.54	None	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-22	0.008122	0.003391	0.16	No 13	0.007808	0.003427	38.46	Kaplan-Meier	No	0.01	Param.
Zinc (mg/L)	GWC-9	0.006349	0.002422	0.16	No 13	0.006269	0.006222	15.38	Kaplan-Meier	ln(x)	0.01	Param.

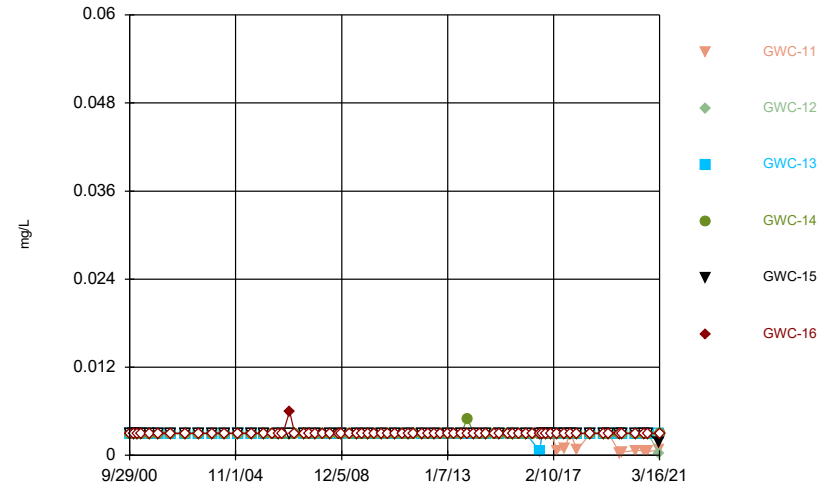
FIGURE A.

Time Series



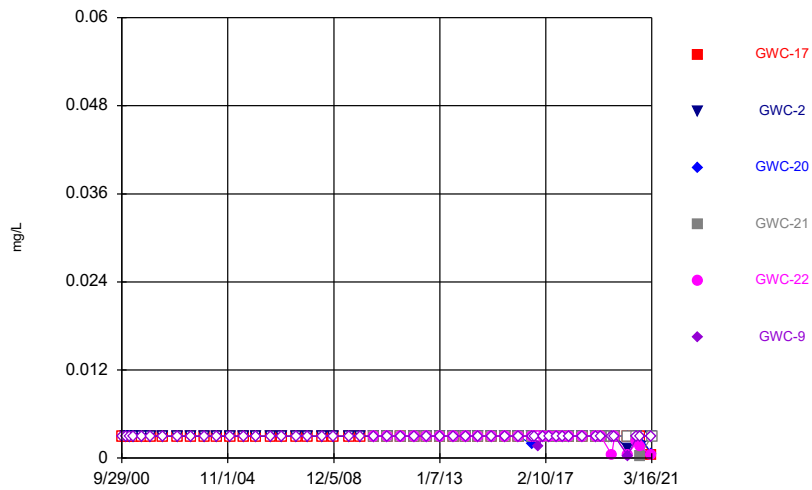
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



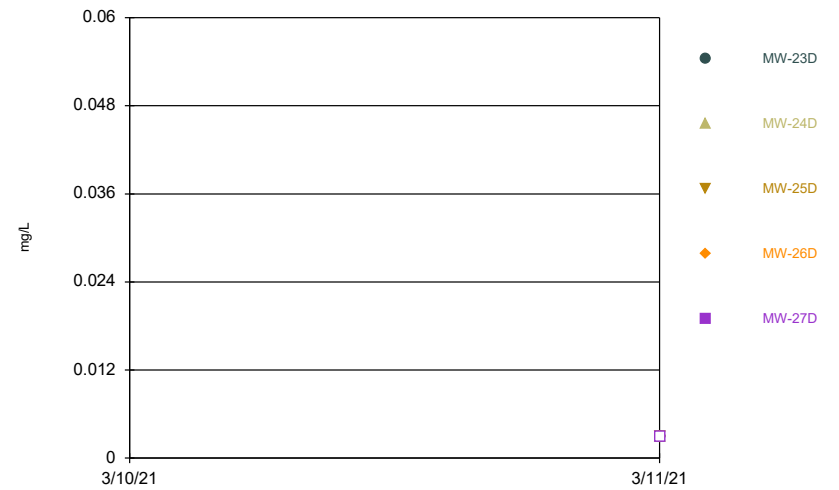
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



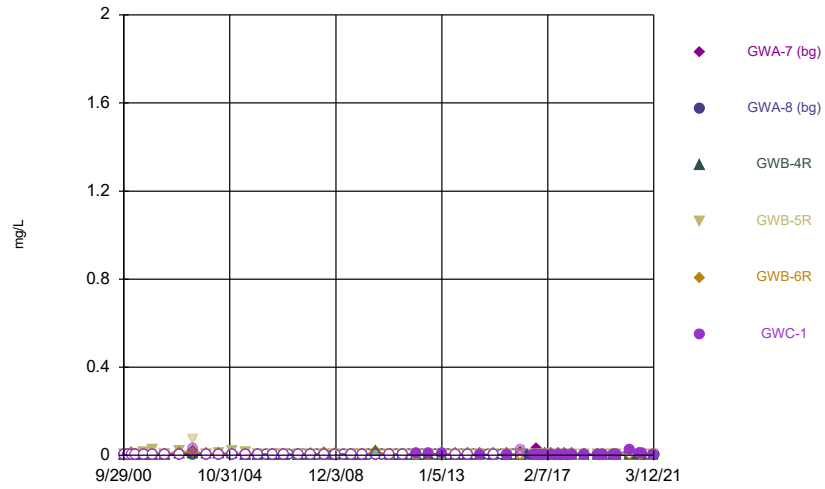
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



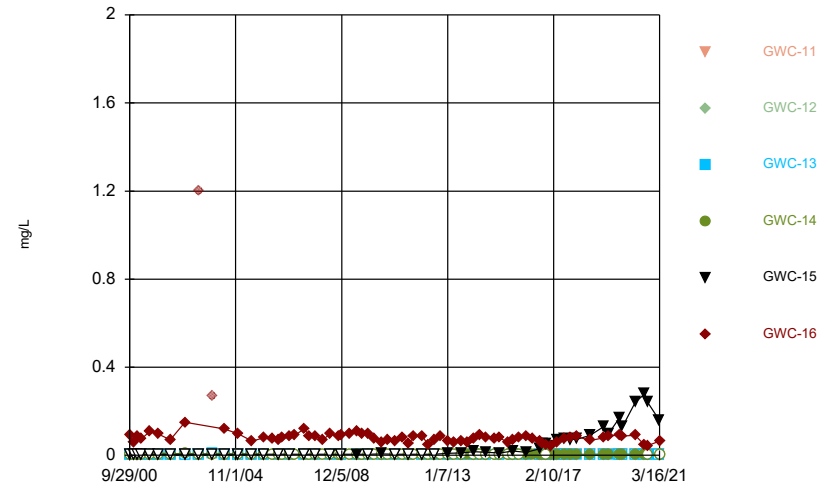
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Time Series



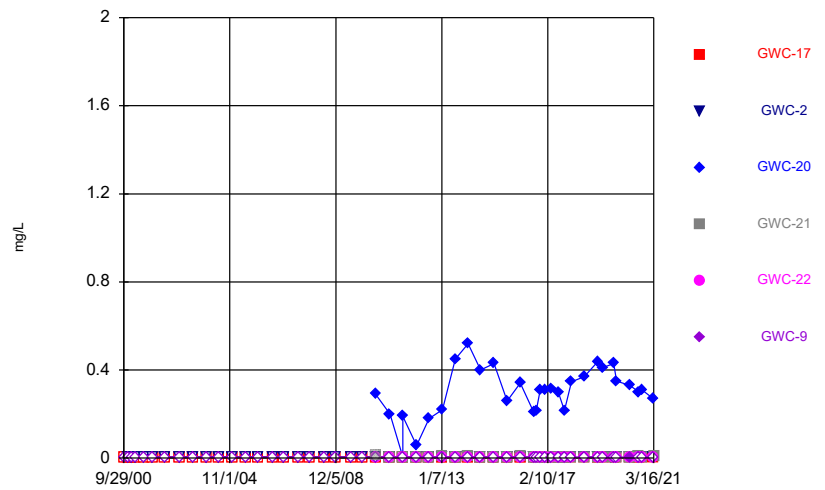
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



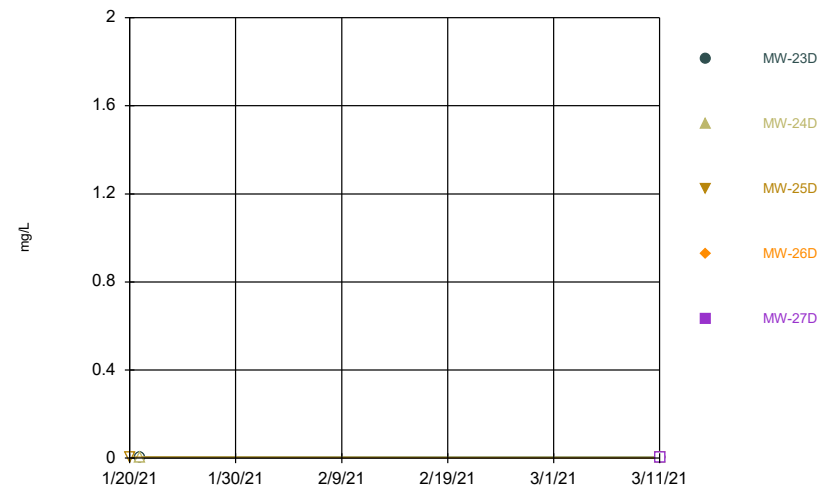
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



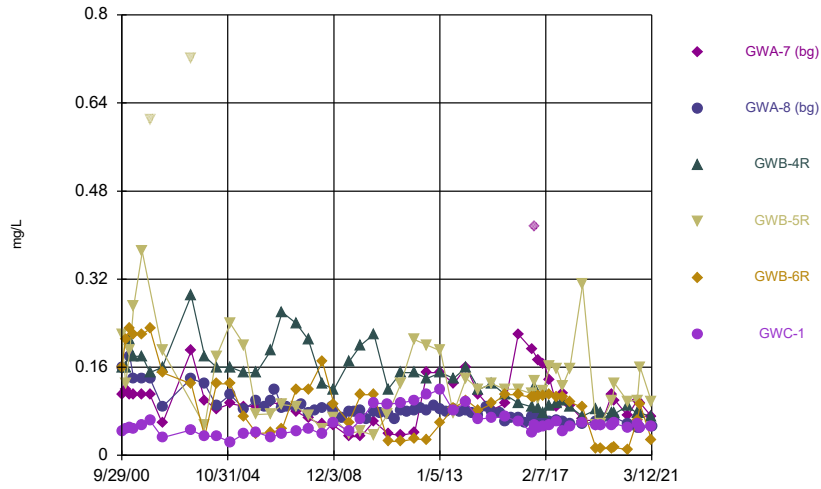
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



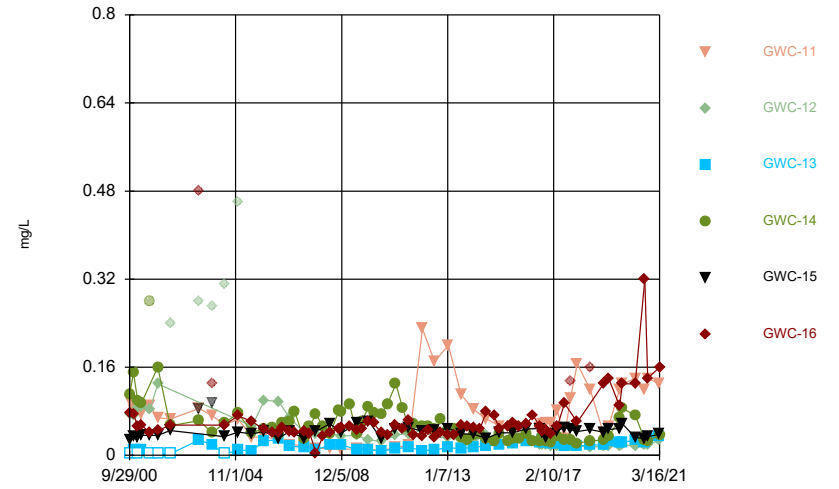
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



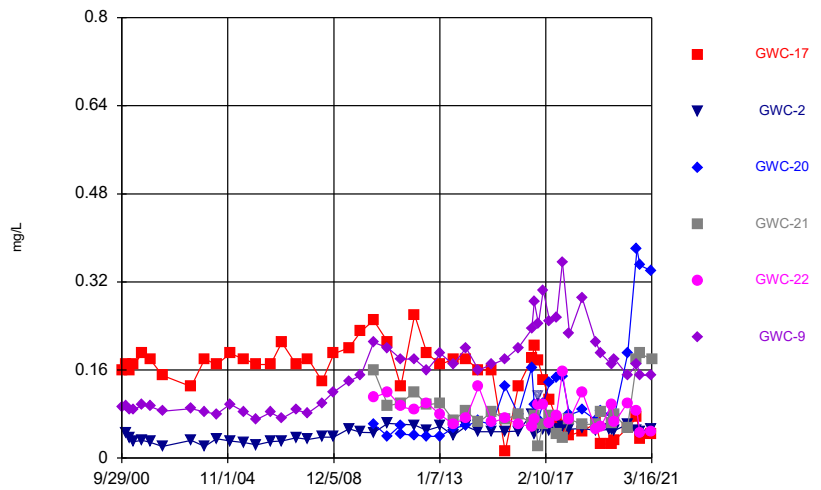
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



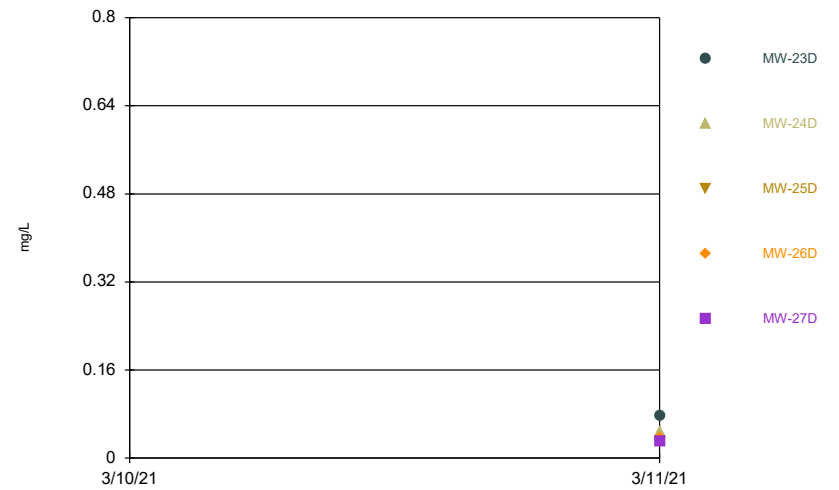
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



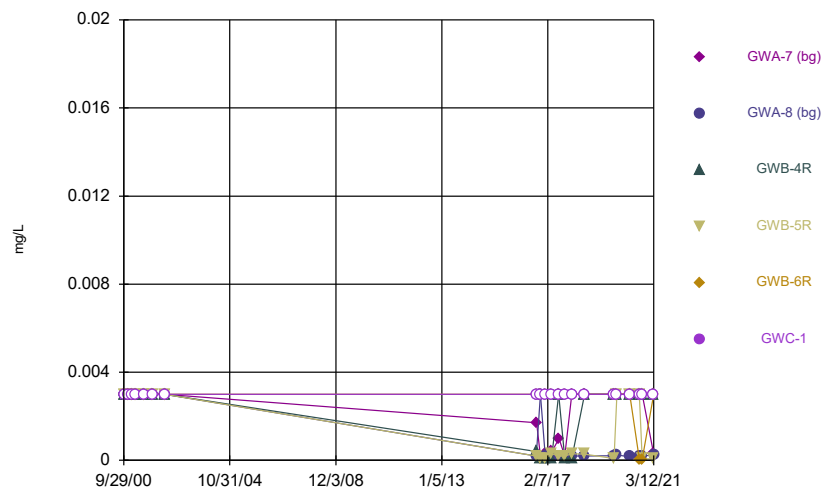
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



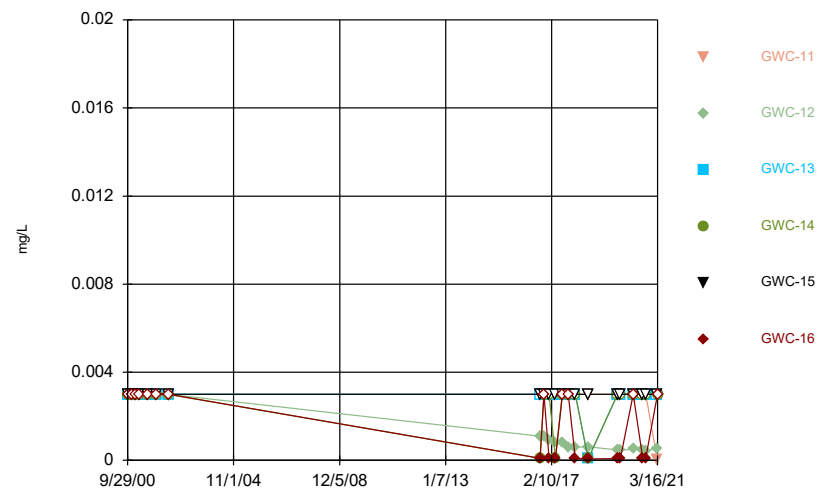
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



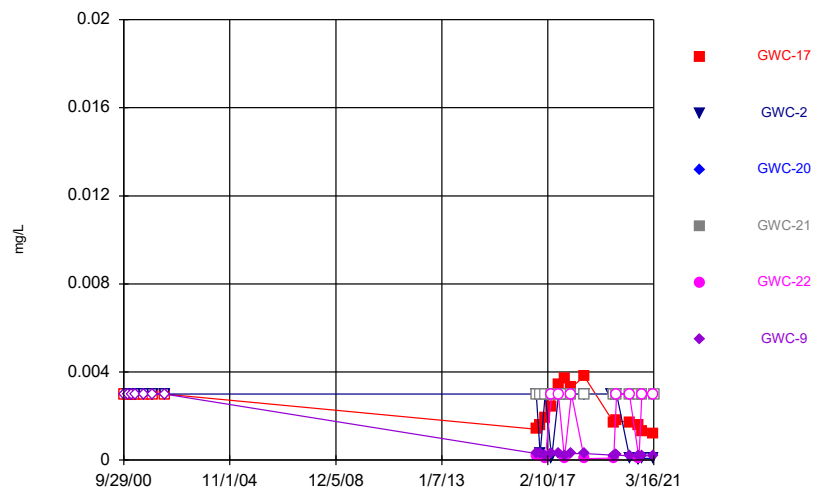
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



Constituent: Beryllium Analysis Run 4/19/2021 1:24 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



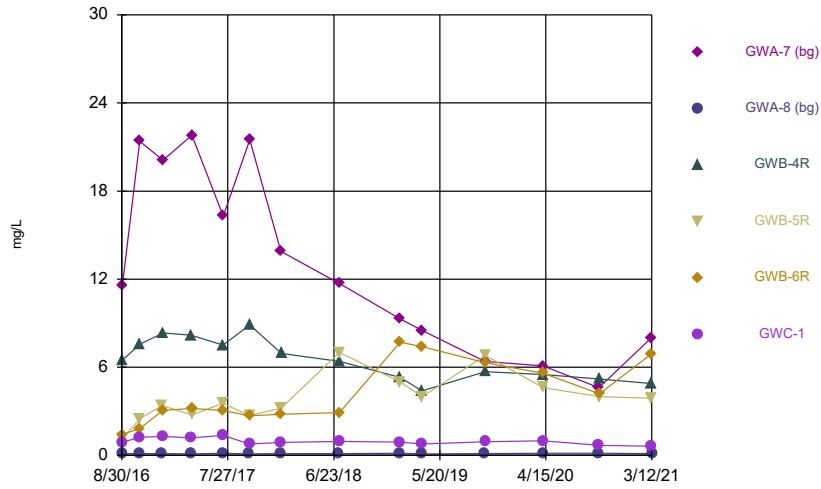
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Time Series



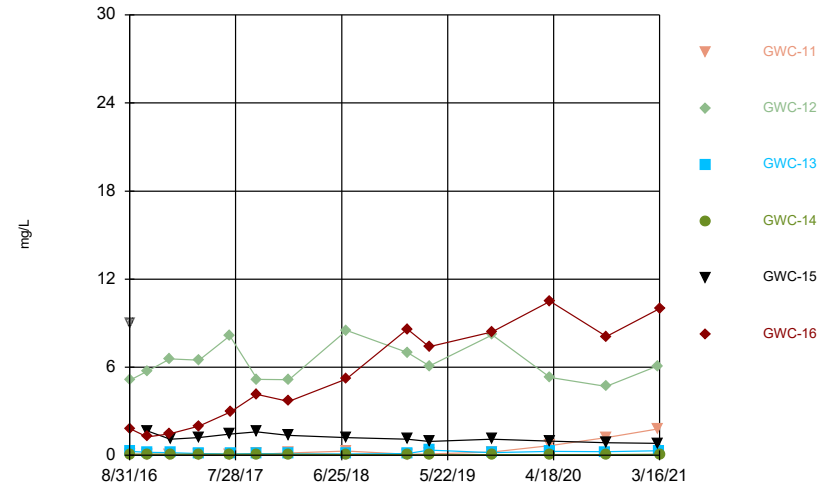
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



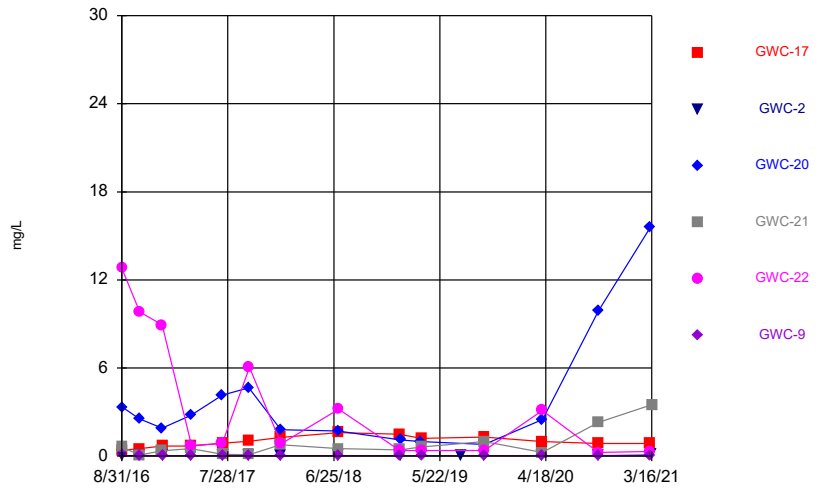
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



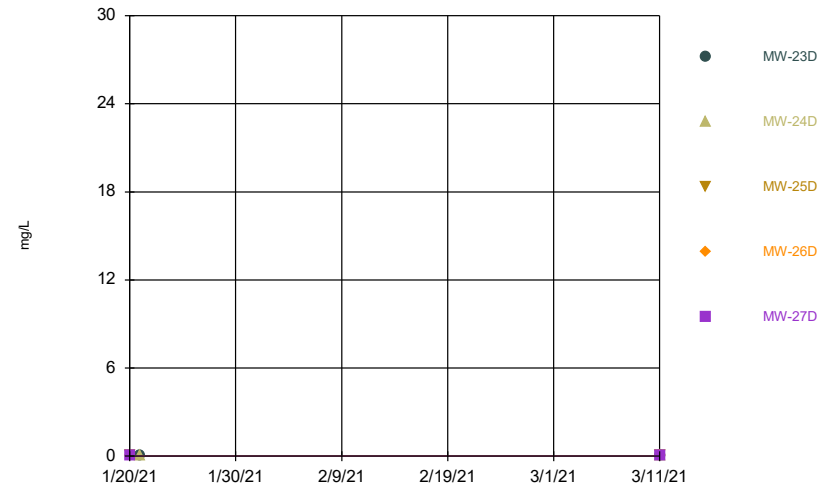
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



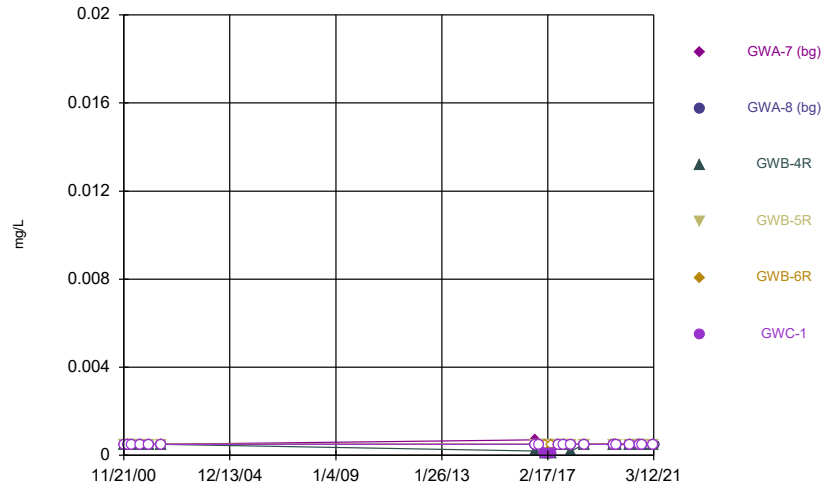
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Time Series



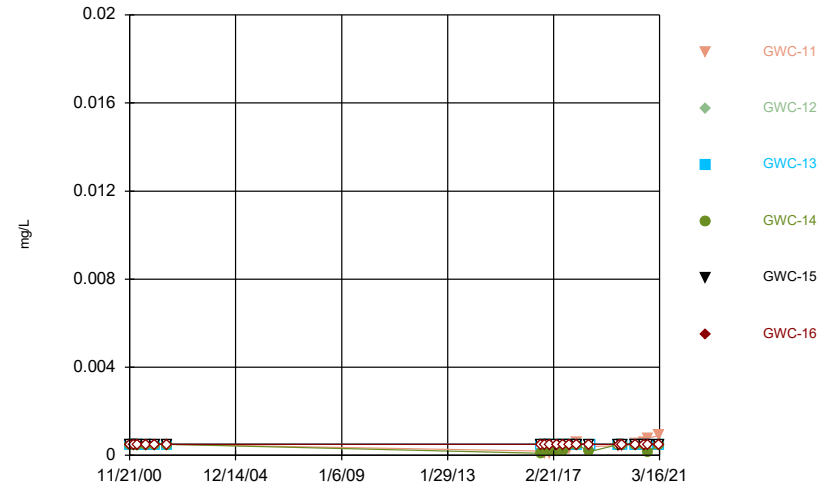
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



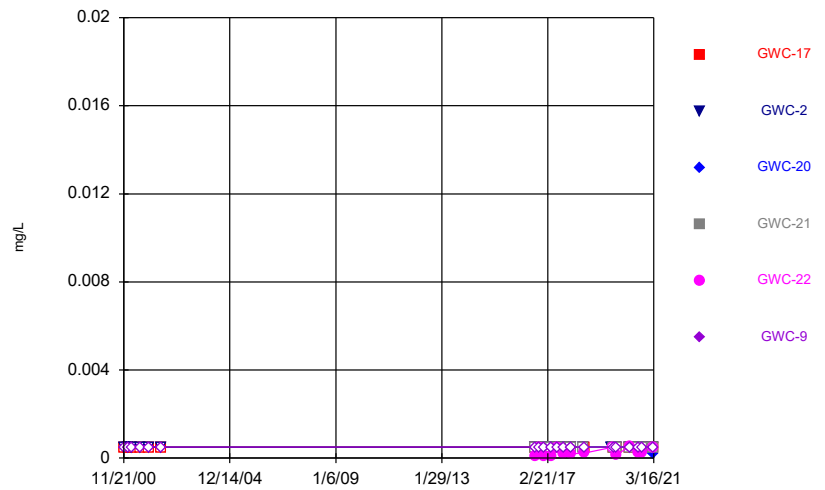
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



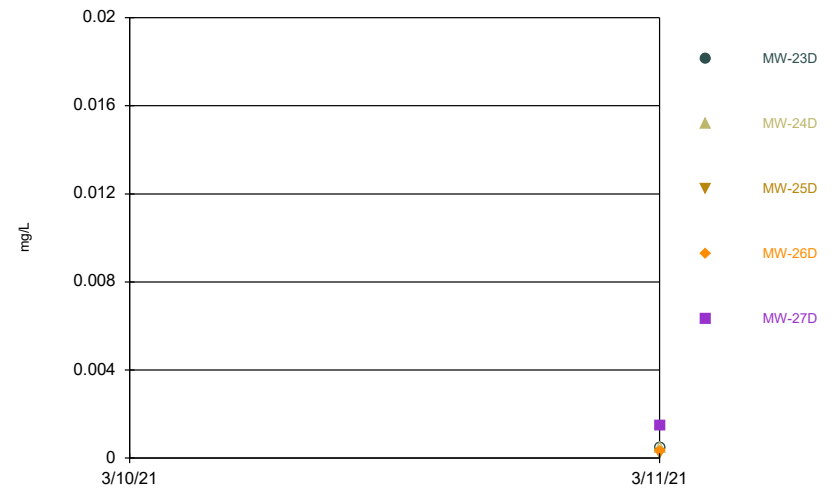
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



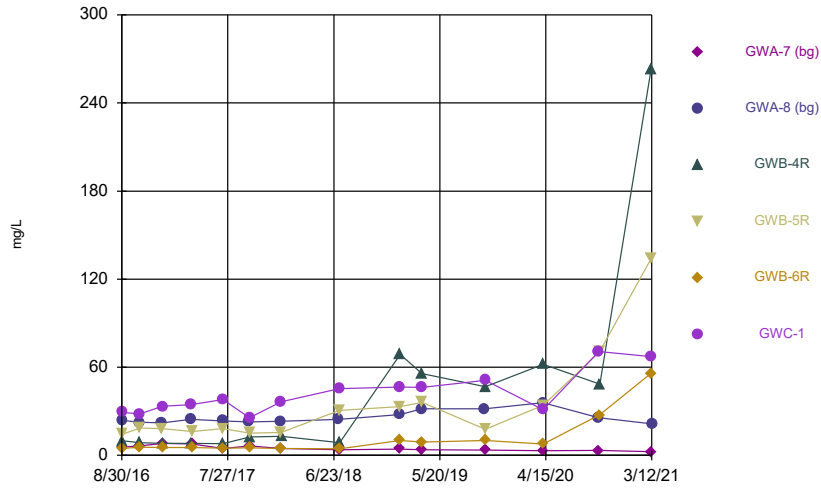
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



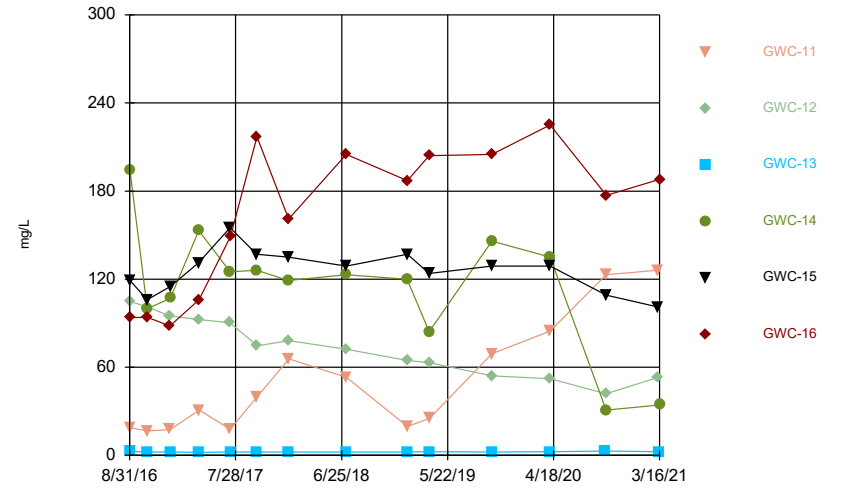
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



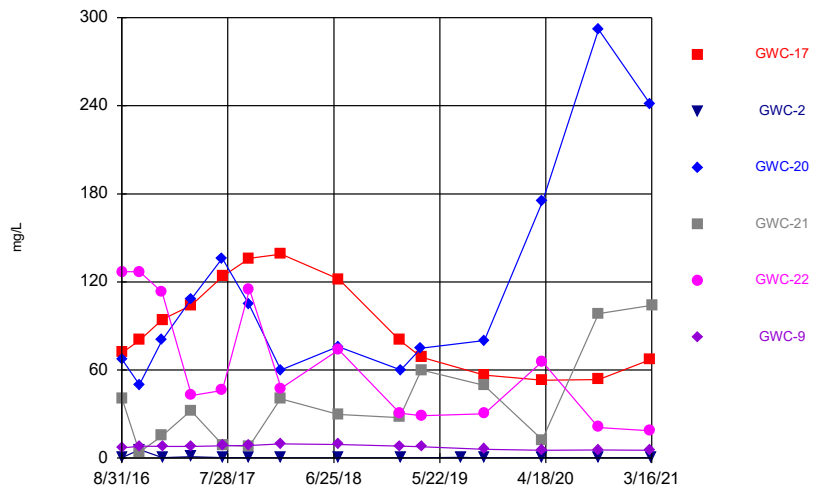
Constituent: Calcium Analysis Run 4/19/2021 1:24 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



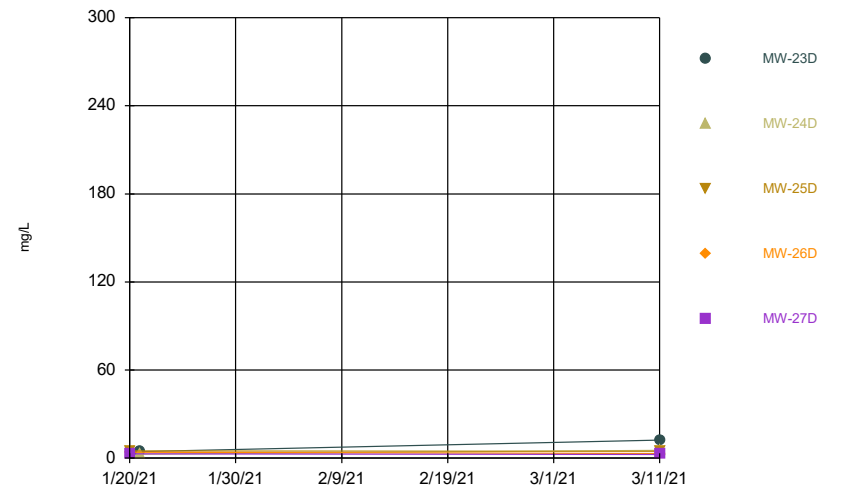
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



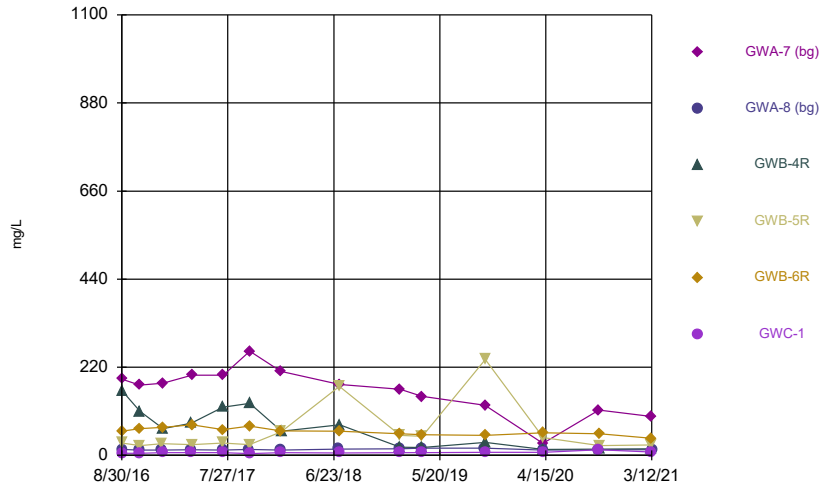
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



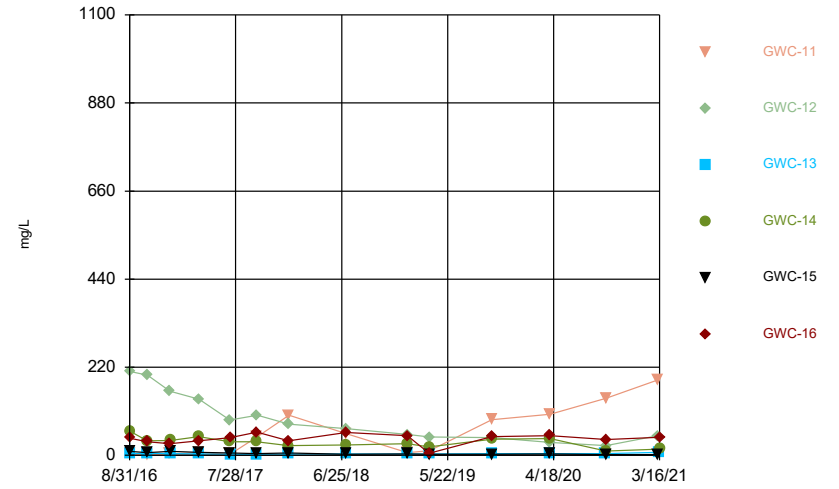
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Time Series



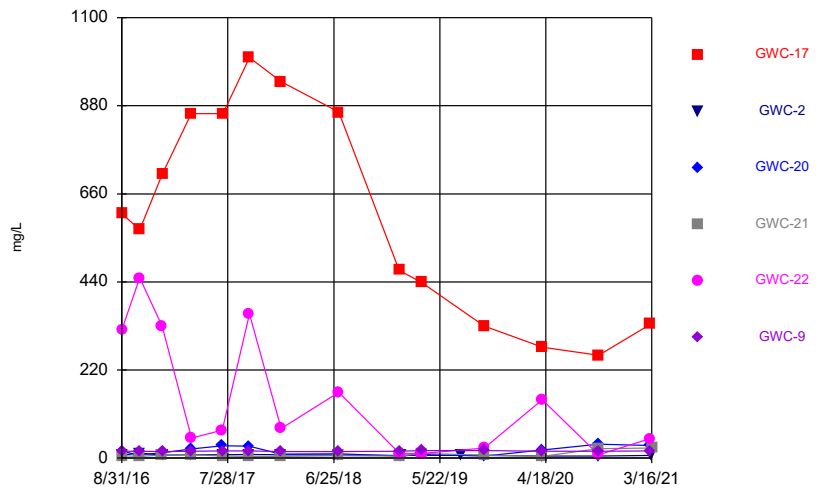
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



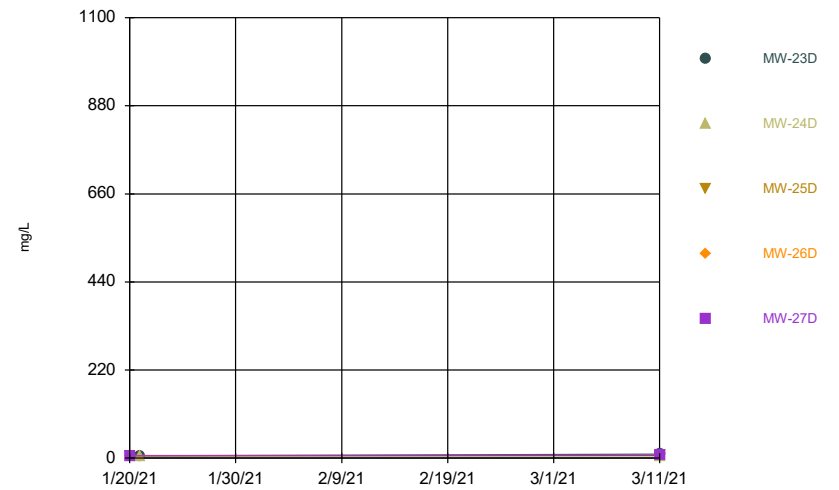
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



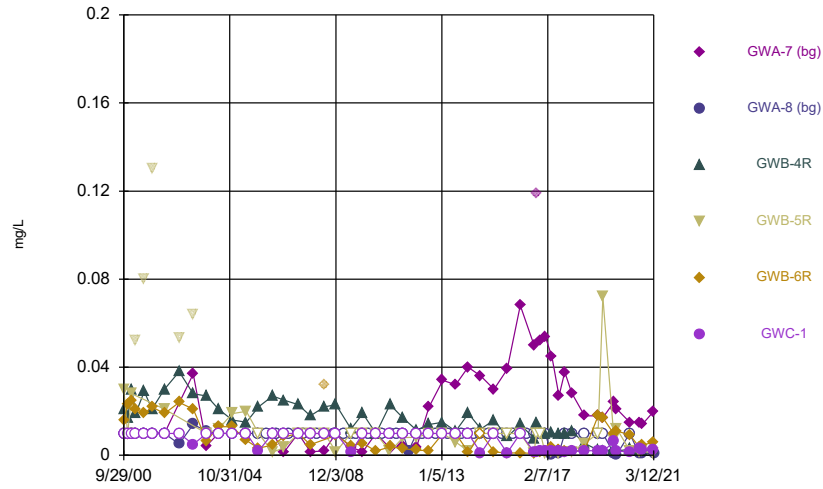
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Time Series



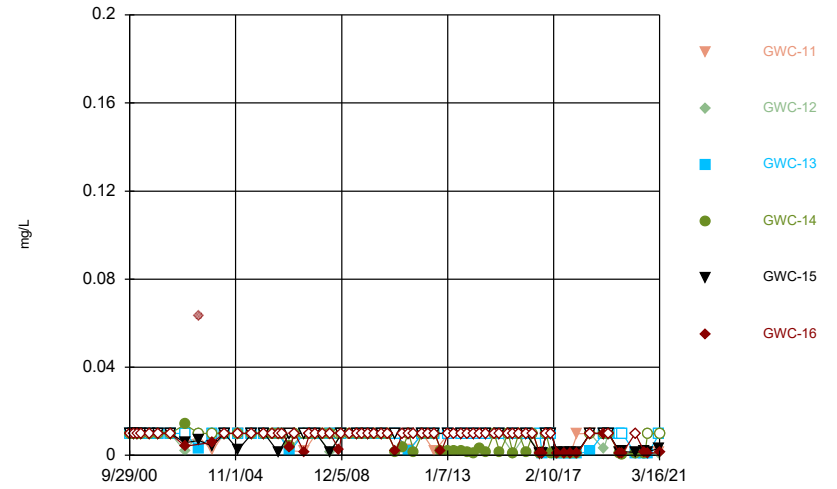
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



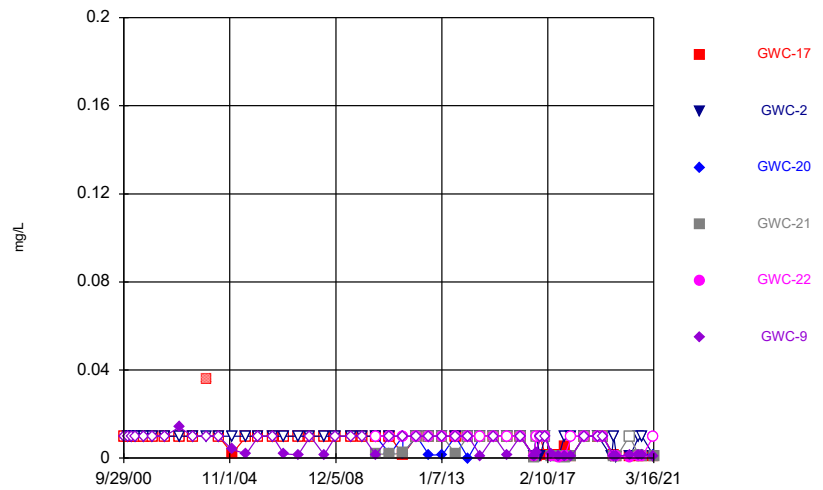
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



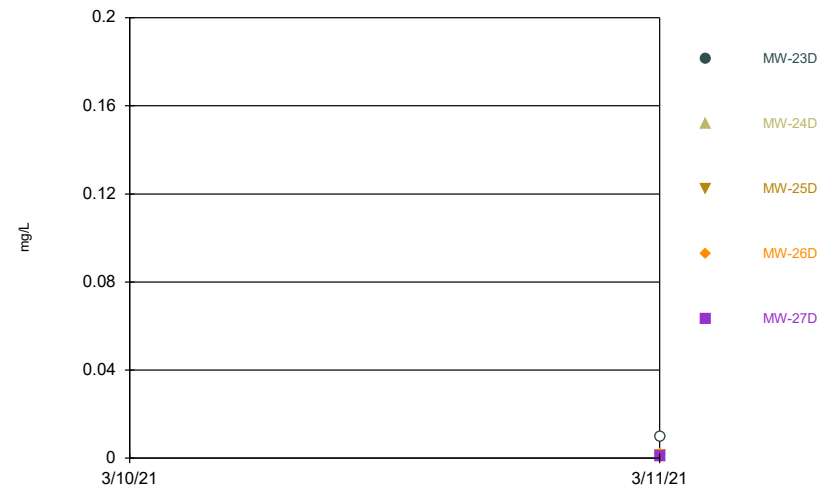
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



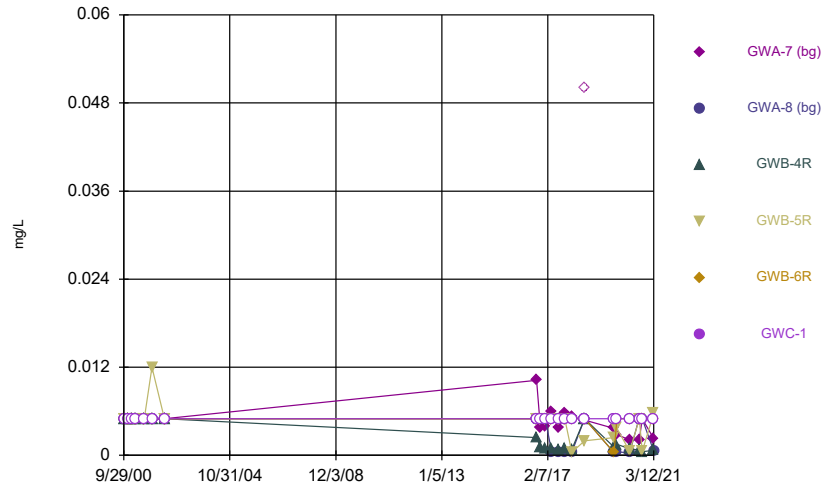
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Time Series



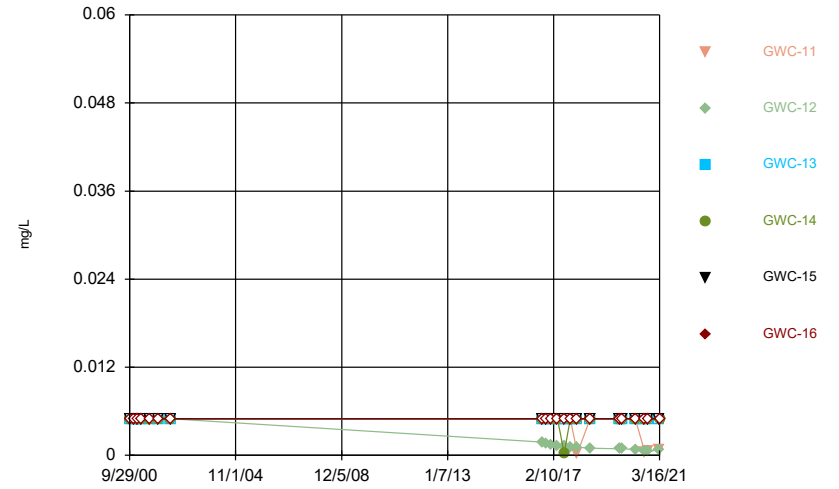
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



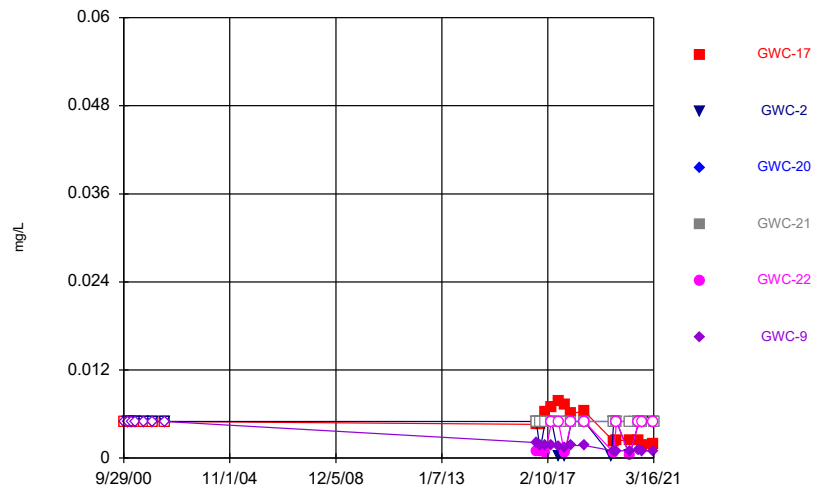
Constituent: Cobalt Analysis Run 4/19/2021 1:24 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



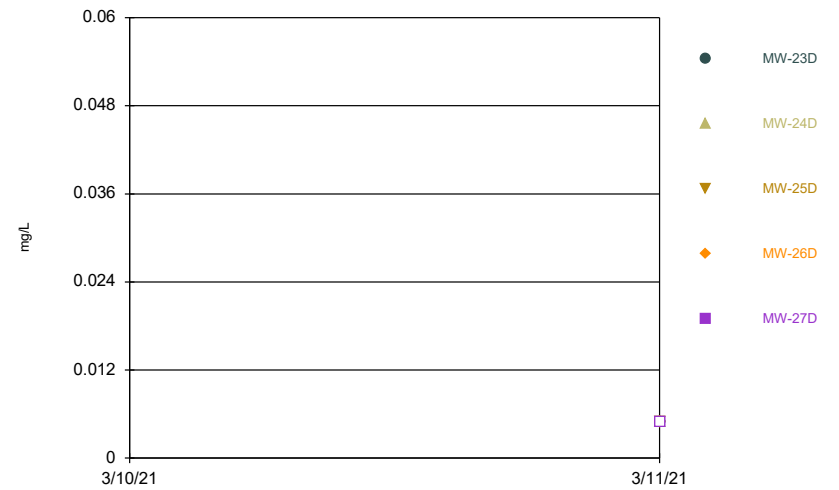
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



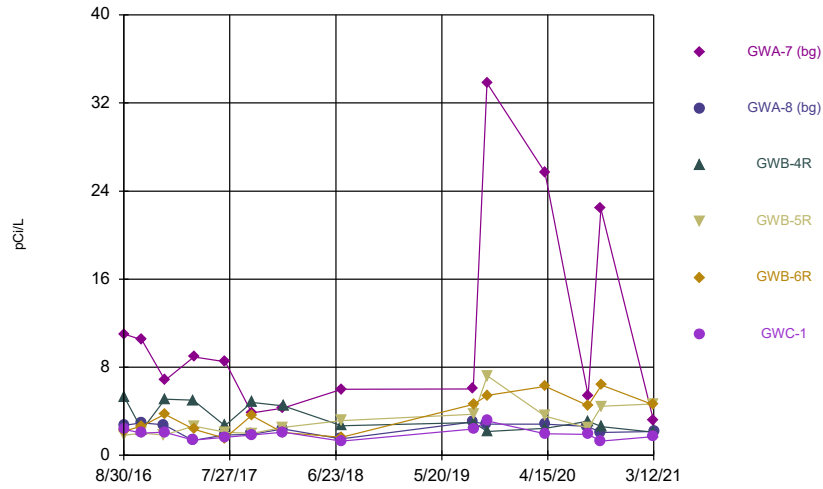
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



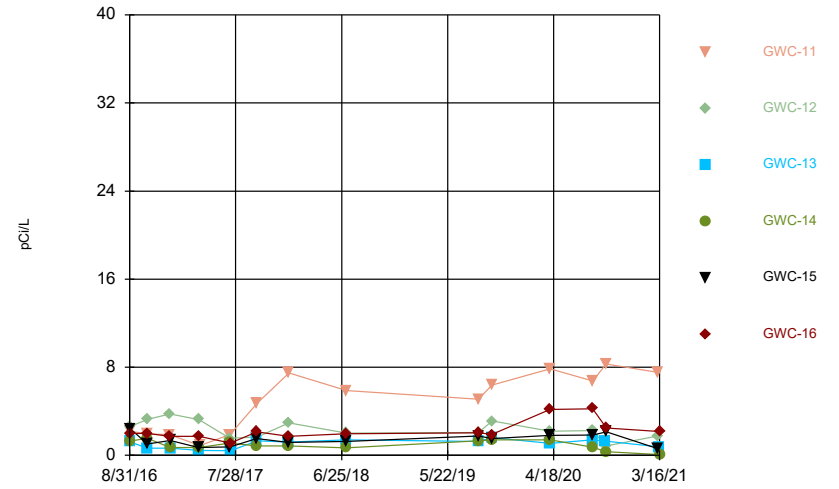
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



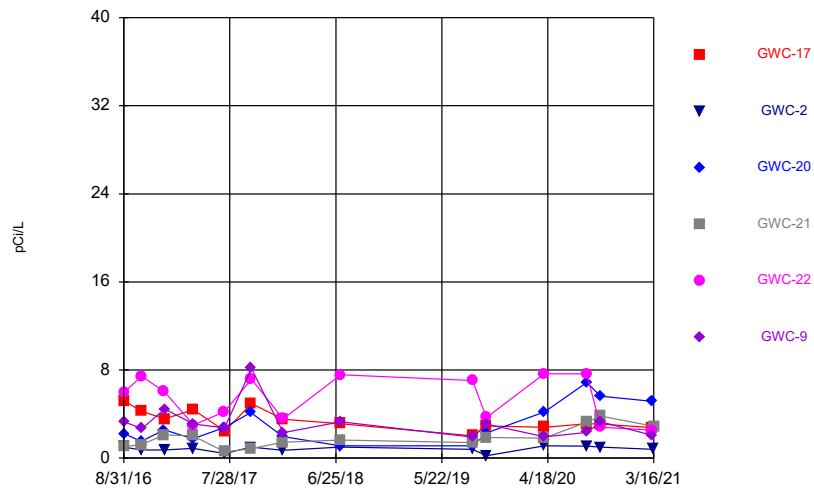
Constituent: Combined Radium 226 + 228 Analysis Run 4/19/2021 1:24 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



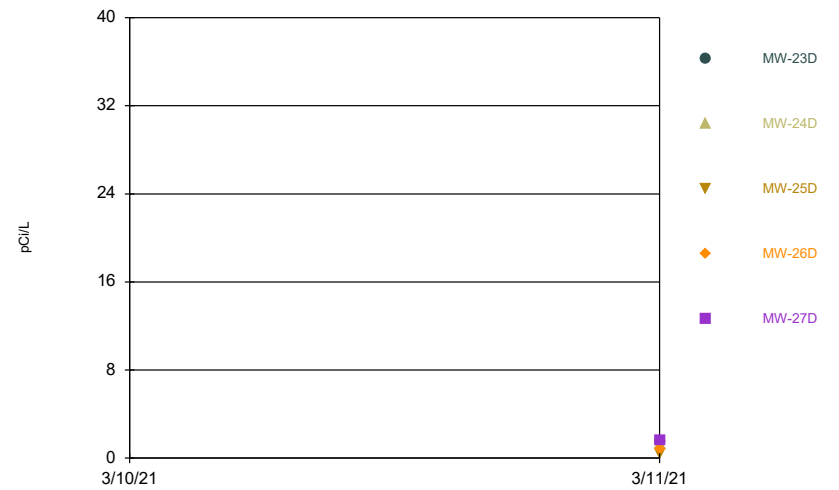
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



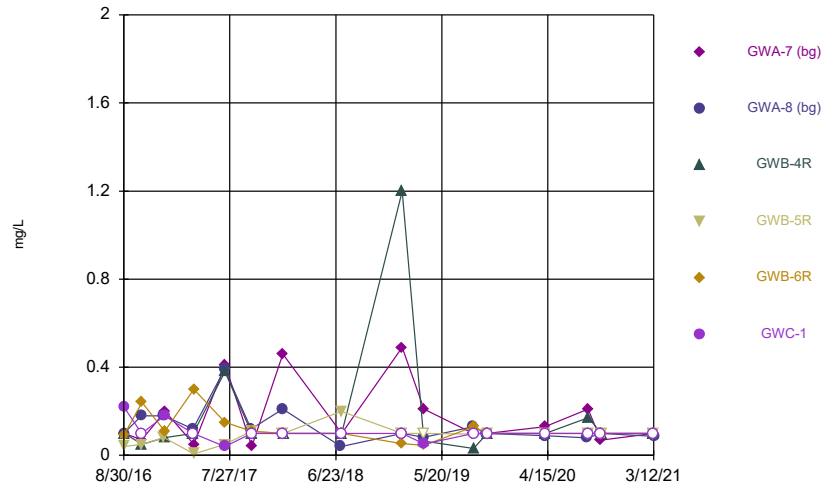
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



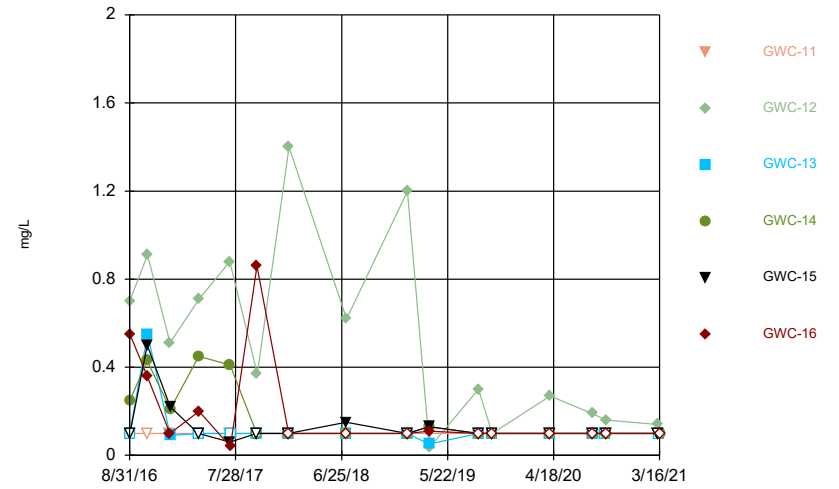
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Time Series



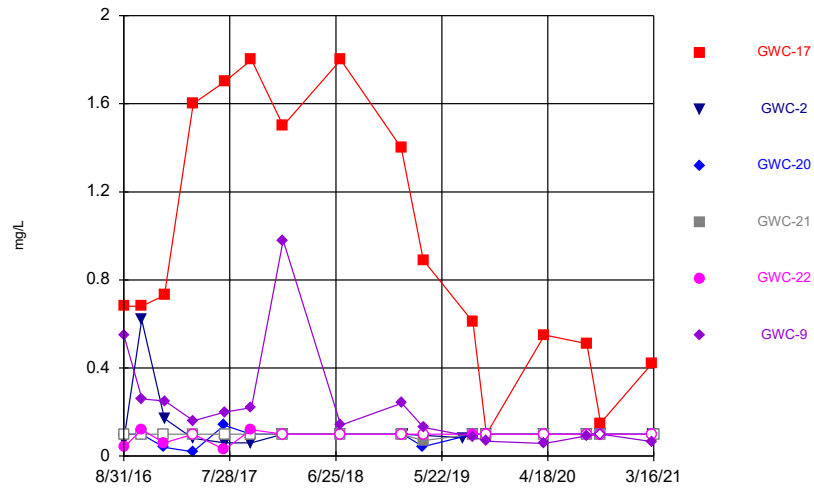
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



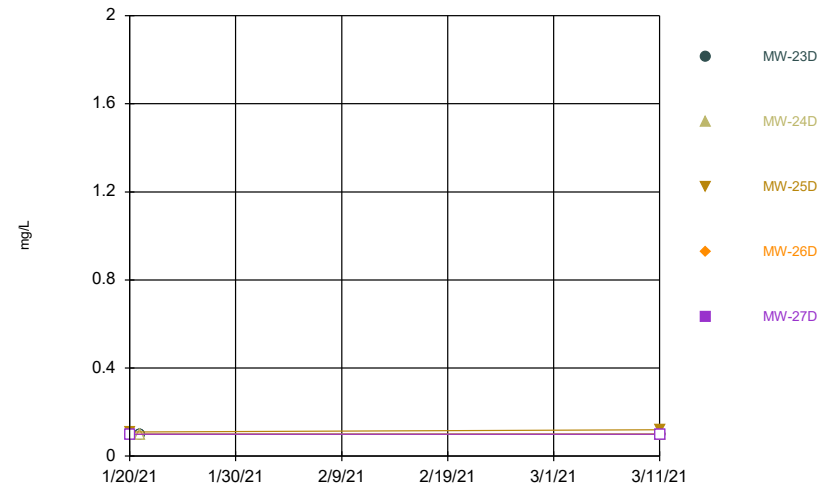
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



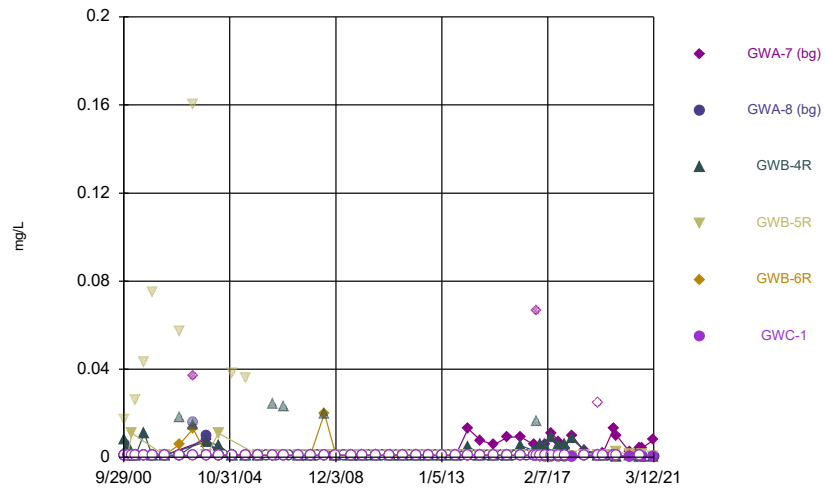
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Time Series



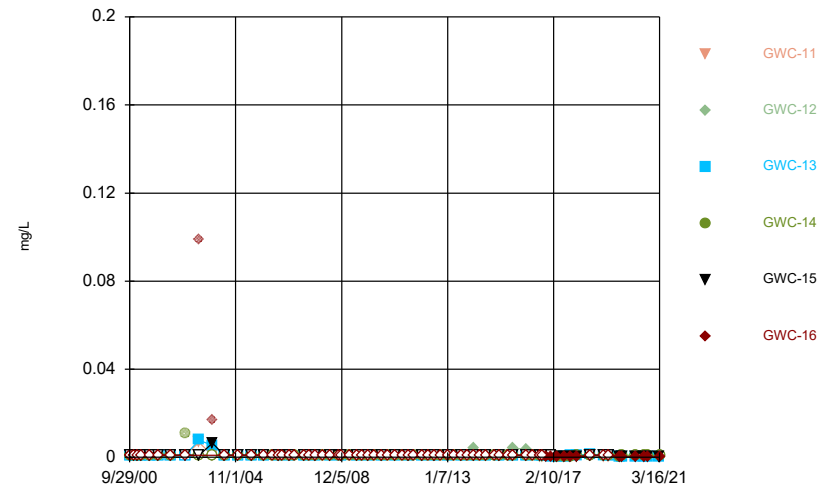
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Time Series



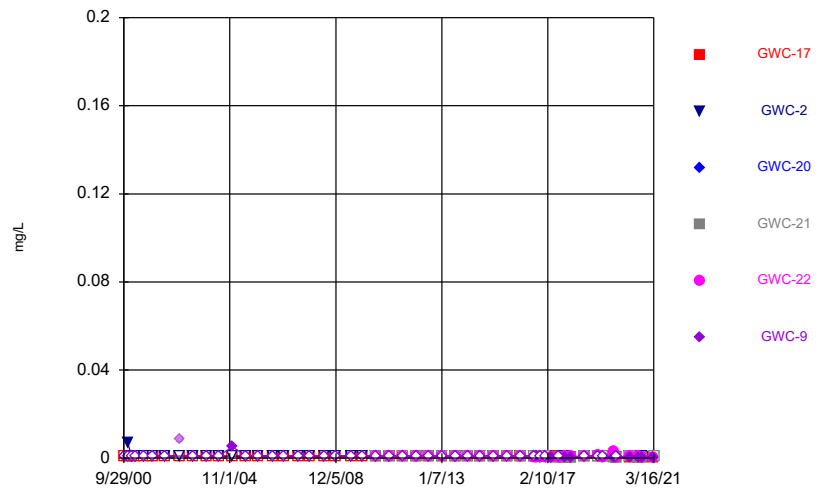
Constituent: Lead Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



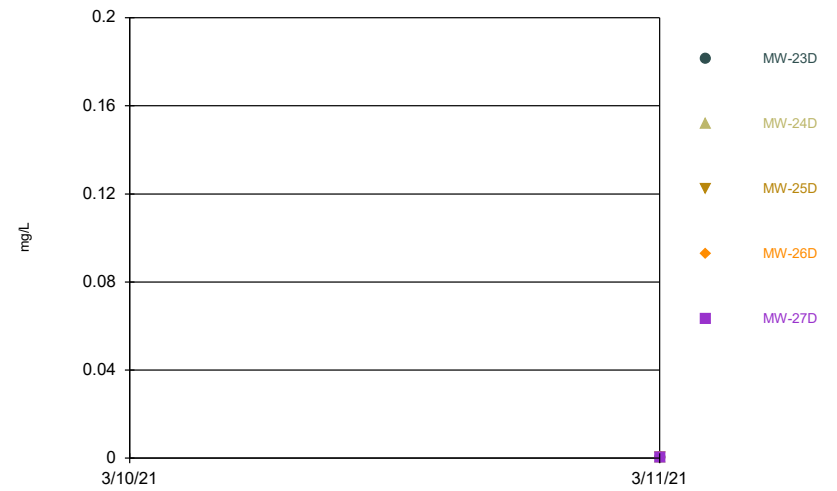
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



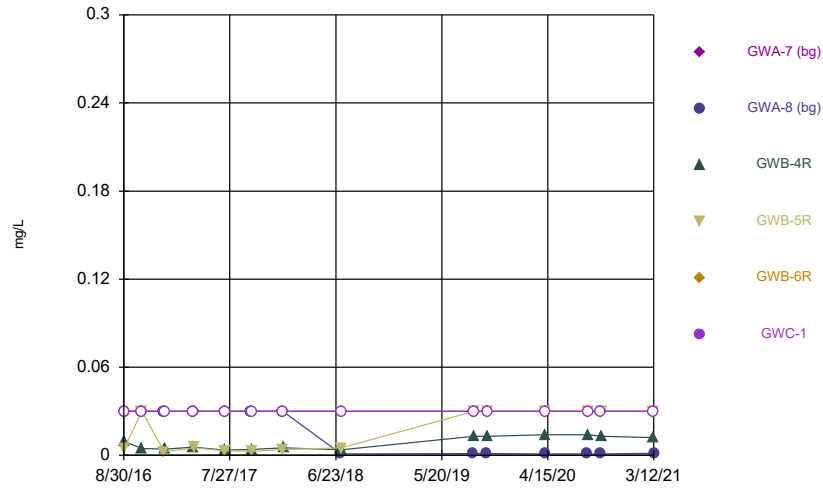
Constituent: Lead Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



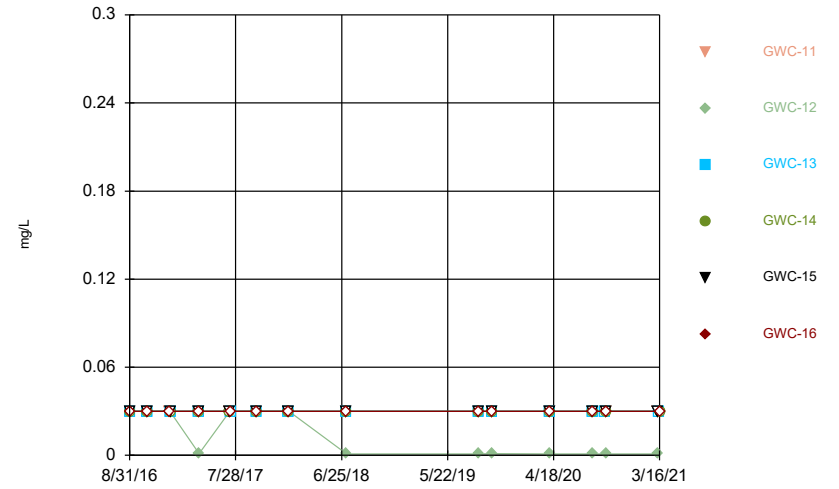
Constituent: Lead Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



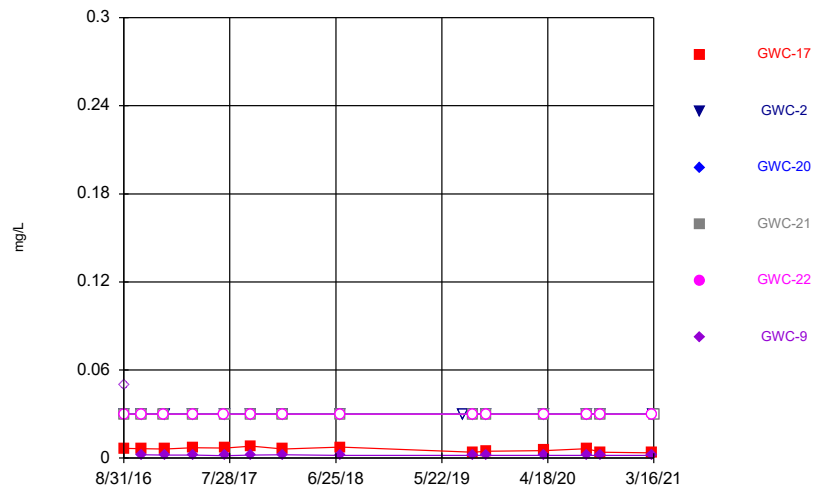
Constituent: Lithium Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



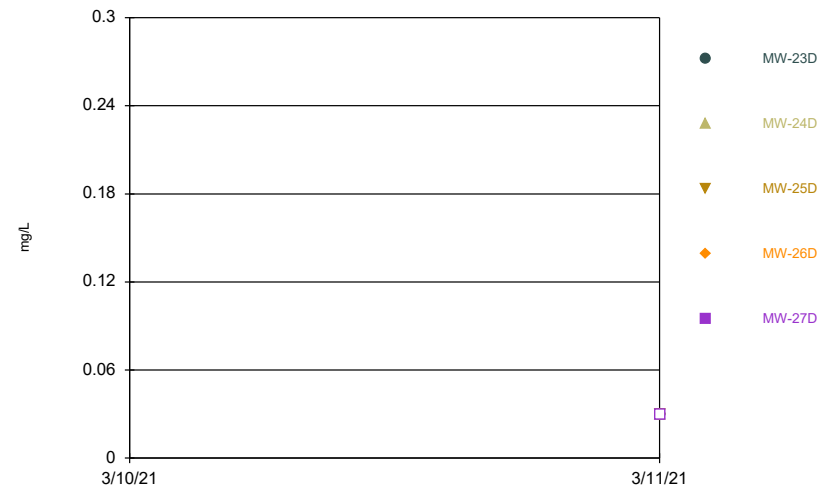
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



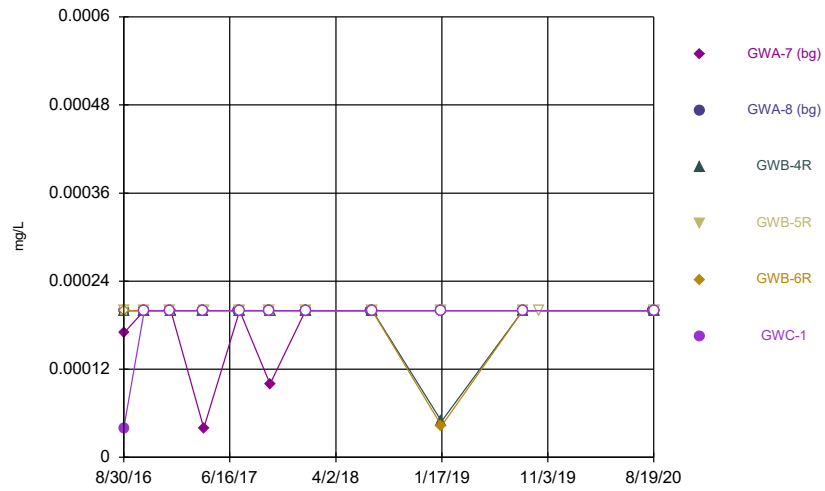
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



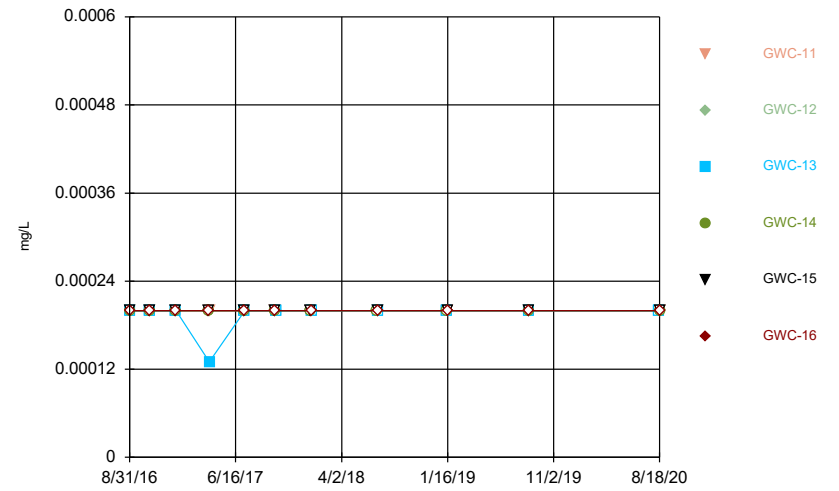
Constituent: Lithium Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



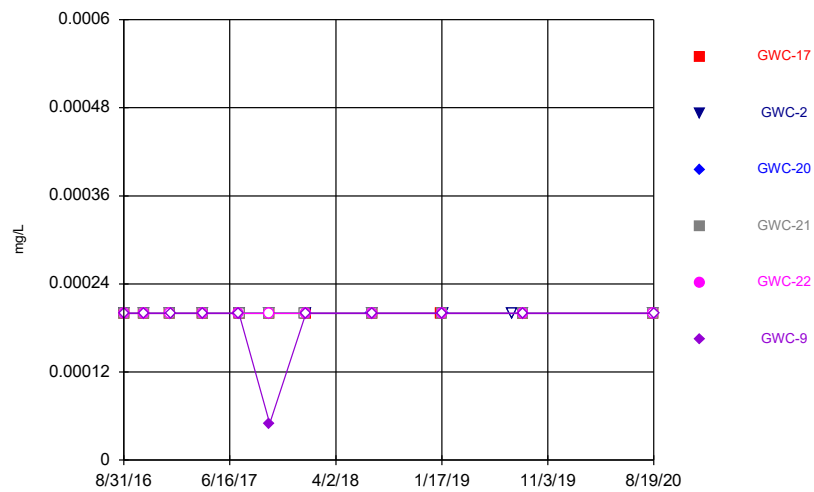
Constituent: Mercury Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



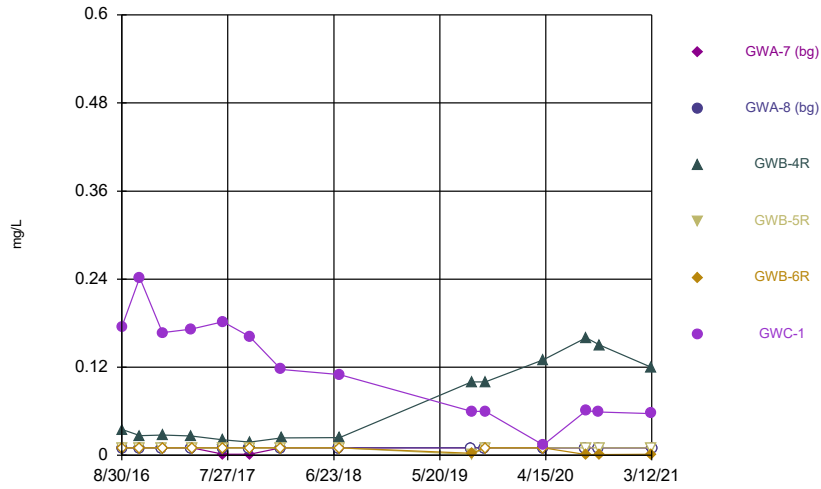
Constituent: Mercury Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



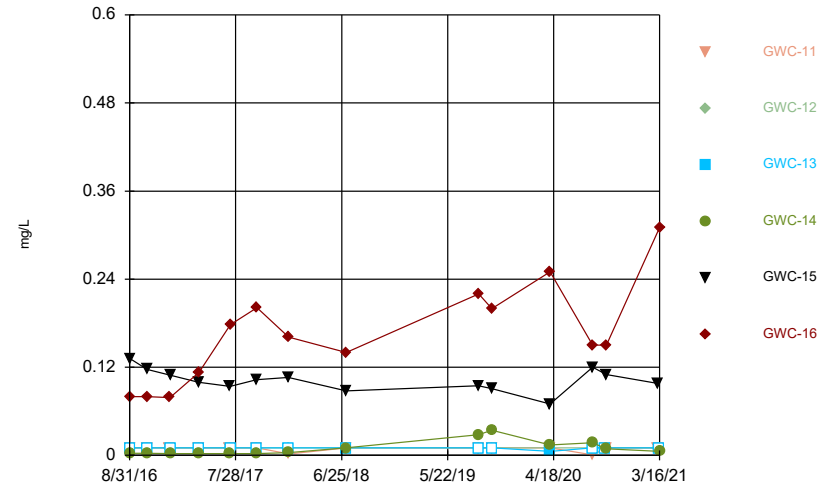
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



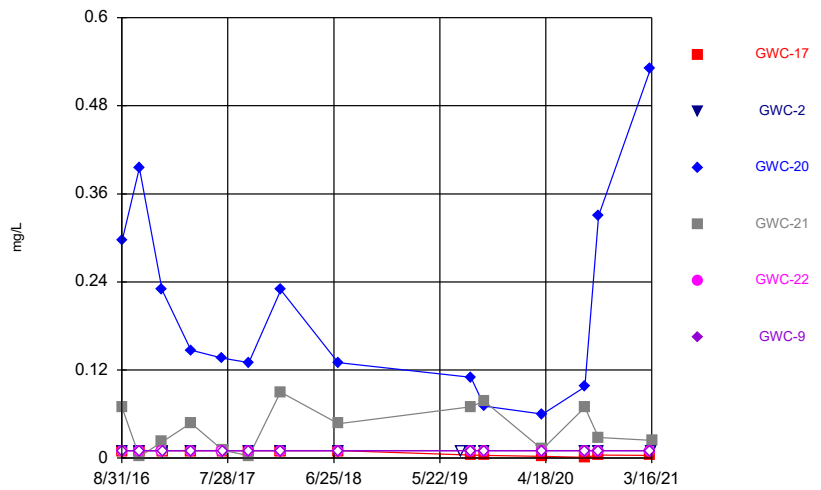
Constituent: Molybdenum Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



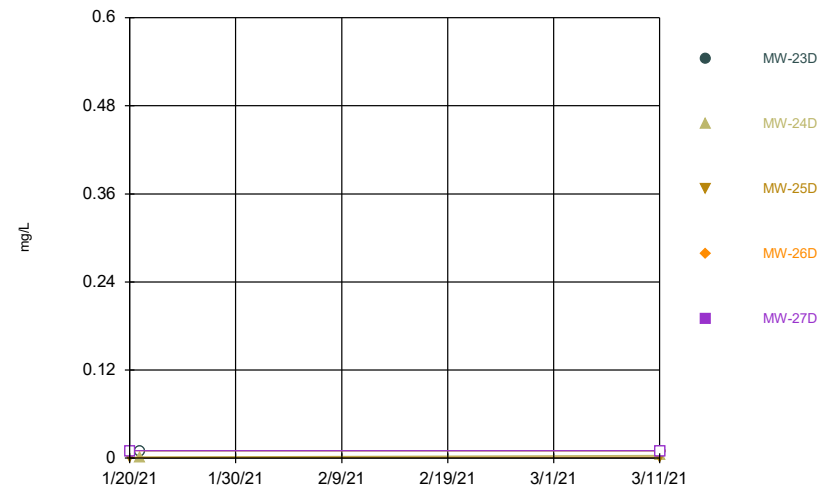
Constituent: Molybdenum Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



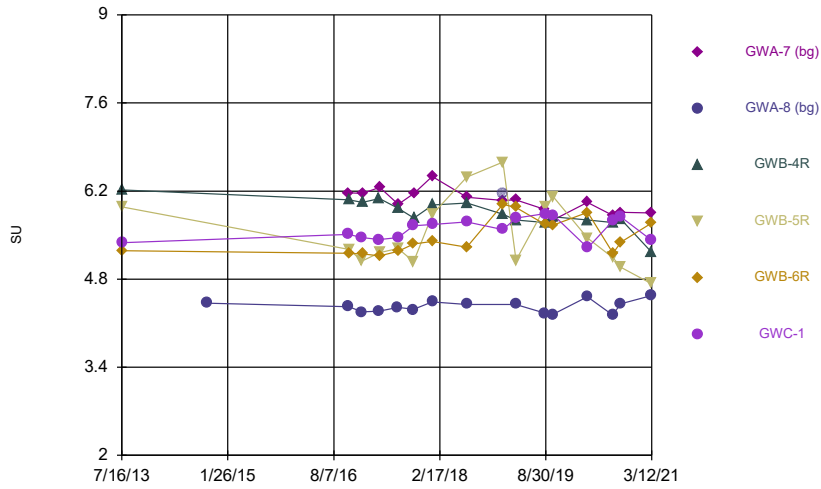
Constituent: Molybdenum Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



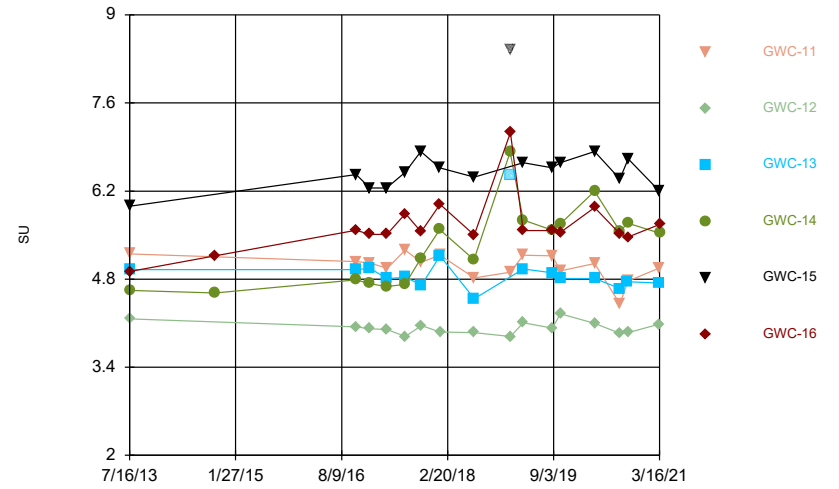
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



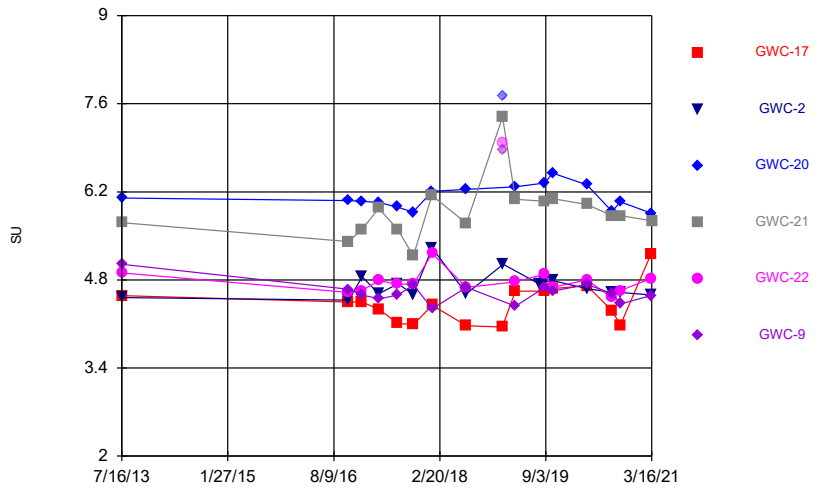
Constituent: pH Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



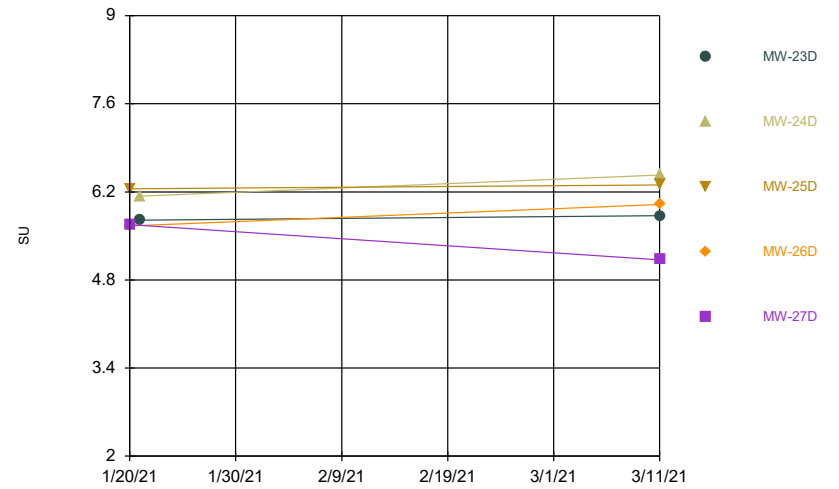
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



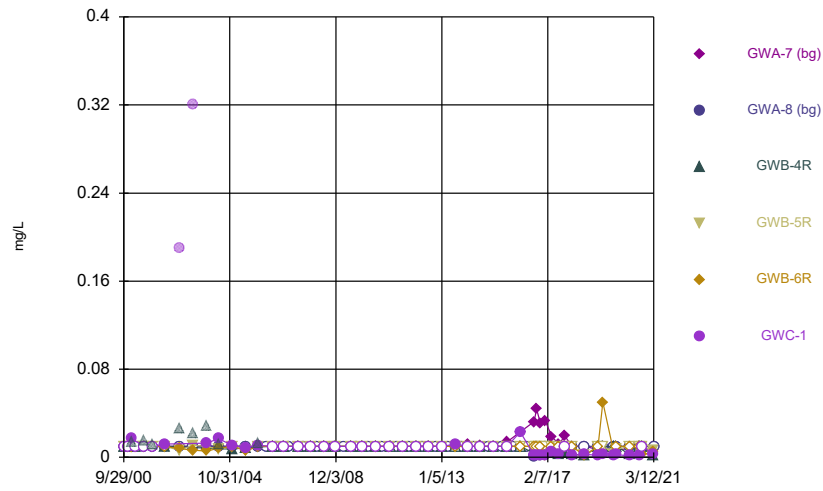
Constituent: pH Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



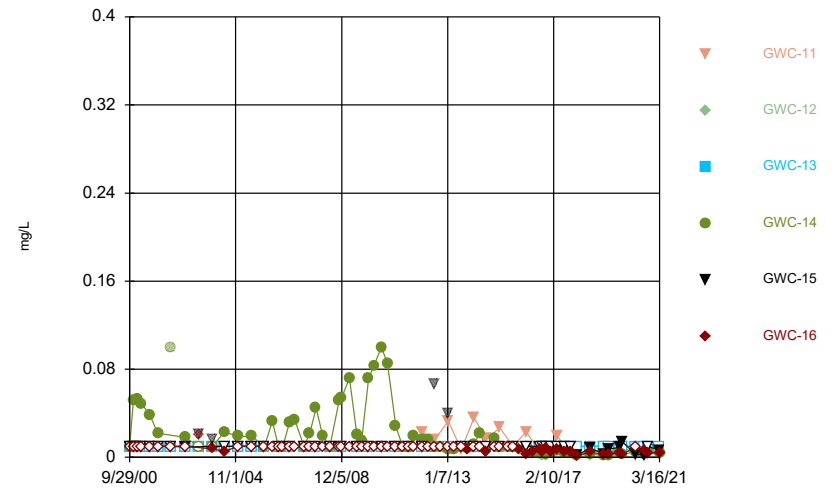
Constituent: pH Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



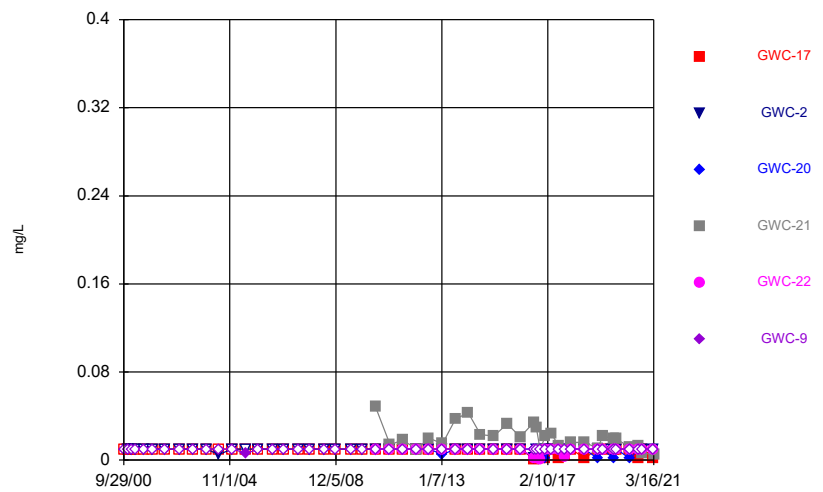
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



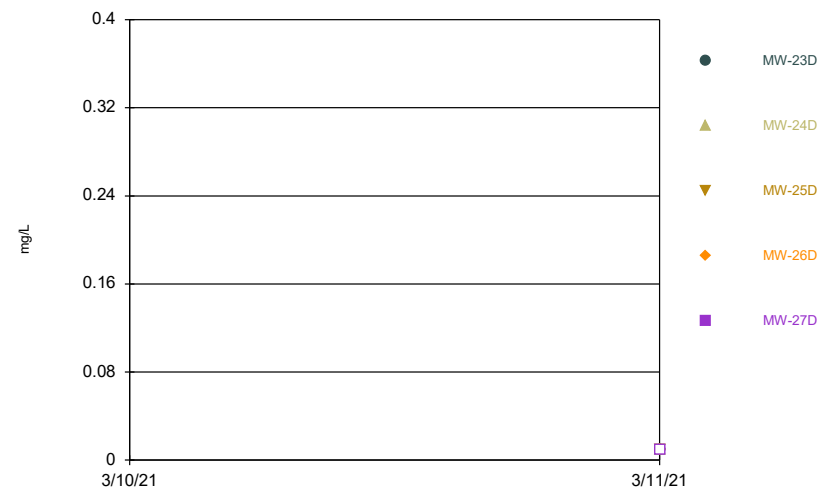
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



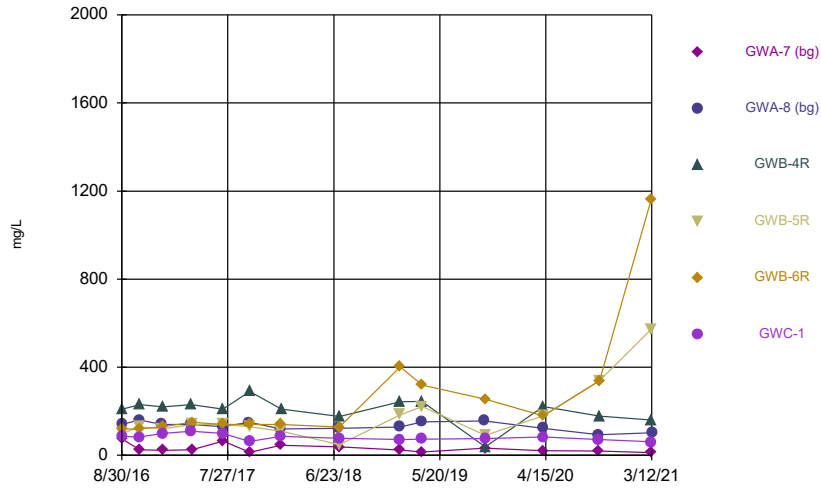
Constituent: Selenium Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



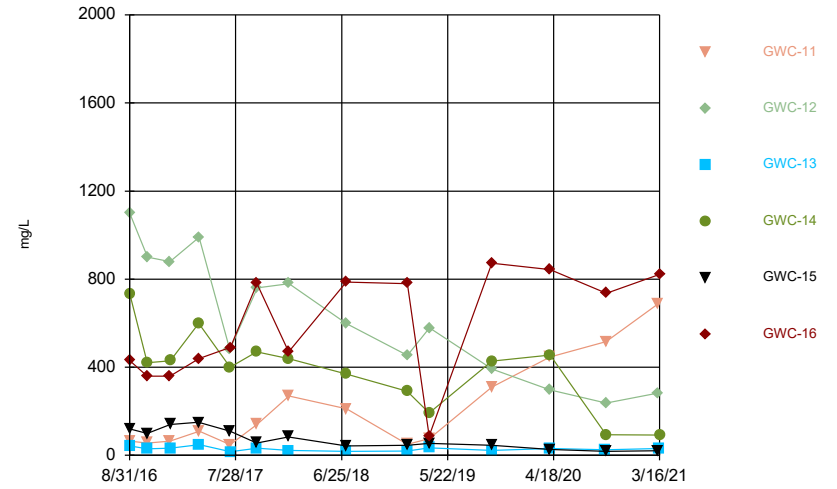
Constituent: Selenium Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



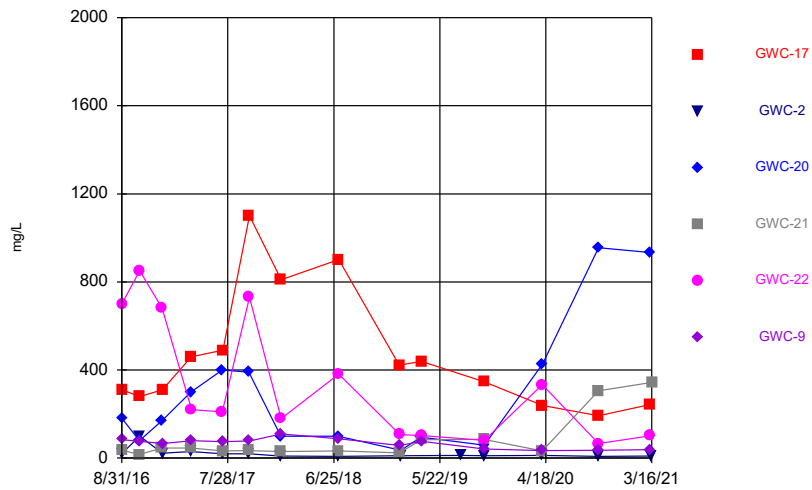
Constituent: Sulfate Analysis Run 4/19/2021 1:38 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



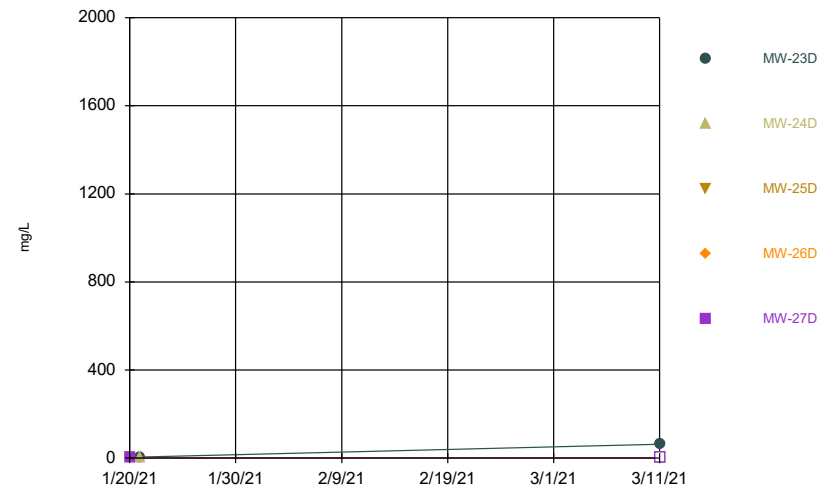
Constituent: Sulfate Analysis Run 4/19/2021 1:38 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



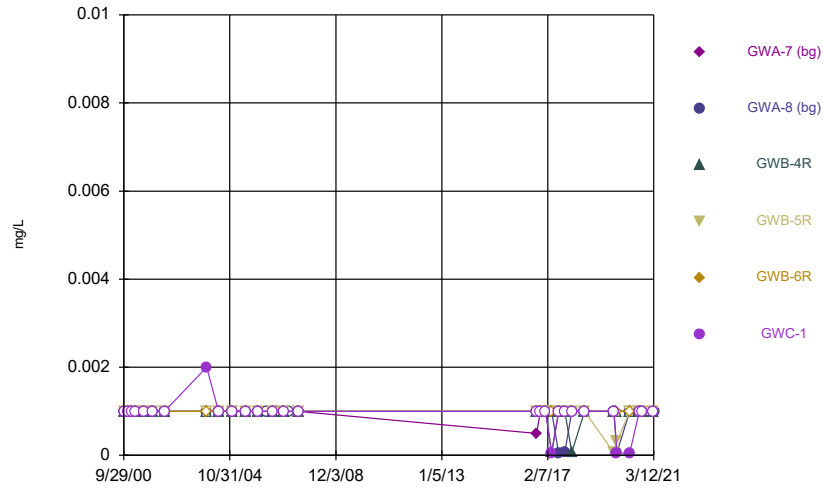
Constituent: Sulfate Analysis Run 4/19/2021 1:38 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



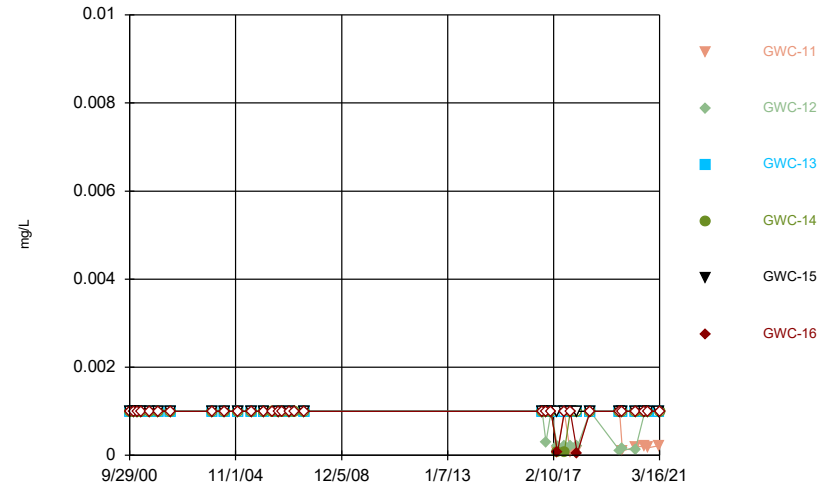
Constituent: Sulfate Analysis Run 4/19/2021 1:38 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



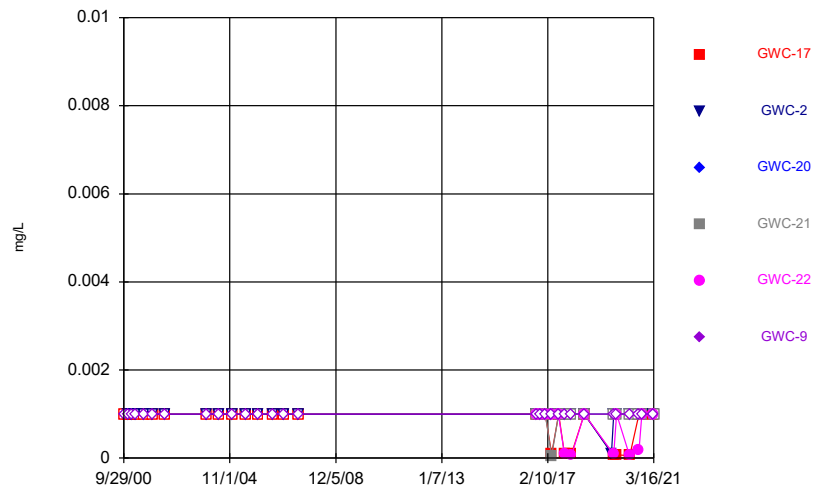
Constituent: Thallium Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



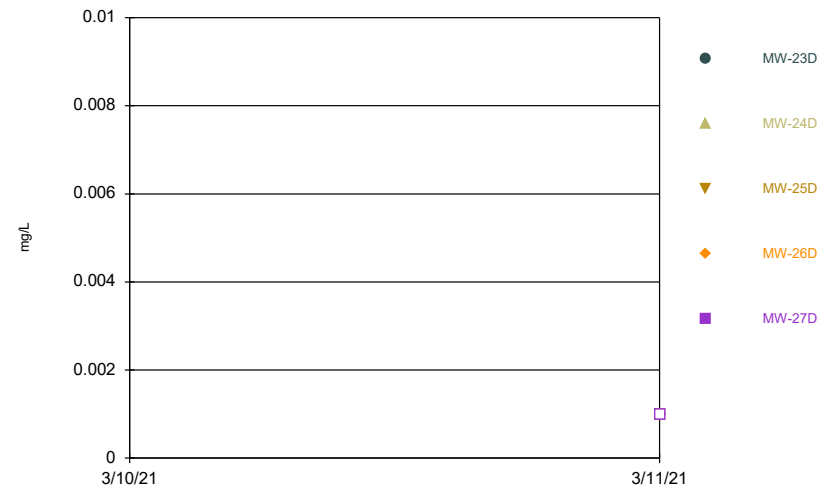
Constituent: Thallium Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



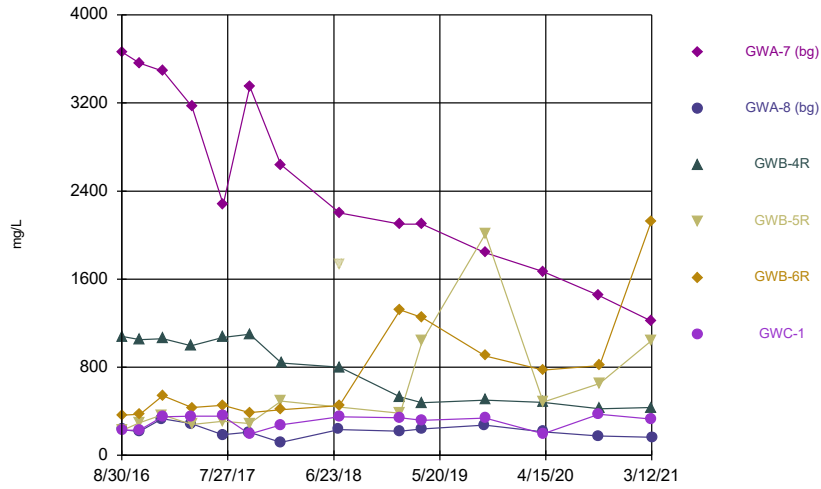
Constituent: Thallium Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



Constituent: Thallium Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

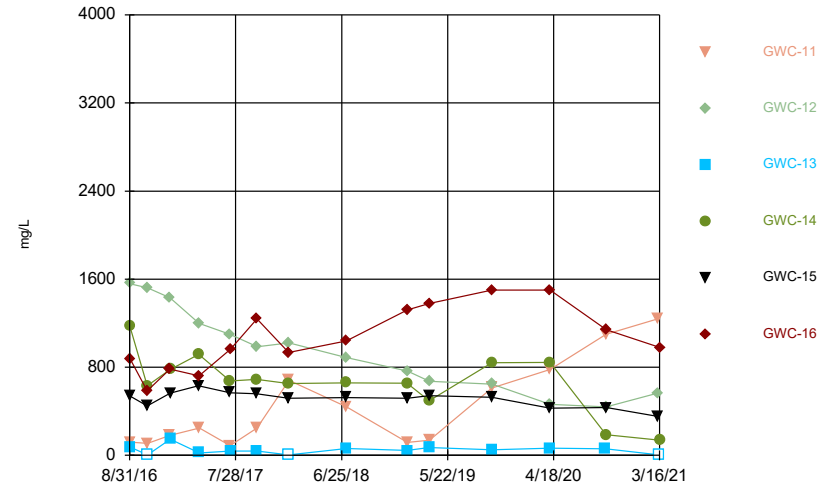
Time Series



Constituent: Total Dissolved Solids Analysis Run 4/19/2021 1:38 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Hollow symbols indicate censored values.

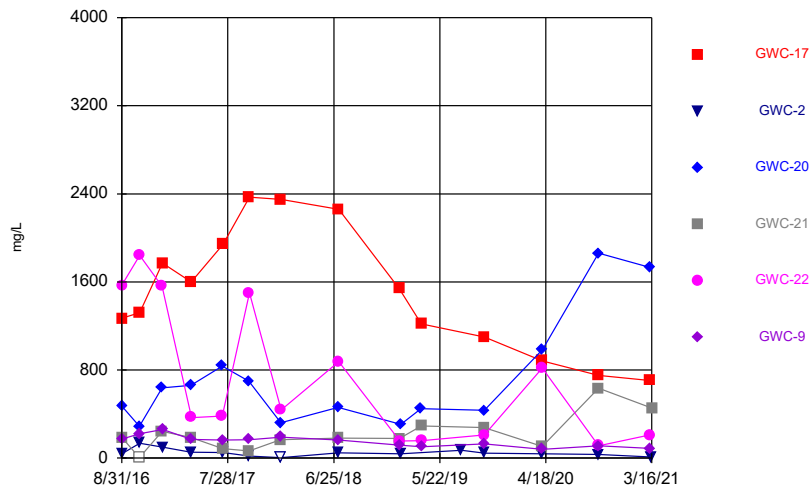
Time Series



Constituent: Total Dissolved Solids Analysis Run 4/19/2021 1:38 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

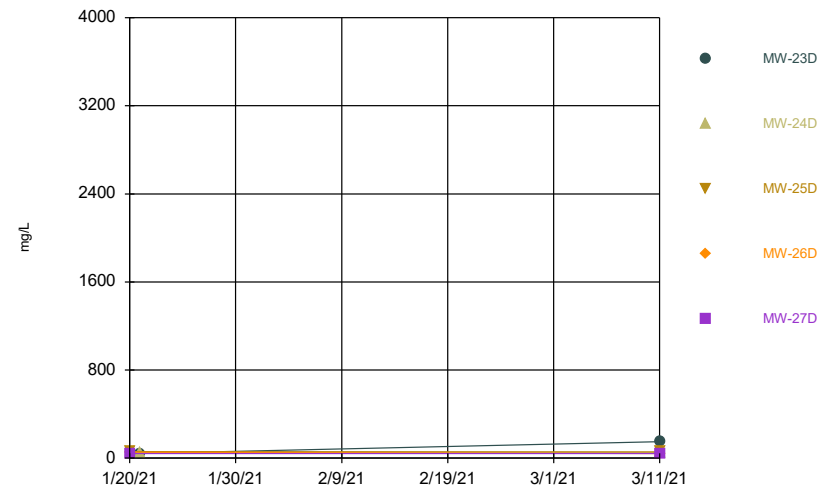
Hollow symbols indicate censored values.

Time Series



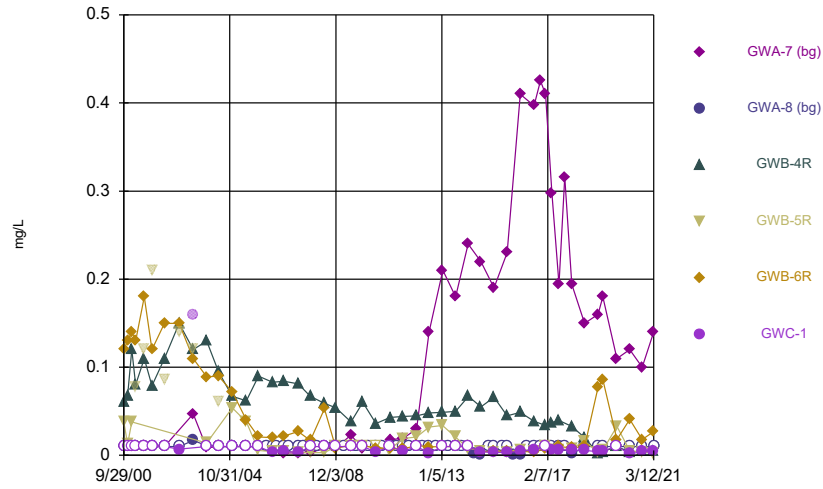
Constituent: Total Dissolved Solids Analysis Run 4/19/2021 1:38 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



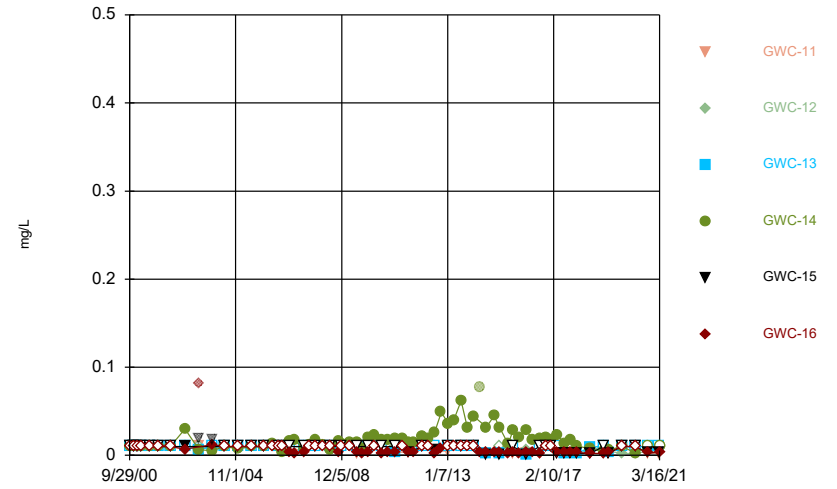
Constituent: Total Dissolved Solids Analysis Run 4/19/2021 1:38 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



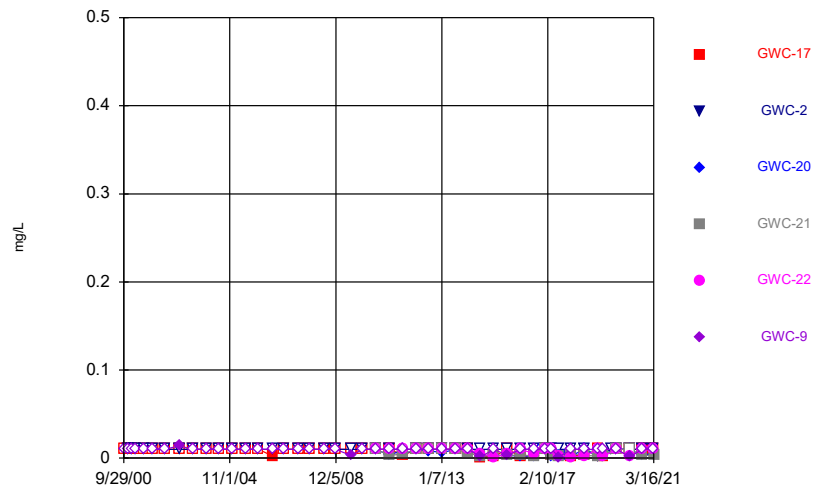
Constituent: Vanadium Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



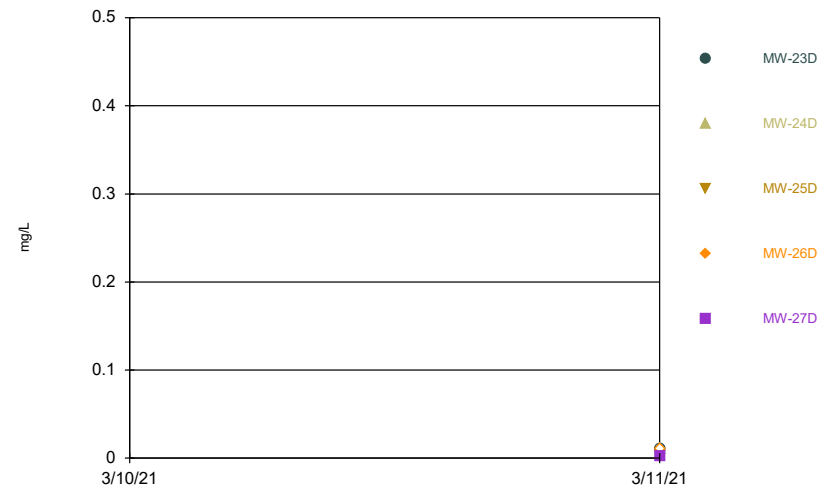
Constituent: Vanadium Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



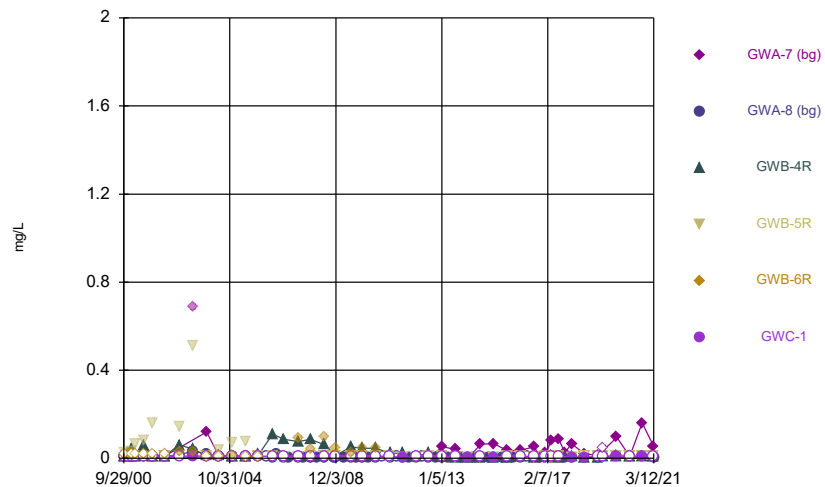
Constituent: Vanadium Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



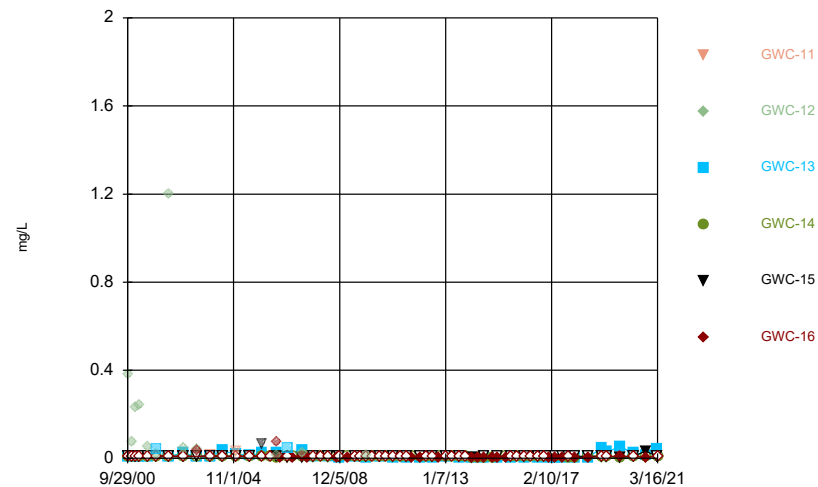
Constituent: Vanadium Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



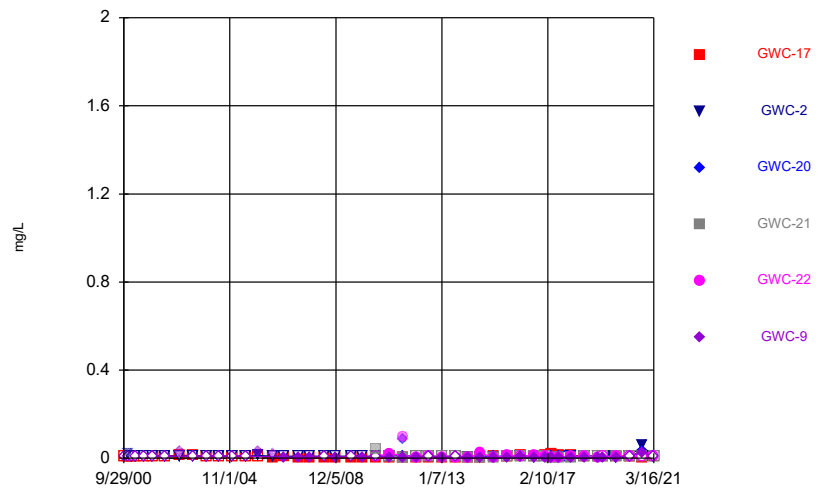
Constituent: Zinc Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



Constituent: Zinc Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



Constituent: Zinc Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



Constituent: Zinc Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series

Constituent: Antimony (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
9/29/2000	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
11/21/2000	<0.003		<0.003	<0.003	<0.003	<0.003
1/20/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
3/14/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
7/16/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
11/1/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
4/25/2002	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
11/20/2002		<0.003	<0.003	<0.003	<0.003	<0.003
6/6/2003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
12/12/2003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
5/26/2004	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
12/7/2004	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
6/21/2005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
12/12/2005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
4/4/2006		<0.003				
6/27/2006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
8/30/2006		<0.003				
12/4/2006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
2/15/2007		<0.003				
6/23/2007	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
9/11/2007		<0.003				
12/11/2007	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
3/11/2008		<0.003				
6/23/2008	<0.003	<0.003				
6/24/2008			<0.003	<0.003	<0.003	<0.003
11/3/2008		<0.003				
12/4/2008	<0.003	<0.003				
12/5/2008			<0.003	<0.003	<0.003	<0.003
3/25/2009		<0.003				
7/7/2009	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
9/14/2009		<0.003				
12/20/2009	<0.003	<0.003				<0.003
12/21/2009			<0.003	<0.003	<0.003	
3/4/2010		<0.003				
6/20/2010	<0.003	<0.003		<0.003	<0.003	<0.003
6/21/2010			<0.003			
9/14/2010		<0.003				
1/6/2011				<0.003		<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		<0.003	<0.003	<0.003
7/8/2011			<0.003			
9/25/2011		<0.003				
1/17/2012	<0.003	<0.003		<0.003		<0.003
1/18/2012			<0.003		<0.003	
4/4/2012		<0.003				
7/9/2012	<0.003			<0.003		<0.003
7/10/2012		<0.003	<0.003		<0.003	
10/9/2012		<0.003				
1/17/2013				<0.003		<0.003
1/18/2013	<0.003	<0.003	<0.003		<0.003	
4/5/2013		<0.003				

Time Series

Constituent: Antimony (mg/L) Analysis Run 4/19/2021 1:25 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
7/16/2013				<0.003		<0.003
7/17/2013	<0.003	<0.003	<0.003		<0.003	
10/11/2013		<0.003				
1/13/2014	<0.003			<0.003		<0.003
1/14/2014		<0.003	<0.003		<0.003	
4/3/2014		<0.003				
7/9/2014	0.0022 (J)	<0.003	0.002 (J)	<0.003	<0.003	<0.003
10/24/2014		<0.003				
1/12/2015			<0.003			
1/13/2015	<0.003			<0.003		<0.003
1/14/2015		<0.003			<0.003	
5/10/2015		<0.003				
7/16/2015	0.0028 (J)		0.0021 (J)	<0.003		<0.003
7/17/2015		<0.003			<0.003	
10/6/2015		<0.003				
1/17/2016						<0.003
1/18/2016	<0.003	<0.003	<0.003	<0.003	<0.003	
4/26/2016		<0.003				
7/27/2016	<0.003			<0.003		<0.003
7/28/2016		<0.003			<0.003	
7/29/2016			0.0003 (J)			
8/30/2016		<0.003		<0.003	<0.003	<0.003
9/1/2016	0.0017 (J)		<0.003			
10/24/2016		<0.003				
10/25/2016	<0.003					<0.003
10/26/2016			<0.003	<0.003	<0.003	
1/3/2017		<0.003		<0.003		
1/4/2017						<0.003
1/5/2017					<0.003	
1/6/2017	0.0009 (J)		<0.003			
4/3/2017		<0.003				
4/4/2017			<0.003			<0.003
4/6/2017	<0.003			<0.003	<0.003	
7/11/2017		<0.003				
7/12/2017			<0.003	<0.003	<0.003	<0.003
7/13/2017	0.0013 (J)					
10/2/2017		<0.003				
10/3/2017				<0.003	<0.003	<0.003
10/4/2017	0.0008 (J)		<0.003			
1/9/2018	<0.003	<0.003			<0.003	
1/10/2018				<0.003		<0.003
1/11/2018			<0.003			
7/9/2018		<0.003				
7/10/2018				<0.003	<0.003	<0.003
7/11/2018	<0.003		<0.003			
1/16/2019	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
3/25/2019	<0.003	<0.003	<0.003			
3/26/2019				<0.003	<0.003	<0.003
8/26/2019	<0.003	<0.003				
8/27/2019			<0.003		<0.003	<0.003
8/28/2019				0.00054 (J)		
10/7/2019		<0.003				

Time Series

Constituent: Antimony (mg/L) Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
10/8/2019	<0.003					
10/9/2019			<0.003	<0.003	<0.003	<0.003
4/6/2020	<0.003	<0.003				
4/7/2020			<0.003	<0.003	<0.003	<0.003
8/17/2020		<0.003				
8/19/2020	<0.003		<0.003	<0.003	<0.003	0.00061 (J)
9/28/2020	<0.003	<0.003				0.00035 (J)
9/30/2020				0.0003 (J)	0.00059 (J)	
10/1/2020			<0.003			
3/10/2021			<0.003	<0.003	0.00029 (J)	0.00069 (J)
3/11/2021	<0.003					
3/12/2021		<0.003				

Time Series

Constituent: Antimony (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
9/29/2000	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
11/21/2000	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
1/20/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
3/14/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
7/16/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
11/1/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
4/25/2002	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
11/20/2002	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
6/6/2003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
12/12/2003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
5/26/2004	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
12/7/2004	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
6/21/2005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
12/12/2005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
4/4/2006				<0.003		<0.003
6/27/2006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
8/30/2006				<0.003		<0.003
12/4/2006	<0.003	<0.003	<0.003	<0.003	<0.003	0.006
2/15/2007				<0.003		<0.003
6/23/2007	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
9/11/2007				<0.003		<0.003
12/11/2007	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
3/11/2008				<0.003		<0.003
6/23/2008	<0.003	<0.003	<0.003			
6/24/2008				<0.003	<0.003	<0.003
11/3/2008				<0.003		<0.003
12/4/2008	<0.003	<0.003	<0.003	<0.003		
12/5/2008					<0.003	<0.003
3/25/2009				<0.003		<0.003
7/8/2009	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
9/14/2009				<0.003		<0.003
12/20/2009				<0.003	<0.003	<0.003
12/21/2009	<0.003	<0.003	<0.003			
3/4/2010				<0.003		<0.003
6/20/2010	<0.003	<0.003	<0.003	<0.003	<0.003	
6/21/2010						<0.003
9/14/2010				<0.003		<0.003
1/6/2011	<0.003		<0.003			
1/7/2011		<0.003		<0.003	<0.003	<0.003
4/15/2011				<0.003		<0.003
7/7/2011	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
9/25/2011				<0.003		<0.003
1/17/2012	<0.003	<0.003	<0.003	<0.003	<0.003	
1/18/2012						<0.003
4/4/2012				<0.003		<0.003
7/9/2012	<0.003	<0.003	<0.003	<0.003	<0.003	
7/10/2012						<0.003
10/9/2012				<0.003		<0.003
1/17/2013	<0.003	<0.003	<0.003			
1/18/2013				<0.003	<0.003	<0.003
4/5/2013				<0.003		<0.003
7/16/2013	<0.003	<0.003	<0.003			

Time Series

Constituent: Antimony (mg/L) Analysis Run 4/19/2021 1:25 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
7/17/2013				<0.003	<0.003	<0.003
10/11/2013				0.005		<0.003
1/13/2014	<0.003	<0.003	<0.003		<0.003	
1/14/2014				<0.003		<0.003
4/3/2014				<0.003		<0.003
7/8/2014	<0.003	<0.003	<0.003			
7/9/2014				<0.003	<0.003	<0.003
10/24/2014				<0.003		<0.003
1/13/2015	<0.003	<0.003	<0.003		<0.003	
1/14/2015				<0.003		<0.003
5/10/2015				<0.003		
5/11/2015						<0.003
7/16/2015	<0.003	<0.003	<0.003		<0.003	<0.003
7/17/2015				<0.003		
10/6/2015				<0.003		<0.003
1/17/2016				<0.003	<0.003	<0.003
1/18/2016		<0.003	<0.003			
1/19/2016	<0.003					
4/26/2016				<0.003		<0.003
7/26/2016	0.0005 (J)		0.0006 (J)			
7/27/2016		<0.003		<0.003	<0.003	
7/28/2016						<0.003
8/31/2016	<0.003	<0.003	<0.003			
9/1/2016				<0.003	<0.003	<0.003
10/25/2016				<0.003	<0.003	<0.003
10/26/2016	<0.003	<0.003	<0.003			
1/4/2017	<0.003	<0.003				<0.003
1/5/2017			<0.003	<0.003	<0.003	
4/3/2017					<0.003	
4/4/2017				<0.003		
4/5/2017		<0.003				<0.003
4/6/2017	0.0006 (J)		<0.003			
7/10/2017		<0.003				
7/11/2017	0.0009 (J)			<0.003	<0.003	
7/12/2017			<0.003			<0.003
10/2/2017				<0.003	<0.003	
10/3/2017	<0.003					<0.003
10/4/2017		<0.003	<0.003			
1/9/2018				<0.003	<0.003	
1/10/2018			<0.003			<0.003
1/11/2018	0.0007 (J)	<0.003				
7/9/2018				<0.003		
7/10/2018					<0.003	<0.003
7/11/2018	<0.003	<0.003	<0.003			
1/16/2019			<0.003	<0.003		
1/17/2019	<0.003	<0.003			<0.003	<0.003
3/26/2019			<0.003	<0.003	<0.003	<0.003
3/27/2019	<0.003	<0.003				
8/27/2019	0.00033 (J)	<0.003	<0.003	<0.003	<0.003	
8/28/2019						<0.003
10/8/2019	0.00046 (J)		<0.003	<0.003	<0.003	<0.003
10/9/2019		<0.003				

Time Series

Constituent: Antimony (mg/L) Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
4/7/2020	0.00066 (J)	<0.003		<0.003	<0.003	<0.003
4/8/2020			<0.003			
8/17/2020		<0.003	<0.003			
8/18/2020	0.00064 (J)			<0.003	<0.003	<0.003
9/28/2020			<0.003			
9/29/2020	0.00051 (J)	<0.003		<0.003		
9/30/2020					<0.003	<0.003
3/10/2021	0.00076 (J)	0.0003 (J)				
3/12/2021					0.0018 (J)	
3/15/2021			<0.003			
3/16/2021				<0.003		<0.003

Time Series

Constituent: Antimony (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
9/29/2000	<0.003					<0.003
11/21/2000	<0.003	<0.003				<0.003
1/20/2001	<0.003	<0.003				<0.003
3/14/2001	<0.003	<0.003				<0.003
7/16/2001	<0.003	<0.003				<0.003
11/1/2001	<0.003	<0.003				<0.003
4/25/2002	<0.003	<0.003				<0.003
11/20/2002	<0.003	<0.003				<0.003
6/6/2003	<0.003	<0.003				<0.003
12/12/2003	<0.003	<0.003				<0.003
5/26/2004	<0.003	<0.003				<0.003
12/7/2004	<0.003	<0.003				<0.003
6/21/2005	<0.003	<0.003				<0.003
12/12/2005	<0.003	<0.003				<0.003
6/27/2006	<0.003	<0.003				<0.003
12/4/2006	<0.003	<0.003				<0.003
6/23/2007	<0.003	<0.003				<0.003
12/11/2007	<0.003	<0.003				<0.003
6/23/2008						<0.003
6/24/2008	<0.003	<0.003				
12/4/2008		<0.003				<0.003
12/5/2008	<0.003					
7/8/2009	<0.003	<0.003				<0.003
12/20/2009		<0.003				
12/21/2009	<0.003					<0.003
6/20/2010		<0.003				<0.003
6/21/2010	<0.003		<0.003	<0.003	<0.003	
1/6/2011		<0.003				
1/7/2011	<0.003		<0.003	<0.003	<0.003	<0.003
7/7/2011			<0.003			
7/8/2011	<0.003		<0.003	<0.003	<0.003	<0.003
1/17/2012		<0.003				
1/18/2012	<0.003		<0.003	<0.003	<0.003	<0.003
7/9/2012		<0.003				
7/10/2012	<0.003		<0.003	<0.003	<0.003	<0.003
1/17/2013		<0.003				
1/18/2013	<0.003		<0.003	<0.003	<0.003	<0.003
7/17/2013	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
1/13/2014		<0.003				
1/14/2014	<0.003		<0.003	<0.003	<0.003	<0.003
7/9/2014	<0.003	<0.003		<0.003		<0.003
7/10/2014			<0.003		<0.003	
1/12/2015			<0.003			
1/13/2015		<0.003				
1/14/2015	<0.003			<0.003	<0.003	<0.003
7/16/2015		<0.003				
7/17/2015				<0.003		<0.003
7/18/2015	<0.003		<0.003		<0.003	
1/17/2016		<0.003	<0.003	<0.003		
1/18/2016	<0.003				<0.003	<0.003
7/27/2016		<0.003				
7/28/2016			0.0019 (J)	<0.003		<0.003

Time Series

Constituent: Antimony (mg/L) Analysis Run 4/19/2021 1:25 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
7/29/2016	<0.003				<0.003	
8/31/2016		<0.003			<0.003	<0.003
9/1/2016	<0.003		<0.003	<0.003		
10/25/2016			<0.003	<0.003		
10/26/2016	<0.003	<0.003			<0.003	
10/27/2016						0.0016 (J)
1/4/2017			<0.003	<0.003	<0.003	
1/5/2017	<0.003	<0.003				
1/6/2017						<0.003
4/4/2017		<0.003	<0.003	<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
7/13/2017	<0.003	<0.003		<0.003		
10/2/2017			<0.003			
10/3/2017		<0.003		<0.003		
10/4/2017	<0.003				<0.003	<0.003
1/9/2018				<0.003		
1/10/2018		<0.003	<0.003			
1/11/2018	<0.003				<0.003	<0.003
7/9/2018			<0.003			
7/10/2018		<0.003		<0.003		
7/11/2018	<0.003				<0.003	<0.003
1/16/2019	<0.003					
1/17/2019				<0.003		
1/18/2019					<0.003	<0.003
1/21/2019		<0.003	<0.003			
3/25/2019			<0.003			
3/26/2019	<0.003			<0.003		
3/27/2019					<0.003	<0.003
7/30/2019		<0.003				
8/27/2019		<0.003			0.00045 (J)	
8/28/2019	<0.003		<0.003	<0.003		<0.003
10/8/2019				<0.003		
10/9/2019	<0.003	<0.003	<0.003		<0.003	<0.003
4/7/2020				<0.003	0.00049 (J)	
4/8/2020	<0.003	0.0013 (J)	<0.003			0.00033 (J)
8/18/2020	<0.003	<0.003	<0.003	<0.003	0.0022 (J)	
8/19/2020						<0.003
9/29/2020		0.0016 (J)				
9/30/2020	<0.003		<0.003	0.00033 (J)	0.0016 (J)	
10/1/2020						<0.003
3/10/2021					0.0004 (J)	<0.003
3/11/2021	0.00039 (J)					
3/12/2021			0.00065 (J)			
3/15/2021		<0.003				
3/16/2021				<0.003		

Time Series

Constituent: Antimony (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
3/11/2021	<0.003	<0.003	<0.003	<0.003	<0.003

Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
9/29/2000	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
11/21/2000	<0.005		<0.005	<0.005	<0.005	<0.005
1/20/2001	<0.005	<0.005	0.01	<0.005	0.014	<0.005
3/14/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
7/16/2001	<0.005	<0.005	<0.005	0.014	<0.005	<0.005
11/1/2001	<0.005	<0.005	<0.005	0.023	<0.005	<0.005
4/25/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
11/20/2002		<0.005	0.0096	0.022	0.014	<0.005
6/6/2003	0.02	<0.005	0.0076	0.07 (o)	0.014	0.03 (o)
12/12/2003	<0.005	<0.005	0.0058	<0.005	<0.005	<0.005
5/26/2004	<0.005	<0.005	0.0068	0.0074	0.0082	<0.005
12/7/2004	<0.005	<0.005	0.0066	0.017	0.0062	<0.005
6/21/2005	<0.005	<0.005	<0.005	0.013	<0.005	<0.005
12/12/2005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4/4/2006		<0.005				
6/27/2006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
8/30/2006		<0.005				
12/4/2006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2/15/2007		<0.005				
6/23/2007	<0.005	<0.005	<0.005	<0.005	0.0053	<0.005
9/11/2007		<0.005				
12/11/2007	<0.005	<0.005	<0.005	<0.005	0.0057	<0.005
3/11/2008		<0.005				
6/23/2008	<0.005	<0.005				
6/24/2008			0.005	<0.005	0.012	<0.005
11/3/2008		<0.005				
12/4/2008	<0.005	<0.005				
12/5/2008			<0.005	<0.005	0.0064	<0.005
3/25/2009		<0.005				
7/7/2009	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
9/14/2009		<0.005				
12/20/2009	<0.005	<0.005				<0.005
12/21/2009			<0.005	<0.005	<0.005	
3/4/2010		<0.005				
6/20/2010	<0.005	<0.005		<0.005	0.017	<0.005
6/21/2010			0.018 (o)			
9/14/2010		<0.005				
1/6/2011				<0.005		<0.005
1/7/2011	<0.005	<0.005	<0.005		<0.005	
4/15/2011		<0.005				
7/7/2011	<0.005	<0.005		<0.005	<0.005	<0.005
7/8/2011			<0.005			
9/25/2011		<0.005				
1/17/2012	<0.005	<0.005		<0.005		0.0071
1/18/2012			<0.005		<0.005	
4/4/2012		<0.005				
7/9/2012	0.0052			<0.005		0.0076
7/10/2012		<0.005	0.0052		<0.005	
10/9/2012		<0.005				
1/17/2013				<0.005		0.0086
1/18/2013	0.0087	<0.005	<0.005		<0.005	
4/5/2013		<0.005				

Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/19/2021 1:25 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
7/16/2013				<0.005		<0.005
7/17/2013	0.0084	<0.005	<0.005		<0.005	
10/11/2013		<0.005				
1/13/2014	0.009			<0.005		<0.005
1/14/2014		<0.005	<0.005		<0.005	
4/3/2014		<0.005				
7/9/2014	0.008	<0.005	0.0023 (J)	<0.005	<0.005	0.0022 (J)
10/24/2014		<0.005				
1/12/2015			0.0028 (J)			
1/13/2015	0.0077			<0.005		<0.005
1/14/2015		<0.005			<0.005	
5/10/2015		<0.005				
7/16/2015	0.0077		<0.005	<0.005		0.0037 (J)
7/17/2015		<0.005			<0.005	
10/6/2015		<0.005				
1/17/2016						0.024 (o)
1/18/2016	0.014	<0.005	<0.005	<0.005	<0.005	
4/26/2016		0.0011 (J)				
7/27/2016	0.0111			0.0008 (J)		0.0046 (J)
7/28/2016		<0.005			0.0009 (J)	
7/29/2016			0.0014 (J)			
8/30/2016		<0.005		<0.005	<0.005	0.0023 (J)
9/1/2016	0.0287		0.0033 (J)			
10/24/2016		<0.005				
10/25/2016	0.0069					0.0035 (J)
10/26/2016			0.0016 (J)	<0.005	<0.005	
1/3/2017		<0.005		<0.005		
1/4/2017						0.0018 (J)
1/5/2017					0.0021 (J)	
1/6/2017	0.0097		<0.005			
4/3/2017		0.0006 (J)				
4/4/2017			0.0021 (J)			0.0015 (J)
4/6/2017	0.0104			0.0006 (J)	0.0011 (J)	
7/11/2017		0.0006 (J)				
7/12/2017			0.0015 (J)	0.0009 (J)	0.0014 (J)	0.0015 (J)
7/13/2017	0.0064					
10/2/2017		0.0006 (J)				
10/3/2017				0.001 (J)	0.0014 (J)	0.0013 (J)
10/4/2017	0.0078		0.0018 (J)			
1/9/2018	0.0091 (J)	0.0009 (J)			0.0017 (J)	
1/10/2018				0.0012 (J)		0.0023 (J)
1/11/2018			0.0015 (J)			
7/9/2018		<0.005				
7/10/2018				0.0016 (J)	0.00063 (J)	0.0031 (J)
7/11/2018	<0.005		0.00095 (J)			
1/16/2019	<0.005	<0.005	0.0024 (J)	0.0011 (J)	<0.005	0.0023 (J)
3/25/2019	0.0029 (J)	<0.005	0.0029 (J)			
3/26/2019				0.0014 (J)	0.0029 (J)	0.0032 (J)
8/26/2019	0.0041 (J)	<0.005				
8/27/2019			0.0023 (J)		0.0035 (J)	0.0022 (J)
8/28/2019				0.0023 (J)		
10/7/2019		<0.005				

Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
10/8/2019	0.003 (J)					
10/9/2019			0.0024 (J)	0.0053 (J)	0.0018 (J)	0.0042 (J)
4/6/2020	<0.005	0.00045 (J)				
4/7/2020			0.0027 (J)	0.0011 (J)	<0.005	0.027
8/17/2020		<0.005				
8/19/2020	0.006 (J)		0.0033 (J)	0.0019 (J)	0.0036 (J)	0.007
9/28/2020	<0.005	<0.005				0.0058
9/30/2020				0.0017 (J)	0.004 (J)	
10/1/2020			0.0027 (J)			
3/10/2021			0.0025 (J)	0.0019 (J)	0.0054	0.0055
3/11/2021	0.0047 (J)					
3/12/2021		<0.005				

Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
9/29/2000	<0.005	<0.005	<0.005	<0.005	<0.005	0.094
11/21/2000	<0.005	<0.005	<0.005	<0.005	<0.005	0.059
1/20/2001	<0.005	<0.005	<0.005	<0.005	<0.005	0.087
3/14/2001	<0.005	<0.005	<0.005	<0.005	<0.005	0.075
7/16/2001	<0.005	<0.005	<0.005	<0.005	<0.005	0.11
11/1/2001	<0.005	<0.005	<0.005	<0.005	<0.005	0.098
4/25/2002	<0.005	<0.005	<0.005	<0.005	<0.005	0.071
11/20/2002	<0.005	<0.005	<0.005	0.011	<0.005	0.15
6/6/2003	<0.005	<0.005	<0.005	<0.005	<0.005	1.2 (o)
12/12/2003	<0.005	<0.005	0.0064	<0.005	<0.005	0.27 (o)
5/26/2004	<0.005	<0.005	<0.005	<0.005	<0.005	0.12
12/7/2004	<0.005	<0.005	<0.005	<0.005	<0.005	0.098
6/21/2005	<0.005	<0.005	<0.005	<0.005	<0.005	0.065
12/12/2005	<0.005	<0.005	<0.005	<0.005	<0.005	0.081
4/4/2006				<0.005		0.077
6/27/2006	<0.005	<0.005	<0.005	<0.005	<0.005	0.071
8/30/2006				<0.005		0.08
12/4/2006	<0.005	<0.005	<0.005	<0.005	<0.005	0.085
2/15/2007				<0.005		0.09
6/23/2007	<0.005	<0.005	<0.005	<0.005	<0.005	0.12
9/11/2007				<0.005		0.088
12/11/2007	<0.005	<0.005	<0.005	<0.005	<0.005	0.088
3/11/2008				<0.005		0.071
6/23/2008	<0.005	<0.005	<0.005			
6/24/2008				<0.005	<0.005	0.097
11/3/2008				<0.005		0.089
12/4/2008	<0.005	<0.005	<0.005	<0.005		
12/5/2008					<0.005	0.092
3/25/2009				<0.005		0.095
7/8/2009	<0.005	<0.005	<0.005	<0.005	0.0052	0.11
9/14/2009				<0.005		0.099
12/20/2009				<0.005	<0.005	0.1
12/21/2009	<0.005	<0.005	<0.005			
3/4/2010				<0.005		0.074
6/20/2010	<0.005	<0.005	<0.005	<0.005	0.0068	
6/21/2010						0.056
9/14/2010				<0.005		0.067
1/6/2011	<0.005		<0.005			
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	<0.005	<0.005	0.054
9/25/2011				<0.005		0.085
1/17/2012	<0.005	<0.005	<0.005	<0.005	<0.005	
1/18/2012						0.089
4/4/2012				<0.005		0.0473
7/9/2012	<0.005	<0.005	<0.005	<0.005	<0.005	
7/10/2012						0.07
10/9/2012				<0.005		0.088
1/17/2013	<0.005	<0.005	<0.005			
1/18/2013				<0.005	0.0089	0.063
4/5/2013				<0.005		0.06
7/16/2013	<0.005	<0.005	<0.005			

Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/19/2021 1:25 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
7/17/2013				<0.005	0.011	0.063
10/11/2013				0.005		0.059
1/13/2014	<0.005	<0.005	<0.005		0.017	
1/14/2014				<0.005		0.077
4/3/2014				<0.005		0.091
7/8/2014	<0.005	<0.005	<0.005			
7/9/2014				<0.005	0.014	0.08
10/24/2014				<0.005		0.073
1/13/2015	<0.005	<0.005	<0.005		0.011	
1/14/2015				<0.005		0.079
5/10/2015				<0.005		
5/11/2015						0.058
7/16/2015	<0.005	<0.005	<0.005		0.02	0.068
7/17/2015				<0.005		
10/6/2015				<0.005		0.078
1/17/2016				0.002 (J)	0.014	0.089
1/18/2016		<0.005	<0.005			
1/19/2016	<0.005					
4/26/2016				0.00183 (J)		0.0731
7/26/2016	<0.005		<0.005			
7/27/2016		<0.005		0.0021 (J)	0.0303	
7/28/2016						0.0627
8/31/2016	<0.005	<0.005	<0.005			
9/1/2016				0.0024 (J)	0.0533	0.0551
10/25/2016				<0.005	0.0551	0.0466
10/26/2016	<0.005	<0.005	<0.005			
1/4/2017	<0.005	<0.005				0.0444
1/5/2017			<0.005	0.0024 (J)	0.0437	
4/3/2017					0.0713	
4/4/2017				0.003 (J)		
4/5/2017		0.0006 (J)				0.0591
4/6/2017	<0.005		<0.005			
7/10/2017		0.0008 (J)				
7/11/2017	<0.005			0.0019 (J)	0.0745	
7/12/2017			<0.005			0.0776
10/2/2017				0.0026 (J)	0.0723	
10/3/2017	<0.005					0.0813
10/4/2017		0.0009 (J)	<0.005			
1/9/2018				0.0021 (J)	0.0731	
1/10/2018			0.0006 (J)			0.085
1/11/2018	<0.005	<0.005				
7/9/2018				0.0019 (J)		
7/10/2018					0.09	0.067
7/11/2018	<0.005	<0.005	<0.005			
1/16/2019			<0.005	0.0016 (J)		
1/17/2019	<0.005	<0.005			0.13	0.079
3/26/2019			0.00058 (J)	0.0023 (J)	0.1	0.089
3/27/2019	<0.005	<0.005				
8/27/2019	<0.005	<0.005	<0.005	0.0017 (J)	0.17	
8/28/2019						0.091
10/8/2019	<0.005		<0.005	0.0017 (J)	0.13	0.088
10/9/2019		<0.005				

Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
4/7/2020	<0.005	<0.005		0.0018 (J)	0.24	0.091
4/8/2020			<0.005			
8/17/2020		<0.005	<0.005			
8/18/2020	<0.005			0.0012 (J)	0.28	0.045
9/28/2020			<0.005			
9/29/2020	<0.005	<0.005		<0.005		
9/30/2020					0.24	0.044
3/10/2021	<0.005	<0.005				
3/12/2021					0.16	
3/15/2021			<0.005			
3/16/2021				<0.005		0.064

Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
9/29/2000	<0.005					<0.005
11/21/2000	<0.005	<0.005				<0.005
1/20/2001	<0.005	<0.005				<0.005
3/14/2001	<0.005	<0.005				<0.005
7/16/2001	<0.005	<0.005				<0.005
11/1/2001	<0.005	<0.005				<0.005
4/25/2002	<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	<0.005				<0.005
5/26/2004	<0.005	<0.005				<0.005
12/7/2004	<0.005	<0.005				<0.005
6/21/2005	<0.005	<0.005				<0.005
12/12/2005	<0.005	<0.005				<0.005
6/27/2006	<0.005	<0.005				<0.005
12/4/2006	<0.005	<0.005				<0.005
6/23/2007	<0.005	<0.005				<0.005
12/11/2007	<0.005	<0.005				<0.005
6/23/2008						<0.005
6/24/2008	<0.005	<0.005				
12/4/2008		<0.005				<0.005
12/5/2008	<0.005					
7/8/2009	<0.005	<0.005				<0.005
12/20/2009		<0.005				
12/21/2009	<0.005					<0.005
6/20/2010		<0.005				<0.005
6/21/2010	<0.005		0.29	0.013 (o)	<0.005	
1/6/2011		<0.005				
1/7/2011	<0.005		0.2	<0.005	<0.005	<0.005
7/7/2011			<0.005			
7/8/2011	<0.005		0.19	<0.005	<0.005	<0.005
1/17/2012		<0.005				
1/18/2012	<0.005		0.058	<0.005	<0.005	<0.005
7/9/2012		<0.005				
7/10/2012	<0.005		0.18	<0.005	<0.005	<0.005
1/17/2013		<0.005				
1/18/2013	<0.005		0.22	0.0061	<0.005	<0.005
7/17/2013	<0.005	<0.005	0.45	<0.005	<0.005	<0.005
1/13/2014		<0.005				
1/14/2014	<0.005		0.52	0.006	<0.005	<0.005
7/9/2014	<0.005	<0.005		<0.005		<0.005
7/10/2014			0.4		0.0027 (J)	
1/12/2015			0.43			
1/13/2015		<0.005				
1/14/2015	<0.005			<0.005	<0.005	<0.005
7/16/2015		<0.005				
7/17/2015				<0.005		<0.005
7/18/2015	<0.005		0.26		<0.005	
1/17/2016		<0.005	0.34	0.0065		
1/18/2016	<0.005				<0.005	<0.005
7/27/2016		<0.005				
7/28/2016			0.209	<0.005		<0.005

Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/19/2021 1:25 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
7/29/2016	0.0009 (J)				0.002 (J)	
8/31/2016		<0.005			0.0017 (J)	<0.005
9/1/2016	<0.005		0.215	0.0039 (J)		
10/25/2016			0.307	<0.005		
10/26/2016	<0.005	<0.005			<0.005	
10/27/2016						<0.005
1/4/2017			0.311	<0.005	<0.005	
1/5/2017	<0.005	<0.005				
1/6/2017						<0.005
4/4/2017		<0.005	0.317	0.0031 (J)		
4/5/2017	0.0011 (J)					
4/6/2017					0.0006 (J)	<0.005
7/11/2017			0.299		0.0012 (J)	
7/12/2017						<0.005
7/13/2017	0.0016 (J)	<0.005		<0.005		
10/2/2017			0.216			
10/3/2017		<0.005		<0.005		
10/4/2017	0.0019 (J)				0.0025 (J)	<0.005
1/9/2018				0.0033 (J)		
1/10/2018		0.0006 (J)	0.347			
1/11/2018	0.0015 (J)				0.0006 (J)	<0.005
7/9/2018			0.37			
7/10/2018		<0.005		0.0027 (J)		
7/11/2018	0.00082 (J)				0.0011 (J)	<0.005
1/16/2019	<0.005					
1/17/2019				0.0022 (J)		
1/18/2019					<0.005	<0.005
1/21/2019		<0.005	0.44			
3/25/2019			0.41			
3/26/2019	0.0015 (J)			0.0045 (J)		
3/27/2019					<0.005	<0.005
7/30/2019		0.00039 (J)				
8/27/2019		<0.005			0.00044 (J)	
8/28/2019	0.0011 (J)		0.43	0.002 (J)		<0.005
10/8/2019				0.0028 (J)		
10/9/2019	0.0011 (J)	<0.005	0.35		<0.005	<0.005
4/7/2020				<0.005	0.00043 (J)	
4/8/2020	0.0013 (J)	0.00094 (J)	0.33			0.00084 (J)
8/18/2020	<0.005	<0.005	0.3	0.0059	<0.005	
8/19/2020						<0.005
9/29/2020		<0.005				
9/30/2020	0.0012 (J)		0.31	0.0029 (J)	<0.005	
10/1/2020						<0.005
3/10/2021					<0.005	<0.005
3/11/2021	0.0009 (J)					
3/12/2021			0.27			
3/15/2021		<0.005				
3/16/2021				0.0098		

Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
1/20/2021			<0.005		
1/21/2021	<0.005	<0.005			
3/11/2021	<0.005	<0.005	0.00092 (J)	0.001 (J)	<0.005

Time Series

Constituent: Barium (mg/L) Analysis Run 4/19/2021 1:25 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
9/29/2000	0.11	0.16	0.16	0.22	0.16	0.044
11/21/2000	0.12		0.16	0.13	0.21	0.047
1/20/2001	0.11	0.18	0.21	0.19	0.23	0.051
3/14/2001	0.11	0.14	0.18	0.27	0.22	0.048
7/16/2001	0.11	0.14	0.18	0.37	0.22	0.054
11/1/2001	0.11	0.14	0.15	0.61 (o)	0.23	0.063
4/25/2002	0.058	0.088	0.16	0.19	0.15	0.032
6/6/2003	0.19	0.14	0.29	0.72 (o)	0.13	0.046
12/12/2003	0.1	0.13	0.18	0.054	0.034	0.034
5/26/2004	0.084	0.09	0.16	0.18	0.13	0.035
12/7/2004	0.094	0.11	0.16	0.24	0.13	0.024
6/21/2005	0.089	0.084	0.15	0.2	0.07	0.039
12/12/2005	0.089	0.1	0.15	0.074	0.04	0.042
4/4/2006		0.089				
6/27/2006	0.096	0.1	0.19	0.075	0.041	0.033
8/30/2006		0.12				
12/4/2006	0.092	0.086	0.26	0.092	0.048	0.04
2/15/2007		0.088				
6/23/2007	0.08	0.089	0.24	0.089	0.12	0.044
9/11/2007		0.092				
12/11/2007	0.067	0.077	0.21	0.072	0.12	0.049
3/11/2008		0.082				
6/23/2008	0.056	0.086				
6/24/2008			0.13	0.049	0.17	0.038
11/3/2008		0.088				
12/4/2008	0.054	0.081				
12/5/2008			0.12	0.067	0.093	0.06
3/25/2009		0.069				
7/7/2009	0.034	0.078	0.17	0.04	0.06	0.043
9/14/2009		0.079				
12/20/2009	0.034	0.081				0.065
12/21/2009			0.2	0.044	0.11	
3/4/2010		0.065				
6/20/2010	0.062	0.078		0.036	0.11	0.095
6/21/2010			0.22			
9/14/2010		0.076				
1/6/2011				0.075		0.093
1/7/2011	0.039	0.074	0.12		0.025	
4/15/2011		0.065				
7/7/2011	0.036	0.081		0.13	0.025	0.095
7/8/2011			0.15			
9/25/2011		0.078				
1/17/2012	0.041	0.082		0.21		0.1
1/18/2012			0.15		0.03	
4/4/2012		0.0861				
7/9/2012	0.15			0.2		0.11
7/10/2012		0.082	0.14		0.028	
10/9/2012		0.09				
1/17/2013				0.19		0.12
1/18/2013	0.15	0.083	0.15		0.058	
4/5/2013		0.078				
7/16/2013				0.076		0.081

Time Series

Constituent: Barium (mg/L) Analysis Run 4/19/2021 1:25 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
7/17/2013	0.13	0.083	0.14		0.086	
10/11/2013		0.078				
1/13/2014	0.16			0.14		0.096
1/14/2014		0.081	0.16		0.1	
4/3/2014		0.077				
7/9/2014	0.11	0.073	0.12	0.12	0.082	0.066
10/24/2014		0.087				
1/12/2015			0.13			
1/13/2015	0.083			0.13		0.068
1/14/2015		0.079			0.094	
5/10/2015		0.076				
7/16/2015	0.094		0.11	0.12		0.07
7/17/2015		0.061			0.11	
10/6/2015		0.067				
1/17/2016						0.062
1/18/2016	0.22	0.068	0.095	0.12	0.11	
4/26/2016		0.0596				
7/27/2016	0.192			0.112		0.0417
7/28/2016		0.0701			0.105	
7/29/2016			0.0883			
8/30/2016		0.0687		0.135	0.106	0.0545
9/1/2016	0.415 (o)		0.123			
10/24/2016		0.07				
10/25/2016	0.173					0.0504
10/26/2016			0.0863	0.103	0.107	
1/3/2017		0.061		0.118		
1/4/2017						0.0534
1/5/2017					0.107	
1/6/2017	0.167		0.0758			
4/3/2017		0.0612				
4/4/2017			0.091			0.0549
4/6/2017	0.136			0.162	0.111	
7/11/2017		0.0624				
7/12/2017			0.0941	0.157	0.106	0.0614
7/13/2017	0.0891					
10/2/2017		0.0618				
10/3/2017				0.127	0.105	0.0436
10/4/2017	0.113		0.0994			
1/9/2018	0.0901	0.0574			0.0969	
1/10/2018				0.158		0.053
1/11/2018			0.088			
7/9/2018		0.056				
7/10/2018				0.31	0.087	0.059
7/11/2018	0.065		0.071			
1/16/2019	0.062	0.062	0.083	0.054	0.013 (J)	0.054
3/25/2019	0.054	0.064	0.077			
3/26/2019				0.057	0.012 (J)	0.055
8/26/2019	0.11	0.065				
8/27/2019			0.076		0.013	0.054
8/28/2019				0.1		
10/7/2019		0.069				
10/8/2019	0.1					

Time Series

Constituent: Barium (mg/L) Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
10/9/2019			0.076	0.13	0.014 (J)	0.058
4/6/2020	0.072	0.057				
4/7/2020			0.09	0.098	0.01 (J)	0.05
8/17/2020		0.051				
8/19/2020	0.1		0.076	0.1	0.064	0.057
9/28/2020	0.095	0.05				0.051
9/30/2020				0.16	0.092	
10/1/2020			0.077			
3/10/2021			0.07	0.096	0.027	0.052
3/11/2021	0.07					
3/12/2021		0.052				

Time Series

Constituent: Barium (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
9/29/2000	0.1	0.075	<0.005	0.11	0.028	0.076
11/21/2000	0.082	0.072	0.01	0.15	0.035	0.075
1/20/2001	0.083	0.086	<0.005	0.1	0.032	0.053
3/14/2001	0.075	0.088	0.01	0.095	0.036	0.055
7/16/2001	0.091	0.084	<0.005	0.28 (o)	0.036	0.041
11/1/2001	0.068	0.13	<0.005	0.16	0.036	0.045
4/25/2002	0.066	0.24 (o)	<0.005	0.054	0.045	0.055
6/6/2003	0.085	0.28 (o)	0.028	0.063	0.083 (o)	0.48 (o)
12/12/2003	0.072	0.27 (o)	0.019	0.041	0.094 (o)	0.13 (o)
5/26/2004	0.055	0.31 (o)	<0.005	0.059	0.034	0.055
12/7/2004	0.066	0.46 (o)	0.009	0.076	0.042	0.072
6/21/2005	0.033	0.053	0.0089	0.042	0.039	0.061
12/12/2005	0.034	0.1	0.026	0.048	0.043	0.047
4/4/2006				0.05		0.042
6/27/2006	0.029	0.098	0.029	0.036	0.031	0.042
8/30/2006				0.059		0.05
12/4/2006	0.02	0.068	0.017	0.062	0.043	0.044
2/15/2007				0.079		0.041
6/23/2007	0.017	0.042	0.014	0.03	0.031	0.044
9/11/2007				0.053		0.04
12/11/2007	0.013	0.04	0.011	0.075	0.044	0.0035
3/11/2008				0.052		0.034
6/23/2008	0.012	0.041	0.018			
6/24/2008				0.039	0.057	0.042
11/3/2008				0.082		0.049
12/4/2008	0.011	0.035	0.019	0.079		
12/5/2008					0.041	0.05
3/25/2009				0.093		0.052
7/8/2009	0.012	0.036	0.011	0.039	0.058	0.046
9/14/2009				0.061		0.048
12/20/2009				0.088	0.062	0.062
12/21/2009	0.011	0.028	0.01			
3/4/2010				0.077		0.058
6/20/2010	0.0089	0.025	0.0081	0.075	0.03	
6/21/2010						0.041
9/14/2010				0.093		0.036
1/6/2011	0.014		0.012			
1/7/2011		0.037		0.13	0.049	0.054
4/15/2011				0.086		0.049
7/7/2011	0.018	0.039	0.015	0.051	0.05	0.063
9/25/2011				0.056		0.037
1/17/2012	0.23	0.045	0.0086	0.052	0.044	
1/18/2012						0.034
4/4/2012				0.0519		0.0446
7/9/2012	0.17	0.032	0.01	0.048	0.045	
7/10/2012						0.033
10/9/2012				0.065		0.041
1/17/2013	0.2	0.033	0.014			
1/18/2013				0.045	0.049	0.036
4/5/2013				0.047		0.036
7/16/2013	0.11	0.027	0.012			
7/17/2013				0.032	0.039	0.054

Time Series

Constituent: Barium (mg/L) Analysis Run 4/19/2021 1:25 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
10/11/2013				0.028		0.052
1/13/2014	0.083	0.027	0.015		0.038	
1/14/2014				0.036		0.051
4/3/2014				0.038		0.047
7/8/2014	0.066	0.037	0.017			
7/9/2014				0.03	0.031	0.08
10/24/2014				0.025		0.072
1/13/2015	0.053	0.023	0.019		0.041	
1/14/2015				0.04		0.047
5/10/2015				0.026		
5/11/2015						0.053
7/16/2015	0.052	0.03	0.022		0.041	0.059
7/17/2015				0.029		
10/6/2015				0.03		0.053
1/17/2016				0.038	0.048	0.056
1/18/2016		0.032	0.026			
1/19/2016	0.048					
4/26/2016				0.025		0.0721
7/26/2016	0.051		0.0236			
7/27/2016		0.0191		0.0248	0.0487	
7/28/2016						0.0534
8/31/2016	0.0565	0.019	0.0273			
9/1/2016				0.0346	0.0403	0.0445
10/25/2016				0.0248	0.0329	0.0464
10/26/2016	0.0591	0.0197	0.0238			
1/4/2017	0.0598	0.0174				0.0379
1/5/2017			0.0218	0.0245	0.0392	
4/3/2017					0.0439	
4/4/2017				0.0342		
4/5/2017		0.0174				0.0534
4/6/2017	0.0813		0.0204			
7/10/2017		0.0172				
7/11/2017	0.0302			0.0276	0.051	
7/12/2017			0.0161			0.0944
10/2/2017				0.0274	0.047	
10/3/2017	0.103					0.135 (o)
10/4/2017		0.0162	0.0185			
1/9/2018				0.0222	0.0431	
1/10/2018			0.0166			0.0603
1/11/2018	0.166	0.018				
7/9/2018				0.026		
7/10/2018					0.047	0.16 (o)
7/11/2018	0.12	0.014	0.019			
1/16/2019			0.019	0.028		
1/17/2019	0.039	0.017			0.042	0.13
3/26/2019			0.026	0.034	0.047	0.14
3/27/2019	0.053	0.017				
8/27/2019	0.12	0.017	0.024	0.067	0.049	
8/28/2019						0.09
10/8/2019	0.13		0.024	0.085	0.057	0.13
10/9/2019		0.019				
4/7/2020	0.14	0.017		0.073	0.033	0.13

Time Series

Constituent: Barium (mg/L) Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
4/8/2020			0.027			
8/17/2020		0.018	0.024			
8/18/2020	0.12			0.028	0.03	0.32
9/28/2020			0.029			
9/29/2020	0.14	0.018		0.026		
9/30/2020					0.034	0.14
3/10/2021	0.13	0.028				
3/12/2021					0.038	
3/15/2021			0.034			
3/16/2021				0.037		0.16

Time Series

Constituent: Barium (mg/L) Analysis Run 4/19/2021 1:25 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
9/29/2000	0.16					0.093
11/21/2000	0.17	0.046				0.095
1/20/2001	0.16	0.036				0.089
3/14/2001	0.17	0.03				0.088
7/16/2001	0.19	0.032				0.096
11/1/2001	0.18	0.029				0.094
4/25/2002	0.15	0.021				0.085
6/6/2003	0.13	0.032				0.09
12/12/2003	0.18	0.021				0.084
5/26/2004	0.17	0.035				0.08
12/7/2004	0.19	0.031				0.098
6/21/2005	0.18	0.028				0.084
12/12/2005	0.17	0.024				0.07
6/27/2006	0.17	0.03				0.083
12/4/2006	0.21	0.031				0.072
6/23/2007	0.17	0.037				0.087
12/11/2007	0.18	0.034				0.082
6/23/2008						0.1
6/24/2008	0.14	0.038				
12/4/2008		0.038				0.12
12/5/2008	0.19					
7/8/2009	0.2	0.053				0.14
12/20/2009		0.047				
12/21/2009	0.23					0.15
6/20/2010		0.046				0.21
6/21/2010	0.25		0.062	0.16	0.11	
1/6/2011		0.063				
1/7/2011	0.21		0.039	0.095	0.12	0.2
7/7/2011			0.06			
7/8/2011	0.13		0.043	0.1	0.094	0.18
1/17/2012		0.06				
1/18/2012	0.26		0.042	0.12	0.087	0.18
7/9/2012		0.05				
7/10/2012	0.19		0.039	0.097	0.1	0.16
1/17/2013		0.058				
1/18/2013	0.17		0.04	0.1	0.078	0.19
7/17/2013	0.18	0.041	0.055	0.069	0.062	0.17
1/13/2014		0.058				
1/14/2014	0.18		0.059	0.086	0.073	0.2
7/9/2014	0.16	0.048		0.065		0.16
7/10/2014			0.067		0.13	
1/12/2015			0.061			
1/13/2015		0.048				
1/14/2015	0.16			0.084	0.065	0.17
7/16/2015		0.048				
7/17/2015				0.071		0.18
7/18/2015	0.012		0.13		0.073	
1/17/2016		0.049	0.08	0.079		
1/18/2016	0.13				0.062	0.2
7/27/2016		0.0796				
7/28/2016			0.164	0.0626		0.234
7/29/2016	0.181				0.0575	

Time Series

Constituent: Barium (mg/L) Analysis Run 4/19/2021 1:25 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
8/31/2016		0.0429			0.0693	0.284
9/1/2016	0.203		0.0976	0.077		
10/25/2016			0.0702	0.0217		
10/26/2016	0.177	0.113 (o)			0.0966	
10/27/2016						0.244
1/4/2017			0.0999	0.0617	0.0975	
1/5/2017	0.142	0.0526				
1/6/2017						0.305
4/4/2017		0.0503	0.136	0.0761		
4/5/2017	0.106					
4/6/2017					0.064	0.249
7/11/2017			0.145		0.0778	
7/12/2017						0.256
7/13/2017	0.0686	0.0529		0.0428		
10/2/2017			0.148			
10/3/2017		0.057		0.0376		
10/4/2017	0.0589				0.156	0.356
1/9/2018				0.0704		
1/10/2018		0.0527	0.0788			
1/11/2018	0.0412				0.0702	0.226
7/9/2018			0.087			
7/10/2018		0.054		0.061		
7/11/2018	0.049				0.12	0.29
1/16/2019	0.063					
1/17/2019				0.061		
1/18/2019					0.052	0.21
1/21/2019		0.05	0.069			
3/25/2019			0.085			
3/26/2019	0.025			0.084		
3/27/2019					0.057	0.19
7/30/2019		0.052				
8/27/2019		0.053			0.097	
8/28/2019	0.026		0.078	0.063		0.17
10/8/2019				0.079		
10/9/2019	0.032	0.05	0.078		0.065	0.18
4/7/2020				0.054	0.1	
4/8/2020	0.055	0.061	0.19			0.15
8/18/2020	0.074	0.05	0.38	0.18	0.085	
8/19/2020						0.17
9/29/2020		0.049				
9/30/2020	0.035		0.35	0.19	0.045	
10/1/2020						0.15
3/10/2021					0.049	0.15
3/11/2021	0.044					
3/12/2021			0.34			
3/15/2021		0.053				
3/16/2021				0.18		

Time Series

Constituent: Barium (mg/L) Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
3/11/2021	0.076	0.047	0.03	0.037	0.031

Time Series

Constituent: Beryllium (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
9/29/2000	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
11/21/2000	<0.003		<0.003	<0.003	<0.003	<0.003
1/20/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
3/14/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
7/16/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
11/1/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
4/25/2002	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
8/30/2016		0.0002 (J)		0.0002 (J)	<0.003	<0.003
9/1/2016	0.0017 (J)		0.0004 (J)			
10/24/2016		<0.003				
10/25/2016	0.0002 (J)					<0.003
10/26/2016			0.0001 (J)	0.0001 (J)	<0.003	
1/3/2017		0.0002 (J)		0.0001 (J)		
1/4/2017						<0.003
1/5/2017					<0.003	
1/6/2017	0.0003 (J)		0.0001 (J)			
4/3/2017		0.0002 (J)				
4/4/2017			0.0001 (J)			<0.003
4/6/2017	0.0004 (J)			0.0003 (J)	<0.003	
7/11/2017		0.0002 (J)				
7/12/2017			<0.003	0.0002 (J)	<0.003	<0.003
7/13/2017	0.001 (J)					
10/2/2017		0.0002 (J)				
10/3/2017				0.0002 (J)	<0.003	<0.003
10/4/2017	0.0002 (J)		0.0001 (J)			
1/9/2018	<0.003	0.0002 (J)			<0.003	
1/10/2018				0.0003 (J)		<0.003
1/11/2018			0.0001 (J)			
7/9/2018		0.0002 (J)				
7/10/2018				0.00028 (J)	<0.003	<0.003
7/11/2018	<0.003		<0.003			
8/26/2019	<0.003	0.00021 (J)				
8/27/2019			<0.003		<0.003	<0.003
8/28/2019				7.6E-05 (J)		
10/7/2019		0.00024 (J)				
10/8/2019	<0.003					
10/9/2019			<0.003	<0.003	<0.003	<0.003
4/6/2020	<0.003	0.00017 (J)				
4/7/2020			<0.003	<0.003	<0.003	<0.003
8/17/2020		0.00019 (J)				
8/19/2020	<0.003		<0.003	<0.003	5E-05 (J)	<0.003
9/28/2020	<0.003	0.00021 (J)				<0.003
9/30/2020				6.5E-05 (J)	4.6E-05 (J)	
10/1/2020			<0.003			
3/10/2021			<0.003	8.2E-05 (J)	<0.003	<0.003
3/11/2021	0.00028 (J)					
3/12/2021		0.00023 (J)				

Time Series

Constituent: Beryllium (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
9/29/2000	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
11/21/2000	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
1/20/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
3/14/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
7/16/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
11/1/2001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
4/25/2002	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
8/31/2016	<0.003	0.0011 (J)	<0.003			
9/1/2016				0.0001 (J)	<0.003	0.0001 (J)
10/25/2016				<0.003	<0.003	<0.003
10/26/2016	<0.003	0.0011 (J)	<0.003			
1/4/2017	<0.003	0.0009 (J)				9E-05 (J)
1/5/2017			<0.003	<0.003	<0.003	
4/3/2017					<0.003	
4/4/2017				9E-05 (J)		
4/5/2017		0.0008 (J)				9E-05 (J)
4/6/2017	<0.003		<0.003			
7/10/2017		0.0008 (J)				
7/11/2017	<0.003			<0.003	<0.003	
7/12/2017			<0.003			<0.003
10/2/2017				<0.003	<0.003	
10/3/2017	<0.003					<0.003
10/4/2017		0.0006 (J)	<0.003			
1/9/2018				<0.003	<0.003	
1/10/2018			<0.003			0.0001 (J)
1/11/2018	<0.003	0.0006 (J)				
7/9/2018				6.2E-05 (J)		
7/10/2018					<0.003	6E-05 (J)
7/11/2018	<0.003	0.00061 (J)	5.8E-05 (J)			
8/27/2019	<0.003	0.00047 (J)	<0.003	<0.003	<0.003	
8/28/2019						8E-05 (J)
10/8/2019	<0.003		<0.003	<0.003	<0.003	9.8E-05 (J)
10/9/2019		0.00046 (J)				
4/7/2020	<0.003	0.00051 (J)		<0.003	<0.003	<0.003
4/8/2020			<0.003			
8/17/2020		0.00046 (J)	<0.003			
8/18/2020	<0.003			<0.003	<0.003	6.8E-05 (J)
9/28/2020			<0.003			
9/29/2020	<0.003	0.00043 (J)		<0.003		
9/30/2020					<0.003	8.9E-05 (J)
3/10/2021	4.7E-05 (J)	0.00054				
3/12/2021					<0.003	
3/15/2021			<0.003			
3/16/2021				<0.003		<0.003

Time Series

Constituent: Beryllium (mg/L) Analysis Run 4/19/2021 1:25 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
9/29/2000	<0.003					<0.003
11/21/2000	<0.003	<0.003				<0.003
1/20/2001	<0.003	<0.003				<0.003
3/14/2001	<0.003	<0.003				<0.003
7/16/2001	<0.003	<0.003				<0.003
11/1/2001	<0.003	<0.003				<0.003
4/25/2002	<0.003	<0.003				<0.003
8/31/2016		<0.003			0.0002 (J)	0.0003 (J)
9/1/2016	0.0014 (J)		<0.003	<0.003		
10/25/2016			<0.003	<0.003		
10/26/2016	0.0016 (J)	0.0003 (J)			0.0002 (J)	
10/27/2016						0.0003 (J)
1/4/2017			<0.003	<0.003	0.0001 (J)	
1/5/2017	0.0019 (J)	<0.003				
1/6/2017						0.0002 (J)
4/4/2017		9E-05 (J)	<0.003	<0.003		
4/5/2017	0.0024 (J)					
4/6/2017					<0.003	0.0003 (J)
7/11/2017			<0.003		<0.003	
7/12/2017						0.0003 (J)
7/13/2017	0.0034	<0.003		<0.003		
10/2/2017			<0.003			
10/3/2017		<0.003		<0.003		
10/4/2017	0.0037				0.0001 (J)	0.0002 (J)
1/9/2018				<0.003		
1/10/2018		<0.003	<0.003			
1/11/2018	0.0033				<0.003	0.0003 (J)
7/9/2018			<0.003			
7/10/2018		<0.003		<0.003		
7/11/2018	0.0038				7E-05 (J)	0.0003 (J)
7/30/2019		<0.003				
8/27/2019		<0.003			9E-05 (J)	
8/28/2019	0.0017 (J)		<0.003	<0.003		0.00022 (J)
10/8/2019				<0.003		
10/9/2019	0.0018 (J)	<0.003	<0.003		<0.003	0.00023 (J)
4/7/2020				<0.003	<0.003	
4/8/2020	0.0017 (J)	8.8E-05 (J)	<0.003			0.00019 (J)
8/18/2020	0.0016 (J)	5.1E-05 (J)	<0.003	<0.003	7.6E-05 (J)	
8/19/2020						0.00022 (J)
9/29/2020		7.5E-05 (J)				
9/30/2020	0.0013 (J)		<0.003	<0.003	<0.003	
10/1/2020						0.0002 (J)
3/10/2021					<0.003	0.00019 (J)
3/11/2021	0.0012					
3/12/2021			<0.003			
3/15/2021		7.3E-05 (J)				
3/16/2021				<0.003		

Time Series

Constituent: Beryllium (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
3/11/2021	<0.003	<0.003	8.4E-05 (J)	0.0001 (J)	0.00032 (J)

Time Series

Constituent: Boron (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
8/30/2016		0.117		1.09	1.41	0.875
9/1/2016	11.6		6.48			
10/24/2016		0.126				
10/25/2016	21.4					1.22
10/26/2016			7.57	2.5	1.83	
1/3/2017		0.124		3.39		
1/4/2017						1.3
1/5/2017					3.07	
1/6/2017	20.1		8.34			
4/3/2017		0.105				
4/4/2017			8.18			1.19
4/6/2017	21.8			2.76	3.19	
7/11/2017		0.136				
7/12/2017			7.51	3.55	3.06	1.37
7/13/2017	16.3					
10/2/2017		0.107				
10/3/2017				2.72	2.69	0.765
10/4/2017	21.5		8.88			
1/9/2018	13.9	0.123			2.81	
1/10/2018				3.21		0.876
1/11/2018			6.95			
7/9/2018		0.11				
7/10/2018				7	2.9	0.94
7/11/2018	11.7		6.4			
1/16/2019	9.3	0.13	5.3	5	7.7	0.91
3/25/2019	8.5	0.098	4.4			
3/26/2019				4	7.4	0.77
10/7/2019		0.12				
10/8/2019	6.4					
10/9/2019			5.7	6.8	6.3	0.93
4/6/2020	6.1	0.14				
4/7/2020			5.5	4.6	5.6	1
9/28/2020	4.6	0.15				0.69
9/30/2020				4	4.2	
10/1/2020			5.2			
3/10/2021			4.9	3.9	6.9	0.63
3/11/2021	8					
3/12/2021		0.11				

Time Series

Constituent: Boron (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
8/31/2016	0.0688 (J)	5.1	0.261			
9/1/2016				0.071 (J)	9.01 (o)	1.82
10/25/2016				0.0819 (J)	1.66	1.26
10/26/2016	0.083 (J)	5.74	0.211			
1/4/2017	0.0738	6.56				1.46
1/5/2017			0.179	0.0813	1.1	
4/3/2017					1.21	
4/4/2017				0.0723		
4/5/2017		6.49				2
4/6/2017	0.0754		0.112			
7/10/2017		8.13				
7/11/2017	0.0614			0.0734	1.44	
7/12/2017			0.0882			2.95
10/2/2017				0.0748	1.59	
10/3/2017	0.0838					4.15
10/4/2017		5.18	0.116			
1/9/2018				0.0679	1.35	
1/10/2018			0.101			3.68
1/11/2018	0.169	5.16				
7/9/2018				0.061		
7/10/2018					1.2	5.2
7/11/2018	0.3	8.5	0.098			
1/16/2019			0.11	0.046		
1/17/2019	0.065	7			1.1	8.6
3/26/2019			0.35	0.037 (J)	0.95	7.4
3/27/2019	0.089	6.1				
10/8/2019	0.22		0.18	0.048	1.1	8.4
10/9/2019		8.2				
4/7/2020	0.67	5.3		0.061 (J)	0.96	10.5
4/8/2020			0.28			
9/28/2020			0.24			
9/29/2020	1.2	4.7		0.053		
9/30/2020					0.86	8.1
3/10/2021	1.8	6.1				
3/12/2021					0.81	
3/15/2021			0.31			
3/16/2021				0.08		10

Time Series

Constituent: Boron (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
8/31/2016		0.0196 (J)			12.8	0.096 (Jo)
9/1/2016	0.408		3.34	0.62		
10/25/2016			2.54	0.0658 (J)		
10/26/2016	0.5	0.05 (J)			9.81	
10/27/2016						0.0281 (J)
1/4/2017			1.91	0.36	8.94	
1/5/2017	0.676	0.0162 (J)				
1/6/2017						0.0189 (J)
4/4/2017		0.019 (J)	2.77	0.509		
4/5/2017	0.69					
4/6/2017					0.733	0.0181 (J)
7/11/2017			4.14		0.852	
7/12/2017						0.0211 (J)
7/13/2017	0.888	0.023 (J)		0.126		
10/2/2017			4.65			
10/3/2017		0.0266 (J)		0.1		
10/4/2017	1.02				6.05	0.0254 (J)
1/9/2018				0.783		
1/10/2018		0.0203 (J)	1.79			
1/11/2018	1.28				0.838	0.018 (J)
7/9/2018			1.7			
7/10/2018		0.026 (J)		0.5		
7/11/2018	1.6				3.2	0.02 (J)
1/16/2019	1.5					
1/17/2019				0.43		
1/18/2019					0.37	0.018 (J)
1/21/2019		0.018 (J)	1.1			
3/25/2019			1			
3/26/2019	1.2			0.61		
3/27/2019					0.37	0.016 (J)
7/30/2019		0.02 (J)				
10/8/2019				1		
10/9/2019	1.3	0.024 (J)	0.79		0.39	0.019 (J)
4/7/2020				0.24	3.1	
4/8/2020	0.99	0.031 (J)	2.5			0.023 (J)
9/29/2020		0.024 (J)				
9/30/2020	0.86		9.9	2.3	0.25	
10/1/2020						0.028 (J)
3/10/2021					0.32	0.022 (J)
3/11/2021	0.85					
3/12/2021			15.6			
3/15/2021		0.084				
3/16/2021				3.5		

Time Series

Constituent: Boron (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
1/20/2021			0.013 (J)	0.013 (J)	0.011 (J)
1/21/2021	0.018 (J)	0.014 (J)			
3/11/2021	0.03 (J)	0.019 (J)	0.017 (J)	0.015 (J)	0.014 (J)

Time Series

Constituent: Cadmium (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
11/21/2000	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
1/20/2001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
3/14/2001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
7/16/2001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
11/1/2001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
4/25/2002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
8/30/2016		<0.0005		<0.0005	<0.0005	<0.0005
9/1/2016	0.0007 (J)		0.0002 (J)			
10/24/2016		<0.0005				
10/25/2016	<0.0005					<0.0005
10/26/2016			<0.0005	<0.0005	<0.0005	
1/3/2017		<0.0005		<0.0005		
1/4/2017						0.0001 (J)
1/5/2017					<0.0005	
1/6/2017	0.0001 (J)		9E-05 (J)			
4/3/2017		<0.0005				
4/4/2017			9E-05 (J)			7E-05 (J)
4/6/2017	<0.0005			<0.0005	<0.0005	
7/11/2017		<0.0005				
7/12/2017			<0.0005	<0.0005	<0.0005	<0.0005
7/13/2017	<0.0005					
10/2/2017		<0.0005				
10/3/2017				<0.0005	<0.0005	<0.0005
10/4/2017	<0.0005		<0.0005			
1/9/2018	<0.0005	<0.0005			<0.0005	
1/10/2018				<0.0005		<0.0005
1/11/2018			0.0002 (J)			
7/9/2018		<0.0005				
7/10/2018				<0.0005	<0.0005	<0.0005
7/11/2018	<0.0005		<0.0005			
8/26/2019	<0.0005	<0.0005				
8/27/2019			<0.0005		<0.0005	<0.0005
8/28/2019				<0.0005		
10/7/2019		<0.0005				
10/8/2019	<0.0005					
10/9/2019			<0.0005	<0.0005	<0.0005	<0.0005
4/6/2020	<0.0005	<0.0005				
4/7/2020			<0.0005	<0.0005	<0.0005	<0.0005
8/17/2020		<0.0005				
8/19/2020	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
9/28/2020	<0.0005	<0.0005				<0.0005
9/30/2020				<0.0005	<0.0005	
10/1/2020			<0.0005			
3/10/2021			<0.0005	<0.0005	<0.0005	<0.0005
3/11/2021	<0.0005					
3/12/2021		<0.0005				

Time Series

Constituent: Cadmium (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
11/21/2000	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1/20/2001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
3/14/2001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
7/16/2001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
11/1/2001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
4/25/2002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
8/31/2016	0.0002 (J)	<0.0005	<0.0005			
9/1/2016				0.0001 (J)	<0.0005	<0.0005
10/25/2016				0.0002 (J)	<0.0005	<0.0005
10/26/2016	0.0001 (J)	<0.0005	<0.0005			
1/4/2017	0.0001 (J)	<0.0005				<0.0005
1/5/2017			<0.0005	0.0002 (J)	<0.0005	
4/3/2017					<0.0005	
4/4/2017				0.0002 (J)		
4/5/2017		<0.0005				<0.0005
4/6/2017	0.0002 (J)		<0.0005			
7/10/2017		<0.0005				
7/11/2017	<0.0005			0.0002 (J)	<0.0005	
7/12/2017			<0.0005			<0.0005
10/2/2017				<0.0005	<0.0005	
10/3/2017	0.0003 (J)					<0.0005
10/4/2017		<0.0005	<0.0005			
1/9/2018				<0.0005	<0.0005	
1/10/2018			<0.0005			<0.0005
1/11/2018	0.0006 (J)	<0.0005				
7/9/2018				0.00017 (J)		
7/10/2018					<0.0005	<0.0005
7/11/2018	0.0004 (J)	<0.0005	<0.0005			
8/27/2019	0.00044 (J)	<0.0005	<0.0005	<0.0005	<0.0005	
8/28/2019						<0.0005
10/8/2019	0.00043 (J)		<0.0005	<0.0005	<0.0005	<0.0005
10/9/2019		<0.0005				
4/7/2020	0.00051 (J)	<0.0005		<0.0005	<0.0005	<0.0005
4/8/2020			<0.0005			
8/17/2020		<0.0005	<0.0005			
8/18/2020	0.00058 (J)			<0.0005	<0.0005	<0.0005
9/28/2020			<0.0005			
9/29/2020	0.00077 (J)	<0.0005		0.00012 (J)		
9/30/2020					<0.0005	<0.0005
3/10/2021	0.0009	<0.0005				
3/12/2021					<0.0005	
3/15/2021			<0.0005			
3/16/2021				<0.0005		<0.0005

Time Series

Constituent: Cadmium (mg/L) Analysis Run 4/19/2021 1:25 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
11/21/2000	<0.0005	<0.0005				<0.0005
1/20/2001	<0.0005	<0.0005				<0.0005
3/14/2001	<0.0005	<0.0005				<0.0005
7/16/2001	<0.0005	<0.0005				<0.0005
11/1/2001	<0.0005	<0.0005				<0.0005
4/25/2002	<0.0005	<0.0005				<0.0005
8/31/2016		<0.0005			8E-05 (J)	<0.0005
9/1/2016	<0.0005		<0.0005	<0.0005		
10/25/2016			<0.0005	<0.0005		
10/26/2016	<0.0005	<0.0005			<0.0005	
10/27/2016						<0.0005
1/4/2017			<0.0005	<0.0005	0.0001 (J)	
1/5/2017	<0.0005	<0.0005				
1/6/2017						<0.0005
4/4/2017		<0.0005	<0.0005	<0.0005		
4/5/2017	<0.0005					
4/6/2017					0.0001 (J)	<0.0005
7/11/2017			<0.0005		<0.0005	
7/12/2017						<0.0005
7/13/2017	<0.0005	<0.0005		<0.0005		
10/2/2017			<0.0005			
10/3/2017		<0.0005		<0.0005		
10/4/2017	<0.0005				0.0002 (J)	<0.0005
1/9/2018				<0.0005		
1/10/2018		<0.0005	<0.0005			
1/11/2018	<0.0005				0.0002 (J)	<0.0005
7/9/2018			<0.0005			
7/10/2018		<0.0005		<0.0005		
7/11/2018	<0.0005				0.00023 (J)	<0.0005
7/30/2019		<0.0005				
8/27/2019		<0.0005			<0.0005	
8/28/2019	<0.0005		<0.0005	<0.0005		<0.0005
10/8/2019				<0.0005		
10/9/2019	<0.0005	<0.0005	<0.0005		0.00012 (J)	<0.0005
4/7/2020				<0.0005	0.00054 (J)	
4/8/2020	<0.0005	<0.0005	<0.0005			<0.0005
8/18/2020	<0.0005	<0.0005	<0.0005	<0.0005	0.00024 (J)	
8/19/2020						<0.0005
9/29/2020		<0.0005				
9/30/2020	<0.0005		<0.0005	<0.0005	0.00024 (J)	
10/1/2020						<0.0005
3/10/2021					<0.0005	<0.0005
3/11/2021	<0.0005					
3/12/2021			0.00018 (J)			
3/15/2021		<0.0005				
3/16/2021				<0.0005		

Time Series

Constituent: Cadmium (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
3/11/2021	<0.0005	<0.0005	0.00019 (J)	0.00029 (J)	0.0015

Time Series

Constituent: Calcium (mg/L) Analysis Run 4/19/2021 1:25 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
8/30/2016		23.8		14.3	4.68	29.4
9/1/2016	5.59		9.91			
10/24/2016		22.5				
10/25/2016	6.43					28.3
10/26/2016			8.56	18.6	5.45	
1/3/2017		22.1		18.1		
1/4/2017						33.4
1/5/2017					5.35	
1/6/2017	8.13		8.18			
4/3/2017		24.6 (J)				
4/4/2017			8.12			34.6
4/6/2017	7.72			16.2	5.41	
7/11/2017		23.5				
7/12/2017			8	18.1	4.81	38
7/13/2017	4.57					
10/2/2017		22.7				
10/3/2017				15.2	5.17	25.5
10/4/2017	6.41		12.5			
1/9/2018	4.68	23.2			4.73	
1/10/2018				15.5		36.5
1/11/2018			12.9			
7/9/2018		24.6 (J)				
7/10/2018				30.6	4.5	45.5
7/11/2018	3.9		8.6			
1/16/2019	4.3	27.7	68.8	33.3	10.1	46.5
3/25/2019	3.9	31.7	55.6			
3/26/2019				36.1	9	46.3
10/7/2019		31.6				
10/8/2019	3.5					
10/9/2019			46.7	17.7	10.1	51.2
4/6/2020	3.1	35.8				
4/7/2020			62.1	34.1	7.8	31.1
9/28/2020	3.3	25.6				70.7
9/30/2020				70.4	27.5	
10/1/2020			48.4			
3/10/2021			263	134	55.9	67.2
3/11/2021	2.4					
3/12/2021		21.4				

Time Series

Constituent: Calcium (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
8/31/2016	18.8	105	2.77			
9/1/2016				194	119	93.8
10/25/2016				100	106	94.1
10/26/2016	16.6	101	2.25			
1/4/2017	17.6	94.9				88.2
1/5/2017			2.27	107	115	
4/3/2017					131	
4/4/2017				153		
4/5/2017		92.5				106
4/6/2017	30.9		2.04			
7/10/2017		90.3				
7/11/2017	17.7			125	155	
7/12/2017			2.25			149
10/2/2017				126	137	
10/3/2017	39.8					217
10/4/2017		74.6	2.19			
1/9/2018				119	135	
1/10/2018			2.28			161
1/11/2018	65.6	78.1				
7/9/2018				123		
7/10/2018					129	205
7/11/2018	53	72.2	2.3			
1/16/2019			2.3	120		
1/17/2019	19.8 (J)	64.7			137	187
3/26/2019			2.4	84.2	124	204
3/27/2019	25.1	63.1				
10/8/2019	69.2		2.3	146	129	205
10/9/2019		54.2				
4/7/2020	84.7	52.1		135	129	225
4/8/2020			2.5			
9/28/2020			2.9			
9/29/2020	123	42		30.8		
9/30/2020					109	177
3/10/2021	126	53.1				
3/12/2021					101	
3/15/2021			2.4			
3/16/2021				34.4		188

Time Series

Constituent: Calcium (mg/L) Analysis Run 4/19/2021 1:25 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Date	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
8/31/2016		0.371 (J)			127	6.9
9/1/2016	71.9		67.2	40.5		
10/25/2016			50.1	3.91		
10/26/2016	80.3	5.84			127	
10/27/2016						8.2
1/4/2017			80.4	15.2	113	
1/5/2017	94.4	0.379 (J)				
1/6/2017						7.97
4/4/2017		0.993	108	32.3		
4/5/2017	104					
4/6/2017					42.7	7.95
7/11/2017			136		46	
7/12/2017						8.37
7/13/2017	124	0.388 (J)		8.92		
10/2/2017			105			
10/3/2017		0.251 (J)		7.88		
10/4/2017	136				115	8.57
1/9/2018				40.5		
1/10/2018		0.177 (J)	60.1			
1/11/2018	139				47.6	9.78
7/9/2018			75.9			
7/10/2018		0.17 (J)		29.8		
7/11/2018	122				73.7	9.2
1/16/2019	80.5					
1/17/2019				27.6		
1/18/2019					30.6	8.1
1/21/2019		0.19 (J)	60			
3/25/2019			74.8			
3/26/2019	68.8			60.1		
3/27/2019					28.8	7.7
7/30/2019		0.43				
10/8/2019				49.5		
10/9/2019	56.6	0.18	80.1		30.1	6
4/7/2020				12.5	65.7	
4/8/2020	53.1	0.24 (J)	175			5.3
9/29/2020		0.18 (J)				
9/30/2020	53.5		292	98.4	20.9	
10/1/2020						5.5
3/10/2021					18.7	5.3
3/11/2021	67					
3/12/2021			241			
3/15/2021		0.22 (J)				
3/16/2021				104		

Time Series

Constituent: Calcium (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
1/20/2021			4.9	4.1	3
1/21/2021	4.4	2.8			
3/11/2021	12.4	5.4	4.7	3.1	2.6

Time Series

Constituent: Chloride (mg/L) Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
8/30/2016		15		31	60	5.5
9/1/2016	190		160			
10/24/2016		13				
10/25/2016	175 (D)					5.1
10/26/2016			110	24	67	
1/3/2017		13		29		
1/4/2017						6.9
1/5/2017					70	
1/6/2017	180		67			
4/3/2017		14				
4/4/2017			80			6.5
4/6/2017	200			27	76	
7/11/2017		13				
7/12/2017			120	31	64	6.5
7/13/2017	200					
10/2/2017		15				
10/3/2017				27	73	4.5
10/4/2017	260		130			
1/9/2018	210	13			61	
1/10/2018				59		6.9
1/11/2018			60			
7/9/2018		15.4				
7/10/2018				172	60.2	6.2
7/11/2018	177		75.9			
1/16/2019	165	16	20.2	49.7	54.1	6.6
3/25/2019	147	17.7	19.7			
3/26/2019				47.9	51.8	7
10/7/2019		18				
10/8/2019	125					
10/9/2019			32.1	239	49.7	7.2
4/6/2020	30.2	13.5				
4/7/2020			14.5	44.3	56.4	7.7
9/28/2020	113	13.7				13.8
9/30/2020				24.1	53.9	
10/1/2020			15.7			
3/10/2021			16	25.7	42.4	8.5
3/11/2021	96.7					
3/12/2021		14.1				

Time Series

Constituent: Chloride (mg/L) Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
8/31/2016	3.5	210	4.3			
9/1/2016				60	10	43
10/25/2016				36	6.5	34
10/26/2016	2.5	200	4.9			
1/4/2017	3.8	160				29
1/5/2017			4.1	37	10	
4/3/2017					7.3	
4/4/2017				47		
4/5/2017		140				36
4/6/2017	7.1		3.7			
7/10/2017		88				
7/11/2017	3.1			34	5.7	
7/12/2017			2.6			44
10/2/2017				34	4.4	
10/3/2017	46					58
10/4/2017		100	3			
1/9/2018				24	5.7	
1/10/2018			3.4			36
1/11/2018	100	78				
7/9/2018				25.9		
7/10/2018					3.1	57
7/11/2018	53.7	66.9	3.2			
1/16/2019			3.8	29.2		
1/17/2019	6.6	52			3.2	48.9
3/26/2019			3.2	21.1	3	5.1
3/27/2019	11.9	45.6				
10/8/2019	89		4	40.2	2.9	46.4
10/9/2019		44.1				
4/7/2020	103	32.5		41.6	3.4	49.3
4/8/2020			4.5			
9/28/2020			4.3			
9/29/2020	143	24.3		10.6		
9/30/2020					1.7	39.6
3/10/2021	188	48.7				
3/12/2021					2.3	
3/15/2021			7.6			
3/16/2021				15.8		44.9

Time Series

Constituent: Chloride (mg/L) Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
8/31/2016		7.8			320	17
9/1/2016	610		16	5.9		
10/25/2016			8.1	4.4		
10/26/2016	570	12			450	
10/27/2016						17
1/4/2017			13	7.7	330	
1/5/2017	710	7.4				
1/6/2017						16
4/4/2017		8.7	23	8		
4/5/2017	860					
4/6/2017					50	17
7/11/2017			31		70	
7/12/2017						18
7/13/2017	860	8.3		5.4		
10/2/2017			30			
10/3/2017		9		4.4		
10/4/2017	1000				360	18
1/9/2018				4.4		
1/10/2018		8.2	9.7			
1/11/2018	940				74	16
7/9/2018			10.8			
7/10/2018		7.3		6.3		
7/11/2018	864				164	16.2
1/16/2019	469					
1/17/2019				5.4		
1/18/2019					11	17.5
1/21/2019		6.9	5.1			
3/25/2019			9.4			
3/26/2019	439			11.9		
3/27/2019					11.5	18.9
7/30/2019		7.1				
10/8/2019				7.8		
10/9/2019	330	7	5.4		25.3	19
4/7/2020				4.7	146	
4/8/2020	277	5.2	20.2			16.9
9/29/2020		5.4				
9/30/2020	257		34.9	23.7	8.5	
10/1/2020						16.8
3/10/2021					48.2	18.3
3/11/2021	334					
3/12/2021			31.9			
3/15/2021		6.4				
3/16/2021				25.3		

Time Series

Constituent: Chloride (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
1/20/2021			6.1	6.9	6.1
1/21/2021	6.1	6.1			
3/11/2021	9.9	6	6.4	7	6.5

Time Series

Constituent: Chromium (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
9/29/2000	<0.01	<0.01	0.021	0.03	0.016	<0.01
11/21/2000	<0.01		0.017	<0.01	0.023	<0.01
1/20/2001	<0.01	<0.01	0.03	0.028	0.025	<0.01
3/14/2001	<0.01	<0.01	0.019	0.052 (o)	0.021	<0.01
7/16/2001	<0.01	<0.01	0.029	0.08 (o)	0.019	<0.01
11/1/2001	<0.01	<0.01	0.021	0.13 (o)	0.022	<0.01
4/25/2002	<0.01	<0.01	0.03	0.021	0.019	<0.01
11/20/2002		0.0051	0.038	0.053 (o)	0.024	<0.01
6/6/2003	0.037	0.014	0.028	0.064 (o)	0.021	0.005
12/12/2003	0.0044	0.011	0.027	<0.01	0.0066	<0.01
5/26/2004	<0.01	<0.01	0.021	0.012	0.013	<0.01
12/7/2004	<0.01	<0.01	0.016	0.019	0.013	<0.01
6/21/2005	<0.01	<0.01	0.015	0.02	0.0067	<0.01
12/12/2005	<0.01	<0.01	0.022	<0.01	0.0033	0.002
4/4/2006		<0.01				
6/27/2006	<0.01	<0.01	0.027	0.0015	0.0047	<0.01
8/30/2006		<0.01				
12/4/2006	0.0015	<0.01	0.025	0.0034	0.0084	<0.01
2/15/2007		<0.01				
6/23/2007	<0.01	<0.01	0.023	<0.01	0.01	<0.01
9/11/2007		<0.01				
12/11/2007	0.0016	<0.01	0.018	<0.01	0.0049	<0.01
3/11/2008		<0.01				
6/23/2008	0.0019	<0.01				
6/24/2008			0.022	<0.01	0.032 (o)	<0.01
11/3/2008		<0.01				
12/4/2008	<0.01	<0.01				
12/5/2008			0.023	0.0016	0.009	<0.01
3/25/2009		<0.01				
7/7/2009	0.0037	<0.01	0.012	<0.01	0.0044	0.0013
9/14/2009		<0.01				
12/20/2009	0.0016	<0.01				<0.01
12/21/2009			0.019	<0.01	0.0055	
3/4/2010		<0.01				
6/20/2010	<0.01	<0.01		<0.01	0.002	<0.01
6/21/2010			0.01			
9/14/2010		<0.01				
1/6/2011				0.0017		<0.01
1/7/2011	0.0033	<0.01	0.023		0.0039	
4/15/2011		<0.01				
7/7/2011	0.0044	<0.01		0.008	0.0031	<0.01
7/8/2011			0.017			
9/25/2011		0.0021				
1/17/2012	0.0038	<0.01		0.0082		<0.01
1/18/2012			0.0114		0.0023	
4/4/2012		<0.01				
7/9/2012	0.022			0.01		<0.01
7/10/2012		<0.01	0.014		0.0022	
10/9/2012		<0.01				
1/17/2013				0.01		<0.01
1/18/2013	0.034	<0.01	0.015		<0.01	
4/5/2013		<0.01				

Time Series

Constituent: Chromium (mg/L) Analysis Run 4/19/2021 1:25 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
7/16/2013				0.0061		<0.01
7/17/2013	0.032	<0.01	0.011		<0.01	
10/11/2013		<0.01				
1/13/2014	0.04			0.002		<0.01
1/14/2014		<0.01	0.019		0.0013	
4/3/2014		<0.01				
7/9/2014	0.036	<0.01	0.012	<0.01	<0.01	0.0011 (J)
10/24/2014		<0.01				
1/12/2015			0.016			
1/13/2015	0.03			<0.01		<0.01
1/14/2015		<0.01			0.0015	
5/10/2015		<0.01				
7/16/2015	0.039		0.0084	<0.01		0.0011 (J)
7/17/2015		<0.01			0.0011 (J)	
10/6/2015		<0.01				
1/17/2016						<0.01
1/18/2016	0.068	<0.01	0.014	<0.01	0.0011 (J)	
4/26/2016		<0.01				
7/27/2016	0.05			0.0006 (J)		0.0016 (J)
7/28/2016		<0.01			0.001 (J)	
7/29/2016			0.0077 (J)			
8/30/2016		<0.01		<0.01	0.0013 (J)	0.0015 (J)
9/1/2016	0.119 (o)		0.015			
10/24/2016		<0.01				
10/25/2016	0.0519					0.0018 (J)
10/26/2016			0.0106	<0.01	0.0014 (J)	
1/3/2017		<0.01		0.001 (J)		
1/4/2017						0.0021 (J)
1/5/2017					0.002 (J)	
1/6/2017	0.0536		0.0098 (J)			
4/3/2017		0.0004 (J)				
4/4/2017			0.0101			0.002 (J)
4/6/2017	0.0447 (J)			0.0013 (J)	0.0034 (J)	
7/11/2017		0.0006 (J)				
7/12/2017			0.0096 (J)	0.0011 (J)	0.0024 (J)	0.0021 (J)
7/13/2017	0.0269					
10/2/2017		<0.01				
10/3/2017				0.0012 (J)	0.0022 (J)	0.0014 (J)
10/4/2017	0.0378		0.0097 (J)			
1/9/2018	0.0283 (J)	<0.01			0.0019 (J)	
1/10/2018				0.0016 (J)		0.0017 (J)
1/11/2018			0.0109			
7/9/2018		<0.01				
7/10/2018				0.0055 (J)	0.0023 (J)	0.0021 (J)
7/11/2018	0.018 (J)		0.0055 (J)			
1/16/2019	0.018 (J)	<0.01	0.0024 (J)	<0.01	0.018 (J)	0.0021 (J)
3/25/2019	0.017 (J)	<0.01	0.002 (J)			
3/26/2019				0.072	0.017 (J)	0.0018 (J)
8/26/2019	0.024 (J)	0.001 (J)				
8/27/2019			0.0027 (J)		0.0097 (J)	0.0062 (J)
8/28/2019				0.0071 (J)		
10/7/2019		0.00052 (J)				

Time Series

Constituent: Chromium (mg/L) Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
10/8/2019	0.021 (J)					
10/9/2019			0.002 (J)	0.012 (J)	0.011 (J)	0.0019 (J)
4/6/2020	0.015 (J)	<0.01				
4/7/2020			0.0028 (J)	0.0022 (J)	0.0094 (J)	0.0015 (J)
8/17/2020		0.00082 (J)				
8/19/2020	0.015 (J)		0.0022 (J)	0.0012 (J)	0.0037 (J)	0.0028 (J)
9/28/2020	0.014 (J)	0.00071 (J)				0.0024 (J)
9/30/2020				0.0018 (J)	0.0045 (J)	
10/1/2020			0.002 (J)			
3/10/2021			0.003 (J)	0.001 (J)	0.006	0.0023 (J)
3/11/2021	0.02 (J)					
3/12/2021		0.00074 (J)				

Time Series

Constituent: Chromium (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
9/29/2000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/21/2000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1/20/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
3/14/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
7/16/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/1/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4/25/2002	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/20/2002	0.006	0.002	<0.01	0.014	0.0058	0.0041
6/6/2003	0.0082	<0.01	0.003	<0.01	0.0068	0.063 (o)
12/12/2003	0.0023	<0.01	<0.01	<0.01	0.0041	0.0059
5/26/2004	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
12/7/2004	<0.01	<0.01	<0.01	<0.01	0.0026	<0.01
6/21/2005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
12/12/2005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4/4/2006				<0.01		<0.01
6/27/2006	<0.01	<0.01	<0.01	<0.01	0.0013	<0.01
8/30/2006				<0.01		<0.01
12/4/2006	0.0021	0.0032	0.0017	0.0042	<0.01	0.0036
2/15/2007				<0.01		<0.01
6/23/2007	0.0017	<0.01	<0.01	<0.01	<0.01	0.0016
9/11/2007				<0.01		<0.01
12/11/2007	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
3/11/2008				<0.01		<0.01
6/23/2008	<0.01	0.0016	<0.01			
6/24/2008				<0.01	0.0014	<0.01
11/3/2008				<0.01		0.0025
12/4/2008	<0.01	<0.01	<0.01	<0.01		
12/5/2008					<0.01	<0.01
3/25/2009				<0.01		<0.01
7/8/2009	<0.01	<0.01	<0.01	<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	<0.01	<0.01	<0.01			
3/4/2010				<0.01		<0.01
6/20/2010	<0.01	<0.01	<0.01	<0.01	<0.01	
6/21/2010						<0.01
9/14/2010				<0.01		<0.01
1/6/2011	<0.01		<0.01			
1/7/2011		<0.01		0.0016	<0.01	0.0018
4/15/2011				0.0034		<0.01
7/7/2011	0.0023	<0.01	0.0019	<0.01	<0.01	<0.01
9/25/2011				0.0013		<0.01
1/17/2012	<0.01	<0.01	<0.01	<0.01	<0.01	
1/18/2012						<0.01
4/4/2012				<0.01		<0.01
7/9/2012	0.0017	<0.01	<0.01	<0.01	<0.01	
7/10/2012						<0.01
10/9/2012				0.0019		0.0018
1/17/2013	<0.01	<0.01	<0.01			
1/18/2013				0.0017	<0.01	<0.01
4/5/2013				0.0019		<0.01
7/16/2013	<0.01	<0.01	<0.01			

Time Series

Constituent: Chromium (mg/L) Analysis Run 4/19/2021 1:25 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
7/17/2013				0.0017	<0.01	<0.01
10/11/2013				0.0013		<0.01
1/13/2014	<0.01	<0.01	<0.01		<0.01	
1/14/2014				0.001		<0.01
4/3/2014				0.0031		<0.01
7/8/2014	<0.01	<0.01	<0.01			
7/9/2014				0.0012 (J)	<0.01	<0.01
10/24/2014				<0.01		<0.01
1/13/2015	<0.01	<0.01	<0.01		<0.01	
1/14/2015				0.0013		<0.01
5/10/2015				<0.01		
5/11/2015						<0.01
7/16/2015	<0.01	0.001 (J)	<0.01		<0.01	<0.01
7/17/2015				0.001 (J)		
10/6/2015				<0.01		<0.01
1/17/2016				0.0012 (J)	<0.01	<0.01
1/18/2016		<0.01	<0.01			
1/19/2016	<0.01					
4/26/2016				<0.01		<0.01
7/26/2016	0.0005 (J)		<0.01			
7/27/2016		0.0014 (J)		0.0008 (J)	0.0007 (J)	
7/28/2016						0.0006 (J)
8/31/2016	0.001 (J)	0.0012 (J)	0.0011 (J)			
9/1/2016				0.0015 (J)	0.0011 (J)	0.0011 (J)
10/25/2016				<0.01	<0.01	<0.01
10/26/2016	<0.01	0.0012 (J)	<0.01			
1/4/2017	<0.01	0.0012 (J)				<0.01
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)				0.001 (J)
4/6/2017	0.0007 (J)		0.0011 (J)			
7/10/2017		0.0014 (J)				
7/11/2017	0.0006 (J)			0.0008 (J)	0.0013 (J)	
7/12/2017			0.0007 (J)			0.0011 (J)
10/2/2017				0.0009 (J)	0.0013 (J)	
10/3/2017	0.0007 (J)					0.0009 (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)			0.0007 (J)
1/11/2018	0.0098 (J)	0.001 (J)				
7/9/2018				<0.01		
7/10/2018					<0.01	<0.01
7/11/2018	<0.01	<0.01	0.0019 (J)			
1/16/2019			<0.01	<0.01		
1/17/2019	<0.01	0.0028 (J)			<0.01	0.01 (J)
3/26/2019			<0.01	<0.01	<0.01	<0.01
3/27/2019	<0.01	<0.01				
8/27/2019	0.00092 (J)	0.00085 (J)	<0.01	0.001 (J)	0.0016 (J)	
8/28/2019						0.0011 (J)
10/8/2019	0.00091 (J)		<0.01	0.00053 (J)	0.0017 (J)	0.00099 (J)
10/9/2019		0.00081 (J)				

Time Series

Constituent: Chromium (mg/L) Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
4/7/2020	0.00094 (J)	0.00082 (J)		0.00074 (J)	0.0014 (J)	<0.01
4/8/2020			0.00058 (J)			
8/17/2020		0.001 (J)	0.00077 (J)			
8/18/2020	0.0015 (J)			0.00059 (J)	0.0018 (J)	0.0012 (J)
9/28/2020			0.00062 (J)			
9/29/2020	0.0011 (J)	0.00085 (J)		<0.01		
9/30/2020					0.0016 (J)	0.00098 (J)
3/10/2021	0.0013 (J)	0.00091 (J)				
3/12/2021					0.0031 (J)	
3/15/2021			<0.01			
3/16/2021				<0.01		0.0012 (J)

Time Series

Constituent: Chromium (mg/L) Analysis Run 4/19/2021 1:25 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
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	<0.01	<0.01				0.014
6/6/2003	<0.01	<0.01				<0.01
12/12/2003	0.036 (o)	<0.01				<0.01
5/26/2004	<0.01	<0.01				<0.01
12/7/2004	0.0021	<0.01				0.0039
6/21/2005	<0.01	<0.01				0.002
12/12/2005	<0.01	<0.01				<0.01
6/27/2006	<0.01	<0.01				<0.01
12/4/2006	<0.01	<0.01				0.0019
6/23/2007	<0.01	<0.01				0.0015
12/11/2007	<0.01	<0.01				<0.01
6/23/2008						0.0015
6/24/2008	<0.01	<0.01				
12/4/2008		<0.01				<0.01
12/5/2008	<0.01					
7/8/2009	<0.01	<0.01				<0.01
12/20/2009		<0.01				
12/21/2009	<0.01					<0.01
6/20/2010		<0.01				0.0015
6/21/2010	<0.01		<0.01	0.0019	<0.01	
1/6/2011		<0.01				
1/7/2011	<0.01		0.0018	0.0017	<0.01	<0.01
7/7/2011			<0.01			
7/8/2011	0.0013		0.0019	0.0023	<0.01	<0.01
1/17/2012		<0.01				
1/18/2012	<0.01		<0.01	<0.01	<0.01	<0.01
7/9/2012		<0.01				
7/10/2012	<0.01		0.0013	<0.01	<0.01	<0.01
1/17/2013		<0.01				
1/18/2013	<0.01		0.0015	<0.01	<0.01	<0.01
7/17/2013	<0.01	<0.01	<0.01	0.0019	<0.01	<0.01
1/13/2014		<0.01				
1/14/2014	<0.01		0	<0.01	<0.01	<0.01
7/9/2014	<0.01	<0.01		<0.01		0.0011 (J)
7/10/2014			<0.01		<0.01	
1/12/2015			<0.01			
1/13/2015		<0.01				
1/14/2015	<0.01			<0.01	<0.01	<0.01
7/16/2015		<0.01				
7/17/2015				<0.01		0.0013
7/18/2015	<0.01		<0.01		<0.01	
1/17/2016		<0.01	<0.01	<0.01		
1/18/2016	<0.01				<0.01	<0.01
7/27/2016		0.0008 (J)				
7/28/2016			0.0007 (J)	0.0005 (J)		0.0011 (J)

Time Series

Constituent: Chromium (mg/L) Analysis Run 4/19/2021 1:25 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
7/29/2016	0.0009 (J)				0.0007 (J)	
8/31/2016		<0.01			<0.01	0.0024 (J)
9/1/2016	0.0011 (J)		<0.01	<0.01		
10/25/2016			<0.01	<0.01		
10/26/2016	<0.01	0.001 (J)			<0.01	
10/27/2016						<0.01
1/4/2017			<0.01	<0.01	<0.01	
1/5/2017	0.0012 (J)	<0.01				
1/6/2017						<0.01
4/4/2017		0.0008 (J)	0.0011 (J)	0.0008 (J)		
4/5/2017	0.0015 (J)					
4/6/2017					0.0006 (J)	0.0019 (J)
7/11/2017			0.0009 (J)		0.0005 (J)	
7/12/2017						0.0011 (J)
7/13/2017	0.0012 (J)	0.0006 (J)		0.0006 (J)		
10/2/2017			0.0009 (J)			
10/3/2017		<0.01		0.0005 (J)		
10/4/2017	0.0055 (J)				0.0006 (J)	0.0011 (J)
1/9/2018				0.0007 (J)		
1/10/2018		<0.01	0.0008 (J)			
1/11/2018	0.0009 (J)				<0.01	0.001 (J)
7/9/2018			<0.01			
7/10/2018		<0.01		<0.01		
7/11/2018	<0.01				<0.01	<0.01
1/16/2019	<0.01					
1/17/2019				0.01		
1/18/2019					<0.01	<0.01
1/21/2019		<0.01	<0.01			
3/25/2019			<0.01			
3/26/2019	<0.01			<0.01		
3/27/2019					<0.01	<0.01
7/30/2019		0.00065 (J)				
8/27/2019		<0.01			0.00057 (J)	
8/28/2019	0.0013 (J)		0.00089 (J)	0.00087 (J)		0.00089 (J)
10/8/2019				0.00065 (J)		
10/9/2019	0.00081 (J)	0.00049 (J)	0.0011 (J)		0.00072 (J)	0.0009 (J)
4/7/2020				<0.01	0.00049 (J)	
4/8/2020	0.00073 (J)	0.00069 (J)	0.001 (J)			0.0015 (J)
8/18/2020	0.0011 (J)	<0.01	0.0011 (J)	0.0012 (J)	0.00056 (J)	
8/19/2020						0.0013 (J)
9/29/2020		<0.01				
9/30/2020	0.00096 (J)		0.0013 (J)	0.00067 (J)	0.00064 (J)	
10/1/2020						0.0012 (J)
3/10/2021					<0.01	0.0011 (J)
3/11/2021	0.0009 (J)					
3/12/2021			0.0014 (J)			
3/15/2021		0.0011 (J)				
3/16/2021				0.00075 (J)		

Time Series

Constituent: Chromium (mg/L) Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
3/11/2021	<0.01	0.00069 (J)	0.0016 (J)	0.002 (J)	0.00073 (J)

Time Series

Constituent: Cobalt (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
9/29/2000	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
11/21/2000	<0.005		<0.005	<0.005	<0.005	<0.005
1/20/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
3/14/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
7/16/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
11/1/2001	<0.005	<0.005	<0.005	0.012	<0.005	<0.005
4/25/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
8/30/2016		<0.005		<0.005	<0.005	<0.005
9/1/2016	0.0102		0.0024 (J)			
10/24/2016		<0.005				
10/25/2016	0.0037 (J)					<0.005
10/26/2016			0.0011 (J)	<0.005	<0.005	
1/3/2017		<0.005		<0.005		
1/4/2017						<0.005
1/5/2017					<0.005	
1/6/2017	0.0039 (J)		0.001 (J)			
4/3/2017		0.0005 (J)				
4/4/2017			0.001 (J)			<0.005
4/6/2017	0.006 (J)			<0.005	<0.005	
7/11/2017		0.0005 (J)				
7/12/2017			0.0008 (J)	<0.005	<0.005	<0.005
7/13/2017	0.0037 (J)					
10/2/2017		0.0004 (J)				
10/3/2017				<0.005	<0.005	<0.005
10/4/2017	0.0058 (J)		0.001 (J)			
1/9/2018	0.0053 (J)	0.0004 (J)			<0.005	
1/10/2018				0.0004 (J)		<0.005
1/11/2018			0.0008 (J)			
7/9/2018		<0.005				
7/10/2018				0.002 (J)	<0.005	<0.005
7/11/2018	<0.05 (o)		<0.005			
8/26/2019	0.0037 (J)	0.00042 (J)				
8/27/2019			0.0011 (J)		0.00038 (J)	<0.005
8/28/2019				0.0024 (J)		
10/7/2019		0.00046 (J)				
10/8/2019	0.0028 (J)					
10/9/2019			0.0015 (J)	0.0037 (J)	<0.005	<0.005
4/6/2020	0.0021 (J)	0.00036 (J)				
4/7/2020			0.0009 (J)	0.00053 (J)	<0.005	<0.005
8/17/2020		<0.005				
8/19/2020	0.0021 (J)		0.00072 (J)	<0.005	<0.005	<0.005
9/28/2020	<0.005	<0.005				<0.005
9/30/2020				0.00056 (J)	<0.005	
10/1/2020			0.0005 (J)			
3/10/2021			0.00069 (J)	0.0057	<0.005	<0.005
3/11/2021	0.0023 (J)					
3/12/2021		0.00058 (J)				

Time Series

Constituent: Cobalt (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
9/29/2000	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
11/21/2000	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1/20/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
3/14/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
7/16/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
11/1/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4/25/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
8/31/2016	<0.005	0.0018 (J)	<0.005			
9/1/2016				<0.005	<0.005	<0.005
10/25/2016				<0.005	<0.005	<0.005
10/26/2016	<0.005	0.0016 (J)	<0.005			
1/4/2017	<0.005	0.0014 (J)				<0.005
1/5/2017			<0.005	<0.005	<0.005	
4/3/2017					<0.005	
4/4/2017				<0.005		
4/5/2017		0.0013 (J)				<0.005
4/6/2017	<0.005		<0.005			
7/10/2017		0.0013 (J)				
7/11/2017	<0.005			0.0003 (J)	<0.005	
7/12/2017			<0.005			<0.005
10/2/2017				<0.005	<0.005	
10/3/2017	<0.005					<0.005
10/4/2017		0.0011 (J)	<0.005			
1/9/2018				<0.005	<0.005	
1/10/2018			<0.005			<0.005
1/11/2018	0.0003 (J)	0.0011 (J)				
7/9/2018				<0.005		
7/10/2018					<0.005	<0.005
7/11/2018	<0.005	0.00096 (J)	<0.005			
8/27/2019	<0.005	0.0009 (J)	<0.005	<0.005	<0.005	
8/28/2019						<0.005
10/8/2019	<0.005		<0.005	<0.005	<0.005	<0.005
10/9/2019		0.00094 (J)				
4/7/2020	<0.005	0.00077 (J)		<0.005	<0.005	<0.005
4/8/2020			<0.005			
8/17/2020		0.0006 (J)	<0.005			
8/18/2020	0.0004 (J)			<0.005	<0.005	<0.005
9/28/2020			<0.005			
9/29/2020	0.00055 (J)	0.00057 (J)		<0.005		
9/30/2020					<0.005	<0.005
3/10/2021	0.00082 (J)	0.00071 (J)				
3/12/2021					<0.005	
3/15/2021			<0.005			
3/16/2021				<0.005		<0.005

Time Series

Constituent: Cobalt (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
9/29/2000	<0.005					<0.005
11/21/2000	<0.005	<0.005				<0.005
1/20/2001	<0.005	<0.005				<0.005
3/14/2001	<0.005	<0.005				<0.005
7/16/2001	<0.005	<0.005				<0.005
11/1/2001	<0.005	<0.005				<0.005
4/25/2002	<0.005	<0.005				<0.005
8/31/2016		<0.005			0.001 (J)	0.0021 (J)
9/1/2016	0.0046 (J)		<0.005	<0.005		
10/25/2016			<0.005	<0.005		
10/26/2016	0.0046 (J)	0.0011 (J)			0.0009 (J)	
10/27/2016						0.0017 (J)
1/4/2017			<0.005	<0.005	0.0007 (J)	
1/5/2017	0.0062 (J)	<0.005				
1/6/2017						0.0017 (J)
4/4/2017		<0.005	<0.005	<0.005		
4/5/2017	0.007 (J)					
4/6/2017					<0.005	0.0017 (J)
7/11/2017			<0.005		<0.005	
7/12/2017						0.0016 (J)
7/13/2017	0.0077 (J)	0.0003 (J)		<0.005		
10/2/2017			<0.005			
10/3/2017		0.0003 (J)		<0.005		
10/4/2017	0.0073 (J)				0.0007 (J)	0.0015 (J)
1/9/2018				<0.005		
1/10/2018		<0.005	<0.005			
1/11/2018	0.0061 (J)				<0.005	0.0017 (J)
7/9/2018			<0.005			
7/10/2018		<0.005		<0.005		
7/11/2018	0.0064 (J)				<0.005	0.0017 (J)
7/30/2019		0.00032 (J)				
8/27/2019		<0.005			0.00077 (J)	
8/28/2019	0.0023 (J)		<0.005	<0.005		0.00099 (J)
10/8/2019				<0.005		
10/9/2019	0.0024 (J)	<0.005	<0.005		<0.005	0.00099 (J)
4/7/2020				<0.005	0.00037 (J)	
4/8/2020	0.0024 (J)	0.00036 (J)	<0.005			0.001 (J)
8/18/2020	0.0025 (J)	<0.005	<0.005	<0.005	<0.005	
8/19/2020						0.0011 (J)
9/29/2020		<0.005				
9/30/2020	0.0018 (J)		<0.005	<0.005	<0.005	
10/1/2020						0.00099 (J)
3/10/2021					<0.005	0.00096 (J)
3/11/2021	0.0019 (J)					
3/12/2021			<0.005			
3/15/2021		<0.005				
3/16/2021				<0.005		

Time Series

Constituent: Cobalt (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
3/11/2021	<0.005	<0.005	<0.005	<0.005	<0.005

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
8/30/2016		2.72		1.81	2.19	2.36
9/1/2016	11		5.27			
10/24/2016		2.96				
10/25/2016	10.5					2.02
10/26/2016			2.32	2.03	2.67	
1/3/2017		2.76		1.85		
1/4/2017						2.1
1/5/2017					3.74	
1/6/2017	6.81		5.1			
4/3/2017		1.36				
4/4/2017			5			1.39 (U)
4/6/2017	8.93			2.66	2.36	
7/11/2017		1.85				
7/12/2017			2.69	2.1	1.54	1.63
7/13/2017	8.51					
10/2/2017		1.9				
10/3/2017				2	3.63	1.84
10/4/2017	3.85		4.82			
1/9/2018	4.28	2.39			2.07	
1/10/2018				2.55		2.11
1/11/2018			4.48			
7/9/2018		1.49				
7/10/2018				3.14	1.63	1.29
7/11/2018	5.99		2.69			
8/26/2019	6.03	3.03				
8/27/2019			2.97		4.63	2.41
8/28/2019				3.74		
10/7/2019		2.83				
10/8/2019	33.8					
10/9/2019			2.17	7.23	5.45	3.13
4/6/2020	25.7	2.83				
4/7/2020			2.44	3.57	6.25	1.97
8/17/2020		2.63				
8/19/2020	5.45		3.1	2.49	4.53	1.91
9/28/2020	22.4	2.08				1.29
9/30/2020				4.45	6.39	
10/1/2020			2.6			
3/10/2021			2.11	4.67	4.61	1.7
3/11/2021	3.22					
3/12/2021		2.17				

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
8/31/2016	2.2	2.61	1.23			
9/1/2016				1.28	2.45	1.99
10/25/2016				1.54	1.04 (U)	1.98
10/26/2016	1.96	3.28	0.641 (U)			
1/4/2017	1.88	3.77				1.72
1/5/2017			0.657 (U)	0.715 (U)	1.36	
4/3/2017					0.697 (U)	
4/4/2017				0.699 (U)		
4/5/2017		3.25				1.72
4/6/2017			0.439 (U)			
4/8/2017	0.893 (U)					
7/10/2017		1.55				
7/11/2017	1.89			1.12	0.754 (U)	
7/12/2017			0.414 (U)			1.11
10/2/2017				0.855 (U)	1.52	
10/3/2017	4.73					2.13
10/4/2017		1.68	1.33			
1/9/2018				0.861 (U)	1.17	
1/10/2018			1.21			1.74
1/11/2018	7.49	2.94				
7/9/2018				0.693 (U)		
7/10/2018					1.26	1.97
7/11/2018	5.88	2.03	1.4 (U)			
8/27/2019	5.09	2.09	1.27	1.32	1.75	
8/28/2019						2.04
10/8/2019	6.39		1.62	1.41	1.52	1.89
10/9/2019		3.11				
4/7/2020	7.87	2.18		1.41	1.82	4.17
4/8/2020			1.08 (U)			
8/17/2020		2.25	1.42			
8/18/2020	6.76			0.731 (U)	1.84	4.24
9/28/2020			1.28			
9/29/2020	8.3	0.845 (U)		0.331 (U)		
9/30/2020					2.14	2.47
3/10/2021	7.55	1.77				
3/12/2021					0.607 (U)	
3/15/2021			0.769 (U)			
3/16/2021				0.0831 (U)		2.15

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
8/31/2016		1.01			5.96	3.3
9/1/2016	5.19		2.21	1.05		
10/25/2016			1.51 (U)	1.2		
10/26/2016	4.25	0.725 (U)			7.42	
10/27/2016						2.7
1/4/2017			2.56	2.11	6.07	
1/5/2017	3.55	0.735 (U)				
1/6/2017						4.45
4/4/2017		0.87 (U)	1.77	2.02		
4/5/2017	4.39					
4/6/2017					3	3.1
7/11/2017			2.76		4.2	
7/12/2017						2.73
7/13/2017	2.44	0.42 (U)		0.576 (U)		
10/2/2017			4.15			
10/3/2017		0.995 (U)		0.86		
10/4/2017	4.95				7.16	8.16
1/9/2018				1.43		
1/10/2018		0.698 (U)	1.96			
1/11/2018	3.53				3.57	2.31
7/9/2018			1.11			
7/10/2018		1.01		1.63		
7/11/2018	3.13				7.57	3.31
8/27/2019		0.787 (U)			7.04	
8/28/2019	2.01		1.13 (U)	1.4 (U)		1.91
10/8/2019				1.88		
10/9/2019	2.91	0.22 (U)	2.28		3.68	3.09
4/7/2020				1.8	7.66	
4/8/2020	2.79	1.13 (U)	4.19			1.92
8/18/2020	3.11	1.09 (U)	6.86	3.27	7.65	
8/19/2020						2.34
9/29/2020		1 (U)				
9/30/2020	3.09		5.62	3.83	2.79	
10/1/2020						3.3
3/10/2021					2.53	2.08
3/11/2021	2.77					
3/12/2021			5.17			
3/15/2021		0.804 (U)				
3/16/2021				2.88		

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
3/11/2021	1.55	1.29	0.353 (U)	0.783 (U)	1.67

Time Series

Constituent: Fluoride (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
8/30/2016		0.1 (J)		0.04 (J)	0.09 (J)	0.22 (J)
9/1/2016	<0.1		<0.1			
10/24/2016		0.18 (J)				
10/25/2016	0.07 (J)					<0.1
10/26/2016			0.05 (J)	0.05 (J)	0.24 (J)	
1/3/2017		0.18 (J)		0.08 (J)		
1/4/2017						0.18 (J)
1/5/2017					0.11 (J)	
1/6/2017	0.2 (J)		0.08 (J)			
4/3/2017		0.12 (J)				
4/4/2017			<0.1			<0.1
4/6/2017	0.05 (J)			0.006 (J)	0.3	
7/11/2017		0.39				
7/12/2017			0.38	0.05 (J)	0.15 (J)	0.04 (J)
7/13/2017	0.41					
10/2/2017		0.12 (J)				
10/3/2017				0.11 (J)	0.11 (J)	<0.1
10/4/2017	0.04 (J)		<0.1			
1/9/2018	0.46	0.21 (J)			<0.1	
1/10/2018				<0.1		<0.1
1/11/2018			<0.1			
7/9/2018		0.04 (J)				
7/10/2018				0.2 (J)	<0.1	<0.1
7/11/2018	<0.1		<0.1			
1/16/2019	0.49	<0.1	1.2	<0.1	0.053 (J)	<0.1
3/25/2019	0.21 (J)	0.082 (J)	0.064 (J)			
3/26/2019				<0.1	0.046 (J)	0.051 (J)
8/26/2019	<0.1	0.13				
8/27/2019			0.031 (J)		0.13 (J)	<0.1
8/28/2019				0.097 (J)		
10/7/2019		<0.1				
10/8/2019	<0.1					
10/9/2019			<0.1	<0.1	<0.1	<0.1
4/6/2020	0.13 (J)	0.089 (J)				
4/7/2020			<0.1	<0.1	<0.1	<0.1
8/17/2020		0.079 (J)				
8/19/2020	0.21		0.17	<0.1	<0.1	<0.1
9/28/2020	0.069 (J)	<0.1				<0.1
9/30/2020				<0.1	<0.1	
10/1/2020			<0.1			
3/10/2021			<0.1	<0.1	<0.1	<0.1
3/11/2021	<0.1					
3/12/2021		0.087 (J)				

Time Series

Constituent: Fluoride (mg/L) Analysis Run 4/19/2021 1:25 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
8/31/2016	<0.1	0.7	<0.1			
9/1/2016				0.25 (J)	<0.1	0.55
10/25/2016				0.43	0.5	0.36
10/26/2016	<0.1	0.91	0.55			
1/4/2017	<0.1	0.51				0.1 (J)
1/5/2017			0.09 (J)	0.21 (J)	0.22 (J)	
4/3/2017					<0.1	
4/4/2017				0.45		
4/5/2017		0.71				0.2 (J)
4/6/2017	<0.1		<0.1			
7/10/2017		0.88				
7/11/2017	<0.1			0.41	0.06 (J)	
7/12/2017			<0.1			0.04 (J)
10/2/2017				<0.1	<0.1	
10/3/2017	<0.1					0.86
10/4/2017		0.37	<0.1			
1/9/2018				<0.1	<0.1	
1/10/2018			<0.1			<0.1
1/11/2018	<0.1	1.4				
7/9/2018				<0.1		
7/10/2018					0.15 (J)	<0.1
7/11/2018	<0.1	0.62	<0.1			
1/16/2019			<0.1	<0.1		
1/17/2019	<0.1	1.2			<0.1	<0.1
3/26/2019			0.052 (J)	0.13 (J)	0.13 (J)	0.11 (J)
3/27/2019	<0.1	0.036 (J)				
8/27/2019	<0.1	0.3	<0.1	<0.1	<0.1	
8/28/2019						<0.1
10/8/2019	<0.1		<0.1	<0.1	<0.1	<0.1
10/9/2019		<0.1				
4/7/2020	<0.1	0.27 (J)		<0.1	<0.1	<0.1
4/8/2020			<0.1			
8/17/2020		0.19	<0.1			
8/18/2020	<0.1			<0.1	<0.1	<0.1
9/28/2020			<0.1			
9/29/2020	<0.1	0.16		<0.1		
9/30/2020					<0.1	<0.1
3/10/2021	<0.1	0.14				
3/12/2021					<0.1	
3/15/2021			<0.1			
3/16/2021				<0.1		<0.1

Time Series

Constituent: Fluoride (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
8/31/2016		0.07 (J)			0.04 (J)	0.55
9/1/2016	0.68		<0.1	<0.1		
10/25/2016			<0.1	<0.1		
10/26/2016	0.68	0.62			0.12 (J)	
10/27/2016						0.26 (J)
1/4/2017			0.04 (J)	<0.1	0.06 (J)	
1/5/2017	0.73	0.17 (J)				
1/6/2017						0.25 (J)
4/4/2017		0.08 (J)	0.02 (J)	<0.1		
4/5/2017	1.6					
4/6/2017					<0.1	0.16 (J)
7/11/2017			0.14 (J)		0.03 (J)	
7/12/2017						0.2 (J)
7/13/2017	1.7	0.06 (J)		<0.1		
10/2/2017			<0.1			
10/3/2017		0.06 (J)		<0.1		
10/4/2017	1.8				0.12 (J)	0.22 (J)
1/9/2018				<0.1		
1/10/2018		<0.1	<0.1			
1/11/2018	1.5				<0.1	0.98
7/9/2018			<0.1			
7/10/2018		<0.1		<0.1		
7/11/2018	1.8				<0.1	0.14 (J)
1/16/2019	1.4					
1/17/2019				<0.1		
1/18/2019					<0.1	0.24 (J)
1/21/2019		<0.1	<0.1			
3/25/2019			0.043 (J)			
3/26/2019	0.89			0.071 (J)		
3/27/2019					<0.1	0.13 (J)
7/30/2019		0.083 (J)				
8/27/2019		<0.1			0.1	
8/28/2019	0.61		<0.1	<0.1		0.088 (J)
10/8/2019				<0.1		
10/9/2019	<0.1	<0.1	<0.1		<0.1	0.068 (J)
4/7/2020				<0.1	<0.1	
4/8/2020	0.55	<0.1	<0.1			0.058 (J)
8/18/2020	0.51	<0.1	<0.1	<0.1	<0.1	
8/19/2020						0.092 (J)
9/29/2020		<0.1				
9/30/2020	0.15		<0.1	<0.1	<0.1	
10/1/2020						<0.1
3/10/2021					<0.1	0.066 (J)
3/11/2021	0.42					
3/12/2021			<0.1			
3/15/2021		<0.1				
3/16/2021				<0.1		

Time Series

Constituent: Fluoride (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
1/20/2021			0.11	<0.1	<0.1
1/21/2021	<0.1	<0.1			
3/11/2021	<0.1	<0.1	0.12	<0.1	<0.1

Time Series

Constituent: Lead (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
9/29/2000	<0.001	<0.001	0.0083	0.017 (o)	<0.001	<0.001
11/21/2000	<0.001		0.0052	<0.001	<0.001	<0.001
1/20/2001	<0.001	<0.001	<0.001	0.011	<0.001	<0.001
3/14/2001	<0.001	<0.001	<0.001	0.026 (o)	<0.001	<0.001
7/16/2001	<0.001	<0.001	0.011	0.043 (o)	<0.001	<0.001
11/1/2001	<0.001	<0.001	<0.001	0.075 (o)	<0.001	<0.001
4/25/2002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
11/20/2002		<0.001	0.018 (o)	0.057 (o)	0.0057 (J)	<0.001
6/6/2003	0.037 (o)	0.016 (o)	0.015 (o)	0.16 (o)	0.013	<0.001
12/12/2003	0.008	0.0095	0.0072	<0.001	<0.001	<0.001
5/26/2004	<0.001	<0.001	0.0055	0.011	<0.001	<0.001
12/7/2004	<0.001	<0.001	<0.001	0.038 (o)	<0.001	<0.001
6/21/2005	<0.001	<0.001	<0.001	0.036 (o)	<0.001	<0.001
12/12/2005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
4/4/2006		<0.001				
6/27/2006	<0.001	<0.001	0.024 (o)	<0.001	<0.001	<0.001
8/30/2006		<0.001				
12/4/2006	<0.001	<0.001	0.023 (o)	<0.001	<0.001	<0.001
2/15/2007		<0.001				
6/23/2007	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
9/11/2007		<0.001				
12/11/2007	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
3/11/2008		<0.001				
6/23/2008	<0.001	<0.001				
6/24/2008			0.02 (o)	<0.001	0.02	<0.001
11/3/2008		<0.001				
12/4/2008	<0.001	<0.001				
12/5/2008			<0.001	<0.001	<0.001	<0.001
3/25/2009		<0.001				
7/7/2009	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
9/14/2009		<0.001				
12/20/2009	<0.001	<0.001				<0.001
12/21/2009			<0.001	<0.001	<0.001	
3/4/2010		<0.001				
6/20/2010	<0.001	<0.001		<0.001	<0.001	<0.001
6/21/2010			<0.001			
9/14/2010		<0.001				
1/6/2011				<0.001		<0.001
1/7/2011	<0.001	<0.001	<0.001		<0.001	
4/15/2011		<0.001				
7/7/2011	<0.001	<0.001		<0.001	<0.001	<0.001
7/8/2011			<0.001			
9/25/2011		<0.001				
1/17/2012	<0.001	<0.001		<0.001		<0.001
1/18/2012			<0.001		<0.001	
4/4/2012		<0.001				
7/9/2012	<0.001			<0.001		<0.001
7/10/2012		<0.001	<0.001		<0.001	
10/9/2012		<0.001				
1/17/2013				<0.001		<0.001
1/18/2013	<0.001	<0.001	<0.001		<0.001	
4/5/2013		<0.001				

Time Series

Constituent: Lead (mg/L) Analysis Run 4/19/2021 1:25 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
7/16/2013				<0.001		<0.001
7/17/2013	<0.001	<0.001	<0.001		<0.001	
10/11/2013		<0.001				
1/13/2014	0.013			<0.001		<0.001
1/14/2014		<0.001	0.005		<0.001	
4/3/2014		<0.001				
7/9/2014	0.0076 (J)	<0.001	<0.001	<0.001	<0.001	<0.001
10/24/2014		<0.001				
1/12/2015			<0.001			
1/13/2015	0.0057 (J)			<0.001		<0.001
1/14/2015		<0.001			<0.001	
5/10/2015		<0.001				
7/16/2015	0.009 (J)		<0.001	<0.001		<0.001
7/17/2015		<0.001			<0.001	
10/6/2015		<0.001				
1/17/2016						<0.001
1/18/2016	0.0094 (J)	<0.001	0.0055 (J)	<0.001	<0.001	
4/26/2016		<0.001				
7/27/2016	0.0058			<0.001		<0.001
7/28/2016		<0.001			<0.001	
7/29/2016			0.003 (J)			
8/30/2016		<0.001		<0.001	<0.001	<0.001
9/1/2016	0.0663 (o)		0.0166 (o)			
10/24/2016		<0.001				
10/25/2016	0.0003 (J)					<0.001
10/26/2016			0.0057	0.0002 (J)	<0.001	
1/3/2017		0.0001 (J)		0.0001 (J)		
1/4/2017						<0.001
1/5/2017					0.0003 (J)	
1/6/2017	0.006		0.0053			
4/3/2017		0.0002 (J)				
4/4/2017			0.0092			<0.001
4/6/2017	0.0109			0.0003 (J)	0.0002 (J)	
7/11/2017		0.0001 (J)				
7/12/2017			0.006	0.0002 (J)	0.0002 (J)	<0.001
7/13/2017	0.007					
10/2/2017		0.0001 (J)				
10/3/2017				0.0002 (J)	0.0001 (J)	<0.001
10/4/2017	0.0042 (J)		0.0057			
1/9/2018	0.0098	0.0001 (J)			0.0003 (J)	
1/10/2018				0.0003 (J)		0.0001 (J)
1/11/2018			0.0085			
7/9/2018		<0.001				
7/10/2018				<0.001	<0.001	<0.001
7/11/2018	0.0028 (J)		0.0029 (J)			
1/16/2019	<0.025 (o)	<0.001	<0.001	<0.001	<0.001	<0.001
3/25/2019	0.0019 (J)	<0.001	<0.001			
3/26/2019				<0.001	<0.001	<0.001
8/26/2019	0.013 (J)	<0.001				
8/27/2019			0.001 (J)		0.0011 (J)	<0.001
8/28/2019				0.0011 (J)		
10/7/2019		<0.001				

Time Series

Constituent: Lead (mg/L) Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
10/8/2019	0.0098 (J)					
10/9/2019			0.00041 (J)	0.0025 (J)	0.00033 (J)	<0.001
4/6/2020	0.0024 (J)	0.0001 (J)				
4/7/2020			0.00073 (J)	0.0014 (J)	0.00063 (J)	0.00012 (J)
8/17/2020		<0.001				
8/19/2020	0.0044 (J)		0.00048 (J)	7.9E-05 (J)	0.00014 (J)	<0.001
9/28/2020	0.0043 (J)	<0.001				4.3E-05 (J)
9/30/2020				0.0012 (J)	8E-05 (J)	
10/1/2020			0.00026 (J)			
3/10/2021			0.0003 (J)	5.2E-05 (J)	9.6E-05 (J)	0.0001 (J)
3/11/2021	0.0079					
3/12/2021		9.3E-05 (J)				

Time Series

Constituent: Lead (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
9/29/2000	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
11/21/2000	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1/20/2001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
3/14/2001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
7/16/2001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
11/1/2001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
4/25/2002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
11/20/2002	<0.001	<0.001	<0.001	0.011 (o)	<0.001	<0.001
6/6/2003	0.0068	<0.001	0.0078	<0.001	<0.001	0.099 (o)
12/12/2003	<0.001	<0.001	0.0055	<0.001	0.0065	0.017 (o)
5/26/2004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
12/7/2004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
6/21/2005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
12/12/2005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
4/4/2006				<0.001		<0.001
6/27/2006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/30/2006				<0.001		<0.001
12/4/2006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
2/15/2007				<0.001		<0.001
6/23/2007	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
9/11/2007				<0.001		<0.001
12/11/2007	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
3/11/2008				<0.001		<0.001
6/23/2008	<0.001	<0.001	<0.001			
6/24/2008				<0.001	<0.001	<0.001
11/3/2008				<0.001		<0.001
12/4/2008	<0.001	<0.001	<0.001	<0.001		
12/5/2008					<0.001	<0.001
3/25/2009				<0.001		<0.001
7/8/2009	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
9/14/2009				<0.001		<0.001
12/20/2009				<0.001	<0.001	<0.001
12/21/2009	<0.001	<0.001	<0.001			
3/4/2010				<0.001		<0.001
6/20/2010	<0.001	<0.001	<0.001	<0.001	<0.001	
6/21/2010						<0.001
9/14/2010				<0.001		<0.001
1/6/2011	<0.001		<0.001			
1/7/2011		<0.001		<0.001	<0.001	<0.001
4/15/2011				<0.001		<0.001
7/7/2011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
9/25/2011				<0.001		<0.001
1/17/2012	<0.001	<0.001	<0.001	<0.001	<0.001	
1/18/2012						<0.001
4/4/2012				<0.001		<0.001
7/9/2012	<0.001	<0.001	<0.001	<0.001	<0.001	
7/10/2012						<0.001
10/9/2012				<0.001		<0.001
1/17/2013	<0.001	<0.001	<0.001			
1/18/2013				<0.001	<0.001	<0.001
4/5/2013				<0.001		<0.001
7/16/2013	<0.001	<0.001	<0.001			

Time Series

Constituent: Lead (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
7/17/2013				<0.001	<0.001	<0.001
10/11/2013				<0.001		<0.001
1/13/2014	<0.001	0.004	<0.001		<0.001	
1/14/2014				<0.001		<0.001
4/3/2014				<0.001		<0.001
7/8/2014	<0.001	<0.001	<0.001			
7/9/2014				<0.001	<0.001	<0.001
10/24/2014				<0.001		<0.001
1/13/2015	<0.001	<0.001	<0.001		<0.001	
1/14/2015				<0.001		<0.001
5/10/2015				<0.001		
5/11/2015						<0.001
7/16/2015	<0.001	0.0044 (J)	<0.001		<0.001	<0.001
7/17/2015				<0.001		
1/17/2016				<0.001	<0.001	<0.001
1/18/2016		0.0034 (J)	<0.001			
1/19/2016	<0.001					
4/26/2016				<0.001		<0.001
7/26/2016	0.0001 (J)		<0.001			
7/27/2016		0.0001 (J)		<0.001	<0.001	
7/28/2016						<0.001
8/31/2016	0.0002 (J)	0.0001 (J)	<0.001			
9/1/2016				<0.001	<0.001	<0.001
10/25/2016				<0.001	<0.001	0.0002 (J)
10/26/2016	0.0001 (J)	0.0001 (J)	<0.001			
1/4/2017	0.0002 (J)	<0.001				0.0001 (J)
1/5/2017			0.0002 (J)	<0.001	<0.001	
4/3/2017					0.0003 (J)	
4/4/2017				0.0001 (J)		
4/5/2017		0.0003 (J)				0.0002 (J)
4/6/2017	0.0003 (J)		0.0005 (J)			
7/10/2017		0.0003 (J)				
7/11/2017	0.0002 (J)			8E-05 (J)	0.0001 (J)	
7/12/2017			0.0005 (J)			0.0001 (J)
10/2/2017				0.0001 (J)	0.0002 (J)	
10/3/2017	0.0003 (J)					0.0001 (J)
10/4/2017		0.0001 (J)	0.0007 (J)			
1/9/2018				<0.001	0.0002 (J)	
1/10/2018			0.0009 (J)			0.0002 (J)
1/11/2018	0.0003 (J)	0.0002 (J)				
7/9/2018				<0.001		
7/10/2018					<0.001	<0.001
7/11/2018	<0.001	<0.001	0.0015 (J)			
1/16/2019			0.00061 (J)	<0.001		
1/17/2019	0.00028 (J)	<0.001			<0.001	<0.001
3/26/2019			<0.001	<0.001	<0.001	<0.001
3/27/2019	0.00029 (J)	<0.001				
8/27/2019	0.00021 (J)	<0.001	0.0001 (J)	0.00051 (J)	0.00033 (J)	
8/28/2019						0.0001 (J)
10/8/2019	0.00028 (J)		0.00013 (J)	<0.001	0.00012 (J)	0.0001 (J)
10/9/2019		6.6E-05 (J)				
4/7/2020	0.00036 (J)	8.1E-05 (J)		<0.001	8.6E-05 (J)	0.00023 (J)

Time Series

Constituent: Lead (mg/L) Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
4/8/2020			0.00017 (J)			
8/17/2020		4.9E-05 (J)	7.6E-05 (J)			
8/18/2020	0.00035 (J)			<0.001	9E-05 (J)	0.00017 (J)
9/28/2020			6.4E-05 (J)			
9/29/2020	0.00032 (J)	3.7E-05 (J)		<0.001		
9/30/2020					4.7E-05 (J)	9.1E-05 (J)
3/10/2021	0.00042 (J)	6.8E-05 (J)				
3/12/2021					5.3E-05 (J)	
3/15/2021			0.00013 (J)			
3/16/2021				<0.001		7.3E-05 (J)

Time Series

Constituent: Lead (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
9/29/2000	<0.001					<0.001
11/21/2000	<0.001	0.0069				<0.001
1/20/2001	<0.001	<0.001				<0.001
3/14/2001	<0.001	<0.001				<0.001
7/16/2001	<0.001	<0.001				<0.001
11/1/2001	<0.001	<0.001				<0.001
4/25/2002	<0.001	<0.001				<0.001
11/20/2002	<0.001	<0.001				0.0086 (o)
6/6/2003	<0.001	<0.001				<0.001
12/12/2003	<0.001	<0.001				<0.001
5/26/2004	<0.001	<0.001				<0.001
12/7/2004	<0.001	<0.001				0.0051
6/21/2005	<0.001	<0.001				<0.001
12/12/2005	<0.001	<0.001				<0.001
6/27/2006	<0.001	<0.001				<0.001
12/4/2006	<0.001	<0.001				<0.001
6/23/2007	<0.001	<0.001				<0.001
12/11/2007	<0.001	<0.001				<0.001
6/23/2008						<0.001
6/24/2008	<0.001	<0.001				
12/4/2008		<0.001				<0.001
12/5/2008	<0.001					
7/8/2009	<0.001	<0.001				<0.001
12/20/2009		<0.001				
12/21/2009	<0.001					<0.001
6/20/2010		<0.001				<0.001
6/21/2010	<0.001		<0.001	<0.001	<0.001	
1/6/2011		<0.001				
1/7/2011	<0.001		<0.001	<0.001	<0.001	<0.001
7/7/2011			<0.001			
7/8/2011	<0.001		<0.001	<0.001	<0.001	<0.001
1/17/2012		<0.001				
1/18/2012	<0.001		<0.001	<0.001	<0.001	<0.001
7/9/2012		<0.001				
7/10/2012	<0.001		<0.001	<0.001	<0.001	<0.001
1/17/2013		<0.001				
1/18/2013	<0.001		<0.001	<0.001	<0.001	<0.001
7/17/2013	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1/13/2014		<0.001				
1/14/2014	<0.001		<0.001	<0.001	<0.001	<0.001
7/9/2014	<0.001	<0.001		<0.001		<0.001
7/10/2014			<0.001		<0.001	
1/12/2015			<0.001			
1/13/2015		<0.001				
1/14/2015	<0.001			<0.001	<0.001	<0.001
7/16/2015		<0.001				
7/17/2015				<0.001		<0.001
7/18/2015	<0.001		<0.001		<0.001	
1/17/2016		<0.001	<0.001	<0.001		
1/18/2016	<0.001				<0.001	<0.001
7/27/2016		<0.001				
7/28/2016			<0.001	<0.001		<0.001

Time Series

Constituent: Lead (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
7/29/2016	<0.001				0.0004 (J)	
8/31/2016		<0.001			0.0003 (J)	0.0007 (J)
9/1/2016	<0.001		<0.001	<0.001		
10/25/2016			0.0001 (J)	<0.001		
10/26/2016	<0.001	<0.001			0.0003 (J)	
10/27/2016						<0.001
1/4/2017			<0.001	<0.001	0.0003 (J)	
1/5/2017	<0.001	<0.001				
1/6/2017						<0.001
4/4/2017		0.0002 (J)	7E-05 (J)	9E-05 (J)		
4/5/2017	0.0009 (J)					
4/6/2017					0.0003 (J)	0.0001 (J)
7/11/2017			<0.001		0.0002 (J)	
7/12/2017						<0.001
7/13/2017	<0.001	0.0003 (J)		7E-05 (J)		
10/2/2017			<0.001			
10/3/2017		<0.001		0.0001 (J)		
10/4/2017	0.0001 (J)				0.0008 (J)	9E-05 (J)
1/9/2018				9E-05 (J)		
1/10/2018		8E-05 (J)	0.0002 (J)			
1/11/2018	0.0001 (J)				0.0009 (J)	0.0002 (J)
7/9/2018			<0.001			
7/10/2018		<0.001		<0.001		
7/11/2018	<0.001				0.001 (J)	<0.001
1/16/2019	<0.001					
1/17/2019				<0.001		
1/18/2019					0.0012 (J)	<0.001
1/21/2019		<0.001	<0.001			
3/25/2019			<0.001			
3/26/2019	<0.001			<0.001		
3/27/2019					0.00047 (J)	<0.001
7/30/2019		0.0002 (J)				
8/27/2019		<0.001			0.003 (J)	
8/28/2019	<0.001		6.5E-05 (J)	0.00018 (J)		6.1E-05 (J)
10/8/2019				0.00016 (J)		
10/9/2019	0.00015 (J)	6.4E-05 (J)	0.00018 (J)		0.00032 (J)	<0.001
4/7/2020				<0.001	0.00067 (J)	
4/8/2020	8.4E-05 (J)	<0.001	<0.001			0.00021 (J)
8/18/2020	0.00014 (J)	<0.001	<0.001	0.00027 (J)	0.00072 (J)	
8/19/2020						9.6E-05 (J)
9/29/2020		<0.001				
9/30/2020	6E-05 (J)		<0.001	5.4E-05 (J)	0.00023 (J)	
10/1/2020						3.8E-05 (J)
3/10/2021					0.00016 (J)	0.00012 (J)
3/11/2021	0.00019 (J)					
3/12/2021			<0.001			
3/15/2021		4.1E-05 (J)				
3/16/2021				<0.001		

Time Series

Constituent: Lead (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
3/11/2021	5.7E-05 (J)	9.4E-05 (J)	9.5E-05 (J)	0.00015 (J)	0.00022 (J)

Time Series

Constituent: Lithium (mg/L) Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
8/30/2016		<0.03		0.0042 (J)	<0.03	<0.03
9/1/2016	<0.03		0.0092 (J)			
10/24/2016		<0.03				
10/25/2016	<0.03					<0.03
10/26/2016			0.0046 (J)	<0.03	<0.03	
1/3/2017		<0.03		0.0024 (J)		
1/4/2017						<0.03
1/5/2017					<0.03	
1/6/2017	<0.03		0.0042 (J)			
4/3/2017		<0.03				
4/4/2017			0.0056 (J)			<0.03
4/6/2017	<0.03			0.0051 (J)	<0.03	
7/11/2017		<0.03				
7/12/2017			0.0035 (J)	0.0031 (J)	<0.03	<0.03
7/13/2017	<0.03					
10/2/2017		<0.03				
10/3/2017				0.0027 (J)	<0.03	<0.03
10/4/2017	<0.03		0.0041 (J)			
1/9/2018	<0.03	<0.03			<0.03	
1/10/2018				0.0041 (J)		<0.03
1/11/2018			0.0052 (J)			
7/9/2018		0.001 (J)				
7/10/2018				0.005 (J)	<0.03	<0.03
7/11/2018	<0.03		0.0039 (J)			
8/26/2019	<0.03	0.0012 (J)				
8/27/2019			0.013 (J)		<0.03	<0.03
8/28/2019				<0.03		
10/7/2019		0.0012 (J)				
10/8/2019	<0.03					
10/9/2019			0.013 (J)	<0.03	<0.03	<0.03
4/6/2020	<0.03	0.00086 (J)				
4/7/2020			0.014 (J)	<0.03	<0.03	<0.03
8/17/2020		0.001 (J)				
8/19/2020	<0.03		0.014 (J)	<0.03	<0.03	<0.03
9/28/2020	<0.03	0.001 (J)				<0.03
9/30/2020				<0.03	<0.03	
10/1/2020			0.013 (J)			
3/10/2021			0.012 (J)	<0.03	<0.03	<0.03
3/11/2021	<0.03					
3/12/2021		0.0013 (J)				

Time Series

Constituent: Lithium (mg/L) Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
8/31/2016	<0.03	<0.03	<0.03			
9/1/2016				<0.03	<0.03	<0.03
10/25/2016				<0.03	<0.03	<0.03
10/26/2016	<0.03	<0.03	<0.03			
1/4/2017	<0.03	<0.03				<0.03
1/5/2017			<0.03	<0.03	<0.03	
4/3/2017					<0.03	
4/4/2017				<0.03		
4/5/2017		0.0012 (J)				<0.03
4/6/2017	<0.03		<0.03			
7/10/2017		<0.03				
7/11/2017	<0.03			<0.03	<0.03	
7/12/2017			<0.03			<0.03
10/2/2017				<0.03	<0.03	
10/3/2017	<0.03					<0.03
10/4/2017		<0.03	<0.03			
1/9/2018				<0.03	<0.03	
1/10/2018			<0.03			<0.03
1/11/2018	<0.03	<0.03				
7/9/2018				<0.03		
7/10/2018					<0.03	<0.03
7/11/2018	<0.03	0.00098 (J)	<0.03			
8/27/2019	<0.03	0.00094 (J)	<0.03	<0.03	<0.03	
8/28/2019						<0.03
10/8/2019	<0.03		<0.03	<0.03	<0.03	<0.03
10/9/2019		0.0011 (J)				
4/7/2020	<0.03	0.00094 (J)		<0.03	<0.03	<0.03
4/8/2020			<0.03			
8/17/2020		0.00091 (J)	<0.03			
8/18/2020	<0.03			<0.03	<0.03	<0.03
9/28/2020			<0.03			
9/29/2020	<0.03	0.00086 (J)		<0.03		
9/30/2020					<0.03	<0.03
3/10/2021	<0.03	0.00095 (J)				
3/12/2021					<0.03	
3/15/2021			<0.03			
3/16/2021				<0.03		<0.03

Time Series

Constituent: Lithium (mg/L) Analysis Run 4/19/2021 1:25 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Date	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
8/31/2016		<0.03			<0.03	<0.05 (o)
9/1/2016	0.0066 (J)		<0.03	<0.03		
10/25/2016			<0.03	<0.03		
10/26/2016	0.0065 (J)	<0.03			<0.03	
10/27/2016						0.0023 (J)
1/4/2017			<0.03	<0.03	<0.03	
1/5/2017	0.0062 (J)	<0.03				
1/6/2017						0.0021 (J)
4/4/2017		<0.03	<0.03	<0.03		
4/5/2017	0.007 (J)					
4/6/2017					<0.03	0.0021 (J)
7/11/2017			<0.03		<0.03	
7/12/2017						0.0017 (J)
7/13/2017	0.0069 (J)	<0.03		<0.03		
10/2/2017			<0.03			
10/3/2017		<0.03		<0.03		
10/4/2017	0.0082 (J)				<0.03	0.0021 (J)
1/9/2018				<0.03		
1/10/2018		<0.03	<0.03			
1/11/2018	0.0061 (J)				<0.03	0.0022 (J)
7/9/2018			<0.03			
7/10/2018		<0.03		<0.03		
7/11/2018	0.0075 (J)				<0.03	0.0019 (J)
7/30/2019		<0.03				
8/27/2019		<0.03			<0.03	
8/28/2019	0.0041 (J)		<0.03	<0.03		0.0018 (J)
10/8/2019				<0.03		
10/9/2019	0.0046 (J)	<0.03	<0.03		<0.03	0.0018 (J)
4/7/2020				<0.03	<0.03	
4/8/2020	0.0051 (J)	<0.03	<0.03			0.0018 (J)
8/18/2020	0.0065 (J)	<0.03	<0.03	<0.03	<0.03	
8/19/2020						0.0019 (J)
9/29/2020		<0.03				
9/30/2020	0.0041 (J)		<0.03	<0.03	<0.03	
10/1/2020						0.0019 (J)
3/10/2021					<0.03	0.0018 (J)
3/11/2021	0.0036 (J)					
3/12/2021			<0.03			
3/15/2021		<0.03				
3/16/2021				<0.03		

Time Series

Constituent: Lithium (mg/L) Analysis Run 4/19/2021 1:25 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
3/11/2021	<0.03	<0.03	<0.03	<0.03	<0.03

Time Series

Constituent: Mercury (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
8/30/2016		<0.0002		<0.0002	<0.0002	4E-05 (J)
9/1/2016	0.00017 (J)		<0.0002			
10/24/2016		<0.0002				
10/25/2016	<0.0002					<0.0002
10/26/2016			<0.0002	<0.0002	<0.0002	
1/3/2017		<0.0002		<0.0002		
1/4/2017						<0.0002
1/5/2017					<0.0002	
1/6/2017	<0.0002		<0.0002			
4/3/2017		<0.0002				
4/4/2017			<0.0002			<0.0002
4/6/2017	4E-05 (J)			<0.0002	<0.0002	
7/11/2017		<0.0002				
7/12/2017			<0.0002	<0.0002	<0.0002	<0.0002
7/13/2017	<0.0002					
10/2/2017		<0.0002				
10/3/2017				<0.0002	<0.0002	<0.0002
10/4/2017	0.0001 (J)		<0.0002			
1/9/2018	<0.0002	<0.0002			<0.0002	
1/10/2018				<0.0002		<0.0002
1/11/2018			<0.0002			
7/9/2018		<0.0002				
7/10/2018				<0.0002	<0.0002	<0.0002
7/11/2018	<0.0002		<0.0002			
1/16/2019	<0.0002	<0.0002	4.9E-05 (J)	<0.0002	4.3E-05 (J)	<0.0002
8/26/2019	<0.0002	<0.0002				
8/27/2019			<0.0002		<0.0002	<0.0002
8/28/2019				<0.0002		
10/9/2019				<0.0002		
8/17/2020		<0.0002				
8/19/2020	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002

Time Series

Constituent: Mercury (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
8/31/2016	<0.0002	<0.0002	<0.0002			
9/1/2016				<0.0002	<0.0002	<0.0002
10/25/2016				<0.0002	<0.0002	<0.0002
10/26/2016	<0.0002	<0.0002	<0.0002			
1/4/2017	<0.0002	<0.0002				<0.0002
1/5/2017			<0.0002	<0.0002	<0.0002	
4/3/2017					<0.0002	
4/4/2017				<0.0002		
4/5/2017		<0.0002				<0.0002
4/6/2017	<0.0002		0.00013 (J)			
7/10/2017		<0.0002				
7/11/2017	<0.0002			<0.0002	<0.0002	
7/12/2017			<0.0002			<0.0002
10/2/2017				<0.0002	<0.0002	
10/3/2017	<0.0002					<0.0002
10/4/2017		<0.0002	<0.0002			
1/9/2018				<0.0002	<0.0002	
1/10/2018			<0.0002			<0.0002
1/11/2018	<0.0002	<0.0002				
7/9/2018				<0.0002		
7/10/2018					<0.0002	<0.0002
7/11/2018	<0.0002	<0.0002	<0.0002			
1/16/2019			<0.0002	<0.0002		
1/17/2019	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
8/27/2019	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
8/28/2019						<0.0002
8/17/2020		<0.0002	<0.0002			
8/18/2020	<0.0002			<0.0002	<0.0002	<0.0002

Time Series

Constituent: Mercury (mg/L) Analysis Run 4/19/2021 1:25 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
8/31/2016		<0.0002			<0.0002	<0.0002
9/1/2016	<0.0002		<0.0002	<0.0002		
10/25/2016			<0.0002	<0.0002		
10/26/2016	<0.0002	<0.0002			<0.0002	
10/27/2016						<0.0002
1/4/2017			<0.0002	<0.0002	<0.0002	
1/5/2017	<0.0002	<0.0002				
1/6/2017						<0.0002
4/4/2017		<0.0002	<0.0002	<0.0002		
4/5/2017	<0.0002					
4/6/2017					<0.0002	<0.0002
7/11/2017			<0.0002		<0.0002	
7/12/2017						<0.0002
7/13/2017	<0.0002	<0.0002		<0.0002		
10/2/2017			<0.0002			
10/3/2017		<0.0002		<0.0002		
10/4/2017	<0.0002				<0.0002	5E-05 (J)
1/9/2018				<0.0002		
1/10/2018		<0.0002	<0.0002			
1/11/2018	<0.0002				<0.0002	<0.0002
7/9/2018			<0.0002			
7/10/2018		<0.0002		<0.0002		
7/11/2018	<0.0002				<0.0002	<0.0002
1/16/2019	<0.0002					
1/17/2019				<0.0002		
1/18/2019					<0.0002	<0.0002
1/21/2019		<0.0002	<0.0002			
7/30/2019		<0.0002				
8/27/2019		<0.0002			<0.0002	
8/28/2019	<0.0002		<0.0002	<0.0002		<0.0002
8/18/2020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
8/19/2020						<0.0002

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 4/19/2021 1:38 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
8/30/2016		<0.01		<0.01	<0.01	0.175
9/1/2016	0.0098 (J)		0.035			
10/24/2016		<0.01				
10/25/2016	<0.01					0.242
10/26/2016			0.0267	<0.01	<0.01	
1/3/2017		<0.01		<0.01		
1/4/2017						0.167
1/5/2017					<0.01	
1/6/2017	<0.01		0.0278			
4/3/2017		<0.01				
4/4/2017			0.0265			0.172
4/6/2017	<0.01			<0.01	<0.01	
7/11/2017		<0.01				
7/12/2017			0.0209	<0.01	<0.01	0.182
7/13/2017	0.0013 (J)					
10/2/2017		<0.01				
10/3/2017				<0.01	<0.01	0.162
10/4/2017	0.0013 (J)		0.0181			
1/9/2018	<0.01	<0.01			<0.01	
1/10/2018				<0.01		0.117
1/11/2018			0.0237			
7/9/2018		<0.01				
7/10/2018				<0.01	<0.01	0.11
7/11/2018	<0.01		0.024			
8/26/2019	<0.01	<0.01				
8/27/2019			0.1		0.0026 (J)	0.06
8/28/2019				0.0012 (J)		
10/7/2019		<0.01				
10/8/2019	<0.01					
10/9/2019			0.1	<0.01	<0.01	0.06
4/6/2020	<0.01	<0.01				
4/7/2020			0.13	<0.01	<0.01	0.014
8/17/2020		<0.01				
8/19/2020	<0.01		0.16	<0.01	0.001 (J)	0.061
9/28/2020	<0.01	<0.01				0.059
9/30/2020				<0.01	0.00097 (J)	
10/1/2020			0.15			
3/10/2021			0.12	<0.01	0.0013 (J)	0.057
3/11/2021	<0.01					
3/12/2021		<0.01				

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
8/31/2016	<0.01	<0.01	<0.01			
9/1/2016				0.0027 (J)	0.132	0.08
10/25/2016				0.0028 (J)	0.117	0.08
10/26/2016	<0.01	<0.01	<0.01			
1/4/2017	<0.01	<0.01				0.0786
1/5/2017			<0.01	0.0022 (J)	0.109	
4/3/2017					0.0994	
4/4/2017				0.0022 (J)		
4/5/2017		<0.01				0.113
4/6/2017	<0.01		<0.01			
7/10/2017		<0.01				
7/11/2017	<0.01			0.0024 (J)	0.0938	
7/12/2017			<0.01			0.178
10/2/2017				0.0025 (J)	0.103	
10/3/2017	<0.01					0.201
10/4/2017		<0.01	<0.01			
1/9/2018				0.0038 (J)	0.106	
1/10/2018			<0.01			0.161
1/11/2018	0.0018 (J)	<0.01				
7/9/2018				0.01		
7/10/2018					0.088	0.14
7/11/2018	<0.01	<0.01	<0.01			
8/27/2019	<0.01	<0.01	<0.01	0.028	0.095	
8/28/2019						0.22
10/8/2019	<0.01		<0.01	0.034	0.091	0.2
10/9/2019		<0.01				
4/7/2020	<0.01	<0.01		0.014	0.07	0.25
4/8/2020			0.0056 (J)			
8/17/2020		<0.01	<0.01			
8/18/2020	0.00077 (J)			0.017	0.12	0.15
9/28/2020			<0.01			
9/29/2020	<0.01	<0.01		0.0089 (J)		
9/30/2020					0.11	0.15
3/10/2021	<0.01	<0.01				
3/12/2021					0.098	
3/15/2021			<0.01			
3/16/2021				0.0054 (J)		0.31

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
8/31/2016		<0.01			<0.01	<0.01
9/1/2016	<0.01		0.296	0.0686		
10/25/2016			0.395	0.0018 (J)		
10/26/2016	<0.01	<0.01			<0.01	
10/27/2016						<0.01
1/4/2017			0.229	0.0222	<0.01	
1/5/2017	<0.01	<0.01				
1/6/2017						<0.01
4/4/2017		<0.01	0.147	0.0476		
4/5/2017	<0.01					
4/6/2017					<0.01	<0.01
7/11/2017			0.136		<0.01	
7/12/2017						<0.01
7/13/2017	<0.01	<0.01		0.0105		
10/2/2017			0.13			
10/3/2017		<0.01		0.0031 (J)		
10/4/2017	<0.01				<0.01	<0.01
1/9/2018				0.09		
1/10/2018		<0.01	0.229			
1/11/2018	<0.01				<0.01	<0.01
7/9/2018			0.13			
7/10/2018		<0.01		0.047		
7/11/2018	<0.01				<0.01	<0.01
7/30/2019		<0.01				
8/27/2019		<0.01			<0.01	
8/28/2019	0.004 (J)		0.11	0.07		<0.01
10/8/2019				0.078		
10/9/2019	0.0036 (J)	<0.01	0.071		<0.01	<0.01
4/7/2020				0.012	<0.01	
4/8/2020	0.0024 (J)	<0.01	0.06			<0.01
8/18/2020	0.00092 (J)	<0.01	0.097	0.069	<0.01	
8/19/2020						<0.01
9/29/2020		<0.01				
9/30/2020	0.0041 (J)		0.33	0.028	<0.01	
10/1/2020						<0.01
3/10/2021					<0.01	<0.01
3/11/2021	0.0038 (J)					
3/12/2021			0.53			
3/15/2021		<0.01				
3/16/2021				0.024		

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 4/19/2021 1:38 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
1/20/2021			0.0011 (J)	<0.01	<0.01
1/21/2021	<0.01	0.0014 (J)			
3/11/2021	<0.01	0.0035 (J)	0.0015 (J)	<0.01	<0.01

Time Series

Constituent: pH (SU) Analysis Run 4/19/2021 1:38 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
7/16/2013			6.22	5.95	5.25	5.38
10/11/2014		4.42				
10/24/2016		4.36				
10/25/2016	6.17					5.51
10/26/2016			6.06	5.27	5.21	
1/3/2017		4.28		5.09		
1/4/2017						5.46
1/5/2017					5.2	
1/6/2017	6.16		6.02			
4/3/2017		4.29				
4/4/2017			6.08			5.43
4/6/2017	6.26			5.22	5.17	
7/11/2017		4.35				
7/12/2017			5.93	5.29	5.24	5.46
7/13/2017	5.99					
10/2/2017		4.32				
10/3/2017				5.08	5.36	5.65
10/4/2017	6.16		5.77			
1/9/2018	6.43	4.44			5.4	
1/10/2018				5.83		5.67
1/11/2018			5.98			
7/9/2018		4.4				
7/10/2018				6.42	5.31	5.71
7/11/2018	6.1		6.01			
1/16/2019	6.05	6.16 (o)	5.83	6.66	5.99	5.59
3/25/2019	6.06	4.4	5.74			
3/26/2019				5.1	5.94	5.77
8/26/2019	5.91	4.26				
8/27/2019			5.7		5.67	5.84
8/28/2019				5.95		
10/7/2019		4.24				
10/8/2019	5.74					
10/9/2019			5.79	6.11	5.66	5.82
4/6/2020	6.02	4.52				
4/7/2020			5.74	5.45	5.86	5.3
8/17/2020		4.23				
8/19/2020	5.81 (D)		5.7	5.14 (D)	5.21	5.73
9/28/2020	5.86	4.41				5.79
9/30/2020				4.99	5.39	
10/1/2020			5.75			
3/10/2021			5.23	4.73	5.69	5.42
3/11/2021	5.85					
3/12/2021		4.54				

Time Series

Constituent: pH (SU) Analysis Run 4/19/2021 1:38 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
7/16/2013	5.2	4.17	4.95	4.62	5.96	4.92
10/11/2014				4.58		5.17
10/25/2016				4.79	6.46	5.58
10/26/2016	5.08	4.04	4.95			
1/4/2017	5.06	4.01				5.51
1/5/2017			4.97	4.73	6.25	
4/3/2017					6.25	
4/4/2017				4.68		
4/5/2017		4	4.81			5.51
4/6/2017	4.97					
7/10/2017		3.89				
7/11/2017	5.26			4.72	6.5	
7/12/2017			4.83			5.84
10/2/2017				5.13	6.83	
10/3/2017	5.07					5.55
10/4/2017		4.06	4.71			
1/9/2018				5.59	6.57	
1/10/2018			5.17			5.99
1/11/2018	5.18	3.96				
7/9/2018				5.11		
7/10/2018					6.42	5.5
7/11/2018	4.82	3.95	4.49			
1/16/2019			6.45 (o)	6.82		
1/17/2019	4.91	3.89			8.44 (o)	7.13
3/26/2019			4.96	5.74	6.65	5.57
3/27/2019	5.18	4.11				
8/27/2019	5.17	4.02	4.9	5.58	6.57	
8/28/2019						5.57
10/8/2019	4.93		4.81	5.68	6.65	5.54
10/9/2019		4.25				
4/7/2020	5.05	4.1		6.2	6.83	5.94
4/8/2020			4.81			
8/17/2020		3.94	4.65			
8/18/2020	4.41			5.56	6.39	5.52
9/28/2020			4.76			
9/29/2020	4.77	3.95		5.69		
9/30/2020					6.71	5.47
3/10/2021	4.97	4.08				
3/12/2021					6.21	
3/15/2021			4.74			
3/16/2021				5.53		5.67

Time Series

Constituent: pH (SU) Analysis Run 4/19/2021 1:39 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
7/16/2013	4.55	4.52	6.1	5.71	4.91	5.05
10/25/2016			6.06	5.41		
10/26/2016	4.45	4.48			4.6	
10/27/2016						4.65
1/4/2017			6.05	5.6	4.63	
1/5/2017	4.45	4.85				
1/6/2017						4.56
4/4/2017		4.58	6.03	5.94		
4/5/2017	4.33					
4/6/2017					4.79	4.5
7/11/2017			5.96		4.73	
7/12/2017						4.56
7/13/2017	4.11	4.74		5.6		
10/2/2017			5.88			
10/3/2017		4.57		5.18		
10/4/2017	4.09				4.74	4.72
1/9/2018				6.14		
1/10/2018		5.31	6.21			
1/11/2018	4.4				5.22	4.34
7/9/2018			6.24			
7/10/2018		4.58		5.7		
7/11/2018	4.07				4.68	4.68
1/16/2019	4.05					
1/17/2019				7.39		
1/18/2019					6.98 (o)	6.87 (o)
1/21/2019		5.05	7.73 (o)			
3/25/2019			6.28			
3/26/2019	4.62			6.08		
3/27/2019					4.77	4.38
7/30/2019		4.74				
8/27/2019		4.77			4.89	
8/28/2019	4.62		6.34	6.05		4.68
10/8/2019				6.09		
10/9/2019	4.66	4.79	6.5		4.68	4.62
4/7/2020				6	4.8	
4/8/2020	4.71	4.66	6.31			4.73
8/18/2020	4.31	4.6	5.89	5.82	4.52	
8/19/2020						4.58
9/29/2020		4.6				
9/30/2020	4.08		6.04	5.82	4.63	
10/1/2020						4.42
3/10/2021					4.82	4.55
3/11/2021	5.2					
3/12/2021			5.86			
3/15/2021		4.56				
3/16/2021				5.74		

Time Series

Constituent: pH (SU) Analysis Run 4/19/2021 1:39 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
1/20/2021			6.25	5.66	5.68
1/21/2021	5.75	6.13			
3/11/2021	5.82	6.47	6.31	6	5.12

Time Series

Constituent: Selenium (mg/L) Analysis Run 4/19/2021 1:39 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
9/29/2000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/21/2000	<0.01		<0.01	<0.01	<0.01	<0.01
1/20/2001	<0.01	<0.01	0.014 (o)	<0.01	<0.01	0.017
3/14/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
7/16/2001	<0.01	<0.01	0.015 (o)	<0.01	<0.01	<0.01
11/1/2001	<0.01	<0.01	0.012 (o)	<0.01	<0.01	<0.01
4/25/2002	<0.01	<0.01	0.01	<0.01	<0.01	0.012
11/20/2002		<0.01	0.026 (o)	0.0064	0.008	0.19 (o)
6/6/2003	<0.01	<0.01	0.022 (o)	0.011	0.0066	0.32 (o)
12/12/2003	<0.01	<0.01	0.028 (o)	<0.01	0.0056	0.013
5/26/2004	<0.01	<0.01	0.012 (o)	0.007	0.0084	0.017
12/7/2004	<0.01	<0.01	0.0073	<0.01	<0.01	0.011
6/21/2005	<0.01	<0.01	0.0087	0.0063	0.0062	0.0088
12/12/2005	<0.01	<0.01	0.013 (o)	<0.01	<0.01	0.011
4/4/2006		<0.01				
6/27/2006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
8/30/2006		<0.01				
12/4/2006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
2/15/2007		<0.01				
6/23/2007	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
9/11/2007		<0.01				
12/11/2007	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
3/11/2008		<0.01				
6/23/2008	<0.01	<0.01				
6/24/2008			<0.01	<0.01	<0.01	<0.01
11/3/2008		<0.01				
12/4/2008	<0.01	<0.01				
12/5/2008			<0.01	<0.01	<0.01	<0.01
3/25/2009		<0.01				
7/7/2009	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
9/14/2009		<0.01				
12/20/2009	<0.01	<0.01				<0.01
12/21/2009			<0.01	<0.01	<0.01	
3/4/2010		<0.01				
6/20/2010	<0.01	<0.01		<0.01	<0.01	<0.01
6/21/2010			<0.01			
9/14/2010		<0.01				
1/6/2011				<0.01		<0.01
1/7/2011	<0.01	<0.01	<0.01		<0.01	
4/15/2011		<0.01				
7/7/2011	<0.01	<0.01		<0.01	<0.01	<0.01
7/8/2011			<0.01			
9/25/2011		<0.01				
1/17/2012	<0.01	<0.01		<0.01		<0.01
1/18/2012			<0.01		<0.01	
4/4/2012		<0.01				
7/9/2012	<0.01			<0.01		<0.01
7/10/2012		<0.01	<0.01		<0.01	
10/9/2012		<0.01				
1/17/2013				<0.01		<0.01
1/18/2013	0.009	<0.01	<0.01		<0.01	
4/5/2013		<0.01				

Time Series

Constituent: Selenium (mg/L) Analysis Run 4/19/2021 1:39 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
7/16/2013				<0.01		0.012
7/17/2013	0.011	<0.01	<0.01		<0.01	
10/11/2013		<0.01				
1/13/2014	0.012			<0.01		<0.01
1/14/2014		<0.01	<0.01		<0.01	
4/3/2014		<0.01				
7/9/2014	0.011	<0.01	<0.01	<0.01	<0.01	<0.01
10/24/2014		<0.01				
1/12/2015			<0.01			
1/13/2015	0.0092			<0.01		<0.01
1/14/2015		<0.01			<0.01	
5/10/2015		<0.01				
7/16/2015	0.014		<0.01	<0.01		<0.01
7/17/2015		<0.01			<0.01	
10/6/2015		<0.01				
1/17/2016						0.023
1/18/2016	0.023	<0.01	<0.01	<0.01	<0.01	
4/26/2016		<0.01				
7/27/2016	0.0323			<0.01		0.002 (J)
7/28/2016		0.001 (J)			<0.01	
7/29/2016			0.0036 (J)			
8/30/2016		<0.01		<0.01	<0.01	0.002 (J)
9/1/2016	0.0438		0.0067 (J)			
10/24/2016		0.0013 (J)				
10/25/2016	0.031					0.0022 (J)
10/26/2016			0.0042 (J)	<0.01	<0.01	
1/3/2017		<0.01		<0.01		
1/4/2017						0.0016 (J)
1/5/2017					0.0014 (J)	
1/6/2017	0.0324		0.0042 (J)			
4/3/2017		<0.01				
4/4/2017			0.0043 (J)			0.0052 (J)
4/6/2017	0.0188 (J)			<0.01	<0.01	
7/11/2017		<0.01				
7/12/2017			0.0033 (J)	<0.01	<0.01	0.0024 (J)
7/13/2017	0.0118					
10/2/2017		<0.01				
10/3/2017				<0.01	<0.01	<0.01
10/4/2017	0.0195		0.0038 (J)			
1/9/2018	<0.01	<0.01			<0.01	
1/10/2018				<0.01		0.0018 (J)
1/11/2018			0.0029 (J)			
7/9/2018		<0.01				
7/10/2018				0.0018 (J)	0.0016 (J)	0.0026 (J)
7/11/2018	<0.01		0.0015 (J)			
1/16/2019	0.0071 (J)	<0.01	<0.01	<0.01	<0.01	0.0018 (J)
3/25/2019	<0.01	<0.01	<0.01			
3/26/2019				<0.01	0.05 (J)	0.0023 (J)
8/26/2019	<0.01	<0.01				
8/27/2019			<0.01		0.0033 (J)	0.0016 (J)
8/28/2019				0.0033 (J)		
10/7/2019		<0.01				

Time Series

Constituent: Selenium (mg/L) Analysis Run 4/19/2021 1:39 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
10/8/2019	0.0072 (J)					
10/9/2019			<0.01	0.0073 (J)	<0.01	0.0024 (J)
4/6/2020	0.0078 (J)	<0.01				
4/7/2020			0.0025 (J)	<0.01	<0.01	0.0013 (J)
8/17/2020		<0.01				
8/19/2020	<0.01		<0.01	<0.01	<0.01	0.002 (J)
9/28/2020	0.01 (J)	<0.01				<0.01
9/30/2020				<0.01	0.0023 (J)	
10/1/2020			<0.01			
3/10/2021			0.0021 (J)	0.006	0.0049 (J)	0.0026 (J)
3/11/2021	<0.01					
3/12/2021		<0.01				

Time Series

Constituent: Selenium (mg/L) Analysis Run 4/19/2021 1:39 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
9/29/2000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/21/2000	<0.01	<0.01	<0.01	0.052	<0.01	<0.01
1/20/2001	<0.01	<0.01	<0.01	0.053	<0.01	<0.01
3/14/2001	<0.01	<0.01	<0.01	0.049	<0.01	<0.01
7/16/2001	<0.01	<0.01	<0.01	0.038	<0.01	<0.01
11/1/2001	<0.01	<0.01	<0.01	0.022	<0.01	<0.01
4/25/2002	<0.01	<0.01	<0.01	0.1 (o)	<0.01	<0.01
11/20/2002	<0.01	<0.01	<0.01	0.018	0.0094	<0.01
6/6/2003	<0.01	<0.01	<0.01	<0.01	0.021 (o)	0.021 (o)
12/12/2003	<0.01	<0.01	<0.01	<0.01	0.016 (o)	0.0078
5/26/2004	<0.01	<0.01	<0.01	0.023	<0.01	0.0053
12/7/2004	<0.01	<0.01	<0.01	0.019	<0.01	<0.01
6/21/2005	<0.01	<0.01	<0.01	0.019	<0.01	<0.01
12/12/2005	<0.01	<0.01	<0.01	0.0095	<0.01	<0.01
4/4/2006				0.033		<0.01
6/27/2006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
8/30/2006				<0.01		<0.01
12/4/2006	<0.01	<0.01	<0.01	0.032	<0.01	<0.01
2/15/2007				0.034		<0.01
6/23/2007	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
9/11/2007				0.022		<0.01
12/11/2007	<0.01	<0.01	<0.01	0.045	<0.01	<0.01
3/11/2008				0.02		<0.01
6/23/2008	<0.01	<0.01	<0.01			
6/24/2008				<0.01	<0.01	<0.01
11/3/2008				0.052		<0.01
12/4/2008	<0.01	<0.01	<0.01	0.054		
12/5/2008					<0.01	<0.01
3/25/2009				0.072		<0.01
7/8/2009	<0.01	<0.01	<0.01	0.021	<0.01	<0.01
9/14/2009				0.015		<0.01
12/20/2009				0.072	<0.01	<0.01
12/21/2009	<0.01	<0.01	<0.01			
3/4/2010				0.083		<0.01
6/20/2010	<0.01	<0.01	<0.01	0.1	<0.01	
6/21/2010						<0.01
9/14/2010				0.085		<0.01
1/6/2011	<0.01		<0.01			
1/7/2011		<0.01		0.028	<0.01	<0.01
4/15/2011				<0.01		<0.01
7/7/2011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
9/25/2011				0.02		<0.01
1/17/2012	0.023	<0.01	<0.01	0.016	<0.01	
1/18/2012						<0.01
4/4/2012				0.0156		<0.01
7/9/2012	0.016	<0.01	<0.01	<0.01	0.066 (o)	
7/10/2012						<0.01
10/9/2012				0.0094		<0.01
1/17/2013	0.033	<0.01	<0.01			
1/18/2013				0.0067	0.04 (o)	<0.01
4/5/2013				0.0077		<0.01
7/16/2013	0.0068	<0.01	<0.01			

Time Series

Constituent: Selenium (mg/L) Analysis Run 4/19/2021 1:39 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
7/17/2013				0.01	<0.01	<0.01
10/11/2013				0.0087		0.0069
1/13/2014	0.036	<0.01	<0.01		<0.01	
1/14/2014				0.012		<0.01
4/3/2014				0.022		<0.01
7/8/2014	0.017	<0.01	<0.01			
7/9/2014				0.0089	<0.01	0.005
10/24/2014				0.017		<0.01
1/13/2015	0.027	<0.01	<0.01		<0.01	
1/14/2015				<0.01		<0.01
5/10/2015				<0.01		
5/11/2015						<0.01
7/16/2015	<0.01	<0.01	<0.01		<0.01	<0.01
7/17/2015				<0.01		
10/6/2015				<0.01		0.0073
1/17/2016				<0.01	<0.01	0.0031 (J)
1/18/2016		<0.01	<0.01			
1/19/2016	0.023					
4/26/2016				0.00428 (J)		0.00497 (J)
7/26/2016	0.0056 (J)		<0.01			
7/27/2016		0.0025 (J)		0.0038 (J)	<0.01	
7/28/2016						0.0076 (J)
8/31/2016	0.0084 (J)	0.0019 (J)	<0.01			
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	0.0052 (J)	0.002 (J)	<0.01			
1/4/2017	0.0062 (J)	<0.01				0.0048 (J)
1/5/2017			<0.01	0.0038 (J)	<0.01	
4/3/2017					<0.01	
4/4/2017				0.0064 (J)		
4/5/2017		<0.01				0.0068 (J)
4/6/2017	0.0195		<0.01			
7/10/2017		<0.01				
7/11/2017	<0.01			0.0044 (J)	<0.01	
7/12/2017			<0.01			0.0048 (J)
10/2/2017				0.004 (J)	<0.01	
10/3/2017	0.0079 (J)					0.0051 (J)
10/4/2017		<0.01	<0.01			
1/9/2018				0.0019 (J)	0.0019 (J)	
1/10/2018			<0.01			0.0018 (J)
1/11/2018	0.0054 (J)	<0.01				
7/9/2018				0.0029 (J)		
7/10/2018					0.0086 (J)	0.0045 (J)
7/11/2018	0.0022 (J)	<0.01	<0.01			
1/16/2019			<0.01	0.0016 (J)		
1/17/2019	<0.01	<0.01			0.0029 (J)	0.0031 (J)
3/26/2019			<0.01	0.0022 (J)	0.0074 (J)	0.0033 (J)
3/27/2019	0.01 (J)	<0.01				
8/27/2019	<0.01	<0.01	<0.01	0.0035 (J)	0.0092 (J)	
8/28/2019						0.004 (J)
10/8/2019	<0.01		<0.01	0.0026 (J)	0.014	0.0023 (J)
10/9/2019		<0.01				

Time Series

Constituent: Selenium (mg/L) Analysis Run 4/19/2021 1:39 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
4/7/2020	0.0021 (J)	<0.01		0.005 (J)	0.0029 (J)	<0.01
4/8/2020			<0.01			
8/17/2020		<0.01	<0.01			
8/18/2020	0.0028 (J)			0.0029 (J)	0.0022 (J)	0.0058 (J)
9/28/2020			<0.01			
9/29/2020	0.0024 (J)	<0.01		0.0051 (J)		
9/30/2020					<0.01	0.0037 (J)
3/10/2021	0.0044 (J)	0.003 (J)				
3/12/2021					0.0064	
3/15/2021			<0.01			
3/16/2021				0.0034 (J)		0.0044 (J)

Time Series

Constituent: Selenium (mg/L) Analysis Run 4/19/2021 1:39 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
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	<0.01	<0.01				<0.01
6/6/2003	<0.01	<0.01				<0.01
12/12/2003	<0.01	<0.01				<0.01
5/26/2004	<0.01	0.005				<0.01
12/7/2004	<0.01	<0.01				<0.01
6/21/2005	<0.01	<0.01				0.0062
12/12/2005	<0.01	<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				<0.01
12/5/2008	<0.01					
7/8/2009	<0.01	<0.01				<0.01
12/20/2009		<0.01				
12/21/2009	<0.01					<0.01
6/20/2010		<0.01				<0.01
6/21/2010	<0.01		<0.01	0.048	<0.01	
1/6/2011		<0.01				
1/7/2011	<0.01		<0.01	0.014	<0.01	<0.01
7/7/2011			<0.01			
7/8/2011	<0.01		<0.01	0.018	<0.01	<0.01
1/17/2012		<0.01				
1/18/2012	<0.01		<0.01	<0.01	<0.01	<0.01
7/9/2012		<0.01				
7/10/2012	<0.01		<0.01	0.02	<0.01	<0.01
1/17/2013		<0.01				
1/18/2013	<0.01		0.005	0.015	<0.01	<0.01
7/17/2013	<0.01	<0.01	<0.01	0.037	<0.01	<0.01
1/13/2014		<0.01				
1/14/2014	<0.01		<0.01	0.043	<0.01	<0.01
7/9/2014	<0.01	<0.01		0.023		<0.01
7/10/2014			<0.01		<0.01	
1/12/2015			<0.01			
1/13/2015		<0.01				
1/14/2015	<0.01			0.022	<0.01	<0.01
7/16/2015		<0.01				
7/17/2015				0.033		<0.01
7/18/2015	<0.01		<0.01		<0.01	
1/17/2016		<0.01	<0.01	0.021		
1/18/2016	<0.01				<0.01	<0.01
7/27/2016		0.002 (J)				
7/28/2016			<0.01	0.0341		<0.01

Time Series

Constituent: Selenium (mg/L) Analysis Run 4/19/2021 1:39 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
7/29/2016	0.0011 (J)				0.0022 (J)	
8/31/2016		<0.01			0.0014 (J)	<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)			0.001 (J)	
10/27/2016						<0.01
1/4/2017			0.0014 (J)	0.022	<0.01	
1/5/2017	0.0012 (J)	<0.01				
1/6/2017						<0.01
4/4/2017		<0.01	<0.01	0.0236		
4/5/2017	<0.01					
4/6/2017					<0.01	<0.01
7/11/2017			<0.01		<0.01	
7/12/2017						<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)				0.0023 (J)	<0.01
1/9/2018				0.0162		
1/10/2018		<0.01	<0.01			
1/11/2018	<0.01				<0.01	<0.01
7/9/2018			<0.01			
7/10/2018		<0.01		0.016		
7/11/2018	0.0016 (J)				<0.01	<0.01
1/16/2019	<0.01					
1/17/2019				0.011		
1/18/2019					<0.01	<0.01
1/21/2019		<0.01	0.0014 (J)			
3/25/2019			<0.01			
3/26/2019	<0.01			0.022		
3/27/2019					<0.01	<0.01
7/30/2019		<0.01				
8/27/2019		<0.01			<0.01	
8/28/2019	<0.01		0.0014 (J)	0.019		<0.01
10/8/2019				0.019		
10/9/2019	<0.01	<0.01	<0.01		<0.01	<0.01
4/7/2020				0.012	<0.01	
4/8/2020	<0.01	<0.01	0.0013 (J)			<0.01
8/18/2020	0.002 (J)	<0.01	<0.01	0.013	<0.01	
8/19/2020						<0.01
9/29/2020		<0.01				
9/30/2020	<0.01		<0.01	0.0061 (J)	<0.01	
10/1/2020						<0.01
3/10/2021					<0.01	<0.01
3/11/2021	0.0016 (J)					
3/12/2021			<0.01			
3/15/2021		<0.01				
3/16/2021				0.0055		

Time Series

Constituent: Selenium (mg/L) Analysis Run 4/19/2021 1:39 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
3/11/2021	<0.01	<0.01	<0.01	<0.01	<0.01

Time Series

Constituent: Sulfate (mg/L) Analysis Run 4/19/2021 1:39 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
8/30/2016		140		100	120	87
9/1/2016	73		210			
10/24/2016		160				
10/25/2016	26					83
10/26/2016			230	130	120	
1/3/2017		140		120		
1/4/2017						99
1/5/2017					130	
1/6/2017	23		220			
4/3/2017		140				
4/4/2017			230			110
4/6/2017	25			140	150	
7/11/2017		130				
7/12/2017			210	140	140	100
7/13/2017	65					
10/2/2017		150				
10/3/2017				130	140	63
10/4/2017	13		290			
1/9/2018	45	120			140	
1/10/2018				110		86
1/11/2018			210			
7/9/2018		123				
7/10/2018				48.1	128	77.7
7/11/2018	37.7		177			
1/16/2019	24.5	129	244	184	402	71.2
3/25/2019	14.7	152	245			
3/26/2019				222	319	73.8
10/7/2019		156				
10/8/2019	32.8					
10/9/2019			38.5	90.8	255	76.3
4/6/2020	20.3	123				
4/7/2020			221	180	180	83
9/28/2020	20	93.6				71.6
9/30/2020				339	339	
10/1/2020			178			
3/10/2021			160	572	1160	61.2
3/11/2021	12					
3/12/2021		103				

Time Series

Constituent: Sulfate (mg/L) Analysis Run 4/19/2021 1:39 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
8/31/2016	64	1100	43			
9/1/2016				730	120	430
10/25/2016				420	100	360
10/26/2016	56	900	29			
1/4/2017	65	880				360
1/5/2017			32	430	140	
4/3/2017					150	
4/4/2017				600		
4/5/2017		990				440
4/6/2017	110		49			
7/10/2017		480				
7/11/2017	49			400	110	
7/12/2017			16			490
10/2/2017				470	56	
10/3/2017	140					780
10/4/2017		760	33			
1/9/2018				440	84	
1/10/2018			22			470
1/11/2018	270	780				
7/9/2018				369		
7/10/2018					43	787
7/11/2018	211	598	17.8			
1/16/2019			20.2	291		
1/17/2019	50.3	454			45.2	780
3/26/2019			33.6	192	54	87.9
3/27/2019	76.8	579				
10/8/2019	310		22	428	45.8	872
10/9/2019		392				
4/7/2020	446	297		456	26.9	844
4/8/2020			30.7			
9/28/2020			25.6			
9/29/2020	516	237		93.5		
9/30/2020					18.5	736
3/10/2021	687	282				
3/12/2021					21.1	
3/15/2021			30.6			
3/16/2021				92		821

Time Series

Constituent: Sulfate (mg/L) Analysis Run 4/19/2021 1:39 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
8/31/2016		21			700	84
9/1/2016	310		180	36		
10/25/2016			79	16		
10/26/2016	280	100			850	
10/27/2016						76
1/4/2017			170	45	680	
1/5/2017	310	22				
1/6/2017						66
4/4/2017		29	300	46		
4/5/2017	460					
4/6/2017					220	79
7/11/2017			400		210	
7/12/2017						75
7/13/2017	490	20		33		
10/2/2017			390			
10/3/2017		20		34		
10/4/2017	1100				730	78
1/9/2018				29		
1/10/2018		9.5	99			
1/11/2018	810				180	110
7/9/2018			99.2			
7/10/2018		8.5		33.2		
7/11/2018	902				381	87.4
1/16/2019	422					
1/17/2019				24.1		
1/18/2019					107	56.9
1/21/2019		10.2	35.5			
3/25/2019			95.6			
3/26/2019	439			83.9		
3/27/2019					103	76.2
7/30/2019		12.3				
10/8/2019				85.6		
10/9/2019	346	10.1	58.5		80.2	41.1
4/7/2020				33.2	333	
4/8/2020	239	12.9	428			34.2
9/29/2020		8.6				
9/30/2020	193		956	306	65.5	
10/1/2020						35
3/10/2021					101	38.7
3/11/2021	244					
3/12/2021			933			
3/15/2021		10				
3/16/2021				343		

Time Series

Constituent: Sulfate (mg/L) Analysis Run 4/19/2021 1:39 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
1/20/2021			1.6	1	0.88 (J)
1/21/2021	5	0.79 (J)			
3/11/2021	62.4	<1	0.52 (J)	<1	<1

Time Series

Constituent: Thallium (mg/L) Analysis Run 4/19/2021 1:39 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
9/29/2000	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
11/21/2000	<0.001		<0.001	<0.001	<0.001	<0.001
1/20/2001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
3/14/2001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
7/16/2001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
11/1/2001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
4/25/2002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
12/12/2003	<0.001	<0.001	<0.001	<0.001	<0.001	0.002
5/26/2004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
12/7/2004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
6/21/2005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
12/12/2005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
4/4/2006		<0.001				
6/27/2006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/30/2006		<0.001				
12/4/2006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
2/15/2007		<0.001				
6/23/2007	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/30/2016		<0.001		<0.001	<0.001	<0.001
9/1/2016	0.0005 (J)		<0.001			
10/24/2016		<0.001				
10/25/2016	<0.001					<0.001
10/26/2016			<0.001	<0.001	<0.001	
1/3/2017		<0.001		<0.001		
1/4/2017						<0.001
1/5/2017					<0.001	
1/6/2017	<0.001		<0.001			
4/3/2017		<0.001				
4/4/2017			7E-05 (J)			5E-05 (J)
4/6/2017	<0.001			<0.001	<0.001	
7/11/2017		5E-05 (J)				
7/12/2017			<0.001	<0.001	<0.001	<0.001
7/13/2017	<0.001					
10/2/2017		6E-05 (J)				
10/3/2017				<0.001	<0.001	<0.001
10/4/2017	<0.001		<0.001			
1/9/2018	<0.001	<0.001			<0.001	
1/10/2018				<0.001		<0.001
1/11/2018			7E-05 (J)			
7/9/2018		<0.001				
7/10/2018				<0.001	<0.001	<0.001
7/11/2018	<0.001		<0.001			
8/26/2019	<0.001	<0.001				
8/27/2019			<0.001		<0.001	<0.001
8/28/2019				5.7E-05 (J)		
10/7/2019		6.2E-05 (J)				
10/8/2019	<0.001					
10/9/2019			<0.001	0.00031 (J)	<0.001	5.4E-05 (J)
4/6/2020	<0.001	<0.001				
4/7/2020			<0.001	<0.001	<0.001	5.4E-05 (J)
8/17/2020		<0.001				
8/19/2020	<0.001		<0.001	<0.001	<0.001	<0.001

Time Series

Constituent: Thallium (mg/L) Analysis Run 4/19/2021 1:39 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
9/28/2020	<0.001	<0.001				<0.001
9/30/2020				<0.001	<0.001	
10/1/2020			<0.001			
3/10/2021			<0.001	<0.001	<0.001	<0.001
3/11/2021	<0.001					
3/12/2021		<0.001				

Time Series

Constituent: Thallium (mg/L) Analysis Run 4/19/2021 1:39 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
9/29/2000	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
11/21/2000	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1/20/2001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
3/14/2001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
7/16/2001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
11/1/2001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
4/25/2002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
12/12/2003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
5/26/2004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
12/7/2004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
6/21/2005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
12/12/2005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
4/4/2006				<0.001		<0.001
6/27/2006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/30/2006				<0.001		<0.001
12/4/2006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
2/15/2007				<0.001		<0.001
6/23/2007	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/31/2016	<0.001	<0.001	<0.001			
9/1/2016				<0.001	<0.001	<0.001
10/25/2016				<0.001	<0.001	<0.001
10/26/2016	<0.001	0.0003 (J)	<0.001			
1/4/2017	<0.001	<0.001				<0.001
1/5/2017			<0.001	<0.001	<0.001	
4/3/2017					<0.001	
4/4/2017				7E-05 (J)		
4/5/2017		0.0002 (J)				6E-05 (J)
4/6/2017	6E-05 (J)		<0.001			
7/10/2017		0.0002 (J)				
7/11/2017	<0.001			6E-05 (J)	<0.001	
7/12/2017			<0.001			<0.001
10/2/2017				<0.001	<0.001	
10/3/2017	7E-05 (J)					<0.001
10/4/2017		0.0002 (J)	<0.001			
1/9/2018				<0.001	<0.001	
1/10/2018			<0.001			5E-05 (J)
1/11/2018	0.0001 (J)	0.0002 (J)				
7/9/2018				<0.001		
7/10/2018					<0.001	<0.001
7/11/2018	<0.001	<0.001	<0.001			
8/27/2019	<0.001	0.00011 (J)	<0.001	<0.001	<0.001	
8/28/2019						<0.001
10/8/2019	9.8E-05 (J)		<0.001	<0.001	<0.001	<0.001
10/9/2019		0.00014 (J)				
4/7/2020	0.00019 (J)	0.00013 (J)		<0.001	<0.001	<0.001
4/8/2020			<0.001			
8/17/2020		<0.001	<0.001			
8/18/2020	0.00021 (J)			<0.001	<0.001	<0.001
9/28/2020			<0.001			
9/29/2020	0.00017 (J)	<0.001		<0.001		
9/30/2020					<0.001	<0.001
3/10/2021	0.00022 (J)	<0.001				

Time Series

Constituent: Thallium (mg/L) Analysis Run 4/19/2021 1:39 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
3/12/2021					<0.001	
3/15/2021			<0.001			
3/16/2021				<0.001		<0.001

Time Series

Constituent: Thallium (mg/L) Analysis Run 4/19/2021 1:39 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
9/29/2000	<0.001					<0.001
11/21/2000	<0.001	<0.001				<0.001
1/20/2001	<0.001	<0.001				<0.001
3/14/2001	<0.001	<0.001				<0.001
7/16/2001	<0.001	<0.001				<0.001
11/1/2001	<0.001	<0.001				<0.001
4/25/2002	<0.001	<0.001				<0.001
12/12/2003	<0.001	<0.001				<0.001
5/26/2004	<0.001	<0.001				<0.001
12/7/2004	<0.001	<0.001				<0.001
6/21/2005	<0.001	<0.001				<0.001
12/12/2005	<0.001	<0.001				<0.001
6/27/2006	<0.001	<0.001				<0.001
12/4/2006	<0.001	<0.001				<0.001
6/23/2007	<0.001	<0.001				<0.001
8/31/2016		<0.001			<0.001	<0.001
9/1/2016	<0.001		<0.001	<0.001		
10/25/2016			<0.001	<0.001		
10/26/2016	<0.001	<0.001			<0.001	
10/27/2016						<0.001
1/4/2017			<0.001	<0.001	<0.001	
1/5/2017	<0.001	<0.001				
1/6/2017						<0.001
4/4/2017		<0.001	<0.001	5E-05 (J)		
4/5/2017	0.0001 (J)					
4/6/2017					<0.001	<0.001
7/11/2017			<0.001		<0.001	
7/12/2017						<0.001
7/13/2017	<0.001	<0.001		<0.001		
10/2/2017			<0.001			
10/3/2017		<0.001		<0.001		
10/4/2017	0.0001 (J)				0.0001 (J)	<0.001
1/9/2018				<0.001		
1/10/2018		<0.001	<0.001			
1/11/2018	0.0001 (J)				6E-05 (J)	<0.001
7/9/2018			<0.001			
7/10/2018		<0.001		<0.001		
7/11/2018	<0.001				<0.001	<0.001
7/30/2019		0.00011 (J)				
8/27/2019		<0.001			8.6E-05 (J)	
8/28/2019	6.6E-05 (J)		<0.001	<0.001		<0.001
10/8/2019				<0.001		
10/9/2019	7.6E-05 (J)	<0.001	<0.001		<0.001	<0.001
4/7/2020				<0.001	6.5E-05 (J)	
4/8/2020	5.6E-05 (J)	<0.001	<0.001			<0.001
8/18/2020	<0.001	<0.001	<0.001	<0.001	0.00017 (J)	
8/19/2020						<0.001
9/29/2020		<0.001				
9/30/2020	<0.001		<0.001	<0.001	<0.001	
10/1/2020						<0.001
3/10/2021					<0.001	<0.001
3/11/2021	<0.001					

Time Series

Constituent: Thallium (mg/L) Analysis Run 4/19/2021 1:39 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
3/12/2021			<0.001			
3/15/2021		<0.001				
3/16/2021				<0.001		

Time Series

Constituent: Thallium (mg/L) Analysis Run 4/19/2021 1:39 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
3/11/2021	<0.001	<0.001	<0.001	<0.001	<0.001

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/19/2021 1:39 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
8/30/2016		234		224	365	225
9/1/2016	3660		1080			
10/24/2016		216				
10/25/2016	3560					230
10/26/2016			1050	297	373	
1/3/2017		333		366		
1/4/2017						349
1/5/2017					543	
1/6/2017	3490		1060			
4/3/2017		288				
4/4/2017			994			356
4/6/2017	3170			279	434	
7/11/2017		188				
7/12/2017			1070	308	454	357
7/13/2017	2280					
10/2/2017		210				
10/3/2017				288	389	192
10/4/2017	3350		1100			
1/9/2018	2640	118			415	
1/10/2018				493		277
1/11/2018			838			
7/9/2018		235				
7/10/2018				1730 (o)	453	349
7/11/2018	2200		799			
1/16/2019	2100	219	530	382	1320	341
3/25/2019	2100	240	479			
3/26/2019				1040	1250	317
10/7/2019		275				
10/8/2019	1840					
10/9/2019			502	2010	903	338
4/6/2020	1670	214				
4/7/2020			482	483	775	195
9/28/2020	1450	175				373
9/30/2020				652	816	
10/1/2020			424			
3/10/2021			434	1040	2120	329
3/11/2021	1220					
3/12/2021		163				

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/19/2021 1:39 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
8/31/2016	119	1560	77			
9/1/2016				1170	539	878
10/25/2016				633	449	585
10/26/2016	108	1520	<10			
1/4/2017	182	1430				783
1/5/2017			146	781	565	
4/3/2017					632	
4/4/2017				916		
4/5/2017		1200				722
4/6/2017	248		23 (J)			
7/10/2017		1100				
7/11/2017	88			675	569	
7/12/2017			39			962
10/2/2017				689	559	
10/3/2017	248					1240
10/4/2017		986	38			
1/9/2018				653	520	
1/10/2018			<10			935
1/11/2018	681	1020				
7/9/2018				659		
7/10/2018					524	1040
7/11/2018	440	888	63			
1/16/2019			44	656		
1/17/2019	118	765			518 (D)	1320
3/26/2019			72	496	541	1380
3/27/2019	138	673				
10/8/2019	613		51	841	526	1500
10/9/2019		647				
4/7/2020	780	464		843	428	1500
4/8/2020			65			
9/28/2020			60			
9/29/2020	1100	440		187		
9/30/2020					434	1140
3/10/2021	1240	566				
3/12/2021					353	
3/15/2021			<10			
3/16/2021				137		980

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/19/2021 1:39 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
8/31/2016		39			1570	173
9/1/2016	1270		470	184		
10/25/2016			289	<10		
10/26/2016	1320	135			1840	
10/27/2016						221
1/4/2017			639	242	1560	
1/5/2017	1770	99				
1/6/2017						259
4/4/2017		54	660	187		
4/5/2017	1600					
4/6/2017					368	169
7/11/2017			836		383	
7/12/2017						163
7/13/2017	1940	50		86		
10/2/2017			698			
10/3/2017		18 (J)		66		
10/4/2017	2370				1500	168
1/9/2018				167		
1/10/2018		<10	322			
1/11/2018	2350				438	190
7/9/2018			461			
7/10/2018		49		180		
7/11/2018	2260				876	165
1/16/2019	1540					
1/17/2019				178		
1/18/2019					154	118
1/21/2019		39	307			
3/25/2019			449			
3/26/2019	1220			292		
3/27/2019					158	104
7/30/2019		70				
10/8/2019				278		
10/9/2019	1100	46	434		211	128
4/7/2020				106	819	
4/8/2020	881	38	986			80
9/29/2020		33				
9/30/2020	752		1860	634	113	
10/1/2020						111
3/10/2021					210	89
3/11/2021	705					
3/12/2021			1730			
3/15/2021		11				
3/16/2021				454		

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/19/2021 1:39 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
1/20/2021			58	54	43
1/21/2021	41	50			
3/11/2021	149	53	57	41	43

Time Series

Constituent: Vanadium (mg/L) Analysis Run 4/19/2021 1:39 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
9/29/2000	<0.01	<0.01	0.06	0.038	0.12	<0.01
11/21/2000	<0.01		0.068	0.013	0.13	<0.01
1/20/2001	<0.01	<0.01	0.12	0.038	0.14	<0.01
3/14/2001	<0.01	<0.01	0.08	0.077 (o)	0.13	<0.01
7/16/2001	<0.01	<0.01	0.11	0.12 (o)	0.18	<0.01
11/1/2001	<0.01	<0.01	0.079	0.21 (o)	0.12	<0.01
4/25/2002	<0.01	<0.01	0.11	0.086 (o)	0.15	<0.01
11/20/2002		<0.01	0.15	0.14 (o)	0.15	0.0069
6/6/2003	0.047	0.017	0.12	0.12 (o)	0.11	0.16 (o)
12/12/2003	0.0086	0.011	0.13	0.014	0.089	<0.01
5/26/2004	<0.01	<0.01	0.095	0.06 (o)	0.09	<0.01
12/7/2004	<0.01	<0.01	0.067	0.054	0.072	<0.01
6/21/2005	<0.01	<0.01	0.062	0.038	0.04	<0.01
12/12/2005	<0.01	<0.01	0.09	0.0056	0.021	<0.01
4/4/2006		<0.01				
6/27/2006	<0.01	<0.01	0.083	0.0043	0.02	0.0029
8/30/2006		<0.01				
12/4/2006	0.0027	<0.01	0.084	0.0044	0.022	0.0047
2/15/2007		<0.01				
6/23/2007	0.0027	<0.01	0.081	0.0039	0.027	0.0029
9/11/2007		<0.01				
12/11/2007	0.0033	<0.01	0.067	0.0029	0.017	<0.01
3/11/2008		<0.01				
6/23/2008	0.0074	<0.01				
6/24/2008			0.059	0.003	0.053	<0.01
11/3/2008		<0.01				
12/4/2008	0.0084	<0.01				
12/5/2008			0.054	<0.01	0.0078	<0.01
3/25/2009		<0.01				
7/7/2009	0.023	<0.01	0.038	<0.01	0.012	<0.01
9/14/2009		<0.01				
12/20/2009	0.007	<0.01				<0.01
12/21/2009			0.06	<0.01	0.011	
3/4/2010		<0.01				
6/20/2010	0.0047	<0.01		<0.01	0.0083	0.0037
6/21/2010			0.036			
9/14/2010		<0.01				
1/6/2011				0.0067		<0.01
1/7/2011	0.018	<0.01	0.043		0.0079	
4/15/2011		<0.01				
7/7/2011	0.019	<0.01		0.019	0.007	0.0045
7/8/2011			0.044			
9/25/2011		<0.01				
1/17/2012	0.0298	<0.01		0.021		<0.01
1/18/2012			0.045		0.0116	
4/4/2012		<0.01				
7/9/2012	0.14			0.032		0.0026
7/10/2012		<0.01	0.048		0.0096	
10/9/2012		<0.01				
1/17/2013				0.034		<0.01
1/18/2013	0.21	<0.01	0.049		<0.01	
4/5/2013		<0.01				

Time Series

Constituent: Vanadium (mg/L) Analysis Run 4/19/2021 1:39 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
7/16/2013				0.021		<0.01
7/17/2013	0.18	<0.01	0.05		<0.01	
10/11/2013		<0.01				
1/13/2014	0.24			0.008		<0.01
1/14/2014		<0.01	0.067		<0.01	
4/3/2014		0.0015 (J)				
7/9/2014	0.22	0.0012 (J)	0.055	0.0052	0.0039 (J)	0.0041 (J)
10/24/2014		<0.01				
1/12/2015			0.066			
1/13/2015	0.19			0.0036 (J)		0.0029 (J)
1/14/2015		<0.01			0.005	
5/10/2015		<0.01				
7/16/2015	0.23		0.045	0.004 (J)		0.0034 (J)
7/17/2015		<0.01			0.0045 (J)	
10/6/2015		0.0012 (J)				
1/17/2016						0.0046 (J)
1/18/2016	0.41	0.00079 (J)	0.049	0.0069	0.0044 (J)	
4/26/2016		<0.01				
7/27/2016	0.397			0.0046 (J)		0.0064 (J)
7/28/2016		<0.01			0.0038 (J)	
7/29/2016			0.0388			
10/24/2016		<0.01				
10/25/2016	0.425			<0.01		
1/3/2017		<0.01				
1/4/2017						<0.01
1/5/2017					0.0077 (J)	
1/6/2017	0.41		0.0341			
4/3/2017		<0.01				
4/4/2017			0.0371			0.0061 (J)
4/6/2017	0.297			0.0063 (J)	0.0069 (J)	
7/11/2017		<0.01				
7/12/2017			0.0399	0.0064 (J)	0.0098 (J)	0.0067 (J)
7/13/2017	0.194					
10/2/2017		<0.01				
10/4/2017	0.316					
1/9/2018	0.194	0.0014 (J)			0.0086 (J)	
1/10/2018				0.0077 (J)		0.0056 (J)
1/11/2018			0.0327			
7/9/2018		<0.01				
7/10/2018				0.016	0.0098 (J)	0.0056 (J)
7/11/2018	0.15		0.02			
1/16/2019	0.16	<0.01	0.0022 (J)	0.0033 (J)	0.077	0.0043 (J)
3/25/2019	0.18	<0.01	0.004 (J)			
3/26/2019				0.0058 (J)	0.086	0.0051 (J)
10/7/2019		<0.01				
10/8/2019	0.11					
10/9/2019			<0.01	0.033 (J)	0.018 (J)	<0.01
4/6/2020	0.12	<0.01				
4/7/2020			0.0037 (J)	0.0053 (J)	0.041 (J)	0.0015 (J)
9/28/2020	0.1	<0.01				0.0042 (J)
9/30/2020				0.0037 (J)	0.018	
10/1/2020			0.0047 (J)			

Time Series

Constituent: Vanadium (mg/L) Analysis Run 4/19/2021 1:39 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
3/10/2021			0.0054 (J)	0.0026 (J)	0.027	0.005 (J)
3/11/2021	0.14					
3/12/2021		<0.01				

Time Series

Constituent: Vanadium (mg/L) Analysis Run 4/19/2021 1:39 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
9/29/2000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/21/2000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1/20/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
3/14/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
7/16/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/1/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4/25/2002	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/20/2002	0.0071	<0.01	<0.01	0.03	0.0099	0.0069
6/6/2003	0.0098	<0.01	0.0063	0.0065	0.019 (o)	0.082 (o)
12/12/2003	0.0074	<0.01	<0.01	0.0052	0.018 (o)	0.012
5/26/2004	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
12/7/2004	<0.01	<0.01	<0.01	0.0074	<0.01	<0.01
6/21/2005	<0.01	<0.01	<0.01	0.01	<0.01	<0.01
12/12/2005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4/4/2006				0.013		<0.01
6/27/2006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
8/30/2006				0.0039		<0.01
12/4/2006	<0.01	<0.01	<0.01	0.016	<0.01	0.0031
2/15/2007				0.017		0.0025
6/23/2007	0.0036	<0.01	<0.01	0.0076	<0.01	0.0032
9/11/2007				0.012		<0.01
12/11/2007	<0.01	<0.01	<0.01	0.017	<0.01	<0.01
3/11/2008				0.012		<0.01
6/23/2008	<0.01	<0.01	<0.01			
6/24/2008				0.0069	<0.01	<0.01
11/3/2008				0.016		0.0032
12/4/2008	<0.01	<0.01	<0.01	0.013		
12/5/2008					<0.01	<0.01
3/25/2009				0.014		<0.01
7/8/2009	0.0026	<0.01	<0.01	0.014	<0.01	0.0036
9/14/2009				0.0072		0.0026
12/20/2009				0.02	<0.01	0.0031
12/21/2009	<0.01	<0.01	<0.01			
3/4/2010				0.023		<0.01
6/20/2010	<0.01	<0.01	<0.01	0.017	<0.01	
6/21/2010						0.0025
9/14/2010				0.018		0.0035
1/6/2011	0.003		0.0028			
1/7/2011		<0.01		0.019	<0.01	0.0036
4/15/2011				0.019		<0.01
7/7/2011	0.004	<0.01	<0.01	0.014	0.0036	0.003
9/25/2011				0.015		0.0037
1/17/2012	<0.01	<0.01	<0.01	0.021	<0.01	
1/18/2012						<0.01
4/4/2012				0.0191		<0.01
7/9/2012	0.005	<0.01	<0.01	0.026	0.0059	
7/10/2012						0.0026
10/9/2012				0.049		0.007
1/17/2013	0.005	<0.01	<0.01			
1/18/2013				0.036	<0.01	<0.01
4/5/2013				0.04		<0.01
7/16/2013	<0.01	<0.01	<0.01			

Time Series

Constituent: Vanadium (mg/L) Analysis Run 4/19/2021 1:39 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
7/17/2013				0.062	<0.01	<0.01
10/11/2013				0.032		<0.01
1/13/2014	<0.01	<0.01	<0.01		<0.01	
1/14/2014				0.044		<0.01
4/3/2014				0.077 (o)		0.0032 (J)
7/8/2014	0.0024 (J)	0.0034 (J)	0.002 (J)			
7/9/2014				0.032	0.0012 (J)	0.0031 (J)
10/24/2014				0.045		0.0028 (J)
1/13/2015	0.0023 (J)	<0.01	0.0015 (J)		0.0013 (J)	
1/14/2015				0.031		0.0034 (J)
5/10/2015				0.013		
5/11/2015						0.0026 (J)
7/16/2015	0.002 (J)	0.0049 (J)	<0.01		<0.01	0.0028 (J)
7/17/2015				0.028		
10/6/2015				0.02		0.0016 (J)
1/17/2016				0.028	0.0013 (J)	0.0029 (J)
1/18/2016		0.0058	0.0011 (J)			
1/19/2016	0.0025 (J)					
4/26/2016				0.0181		0.00296 (J)
7/26/2016	0.0027 (J)		<0.01			
7/27/2016		0.0058 (J)		0.0189	<0.01	
7/28/2016						0.0026 (J)
10/25/2016				0.0206	<0.01	<0.01
1/4/2017	<0.01	<0.01				<0.01
1/5/2017			<0.01	0.0172	<0.01	
4/3/2017					0.002 (J)	
4/4/2017				0.0235		
4/5/2017		0.0039 (J)				0.0033 (J)
4/6/2017	0.0025 (J)		<0.01			
7/10/2017		0.0062 (J)				
7/11/2017	0.0027 (J)			0.0136	0.0022 (J)	
7/12/2017			0.0016 (J)			0.0037 (J)
10/2/2017				0.0175	0.0022 (J)	
10/3/2017						0.0036 (J)
1/9/2018				0.0103	0.0021 (J)	
1/10/2018			0.0019 (J)			0.0029 (J)
1/11/2018	0.0019 (J)	0.0025 (J)				
7/9/2018				0.0078 (J)		
7/10/2018					0.0025 (J)	0.0025 (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			<0.01	0.0021 (J)
3/26/2019			0.0029 (J)	0.0063 (J)	0.0026 (J)	0.0038 (J)
3/27/2019	0.0023 (J)	0.0049 (J)				
10/8/2019	<0.01		<0.01	<0.01	<0.01	<0.01
10/9/2019		0.0021 (J)				
4/7/2020	<0.01	0.0024 (J)		0.0026 (J)	<0.01	<0.01
4/8/2020			<0.01			
9/28/2020			<0.01			
9/29/2020	0.0023 (J)	0.0046 (J)		<0.01		
9/30/2020					0.0028 (J)	0.0028 (J)
3/10/2021	0.0023 (J)	0.0055 (J)				

Time Series

Constituent: Vanadium (mg/L) Analysis Run 4/19/2021 1:39 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
3/12/2021					0.0037 (J)	
3/15/2021			<0.01			
3/16/2021				<0.01		0.0034 (J)

Time Series

Constituent: Vanadium (mg/L) Analysis Run 4/19/2021 1:39 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
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	<0.01	<0.01				0.014
6/6/2003	<0.01	<0.01				<0.01
12/12/2003	<0.01	<0.01				<0.01
5/26/2004	<0.01	<0.01				<0.01
12/7/2004	<0.01	<0.01				<0.01
6/21/2005	<0.01	<0.01				<0.01
12/12/2005	<0.01	<0.01				<0.01
6/27/2006	0.0025	<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				<0.01
12/5/2008	<0.01					
7/8/2009	<0.01	<0.01				0.0029
12/20/2009		<0.01				
12/21/2009	<0.01					<0.01
6/20/2010		<0.01				<0.01
6/21/2010	<0.01		<0.01	<0.01	<0.01	
1/6/2011		<0.01				
1/7/2011	<0.01		0.0029	0.0031	<0.01	<0.01
7/7/2011			<0.01			
7/8/2011	0.0031		0.0046	0.0048	<0.01	<0.01
1/17/2012		<0.01				
1/18/2012	<0.01		<0.01	<0.01	<0.01	<0.01
7/9/2012		<0.01				
7/10/2012	<0.01		0.0081	<0.01	<0.01	<0.01
1/17/2013		<0.01				
1/18/2013	<0.01		0.0063	<0.01	<0.01	<0.01
7/17/2013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1/13/2014		<0.01				
1/14/2014	<0.01		<0.01	0.006	<0.01	<0.01
7/9/2014	0.0012 (J)	<0.01		0.0019 (J)		0.0016 (J)
7/10/2014			0.0026 (J)		0.0053	
1/12/2015			0.0031 (J)			
1/13/2015		<0.01				
1/14/2015	0.002 (J)			0.0037 (J)	0.0013 (J)	<0.01
7/16/2015		<0.01				
7/17/2015				0.0028 (J)		0.0029 (J)
7/18/2015	<0.01		0.003 (J)		0.0043 (J)	
1/17/2016		<0.01	0.0025 (J)	0.0039 (J)		
1/18/2016	0.0019 (J)				<0.01	<0.01
7/27/2016		<0.01				
7/28/2016			0.0024 (J)	0.0022 (J)		<0.01

Time Series

Constituent: Vanadium (mg/L) Analysis Run 4/19/2021 1:39 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
7/29/2016	0.0031 (J)				0.0052 (J)	
10/25/2016			<0.01			
1/4/2017			<0.01	<0.01	<0.01	
1/5/2017	<0.01	<0.01				
1/6/2017						<0.01
4/4/2017		<0.01	0.0024 (J)	0.003 (J)		
4/5/2017	0.0029 (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	0.0037 (J)	<0.01		0.0019 (J)		
10/2/2017			0.0028 (J)			
1/9/2018				0.0046 (J)		
1/10/2018		<0.01	0.0026 (J)			
1/11/2018	0.0026 (J)				0.0012 (J)	<0.01
7/9/2018			<0.01			
7/10/2018		<0.01		0.0031 (J)		
7/11/2018	0.0032 (J)				0.0025 (J)	<0.01
1/16/2019	<0.01					
1/17/2019				0.0022 (J)		
1/18/2019					<0.01	<0.01
1/21/2019		0.0024 (J)	0.0031 (J)			
3/25/2019			0.0024 (J)			
3/26/2019	0.0024 (J)			0.0041 (J)		
3/27/2019					0.002 (J)	<0.01
7/30/2019		<0.01				
10/8/2019				<0.01		
10/9/2019	<0.01	<0.01	<0.01		<0.01	<0.01
4/7/2020				<0.01	0.0014 (J)	
4/8/2020	<0.01	<0.01	<0.01			0.0015 (J)
9/29/2020		<0.01				
9/30/2020	<0.01		0.0029 (J)	0.0029 (J)	<0.01	
10/1/2020						<0.01
3/10/2021					<0.01	<0.01
3/11/2021	<0.01					
3/12/2021			0.0038 (J)			
3/15/2021		<0.01				
3/16/2021				0.003 (J)		

Time Series

Constituent: Vanadium (mg/L) Analysis Run 4/19/2021 1:39 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
3/11/2021	<0.01	<0.01	0.0024 (J)	<0.01	0.0024 (J)

Time Series

Constituent: Zinc (mg/L) Analysis Run 4/19/2021 1:39 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
9/29/2000	<0.01	<0.01	<0.01	0.026 (o)	<0.02 (o)	<0.01
11/21/2000	<0.01		<0.01	<0.01	0.024 (o)	<0.01
1/20/2001	<0.01	0.025	0.041	0.031 (o)	<0.02 (o)	<0.01
3/14/2001	<0.01	<0.01	<0.01	0.063 (o)	<0.02 (o)	<0.01
7/16/2001	<0.01	<0.01	0.059	0.08 (o)	<0.02 (o)	<0.01
11/1/2001	<0.01	<0.01	<0.01	0.16 (o)	<0.02 (o)	<0.01
4/25/2002	<0.01	<0.01	<0.01	<0.01	<0.02 (o)	<0.01
11/20/2002		0.016	0.061	0.14 (o)	0.028 (o)	<0.01
6/6/2003	0.69 (o)	0.032	0.041	0.51 (o)	0.032 (o)	0.011
12/12/2003	0.12	0.019	0.012	<0.01	<0.01 (o)	<0.01
5/26/2004	0.013	<0.01	0.016	0.036 (o)	<0.01 (o)	<0.01
12/7/2004	<0.01	<0.01	<0.01	0.069 (o)	0.012 (o)	<0.01
6/21/2005	<0.01	<0.01	<0.01	0.076 (o)	<0.01 (o)	<0.01
12/12/2005	0.014	0.01	0.017	<0.01	<0.01 (o)	<0.01
4/4/2006		<0.01				
6/27/2006	0.01	0.0043	0.11	0.01	0.0071	<0.01
8/30/2006		0.017				
12/4/2006	0.0065	0.0053	0.086	0.0035	0.0096	<0.01
2/15/2007		0.0045				
6/23/2007	0.0049	0.0043	0.076	0.0032	0.094 (o)	<0.01
9/11/2007		0.004				
12/11/2007	0.0043	0.0048	0.087	0.0079	0.042 (o)	<0.01
3/11/2008		0.0043				
6/23/2008	0.0025	0.0037				
6/24/2008			0.062	<0.01	0.098 (o)	<0.01
11/3/2008		0.0032				
12/4/2008	0.0025	0.0029				
12/5/2008			0.014	<0.01	0.047 (o)	<0.01
3/25/2009		0.0055				
7/7/2009	<0.01	0.0028	0.052	<0.01	0.024 (o)	<0.01
9/14/2009		0.0027				
12/20/2009	0.0031	0.0029				<0.01
12/21/2009			0.046	<0.01	0.049 (o)	
3/4/2010		0.0042				
6/20/2010	<0.01	0.0027		<0.01	0.045 (o)	<0.01
6/21/2010			0.045			
9/14/2010		<0.01				
1/6/2011				<0.01		<0.01
1/7/2011	<0.01	0.0032	0.024		0.0044	
4/15/2011		<0.01				
7/7/2011	0.0031	0.005		0.0027	0.003	0.0025
7/8/2011			0.023			
9/25/2011		0.0041				
1/17/2012	0.004	0.0043		0.0039		<0.01
1/18/2012			0.011		0.0048	
4/4/2012		<0.01				
7/9/2012	0.0096			<0.01		<0.01
7/10/2012		0.0028	0.024		<0.01	
10/9/2012		0.0033				
1/17/2013				<0.01		<0.01
1/18/2013	0.051	0.0038	0.011		0.0028	
4/5/2013		0.0026				

Time Series

Constituent: Zinc (mg/L) Analysis Run 4/19/2021 1:39 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
7/16/2013				0.0032		<0.01
7/17/2013	0.042	<0.01	0.0029		<0.01	
10/11/2013		0.0046				
1/13/2014	0.0025			0.0025		0.0025
1/14/2014		0.0025	0.0025		0.0025	
4/3/2014		0.0029				
7/9/2014	0.064	0.002 (J)	0.0051	0.00076 (J)	0.00093 (J)	<0.01
10/24/2014		0.0031				
1/12/2015			0.0023 (J)			
1/13/2015	0.066			0.0036		0.0025
1/14/2015		0.003			0.0023 (J)	
5/10/2015		0.0028				
7/16/2015	0.036		0.0021 (J)	<0.01		<0.01
7/17/2015		0.0018 (J)			<0.01	
10/6/2015		0.0018 (J)				
1/17/2016						<0.01
1/18/2016	0.035	0.0028	0.0092	<0.01	0.0029	
4/26/2016		<0.01				
7/27/2016	0.0529			0.0015 (J)		<0.01
7/28/2016		0.0018 (J)			<0.01	
7/29/2016			0.003 (J)			
10/24/2016		0.0024 (J)				
10/25/2016	0.0035 (J)					
1/3/2017		0.0035 (J)		<0.01		
1/4/2017						<0.01
1/5/2017					<0.01	
1/6/2017	0.0235		0.0104			
4/3/2017		0.0041 (J)				
4/4/2017			0.0132			<0.01
4/6/2017	0.0829			0.0023 (J)	0.0032 (J)	
7/11/2017		0.0029 (J)				
7/12/2017			0.0046 (J)	<0.01	0.002 (J)	<0.01
7/13/2017	0.0853					
10/2/2017		0.0026 (J)				
10/4/2017	0.0263					
1/9/2018	0.0665	0.0035 (J)			0.0036 (J)	
1/10/2018				0.0022 (J)		0.0014 (J)
1/11/2018			0.0095 (J)			
7/9/2018		0.0022 (J)				
7/10/2018				<0.01	0.0055 (J)	0.0021 (J)
7/11/2018	0.02 (J)		0.0028 (J)			
1/16/2019	0.014 (J)	0.0037 (J)	0.0052 (J)	<0.01	<0.01	<0.01
3/25/2019	<0.05 (o)	<0.01	0.0078 (J)			
3/26/2019				<0.01	<0.01	<0.01
10/7/2019		0.0077 (J)				
10/8/2019	0.095					
10/9/2019			0.0064 (J)	0.0081 (J)	0.016 (J)	0.0057 (J)
4/6/2020	<0.01	<0.01				
4/7/2020			<0.01	<0.01	<0.01	<0.01
9/28/2020	0.16	0.0092 (J)				0.0092 (J)
9/30/2020				<0.01	<0.01	
10/1/2020			0.0064 (J)			

Time Series

Constituent: Zinc (mg/L) Analysis Run 4/19/2021 1:39 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWB-4R	GWB-5R	GWB-6R	GWC-1
3/10/2021			<0.01	<0.01	<0.01	<0.01
3/11/2021	0.054					
3/12/2021		0.0028 (J)				

Time Series

Constituent: Zinc (mg/L) Analysis Run 4/19/2021 1:39 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
9/29/2000	<0.01	0.38 (o)	<0.01	<0.01	<0.01	<0.01
11/21/2000	<0.01	0.077 (o)	<0.01	<0.01	<0.01	<0.01
1/20/2001	<0.01	0.23 (o)	<0.01	<0.01	<0.01	<0.01
3/14/2001	<0.01	0.24 (o)	<0.01	<0.01	<0.01	<0.01
7/16/2001	<0.01	0.053 (o)	<0.01	<0.01	<0.01	<0.01
11/1/2001	<0.01	0.022 (o)	0.044 (o)	<0.01	<0.01	<0.01
4/25/2002	<0.01	1.2 (o)	<0.01	<0.01	<0.01	<0.01
11/20/2002	<0.01	0.045 (o)	0.023	<0.01	<0.01	<0.01
6/6/2003	<0.01	0.042 (o)	<0.01	<0.01	<0.01	0.035 (o)
12/12/2003	0.013	<0.01	<0.01	<0.01	<0.01	<0.01
5/26/2004	<0.01	<0.01	0.035	<0.01	<0.01	<0.01
12/7/2004	0.028 (o)	<0.01	0.018	<0.01	<0.01	<0.01
6/21/2005	<0.01	<0.01	0.014	<0.01	<0.01	<0.01
12/12/2005	<0.01	<0.01	0.023	0.011	0.064 (o)	<0.01
4/4/2006				<0.01		<0.01
6/27/2006	0.0028	0.012 (o)	0.023	0.0045	0.011	0.077 (o)
8/30/2006				<0.01		0.0027
12/4/2006	0.0028	0.0067	0.046 (o)	<0.01	0.0033	<0.01
2/15/2007				<0.01		0.0032
6/23/2007	0.0063	0.025 (o)	0.036	<0.01	0.0029	0.0058
9/11/2007				<0.01		0.0033
12/11/2007	<0.01	0.0038	0.011	<0.01	<0.01	<0.01
3/11/2008				<0.01		<0.01
6/23/2008	<0.01	0.0051	0.0091			
6/24/2008				<0.01	<0.01	<0.01
11/3/2008				<0.01		0.0025
12/4/2008	<0.01	<0.01	0.0038	<0.01		
12/5/2008					<0.01	<0.01
3/25/2009				<0.01		0.0025
7/8/2009	<0.01	<0.01	<0.01	<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	<0.01	0.013 (o)	0.0032			
3/4/2010				<0.01		<0.01
6/20/2010	<0.01	<0.01	<0.01	<0.01	<0.01	
6/21/2010						<0.01
9/14/2010				<0.01		<0.01
1/6/2011	<0.01		0.004			
1/7/2011		0.004		<0.01	<0.01	<0.01
4/15/2011				<0.01		<0.01
7/7/2011	<0.01	0.0028	0.0037	<0.01	<0.01	<0.01
9/25/2011				<0.01		0.0028
1/17/2012	0.0043	0.0043	0.0031	<0.01	<0.01	
1/18/2012						0.0029
4/4/2012				<0.01		<0.01
7/9/2012	<0.01	<0.01	0.003	<0.01	<0.01	
7/10/2012						<0.01
10/9/2012				<0.01		0.0027
1/17/2013	0.0025	0.0033	<0.01			
1/18/2013				<0.01	<0.01	<0.01
4/5/2013				<0.01		<0.01
7/16/2013	<0.01	0.0028	0.0029			

Time Series

Constituent: Zinc (mg/L) Analysis Run 4/19/2021 1:39 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	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	0.0025		0.0025	
1/14/2014				0.0025		0.0025
4/3/2014				0.0014 (J)		0.0015 (J)
7/8/2014	0.0011 (J)	0.002 (J)	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	0.0021 (J)	0.0079	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	<0.01	0.0026	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		0.0025	0.0017 (J)			
1/19/2016	0.0029					
4/26/2016				<0.01		<0.01
7/26/2016	<0.01		0.0028 (J)			
7/27/2016		0.0021 (J)		<0.01	<0.01	
7/28/2016						<0.01
10/25/2016				<0.01	<0.01	<0.01
1/4/2017	<0.01	0.0025 (J)				0.0025 (J)
1/5/2017			0.0021 (J)	<0.01	<0.01	
4/3/2017				<0.01	<0.01	
4/4/2017				<0.01		
4/5/2017		0.0026 (J)				0.0025 (J)
4/6/2017	0.004 (J)		0.0027 (J)			
7/10/2017		0.0023 (J)				
7/11/2017	<0.01			<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)
1/11/2018	0.0018 (J)	0.0031 (J)				
7/9/2018				<0.01		
7/10/2018					<0.01	0.0031 (J)
7/11/2018	<0.01	0.0036 (J)	0.0039 (J)			
1/16/2019			0.047	<0.01		
1/17/2019	<0.01	0.0032 (J)			<0.01	<0.01
3/26/2019			0.03	<0.01	<0.01	<0.01
3/27/2019	<0.01	0.0031 (J)				
10/8/2019	0.0061 (J)		0.053	0.0052 (J)	0.0051 (J)	0.01
10/9/2019		0.0057 (J)				
4/7/2020	<0.01	<0.01		<0.01	<0.01	<0.01
4/8/2020			0.023			
9/28/2020			0.016			
9/29/2020	0.0031 (J)	0.0074 (J)		<0.01		
9/30/2020					0.032	0.0051 (J)
3/10/2021	<0.01	<0.01				

Time Series

Constituent: Zinc (mg/L) Analysis Run 4/19/2021 1:39 PM
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16
3/12/2021					<0.01	
3/15/2021			0.039			
3/16/2021				<0.01		<0.01

Time Series

Constituent: Zinc (mg/L) Analysis Run 4/19/2021 1:39 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
9/29/2000	<0.01					<0.01
11/21/2000	<0.01	0.021 (o)				<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	0.014	<0.01				0.033 (o)
6/6/2003	0.012	<0.01				<0.01
12/12/2003	<0.01	<0.01				<0.01
5/26/2004	<0.01	<0.01				<0.01
12/7/2004	<0.01	<0.01				<0.01
6/21/2005	<0.01	<0.01				<0.01
12/12/2005	<0.01	0.012				0.032 (o)
6/27/2006	0.0046	<0.01				0.018 (o)
12/4/2006	0.0071	<0.01				0.0044
6/23/2007	0.005	<0.01				0.0041
12/11/2007	0.0033	<0.01				0.0039
6/23/2008						<0.01
6/24/2008	0.0037	<0.01				
12/4/2008		<0.01				0.0039
12/5/2008	0.0027					
7/8/2009	0.0048	<0.01				<0.01
12/20/2009		<0.01				
12/21/2009	0.0032					0.004
6/20/2010		<0.01				<0.01
6/21/2010	0.0028		<0.01	0.04 (o)	<0.01	
1/6/2011		<0.01				
1/7/2011	0.003		<0.01	<0.01	0.019	0.0032
7/7/2011			<0.01			
7/8/2011	0.0034		0.086 (Jo)	0.0044	0.1 (o)	0.0025
1/17/2012		<0.01				
1/18/2012	0.0049		<0.01	<0.01	0.0051	0.0045
7/9/2012		<0.01				
7/10/2012	0.0039		<0.01	<0.01	0.01	<0.01
1/17/2013		<0.01				
1/18/2013	0.0043		0.0032	<0.01	0.0036	0.0029
7/17/2013	0.0035	<0.01	<0.01	<0.01	0.0025	<0.01
1/13/2014		0.0025				
1/14/2014	0.0025		0.0025	0.0025	0.0025	0.0025
7/9/2014	0.0033	0.00058 (J)		0.00084 (J)		0.0016 (J)
7/10/2014			<0.01		0.024	
1/12/2015			<0.01			
1/13/2015		0.0024 (J)				
1/14/2015	0.0067			0.0018 (J)	0.0016 (J)	0.0024 (J)
7/16/2015		<0.01				
7/17/2015				<0.01		0.0031
7/18/2015	<0.01		<0.01		0.014	
1/17/2016		<0.01	<0.01	<0.01		
1/18/2016	0.012				<0.01	0.0059
7/27/2016		0.0018 (J)				
7/28/2016			<0.01	<0.01		0.0019 (J)

Time Series

Constituent: Zinc (mg/L) Analysis Run 4/19/2021 1:39 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9
7/29/2016	0.0086 (J)				0.0129	
10/25/2016			<0.01			
1/4/2017			<0.01	<0.01	0.006 (J)	
1/5/2017	0.016	<0.01				
1/6/2017						0.0026 (J)
4/4/2017		0.0015 (J)	<0.01	0.0015 (J)		
4/5/2017	0.0175					
4/6/2017					0.0031 (J)	0.0047 (J)
7/11/2017			<0.01		0.0029 (J)	
7/12/2017						0.003 (J)
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				0.0106	0.0046 (J)
7/9/2018			<0.01			
7/10/2018		<0.01		<0.01		
7/11/2018	0.011				0.0057 (J)	0.0033 (J)
1/16/2019	0.0094 (J)					
1/17/2019				<0.01		
1/18/2019					0.0024 (J)	0.0025 (J)
1/21/2019		<0.01	<0.01			
3/25/2019			<0.01			
3/26/2019	0.0057 (J)			<0.01		
3/27/2019					<0.01	0.0026 (J)
7/30/2019		0.0067 (J)				
10/8/2019				0.0071 (J)		
10/9/2019	0.011	0.005 (J)	0.0049 (J)		0.0079 (J)	0.0054 (J)
4/7/2020				<0.01	<0.01	
4/8/2020	<0.01	<0.01	<0.01			<0.01
9/29/2020		0.056				
9/30/2020	0.0043 (J)		0.031	0.0096 (J)	<0.01	
10/1/2020						0.025
3/10/2021					<0.01	<0.01
3/11/2021	0.0056 (J)					
3/12/2021			<0.01			
3/15/2021		<0.01				
3/16/2021				<0.01		

Time Series

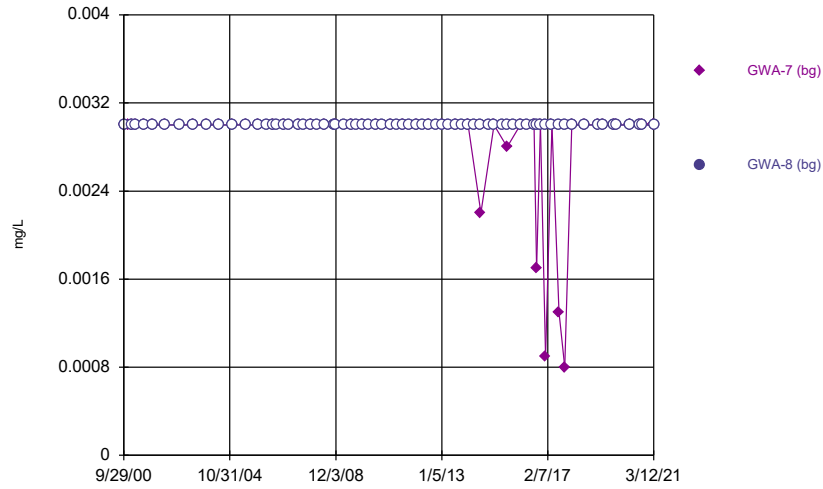
Constituent: Zinc (mg/L) Analysis Run 4/19/2021 1:39 PM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	MW-23D	MW-24D	MW-25D	MW-26D	MW-27D
3/11/2021	0.0067 (J)	0.0025 (J)	0.0054 (J)	0.008 (J)	0.0066 (J)

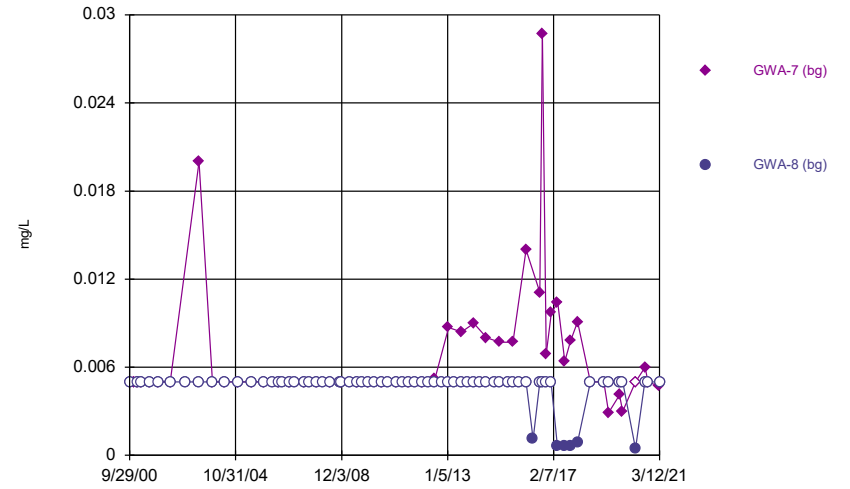
FIGURE A. Upgradient Wells

Time Series



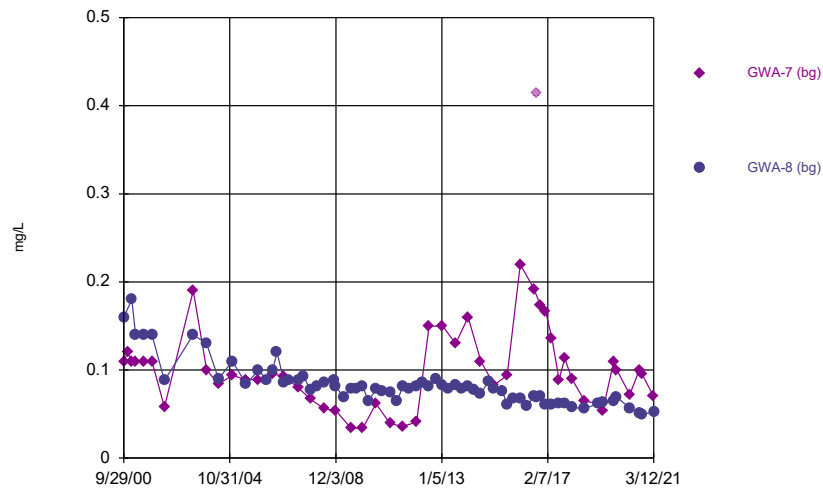
Constituent: Antimony Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



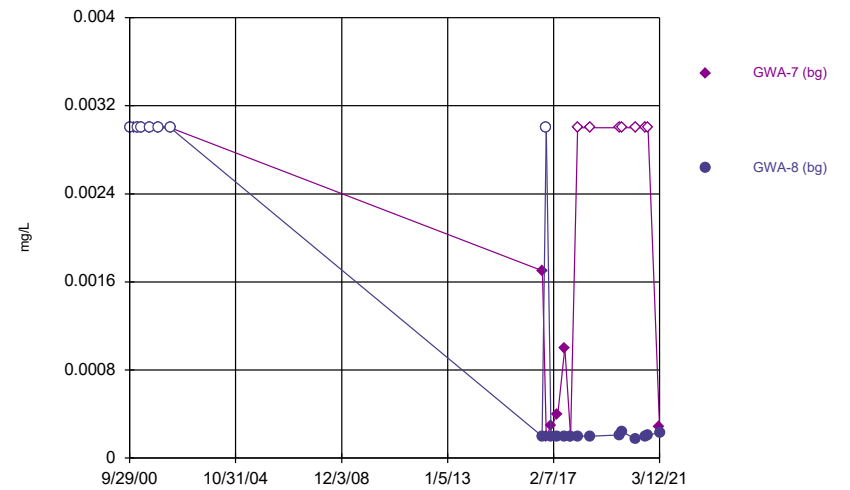
Constituent: Arsenic Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



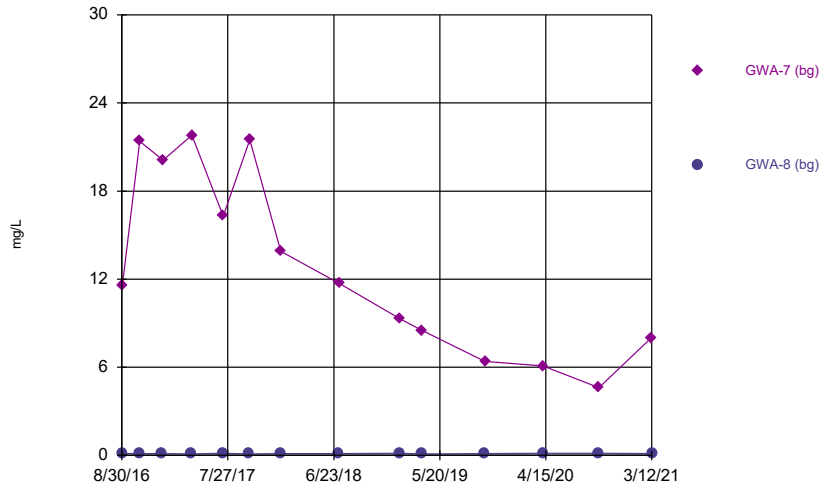
Constituent: Barium Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



Constituent: Beryllium Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

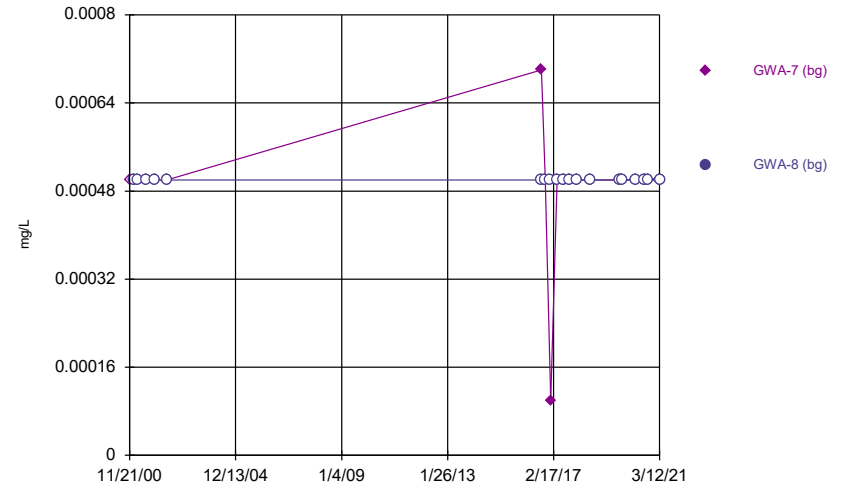
Time Series



Constituent: Boron Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

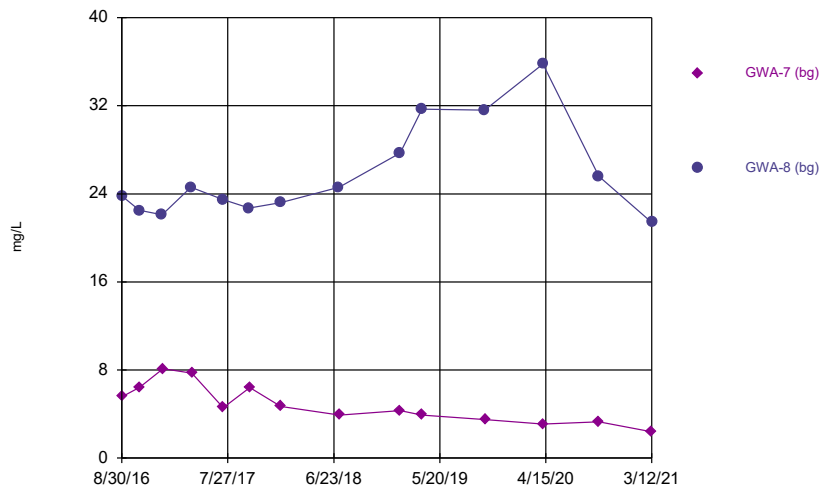
Hollow symbols indicate censored values.

Time Series



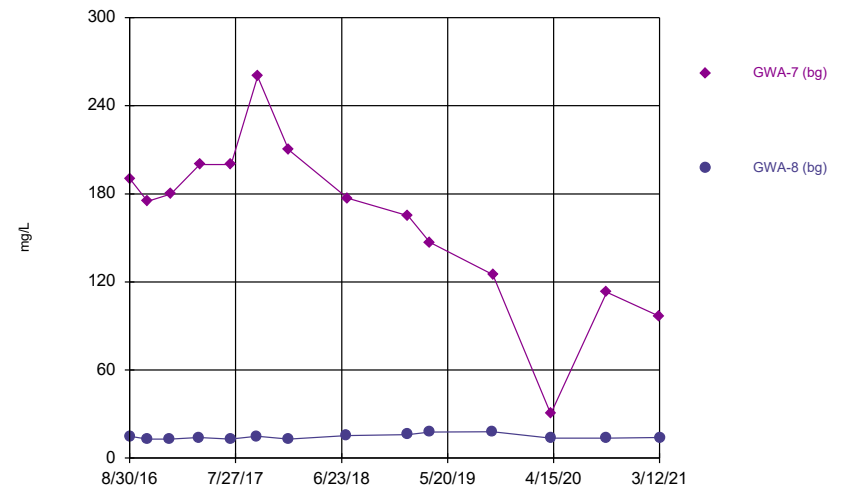
Constituent: Cadmium Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



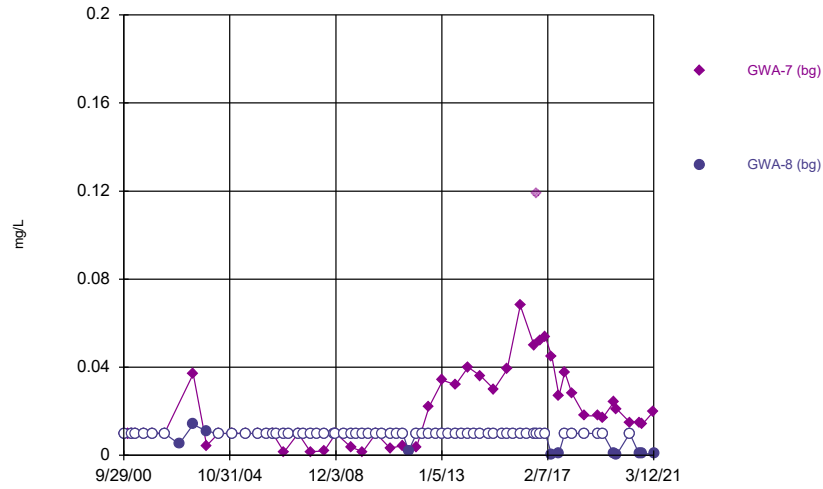
Constituent: Calcium Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



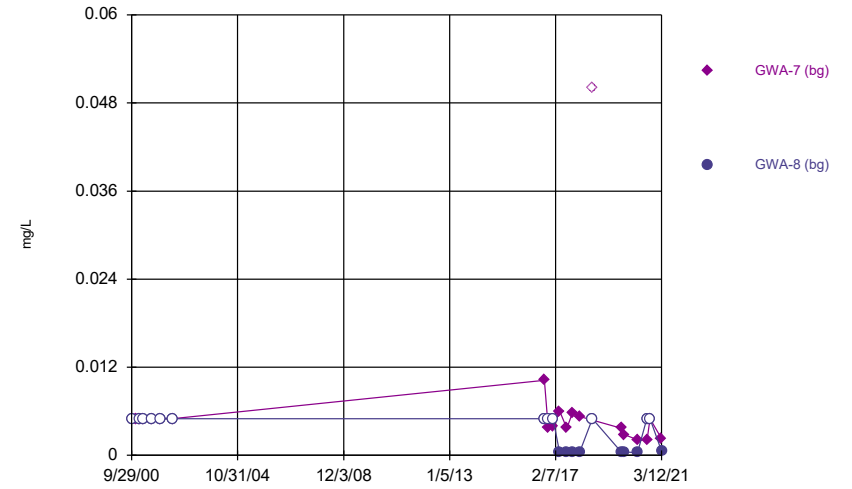
Constituent: Chloride Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



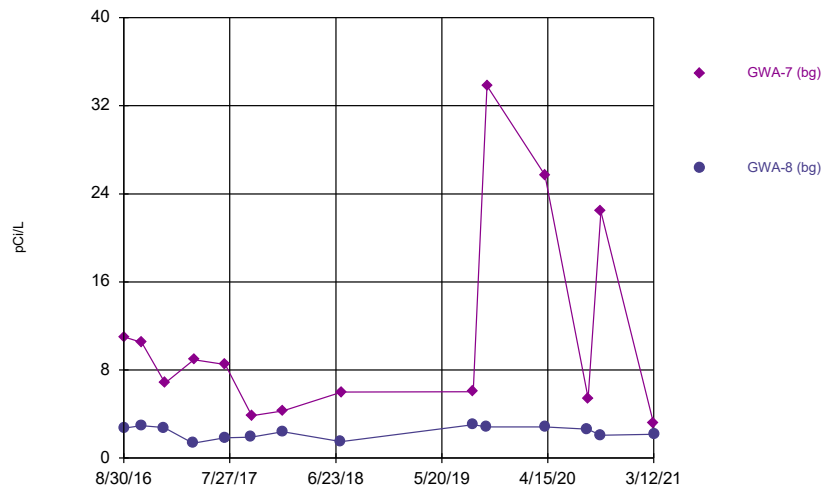
Constituent: Chromium Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



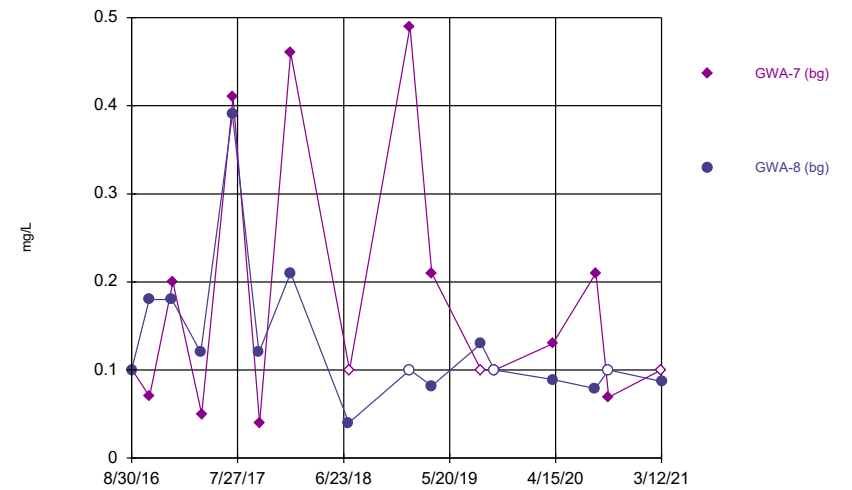
Constituent: Cobalt Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



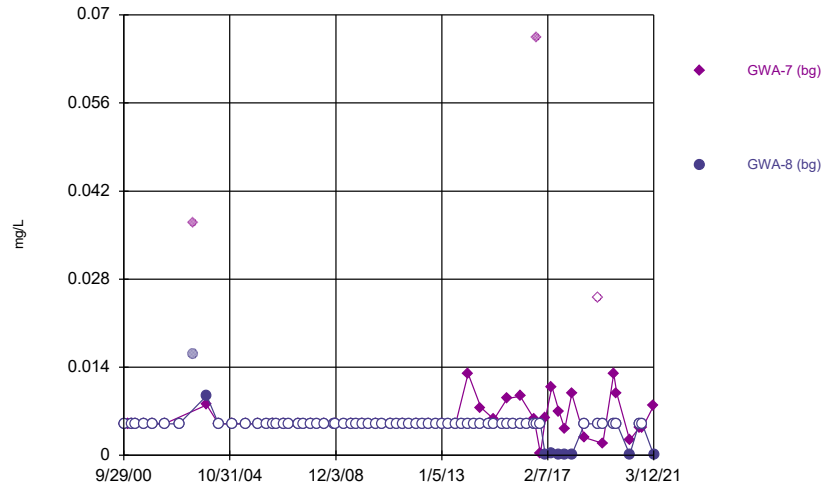
Constituent: Combined Radium 226 + 228 Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



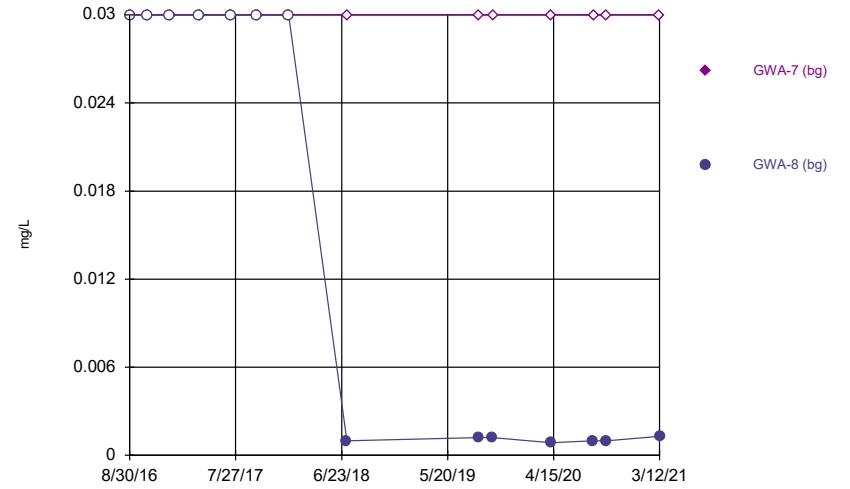
Constituent: Fluoride Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



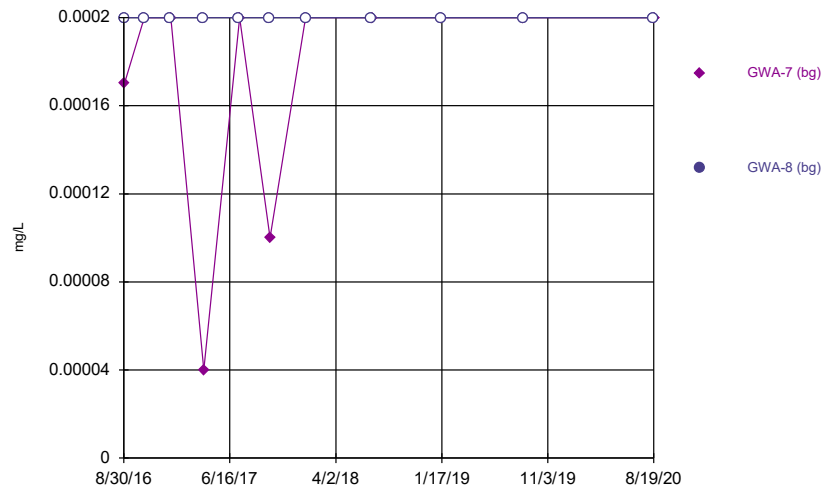
Constituent: Lead Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



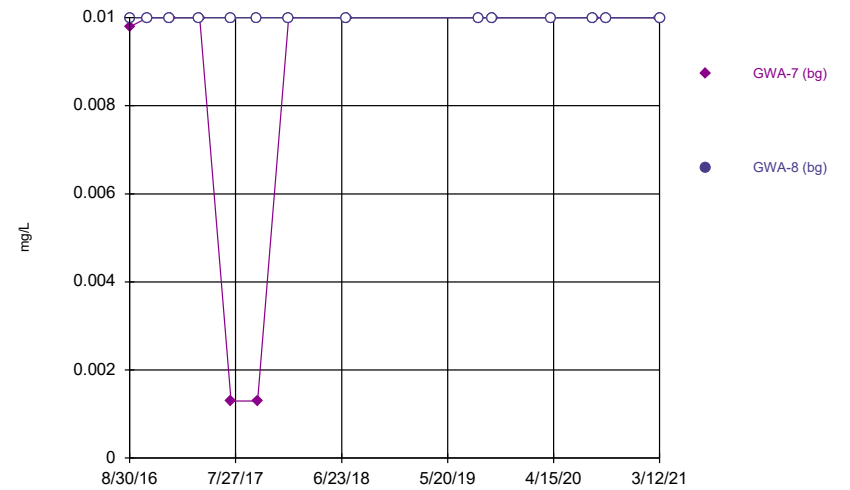
Constituent: Lithium Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



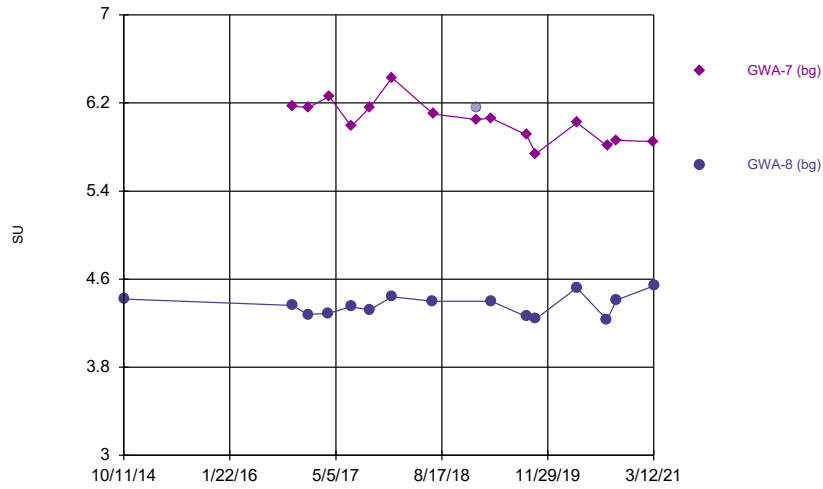
Constituent: Mercury Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



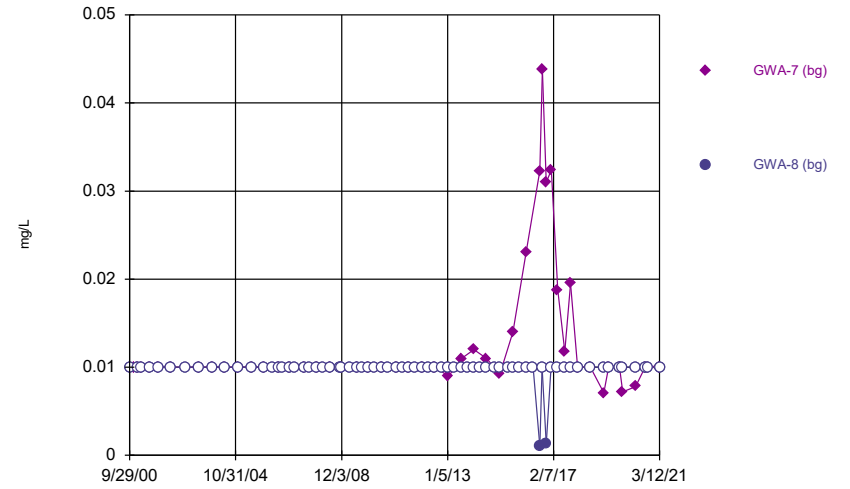
Constituent: Molybdenum Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



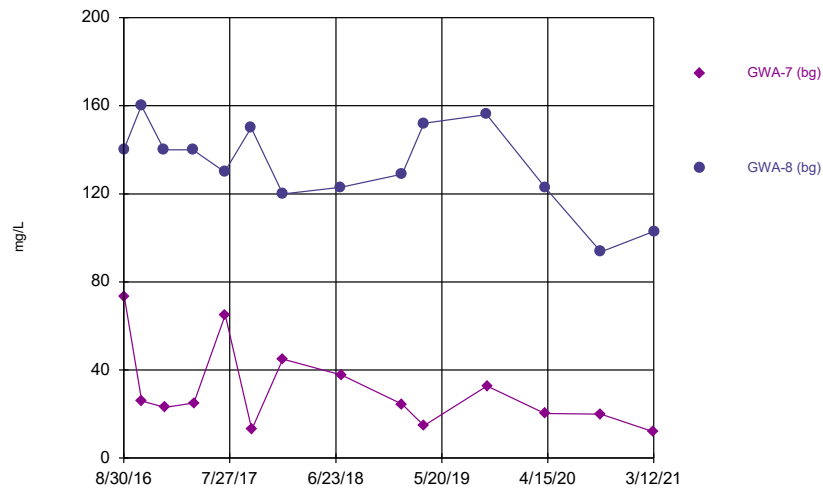
Constituent: pH Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



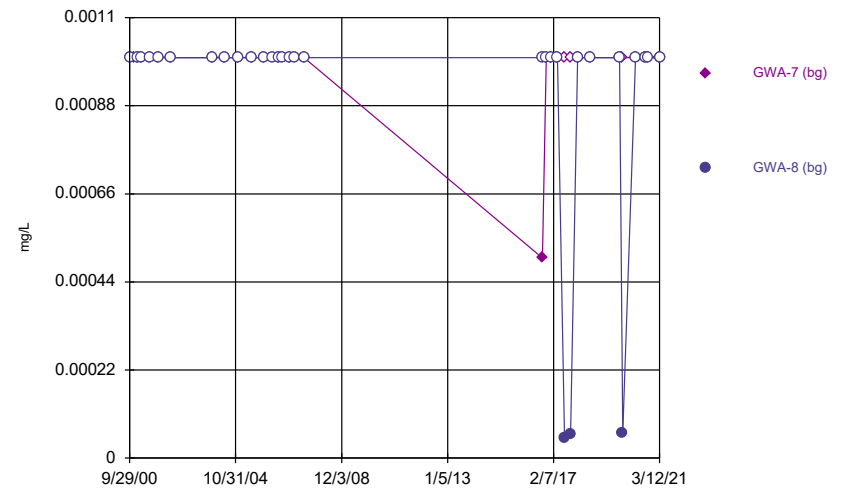
Constituent: Selenium Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



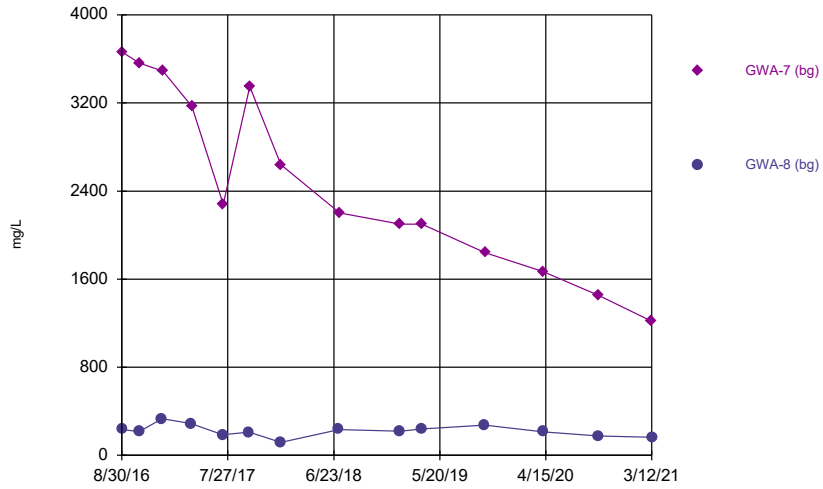
Constituent: Sulfate Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series



Constituent: Thallium Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

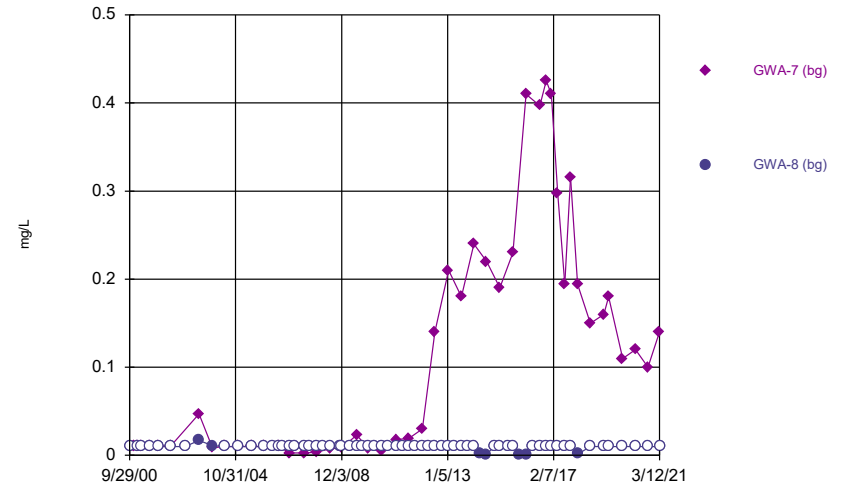
Time Series



Constituent: Total Dissolved Solids Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Hollow symbols indicate censored values.

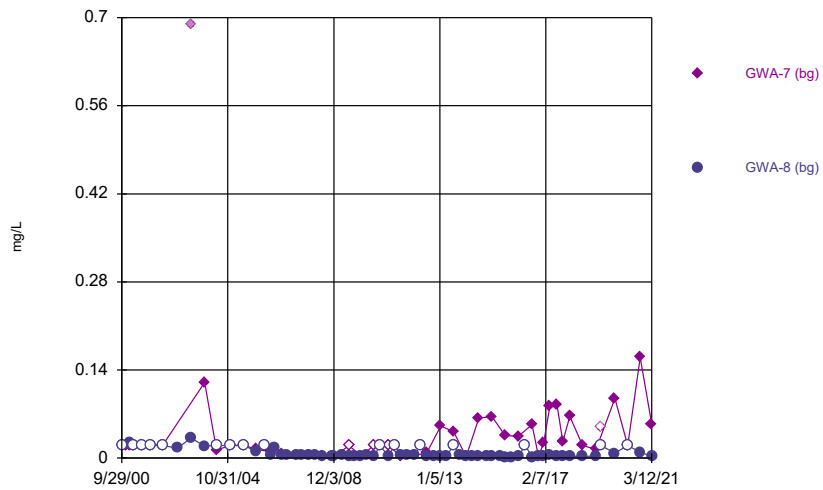
Time Series



Constituent: Vanadium Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Hollow symbols indicate censored values.

Time Series



Constituent: Zinc Analysis Run 4/20/2021 9:59 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Time Series

Constituent: Antimony (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
9/29/2000	<0.003	<0.003
11/21/2000	<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
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	<0.003	<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	<0.003
11/3/2008		<0.003
12/4/2008	<0.003	<0.003
3/25/2009		<0.003
7/7/2009	<0.003	<0.003
9/14/2009		<0.003
12/20/2009	<0.003	<0.003
3/4/2010		<0.003
6/20/2010	<0.003	<0.003
9/14/2010		<0.003
1/7/2011	<0.003	<0.003
4/15/2011		<0.003
7/7/2011	<0.003	<0.003
9/25/2011		<0.003
1/17/2012	<0.003	<0.003
4/4/2012		<0.003
7/9/2012	<0.003	
7/10/2012		<0.003
10/9/2012		<0.003
1/18/2013	<0.003	<0.003
4/5/2013		<0.003
7/17/2013	<0.003	<0.003
10/11/2013		<0.003
1/13/2014	<0.003	
1/14/2014		<0.003
4/3/2014		<0.003
7/9/2014	0.0022 (J)	<0.003
10/24/2014		<0.003
1/13/2015	<0.003	

Time Series

Constituent: Antimony (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
1/14/2015		<0.003
5/10/2015		<0.003
7/16/2015	0.0028 (J)	
7/17/2015		<0.003
10/6/2015		<0.003
1/18/2016	<0.003	<0.003
4/26/2016		<0.003
7/27/2016	<0.003	
7/28/2016		<0.003
8/30/2016		<0.003
9/1/2016	0.0017 (J)	
10/24/2016		<0.003
10/25/2016	<0.003	
1/3/2017		<0.003
1/6/2017	0.0009 (J)	
4/3/2017		<0.003
4/6/2017	<0.003	
7/11/2017		<0.003
7/13/2017	0.0013 (J)	
10/2/2017		<0.003
10/4/2017	0.0008 (J)	
1/9/2018	<0.003	<0.003
7/9/2018		<0.003
7/11/2018	<0.003	
1/16/2019	<0.003	<0.003
3/25/2019	<0.003	<0.003
8/26/2019	<0.003	<0.003
10/7/2019		<0.003
10/8/2019	<0.003	
4/6/2020	<0.003	<0.003
8/17/2020		<0.003
8/19/2020	<0.003	
9/28/2020	<0.003	<0.003
3/11/2021	<0.003	
3/12/2021		<0.003

Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
9/29/2000	<0.005	<0.005
11/21/2000	<0.005	
1/20/2001	<0.005	<0.005
3/14/2001	<0.005	<0.005
7/16/2001	<0.005	<0.005
11/1/2001	<0.005	<0.005
4/25/2002	<0.005	<0.005
11/20/2002		<0.005
6/6/2003	0.02	<0.005
12/12/2003	<0.005	<0.005
5/26/2004	<0.005	<0.005
12/7/2004	<0.005	<0.005
6/21/2005	<0.005	<0.005
12/12/2005	<0.005	<0.005
4/4/2006		<0.005
6/27/2006	<0.005	<0.005
8/30/2006		<0.005
12/4/2006	<0.005	<0.005
2/15/2007		<0.005
6/23/2007	<0.005	<0.005
9/11/2007		<0.005
12/11/2007	<0.005	<0.005
3/11/2008		<0.005
6/23/2008	<0.005	<0.005
11/3/2008		<0.005
12/4/2008	<0.005	<0.005
3/25/2009		<0.005
7/7/2009	<0.005	<0.005
9/14/2009		<0.005
12/20/2009	<0.005	<0.005
3/4/2010		<0.005
6/20/2010	<0.005	<0.005
9/14/2010		<0.005
1/7/2011	<0.005	<0.005
4/15/2011		<0.005
7/7/2011	<0.005	<0.005
9/25/2011		<0.005
1/17/2012	<0.005	<0.005
4/4/2012		<0.005
7/9/2012	0.0052	
7/10/2012		<0.005
10/9/2012		<0.005
1/18/2013	0.0087	<0.005
4/5/2013		<0.005
7/17/2013	0.0084	<0.005
10/11/2013		<0.005
1/13/2014	0.009	
1/14/2014		<0.005
4/3/2014		<0.005
7/9/2014	0.008	<0.005
10/24/2014		<0.005
1/13/2015	0.0077	

Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
1/14/2015		<0.005
5/10/2015		<0.005
7/16/2015	0.0077	
7/17/2015		<0.005
10/6/2015		<0.005
1/18/2016	0.014	<0.005
4/26/2016		0.0011 (J)
7/27/2016	0.0111	
7/28/2016		<0.005
8/30/2016		<0.005
9/1/2016	0.0287	
10/24/2016		<0.005
10/25/2016	0.0069	
1/3/2017		<0.005
1/6/2017	0.0097	
4/3/2017		0.0006 (J)
4/6/2017	0.0104	
7/11/2017		0.0006 (J)
7/13/2017	0.0064	
10/2/2017		0.0006 (J)
10/4/2017	0.0078	
1/9/2018	0.0091 (J)	0.0009 (J)
7/9/2018		<0.005
7/11/2018	<0.005	
1/16/2019	<0.005	<0.005
3/25/2019	0.0029 (J)	<0.005
8/26/2019	0.0041 (J)	<0.005
10/7/2019		<0.005
10/8/2019	0.003 (J)	
4/6/2020	<0.005	0.00045 (J)
8/17/2020		<0.005
8/19/2020	0.006 (J)	
9/28/2020	<0.005	<0.005
3/11/2021	0.0047 (J)	
3/12/2021		<0.005

Time Series

Constituent: Barium (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
9/29/2000	0.11	0.16
11/21/2000	0.12	
1/20/2001	0.11	0.18
3/14/2001	0.11	0.14
7/16/2001	0.11	0.14
11/1/2001	0.11	0.14
4/25/2002	0.058	0.088
6/6/2003	0.19	0.14
12/12/2003	0.1	0.13
5/26/2004	0.084	0.09
12/7/2004	0.094	0.11
6/21/2005	0.089	0.084
12/12/2005	0.089	0.1
4/4/2006		0.089
6/27/2006	0.096	0.1
8/30/2006		0.12
12/4/2006	0.092	0.086
2/15/2007		0.088
6/23/2007	0.08	0.089
9/11/2007		0.092
12/11/2007	0.067	0.077
3/11/2008		0.082
6/23/2008	0.056	0.086
11/3/2008		0.088
12/4/2008	0.054	0.081
3/25/2009		0.069
7/7/2009	0.034	0.078
9/14/2009		0.079
12/20/2009	0.034	0.081
3/4/2010		0.065
6/20/2010	0.062	0.078
9/14/2010		0.076
1/7/2011	0.039	0.074
4/15/2011		0.065
7/7/2011	0.036	0.081
9/25/2011		0.078
1/17/2012	0.041	0.082
4/4/2012		0.0861
7/9/2012	0.15	
7/10/2012		0.082
10/9/2012		0.09
1/18/2013	0.15	0.083
4/5/2013		0.078
7/17/2013	0.13	0.083
10/11/2013		0.078
1/13/2014	0.16	
1/14/2014		0.081
4/3/2014		0.077
7/9/2014	0.11	0.073
10/24/2014		0.087
1/13/2015	0.083	
1/14/2015		0.079

Time Series

Constituent: Barium (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
5/10/2015		0.076
7/16/2015	0.094	
7/17/2015		0.061
10/6/2015		0.067
1/18/2016	0.22	0.068
4/26/2016		0.0596
7/27/2016	0.192	
7/28/2016		0.0701
8/30/2016		0.0687
9/1/2016	0.415 (o)	
10/24/2016		0.07
10/25/2016	0.173	
1/3/2017		0.061
1/6/2017	0.167	
4/3/2017		0.0612
4/6/2017	0.136	
7/11/2017		0.0624
7/13/2017	0.0891	
10/2/2017		0.0618
10/4/2017	0.113	
1/9/2018	0.0901	0.0574
7/9/2018		0.056
7/11/2018	0.065	
1/16/2019	0.062	0.062
3/25/2019	0.054	0.064
8/26/2019	0.11	0.065
10/7/2019		0.069
10/8/2019	0.1	
4/6/2020	0.072	0.057
8/17/2020		0.051
8/19/2020	0.1	
9/28/2020	0.095	0.05
3/11/2021	0.07	
3/12/2021		0.052

Time Series

Constituent: Beryllium (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
9/29/2000	<0.003	<0.003
11/21/2000	<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
8/30/2016		0.0002 (J)
9/1/2016	0.0017 (J)	
10/24/2016		<0.003
10/25/2016	0.0002 (J)	
1/3/2017		0.0002 (J)
1/6/2017	0.0003 (J)	
4/3/2017		0.0002 (J)
4/6/2017	0.0004 (J)	
7/11/2017		0.0002 (J)
7/13/2017	0.001 (J)	
10/2/2017		0.0002 (J)
10/4/2017	0.0002 (J)	
1/9/2018	<0.003	0.0002 (J)
7/9/2018		0.0002 (J)
7/11/2018	<0.003	
8/26/2019	<0.003	0.00021 (J)
10/7/2019		0.00024 (J)
10/8/2019	<0.003	
4/6/2020	<0.003	0.00017 (J)
8/17/2020		0.00019 (J)
8/19/2020	<0.003	
9/28/2020	<0.003	0.00021 (J)
3/11/2021	0.00028 (J)	
3/12/2021		0.00023 (J)

Time Series

Constituent: Boron (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
8/30/2016		0.117
9/1/2016	11.6	
10/24/2016		0.126
10/25/2016	21.4	
1/3/2017		0.124
1/6/2017	20.1	
4/3/2017		0.105
4/6/2017	21.8	
7/11/2017		0.136
7/13/2017	16.3	
10/2/2017		0.107
10/4/2017	21.5	
1/9/2018	13.9	0.123
7/9/2018		0.11
7/11/2018	11.7	
1/16/2019	9.3	0.13
3/25/2019	8.5	0.098
10/7/2019		0.12
10/8/2019	6.4	
4/6/2020	6.1	0.14
9/28/2020	4.6	0.15
3/11/2021	8	
3/12/2021		0.11

Time Series

Constituent: Cadmium (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
11/21/2000	<0.0005	
1/20/2001	<0.0005	<0.0005
3/14/2001	<0.0005	<0.0005
7/16/2001	<0.0005	<0.0005
11/1/2001	<0.0005	<0.0005
4/25/2002	<0.0005	<0.0005
8/30/2016		<0.0005
9/1/2016	0.0007 (J)	
10/24/2016		<0.0005
10/25/2016	<0.0005	
1/3/2017		<0.0005
1/6/2017	0.0001 (J)	
4/3/2017		<0.0005
4/6/2017	<0.0005	
7/11/2017		<0.0005
7/13/2017	<0.0005	
10/2/2017		<0.0005
10/4/2017	<0.0005	
1/9/2018	<0.0005	<0.0005
7/9/2018		<0.0005
7/11/2018	<0.0005	
8/26/2019	<0.0005	<0.0005
10/7/2019		<0.0005
10/8/2019	<0.0005	
4/6/2020	<0.0005	<0.0005
8/17/2020		<0.0005
8/19/2020	<0.0005	
9/28/2020	<0.0005	<0.0005
3/11/2021	<0.0005	
3/12/2021		<0.0005

Time Series

Constituent: Calcium (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
8/30/2016		23.8
9/1/2016	5.59	
10/24/2016		22.5
10/25/2016	6.43	
1/3/2017		22.1
1/6/2017	8.13	
4/3/2017		24.6 (J)
4/6/2017	7.72	
7/11/2017		23.5
7/13/2017	4.57	
10/2/2017		22.7
10/4/2017	6.41	
1/9/2018	4.68	23.2
7/9/2018		24.6 (J)
7/11/2018	3.9	
1/16/2019	4.3	27.7
3/25/2019	3.9	31.7
10/7/2019		31.6
10/8/2019	3.5	
4/6/2020	3.1	35.8
9/28/2020	3.3	25.6
3/11/2021	2.4	
3/12/2021		21.4

Time Series

Constituent: Chloride (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
8/30/2016		15
9/1/2016	190	
10/24/2016		13
10/25/2016	175 (D)	
1/3/2017		13
1/6/2017	180	
4/3/2017		14
4/6/2017	200	
7/11/2017		13
7/13/2017	200	
10/2/2017		15
10/4/2017	260	
1/9/2018	210	13
7/9/2018		15.4
7/11/2018	177	
1/16/2019	165	16
3/25/2019	147	17.7
10/7/2019		18
10/8/2019	125	
4/6/2020	30.2	13.5
9/28/2020	113	13.7
3/11/2021	96.7	
3/12/2021		14.1

Time Series

Constituent: Chromium (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
9/29/2000	<0.01	<0.01
11/21/2000	<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		0.0051
6/6/2003	0.037	0.014
12/12/2003	0.0044	0.011
5/26/2004	<0.01	<0.01
12/7/2004	<0.01	<0.01
6/21/2005	<0.01	<0.01
12/12/2005	<0.01	<0.01
4/4/2006		<0.01
6/27/2006	<0.01	<0.01
8/30/2006		<0.01
12/4/2006	0.0015	<0.01
2/15/2007		<0.01
6/23/2007	<0.01	<0.01
9/11/2007		<0.01
12/11/2007	0.0016	<0.01
3/11/2008		<0.01
6/23/2008	0.0019	<0.01
11/3/2008		<0.01
12/4/2008	<0.01	<0.01
3/25/2009		<0.01
7/7/2009	0.0037	<0.01
9/14/2009		<0.01
12/20/2009	0.0016	<0.01
3/4/2010		<0.01
6/20/2010	<0.01	<0.01
9/14/2010		<0.01
1/7/2011	0.0033	<0.01
4/15/2011		<0.01
7/7/2011	0.0044	<0.01
9/25/2011		0.0021
1/17/2012	0.0038	<0.01
4/4/2012		<0.01
7/9/2012	0.022	
7/10/2012		<0.01
10/9/2012		<0.01
1/18/2013	0.034	<0.01
4/5/2013		<0.01
7/17/2013	0.032	<0.01
10/11/2013		<0.01
1/13/2014	0.04	
1/14/2014		<0.01
4/3/2014		<0.01
7/9/2014	0.036	<0.01
10/24/2014		<0.01
1/13/2015	0.03	

Time Series

Constituent: Chromium (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
1/14/2015		<0.01
5/10/2015		<0.01
7/16/2015	0.039	
7/17/2015		<0.01
10/6/2015		<0.01
1/18/2016	0.068	<0.01
4/26/2016		<0.01
7/27/2016	0.05	
7/28/2016		<0.01
8/30/2016		<0.01
9/1/2016	0.119 (o)	
10/24/2016		<0.01
10/25/2016	0.0519	
1/3/2017		<0.01
1/6/2017	0.0536	
4/3/2017		0.0004 (J)
4/6/2017	0.0447 (J)	
7/11/2017		0.0006 (J)
7/13/2017	0.0269	
10/2/2017		<0.01
10/4/2017	0.0378	
1/9/2018	0.0283 (J)	<0.01
7/9/2018		<0.01
7/11/2018	0.018 (J)	
1/16/2019	0.018 (J)	<0.01
3/25/2019	0.017 (J)	<0.01
8/26/2019	0.024 (J)	0.001 (J)
10/7/2019		0.00052 (J)
10/8/2019	0.021 (J)	
4/6/2020	0.015 (J)	<0.01
8/17/2020		0.00082 (J)
8/19/2020	0.015 (J)	
9/28/2020	0.014 (J)	0.00071 (J)
3/11/2021	0.02 (J)	
3/12/2021		0.00074 (J)

Time Series

Constituent: Cobalt (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
9/29/2000	<0.005	<0.005
11/21/2000	<0.005	
1/20/2001	<0.005	<0.005
3/14/2001	<0.005	<0.005
7/16/2001	<0.005	<0.005
11/1/2001	<0.005	<0.005
4/25/2002	<0.005	<0.005
8/30/2016		<0.005
9/1/2016	0.0102	
10/24/2016		<0.005
10/25/2016	0.0037 (J)	
1/3/2017		<0.005
1/6/2017	0.0039 (J)	
4/3/2017		0.0005 (J)
4/6/2017	0.006 (J)	
7/11/2017		0.0005 (J)
7/13/2017	0.0037 (J)	
10/2/2017		0.0004 (J)
10/4/2017	0.0058 (J)	
1/9/2018	0.0053 (J)	0.0004 (J)
7/9/2018		<0.005
7/11/2018	<0.05 (o)	
8/26/2019	0.0037 (J)	0.00042 (J)
10/7/2019		0.00046 (J)
10/8/2019	0.0028 (J)	
4/6/2020	0.0021 (J)	0.00036 (J)
8/17/2020		<0.005
8/19/2020	0.0021 (J)	
9/28/2020	<0.005	<0.005
3/11/2021	0.0023 (J)	
3/12/2021		0.00058 (J)

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
8/30/2016		2.72
9/1/2016	11	
10/24/2016		2.96
10/25/2016	10.5	
1/3/2017		2.76
1/6/2017	6.81	
4/3/2017		1.36
4/6/2017	8.93	
7/11/2017		1.85
7/13/2017	8.51	
10/2/2017		1.9
10/4/2017	3.85	
1/9/2018	4.28	2.39
7/9/2018		1.49
7/11/2018	5.99	
8/26/2019	6.03	3.03
10/7/2019		2.83
10/8/2019	33.8	
4/6/2020	25.7	2.83
8/17/2020		2.63
8/19/2020	5.45	
9/28/2020	22.4	2.08
3/11/2021	3.22	
3/12/2021		2.17

Time Series

Constituent: Fluoride (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
8/30/2016		0.1 (J)
9/1/2016	<0.1	
10/24/2016		0.18 (J)
10/25/2016	0.07 (J)	
1/3/2017		0.18 (J)
1/6/2017	0.2 (J)	
4/3/2017		0.12 (J)
4/6/2017	0.05 (J)	
7/11/2017		0.39
7/13/2017	0.41	
10/2/2017		0.12 (J)
10/4/2017	0.04 (J)	
1/9/2018	0.46	0.21 (J)
7/9/2018		0.04 (J)
7/11/2018	<0.1	
1/16/2019	0.49	<0.1
3/25/2019	0.21 (J)	0.082 (J)
8/26/2019	<0.1	0.13
10/7/2019		<0.1
10/8/2019	<0.1	
4/6/2020	0.13 (J)	0.089 (J)
8/17/2020		0.079 (J)
8/19/2020	0.21	
9/28/2020	0.069 (J)	<0.1
3/11/2021	<0.1	
3/12/2021		0.087 (J)

Time Series

Constituent: Lead (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
9/29/2000	<0.005	<0.005
11/21/2000	<0.005	
1/20/2001	<0.005	<0.005
3/14/2001	<0.005	<0.005
7/16/2001	<0.005	<0.005
11/1/2001	<0.005	<0.005
4/25/2002	<0.005	<0.005
11/20/2002		<0.005
6/6/2003	0.037 (o)	0.016 (o)
12/12/2003	0.008	0.0095
5/26/2004	<0.005	<0.005
12/7/2004	<0.005	<0.005
6/21/2005	<0.005	<0.005
12/12/2005	<0.005	<0.005
4/4/2006		<0.005
6/27/2006	<0.005	<0.005
8/30/2006		<0.005
12/4/2006	<0.005	<0.005
2/15/2007		<0.005
6/23/2007	<0.005	<0.005
9/11/2007		<0.005
12/11/2007	<0.005	<0.005
3/11/2008		<0.005
6/23/2008	<0.005	<0.005
11/3/2008		<0.005
12/4/2008	<0.005	<0.005
3/25/2009		<0.005
7/7/2009	<0.005	<0.005
9/14/2009		<0.005
12/20/2009	<0.005	<0.005
3/4/2010		<0.005
6/20/2010	<0.005	<0.005
9/14/2010		<0.005
1/7/2011	<0.005	<0.005
4/15/2011		<0.005
7/7/2011	<0.005	<0.005
9/25/2011		<0.005
1/17/2012	<0.005	<0.005
4/4/2012		<0.005
7/9/2012	<0.005	
7/10/2012		<0.005
10/9/2012		<0.005
1/18/2013	<0.005	<0.005
4/5/2013		<0.005
7/17/2013	<0.005	<0.005
10/11/2013		<0.005
1/13/2014	0.013	
1/14/2014		<0.005
4/3/2014		<0.005
7/9/2014	0.0076 (J)	<0.005
10/24/2014		<0.005
1/13/2015	0.0057 (J)	

Time Series

Constituent: Lead (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
1/14/2015		<0.005
5/10/2015		<0.005
7/16/2015	0.009 (J)	
7/17/2015		<0.005
10/6/2015		<0.005
1/18/2016	0.0094 (J)	<0.005
4/26/2016		<0.005
7/27/2016	0.0058	
7/28/2016		<0.005
8/30/2016		<0.005
9/1/2016	0.0663 (o)	
10/24/2016		<0.005
10/25/2016	0.0003 (J)	
1/3/2017		0.0001 (J)
1/6/2017	0.006	
4/3/2017		0.0002 (J)
4/6/2017	0.0109	
7/11/2017		0.0001 (J)
7/13/2017	0.007	
10/2/2017		0.0001 (J)
10/4/2017	0.0042 (J)	
1/9/2018	0.0098	0.0001 (J)
7/9/2018		<0.005
7/11/2018	0.0028 (J)	
1/16/2019	<0.025 (o)	<0.005
3/25/2019	0.0019 (J)	<0.005
8/26/2019	0.013 (J)	<0.005
10/7/2019		<0.005
10/8/2019	0.0098 (J)	
4/6/2020	0.0024 (J)	0.0001 (J)
8/17/2020		<0.005
8/19/2020	0.0044 (J)	
9/28/2020	0.0043 (J)	<0.005
3/11/2021	0.0079	
3/12/2021		9.3E-05 (J)

Time Series

Constituent: Lithium (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
8/30/2016		<0.03
9/1/2016	<0.03	
10/24/2016		<0.03
10/25/2016	<0.03	
1/3/2017		<0.03
1/6/2017	<0.03	
4/3/2017		<0.03
4/6/2017	<0.03	
7/11/2017		<0.03
7/13/2017	<0.03	
10/2/2017		<0.03
10/4/2017	<0.03	
1/9/2018	<0.03	<0.03
7/9/2018		0.001 (J)
7/11/2018	<0.03	
8/26/2019	<0.03	0.0012 (J)
10/7/2019		0.0012 (J)
10/8/2019	<0.03	
4/6/2020	<0.03	0.00086 (J)
8/17/2020		0.001 (J)
8/19/2020	<0.03	
9/28/2020	<0.03	0.001 (J)
3/11/2021	<0.03	
3/12/2021		0.0013 (J)

Time Series

Constituent: Mercury (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
8/30/2016		<0.0002
9/1/2016	0.00017 (J)	
10/24/2016		<0.0002
10/25/2016	<0.0002	
1/3/2017		<0.0002
1/6/2017	<0.0002	
4/3/2017		<0.0002
4/6/2017	4E-05 (J)	
7/11/2017		<0.0002
7/13/2017	<0.0002	
10/2/2017		<0.0002
10/4/2017	0.0001 (J)	
1/9/2018	<0.0002	<0.0002
7/9/2018		<0.0002
7/11/2018	<0.0002	
1/16/2019	<0.0002	<0.0002
8/26/2019	<0.0002	<0.0002
8/17/2020		<0.0002
8/19/2020	<0.0002	

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
8/30/2016		<0.01
9/1/2016	0.0098 (J)	
10/24/2016		<0.01
10/25/2016	<0.01	
1/3/2017		<0.01
1/6/2017	<0.01	
4/3/2017		<0.01
4/6/2017	<0.01	
7/11/2017		<0.01
7/13/2017	0.0013 (J)	
10/2/2017		<0.01
10/4/2017	0.0013 (J)	
1/9/2018	<0.01	<0.01
7/9/2018		<0.01
7/11/2018	<0.01	
8/26/2019	<0.01	<0.01
10/7/2019		<0.01
10/8/2019	<0.01	
4/6/2020	<0.01	<0.01
8/17/2020		<0.01
8/19/2020	<0.01	
9/28/2020	<0.01	<0.01
3/11/2021	<0.01	
3/12/2021		<0.01

Time Series

Constituent: pH (SU) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
10/11/2014		4.42
10/24/2016		4.36
10/25/2016	6.17	
1/3/2017		4.28
1/6/2017	6.16	
4/3/2017		4.29
4/6/2017	6.26	
7/11/2017		4.35
7/13/2017	5.99	
10/2/2017		4.32
10/4/2017	6.16	
1/9/2018	6.43	4.44
7/9/2018		4.4
7/11/2018	6.1	
1/16/2019	6.05	6.16 (o)
3/25/2019	6.06	4.4
8/26/2019	5.91	4.26
10/7/2019		4.24
10/8/2019	5.74	
4/6/2020	6.02	4.52
8/17/2020		4.23
8/19/2020	5.81 (D)	
9/28/2020	5.86	4.41
3/11/2021	5.85	
3/12/2021		4.54

Time Series

Constituent: Selenium (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
9/29/2000	<0.01	<0.01
11/21/2000	<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
6/6/2003	<0.01	<0.01
12/12/2003	<0.01	<0.01
5/26/2004	<0.01	<0.01
12/7/2004	<0.01	<0.01
6/21/2005	<0.01	<0.01
12/12/2005	<0.01	<0.01
4/4/2006		<0.01
6/27/2006	<0.01	<0.01
8/30/2006		<0.01
12/4/2006	<0.01	<0.01
2/15/2007		<0.01
6/23/2007	<0.01	<0.01
9/11/2007		<0.01
12/11/2007	<0.01	<0.01
3/11/2008		<0.01
6/23/2008	<0.01	<0.01
11/3/2008		<0.01
12/4/2008	<0.01	<0.01
3/25/2009		<0.01
7/7/2009	<0.01	<0.01
9/14/2009		<0.01
12/20/2009	<0.01	<0.01
3/4/2010		<0.01
6/20/2010	<0.01	<0.01
9/14/2010		<0.01
1/7/2011	<0.01	<0.01
4/15/2011		<0.01
7/7/2011	<0.01	<0.01
9/25/2011		<0.01
1/17/2012	<0.01	<0.01
4/4/2012		<0.01
7/9/2012	<0.01	
7/10/2012		<0.01
10/9/2012		<0.01
1/18/2013	0.009	<0.01
4/5/2013		<0.01
7/17/2013	0.011	<0.01
10/11/2013		<0.01
1/13/2014	0.012	
1/14/2014		<0.01
4/3/2014		<0.01
7/9/2014	0.011	<0.01
10/24/2014		<0.01
1/13/2015	0.0092	

Time Series

Constituent: Selenium (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
1/14/2015		<0.01
5/10/2015		<0.01
7/16/2015	0.014	
7/17/2015		<0.01
10/6/2015		<0.01
1/18/2016	0.023	<0.01
4/26/2016		<0.01
7/27/2016	0.0323	
7/28/2016		0.001 (J)
8/30/2016		<0.01
9/1/2016	0.0438	
10/24/2016		0.0013 (J)
10/25/2016	0.031	
1/3/2017		<0.01
1/6/2017	0.0324	
4/3/2017		<0.01
4/6/2017	0.0188 (J)	
7/11/2017		<0.01
7/13/2017	0.0118	
10/2/2017		<0.01
10/4/2017	0.0195	
1/9/2018	<0.01	<0.01
7/9/2018		<0.01
7/11/2018	<0.01	
1/16/2019	0.0071 (J)	<0.01
3/25/2019	<0.01	<0.01
8/26/2019	<0.01	<0.01
10/7/2019		<0.01
10/8/2019	0.0072 (J)	
4/6/2020	0.0078 (J)	<0.01
8/17/2020		<0.01
8/19/2020	<0.01	
9/28/2020	0.01 (J)	<0.01
3/11/2021	<0.01	
3/12/2021		<0.01

Time Series

Constituent: Sulfate (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
8/30/2016		140
9/1/2016	73	
10/24/2016		160
10/25/2016	26	
1/3/2017		140
1/6/2017	23	
4/3/2017		140
4/6/2017	25	
7/11/2017		130
7/13/2017	65	
10/2/2017		150
10/4/2017	13	
1/9/2018	45	120
7/9/2018		123
7/11/2018	37.7	
1/16/2019	24.5	129
3/25/2019	14.7	152
10/7/2019		156
10/8/2019	32.8	
4/6/2020	20.3	123
9/28/2020	20	93.6
3/11/2021	12	
3/12/2021		103

Time Series

Constituent: Thallium (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
9/29/2000	<0.001	<0.001
11/21/2000	<0.001	
1/20/2001	<0.001	<0.001
3/14/2001	<0.001	<0.001
7/16/2001	<0.001	<0.001
11/1/2001	<0.001	<0.001
4/25/2002	<0.001	<0.001
12/12/2003	<0.001	<0.001
5/26/2004	<0.001	<0.001
12/7/2004	<0.001	<0.001
6/21/2005	<0.001	<0.001
12/12/2005	<0.001	<0.001
4/4/2006		<0.001
6/27/2006	<0.001	<0.001
8/30/2006		<0.001
12/4/2006	<0.001	<0.001
2/15/2007		<0.001
6/23/2007	<0.001	<0.001
8/30/2016		<0.001
9/1/2016	0.0005 (J)	
10/24/2016		<0.001
10/25/2016	<0.001	
1/3/2017		<0.001
1/6/2017	<0.001	
4/3/2017		<0.001
4/6/2017	<0.001	
7/11/2017		5E-05 (J)
7/13/2017	<0.001	
10/2/2017		6E-05 (J)
10/4/2017	<0.001	
1/9/2018	<0.001	<0.001
7/9/2018		<0.001
7/11/2018	<0.001	
8/26/2019	<0.001	<0.001
10/7/2019		6.2E-05 (J)
10/8/2019	<0.001	
4/6/2020	<0.001	<0.001
8/17/2020		<0.001
8/19/2020	<0.001	
9/28/2020	<0.001	<0.001
3/11/2021	<0.001	
3/12/2021		<0.001

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
8/30/2016		234
9/1/2016	3660	
10/24/2016		216
10/25/2016	3560	
1/3/2017		333
1/6/2017	3490	
4/3/2017		288
4/6/2017	3170	
7/11/2017		188
7/13/2017	2280	
10/2/2017		210
10/4/2017	3350	
1/9/2018	2640	118
7/9/2018		235
7/11/2018	2200	
1/16/2019	2100	219
3/25/2019	2100	240
10/7/2019		275
10/8/2019	1840	
4/6/2020	1670	214
9/28/2020	1450	175
3/11/2021	1220	
3/12/2021		163

Time Series

Constituent: Vanadium (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
9/29/2000	<0.01	<0.01
11/21/2000	<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
6/6/2003	0.047	0.017
12/12/2003	0.0086	0.011
5/26/2004	<0.01	<0.01
12/7/2004	<0.01	<0.01
6/21/2005	<0.01	<0.01
12/12/2005	<0.01	<0.01
4/4/2006		<0.01
6/27/2006	<0.01	<0.01
8/30/2006		<0.01
12/4/2006	0.0027	<0.01
2/15/2007		<0.01
6/23/2007	0.0027	<0.01
9/11/2007		<0.01
12/11/2007	0.0033	<0.01
3/11/2008		<0.01
6/23/2008	0.0074	<0.01
11/3/2008		<0.01
12/4/2008	0.0084	<0.01
3/25/2009		<0.01
7/7/2009	0.023	<0.01
9/14/2009		<0.01
12/20/2009	0.007	<0.01
3/4/2010		<0.01
6/20/2010	0.0047	<0.01
9/14/2010		<0.01
1/7/2011	0.018	<0.01
4/15/2011		<0.01
7/7/2011	0.019	<0.01
9/25/2011		<0.01
1/17/2012	0.0298	<0.01
4/4/2012		<0.01
7/9/2012	0.14	
7/10/2012		<0.01
10/9/2012		<0.01
1/18/2013	0.21	<0.01
4/5/2013		<0.01
7/17/2013	0.18	<0.01
10/11/2013		<0.01
1/13/2014	0.24	
1/14/2014		<0.01
4/3/2014		0.0015 (J)
7/9/2014	0.22	0.0012 (J)
10/24/2014		<0.01
1/13/2015	0.19	

Time Series

Constituent: Vanadium (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
1/14/2015		<0.01
5/10/2015		<0.01
7/16/2015	0.23	
7/17/2015		<0.01
10/6/2015		0.0012 (J)
1/18/2016	0.41	0.00079 (J)
4/26/2016		<0.01
7/27/2016	0.397	
7/28/2016		<0.01
10/24/2016		<0.01
10/25/2016	0.425	
1/3/2017		<0.01
1/6/2017	0.41	
4/3/2017		<0.01
4/6/2017	0.297	
7/11/2017		<0.01
7/13/2017	0.194	
10/2/2017		<0.01
10/4/2017	0.316	
1/9/2018	0.194	0.0014 (J)
7/9/2018		<0.01
7/11/2018	0.15	
1/16/2019	0.16	<0.01
3/25/2019	0.18	<0.01
10/7/2019		<0.01
10/8/2019	0.11	
4/6/2020	0.12	<0.01
9/28/2020	0.1	<0.01
3/11/2021	0.14	
3/12/2021		<0.01

Time Series

Constituent: Zinc (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
9/29/2000	<0.02	<0.02
11/21/2000	<0.02	
1/20/2001	<0.02	0.025
3/14/2001	<0.02	<0.02
7/16/2001	<0.02	<0.02
11/1/2001	<0.02	<0.02
4/25/2002	<0.02	<0.02
11/20/2002		0.016
6/6/2003	0.69 (o)	0.032
12/12/2003	0.12	0.019
5/26/2004	0.013	<0.02
12/7/2004	<0.02	<0.02
6/21/2005	<0.02	<0.02
12/12/2005	0.014	0.01
4/4/2006		<0.02
6/27/2006	0.01	0.0043
8/30/2006		0.017
12/4/2006	0.0065	0.0053
2/15/2007		0.0045
6/23/2007	0.0049	0.0043
9/11/2007		0.004
12/11/2007	0.0043	0.0048
3/11/2008		0.0043
6/23/2008	0.0025	0.0037
11/3/2008		0.0032
12/4/2008	0.0025	0.0029
3/25/2009		0.0055
7/7/2009	<0.02	0.0028
9/14/2009		0.0027
12/20/2009	0.0031	0.0029
3/4/2010		0.0042
6/20/2010	<0.02	0.0027
9/14/2010		<0.02
1/7/2011	<0.02	0.0032
4/15/2011		<0.02
7/7/2011	0.0031	0.005
9/25/2011		0.0041
1/17/2012	0.004	0.0043
4/4/2012		<0.02
7/9/2012	0.0096	
7/10/2012		0.0028
10/9/2012		0.0033
1/18/2013	0.051	0.0038
4/5/2013		0.0026
7/17/2013	0.042	<0.02
10/11/2013		0.0046
1/13/2014	0.0025	
1/14/2014		0.0025
4/3/2014		0.0029
7/9/2014	0.064	0.002 (J)
10/24/2014		0.0031
1/13/2015	0.066	

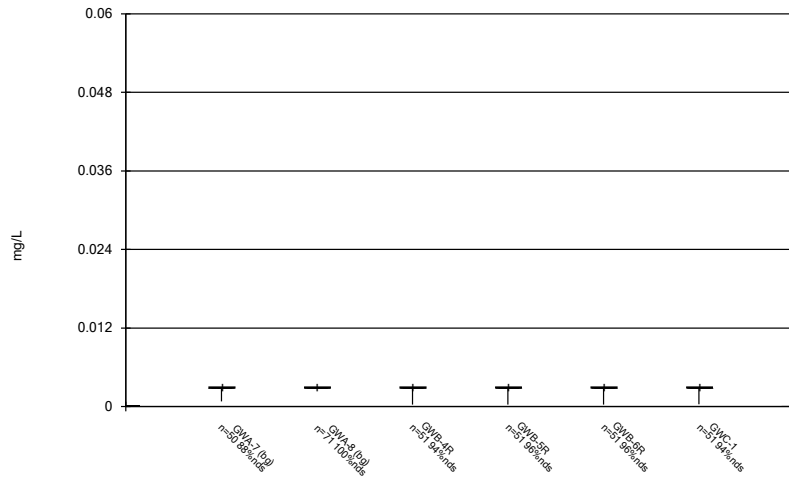
Time Series

Constituent: Zinc (mg/L) Analysis Run 4/20/2021 10:00 AM View: Upgradient Wells
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)
1/14/2015		0.003
5/10/2015		0.0028
7/16/2015	0.036	
7/17/2015		0.0018 (J)
10/6/2015		0.0018 (J)
1/18/2016	0.035	0.0028
4/26/2016		<0.02
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)
1/6/2017	0.0235	
4/3/2017		0.0041 (J)
4/6/2017	0.0829	
7/11/2017		0.0029 (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)
7/9/2018		0.0022 (J)
7/11/2018	0.02 (J)	
1/16/2019	0.014 (J)	0.0037 (J)
3/25/2019	<0.05 (o)	<0.02
10/7/2019		0.0077 (J)
10/8/2019	0.095	
4/6/2020	<0.02	<0.02
9/28/2020	0.16	0.0092 (J)
3/11/2021	0.054	
3/12/2021		0.0028 (J)

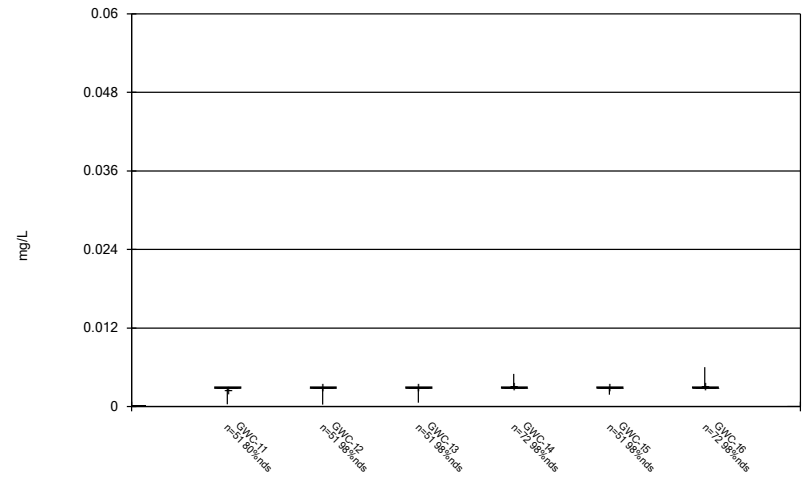
FIGURE B.

Box & Whiskers Plot



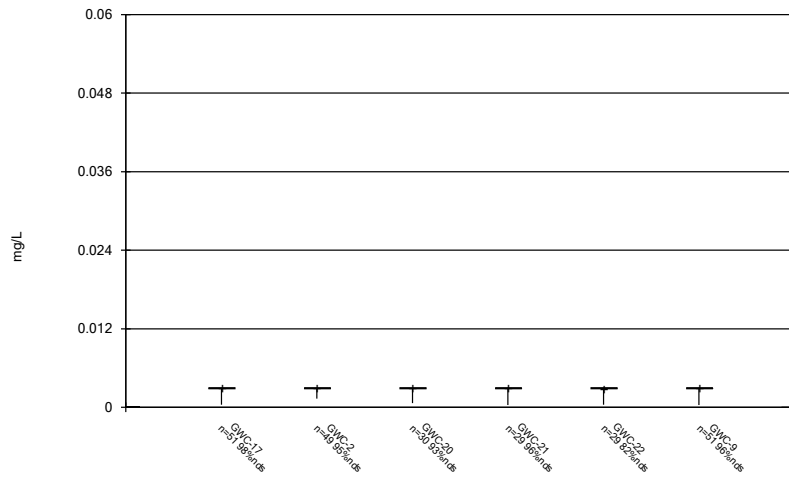
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



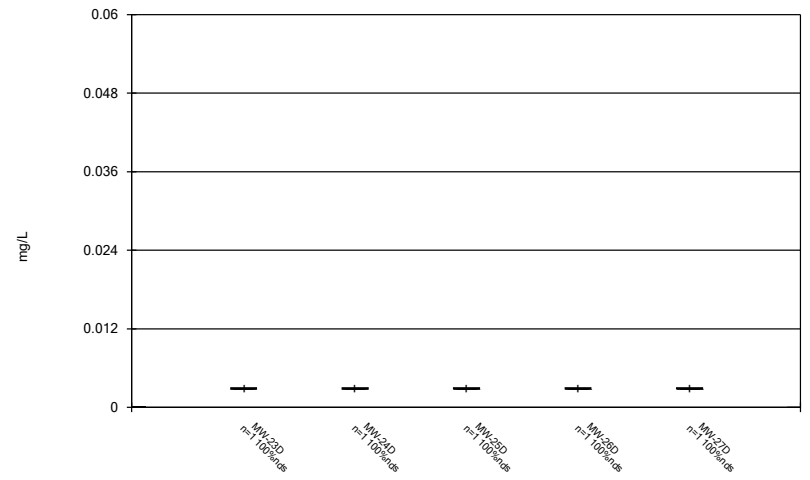
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



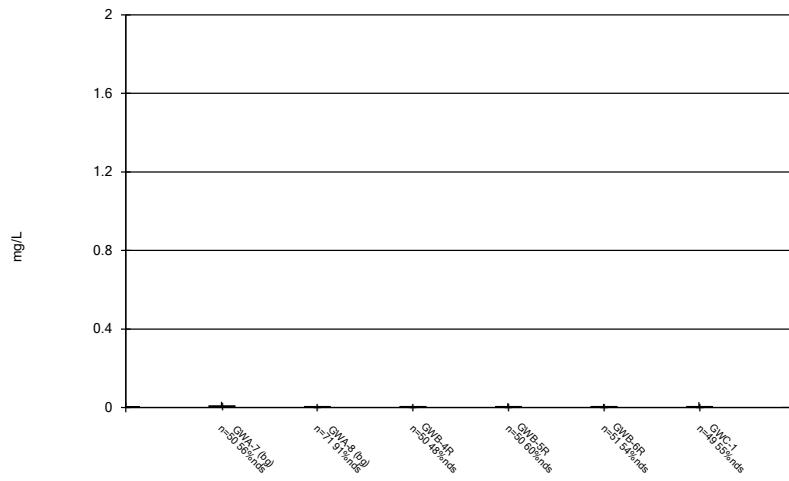
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



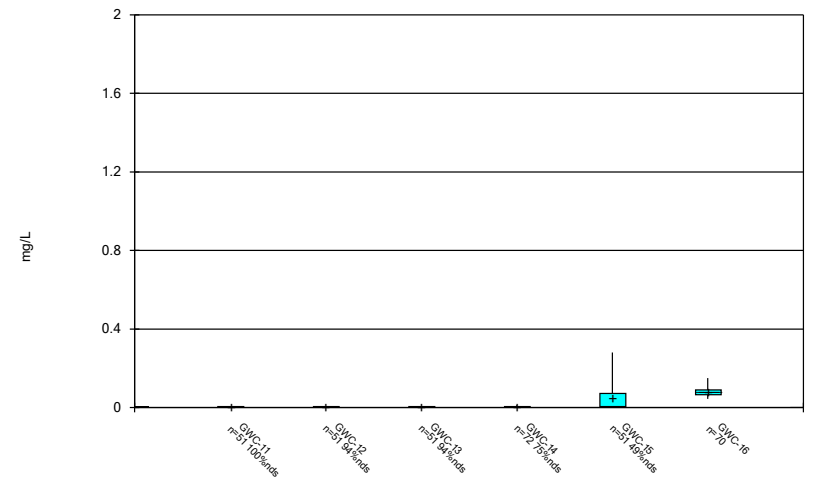
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



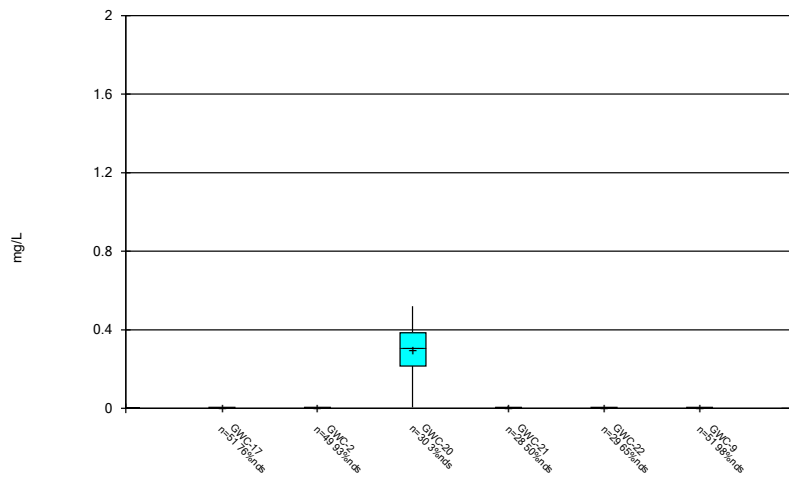
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



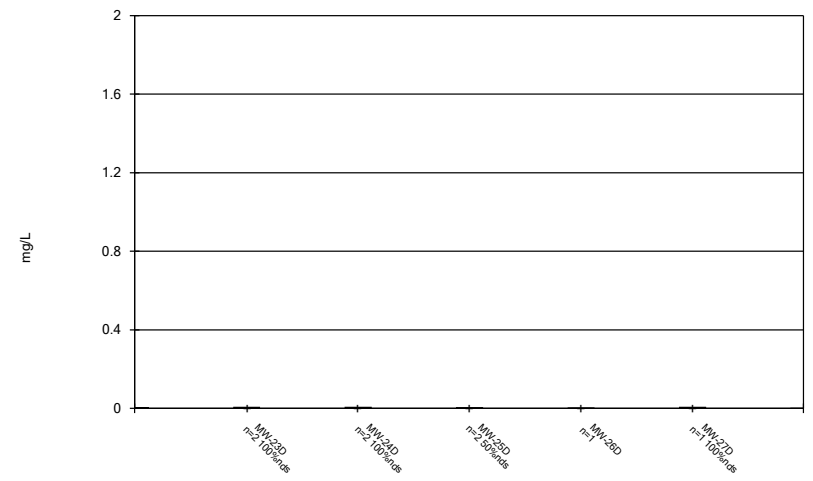
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



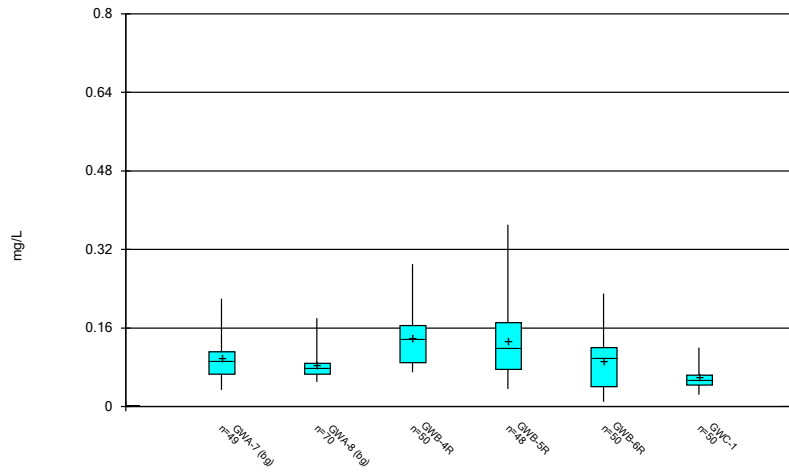
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



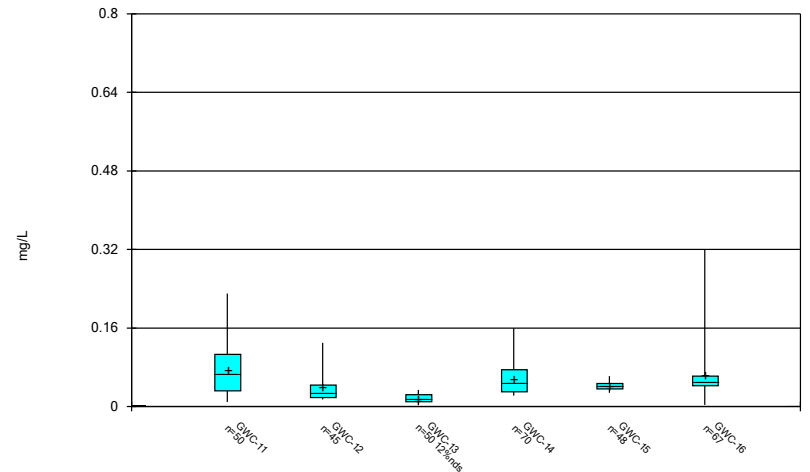
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Box & Whiskers Plot



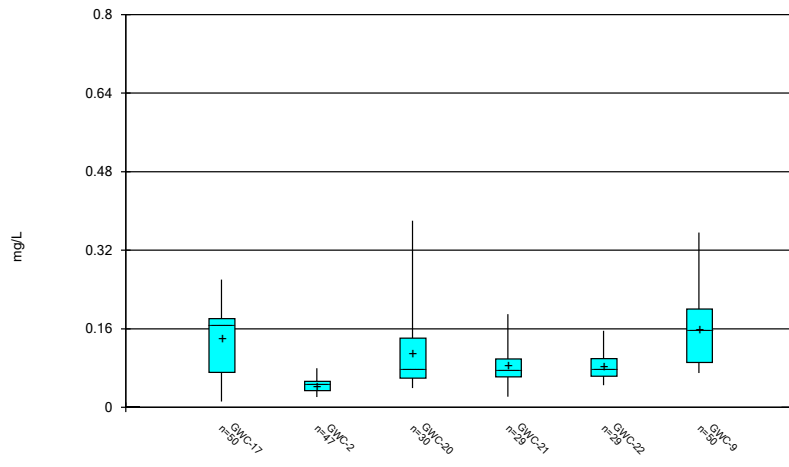
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Box & Whiskers Plot



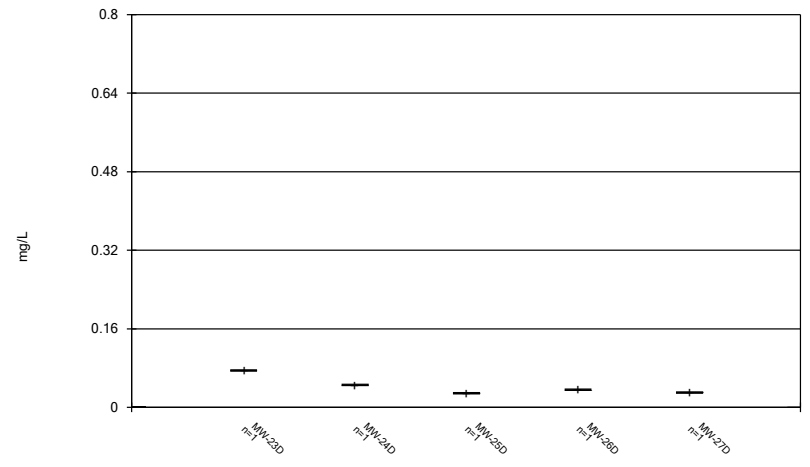
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



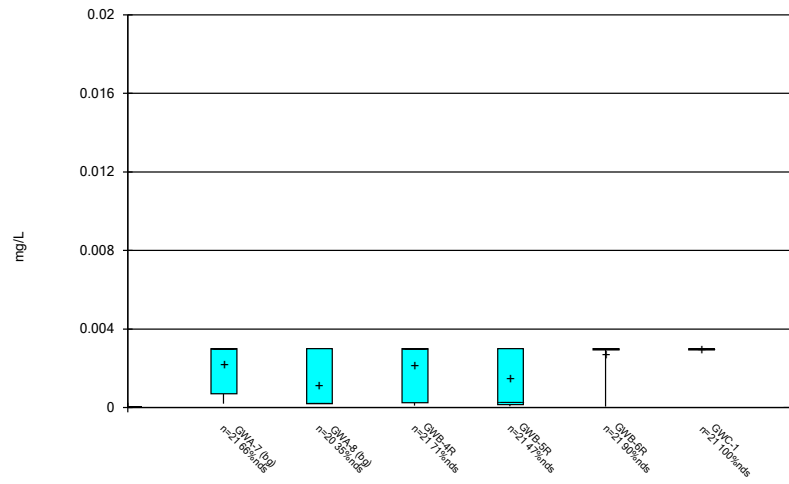
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



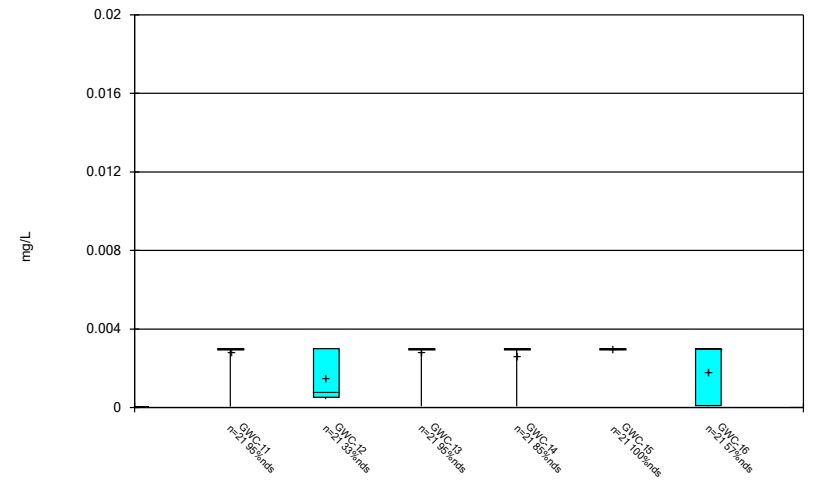
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



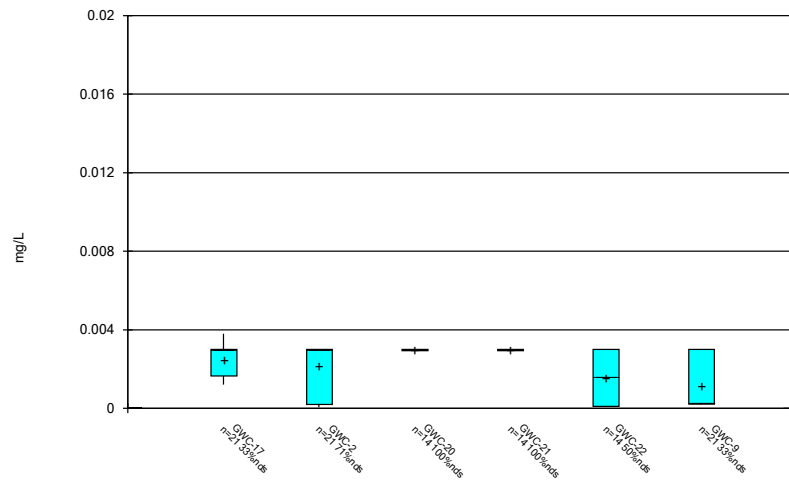
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



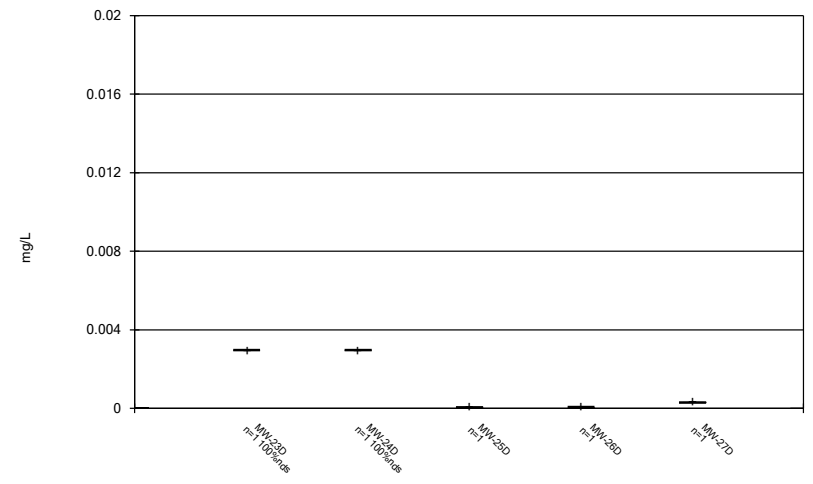
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



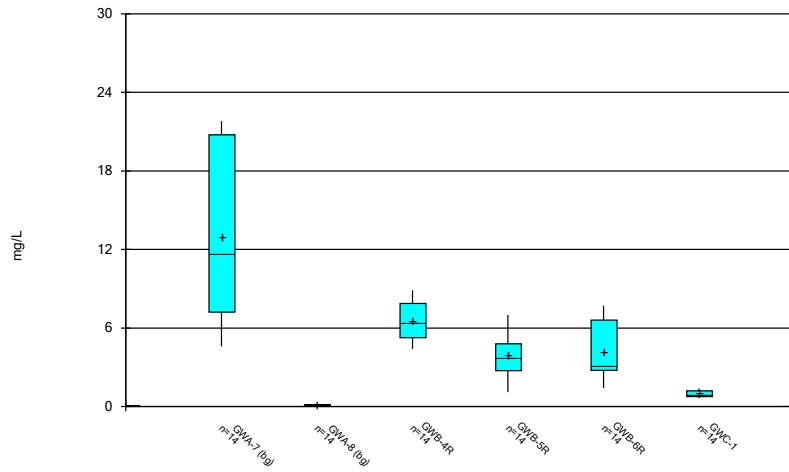
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



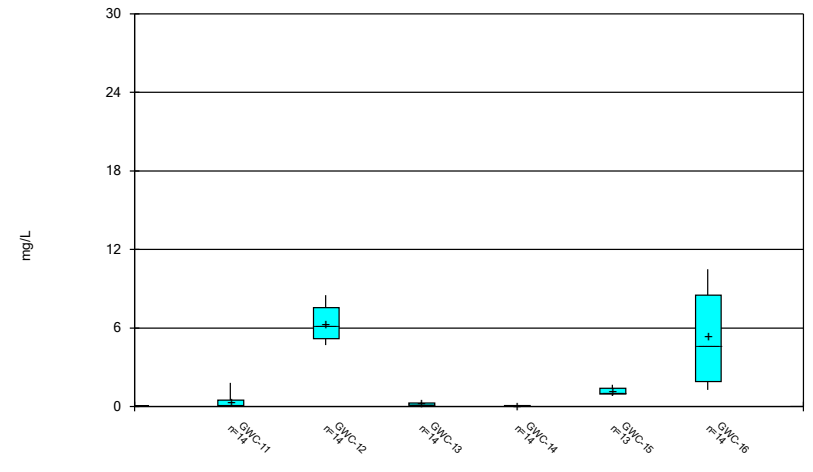
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Box & Whiskers Plot



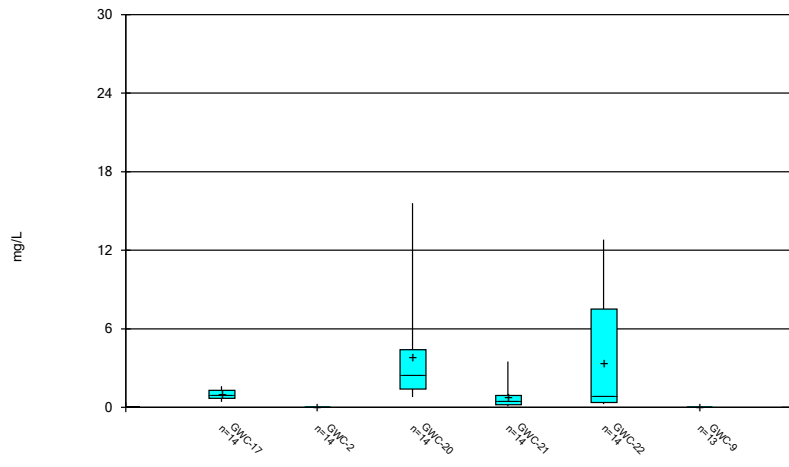
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Box & Whiskers Plot



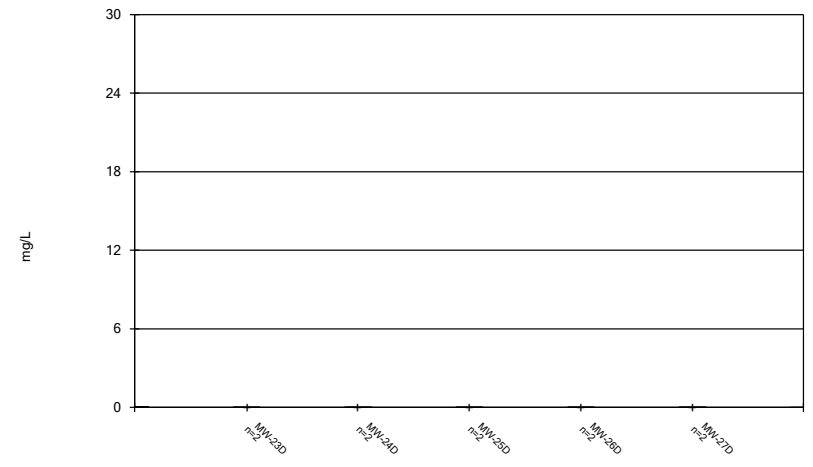
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



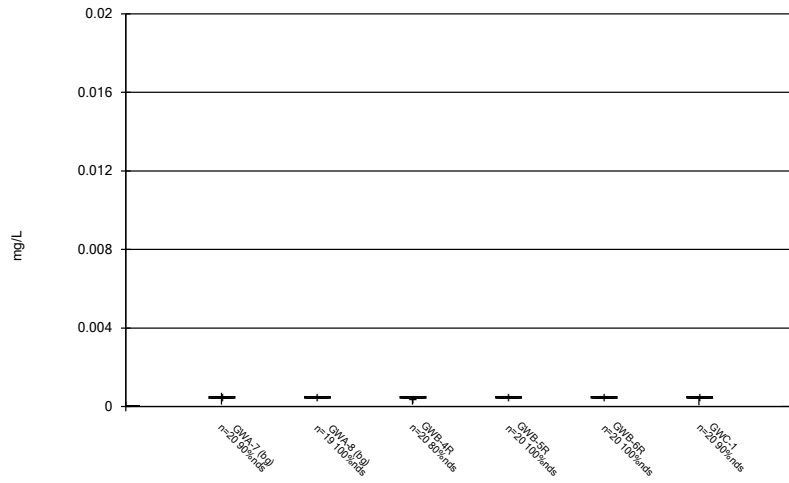
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



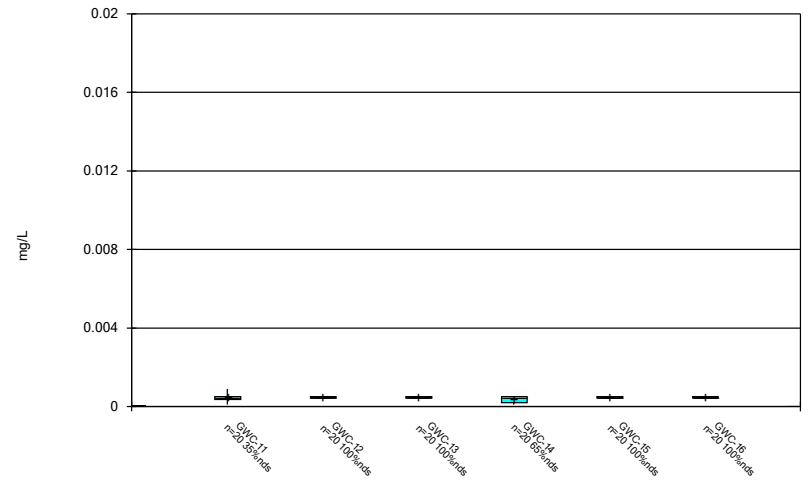
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



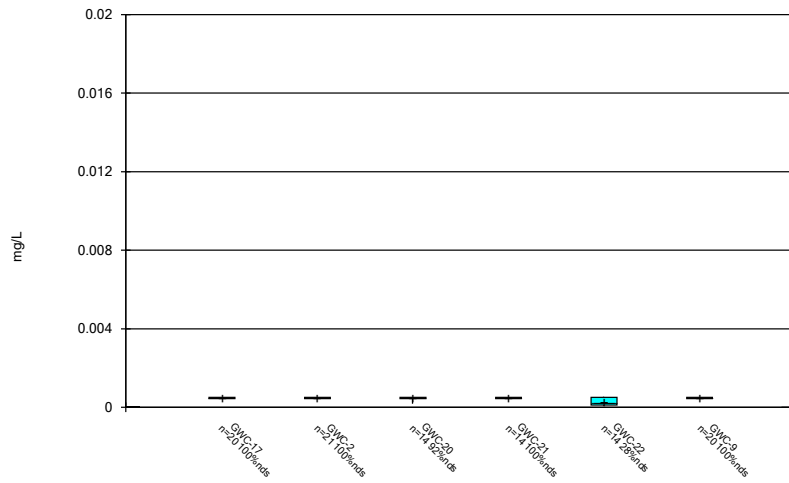
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



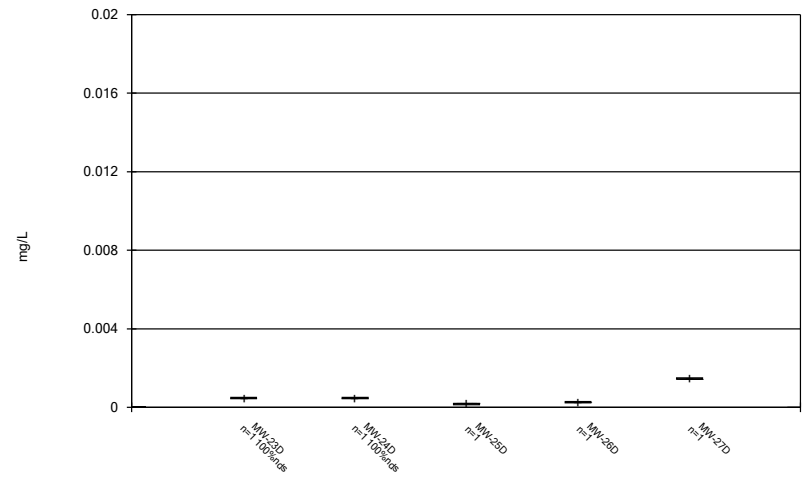
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Box & Whiskers Plot



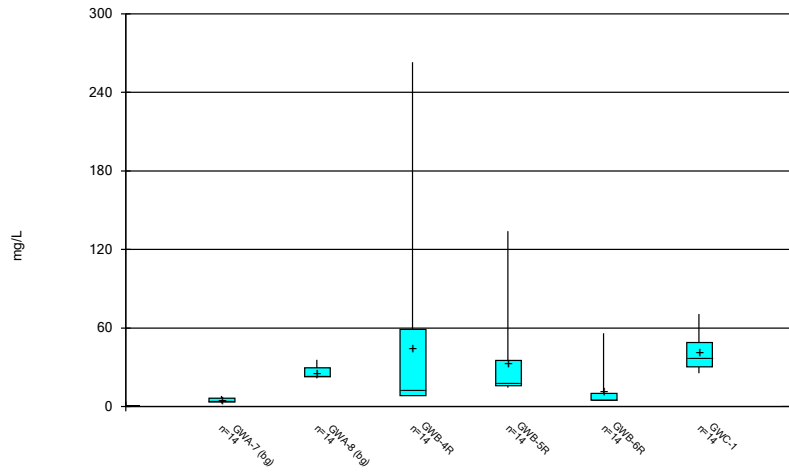
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Box & Whiskers Plot



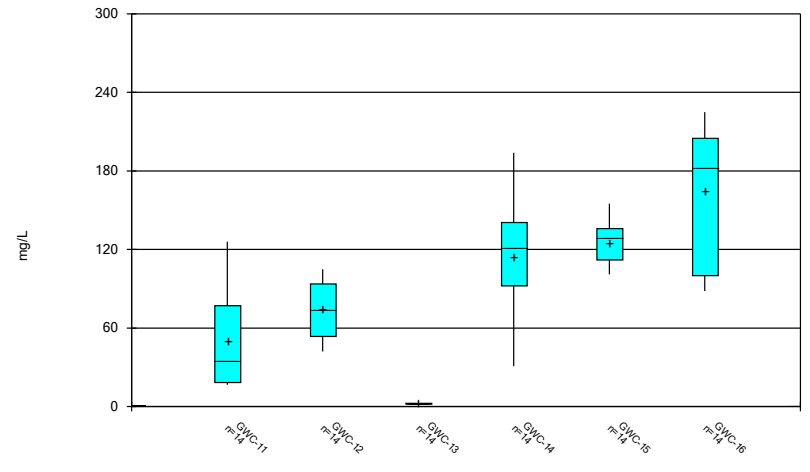
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Box & Whiskers Plot



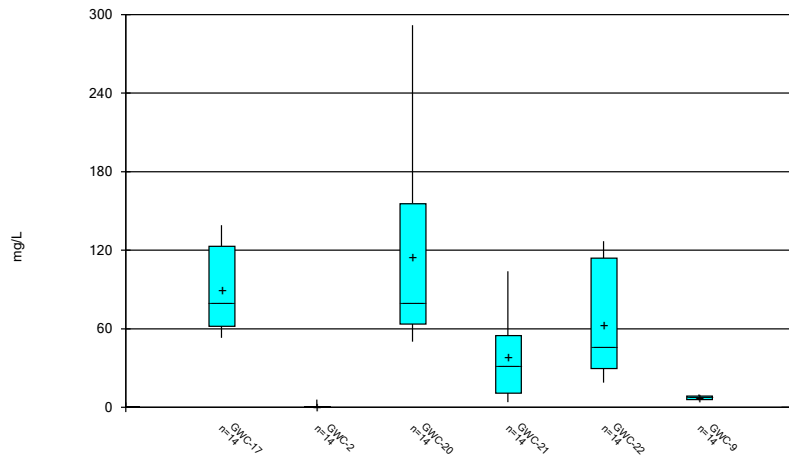
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Box & Whiskers Plot



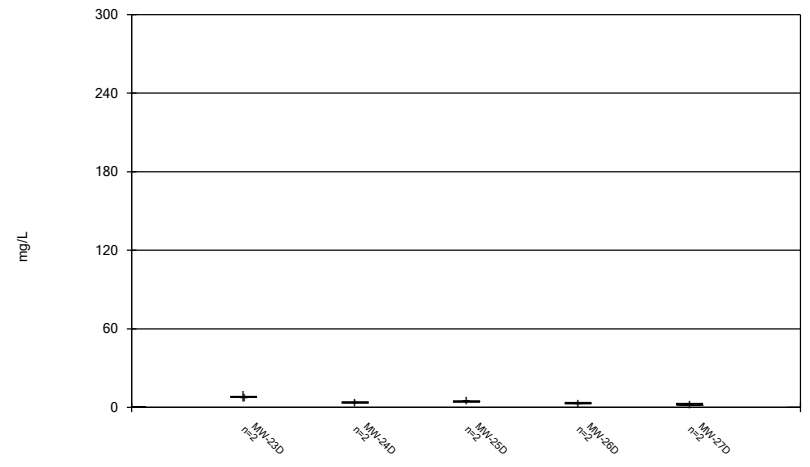
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Box & Whiskers Plot



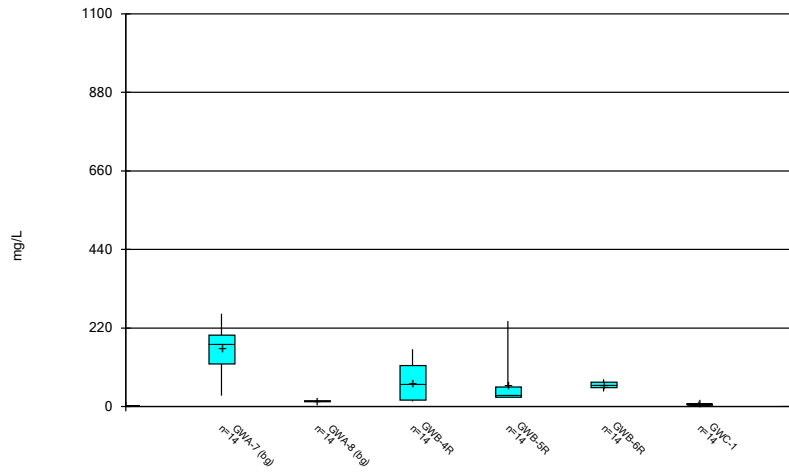
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Box & Whiskers Plot



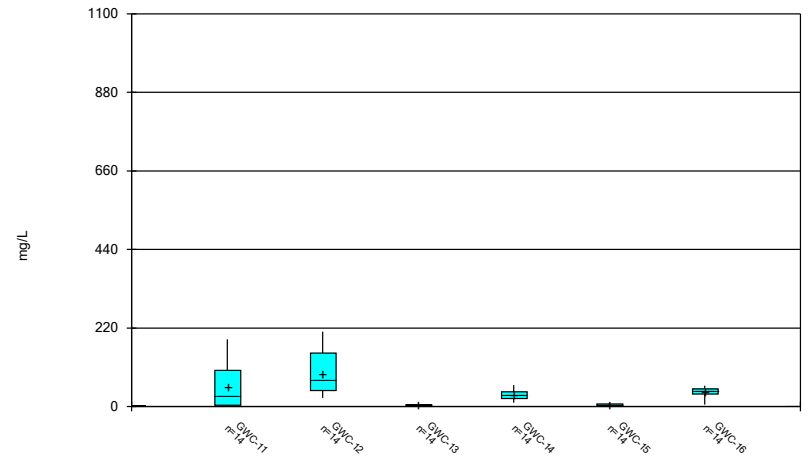
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Box & Whiskers Plot



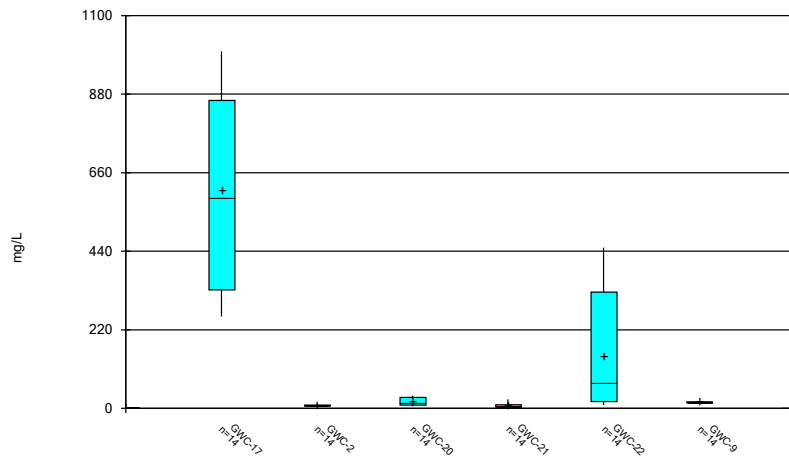
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



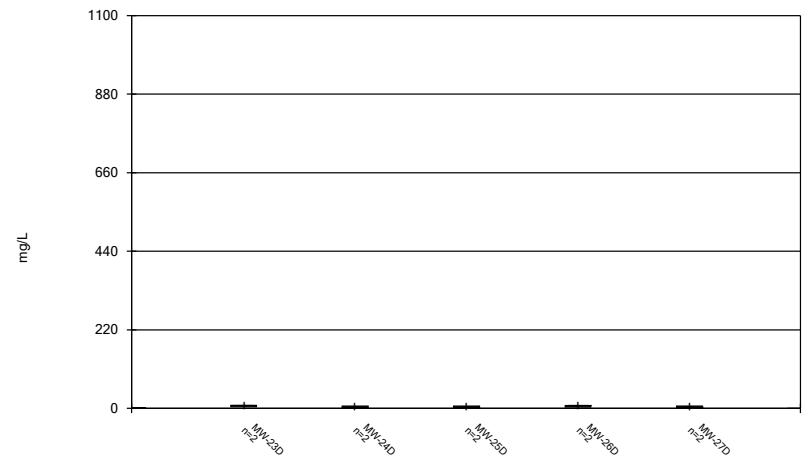
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Box & Whiskers Plot



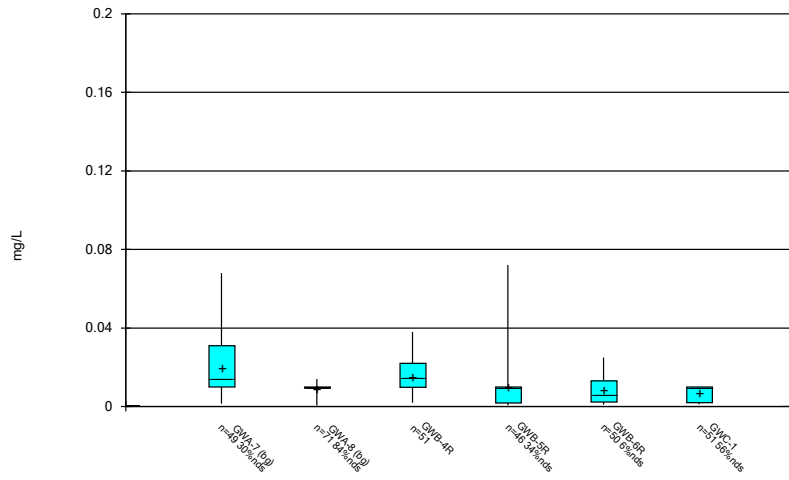
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Box & Whiskers Plot



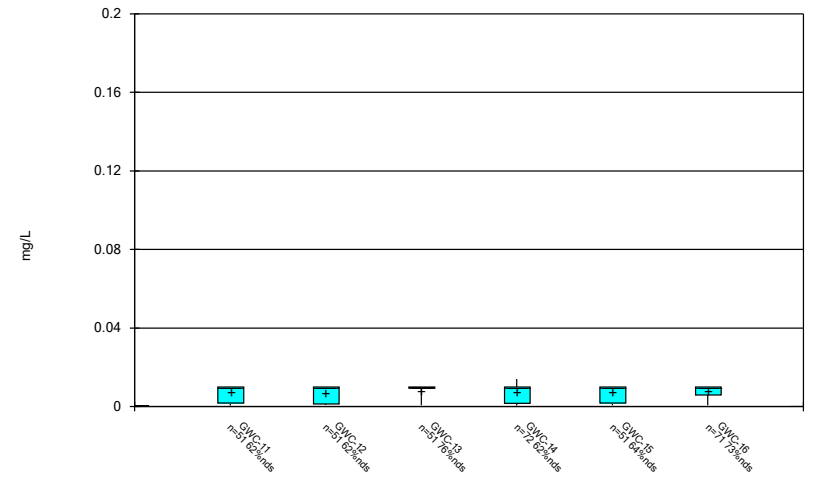
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Box & Whiskers Plot



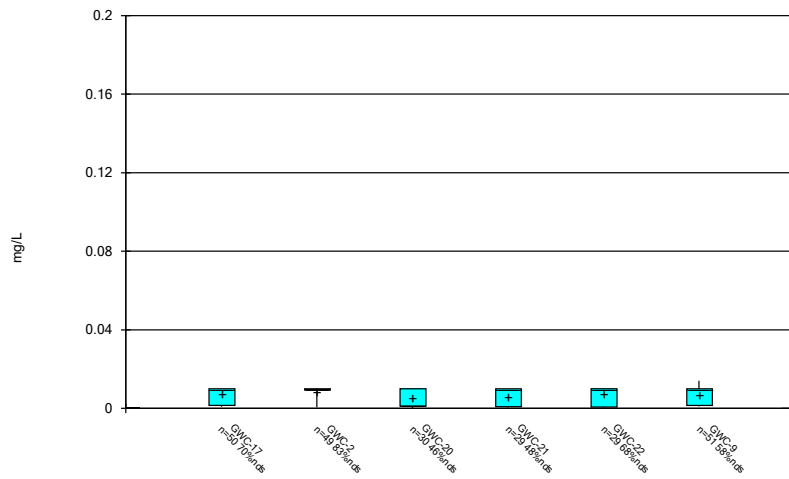
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Box & Whiskers Plot



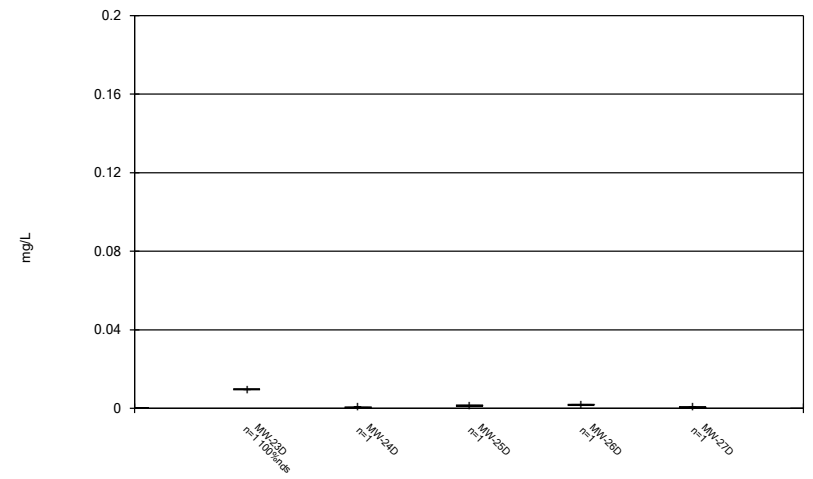
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Box & Whiskers Plot



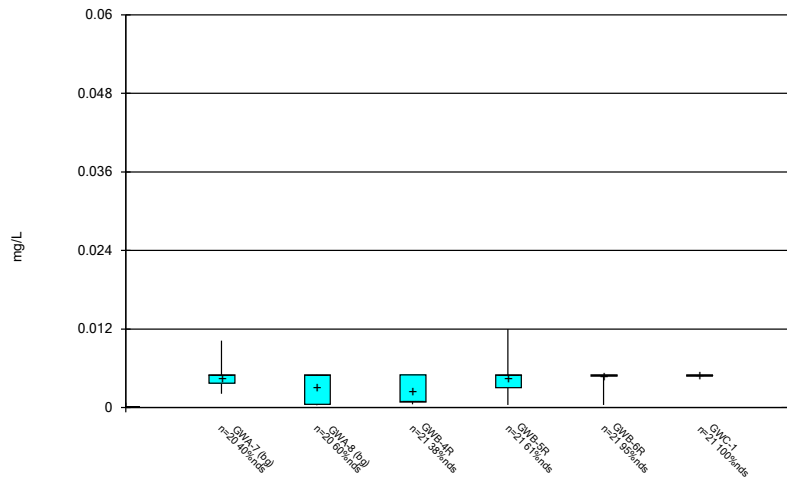
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Box & Whiskers Plot



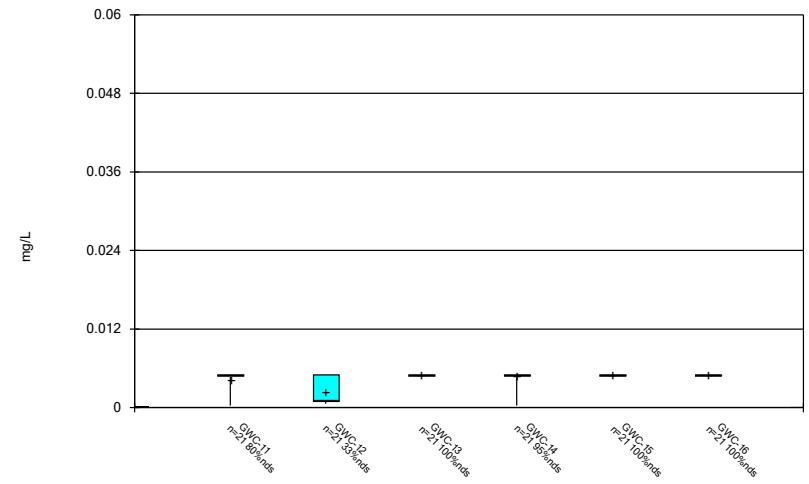
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Box & Whiskers Plot



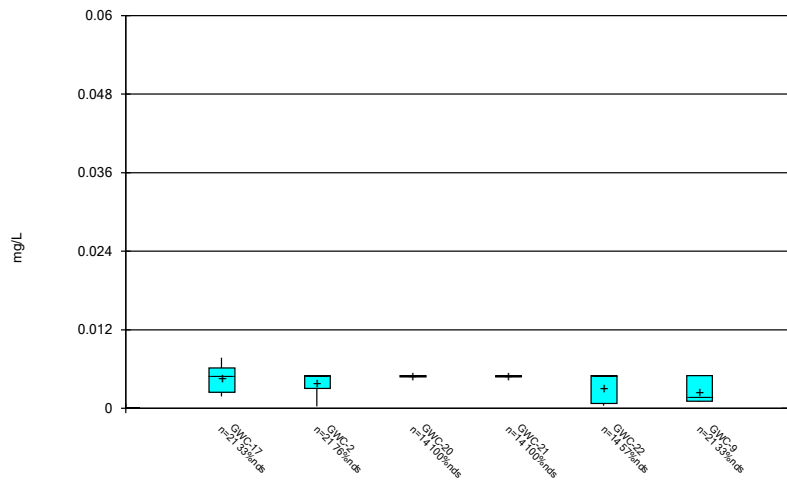
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



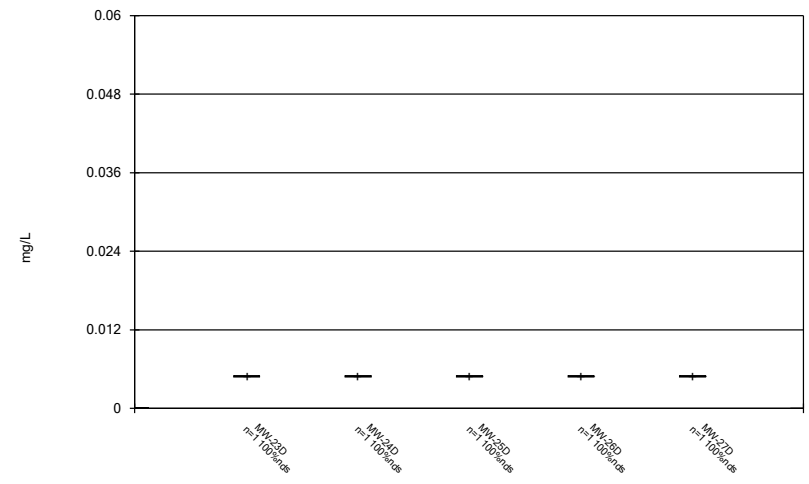
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



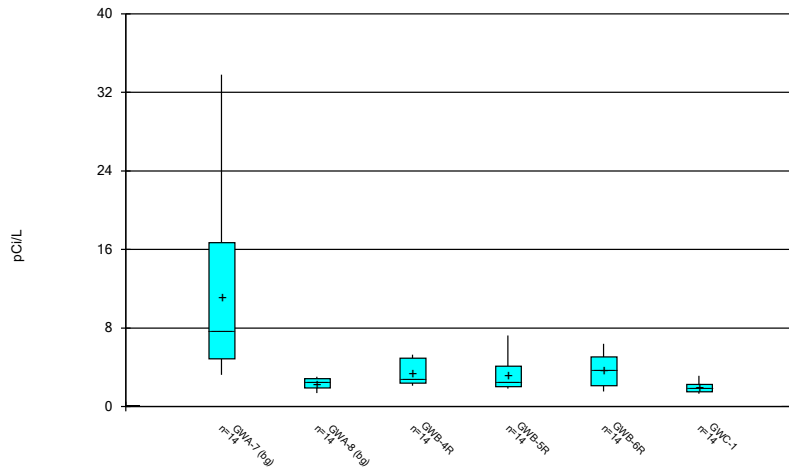
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Box & Whiskers Plot



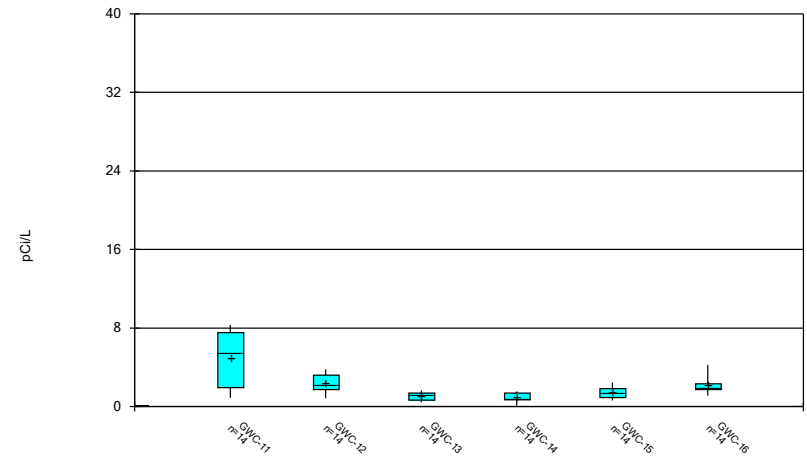
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



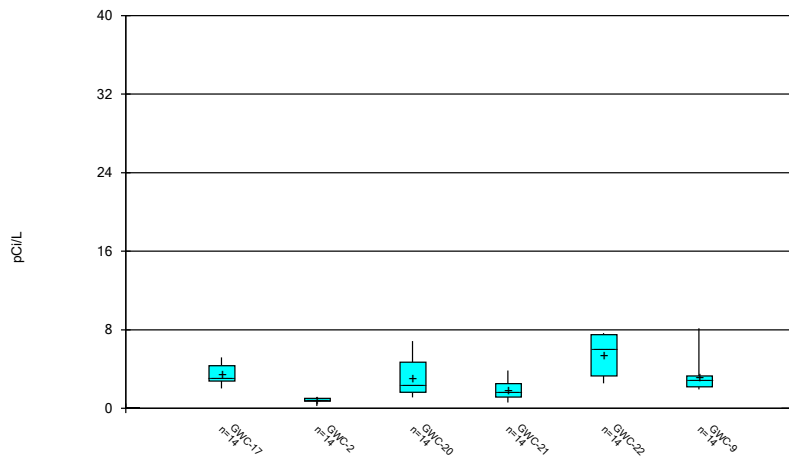
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



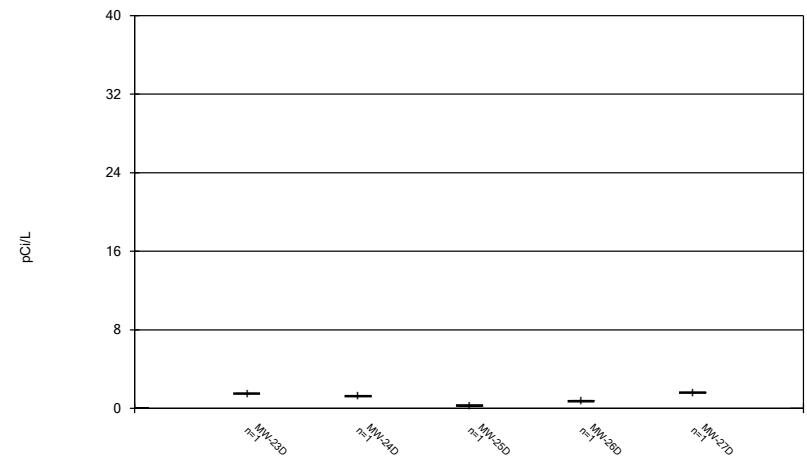
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



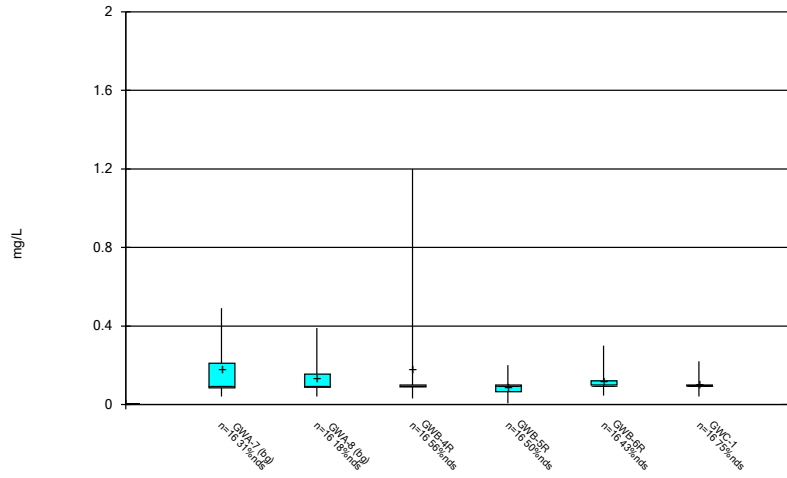
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Box & Whiskers Plot



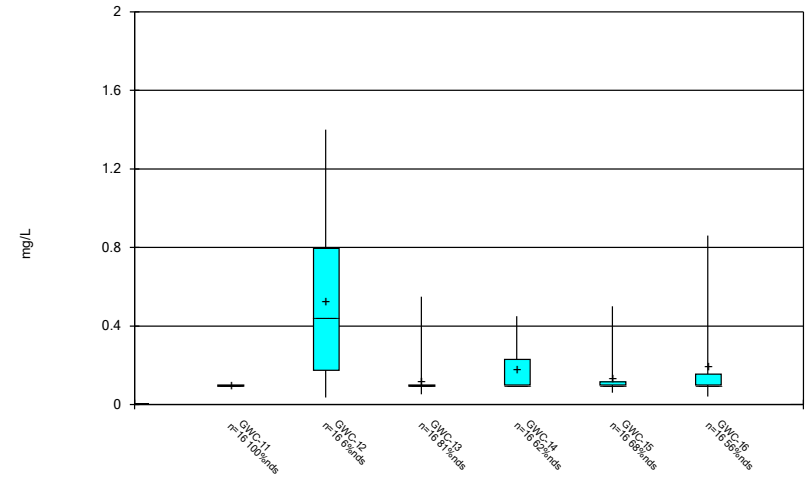
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



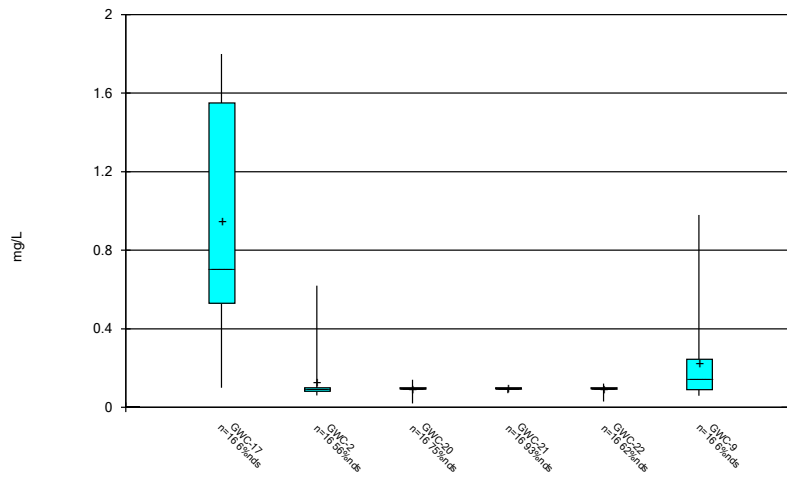
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



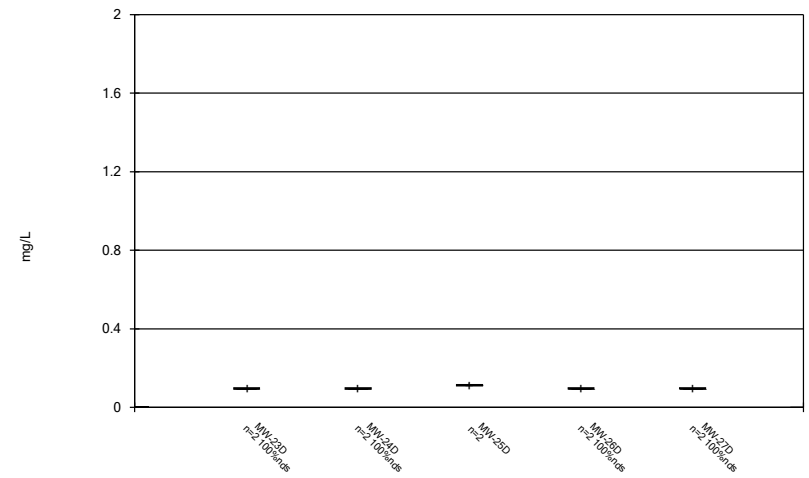
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



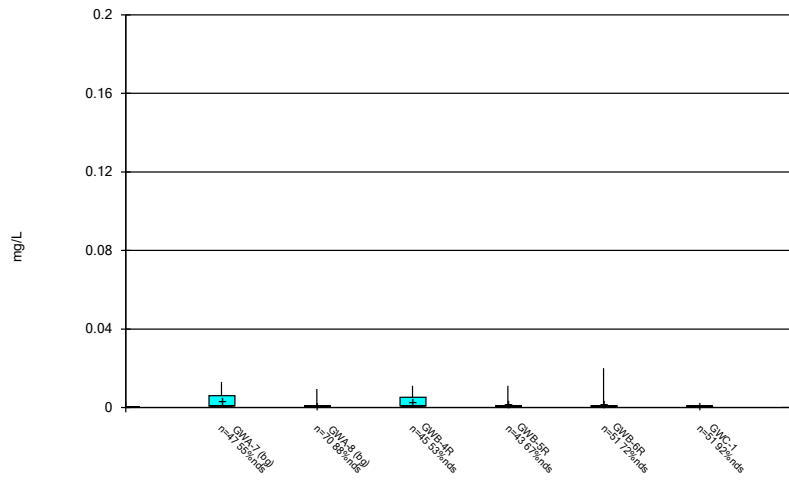
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



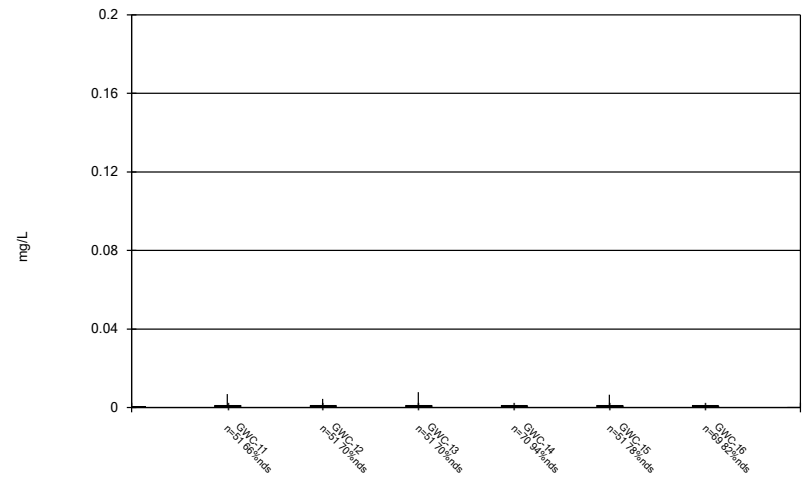
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



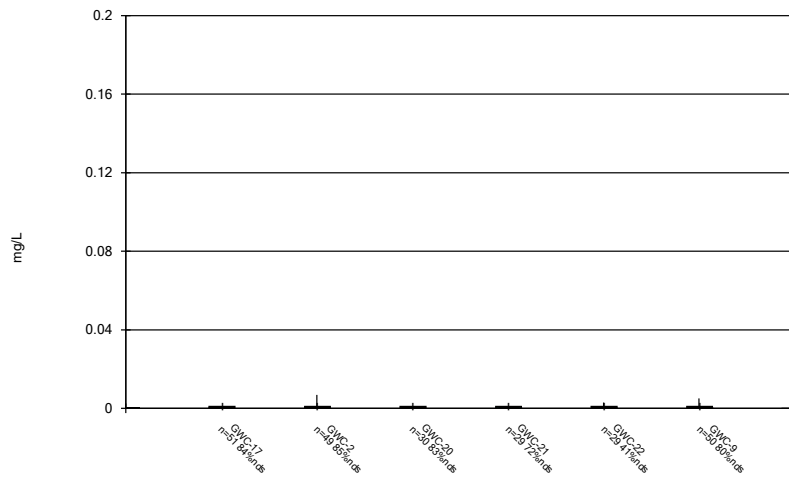
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



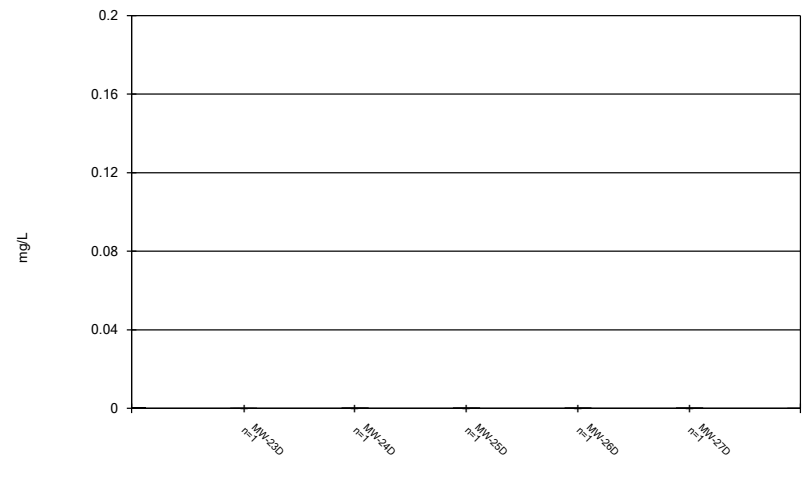
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



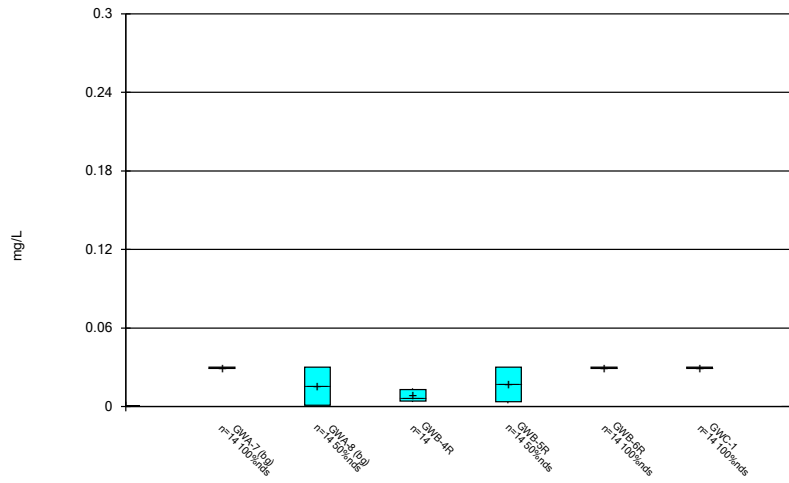
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



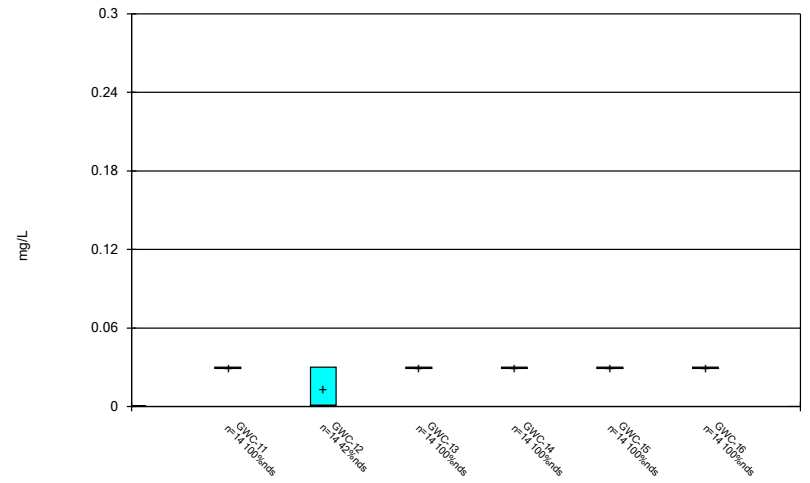
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



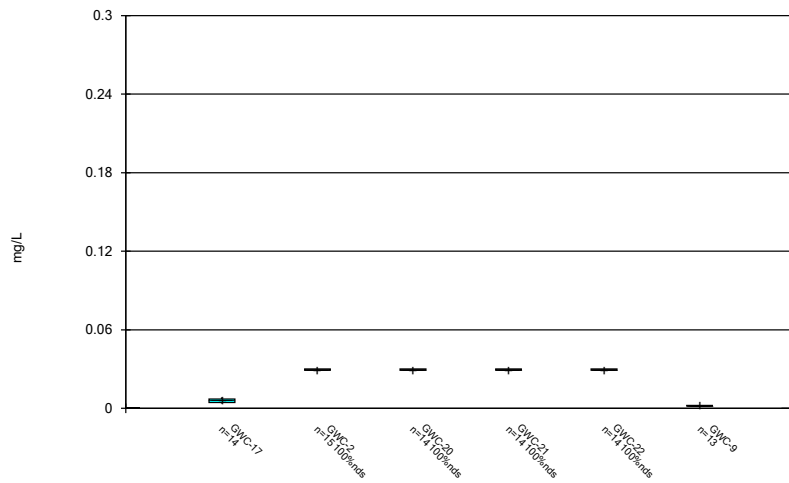
Constituent: Lithium Analysis Run 4/19/2021 1:27 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



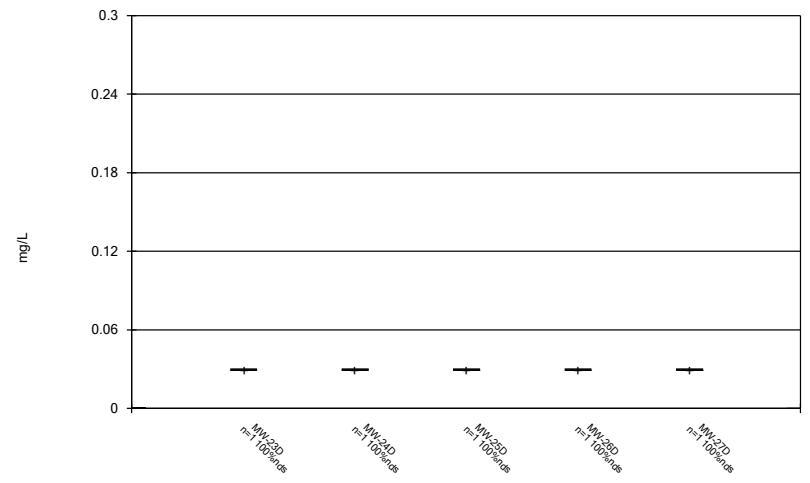
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



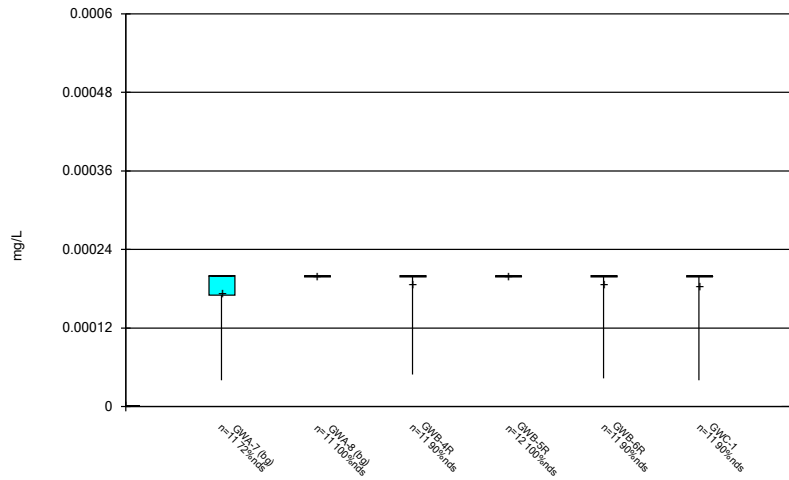
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Box & Whiskers Plot



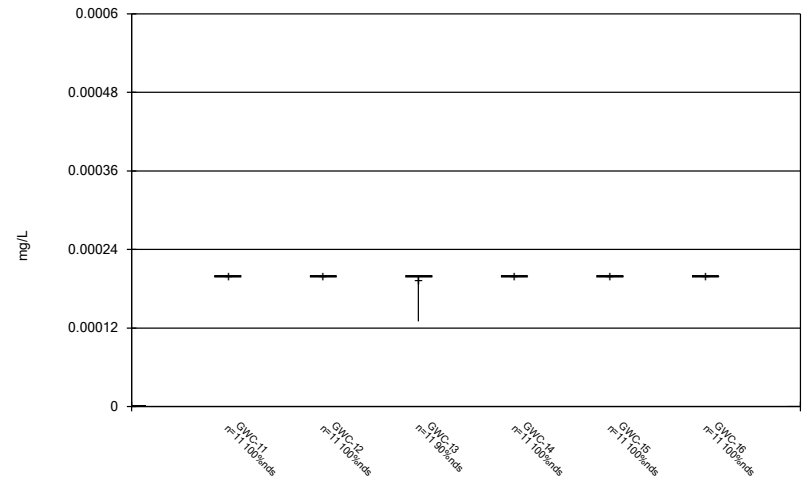
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Box & Whiskers Plot



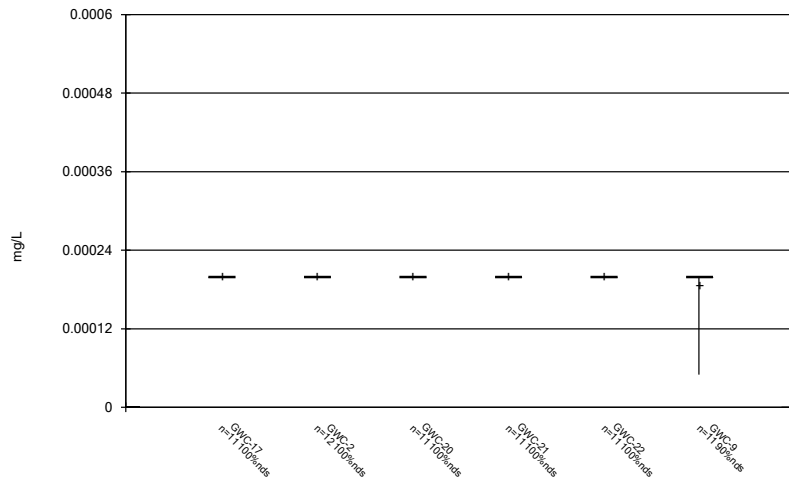
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



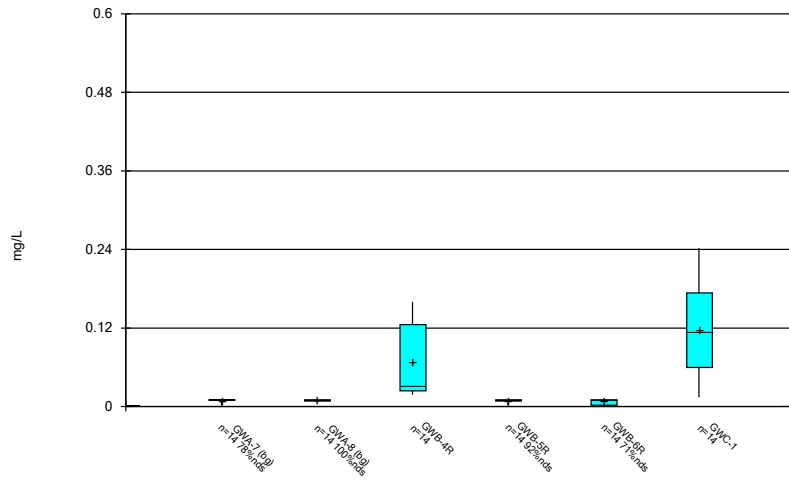
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



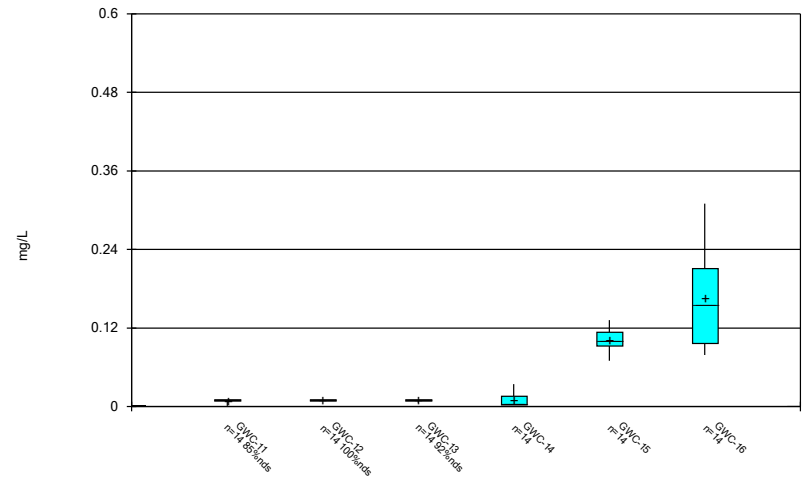
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Box & Whiskers Plot



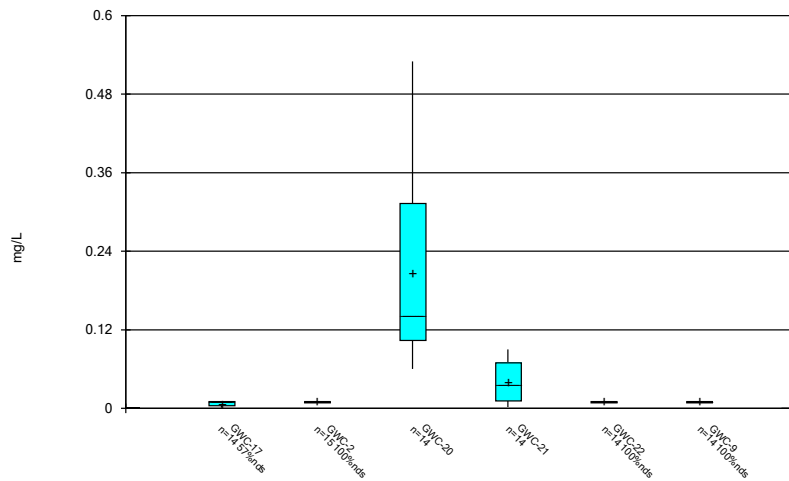
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



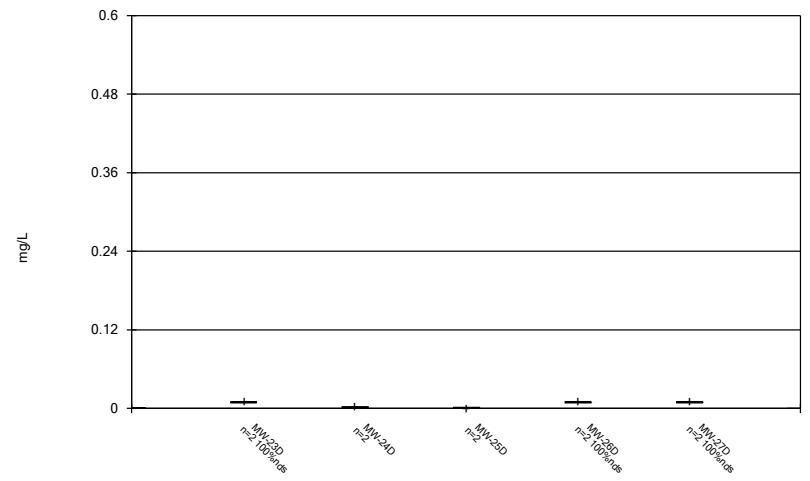
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



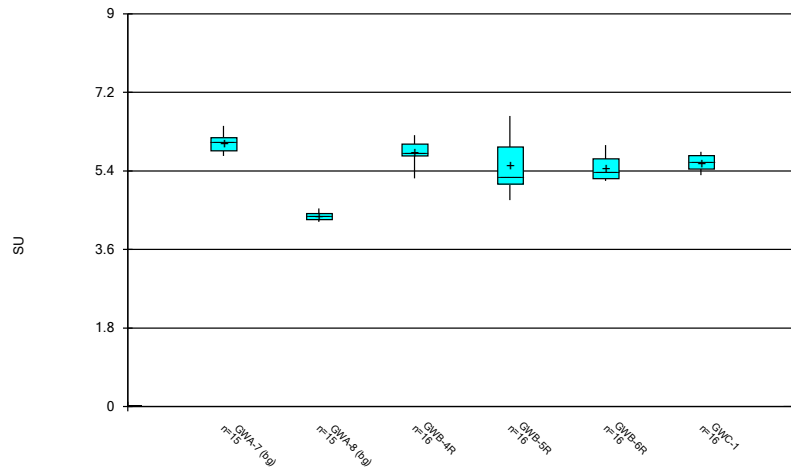
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



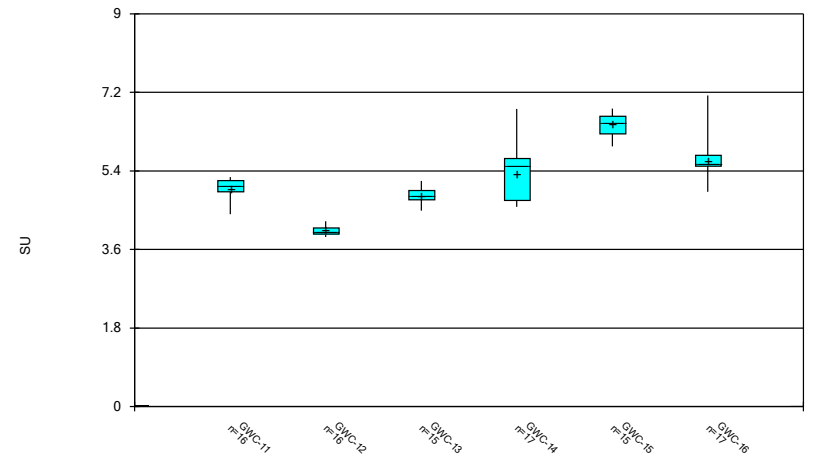
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Box & Whiskers Plot



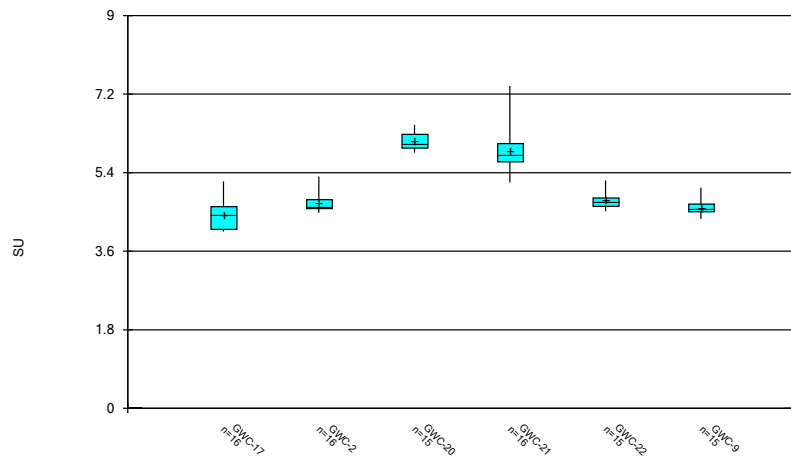
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Box & Whiskers Plot



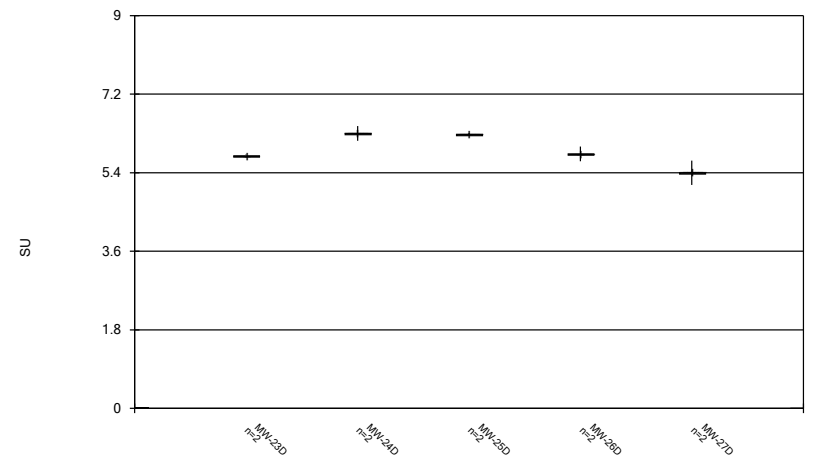
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Box & Whiskers Plot



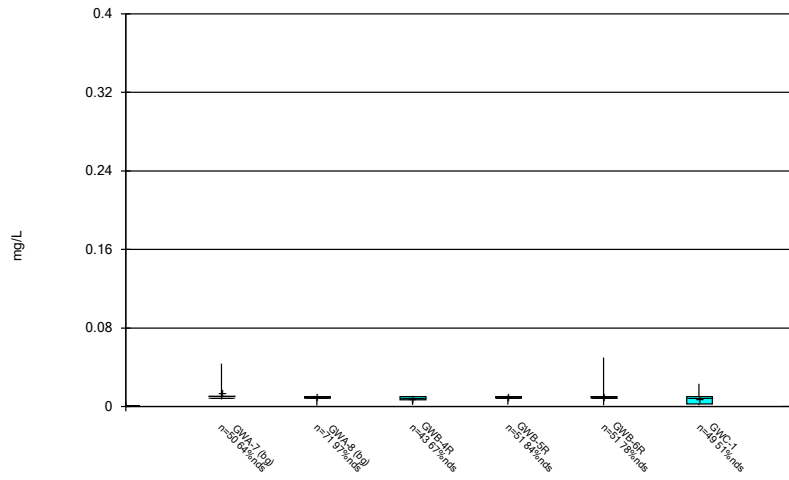
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Box & Whiskers Plot



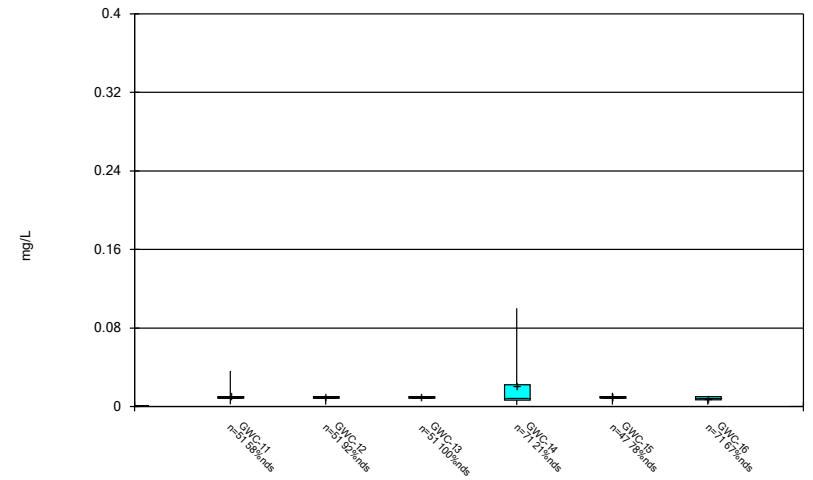
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Box & Whiskers Plot



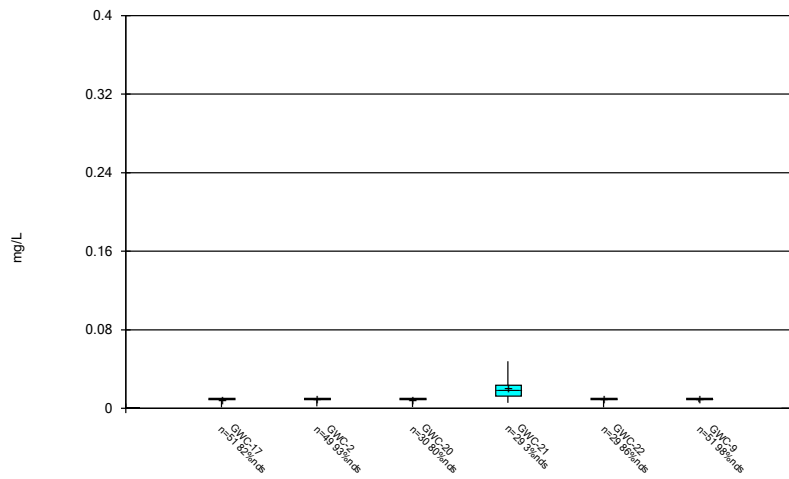
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Box & Whiskers Plot



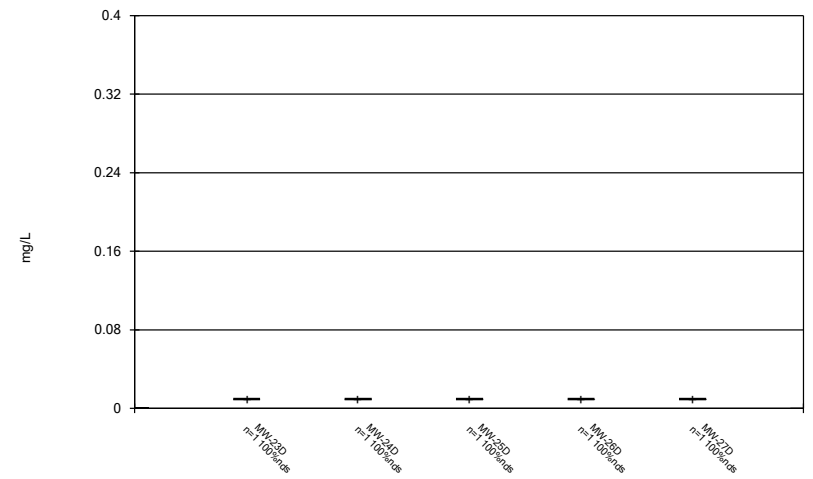
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Box & Whiskers Plot



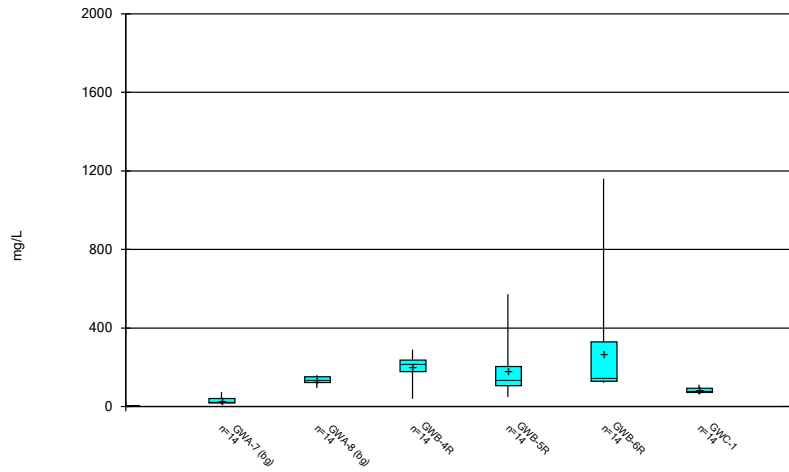
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Box & Whiskers Plot



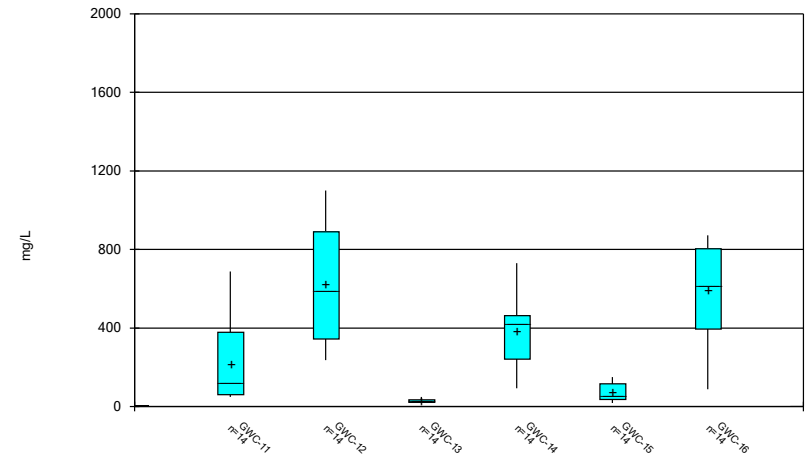
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Box & Whiskers Plot



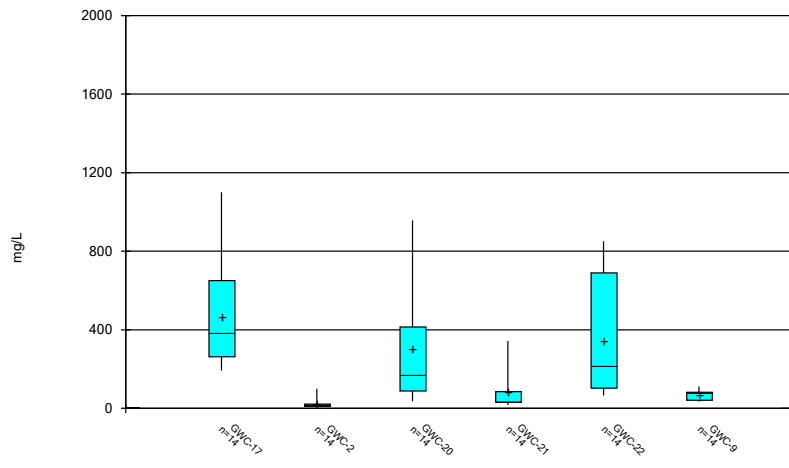
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Box & Whiskers Plot



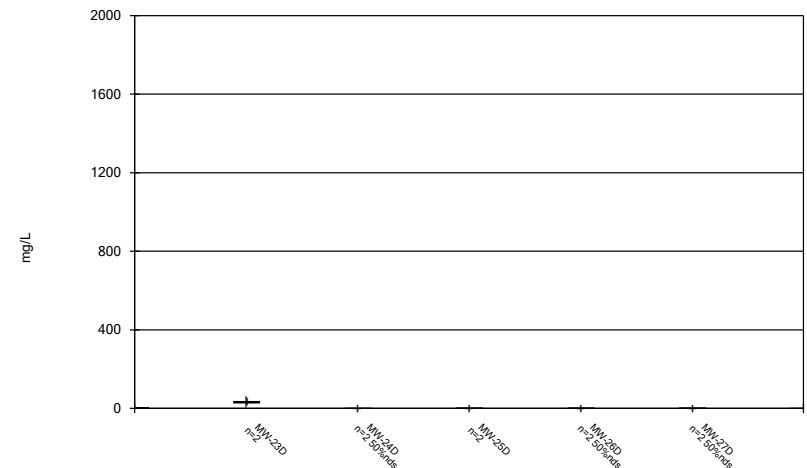
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Box & Whiskers Plot



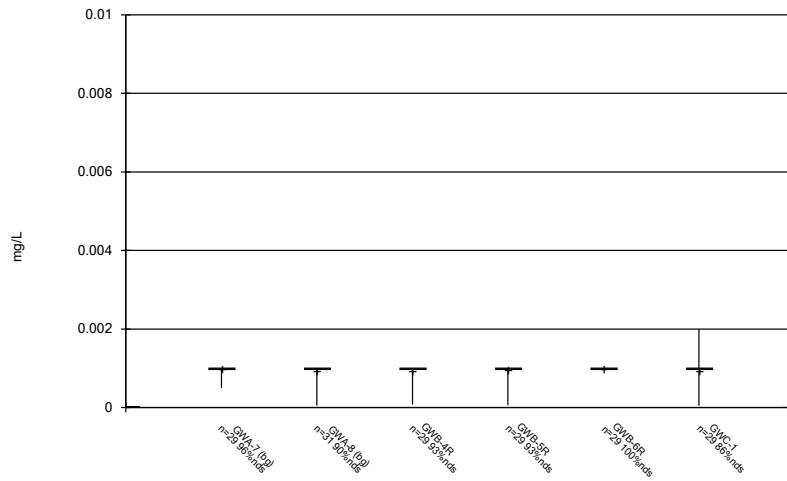
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Box & Whiskers Plot



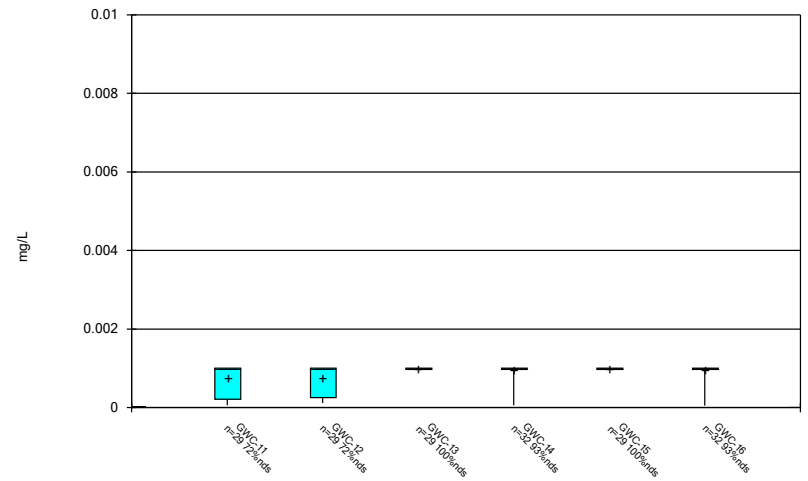
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Box & Whiskers Plot



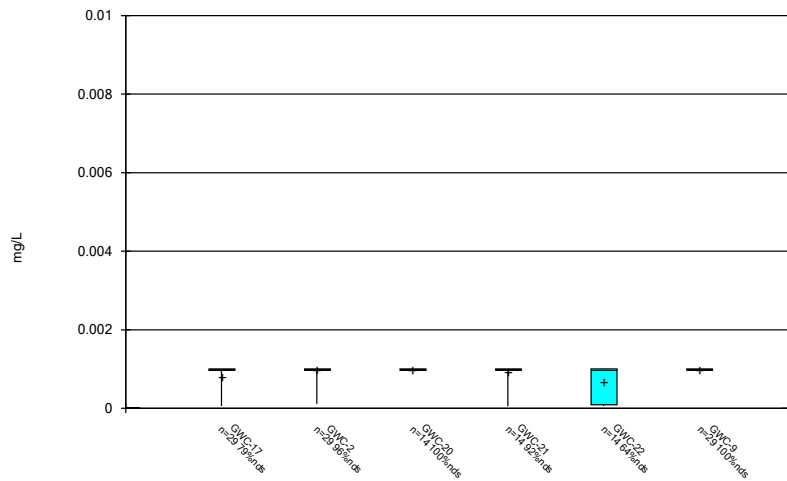
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Box & Whiskers Plot



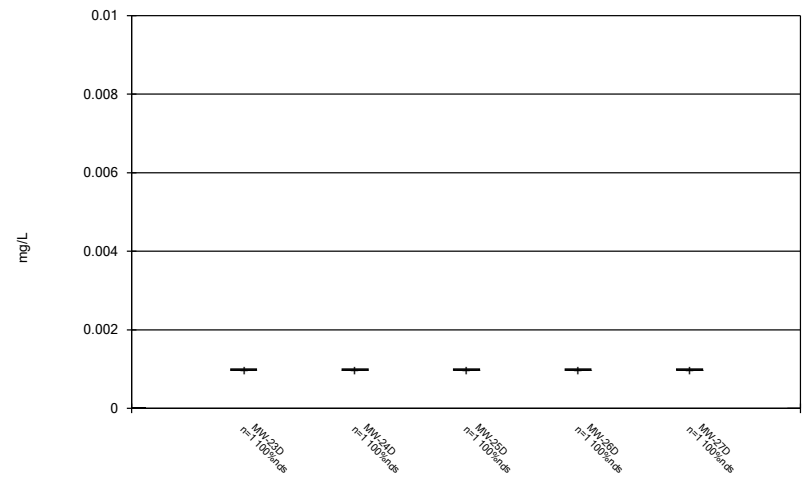
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Box & Whiskers Plot



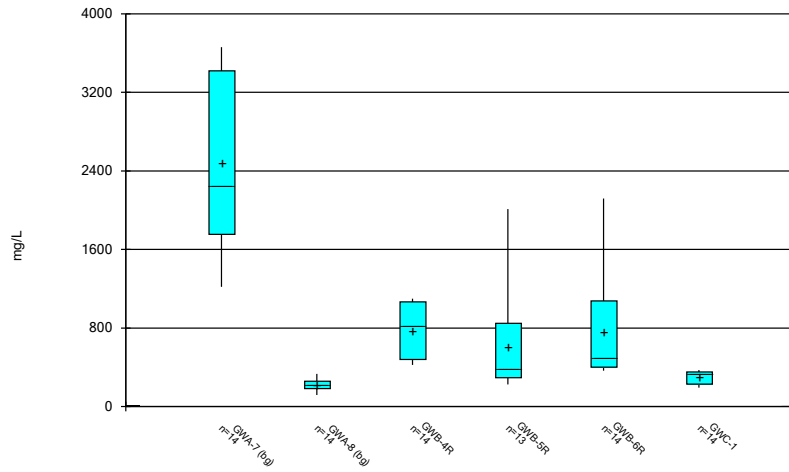
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Box & Whiskers Plot



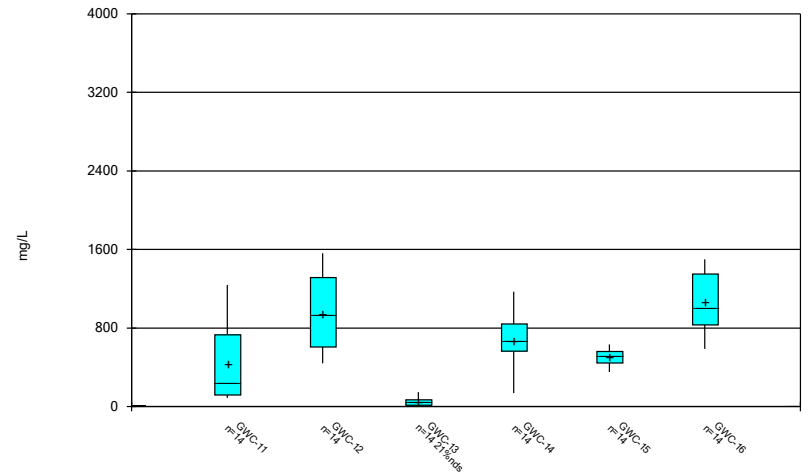
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Box & Whiskers Plot



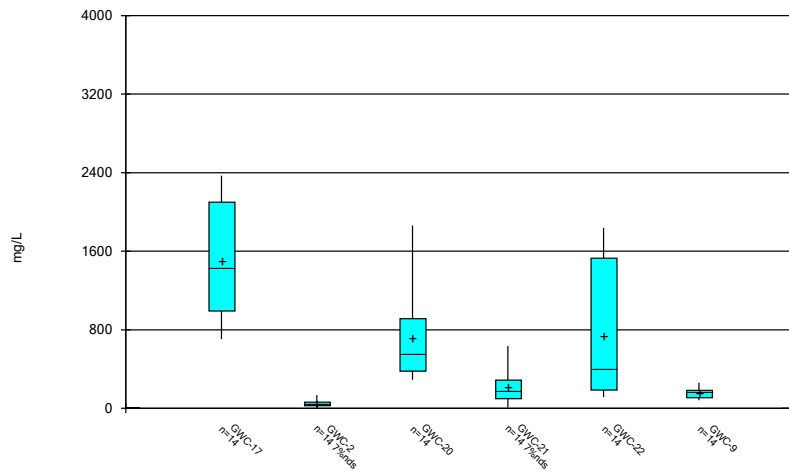
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



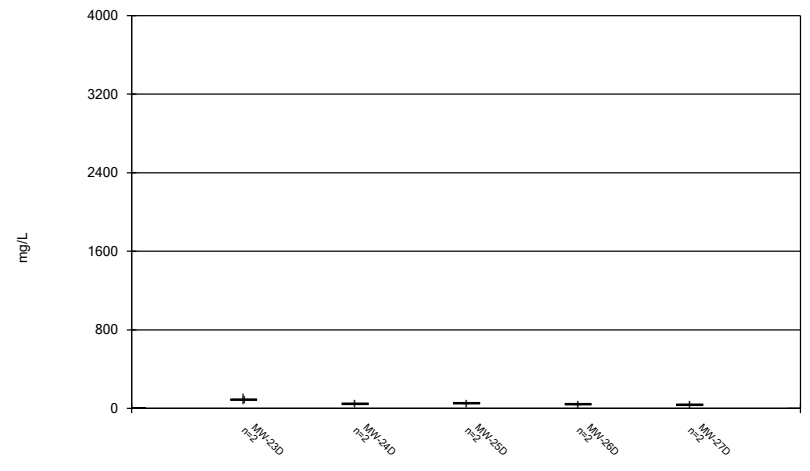
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



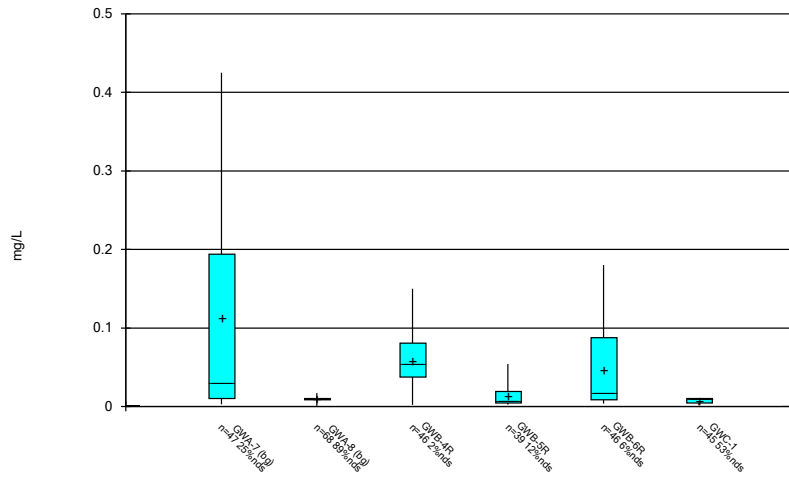
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



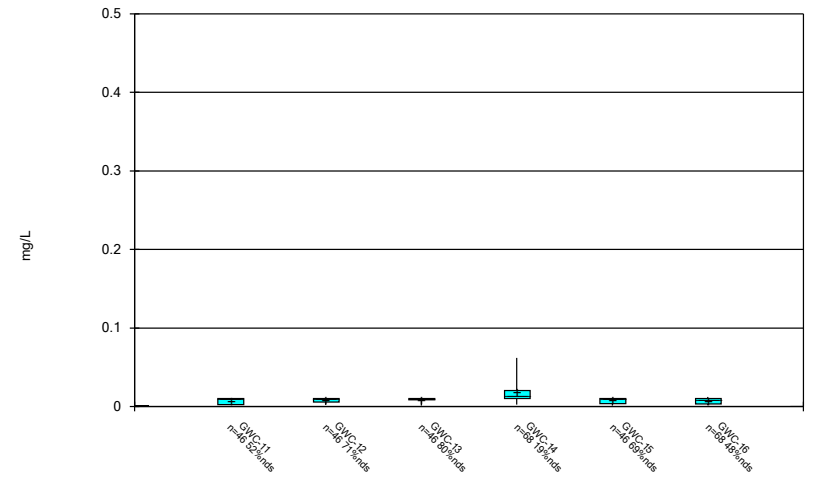
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



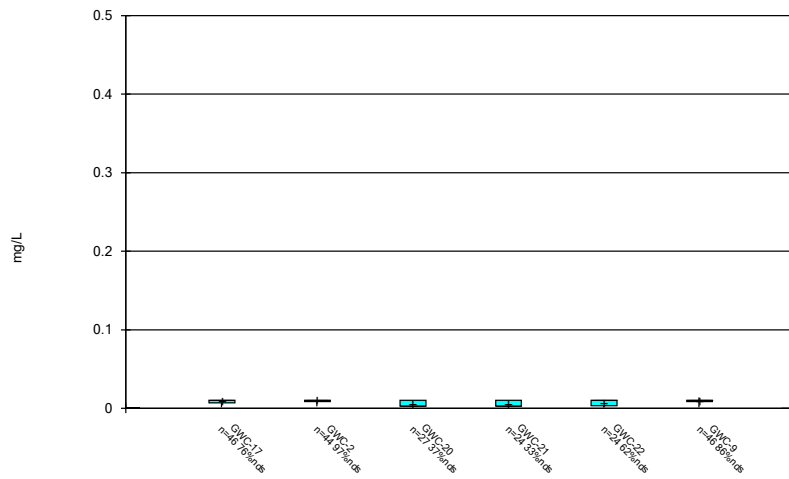
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



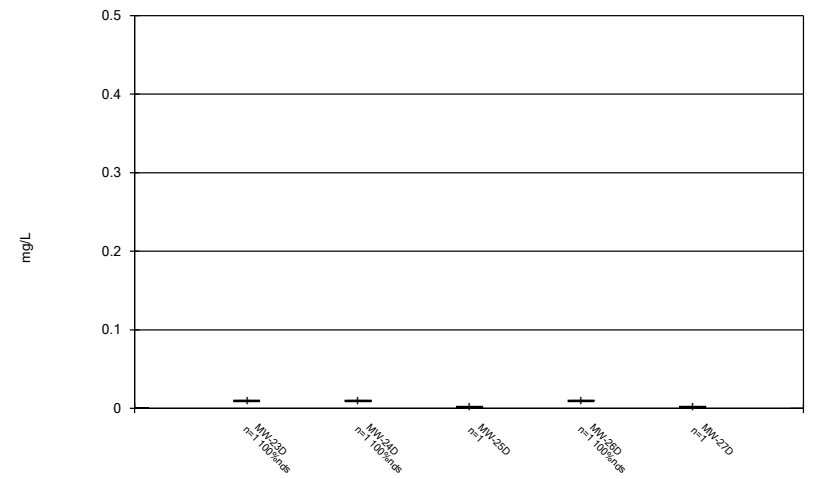
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Box & Whiskers Plot



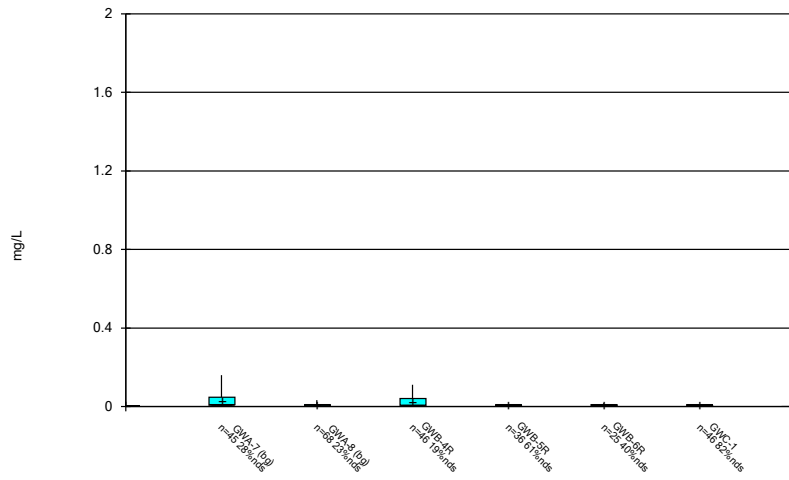
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Box & Whiskers Plot



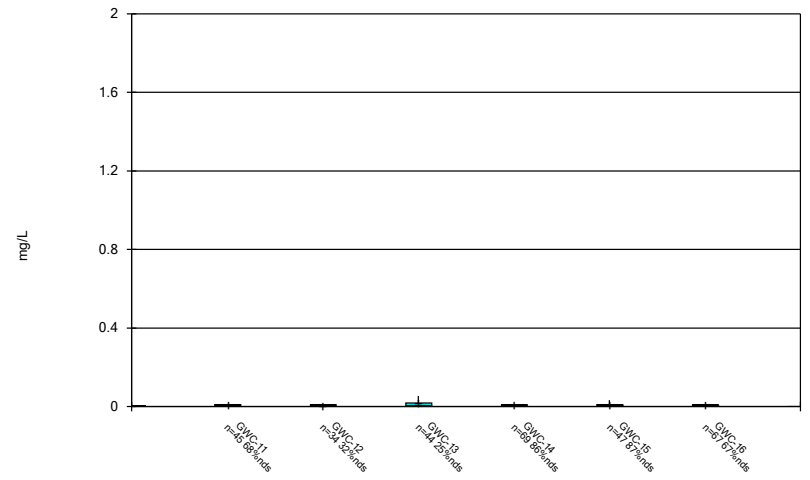
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



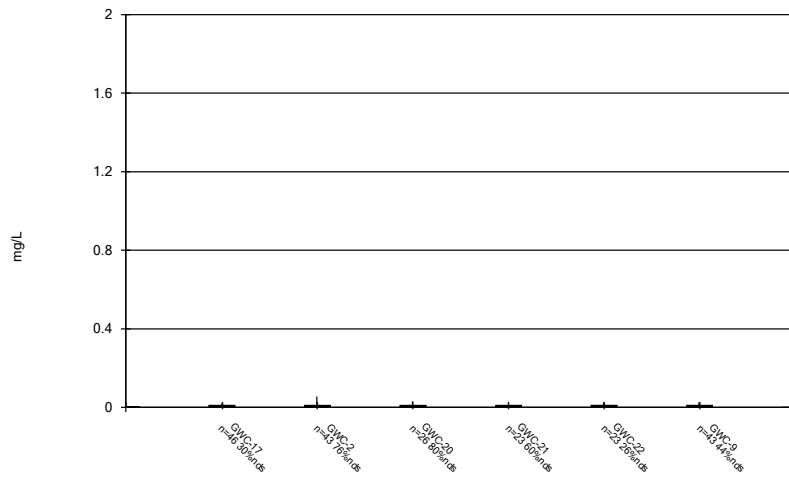
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



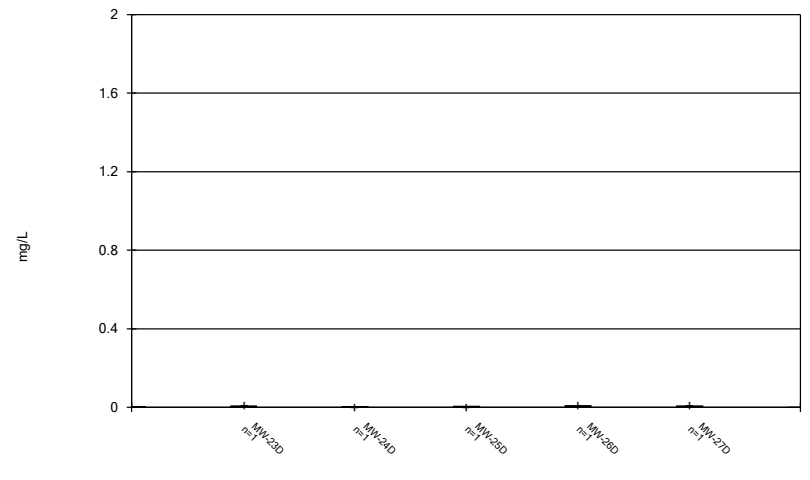
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



Constituent: Zinc Analysis Run 4/19/2021 1:40 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Box & Whiskers Plot



Constituent: Zinc Analysis Run 4/19/2021 1:40 PM
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

FIGURE C.

Outlier Summary

Date	GWB-5R Vanadium (mg/L)	GWC-1 Vanadium (mg/L)	GWC-14 Vanadium (mg/L)	GWC-15 Vanadium (mg/L)	GWC-16 Vanadium (mg/L)	GWA-7 Zinc (mg/L)	GWB-5R Zinc (mg/L)	GWB-6R Zinc (mg/L)	GWC-11 Zinc (mg/L)	GWC-12 Zinc (mg/L)
9/29/2000							0.026 (o)	<0.01 (o)		0.38 (o)
11/21/2000								0.024 (o)		0.077 (o)
1/20/2001							0.031 (o)	<0.01 (o)		0.23 (o)
3/14/2001	0.077 (o)						0.063 (o)	<0.01 (o)		0.24 (o)
7/16/2001	0.12 (o)						0.08 (o)	<0.01 (o)		0.053 (o)
11/1/2001	0.21 (o)						0.16 (o)	<0.01 (o)		0.022 (o)
4/25/2002	0.086 (o)							<0.01 (o)		1.2 (o)
11/20/2002	0.14 (o)						0.14 (o)	0.028 (o)		0.045 (o)
6/6/2003	0.12 (o)	0.16 (o)		0.019 (o)	0.082 (o)	0.69 (o)	0.51 (o)	0.032 (o)		0.042 (o)
12/12/2003				0.018 (o)				<0.01 (o)		
5/26/2004	0.06 (o)						0.036 (o)	<0.01 (o)		
12/7/2004							0.069 (o)	0.012 (o)	0.028 (o)	
6/21/2005							0.076 (o)	<0.01 (o)		
12/12/2005								<0.01 (o)		
6/27/2006										0.012 (o)
12/4/2006										
6/23/2007								0.094 (o)		0.025 (o)
12/11/2007								0.042 (o)		
6/24/2008								0.098 (o)		
12/5/2008								0.047 (o)		
7/7/2009								0.024 (o)		
12/21/2009								0.049 (o)		0.013 (o)
6/20/2010								0.045 (o)		
6/21/2010										
7/8/2011										
7/9/2012										
1/18/2013										
4/3/2014		0.077 (o)								
1/17/2016										
8/31/2016										
9/1/2016										
10/26/2016										
10/3/2017										
7/10/2018										
7/11/2018										
1/16/2019										
1/17/2019										
1/18/2019										
1/21/2019										
3/25/2019						<0.02 (o)				

FIGURE D.

Appendix I Interwell Prediction Limits - Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/19/2021, 1:53 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg.N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	GWC-15	0.0287	n/a	3/12/2021	0.16	Yes	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-16	0.0287	n/a	3/16/2021	0.064	Yes	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-20	0.0287	n/a	3/12/2021	0.27	Yes	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Barium (mg/L)	GWC-20	0.22	n/a	3/12/2021	0.34	Yes	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2

Appendix I Interwell Prediction Limits - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/19/2021, 1:53 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	GWB-4R	0.0287	n/a	3/10/2021	0.0025J	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWB-5R	0.0287	n/a	3/10/2021	0.0019J	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWB-6R	0.0287	n/a	3/10/2021	0.0054	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-1	0.0287	n/a	3/10/2021	0.0055	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-11	0.0287	n/a	3/10/2021	0.005ND	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-12	0.0287	n/a	3/10/2021	0.005ND	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-13	0.0287	n/a	3/15/2021	0.005ND	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-14	0.0287	n/a	3/16/2021	0.005ND	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-15	0.0287	n/a	3/12/2021	0.16	Yes	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-16	0.0287	n/a	3/16/2021	0.064	Yes	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-17	0.0287	n/a	3/11/2021	0.0009J	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-2	0.0287	n/a	3/15/2021	0.005ND	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-20	0.0287	n/a	3/12/2021	0.27	Yes	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-21	0.0287	n/a	3/16/2021	0.0098	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-22	0.0287	n/a	3/10/2021	0.005ND	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	GWC-9	0.0287	n/a	3/10/2021	0.005ND	No	121	n/a	n/a	76.86	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Barium (mg/L)	GWB-4R	0.22	n/a	3/10/2021	0.07	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWB-5R	0.22	n/a	3/10/2021	0.096	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWB-6R	0.22	n/a	3/10/2021	0.027	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-1	0.22	n/a	3/10/2021	0.052	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-11	0.22	n/a	3/10/2021	0.13	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-12	0.22	n/a	3/10/2021	0.028	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-13	0.22	n/a	3/15/2021	0.034	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-14	0.22	n/a	3/16/2021	0.037	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-15	0.22	n/a	3/12/2021	0.038	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-16	0.22	n/a	3/16/2021	0.16	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-17	0.22	n/a	3/11/2021	0.044	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-2	0.22	n/a	3/15/2021	0.053	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-20	0.22	n/a	3/12/2021	0.34	Yes	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-21	0.22	n/a	3/16/2021	0.18	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-22	0.22	n/a	3/10/2021	0.049	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Barium (mg/L)	GWC-9	0.22	n/a	3/10/2021	0.15	No	119	n/a	n/a	0	n/a	n/a	0.000137	NP Inter (normality) 1 of 2
Chromium (mg/L)	GWB-4R	0.068	n/a	3/10/2021	0.003J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWB-5R	0.068	n/a	3/10/2021	0.001J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWB-6R	0.068	n/a	3/10/2021	0.006	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-1	0.068	n/a	3/10/2021	0.0023J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-11	0.068	n/a	3/10/2021	0.0013J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-12	0.068	n/a	3/10/2021	0.00091J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-13	0.068	n/a	3/15/2021	0.01ND	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-14	0.068	n/a	3/16/2021	0.01ND	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-15	0.068	n/a	3/12/2021	0.0031J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-16	0.068	n/a	3/16/2021	0.0012J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-17	0.068	n/a	3/11/2021	0.0009J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-2	0.068	n/a	3/15/2021	0.0011J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-20	0.068	n/a	3/12/2021	0.0014J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-21	0.068	n/a	3/16/2021	0.00075J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-22	0.068	n/a	3/10/2021	0.01ND	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Chromium (mg/L)	GWC-9	0.068	n/a	3/10/2021	0.0011J	No	120	n/a	n/a	62.5	n/a	n/a	0.0001341	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWB-4R	0.0438	n/a	3/10/2021	0.0021J	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWB-5R	0.0438	n/a	3/10/2021	0.006	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWB-6R	0.0438	n/a	3/10/2021	0.0049J	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-1	0.0438	n/a	3/10/2021	0.0026J	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-11	0.0438	n/a	3/10/2021	0.0044J	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-12	0.0438	n/a	3/10/2021	0.003J	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-13	0.0438	n/a	3/15/2021	0.01ND	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-14	0.0438	n/a	3/16/2021	0.0034J	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2

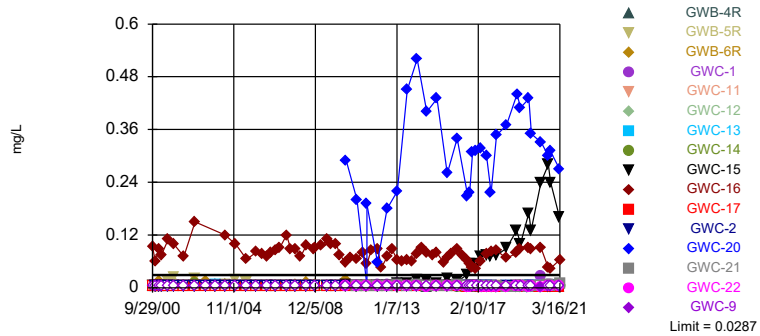
Appendix I Interwell Prediction Limits - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/19/2021, 1:53 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Selenium (mg/L)	GWC-15	0.0438	n/a	3/12/2021	0.0064	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-16	0.0438	n/a	3/16/2021	0.0044J	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-17	0.0438	n/a	3/11/2021	0.0016J	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-2	0.0438	n/a	3/15/2021	0.01ND	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-20	0.0438	n/a	3/12/2021	0.01ND	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-21	0.0438	n/a	3/16/2021	0.0055	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-22	0.0438	n/a	3/10/2021	0.01ND	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Selenium (mg/L)	GWC-9	0.0438	n/a	3/10/2021	0.01ND	No	121	n/a	n/a	83.47	n/a	n/a	0.0001324	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWB-4R	0.425	n/a	3/10/2021	0.0054J	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWB-5R	0.425	n/a	3/10/2021	0.0026J	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWB-6R	0.425	n/a	3/10/2021	0.027	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-1	0.425	n/a	3/10/2021	0.005J	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-11	0.425	n/a	3/10/2021	0.0023J	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-12	0.425	n/a	3/10/2021	0.0055J	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-13	0.425	n/a	3/15/2021	0.01ND	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-14	0.425	n/a	3/16/2021	0.01ND	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-15	0.425	n/a	3/12/2021	0.0037J	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-16	0.425	n/a	3/16/2021	0.0034J	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-17	0.425	n/a	3/11/2021	0.01ND	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-2	0.425	n/a	3/15/2021	0.01ND	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-20	0.425	n/a	3/12/2021	0.0038J	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-21	0.425	n/a	3/16/2021	0.003J	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-22	0.425	n/a	3/10/2021	0.01ND	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Vanadium (mg/L)	GWC-9	0.425	n/a	3/10/2021	0.01ND	No	115	n/a	n/a	63.48	n/a	n/a	0.0001484	NP Inter (NDs) 1 of 2
Zinc (mg/L)	GWB-4R	0.16	n/a	3/10/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWB-5R	0.16	n/a	3/10/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWB-6R	0.16	n/a	3/10/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-1	0.16	n/a	3/10/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-11	0.16	n/a	3/10/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-12	0.16	n/a	3/10/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-13	0.16	n/a	3/15/2021	0.039	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-14	0.16	n/a	3/16/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-15	0.16	n/a	3/12/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-16	0.16	n/a	3/16/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-17	0.16	n/a	3/11/2021	0.0056J	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-2	0.16	n/a	3/15/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-20	0.16	n/a	3/12/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-21	0.16	n/a	3/16/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-22	0.16	n/a	3/10/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2
Zinc (mg/L)	GWC-9	0.16	n/a	3/10/2021	0.01ND	No	113	n/a	n/a	25.66	n/a	n/a	0.0001542	NP Inter (normality) 1 of 2

Exceeds Limit: GWC-15, GWC-16, GWC-20

Prediction Limit Interwell Non-parametric

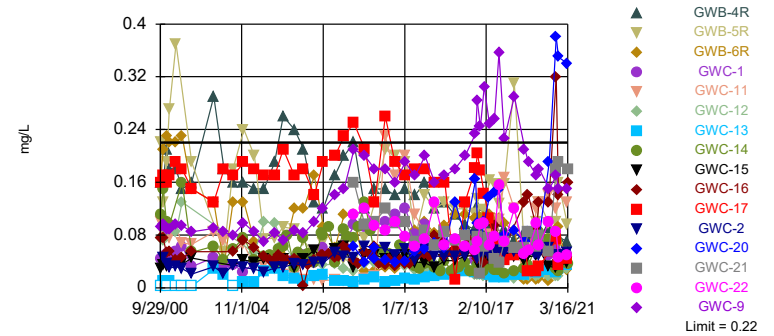


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 121 background values. 76.86% NDs. Annual per-constituent alpha = 0.004228. Individual comparison alpha = 0.0001324 (1 of 2). Comparing 16 points to limit.

Constituent: Arsenic Analysis Run 4/19/2021 1:51 PM View: Appendix I
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit: GWC-20

Prediction Limit Interwell Non-parametric

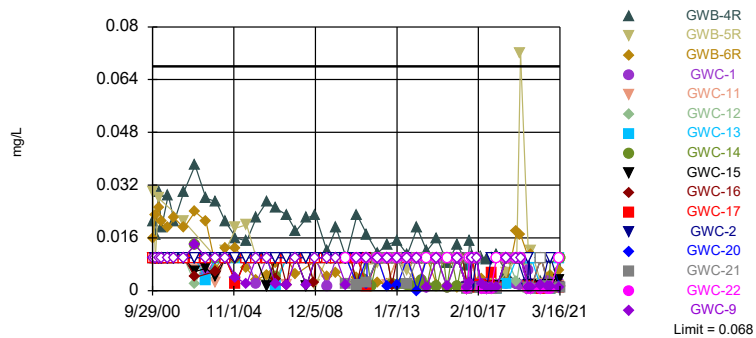


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 119 background values. Annual per-constituent alpha = 0.004375. Individual comparison alpha = 0.000137 (1 of 2). Comparing 16 points to limit.

Constituent: Barium Analysis Run 4/19/2021 1:51 PM View: Appendix I
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Prediction Limit Interwell Non-parametric

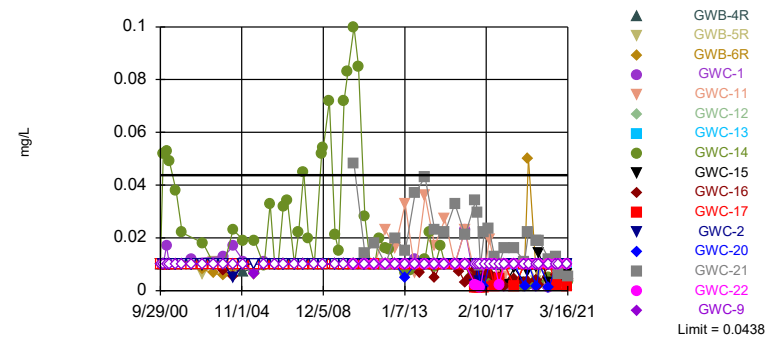


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 120 background values. 62.5% NDs. Annual per-constituent alpha = 0.004283. Individual comparison alpha = 0.0001341 (1 of 2). Comparing 16 points to limit.

Constituent: Chromium Analysis Run 4/19/2021 1:51 PM View: Appendix I
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Prediction Limit Interwell Non-parametric

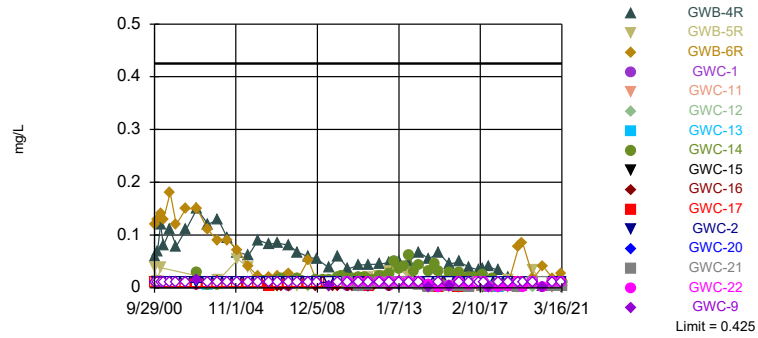


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 121 background values. 83.47% NDs. Annual per-constituent alpha = 0.004228. Individual comparison alpha = 0.0001324 (1 of 2). Comparing 16 points to limit.

Constituent: Selenium Analysis Run 4/19/2021 1:51 PM View: Appendix I
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Prediction Limit
 Interwell Non-parametric

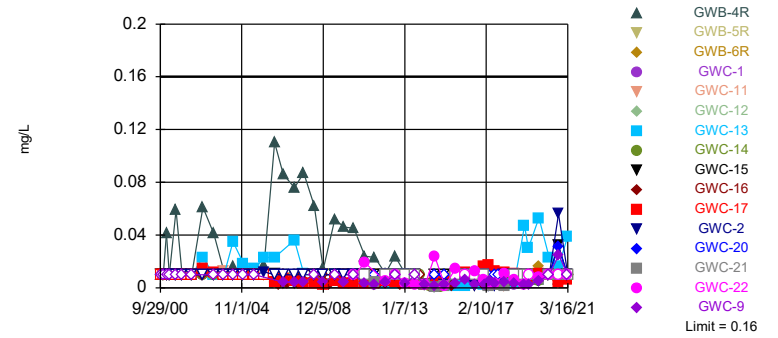


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 115 background values. 63.48% NDs. Annual per-constituent alpha = 0.004739. Individual comparison alpha = 0.0001484 (1 of 2). Comparing 16 points to limit.

Constituent: Vanadium Analysis Run 4/19/2021 1:51 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Prediction Limit
 Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 113 background values. 25.66% NDs. Annual per-constituent alpha = 0.004922. Individual comparison alpha = 0.0001542 (1 of 2). Comparing 16 points to limit.

Constituent: Zinc Analysis Run 4/19/2021 1:51 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-16	GWC-12	GWC-14	GWC-11	GWB-6R	GWB-5R	GWC-9	GWB-4R
9/29/2000	<0.005	0.094	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
11/21/2000	<0.005	0.059	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1/20/2001	<0.005	0.087	<0.005	<0.005	<0.005	0.014	<0.005	<0.005	0.01
3/14/2001	<0.005	0.075	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
7/16/2001	<0.005	0.11	<0.005	<0.005	<0.005	<0.005	0.014	<0.005	<0.005
11/1/2001	<0.005	0.098	<0.005	<0.005	<0.005	<0.005	0.023	<0.005	<0.005
4/25/2002	<0.005	0.071	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
11/20/2002		0.15	<0.005	0.011	<0.005	0.014	0.022	<0.005	0.0096
6/6/2003	0.02	1.2 (o)	<0.005	<0.005	<0.005	0.014	0.07 (o)	<0.005	0.0076
12/12/2003	<0.005	0.27 (o)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0058
5/26/2004	<0.005	0.12	<0.005	<0.005	<0.005	0.0082	0.0074	<0.005	0.0068
12/7/2004	<0.005	0.098	<0.005	<0.005	<0.005	0.0062	0.017	<0.005	0.0066
6/21/2005	<0.005	0.065	<0.005	<0.005	<0.005	<0.005	0.013	<0.005	<0.005
12/12/2005	<0.005	0.081	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4/4/2006		0.077		<0.005					
6/27/2006	<0.005	0.071	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
8/30/2006		0.08		<0.005					
12/4/2006	<0.005	0.085	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2/15/2007		0.09		<0.005					
6/23/2007	<0.005	0.12	<0.005	<0.005	<0.005	0.0053	<0.005	<0.005	<0.005
9/11/2007		0.088		<0.005					
12/11/2007	<0.005	0.088	<0.005	<0.005	<0.005	0.0057	<0.005	<0.005	<0.005
3/11/2008		0.071		<0.005					
6/23/2008	<0.005		<0.005		<0.005			<0.005	
6/24/2008		0.097		<0.005		0.012	<0.005		0.005
11/3/2008		0.089		<0.005					
12/4/2008	<0.005		<0.005	<0.005	<0.005			<0.005	
12/5/2008		0.092				0.0064	<0.005		<0.005
3/25/2009		0.095		<0.005					
7/7/2009	<0.005					<0.005	<0.005		<0.005
7/8/2009		0.11	<0.005	<0.005	<0.005			<0.005	
9/14/2009		0.099		<0.005					
12/20/2009	<0.005	0.1		<0.005					
12/21/2009			<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
3/4/2010		0.074		<0.005					
6/20/2010	<0.005		<0.005	<0.005	<0.005	0.017	<0.005	<0.005	
6/21/2010		0.056							0.018 (o)
9/14/2010		0.067		<0.005					
1/6/2011					<0.005		<0.005		
1/7/2011	<0.005	0.066	<0.005	<0.005		<0.005		<0.005	<0.005
4/15/2011		0.08		<0.005					
7/7/2011	<0.005	0.054	<0.005	<0.005	<0.005	<0.005	<0.005		
7/8/2011								<0.005	<0.005
9/25/2011		0.085		<0.005					
1/17/2012	<0.005		<0.005	<0.005	<0.005		<0.005		
1/18/2012		0.089				<0.005		<0.005	<0.005
4/4/2012		0.0473		<0.005					
7/9/2012	0.0052		<0.005	<0.005	<0.005		<0.005		
7/10/2012		0.07				<0.005		<0.005	0.0052
10/9/2012		0.088		<0.005					
1/17/2013			<0.005		<0.005		<0.005		
1/18/2013	0.0087	0.063		<0.005		<0.005		<0.005	<0.005

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-16	GWC-12	GWC-14	GWC-11	GWB-6R	GWB-5R	GWC-9	GWB-4R
4/5/2013		0.06		<0.005					
7/16/2013			<0.005		<0.005		<0.005		
7/17/2013	0.0084	0.063		<0.005		<0.005		<0.005	<0.005
10/11/2013		0.059		0.005					
1/13/2014	0.009		<0.005		<0.005		<0.005		
1/14/2014		0.077		<0.005		<0.005		<0.005	<0.005
4/3/2014		0.091		<0.005					
7/8/2014			<0.005		<0.005				
7/9/2014	0.008	0.08		<0.005		<0.005	<0.005	<0.005	0.0023 (J)
7/10/2014									
10/24/2014		0.073		<0.005					
1/12/2015									0.0028 (J)
1/13/2015	0.0077		<0.005		<0.005		<0.005		
1/14/2015		0.079		<0.005		<0.005		<0.005	
5/10/2015				<0.005					
5/11/2015		0.058							
7/16/2015	0.0077	0.068	<0.005		<0.005		<0.005		<0.005
7/17/2015				<0.005		<0.005		<0.005	
7/18/2015									
10/6/2015		0.078		<0.005					
1/17/2016		0.089		0.002 (J)					
1/18/2016	0.014		<0.005			<0.005	<0.005	<0.005	<0.005
1/19/2016					<0.005				
4/26/2016		0.0731		0.00183 (J)					
7/26/2016					<0.005				
7/27/2016	0.0111		<0.005	0.0021 (J)			0.0008 (J)		
7/28/2016		0.0627				0.0009 (J)		<0.005	
7/29/2016									0.0014 (J)
8/30/2016						<0.005	<0.005		
8/31/2016			<0.005		<0.005			<0.005	
9/1/2016	0.0287	0.0551		0.0024 (J)					0.0033 (J)
10/24/2016									
10/25/2016	0.0069	0.0466		<0.005					
10/26/2016			<0.005		<0.005	<0.005	<0.005		0.0016 (J)
10/27/2016								<0.005	
1/3/2017							<0.005		
1/4/2017		0.0444	<0.005		<0.005				
1/5/2017				0.0024 (J)		0.0021 (J)			
1/6/2017	0.0097							<0.005	<0.005
4/3/2017									
4/4/2017				0.003 (J)					0.0021 (J)
4/5/2017		0.0591	0.0006 (J)						
4/6/2017	0.0104				<0.005	0.0011 (J)	0.0006 (J)	<0.005	
7/10/2017			0.0008 (J)						
7/11/2017				0.0019 (J)	<0.005				
7/12/2017		0.0776				0.0014 (J)	0.0009 (J)	<0.005	0.0015 (J)
7/13/2017	0.0064								
10/2/2017				0.0026 (J)					
10/3/2017		0.0813			<0.005	0.0014 (J)	0.001 (J)		
10/4/2017	0.0078		0.0009 (J)					<0.005	0.0018 (J)
1/9/2018	0.0091 (J)			0.0021 (J)		0.0017 (J)			
1/10/2018		0.085					0.0012 (J)		

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-16	GWC-12	GWC-14	GWC-11	GWB-6R	GWB-5R	GWC-9	GWB-4R
1/11/2018			<0.005		<0.005			<0.005	0.0015 (J)
7/9/2018				0.0019 (J)					
7/10/2018		0.067				0.00063 (J)	0.0016 (J)		
7/11/2018	<0.005		<0.005		<0.005			<0.005	0.00095 (J)
1/16/2019	<0.005			0.0016 (J)		<0.005	0.0011 (J)		0.0024 (J)
1/17/2019		0.079	<0.005		<0.005				
1/18/2019								<0.005	
1/21/2019									
3/25/2019	0.0029 (J)								0.0029 (J)
3/26/2019		0.089		0.0023 (J)		0.0029 (J)	0.0014 (J)		
3/27/2019			<0.005		<0.005			<0.005	
7/30/2019									
8/26/2019	0.0041 (J)								
8/27/2019			<0.005	0.0017 (J)	<0.005	0.0035 (J)			0.0023 (J)
8/28/2019		0.091					0.0023 (J)	<0.005	
10/7/2019									
10/8/2019	0.003 (J)	0.088		0.0017 (J)	<0.005				
10/9/2019			<0.005			0.0018 (J)	0.0053 (J)	<0.005	0.0024 (J)
4/6/2020	<0.005								
4/7/2020		0.091	<0.005	0.0018 (J)	<0.005	<0.005	0.0011 (J)		0.0027 (J)
4/8/2020								0.00084 (J)	
8/17/2020			<0.005						
8/18/2020		0.045		0.0012 (J)	<0.005				
8/19/2020	0.006 (J)					0.0036 (J)	0.0019 (J)	<0.005	0.0033 (J)
9/28/2020	<0.005								
9/29/2020			<0.005	<0.005	<0.005				
9/30/2020		0.044				0.004 (J)	0.0017 (J)		
10/1/2020								<0.005	0.0027 (J)
3/10/2021			<0.005		<0.005	0.0054	0.0019 (J)	<0.005	0.0025 (J)
3/11/2021	0.0047 (J)								
3/12/2021									
3/15/2021									
3/16/2021		0.064		<0.005					

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-15	GWC-17	GWC-1	GWC-13	GWA-8 (bg)	GWC-2	GWC-22	GWC-20	GWC-21
9/29/2000	<0.005	<0.005	<0.005	<0.005	<0.005				
11/21/2000	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			
1/20/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			
3/14/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			
7/16/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			
11/1/2001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			
4/25/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			
11/20/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			
6/6/2003	<0.005	<0.005	0.03 (o)	<0.005	<0.005	<0.005			
12/12/2003	<0.005	<0.005	<0.005	0.0064	<0.005	<0.005			
5/26/2004	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			
12/7/2004	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			
6/21/2005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			
12/12/2005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			
4/4/2006					<0.005				
6/27/2006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			
8/30/2006					<0.005				
12/4/2006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			
2/15/2007					<0.005				
6/23/2007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			
9/11/2007					<0.005				
12/11/2007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			
3/11/2008					<0.005				
6/23/2008				<0.005	<0.005				
6/24/2008	<0.005	<0.005	<0.005			<0.005			
11/3/2008					<0.005				
12/4/2008				<0.005	<0.005	<0.005			
12/5/2008	<0.005	<0.005	<0.005						
3/25/2009					<0.005				
7/7/2009			<0.005		<0.005				
7/8/2009	0.0052	<0.005		<0.005		<0.005			
9/14/2009					<0.005				
12/20/2009	<0.005		<0.005		<0.005	<0.005			
12/21/2009		<0.005		<0.005					
3/4/2010					<0.005				
6/20/2010	0.0068		<0.005	<0.005	<0.005	<0.005			
6/21/2010		<0.005					<0.005	0.29	0.013 (o)
9/14/2010					<0.005				
1/6/2011			<0.005	<0.005		<0.005			
1/7/2011	<0.005	<0.005			<0.005		<0.005	0.2	<0.005
4/15/2011					<0.005				
7/7/2011	<0.005		<0.005	<0.005	<0.005			<0.005	
7/8/2011		<0.005					<0.005	0.19	<0.005
9/25/2011					<0.005				
1/17/2012	<0.005		0.0071	<0.005	<0.005	<0.005			
1/18/2012		<0.005					<0.005	0.058	<0.005
4/4/2012					<0.005				
7/9/2012	<0.005		0.0076	<0.005		<0.005			
7/10/2012		<0.005			<0.005		<0.005	0.18	<0.005
10/9/2012					<0.005				
1/17/2013			0.0086	<0.005		<0.005			
1/18/2013	0.0089	<0.005			<0.005		<0.005	0.22	0.0061

Prediction Limit

Constituent: Arsenic (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-15	GWC-17	GWC-1	GWC-13	GWA-8 (bg)	GWC-2	GWC-22	GWC-20	GWC-21
4/5/2013					<0.005				
7/16/2013			<0.005	<0.005					
7/17/2013	0.011	<0.005			<0.005	<0.005	<0.005	0.45	<0.005
10/11/2013					<0.005				
1/13/2014	0.017		<0.005	<0.005		<0.005			
1/14/2014		<0.005			<0.005		<0.005	0.52	0.006
4/3/2014					<0.005				
7/8/2014				<0.005					
7/9/2014	0.014	<0.005	0.0022 (J)		<0.005	<0.005			<0.005
7/10/2014							0.0027 (J)	0.4	
10/24/2014					<0.005				
1/12/2015								0.43	
1/13/2015	0.011		<0.005	<0.005		<0.005			
1/14/2015		<0.005			<0.005		<0.005		<0.005
5/10/2015					<0.005				
5/11/2015									
7/16/2015	0.02		0.0037 (J)	<0.005		<0.005			
7/17/2015					<0.005				<0.005
7/18/2015		<0.005					<0.005	0.26	
10/6/2015					<0.005				
1/17/2016	0.014		0.024 (o)			<0.005		0.34	0.0065
1/18/2016		<0.005		<0.005	<0.005		<0.005		
1/19/2016									
4/26/2016					0.0011 (J)				
7/26/2016				<0.005					
7/27/2016	0.0303		0.0046 (J)			<0.005			
7/28/2016					<0.005			0.209	<0.005
7/29/2016		0.0009 (J)					0.002 (J)		
8/30/2016			0.0023 (J)		<0.005				
8/31/2016				<0.005		<0.005	0.0017 (J)		
9/1/2016	0.0533	<0.005						0.215	0.0039 (J)
10/24/2016					<0.005				
10/25/2016	0.0551		0.0035 (J)					0.307	<0.005
10/26/2016		<0.005		<0.005		<0.005	<0.005		
10/27/2016									
1/3/2017					<0.005				
1/4/2017			0.0018 (J)				<0.005	0.311	<0.005
1/5/2017	0.0437	<0.005		<0.005		<0.005			
1/6/2017									
4/3/2017	0.0713				0.0006 (J)				
4/4/2017			0.0015 (J)			<0.005		0.317	0.0031 (J)
4/5/2017		0.0011 (J)							
4/6/2017				<0.005			0.0006 (J)		
7/10/2017									
7/11/2017	0.0745				0.0006 (J)		0.0012 (J)	0.299	
7/12/2017			0.0015 (J)	<0.005					
7/13/2017		0.0016 (J)				<0.005			<0.005
10/2/2017	0.0723				0.0006 (J)			0.216	
10/3/2017			0.0013 (J)			<0.005			<0.005
10/4/2017		0.0019 (J)		<0.005			0.0025 (J)		
1/9/2018	0.0731				0.0009 (J)				0.0033 (J)
1/10/2018			0.0023 (J)	0.0006 (J)		0.0006 (J)		0.347	

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-12	GWC-16	GWC-15	GWC-13	GWC-9	GWC-11	GWB-4R
9/29/2000	0.11	0.16	0.075	0.076	0.028	<0.005	0.093	0.1	0.16
11/21/2000	0.12		0.072	0.075	0.035	0.01	0.095	0.082	0.16
1/20/2001	0.11	0.18	0.086	0.053	0.032	<0.005	0.089	0.083	0.21
3/14/2001	0.11	0.14	0.088	0.055	0.036	0.01	0.088	0.075	0.18
7/16/2001	0.11	0.14	0.084	0.041	0.036	<0.005	0.096	0.091	0.18
11/1/2001	0.11	0.14	0.13	0.045	0.036	<0.005	0.094	0.068	0.15
4/25/2002	0.058	0.088	0.24 (o)	0.055	0.045	<0.005	0.085	0.066	0.16
6/6/2003	0.19	0.14	0.28 (o)	0.48 (o)	0.083 (o)	0.028	0.09	0.085	0.29
12/12/2003	0.1	0.13	0.27 (o)	0.13 (o)	0.094 (o)	0.019	0.084	0.072	0.18
5/26/2004	0.084	0.09	0.31 (o)	0.055	0.034	<0.005	0.08	0.055	0.16
12/7/2004	0.094	0.11	0.46 (o)	0.072	0.042	0.009	0.098	0.066	0.16
6/21/2005	0.089	0.084	0.053	0.061	0.039	0.0089	0.084	0.033	0.15
12/12/2005	0.089	0.1	0.1	0.047	0.043	0.026	0.07	0.034	0.15
4/4/2006		0.089		0.042					
6/27/2006	0.096	0.1	0.098	0.042	0.031	0.029	0.083	0.029	0.19
8/30/2006		0.12		0.05					
12/4/2006	0.092	0.086	0.068	0.044	0.043	0.017	0.072	0.02	0.26
2/15/2007		0.088		0.041					
6/23/2007	0.08	0.089	0.042	0.044	0.031	0.014	0.087	0.017	0.24
9/11/2007		0.092		0.04					
12/11/2007	0.067	0.077	0.04	0.0035	0.044	0.011	0.082	0.013	0.21
3/11/2008		0.082		0.034					
6/23/2008	0.056	0.086	0.041			0.018	0.1	0.012	
6/24/2008				0.042	0.057				0.13
11/3/2008		0.088		0.049					
12/4/2008	0.054	0.081	0.035			0.019	0.12	0.011	
12/5/2008				0.05	0.041				0.12
3/25/2009		0.069		0.052					
7/7/2009	0.034	0.078							0.17
7/8/2009			0.036	0.046	0.058	0.011	0.14	0.012	
9/14/2009		0.079		0.048					
12/20/2009	0.034	0.081		0.062	0.062				
12/21/2009			0.028			0.01	0.15	0.011	0.2
3/4/2010		0.065		0.058					
6/20/2010	0.062	0.078	0.025		0.03	0.0081	0.21	0.0089	
6/21/2010				0.041					0.22
9/14/2010		0.076		0.036					
1/6/2011						0.012		0.014	
1/7/2011	0.039	0.074	0.037	0.054	0.049		0.2		0.12
4/15/2011		0.065		0.049					
7/7/2011	0.036	0.081	0.039	0.063	0.05	0.015		0.018	
7/8/2011							0.18		0.15
9/25/2011		0.078		0.037					
1/17/2012	0.041	0.082	0.045		0.044	0.0086		0.23	
1/18/2012				0.034			0.18		0.15
4/4/2012		0.0861		0.0446					
7/9/2012	0.15		0.032		0.045	0.01		0.17	
7/10/2012		0.082		0.033			0.16		0.14
10/9/2012		0.09		0.041					
1/17/2013			0.033			0.014		0.2	
1/18/2013	0.15	0.083		0.036	0.049		0.19		0.15
4/5/2013		0.078		0.036					

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-12	GWC-16	GWC-15	GWC-13	GWC-9	GWC-11	GWB-4R
7/16/2013			0.027			0.012		0.11	
7/17/2013	0.13	0.083		0.054	0.039		0.17		0.14
10/11/2013		0.078		0.052					
1/13/2014	0.16		0.027		0.038	0.015		0.083	
1/14/2014		0.081		0.051			0.2		0.16
4/3/2014		0.077		0.047					
7/8/2014			0.037			0.017		0.066	
7/9/2014	0.11	0.073		0.08	0.031		0.16		0.12
7/10/2014									
10/24/2014		0.087		0.072					
1/12/2015									0.13
1/13/2015	0.083		0.023		0.041	0.019		0.053	
1/14/2015		0.079		0.047			0.17		
5/10/2015		0.076							
5/11/2015				0.053					
7/16/2015	0.094		0.03	0.059	0.041	0.022		0.052	0.11
7/17/2015		0.061					0.18		
7/18/2015									
10/6/2015		0.067		0.053					
1/17/2016				0.056	0.048				
1/18/2016	0.22	0.068	0.032			0.026	0.2		0.095
1/19/2016								0.048	
4/26/2016		0.0596		0.0721					
7/26/2016						0.0236		0.051	
7/27/2016	0.192		0.0191		0.0487				
7/28/2016		0.0701		0.0534			0.234		
7/29/2016									0.0883
8/30/2016		0.0687							
8/31/2016			0.019			0.0273	0.284	0.0565	
9/1/2016	0.415 (o)			0.0445	0.0403				0.123
10/24/2016		0.07							
10/25/2016	0.173			0.0464	0.0329				
10/26/2016			0.0197			0.0238		0.0591	0.0863
10/27/2016							0.244		
1/3/2017		0.061							
1/4/2017			0.0174	0.0379				0.0598	
1/5/2017					0.0392	0.0218			
1/6/2017	0.167						0.305		0.0758
4/3/2017		0.0612			0.0439				
4/4/2017									0.091
4/5/2017			0.0174	0.0534					
4/6/2017	0.136					0.0204	0.249	0.0813	
7/10/2017			0.0172						
7/11/2017		0.0624			0.051			0.0302	
7/12/2017				0.0944		0.0161	0.256		0.0941
7/13/2017	0.0891								
10/2/2017		0.0618			0.047				
10/3/2017				0.135 (o)				0.103	
10/4/2017	0.113		0.0162			0.0185	0.356		0.0994
1/9/2018	0.0901	0.0574			0.0431				
1/10/2018				0.0603		0.0166			
1/11/2018			0.018				0.226	0.166	0.088

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWA-8 (bg)	GWC-12	GWC-16	GWC-15	GWC-13	GWC-9	GWC-11	GWB-4R
7/9/2018		0.056							
7/10/2018				0.16 (o)	0.047				
7/11/2018	0.065		0.014			0.019	0.29	0.12	0.071
1/16/2019	0.062	0.062				0.019			0.083
1/17/2019			0.017	0.13	0.042			0.039	
1/18/2019							0.21		
1/21/2019									
3/25/2019	0.054	0.064							0.077
3/26/2019				0.14	0.047	0.026			
3/27/2019			0.017				0.19	0.053	
7/30/2019									
8/26/2019	0.11	0.065							
8/27/2019			0.017		0.049	0.024		0.12	0.076
8/28/2019				0.09			0.17		
10/7/2019		0.069							
10/8/2019	0.1			0.13	0.057	0.024		0.13	
10/9/2019			0.019				0.18		0.076
4/6/2020	0.072	0.057							
4/7/2020			0.017	0.13	0.033			0.14	0.09
4/8/2020						0.027	0.15		
8/17/2020		0.051	0.018			0.024			
8/18/2020				0.32	0.03			0.12	
8/19/2020	0.1						0.17		0.076
9/28/2020	0.095	0.05				0.029			
9/29/2020			0.018					0.14	
9/30/2020				0.14	0.034				
10/1/2020							0.15		0.077
3/10/2021			0.028				0.15	0.13	0.07
3/11/2021	0.07								
3/12/2021		0.052			0.038				
3/15/2021						0.034			
3/16/2021				0.16					

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-1	GWC-17	GWB-5R	GWC-14	GWB-6R	GWC-2	GWC-20	GWC-22	GWC-21
9/29/2000	0.044	0.16	0.22	0.11	0.16				
11/21/2000	0.047	0.17	0.13	0.15	0.21	0.046			
1/20/2001	0.051	0.16	0.19	0.1	0.23	0.036			
3/14/2001	0.048	0.17	0.27	0.095	0.22	0.03			
7/16/2001	0.054	0.19	0.37	0.28 (o)	0.22	0.032			
11/1/2001	0.063	0.18	0.61 (o)	0.16	0.23	0.029			
4/25/2002	0.032	0.15	0.19	0.054	0.15	0.021			
6/6/2003	0.046	0.13	0.72 (o)	0.063	0.13	0.032			
12/12/2003	0.034	0.18	0.054	0.041	0.034	0.021			
5/26/2004	0.035	0.17	0.18	0.059	0.13	0.035			
12/7/2004	0.024	0.19	0.24	0.076	0.13	0.031			
6/21/2005	0.039	0.18	0.2	0.042	0.07	0.028			
12/12/2005	0.042	0.17	0.074	0.048	0.04	0.024			
4/4/2006				0.05					
6/27/2006	0.033	0.17	0.075	0.036	0.041	0.03			
8/30/2006				0.059					
12/4/2006	0.04	0.21	0.092	0.062	0.048	0.031			
2/15/2007				0.079					
6/23/2007	0.044	0.17	0.089	0.03	0.12	0.037			
9/11/2007				0.053					
12/11/2007	0.049	0.18	0.072	0.075	0.12	0.034			
3/11/2008				0.052					
6/23/2008									
6/24/2008	0.038	0.14	0.049	0.039	0.17	0.038			
11/3/2008				0.082					
12/4/2008				0.079		0.038			
12/5/2008	0.06	0.19	0.067		0.093				
3/25/2009				0.093					
7/7/2009	0.043		0.04		0.06				
7/8/2009		0.2		0.039		0.053			
9/14/2009				0.061					
12/20/2009	0.065			0.088		0.047			
12/21/2009		0.23	0.044		0.11				
3/4/2010				0.077					
6/20/2010	0.095		0.036	0.075	0.11	0.046			
6/21/2010		0.25					0.062	0.11	0.16
9/14/2010				0.093					
1/6/2011	0.093		0.075			0.063			
1/7/2011		0.21		0.13	0.025		0.039	0.12	0.095
4/15/2011				0.086					
7/7/2011	0.095		0.13	0.051	0.025		0.06		
7/8/2011		0.13					0.043	0.094	0.1
9/25/2011				0.056					
1/17/2012	0.1		0.21	0.052		0.06			
1/18/2012		0.26			0.03		0.042	0.087	0.12
4/4/2012				0.0519					
7/9/2012	0.11		0.2	0.048		0.05			
7/10/2012		0.19			0.028		0.039	0.1	0.097
10/9/2012				0.065					
1/17/2013	0.12		0.19			0.058			
1/18/2013		0.17		0.045	0.058		0.04	0.078	0.1
4/5/2013				0.047					

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-1	GWC-17	GWB-5R	GWC-14	GWB-6R	GWC-2	GWC-20	GWC-22	GWC-21
7/16/2013	0.081		0.076						
7/17/2013		0.18		0.032	0.086	0.041	0.055	0.062	0.069
10/11/2013				0.028					
1/13/2014	0.096		0.14			0.058			
1/14/2014		0.18		0.036	0.1		0.059	0.073	0.086
4/3/2014				0.038					
7/8/2014									
7/9/2014	0.066	0.16	0.12	0.03	0.082	0.048			0.065
7/10/2014							0.067	0.13	
10/24/2014				0.025					
1/12/2015							0.061		
1/13/2015	0.068		0.13			0.048			
1/14/2015		0.16		0.04	0.094			0.065	0.084
5/10/2015				0.026					
5/11/2015									
7/16/2015	0.07		0.12			0.048			
7/17/2015				0.029	0.11				0.071
7/18/2015		0.012					0.13	0.073	
10/6/2015				0.03					
1/17/2016	0.062			0.038		0.049	0.08		0.079
1/18/2016		0.13	0.12		0.11			0.062	
1/19/2016									
4/26/2016				0.025					
7/26/2016									
7/27/2016	0.0417		0.112	0.0248		0.0796			
7/28/2016					0.105		0.164		0.0626
7/29/2016		0.181						0.0575	
8/30/2016	0.0545		0.135		0.106				
8/31/2016						0.0429		0.0693	
9/1/2016		0.203		0.0346			0.0976		0.077
10/24/2016									
10/25/2016	0.0504			0.0248			0.0702		0.0217
10/26/2016		0.177	0.103		0.107	0.113 (o)		0.0966	
10/27/2016									
1/3/2017			0.118						
1/4/2017	0.0534						0.0999	0.0975	0.0617
1/5/2017		0.142		0.0245	0.107	0.0526			
1/6/2017									
4/3/2017									
4/4/2017	0.0549			0.0342		0.0503	0.136		0.0761
4/5/2017		0.106							
4/6/2017			0.162		0.111			0.064	
7/10/2017									
7/11/2017				0.0276			0.145	0.0778	
7/12/2017	0.0614		0.157		0.106				
7/13/2017		0.0686				0.0529			0.0428
10/2/2017				0.0274			0.148		
10/3/2017	0.0436		0.127		0.105	0.057			0.0376
10/4/2017		0.0589						0.156	
1/9/2018				0.0222	0.0969				0.0704
1/10/2018	0.053		0.158			0.0527	0.0788		
1/11/2018		0.0412						0.0702	

Prediction Limit

Constituent: Barium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-1	GWC-17	GWB-5R	GWC-14	GWB-6R	GWC-2	GWC-20	GWC-22	GWC-21
7/9/2018				0.026			0.087		
7/10/2018	0.059		0.31		0.087	0.054			0.061
7/11/2018		0.049						0.12	
1/16/2019	0.054	0.063	0.054	0.028	0.013 (J)				
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	0.055	0.025	0.057	0.034	0.012 (J)				0.084
3/27/2019								0.057	
7/30/2019						0.052			
8/26/2019									
8/27/2019	0.054			0.067	0.013	0.053		0.097	
8/28/2019		0.026	0.1				0.078		0.063
10/7/2019									
10/8/2019				0.085					0.079
10/9/2019	0.058	0.032	0.13		0.014 (J)	0.05	0.078	0.065	
4/6/2020									
4/7/2020	0.05		0.098	0.073	0.01 (J)			0.1	0.054
4/8/2020		0.055				0.061	0.19		
8/17/2020									
8/18/2020		0.074		0.028		0.05	0.38	0.085	0.18
8/19/2020	0.057		0.1		0.064				
9/28/2020	0.051								
9/29/2020				0.026		0.049			
9/30/2020		0.035	0.16		0.092		0.35	0.045	0.19
10/1/2020									
3/10/2021	0.052		0.096		0.027			0.049	
3/11/2021		0.044							
3/12/2021							0.34		
3/15/2021						0.053			
3/16/2021				0.037					0.18

Prediction Limit

Constituent: Chromium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-14	GWC-16	GWC-13	GWC-12	GWC-11	GWC-17	GWC-1	GWB-6R
9/29/2000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.016
11/21/2000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.023
1/20/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.025
3/14/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.021
7/16/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.019
11/1/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.022
4/25/2002	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.019
11/20/2002		0.014	0.0041	<0.01	0.002	0.006	<0.01	<0.01	0.024
6/6/2003	0.037	<0.01	0.063 (o)	0.003	<0.01	0.0082	<0.01	0.005	0.021
12/12/2003	0.0044	<0.01	0.0059	<0.01	<0.01	0.0023	0.036 (o)	<0.01	0.0066
5/26/2004	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.013
12/7/2004	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0021	<0.01	0.013
6/21/2005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0067
12/12/2005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.002	0.0033
4/4/2006		<0.01	<0.01						
6/27/2006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0047
8/30/2006		<0.01	<0.01						
12/4/2006	0.0015	0.0042	0.0036	0.0017	0.0032	0.0021	<0.01	<0.01	0.0084
2/15/2007		<0.01	<0.01						
6/23/2007	<0.01	<0.01	0.0016	<0.01	<0.01	0.0017	<0.01	<0.01	0.01
9/11/2007		<0.01	<0.01						
12/11/2007	0.0016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0049
3/11/2008		<0.01	<0.01						
6/23/2008	0.0019			<0.01	0.0016	<0.01			
6/24/2008		<0.01	<0.01				<0.01	<0.01	0.032 (o)
11/3/2008		<0.01	0.0025						
12/4/2008	<0.01	<0.01		<0.01	<0.01	<0.01			
12/5/2008			<0.01				<0.01	<0.01	0.009
3/25/2009		<0.01	<0.01						
7/7/2009	0.0037							0.0013	0.0044
7/8/2009		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
9/14/2009		<0.01	<0.01						
12/20/2009	0.0016	<0.01	<0.01					<0.01	
12/21/2009				<0.01	<0.01	<0.01	<0.01		0.0055
3/4/2010		<0.01	<0.01						
6/20/2010	<0.01	<0.01		<0.01	<0.01	<0.01		<0.01	0.002
6/21/2010			<0.01				<0.01		
9/14/2010		<0.01	<0.01						
1/6/2011				<0.01		<0.01		<0.01	
1/7/2011	0.0033	0.0016	0.0018		<0.01		<0.01		0.0039
4/15/2011		0.0034	<0.01						
7/7/2011	0.0044	<0.01	<0.01	0.0019	<0.01	0.0023		<0.01	0.0031
7/8/2011							0.0013		
9/25/2011		0.0013	<0.01						
1/17/2012	0.0038	<0.01		<0.01	<0.01	<0.01		<0.01	
1/18/2012			<0.01				<0.01		0.0023
4/4/2012		<0.01	<0.01						
7/9/2012	0.022	<0.01		<0.01	<0.01	0.0017		<0.01	
7/10/2012			<0.01				<0.01		0.0022
10/9/2012		0.0019	0.0018						
1/17/2013				<0.01	<0.01	<0.01		<0.01	
1/18/2013	0.034	0.0017	<0.01				<0.01		<0.01

Prediction Limit

Constituent: Chromium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-14	GWC-16	GWC-13	GWC-12	GWC-11	GWC-17	GWC-1	GWB-6R
4/5/2013		0.0019	<0.01						
7/16/2013				<0.01	<0.01	<0.01		<0.01	
7/17/2013	0.032	0.0017	<0.01				<0.01		<0.01
10/11/2013		0.0013	<0.01						
1/13/2014	0.04			<0.01	<0.01	<0.01		<0.01	
1/14/2014		0.001	<0.01				<0.01		0.0013
4/3/2014		0.0031	<0.01						
7/8/2014				<0.01	<0.01	<0.01			
7/9/2014	0.036	0.0012 (J)	<0.01				<0.01	0.0011 (J)	<0.01
7/10/2014									
10/24/2014		<0.01	<0.01						
1/12/2015									
1/13/2015	0.03			<0.01	<0.01	<0.01		<0.01	
1/14/2015		0.0013	<0.01				<0.01		0.0015
5/10/2015		<0.01							
5/11/2015			<0.01						
7/16/2015	0.039		<0.01	<0.01	0.001 (J)	<0.01		0.0011 (J)	
7/17/2015		0.001 (J)							0.0011 (J)
7/18/2015							<0.01		
10/6/2015		<0.01	<0.01						
1/17/2016		0.0012 (J)	<0.01					<0.01	
1/18/2016	0.068			<0.01	<0.01		<0.01		0.0011 (J)
1/19/2016						<0.01			
4/26/2016		<0.01	<0.01						
7/26/2016				<0.01		0.0005 (J)			
7/27/2016	0.05	0.0008 (J)			0.0014 (J)			0.0016 (J)	
7/28/2016			0.0006 (J)						0.001 (J)
7/29/2016							0.0009 (J)		
8/30/2016								0.0015 (J)	0.0013 (J)
8/31/2016				0.0011 (J)	0.0012 (J)	0.001 (J)			
9/1/2016	0.119 (o)	0.0015 (J)	0.0011 (J)				0.0011 (J)		
10/24/2016									
10/25/2016	0.0519	<0.01	<0.01					0.0018 (J)	
10/26/2016				<0.01	0.0012 (J)	<0.01	<0.01		0.0014 (J)
10/27/2016									
1/3/2017									
1/4/2017			<0.01		0.0012 (J)	<0.01		0.0021 (J)	
1/5/2017		0.001 (J)		<0.01			0.0012 (J)		0.002 (J)
1/6/2017	0.0536								
4/3/2017									
4/4/2017		0.001 (J)						0.002 (J)	
4/5/2017			0.001 (J)		0.0013 (J)		0.0015 (J)		
4/6/2017	0.0447 (J)			0.0011 (J)		0.0007 (J)			0.0034 (J)
7/10/2017					0.0014 (J)				
7/11/2017		0.0008 (J)				0.0006 (J)			
7/12/2017			0.0011 (J)	0.0007 (J)				0.0021 (J)	0.0024 (J)
7/13/2017	0.0269						0.0012 (J)		
10/2/2017		0.0009 (J)							
10/3/2017			0.0009 (J)			0.0007 (J)		0.0014 (J)	0.0022 (J)
10/4/2017	0.0378			0.0008 (J)	0.0011 (J)		0.0055 (J)		
1/9/2018	0.0283 (J)	0.0006 (J)							0.0019 (J)
1/10/2018			0.0007 (J)	0.0007 (J)				0.0017 (J)	

Prediction Limit

Constituent: Chromium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-14	GWC-16	GWC-13	GWC-12	GWC-11	GWC-17	GWC-1	GWB-6R
1/11/2018					0.001 (J)	0.0098 (J)	0.0009 (J)		
7/9/2018		<0.01							
7/10/2018			<0.01					0.0021 (J)	0.0023 (J)
7/11/2018	0.018 (J)			0.0019 (J)	<0.01	<0.01	<0.01		
1/16/2019	0.018 (J)	<0.01		<0.01			<0.01	0.0021 (J)	0.018 (J)
1/17/2019			0.01 (J)		0.0028 (J)	<0.01			
1/18/2019									
1/21/2019									
3/25/2019	0.017 (J)								
3/26/2019		<0.01	<0.01	<0.01			<0.01	0.0018 (J)	0.017 (J)
3/27/2019					<0.01	<0.01			
7/30/2019									
8/26/2019	0.024 (J)								
8/27/2019		0.001 (J)		<0.01	0.00085 (J)	0.00092 (J)		0.0062 (J)	0.0097 (J)
8/28/2019			0.0011 (J)				0.0013 (J)		
10/7/2019									
10/8/2019	0.021 (J)	0.00053 (J)	0.00099 (J)	<0.01		0.00091 (J)			
10/9/2019					0.00081 (J)		0.00081 (J)	0.0019 (J)	0.011 (J)
4/6/2020	0.015 (J)								
4/7/2020		0.00074 (J)	<0.01		0.00082 (J)	0.00094 (J)		0.0015 (J)	0.0094 (J)
4/8/2020				0.00058 (J)			0.00073 (J)		
8/17/2020				0.00077 (J)	0.001 (J)				
8/18/2020		0.00059 (J)	0.0012 (J)			0.0015 (J)	0.0011 (J)		
8/19/2020	0.015 (J)							0.0028 (J)	0.0037 (J)
9/28/2020	0.014 (J)			0.00062 (J)				0.0024 (J)	
9/29/2020		<0.01			0.00085 (J)	0.0011 (J)			
9/30/2020			0.00098 (J)				0.00096 (J)		0.0045 (J)
10/1/2020									
3/10/2021					0.00091 (J)	0.0013 (J)		0.0023 (J)	0.006
3/11/2021	0.02 (J)						0.0009 (J)		
3/12/2021									
3/15/2021				<0.01					
3/16/2021		<0.01	0.0012 (J)						

Prediction Limit

Constituent: Chromium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-5R	GWB-4R	GWC-9	GWA-8 (bg)	GWC-15	GWC-2	GWC-22	GWC-21	GWC-20
9/29/2000	0.03	0.021	<0.01	<0.01	<0.01				
11/21/2000	<0.01	0.017	<0.01		<0.01	<0.01			
1/20/2001	0.028	0.03	<0.01	<0.01	<0.01	<0.01			
3/14/2001	0.052 (o)	0.019	<0.01	<0.01	<0.01	<0.01			
7/16/2001	0.08 (o)	0.029	<0.01	<0.01	<0.01	<0.01			
11/1/2001	0.13 (o)	0.021	<0.01	<0.01	<0.01	<0.01			
4/25/2002	0.021	0.03	<0.01	<0.01	<0.01	<0.01			
11/20/2002	0.053 (o)	0.038	0.014	0.0051	0.0058	<0.01			
6/6/2003	0.064 (o)	0.028	<0.01	0.014	0.0068	<0.01			
12/12/2003	<0.01	0.027	<0.01	0.011	0.0041	<0.01			
5/26/2004	0.012	0.021	<0.01	<0.01	<0.01	<0.01			
12/7/2004	0.019	0.016	0.0039	<0.01	0.0026	<0.01			
6/21/2005	0.02	0.015	0.002	<0.01	<0.01	<0.01			
12/12/2005	<0.01	0.022	<0.01	<0.01	<0.01	<0.01			
4/4/2006				<0.01					
6/27/2006	0.0015	0.027	<0.01	<0.01	0.0013	<0.01			
8/30/2006				<0.01					
12/4/2006	0.0034	0.025	0.0019	<0.01	<0.01	<0.01			
2/15/2007				<0.01					
6/23/2007	<0.01	0.023	0.0015	<0.01	<0.01	<0.01			
9/11/2007				<0.01					
12/11/2007	<0.01	0.018	<0.01	<0.01	<0.01	<0.01			
3/11/2008				<0.01					
6/23/2008			0.0015	<0.01					
6/24/2008	<0.01	0.022			0.0014	<0.01			
11/3/2008				<0.01					
12/4/2008			<0.01	<0.01				<0.01	
12/5/2008	0.0016	0.023			<0.01				
3/25/2009				<0.01					
7/7/2009	<0.01	0.012		<0.01					
7/8/2009			<0.01		<0.01	<0.01			
9/14/2009				<0.01					
12/20/2009				<0.01	<0.01	<0.01			
12/21/2009	<0.01	0.019	<0.01						
3/4/2010				<0.01					
6/20/2010	<0.01		0.0015	<0.01	<0.01	<0.01			
6/21/2010		0.01					<0.01	0.0019	<0.01
9/14/2010				<0.01					
1/6/2011	0.0017					<0.01			
1/7/2011		0.023	<0.01	<0.01	<0.01		<0.01	0.0017	0.0018
4/15/2011				<0.01					
7/7/2011	0.008			<0.01	<0.01				<0.01
7/8/2011		0.017	<0.01				<0.01	0.0023	0.0019
9/25/2011				0.0021					
1/17/2012	0.0082			<0.01	<0.01	<0.01			
1/18/2012		0.0114	<0.01				<0.01	<0.01	<0.01
4/4/2012				<0.01					
7/9/2012	0.01				<0.01	<0.01			
7/10/2012		0.014	<0.01	<0.01			<0.01	<0.01	0.0013
10/9/2012				<0.01					
1/17/2013	0.01					<0.01			
1/18/2013		0.015	<0.01	<0.01	<0.01		<0.01	<0.01	0.0015

Prediction Limit

Constituent: Chromium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-5R	GWB-4R	GWC-9	GWA-8 (bg)	GWC-15	GWC-2	GWC-22	GWC-21	GWC-20
4/5/2013				<0.01					
7/16/2013	0.0061								
7/17/2013		0.011	<0.01	<0.01	<0.01	<0.01	<0.01	0.0019	<0.01
10/11/2013				<0.01					
1/13/2014	0.002				<0.01	<0.01			
1/14/2014		0.019	<0.01	<0.01			<0.01	<0.01	0
4/3/2014				<0.01					
7/8/2014									
7/9/2014	<0.01	0.012	0.0011 (J)	<0.01	<0.01	<0.01		<0.01	
7/10/2014							<0.01		<0.01
10/24/2014				<0.01					
1/12/2015		0.016							<0.01
1/13/2015	<0.01				<0.01	<0.01			
1/14/2015			<0.01	<0.01			<0.01	<0.01	
5/10/2015				<0.01					
5/11/2015									
7/16/2015	<0.01	0.0084			<0.01	<0.01			
7/17/2015			0.0013	<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	<0.01
1/18/2016	<0.01	0.014	<0.01	<0.01			<0.01		
1/19/2016									
4/26/2016				<0.01					
7/26/2016									
7/27/2016	0.0006 (J)				0.0007 (J)	0.0008 (J)			
7/28/2016			0.0011 (J)	<0.01				0.0005 (J)	0.0007 (J)
7/29/2016		0.0077 (J)					0.0007 (J)		
8/30/2016	<0.01			<0.01					
8/31/2016			0.0024 (J)			<0.01	<0.01		
9/1/2016		0.015			0.0011 (J)			<0.01	<0.01
10/24/2016				<0.01					
10/25/2016					<0.01			<0.01	<0.01
10/26/2016	<0.01	0.0106				0.001 (J)	<0.01		
10/27/2016			<0.01						
1/3/2017	0.001 (J)			<0.01					
1/4/2017							<0.01	<0.01	<0.01
1/5/2017					<0.01	<0.01			
1/6/2017		0.0098 (J)	<0.01						
4/3/2017				0.0004 (J)	0.0015 (J)				
4/4/2017		0.0101				0.0008 (J)		0.0008 (J)	0.0011 (J)
4/5/2017									
4/6/2017	0.0013 (J)		0.0019 (J)				0.0006 (J)		
7/10/2017									
7/11/2017				0.0006 (J)	0.0013 (J)		0.0005 (J)		0.0009 (J)
7/12/2017	0.0011 (J)	0.0096 (J)	0.0011 (J)						
7/13/2017						0.0006 (J)		0.0006 (J)	
10/2/2017				<0.01	0.0013 (J)				0.0009 (J)
10/3/2017	0.0012 (J)					<0.01		0.0005 (J)	
10/4/2017		0.0097 (J)	0.0011 (J)				0.0006 (J)		
1/9/2018				<0.01	0.0012 (J)			0.0007 (J)	
1/10/2018	0.0016 (J)					<0.01			0.0008 (J)

Prediction Limit

Constituent: Chromium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-5R	GWB-4R	GWC-9	GWA-8 (bg)	GWC-15	GWC-2	GWC-22	GWC-21	GWC-20
1/11/2018		0.0109	0.001 (J)				<0.01		
7/9/2018				<0.01					<0.01
7/10/2018	0.0055 (J)				<0.01	<0.01		<0.01	
7/11/2018		0.0055 (J)	<0.01				<0.01		
1/16/2019	<0.01	0.0024 (J)		<0.01					
1/17/2019					<0.01			0.01	
1/18/2019			<0.01				<0.01		
1/21/2019						<0.01			<0.01
3/25/2019		0.002 (J)		<0.01					<0.01
3/26/2019	0.072				<0.01			<0.01	
3/27/2019			<0.01				<0.01		
7/30/2019						0.00065 (J)			
8/26/2019				0.001 (J)					
8/27/2019		0.0027 (J)			0.0016 (J)	<0.01	0.00057 (J)		
8/28/2019	0.0071 (J)		0.00089 (J)					0.00087 (J)	0.00089 (J)
10/7/2019				0.00052 (J)					
10/8/2019					0.0017 (J)			0.00065 (J)	
10/9/2019	0.012 (J)	0.002 (J)	0.0009 (J)			0.00049 (J)	0.00072 (J)		0.0011 (J)
4/6/2020				<0.01					
4/7/2020	0.0022 (J)	0.0028 (J)			0.0014 (J)		0.00049 (J)	<0.01	
4/8/2020			0.0015 (J)			0.00069 (J)			0.001 (J)
8/17/2020				0.00082 (J)					
8/18/2020					0.0018 (J)	<0.01	0.00056 (J)	0.0012 (J)	0.0011 (J)
8/19/2020	0.0012 (J)	0.0022 (J)	0.0013 (J)						
9/28/2020				0.00071 (J)					
9/29/2020						<0.01			
9/30/2020	0.0018 (J)				0.0016 (J)		0.00064 (J)	0.00067 (J)	0.0013 (J)
10/1/2020		0.002 (J)	0.0012 (J)						
3/10/2021	0.001 (J)	0.003 (J)	0.0011 (J)				<0.01		
3/11/2021									
3/12/2021				0.00074 (J)	0.0031 (J)				0.0014 (J)
3/15/2021						0.0011 (J)			
3/16/2021								0.00075 (J)	

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-17	GWC-11	GWC-14	GWC-15	GWB-4R	GWB-5R	GWC-12	GWA-8 (bg)
9/29/2000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/21/2000	<0.01	<0.01	<0.01	0.052	<0.01	<0.01	<0.01	<0.01	<0.01
1/20/2001	<0.01	<0.01	<0.01	0.053	<0.01	0.014 (o)	<0.01	<0.01	<0.01
3/14/2001	<0.01	<0.01	<0.01	0.049	<0.01	<0.01	<0.01	<0.01	<0.01
7/16/2001	<0.01	<0.01	<0.01	0.038	<0.01	0.015 (o)	<0.01	<0.01	<0.01
11/1/2001	<0.01	<0.01	<0.01	0.022	<0.01	0.012 (o)	<0.01	<0.01	<0.01
4/25/2002	<0.01	<0.01	<0.01	0.1 (o)	<0.01	0.01	<0.01	<0.01	<0.01
11/20/2002		<0.01	<0.01	0.018	0.0094	0.026 (o)	0.0064	<0.01	<0.01
6/6/2003	<0.01	<0.01	<0.01	<0.01	0.021 (o)	0.022 (o)	0.011	<0.01	<0.01
12/12/2003	<0.01	<0.01	<0.01	<0.01	0.016 (o)	0.028 (o)	<0.01	<0.01	<0.01
5/26/2004	<0.01	<0.01	<0.01	0.023	<0.01	0.012 (o)	0.007	<0.01	<0.01
12/7/2004	<0.01	<0.01	<0.01	0.019	<0.01	0.0073	<0.01	<0.01	<0.01
6/21/2005	<0.01	<0.01	<0.01	0.019	<0.01	0.0087	0.0063	<0.01	<0.01
12/12/2005	<0.01	<0.01	<0.01	0.0095	<0.01	0.013 (o)	<0.01	<0.01	<0.01
4/4/2006				0.033					<0.01
6/27/2006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
8/30/2006				<0.01					<0.01
12/4/2006	<0.01	<0.01	<0.01	0.032	<0.01	<0.01	<0.01	<0.01	<0.01
2/15/2007				0.034					<0.01
6/23/2007	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
9/11/2007				0.022					<0.01
12/11/2007	<0.01	<0.01	<0.01	0.045	<0.01	<0.01	<0.01	<0.01	<0.01
3/11/2008				0.02					<0.01
6/23/2008	<0.01		<0.01					<0.01	<0.01
6/24/2008		<0.01		<0.01	<0.01	<0.01	<0.01		
11/3/2008				0.052					<0.01
12/4/2008	<0.01		<0.01	0.054				<0.01	<0.01
12/5/2008		<0.01			<0.01	<0.01	<0.01		
3/25/2009				0.072					<0.01
7/7/2009	<0.01					<0.01	<0.01		<0.01
7/8/2009		<0.01	<0.01	0.021	<0.01			<0.01	
9/14/2009				0.015					<0.01
12/20/2009	<0.01			0.072	<0.01				<0.01
12/21/2009		<0.01	<0.01			<0.01	<0.01	<0.01	
3/4/2010				0.083					<0.01
6/20/2010	<0.01		<0.01	0.1	<0.01		<0.01	<0.01	<0.01
6/21/2010		<0.01				<0.01			
9/14/2010				0.085					<0.01
1/6/2011			<0.01				<0.01		
1/7/2011	<0.01	<0.01		0.028	<0.01	<0.01		<0.01	<0.01
4/15/2011				<0.01					<0.01
7/7/2011	<0.01		<0.01	<0.01	<0.01		<0.01	<0.01	<0.01
7/8/2011		<0.01				<0.01			
9/25/2011				0.02					<0.01
1/17/2012	<0.01		0.023	0.016	<0.01		<0.01	<0.01	<0.01
1/18/2012		<0.01				<0.01			
4/4/2012				0.0156					<0.01
7/9/2012	<0.01		0.016	<0.01	0.066 (o)		<0.01	<0.01	
7/10/2012		<0.01				<0.01			<0.01
10/9/2012				0.0094					<0.01
1/17/2013			0.033				<0.01	<0.01	
1/18/2013	0.009	<0.01		0.0067	0.04 (o)	<0.01			<0.01

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-17	GWC-11	GWC-14	GWC-15	GWB-4R	GWB-5R	GWC-12	GWA-8 (bg)
4/5/2013				0.0077					<0.01
7/16/2013			0.0068				<0.01	<0.01	
7/17/2013	0.011	<0.01		0.01	<0.01	<0.01			<0.01
10/11/2013				0.0087					<0.01
1/13/2014	0.012		0.036		<0.01		<0.01	<0.01	
1/14/2014		<0.01		0.012		<0.01			<0.01
4/3/2014				0.022					<0.01
7/8/2014			0.017					<0.01	
7/9/2014	0.011	<0.01		0.0089	<0.01	<0.01	<0.01		<0.01
7/10/2014									
10/24/2014				0.017					<0.01
1/12/2015						<0.01			
1/13/2015	0.0092		0.027		<0.01		<0.01	<0.01	
1/14/2015		<0.01		<0.01					<0.01
5/10/2015				<0.01					<0.01
5/11/2015									
7/16/2015	0.014		<0.01		<0.01	<0.01	<0.01	<0.01	
7/17/2015				<0.01					<0.01
7/18/2015		<0.01							
10/6/2015				<0.01					<0.01
1/17/2016				<0.01	<0.01				
1/18/2016	0.023	<0.01				<0.01	<0.01	<0.01	<0.01
1/19/2016			0.023						
4/26/2016				0.00428 (J)					<0.01
7/26/2016			0.0056 (J)						
7/27/2016	0.0323			0.0038 (J)	<0.01		<0.01	0.0025 (J)	
7/28/2016									0.001 (J)
7/29/2016		0.0011 (J)				0.0036 (J)			
8/30/2016							<0.01		<0.01
8/31/2016			0.0084 (J)					0.0019 (J)	
9/1/2016	0.0438	0.0012 (J)		0.0056 (J)	<0.01	0.0067 (J)			
10/24/2016									0.0013 (J)
10/25/2016	0.031			0.0023 (J)	<0.01				
10/26/2016		0.0013 (J)	0.0052 (J)			0.0042 (J)	<0.01	0.002 (J)	
10/27/2016									
1/3/2017							<0.01		<0.01
1/4/2017			0.0062 (J)					<0.01	
1/5/2017		0.0012 (J)		0.0038 (J)	<0.01				
1/6/2017	0.0324					0.0042 (J)			
4/3/2017					<0.01				<0.01
4/4/2017				0.0064 (J)		0.0043 (J)			
4/5/2017		<0.01						<0.01	
4/6/2017	0.0188 (J)		0.0195				<0.01		
7/10/2017								<0.01	
7/11/2017			<0.01	0.0044 (J)	<0.01				<0.01
7/12/2017						0.0033 (J)	<0.01		
7/13/2017	0.0118	0.0018 (J)							
10/2/2017				0.004 (J)	<0.01				<0.01
10/3/2017			0.0079 (J)				<0.01		
10/4/2017	0.0195	0.0042 (J)				0.0038 (J)		<0.01	
1/9/2018	<0.01			0.0019 (J)	0.0019 (J)				<0.01
1/10/2018							<0.01		

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-17	GWC-11	GWC-14	GWC-15	GWB-4R	GWB-5R	GWC-12	GWA-8 (bg)
1/11/2018		<0.01	0.0054 (J)			0.0029 (J)		<0.01	
7/9/2018				0.0029 (J)					<0.01
7/10/2018					0.0086 (J)		0.0018 (J)		
7/11/2018	<0.01	0.0016 (J)	0.0022 (J)			0.0015 (J)		<0.01	
1/16/2019	0.0071 (J)	<0.01		0.0016 (J)		<0.01	<0.01		<0.01
1/17/2019			<0.01		0.0029 (J)			<0.01	
1/18/2019									
1/21/2019									
3/25/2019	<0.01					<0.01			<0.01
3/26/2019		<0.01		0.0022 (J)	0.0074 (J)		<0.01		
3/27/2019			0.01 (J)					<0.01	
7/30/2019									
8/26/2019	<0.01								<0.01
8/27/2019			<0.01	0.0035 (J)	0.0092 (J)	<0.01		<0.01	
8/28/2019		<0.01					0.0033 (J)		
10/7/2019									<0.01
10/8/2019	0.0072 (J)		<0.01	0.0026 (J)	0.014				
10/9/2019		<0.01				<0.01	0.0073 (J)	<0.01	
4/6/2020	0.0078 (J)								<0.01
4/7/2020			0.0021 (J)	0.005 (J)	0.0029 (J)	0.0025 (J)	<0.01	<0.01	
4/8/2020		<0.01							
8/17/2020								<0.01	<0.01
8/18/2020		0.002 (J)	0.0028 (J)	0.0029 (J)	0.0022 (J)				
8/19/2020	<0.01					<0.01	<0.01		
9/28/2020	0.01 (J)								<0.01
9/29/2020			0.0024 (J)	0.0051 (J)				<0.01	
9/30/2020		<0.01			<0.01		<0.01		
10/1/2020						<0.01			
3/10/2021			0.0044 (J)			0.0021 (J)	0.006	0.003 (J)	
3/11/2021	<0.01	0.0016 (J)							
3/12/2021					0.0064				<0.01
3/15/2021									
3/16/2021				0.0034 (J)					

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-1	GWC-16	GWB-6R	GWC-9	GWC-13	GWC-2	GWC-20	GWC-21	GWC-22
9/29/2000	<0.01	<0.01	<0.01	<0.01	<0.01				
11/21/2000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
1/20/2001	0.017	<0.01	<0.01	<0.01	<0.01	<0.01			
3/14/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
7/16/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
11/1/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
4/25/2002	0.012	<0.01	<0.01	<0.01	<0.01	<0.01			
11/20/2002	0.19 (o)	<0.01	0.008	<0.01	<0.01	<0.01			
6/6/2003	0.32 (o)	0.021 (o)	0.0066	<0.01	<0.01	<0.01			
12/12/2003	0.013	0.0078	0.0056	<0.01	<0.01	<0.01			
5/26/2004	0.017	0.0053	0.0084	<0.01	<0.01	0.005			
12/7/2004	0.011	<0.01	<0.01	<0.01	<0.01	<0.01			
6/21/2005	0.0088	<0.01	0.0062	0.0062	<0.01	<0.01			
12/12/2005	0.011	<0.01	<0.01	<0.01	<0.01	<0.01			
4/4/2006		<0.01							
6/27/2006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
8/30/2006		<0.01							
12/4/2006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
2/15/2007		<0.01							
6/23/2007	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
9/11/2007		<0.01							
12/11/2007	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
3/11/2008		<0.01							
6/23/2008				<0.01	<0.01				
6/24/2008	<0.01	<0.01	<0.01			<0.01			
11/3/2008		<0.01							
12/4/2008				<0.01	<0.01	<0.01			
12/5/2008	<0.01	<0.01	<0.01						
3/25/2009		<0.01							
7/7/2009	<0.01		<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				<0.01			
12/21/2009			<0.01	<0.01	<0.01				
3/4/2010		<0.01							
6/20/2010	<0.01		<0.01	<0.01	<0.01	<0.01			
6/21/2010		<0.01					<0.01	0.048	<0.01
9/14/2010		<0.01							
1/6/2011	<0.01				<0.01	<0.01			
1/7/2011		<0.01	<0.01	<0.01			<0.01	0.014	<0.01
4/15/2011		<0.01							
7/7/2011	<0.01	<0.01	<0.01		<0.01		<0.01		
7/8/2011				<0.01			<0.01	0.018	<0.01
9/25/2011		<0.01							
1/17/2012	<0.01				<0.01	<0.01			
1/18/2012		<0.01	<0.01	<0.01			<0.01	<0.01	<0.01
4/4/2012		<0.01							
7/9/2012	<0.01				<0.01	<0.01			
7/10/2012		<0.01	<0.01	<0.01			<0.01	0.02	<0.01
10/9/2012		<0.01							
1/17/2013	<0.01				<0.01	<0.01			
1/18/2013		<0.01	<0.01	<0.01			0.005	0.015	<0.01

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-1	GWC-16	GWB-6R	GWC-9	GWC-13	GWC-2	GWC-20	GWC-21	GWC-22
4/5/2013		<0.01							
7/16/2013	0.012				<0.01				
7/17/2013		<0.01	<0.01	<0.01		<0.01	<0.01	0.037	<0.01
10/11/2013		0.0069							
1/13/2014	<0.01				<0.01	<0.01			
1/14/2014		<0.01	<0.01	<0.01			<0.01	0.043	<0.01
4/3/2014		<0.01							
7/8/2014					<0.01				
7/9/2014	<0.01	0.005	<0.01	<0.01		<0.01		0.023	
7/10/2014							<0.01		<0.01
10/24/2014		<0.01							
1/12/2015							<0.01		
1/13/2015	<0.01				<0.01	<0.01			
1/14/2015		<0.01	<0.01	<0.01				0.022	<0.01
5/10/2015									
5/11/2015		<0.01							
7/16/2015	<0.01	<0.01			<0.01	<0.01			
7/17/2015			<0.01	<0.01				0.033	
7/18/2015							<0.01		<0.01
10/6/2015		0.0073							
1/17/2016	0.023	0.0031 (J)			<0.01	<0.01	<0.01	0.021	
1/18/2016			<0.01	<0.01	<0.01				<0.01
1/19/2016									
4/26/2016		0.00497 (J)							
7/26/2016					<0.01				
7/27/2016	0.002 (J)					0.002 (J)			
7/28/2016		0.0076 (J)	<0.01	<0.01			<0.01	0.0341	
7/29/2016									0.0022 (J)
8/30/2016	0.002 (J)		<0.01						
8/31/2016				<0.01	<0.01	<0.01			0.0014 (J)
9/1/2016		0.0052 (J)					<0.01	0.0297	
10/24/2016									
10/25/2016	0.0022 (J)	0.0085 (J)					0.0014 (J)	0.0095 (J)	
10/26/2016			<0.01		<0.01	0.0035 (J)			0.001 (J)
10/27/2016				<0.01					
1/3/2017									
1/4/2017	0.0016 (J)	0.0048 (J)					0.0014 (J)	0.022	<0.01
1/5/2017			0.0014 (J)		<0.01	<0.01			
1/6/2017				<0.01					
4/3/2017									
4/4/2017	0.0052 (J)					<0.01	<0.01	0.0236	
4/5/2017		0.0068 (J)							
4/6/2017			<0.01	<0.01	<0.01				<0.01
7/10/2017									
7/11/2017							<0.01		<0.01
7/12/2017	0.0024 (J)	0.0048 (J)	<0.01	<0.01	<0.01				
7/13/2017						<0.01		0.013	
10/2/2017							<0.01		
10/3/2017	<0.01	0.0051 (J)	<0.01			<0.01		0.01 (J)	
10/4/2017				<0.01	<0.01				0.0023 (J)
1/9/2018			<0.01					0.0162	
1/10/2018	0.0018 (J)	0.0018 (J)			<0.01	<0.01	<0.01		

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-1	GWC-16	GWB-6R	GWC-9	GWC-13	GWC-2	GWC-20	GWC-21	GWC-22
1/11/2018				<0.01					<0.01
7/9/2018							<0.01		
7/10/2018	0.0026 (J)	0.0045 (J)	0.0016 (J)			<0.01		0.016	
7/11/2018				<0.01	<0.01				<0.01
1/16/2019	0.0018 (J)		<0.01		<0.01				
1/17/2019		0.0031 (J)						0.011	
1/18/2019				<0.01					<0.01
1/21/2019						<0.01	0.0014 (J)		
3/25/2019							<0.01		
3/26/2019	0.0023 (J)	0.0033 (J)	0.05 (J)		<0.01			0.022	
3/27/2019				<0.01					<0.01
7/30/2019						<0.01			
8/26/2019									
8/27/2019	0.0016 (J)		0.0033 (J)		<0.01	<0.01			<0.01
8/28/2019		0.004 (J)		<0.01			0.0014 (J)	0.019	
10/7/2019									
10/8/2019		0.0023 (J)			<0.01			0.019	
10/9/2019	0.0024 (J)		<0.01	<0.01		<0.01	<0.01		<0.01
4/6/2020									
4/7/2020	0.0013 (J)	<0.01	<0.01					0.012	<0.01
4/8/2020				<0.01	<0.01	<0.01	0.0013 (J)		
8/17/2020					<0.01				
8/18/2020		0.0058 (J)				<0.01	<0.01	0.013	<0.01
8/19/2020	0.002 (J)		<0.01	<0.01					
9/28/2020	<0.01				<0.01				
9/29/2020						<0.01			
9/30/2020		0.0037 (J)	0.0023 (J)				<0.01	0.0061 (J)	<0.01
10/1/2020				<0.01					
3/10/2021	0.0026 (J)		0.0049 (J)	<0.01					<0.01
3/11/2021									
3/12/2021							<0.01		
3/15/2021					<0.01	<0.01			
3/16/2021		0.0044 (J)						0.0055	

Prediction Limit

Constituent: Vanadium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-17	GWB-6R	GWC-11	GWB-5R	GWC-16	GWC-12	GWB-4R	GWC-9
9/29/2000	<0.01	<0.01	0.12	<0.01	0.038	<0.01	<0.01	0.06	<0.01
11/21/2000	<0.01	<0.01	0.13	<0.01	0.013	<0.01	<0.01	0.068	<0.01
1/20/2001	<0.01	<0.01	0.14	<0.01	0.038	<0.01	<0.01	0.12	<0.01
3/14/2001	<0.01	<0.01	0.13	<0.01	0.077 (o)	<0.01	<0.01	0.08	<0.01
7/16/2001	<0.01	<0.01	0.18	<0.01	0.12 (o)	<0.01	<0.01	0.11	<0.01
11/1/2001	<0.01	<0.01	0.12	<0.01	0.21 (o)	<0.01	<0.01	0.079	<0.01
4/25/2002	<0.01	<0.01	0.15	<0.01	0.086 (o)	<0.01	<0.01	0.11	<0.01
11/20/2002		<0.01	0.15	0.0071	0.14 (o)	0.0069	<0.01	0.15	0.014
6/6/2003	0.047	<0.01	0.11	0.0098	0.12 (o)	0.082 (o)	<0.01	0.12	<0.01
12/12/2003	0.0086	<0.01	0.089	0.0074	0.014	0.012	<0.01	0.13	<0.01
5/26/2004	<0.01	<0.01	0.09	<0.01	0.06 (o)	<0.01	<0.01	0.095	<0.01
12/7/2004	<0.01	<0.01	0.072	<0.01	0.054	<0.01	<0.01	0.067	<0.01
6/21/2005	<0.01	<0.01	0.04	<0.01	0.038	<0.01	<0.01	0.062	<0.01
12/12/2005	<0.01	<0.01	0.021	<0.01	0.0056	<0.01	<0.01	0.09	<0.01
4/4/2006						<0.01			
6/27/2006	<0.01	0.0025	0.02	<0.01	0.0043	<0.01	<0.01	0.083	<0.01
8/30/2006						<0.01			
12/4/2006	0.0027	<0.01	0.022	<0.01	0.0044	0.0031	<0.01	0.084	<0.01
2/15/2007						0.0025			
6/23/2007	0.0027	<0.01	0.027	0.0036	0.0039	0.0032	<0.01	0.081	<0.01
9/11/2007						<0.01			
12/11/2007	0.0033	<0.01	0.017	<0.01	0.0029	<0.01	<0.01	0.067	<0.01
3/11/2008						<0.01			
6/23/2008	0.0074			<0.01			<0.01		<0.01
6/24/2008		<0.01	0.053		0.003	<0.01		0.059	
11/3/2008						0.0032			
12/4/2008	0.0084			<0.01			<0.01		<0.01
12/5/2008		<0.01	0.0078		<0.01	<0.01		0.054	
3/25/2009						<0.01			
7/7/2009	0.023		0.012		<0.01			0.038	
7/8/2009		<0.01		0.0026		0.0036	<0.01		0.0029
9/14/2009						0.0026			
12/20/2009	0.007					0.0031			
12/21/2009		<0.01	0.011	<0.01	<0.01		<0.01	0.06	<0.01
3/4/2010						<0.01			
6/20/2010	0.0047		0.0083	<0.01	<0.01		<0.01		<0.01
6/21/2010		<0.01				0.0025		0.036	
9/14/2010						0.0035			
1/6/2011				0.003	0.0067				
1/7/2011	0.018	<0.01	0.0079			0.0036	<0.01	0.043	<0.01
4/15/2011						<0.01			
7/7/2011	0.019		0.007	0.004	0.019	0.003	<0.01		
7/8/2011		0.0031						0.044	<0.01
9/25/2011						0.0037			
1/17/2012	0.0298			<0.01	0.021		<0.01		
1/18/2012		<0.01	0.0116			<0.01		0.045	<0.01
4/4/2012						<0.01			
7/9/2012	0.14			0.005	0.032		<0.01		
7/10/2012		<0.01	0.0096			0.0026		0.048	<0.01
10/9/2012						0.007			
1/17/2013				0.005	0.034		<0.01		
1/18/2013	0.21	<0.01	<0.01			<0.01		0.049	<0.01

Prediction Limit

Constituent: Vanadium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-17	GWB-6R	GWC-11	GWB-5R	GWC-16	GWC-12	GWB-4R	GWC-9
4/5/2013						<0.01			
7/16/2013				<0.01	0.021		<0.01		
7/17/2013	0.18	<0.01	<0.01			<0.01		0.05	<0.01
10/11/2013						<0.01			
1/13/2014	0.24			<0.01	0.008		<0.01		
1/14/2014		<0.01	<0.01			<0.01		0.067	<0.01
4/3/2014						0.0032 (J)			
7/8/2014				0.0024 (J)			0.0034 (J)		
7/9/2014	0.22	0.0012 (J)	0.0039 (J)		0.0052	0.0031 (J)		0.055	0.0016 (J)
7/10/2014									
10/24/2014						0.0028 (J)			
1/12/2015								0.066	
1/13/2015	0.19			0.0023 (J)	0.0036 (J)		<0.01		
1/14/2015		0.002 (J)	0.005			0.0034 (J)			<0.01
5/10/2015									
5/11/2015						0.0026 (J)			
7/16/2015	0.23			0.002 (J)	0.004 (J)	0.0028 (J)	0.0049 (J)	0.045	
7/17/2015			0.0045 (J)						0.0029 (J)
7/18/2015		<0.01							
10/6/2015						0.0016 (J)			
1/17/2016						0.0029 (J)			
1/18/2016	0.41	0.0019 (J)	0.0044 (J)		0.0069		0.0058	0.049	<0.01
1/19/2016				0.0025 (J)					
4/26/2016						0.00296 (J)			
7/26/2016				0.0027 (J)					
7/27/2016	0.397				0.0046 (J)		0.0058 (J)		
7/28/2016			0.0038 (J)			0.0026 (J)			<0.01
7/29/2016		0.0031 (J)						0.0388	
10/24/2016									
10/25/2016	0.425					<0.01			
1/3/2017					<0.01				
1/4/2017				<0.01		<0.01	<0.01		
1/5/2017		<0.01	0.0077 (J)						
1/6/2017	0.41							0.0341	<0.01
4/3/2017									
4/4/2017								0.0371	
4/5/2017		0.0029 (J)				0.0033 (J)	0.0039 (J)		
4/6/2017	0.297		0.0069 (J)	0.0025 (J)	0.0063 (J)				<0.01
7/10/2017							0.0062 (J)		
7/11/2017				0.0027 (J)					
7/12/2017			0.0098 (J)		0.0064 (J)	0.0037 (J)		0.0399	0.0013 (J)
7/13/2017	0.194	0.0037 (J)							
10/2/2017									
10/3/2017						0.0036 (J)			
10/4/2017	0.316								
1/9/2018	0.194		0.0086 (J)						
1/10/2018					0.0077 (J)	0.0029 (J)			
1/11/2018		0.0026 (J)		0.0019 (J)			0.0025 (J)	0.0327	<0.01
7/9/2018									
7/10/2018			0.0098 (J)		0.016	0.0025 (J)			
7/11/2018	0.15	0.0032 (J)		0.0021 (J)			0.0059 (J)	0.02	<0.01
1/16/2019	0.16	<0.01	0.077		0.0033 (J)			0.0022 (J)	

Prediction Limit

Constituent: Vanadium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-17	GWB-6R	GWC-11	GWB-5R	GWC-16	GWC-12	GWB-4R	GWC-9
1/17/2019				0.0021 (J)		0.0021 (J)	<0.01		
1/18/2019									<0.01
1/21/2019									
3/25/2019	0.18							0.004 (J)	
3/26/2019		0.0024 (J)	0.086		0.0058 (J)	0.0038 (J)			
3/27/2019				0.0023 (J)			0.0049 (J)		<0.01
7/30/2019									
10/7/2019									
10/8/2019	0.11			<0.01		<0.01			
10/9/2019		<0.01	0.018 (J)		0.033 (J)		0.0021 (J)	<0.01	<0.01
4/6/2020	0.12								
4/7/2020			0.041 (J)	<0.01	0.0053 (J)	<0.01	0.0024 (J)	0.0037 (J)	
4/8/2020		<0.01							0.0015 (J)
9/28/2020	0.1								
9/29/2020				0.0023 (J)			0.0046 (J)		
9/30/2020		<0.01	0.018		0.0037 (J)	0.0028 (J)			
10/1/2020								0.0047 (J)	<0.01
3/10/2021			0.027	0.0023 (J)	0.0026 (J)		0.0055 (J)	0.0054 (J)	<0.01
3/11/2021	0.14	<0.01							
3/12/2021									
3/15/2021									
3/16/2021						0.0034 (J)			

Prediction Limit

Constituent: Vanadium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-15	GWC-13	GWA-8 (bg)	GWC-14	GWC-1	GWC-2	GWC-20	GWC-21	GWC-22
9/29/2000	<0.01	<0.01	<0.01	<0.01	<0.01				
11/21/2000	<0.01	<0.01		<0.01	<0.01	<0.01			
1/20/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
3/14/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
7/16/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
11/1/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
4/25/2002	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
11/20/2002	0.0099	<0.01	<0.01	0.03	0.0069	<0.01			
6/6/2003	0.019 (o)	0.0063	0.017	0.0065	0.16 (o)	<0.01			
12/12/2003	0.018 (o)	<0.01	0.011	0.0052	<0.01	<0.01			
5/26/2004	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
12/7/2004	<0.01	<0.01	<0.01	0.0074	<0.01	<0.01			
6/21/2005	<0.01	<0.01	<0.01	0.01	<0.01	<0.01			
12/12/2005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
4/4/2006			<0.01	0.013					
6/27/2006	<0.01	<0.01	<0.01	<0.01	0.0029	<0.01			
8/30/2006			<0.01	0.0039					
12/4/2006	<0.01	<0.01	<0.01	0.016	0.0047	<0.01			
2/15/2007			<0.01	0.017					
6/23/2007	<0.01	<0.01	<0.01	0.0076	0.0029	<0.01			
9/11/2007			<0.01	0.012					
12/11/2007	<0.01	<0.01	<0.01	0.017	<0.01	<0.01			
3/11/2008			<0.01	0.012					
6/23/2008		<0.01	<0.01						
6/24/2008	<0.01			0.0069	<0.01	<0.01			
11/3/2008			<0.01	0.016					
12/4/2008		<0.01	<0.01	0.013		<0.01			
12/5/2008	<0.01				<0.01				
3/25/2009			<0.01	0.014					
7/7/2009			<0.01		<0.01				
7/8/2009	<0.01	<0.01		0.014		<0.01			
9/14/2009			<0.01	0.0072					
12/20/2009	<0.01		<0.01	0.02	<0.01	<0.01			
12/21/2009		<0.01							
3/4/2010			<0.01	0.023					
6/20/2010	<0.01	<0.01	<0.01	0.017	0.0037	<0.01			
6/21/2010							<0.01	<0.01	<0.01
9/14/2010			<0.01	0.018					
1/6/2011		0.0028			<0.01	<0.01			
1/7/2011	<0.01		<0.01	0.019			0.0029	0.0031	<0.01
4/15/2011			<0.01	0.019					
7/7/2011	0.0036	<0.01	<0.01	0.014	0.0045		<0.01		
7/8/2011							0.0046	0.0048	<0.01
9/25/2011			<0.01	0.015					
1/17/2012	<0.01	<0.01	<0.01	0.021	<0.01	<0.01			
1/18/2012							<0.01	<0.01	<0.01
4/4/2012			<0.01	0.0191					
7/9/2012	0.0059	<0.01		0.026	0.0026	<0.01			
7/10/2012			<0.01				0.0081	<0.01	<0.01
10/9/2012			<0.01	0.049					
1/17/2013		<0.01			<0.01	<0.01			
1/18/2013	<0.01		<0.01	0.036			0.0063	<0.01	<0.01

Prediction Limit

Constituent: Vanadium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-15	GWC-13	GWA-8 (bg)	GWC-14	GWC-1	GWC-2	GWC-20	GWC-21	GWC-22
4/5/2013			<0.01	0.04					
7/16/2013		<0.01			<0.01				
7/17/2013	<0.01		<0.01	0.062		<0.01	<0.01	<0.01	<0.01
10/11/2013			<0.01	0.032					
1/13/2014	<0.01	<0.01			<0.01	<0.01			
1/14/2014			<0.01	0.044			<0.01	0.006	<0.01
4/3/2014			0.0015 (J)	0.077 (o)					
7/8/2014		0.002 (J)							
7/9/2014	0.0012 (J)		0.0012 (J)	0.032	0.0041 (J)	<0.01		0.0019 (J)	
7/10/2014							0.0026 (J)		0.0053
10/24/2014			<0.01	0.045					
1/12/2015							0.0031 (J)		
1/13/2015	0.0013 (J)	0.0015 (J)			0.0029 (J)	<0.01			
1/14/2015			<0.01	0.031				0.0037 (J)	0.0013 (J)
5/10/2015			<0.01	0.013					
5/11/2015									
7/16/2015	<0.01	<0.01			0.0034 (J)	<0.01			
7/17/2015			<0.01	0.028				0.0028 (J)	
7/18/2015							0.003 (J)		0.0043 (J)
10/6/2015			0.0012 (J)	0.02					
1/17/2016	0.0013 (J)			0.028	0.0046 (J)	<0.01	0.0025 (J)	0.0039 (J)	
1/18/2016		0.0011 (J)	0.00079 (J)						<0.01
1/19/2016									
4/26/2016			<0.01	0.0181					
7/26/2016		<0.01							
7/27/2016	<0.01			0.0189	0.0064 (J)	<0.01			
7/28/2016			<0.01				0.0024 (J)	0.0022 (J)	
7/29/2016									0.0052 (J)
10/24/2016			<0.01						
10/25/2016	<0.01			0.0206			<0.01		
1/3/2017			<0.01						
1/4/2017					<0.01		<0.01	<0.01	<0.01
1/5/2017	<0.01	<0.01		0.0172		<0.01			
1/6/2017									
4/3/2017	0.002 (J)		<0.01						
4/4/2017				0.0235	0.0061 (J)	<0.01	0.0024 (J)	0.003 (J)	
4/5/2017									
4/6/2017		<0.01							<0.01
7/10/2017									
7/11/2017	0.0022 (J)		<0.01	0.0136			0.003 (J)		0.0016 (J)
7/12/2017		0.0016 (J)			0.0067 (J)				
7/13/2017						<0.01		0.0019 (J)	
10/2/2017	0.0022 (J)		<0.01	0.0175			0.0028 (J)		
10/3/2017									
10/4/2017									
1/9/2018	0.0021 (J)		0.0014 (J)	0.0103				0.0046 (J)	
1/10/2018		0.0019 (J)			0.0056 (J)	<0.01	0.0026 (J)		
1/11/2018									0.0012 (J)
7/9/2018			<0.01	0.0078 (J)			<0.01		
7/10/2018	0.0025 (J)				0.0056 (J)	<0.01		0.0031 (J)	
7/11/2018		0.0097 (J)							0.0025 (J)
1/16/2019		<0.01	<0.01	0.0043 (J)	0.0043 (J)				

Prediction Limit

Constituent: Vanadium (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-15	GWC-13	GWA-8 (bg)	GWC-14	GWC-1	GWC-2	GWC-20	GWC-21	GWC-22
1/17/2019	<0.01							0.0022 (J)	
1/18/2019									<0.01
1/21/2019						0.0024 (J)	0.0031 (J)		
3/25/2019			<0.01				0.0024 (J)		
3/26/2019	0.0026 (J)	0.0029 (J)		0.0063 (J)	0.0051 (J)			0.0041 (J)	
3/27/2019									0.002 (J)
7/30/2019						<0.01			
10/7/2019			<0.01						
10/8/2019	<0.01	<0.01		<0.01				<0.01	
10/9/2019					<0.01	<0.01	<0.01		<0.01
4/6/2020			<0.01						
4/7/2020	<0.01			0.0026 (J)	0.0015 (J)			<0.01	0.0014 (J)
4/8/2020		<0.01				<0.01	<0.01		
9/28/2020		<0.01	<0.01		0.0042 (J)				
9/29/2020				<0.01		<0.01			
9/30/2020	0.0028 (J)						0.0029 (J)	0.0029 (J)	<0.01
10/1/2020									
3/10/2021					0.005 (J)				<0.01
3/11/2021									
3/12/2021	0.0037 (J)		<0.01				0.0038 (J)		
3/15/2021		<0.01				<0.01			
3/16/2021				<0.01				0.003 (J)	

Prediction Limit

Constituent: Zinc (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-1	GWC-11	GWC-13	GWA-8 (bg)	GWC-14	GWC-15	GWC-16	GWC-17
9/29/2000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/21/2000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1/20/2001	<0.01	<0.01	<0.01	<0.01	0.025	<0.01	<0.01	<0.01	<0.01
3/14/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
7/16/2001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/1/2001	<0.01	<0.01	<0.01	0.044 (o)	<0.01	<0.01	<0.01	<0.01	<0.01
4/25/2002	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/20/2002		<0.01	<0.01	0.023	0.016	<0.01	<0.01	<0.01	0.014
6/6/2003	0.69 (o)	0.011	<0.01	<0.01	0.032	<0.01	<0.01	0.035 (o)	0.012
12/12/2003	0.12	<0.01	0.013	<0.01	0.019	<0.01	<0.01	<0.01	<0.01
5/26/2004	0.013	<0.01	<0.01	0.035	<0.01	<0.01	<0.01	<0.01	<0.01
12/7/2004	<0.01	<0.01	0.028 (o)	0.018	<0.01	<0.01	<0.01	<0.01	<0.01
6/21/2005	<0.01	<0.01	<0.01	0.014	<0.01	<0.01	<0.01	<0.01	<0.01
12/12/2005	0.014	<0.01	<0.01	0.023	0.01	0.011	0.064 (o)	<0.01	<0.01
4/4/2006					<0.01	<0.01		<0.01	
6/27/2006	0.01	<0.01	0.0028	0.023	0.0043	0.0045	0.011	0.077 (o)	0.0046
8/30/2006					0.017	<0.01		0.0027	
12/4/2006	0.0065	<0.01	0.0028	0.046 (o)	0.0053	<0.01	0.0033	<0.01	0.0071
2/15/2007					0.0045	<0.01		0.0032	
6/23/2007	0.0049	<0.01	0.0063	0.036	0.0043	<0.01	0.0029	0.0058	0.005
9/11/2007					0.004	<0.01		0.0033	
12/11/2007	0.0043	<0.01	<0.01	0.011	0.0048	<0.01	<0.01	<0.01	0.0033
3/11/2008					0.0043	<0.01		<0.01	
6/23/2008	0.0025		<0.01	0.0091	0.0037				
6/24/2008		<0.01				<0.01	<0.01	<0.01	0.0037
11/3/2008					0.0032	<0.01		0.0025	
12/4/2008	0.0025		<0.01	0.0038	0.0029	<0.01			
12/5/2008		<0.01					<0.01	<0.01	0.0027
3/25/2009					0.0055	<0.01		0.0025	
7/7/2009	<0.01	<0.01			0.0028				
7/8/2009			<0.01	<0.01		<0.01	<0.01	<0.01	0.0048
9/14/2009					0.0027	<0.01		<0.01	
12/20/2009	0.0031	<0.01			0.0029	<0.01	<0.01	<0.01	
12/21/2009			<0.01	0.0032					0.0032
3/4/2010					0.0042	<0.01		<0.01	
6/20/2010	<0.01	<0.01	<0.01	<0.01	0.0027	<0.01	<0.01		
6/21/2010								<0.01	0.0028
9/14/2010					<0.01	<0.01		<0.01	
1/6/2011		<0.01	<0.01	0.004					
1/7/2011	<0.01				0.0032	<0.01	<0.01	<0.01	0.003
4/15/2011					<0.01	<0.01		<0.01	
7/7/2011	0.0031	0.0025	<0.01	0.0037	0.005	<0.01	<0.01	<0.01	
7/8/2011									0.0034
9/25/2011					0.0041	<0.01		0.0028	
1/17/2012	0.004	<0.01	0.0043	0.0031	0.0043	<0.01	<0.01		
1/18/2012								0.0029	0.0049
4/4/2012					<0.01	<0.01		<0.01	
7/9/2012	0.0096	<0.01	<0.01	0.003		<0.01	<0.01		
7/10/2012					0.0028			<0.01	0.0039
10/9/2012					0.0033	<0.01		0.0027	
1/17/2013		<0.01	0.0025	<0.01					
1/18/2013	0.051				0.0038	<0.01	<0.01	<0.01	0.0043

Prediction Limit

Constituent: Zinc (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-1	GWC-11	GWC-13	GWA-8 (bg)	GWC-14	GWC-15	GWC-16	GWC-17
4/5/2013					0.0026	<0.01		<0.01	
7/16/2013		<0.01	<0.01	0.0029					
7/17/2013	0.042				<0.01	<0.01	<0.01	<0.01	0.0035
10/11/2013					0.0046	<0.01		<0.01	
1/13/2014	0.0025	0.0025	0.0025	0.0025			0.0025		
1/14/2014					0.0025	0.0025		0.0025	0.0025
4/3/2014					0.0029	0.0014 (J)		0.0015 (J)	
7/8/2014			0.0011 (J)	0.0018 (J)					
7/9/2014	0.064	<0.01			0.002 (J)	0.00086 (J)	<0.01	0.0012 (J)	0.0033
7/10/2014									
10/24/2014					0.0031	0.00083 (J)		0.0013 (J)	
1/12/2015									
1/13/2015	0.066	0.0025	0.0021 (J)	0.0028			<0.01		
1/14/2015					0.003	<0.01		0.0017 (J)	0.0067
5/10/2015					0.0028	<0.01			
5/11/2015								0.0015 (J)	
7/16/2015	0.036	<0.01	<0.01	0.0018 (J)			<0.01	<0.01	
7/17/2015					0.0018 (J)	<0.01			
7/18/2015									<0.01
10/6/2015					0.0018 (J)	<0.01		<0.01	
1/17/2016		<0.01				<0.01	<0.01	<0.01	
1/18/2016	0.035			0.0017 (J)	0.0028				0.012
1/19/2016			0.0029						
4/26/2016					<0.01	<0.01		<0.01	
7/26/2016			<0.01	0.0028 (J)					
7/27/2016	0.0529	<0.01				<0.01	<0.01		
7/28/2016					0.0018 (J)			<0.01	
7/29/2016									0.0086 (J)
10/24/2016					0.0024 (J)				
10/25/2016	0.0035 (J)					<0.01	<0.01	<0.01	
1/3/2017					0.0035 (J)				
1/4/2017		<0.01	<0.01					0.0025 (J)	
1/5/2017				0.0021 (J)		<0.01	<0.01		0.016
1/6/2017	0.0235								
4/3/2017					0.0041 (J)		<0.01		
4/4/2017		<0.01				<0.01			
4/5/2017								0.0025 (J)	0.0175
4/6/2017	0.0829		0.004 (J)	0.0027 (J)					
7/10/2017									
7/11/2017			<0.01		0.0029 (J)	<0.01	<0.01		
7/12/2017		<0.01		0.0043 (J)				0.002 (J)	
7/13/2017	0.0853								0.0126
10/2/2017					0.0026 (J)	0.0026 (J)	<0.01		
10/3/2017								<0.01	
10/4/2017	0.0263								
1/9/2018	0.0665				0.0035 (J)	0.0018 (J)	<0.01		
1/10/2018		0.0014 (J)		0.0021 (J)				0.0016 (J)	
1/11/2018			0.0018 (J)						0.012
7/9/2018					0.0022 (J)	<0.01			
7/10/2018		0.0021 (J)					<0.01	0.0031 (J)	
7/11/2018	0.02 (J)		<0.01	0.0039 (J)					0.011
1/16/2019	0.014 (J)	<0.01		0.047	0.0037 (J)	<0.01			0.0094 (J)

Prediction Limit

Constituent: Zinc (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7 (bg)	GWC-1	GWC-11	GWC-13	GWA-8 (bg)	GWC-14	GWC-15	GWC-16	GWC-17
1/17/2019			<0.01				<0.01	<0.01	
1/18/2019									
1/21/2019									
3/25/2019	<0.05 (o)				<0.01				
3/26/2019		<0.01		0.03		<0.01	<0.01	<0.01	0.0057 (J)
3/27/2019			<0.01						
7/30/2019									
10/7/2019					0.0077 (J)				
10/8/2019	0.095		0.0061 (J)	0.053		0.0052 (J)	0.0051 (J)	0.01	
10/9/2019		0.0057 (J)							0.011
4/6/2020	<0.01				<0.01				
4/7/2020		<0.01	<0.01			<0.01	<0.01	<0.01	
4/8/2020				0.023					<0.01
9/28/2020	0.16	0.0092 (J)		0.016	0.0092 (J)				
9/29/2020			0.0031 (J)			<0.01			
9/30/2020							0.032	0.0051 (J)	0.0043 (J)
10/1/2020									
3/10/2021		<0.01	<0.01						
3/11/2021	0.054								0.0056 (J)
3/12/2021					0.0028 (J)		<0.01		
3/15/2021				0.039					
3/16/2021						<0.01		<0.01	

Prediction Limit

Constituent: Zinc (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWB-4R	GWB-5R	GWC-2	GWC-12	GWB-6R	GWC-22	GWC-20	GWC-21
9/29/2000	<0.01	<0.01	0.026 (o)		0.38 (o)	<0.02 (o)			
11/21/2000	<0.01	<0.01	<0.01	0.021 (o)	0.077 (o)	0.024 (o)			
1/20/2001	<0.01	0.041	0.031 (o)	<0.01	0.23 (o)	<0.02 (o)			
3/14/2001	<0.01	<0.01	0.063 (o)	<0.01	0.24 (o)	<0.02 (o)			
7/16/2001	<0.01	0.059	0.08 (o)	<0.01	0.053 (o)	<0.02 (o)			
11/1/2001	<0.01	<0.01	0.16 (o)	<0.01	0.022 (o)	<0.02 (o)			
4/25/2002	<0.01	<0.01	<0.01	<0.01	1.2 (o)	<0.02 (o)			
11/20/2002	0.033 (o)	0.061	0.14 (o)	<0.01	0.045 (o)	0.028 (o)			
6/6/2003	<0.01	0.041	0.51 (o)	<0.01	0.042 (o)	0.032 (o)			
12/12/2003	<0.01	0.012	<0.01	<0.01	<0.01	<0.01 (o)			
5/26/2004	<0.01	0.016	0.036 (o)	<0.01	<0.01	<0.01 (o)			
12/7/2004	<0.01	<0.01	0.069 (o)	<0.01	<0.01	0.012 (o)			
6/21/2005	<0.01	<0.01	0.076 (o)	<0.01	<0.01	<0.01 (o)			
12/12/2005	0.032 (o)	0.017	<0.01	0.012	<0.01	<0.01 (o)			
4/4/2006									
6/27/2006	0.018 (o)	0.11	0.01	<0.01	0.012 (o)	0.0071			
8/30/2006									
12/4/2006	0.0044	0.086	0.0035	<0.01	0.0067	0.0096			
2/15/2007									
6/23/2007	0.0041	0.076	0.0032	<0.01	0.025 (o)	0.094 (o)			
9/11/2007									
12/11/2007	0.0039	0.087	0.0079	<0.01	0.0038	0.042 (o)			
3/11/2008									
6/23/2008	<0.01				0.0051				
6/24/2008		0.062	<0.01	<0.01		0.098 (o)			
11/3/2008									
12/4/2008	0.0039			<0.01	<0.01				
12/5/2008		0.014	<0.01			0.047 (o)			
3/25/2009									
7/7/2009		0.052	<0.01			0.024 (o)			
7/8/2009	<0.01			<0.01	<0.01				
9/14/2009									
12/20/2009				<0.01					
12/21/2009	0.004	0.046	<0.01		0.013 (o)	0.049 (o)			
3/4/2010									
6/20/2010	<0.01		<0.01	<0.01	<0.01	0.045 (o)			
6/21/2010		0.045					<0.01	<0.01	0.04 (o)
9/14/2010									
1/6/2011			<0.01	<0.01					
1/7/2011	0.0032	0.024			0.004	0.0044	0.019	<0.01	<0.01
4/15/2011									
7/7/2011			0.0027		0.0028	0.003		<0.01	
7/8/2011	0.0025	0.023					0.1 (o)	0.086 (Jo)	0.0044
9/25/2011									
1/17/2012			0.0039	<0.01	0.0043				
1/18/2012	0.0045	0.011				0.0048	0.0051	<0.01	<0.01
4/4/2012									
7/9/2012			<0.01	<0.01	<0.01				
7/10/2012	<0.01	0.024				<0.01	0.01	<0.01	<0.01
10/9/2012									
1/17/2013			<0.01	<0.01	0.0033				
1/18/2013	0.0029	0.011				0.0028	0.0036	0.0032	<0.01

Prediction Limit

Constituent: Zinc (mg/L) Analysis Run 4/19/2021 1:54 PM View: Appendix I
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWB-4R	GWB-5R	GWC-2	GWC-12	GWB-6R	GWC-22	GWC-20	GWC-21
4/5/2013									
7/16/2013			0.0032		0.0028				
7/17/2013	<0.01	0.0029		<0.01		<0.01	0.0025	<0.01	<0.01
10/11/2013									
1/13/2014			0.0025	0.0025	0.0025				
1/14/2014	0.0025	0.0025				0.0025	0.0025	0.0025	0.0025
4/3/2014									
7/8/2014					0.002 (J)				
7/9/2014	0.0016 (J)	0.0051	0.00076 (J)	0.00058 (J)		0.00093 (J)			0.00084 (J)
7/10/2014							0.024	<0.01	
10/24/2014									
1/12/2015		0.0023 (J)						<0.01	
1/13/2015			0.0036	0.0024 (J)	0.0079				
1/14/2015	0.0024 (J)					0.0023 (J)	0.0016 (J)		0.0018 (J)
5/10/2015									
5/11/2015									
7/16/2015		0.0021 (J)	<0.01	<0.01	0.0026				
7/17/2015	0.0031					<0.01			<0.01
7/18/2015							0.014	<0.01	
10/6/2015									
1/17/2016				<0.01				<0.01	<0.01
1/18/2016	0.0059	0.0092	<0.01		0.0025	0.0029	<0.01		
1/19/2016									
4/26/2016									
7/26/2016									
7/27/2016			0.0015 (J)	0.0018 (J)	0.0021 (J)				
7/28/2016	0.0019 (J)					<0.01		<0.01	<0.01
7/29/2016		0.003 (J)					0.0129		
10/24/2016									
10/25/2016								<0.01	
1/3/2017			<0.01						
1/4/2017					0.0025 (J)		0.006 (J)	<0.01	<0.01
1/5/2017				<0.01		<0.01			
1/6/2017	0.0026 (J)	0.0104							
4/3/2017									
4/4/2017		0.0132		0.0015 (J)				<0.01	0.0015 (J)
4/5/2017					0.0026 (J)				
4/6/2017	0.0047 (J)		0.0023 (J)			0.0032 (J)	0.0031 (J)		
7/10/2017					0.0023 (J)				
7/11/2017							0.0029 (J)	<0.01	
7/12/2017	0.003 (J)	0.0046 (J)	<0.01			0.002 (J)			
7/13/2017				0.0014 (J)					0.002 (J)
10/2/2017								<0.01	
10/3/2017									
10/4/2017									
1/9/2018						0.0036 (J)			0.0016 (J)
1/10/2018			0.0022 (J)	<0.01				0.0034 (J)	
1/11/2018	0.0046 (J)	0.0095 (J)			0.0031 (J)		0.0106		
7/9/2018								<0.01	
7/10/2018			<0.01	<0.01		0.0055 (J)			<0.01
7/11/2018	0.0033 (J)	0.0028 (J)			0.0036 (J)		0.0057 (J)		
1/16/2019		0.0052 (J)	<0.01			<0.01			

FIGURE E.

Appendix I Trend Tests - Prediction Limit Exceedances -Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/9/2021, 1:51 PM

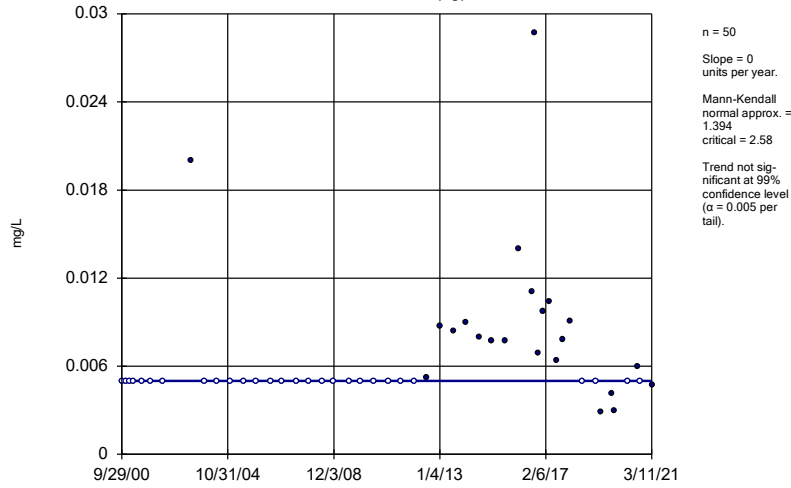
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Arsenic (mg/L)	GWA-8 (bg)	0	-3.107	-2.58	Yes	71	91.55	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWC-15	0.004128	7.971	2.58	Yes	51	49.02	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWC-16	-0.001278	-3.094	-2.58	Yes	70	0	n/a	n/a	0.01	NP
Barium (mg/L)	GWA-8 (bg)	-0.002912	-8.579	-2.58	Yes	70	0	n/a	n/a	0.01	NP
Barium (mg/L)	GWC-20	0.01009	249	146	Yes	30	0	n/a	n/a	0.01	NP

Appendix I Trend Tests - Prediction Limit Exceedances - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/9/2021, 1:51 PM

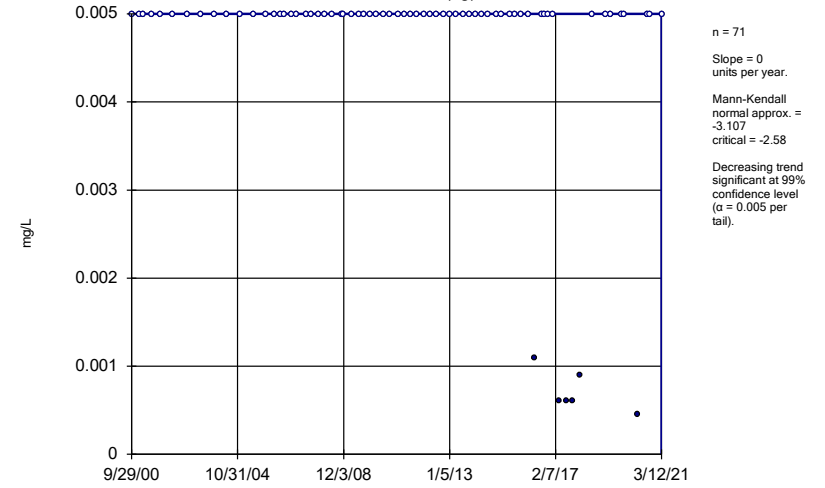
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Arsenic (mg/L)	GWA-7 (bg)	0	1.394	2.58	No	50	56	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWA-8 (bg)	0	-3.107	-2.58	Yes	71	91.55	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWC-15	0.004128	7.971	2.58	Yes	51	49.02	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWC-16	-0.001278	-3.094	-2.58	Yes	70	0	n/a	n/a	0.01	NP
Arsenic (mg/L)	GWC-20	0.01404	114	146	No	30	3.333	n/a	n/a	0.01	NP
Barium (mg/L)	GWA-7 (bg)	-0.0005107	-0.5269	-2.58	No	49	0	n/a	n/a	0.01	NP
Barium (mg/L)	GWA-8 (bg)	-0.002912	-8.579	-2.58	Yes	70	0	n/a	n/a	0.01	NP
Barium (mg/L)	GWC-20	0.01009	249	146	Yes	30	0	n/a	n/a	0.01	NP

Sen's Slope Estimator
GWA-7 (bg)



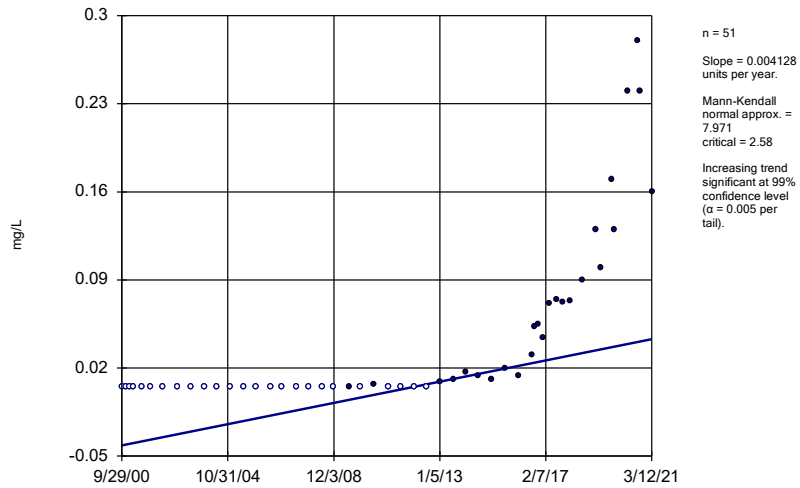
Constituent: Arsenic Analysis Run 4/9/2021 1:49 PM View: Appendix I Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWA-8 (bg)



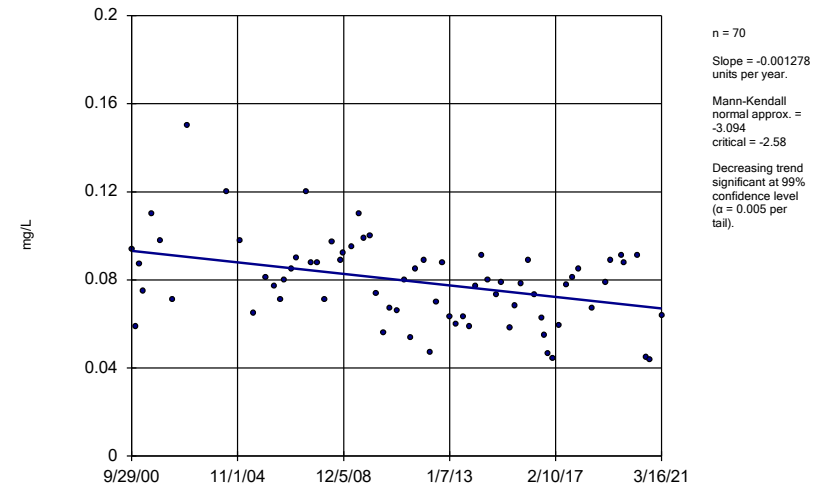
Constituent: Arsenic Analysis Run 4/9/2021 1:49 PM View: Appendix I Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWC-15



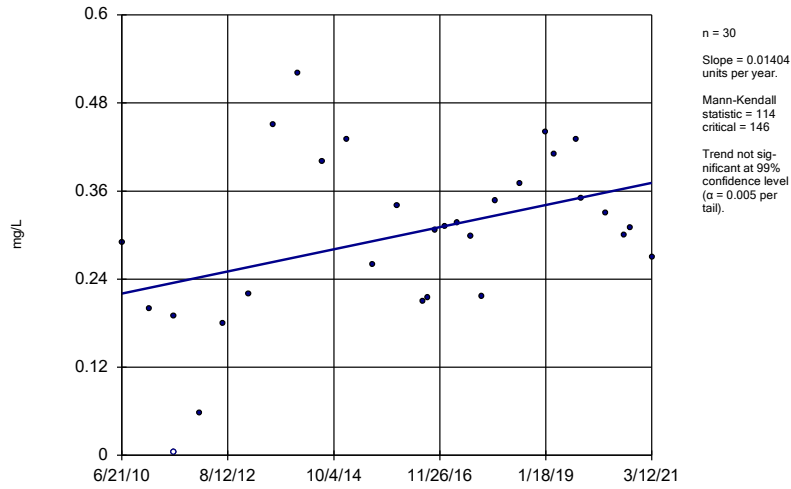
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWC-16



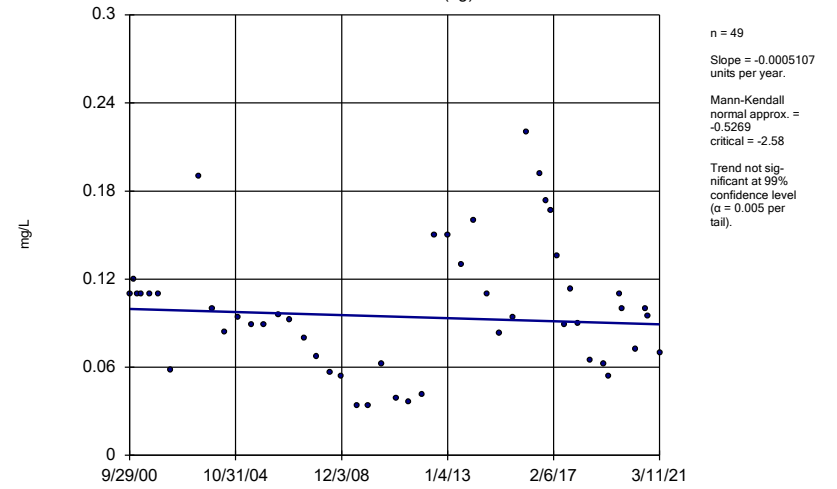
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWC-20



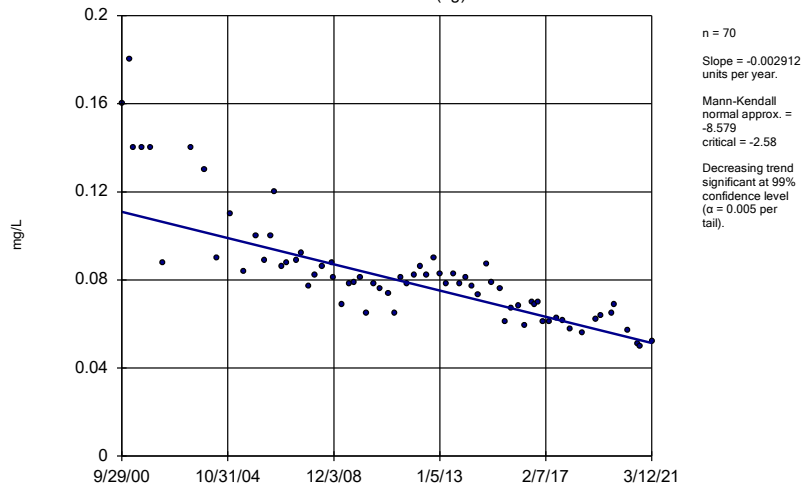
Constituent: Arsenic Analysis Run 4/9/2021 1:49 PM View: Appendix I Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWA-7 (bg)



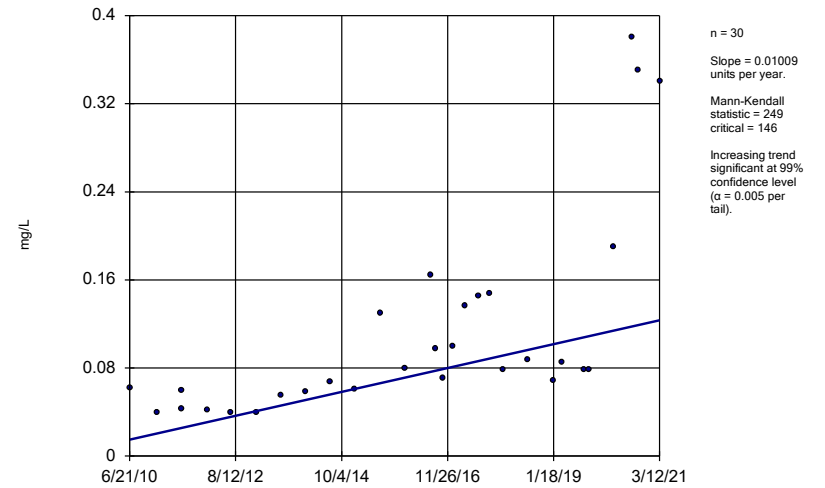
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWA-8 (bg)



Constituent: Barium Analysis Run 4/9/2021 1:49 PM View: Appendix I Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWC-20



Constituent: Barium Analysis Run 4/9/2021 1:49 PM View: Appendix I Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

FIGURE F.

Appendix III Interwell Prediction Limits - Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/9/2021, 11:09 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Calcium (mg/L)	GWB-4R	35.8	n/a	3/10/2021	263	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-5R	35.8	n/a	3/10/2021	134	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-6R	35.8	n/a	3/10/2021	55.9	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-1	35.8	n/a	3/10/2021	67.2	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-11	35.8	n/a	3/10/2021	126	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-12	35.8	n/a	3/10/2021	53.1	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-15	35.8	n/a	3/12/2021	101	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-16	35.8	n/a	3/16/2021	188	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-17	35.8	n/a	3/11/2021	67	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-20	35.8	n/a	3/12/2021	241	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-21	35.8	n/a	3/16/2021	104	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-17	260	n/a	3/11/2021	334	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
pH (SU)	GWC-12	6.43	4.23	3/10/2021	4.08	Yes	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-5R	160	n/a	3/10/2021	572	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-6R	160	n/a	3/10/2021	1160	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-11	160	n/a	3/10/2021	687	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-12	160	n/a	3/10/2021	282	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-16	160	n/a	3/16/2021	821	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-17	160	n/a	3/11/2021	244	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-20	160	n/a	3/12/2021	933	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-21	160	n/a	3/16/2021	343	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2

Appendix III Interwell Prediction Limits - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/9/2021, 11:09 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	GWB-4R	21.8	n/a	3/10/2021	4.9	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWB-5R	21.8	n/a	3/10/2021	3.9	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWB-6R	21.8	n/a	3/10/2021	6.9	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-1	21.8	n/a	3/10/2021	0.63	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-11	21.8	n/a	3/10/2021	1.8	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-12	21.8	n/a	3/10/2021	6.1	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-13	21.8	n/a	3/15/2021	0.31	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-14	21.8	n/a	3/16/2021	0.08	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-15	21.8	n/a	3/12/2021	0.81	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-16	21.8	n/a	3/16/2021	10	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-17	21.8	n/a	3/11/2021	0.85	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-2	21.8	n/a	3/15/2021	0.084	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-20	21.8	n/a	3/12/2021	15.6	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-21	21.8	n/a	3/16/2021	3.5	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-22	21.8	n/a	3/10/2021	0.32	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Boron (mg/L)	GWC-9	21.8	n/a	3/10/2021	0.022J	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-4R	35.8	n/a	3/10/2021	263	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-5R	35.8	n/a	3/10/2021	134	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-6R	35.8	n/a	3/10/2021	55.9	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-1	35.8	n/a	3/10/2021	67.2	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-11	35.8	n/a	3/10/2021	126	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-12	35.8	n/a	3/10/2021	53.1	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-13	35.8	n/a	3/15/2021	2.4	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-14	35.8	n/a	3/16/2021	34.4	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-15	35.8	n/a	3/12/2021	101	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-16	35.8	n/a	3/16/2021	188	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-17	35.8	n/a	3/11/2021	67	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-2	35.8	n/a	3/15/2021	0.22J	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-20	35.8	n/a	3/12/2021	241	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-21	35.8	n/a	3/16/2021	104	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-22	35.8	n/a	3/10/2021	18.7	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-9	35.8	n/a	3/10/2021	5.3	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWB-4R	260	n/a	3/10/2021	16	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWB-5R	260	n/a	3/10/2021	25.7	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWB-6R	260	n/a	3/10/2021	42.4	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-1	260	n/a	3/10/2021	8.5	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-11	260	n/a	3/10/2021	188	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-12	260	n/a	3/10/2021	48.7	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-13	260	n/a	3/15/2021	7.6	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-14	260	n/a	3/16/2021	15.8	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-15	260	n/a	3/12/2021	2.3	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-16	260	n/a	3/16/2021	44.9	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-17	260	n/a	3/11/2021	334	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-2	260	n/a	3/15/2021	6.4	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-20	260	n/a	3/12/2021	31.9	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-21	260	n/a	3/16/2021	25.3	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-22	260	n/a	3/10/2021	48.2	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-9	260	n/a	3/10/2021	18.3	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Fluoride (mg/L)	GWB-4R	0.5074	n/a	3/10/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWB-5R	0.5074	n/a	3/10/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWB-6R	0.5074	n/a	3/10/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-1	0.5074	n/a	3/10/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-11	0.5074	n/a	3/10/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-12	0.5074	n/a	3/10/2021	0.14	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-13	0.5074	n/a	3/15/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-14	0.5074	n/a	3/16/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2

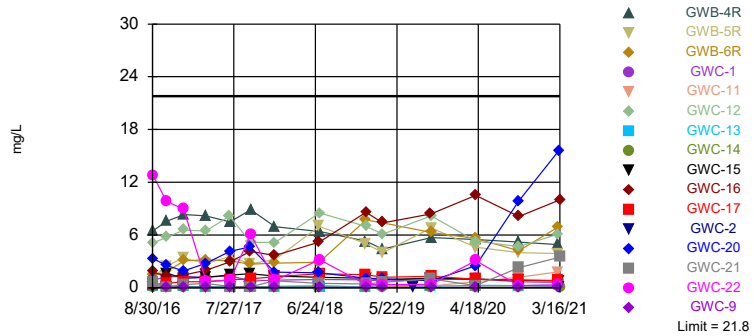
Appendix III Interwell Prediction Limits - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/9/2021, 11:09 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	GWC-15	0.5074	n/a	3/12/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-16	0.5074	n/a	3/16/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-17	0.5074	n/a	3/11/2021	0.42	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-2	0.5074	n/a	3/15/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-20	0.5074	n/a	3/12/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-21	0.5074	n/a	3/16/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-22	0.5074	n/a	3/10/2021	0.1ND	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
Fluoride (mg/L)	GWC-9	0.5074	n/a	3/10/2021	0.066J	No	32	-2.268	0.7069	25	Kaplan-Meier	ln(x)	0.0004702	Param Inter 1 of 2
pH (SU)	GWB-4R	6.43	4.23	3/10/2021	5.23	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWB-5R	6.43	4.23	3/10/2021	4.73	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWB-6R	6.43	4.23	3/10/2021	5.69	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-1	6.43	4.23	3/10/2021	5.42	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-11	6.43	4.23	3/10/2021	4.97	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-12	6.43	4.23	3/10/2021	4.08	Yes	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-13	6.43	4.23	3/15/2021	4.74	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-14	6.43	4.23	3/16/2021	5.53	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-15	6.43	4.23	3/12/2021	6.21	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-16	6.43	4.23	3/16/2021	5.67	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-17	6.43	4.23	3/11/2021	5.2	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-2	6.43	4.23	3/15/2021	4.56	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-20	6.43	4.23	3/12/2021	5.86	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-21	6.43	4.23	3/16/2021	5.74	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-22	6.43	4.23	3/10/2021	4.82	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
pH (SU)	GWC-9	6.43	4.23	3/10/2021	4.55	No	30	n/a	n/a	0	n/a	n/a	0.003584	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-4R	160	n/a	3/10/2021	160	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-5R	160	n/a	3/10/2021	572	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-6R	160	n/a	3/10/2021	1160	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-1	160	n/a	3/10/2021	61.2	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-11	160	n/a	3/10/2021	687	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-12	160	n/a	3/10/2021	282	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-13	160	n/a	3/15/2021	30.6	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-14	160	n/a	3/16/2021	92	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-15	160	n/a	3/12/2021	21.1	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-16	160	n/a	3/16/2021	821	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-17	160	n/a	3/11/2021	244	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-2	160	n/a	3/15/2021	10	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-20	160	n/a	3/12/2021	933	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-21	160	n/a	3/16/2021	343	Yes	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-22	160	n/a	3/10/2021	101	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-9	160	n/a	3/10/2021	38.7	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWB-4R	3660	n/a	3/10/2021	434	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWB-5R	3660	n/a	3/10/2021	1040	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWB-6R	3660	n/a	3/10/2021	2120	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-1	3660	n/a	3/10/2021	329	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-11	3660	n/a	3/10/2021	1240	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-12	3660	n/a	3/10/2021	566	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-13	3660	n/a	3/15/2021	5ND	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-14	3660	n/a	3/16/2021	137	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-15	3660	n/a	3/12/2021	353	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-16	3660	n/a	3/16/2021	980	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-17	3660	n/a	3/11/2021	705	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-2	3660	n/a	3/15/2021	11	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-20	3660	n/a	3/12/2021	1730	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-21	3660	n/a	3/16/2021	454	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-22	3660	n/a	3/10/2021	210	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-9	3660	n/a	3/10/2021	89	No	28	n/a	n/a	0	n/a	n/a	0.002049	NP Inter (normality) 1 of 2

Within Limit

Prediction Limit Interwell Non-parametric

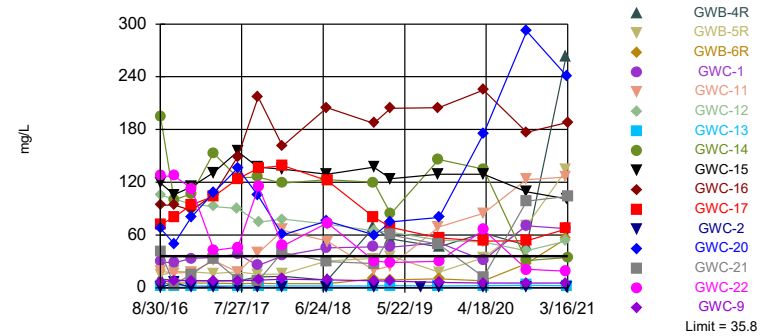


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 28 background values. Annual per-constituent alpha = 0.06352. Individual comparison alpha = 0.002049 (1 of 2). Comparing 16 points to limit.

Constituent: Boron Analysis Run 4/9/2021 11:05 AM View: Appendix III
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit: GWB-4R, GWB-5R, GWB-6R, GWC-1, GWC-11, GWC-12, GWC-15, GWC-16, GWC-17, GWC-20, GWC-21

Prediction Limit Interwell Non-parametric

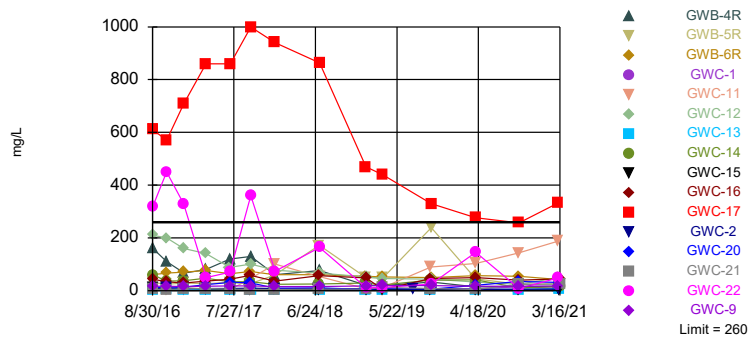


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 28 background values. Annual per-constituent alpha = 0.06352. Individual comparison alpha = 0.002049 (1 of 2). Comparing 16 points to limit.

Constituent: Calcium Analysis Run 4/9/2021 11:05 AM View: Appendix III
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit: GWC-17

Prediction Limit Interwell Non-parametric



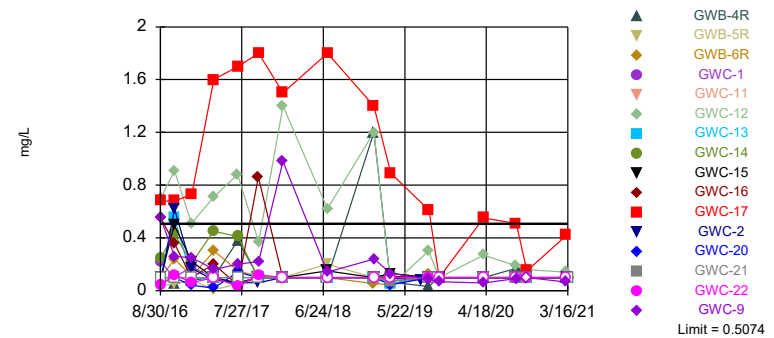
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 28 background values. Annual per-constituent alpha = 0.06352. Individual comparison alpha = 0.002049 (1 of 2). Comparing 16 points to limit.

Constituent: Chloride Analysis Run 4/9/2021 11:05 AM View: Appendix III
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Hollow symbols indicate censored values.

Prediction Limit Interwell Parametric

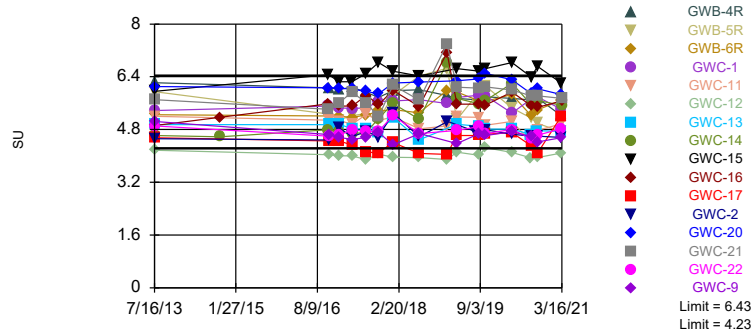


Background Data Summary (based on natural log transformation) (after Kaplan-Meier Adjustment): Mean=-2.268, Std. Dev.=0.7069, n=32, 25% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9256, critical = 0.904. Kappa = 2.248 (c=7, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0004702. Comparing 16 points to limit.

Constituent: Fluoride Analysis Run 4/9/2021 11:05 AM View: Appendix III
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limits: GWC-12

Prediction Limit
Interwell Non-parametric

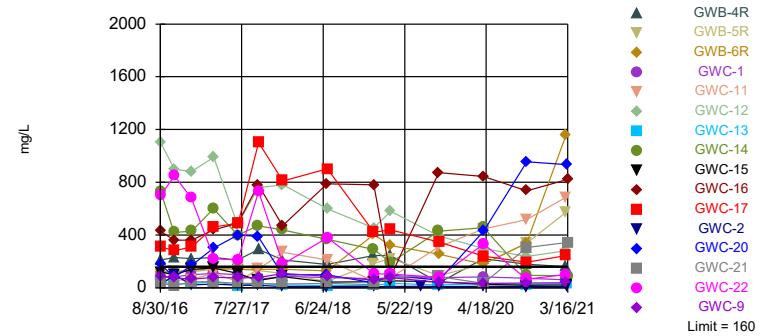


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 30 background values. Annual per-constituent alpha = 0.1116. Individual comparison alpha = 0.003584 (1 of 2). Comparing 16 points to limit.

Constituent: pH Analysis Run 4/9/2021 11:05 AM View: Appendix III
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit: GWB-5R, GWB-6R, GWC-11, GWC-12, GWC-16, GWC-17, GWC-20, GWC-21

Prediction Limit
Interwell Non-parametric

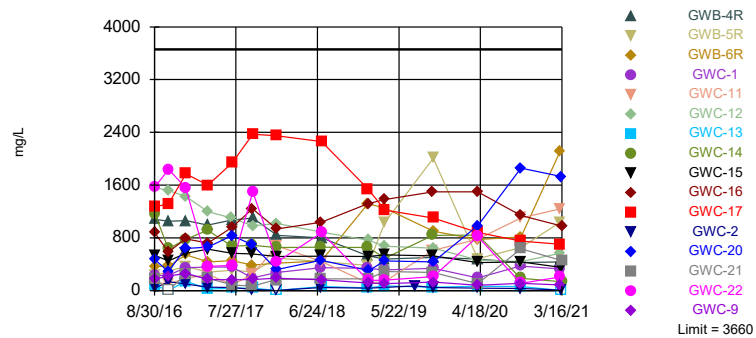


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 28 background values. Annual per-constituent alpha = 0.06352. Individual comparison alpha = 0.002049 (1 of 2). Comparing 16 points to limit.

Constituent: Sulfate Analysis Run 4/9/2021 11:05 AM View: Appendix III
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Prediction Limit
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 28 background values. Annual per-constituent alpha = 0.06352. Individual comparison alpha = 0.002049 (1 of 2). Comparing 16 points to limit.

Constituent: Total Dissolved Solids Analysis Run 4/9/2021 11:05 AM View: Appendix III
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 4/9/2021 11:08 AM View: Appendix III
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-14	GWC-16	GWB-4R	GWC-17	GWA-7 (bg)	GWC-20	GWC-21	GWC-15	GWC-9
8/30/2016									
8/31/2016									0.096 (Jo)
9/1/2016	0.071 (J)	1.82	6.48	0.408	11.6	3.34	0.62	9.01 (o)	
10/24/2016									
10/25/2016	0.0819 (J)	1.26			21.4	2.54	0.0658 (J)	1.66	
10/26/2016			7.57	0.5					
10/27/2016									0.0281 (J)
1/3/2017									
1/4/2017		1.46				1.91	0.36		
1/5/2017	0.0813			0.676				1.1	
1/6/2017			8.34		20.1				0.0189 (J)
4/3/2017								1.21	
4/4/2017	0.0723		8.18			2.77	0.509		
4/5/2017		2		0.69					
4/6/2017					21.8				0.0181 (J)
7/10/2017									
7/11/2017	0.0734					4.14		1.44	
7/12/2017		2.95	7.51						0.0211 (J)
7/13/2017				0.888	16.3		0.126		
10/2/2017	0.0748					4.65		1.59	
10/3/2017		4.15					0.1		
10/4/2017			8.88	1.02	21.5				0.0254 (J)
1/9/2018	0.0679				13.9		0.783	1.35	
1/10/2018		3.68				1.79			
1/11/2018			6.95	1.28					0.018 (J)
7/9/2018	0.061					1.7			
7/10/2018		5.2					0.5	1.2	
7/11/2018			6.4	1.6	11.7				0.02 (J)
1/16/2019	0.046		5.3	1.5	9.3				
1/17/2019		8.6					0.43	1.1	
1/18/2019									0.018 (J)
1/21/2019						1.1			
3/25/2019			4.4		8.5	1			
3/26/2019	0.037 (J)	7.4		1.2			0.61	0.95	
3/27/2019									0.016 (J)
7/30/2019									
10/7/2019									
10/8/2019	0.048	8.4			6.4		1	1.1	
10/9/2019			5.7	1.3		0.79			0.019 (J)
4/6/2020					6.1				
4/7/2020	0.061 (J)	10.5	5.5				0.24	0.96	
4/8/2020				0.99		2.5			0.023 (J)
9/28/2020					4.6				
9/29/2020	0.053								
9/30/2020		8.1		0.86		9.9	2.3	0.86	
10/1/2020			5.2						0.028 (J)
3/10/2021			4.9						0.022 (J)
3/11/2021				0.85	8				
3/12/2021						15.6		0.81	
3/15/2021									
3/16/2021	0.08	10					3.5		

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 4/9/2021 11:08 AM View: Appendix III
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-22	GWA-7 (bg)	GWB-4R	GWC-17	GWC-21	GWC-16	GWC-20	GWC-15	GWC-14
8/30/2016									
8/31/2016	127								
9/1/2016		5.59	9.91	71.9	40.5	93.8	67.2	119	194
10/24/2016									
10/25/2016		6.43			3.91	94.1	50.1	106	100
10/26/2016	127		8.56	80.3					
10/27/2016									
1/3/2017									
1/4/2017	113				15.2	88.2	80.4		
1/5/2017				94.4				115	107
1/6/2017		8.13	8.18						
4/3/2017								131	
4/4/2017			8.12		32.3		108		153
4/5/2017				104		106			
4/6/2017	42.7	7.72							
7/10/2017									
7/11/2017	46						136	155	125
7/12/2017			8			149			
7/13/2017		4.57		124	8.92				
10/2/2017							105	137	126
10/3/2017					7.88	217			
10/4/2017	115	6.41	12.5	136					
1/9/2018		4.68			40.5			135	119
1/10/2018						161	60.1		
1/11/2018	47.6		12.9	139					
7/9/2018							75.9		123
7/10/2018					29.8	205		129	
7/11/2018	73.7	3.9	8.6	122					
1/16/2019		4.3	68.8	80.5					120
1/17/2019					27.6	187		137	
1/18/2019	30.6								
1/21/2019							60		
3/25/2019		3.9	55.6				74.8		
3/26/2019				68.8	60.1	204		124	84.2
3/27/2019	28.8								
7/30/2019									
10/7/2019									
10/8/2019		3.5			49.5	205		129	146
10/9/2019	30.1		46.7	56.6			80.1		
4/6/2020		3.1							
4/7/2020	65.7		62.1		12.5	225		129	135
4/8/2020				53.1			175		
9/28/2020		3.3							
9/29/2020									30.8
9/30/2020	20.9			53.5	98.4	177	292	109	
10/1/2020			48.4						
3/10/2021	18.7		263						
3/11/2021		2.4		67					
3/12/2021							241	101	
3/15/2021									
3/16/2021					104	188			34.4

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 4/9/2021 11:08 AM View: Appendix III

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-22	GWA-7 (bg)	GWB-4R	GWC-17	GWC-21	GWC-16	GWC-20	GWC-15	GWC-14
8/30/2016									
8/31/2016	320								
9/1/2016		190	160	610	5.9	43	16	10	60
10/24/2016									
10/25/2016		175 (D)			4.4	34	8.1	6.5	36
10/26/2016	450		110	570					
10/27/2016									
1/3/2017									
1/4/2017	330				7.7	29	13		
1/5/2017				710				10	37
1/6/2017		180	67						
4/3/2017								7.3	
4/4/2017			80		8		23		47
4/5/2017				860		36			
4/6/2017	50	200							
7/10/2017									
7/11/2017	70						31	5.7	34
7/12/2017			120			44			
7/13/2017		200		860	5.4				
10/2/2017							30	4.4	34
10/3/2017					4.4	58			
10/4/2017	360	260	130	1000					
1/9/2018		210			4.4			5.7	24
1/10/2018						36	9.7		
1/11/2018	74		60	940					
7/9/2018							10.8		25.9
7/10/2018					6.3	57		3.1	
7/11/2018	164	177	75.9	864					
1/16/2019		165	20.2	469					29.2
1/17/2019					5.4	48.9		3.2	
1/18/2019	11								
1/21/2019							5.1		
3/25/2019		147	19.7				9.4		
3/26/2019				439	11.9	5.1		3	21.1
3/27/2019	11.5								
7/30/2019									
10/7/2019									
10/8/2019		125			7.8	46.4		2.9	40.2
10/9/2019	25.3		32.1	330			5.4		
4/6/2020		30.2							
4/7/2020	146		14.5		4.7	49.3		3.4	41.6
4/8/2020				277			20.2		
9/28/2020		113							
9/29/2020									10.6
9/30/2020	8.5			257	23.7	39.6	34.9	1.7	
10/1/2020			15.7						
3/10/2021	48.2		16						
3/11/2021		96.7		334					
3/12/2021							31.9	2.3	
3/15/2021									
3/16/2021					25.3	44.9			15.8

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 4/9/2021 11:08 AM View: Appendix III

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-6R	GWB-5R	GWC-1	GWA-8 (bg)	GWC-11	GWC-2	GWC-13	GWC-9	GWC-22
8/30/2016	0.09 (J)	0.04 (J)	0.22 (J)	0.1 (J)					
8/31/2016					<0.1	0.07 (J)	<0.1	0.55	0.04 (J)
9/1/2016									
10/24/2016				0.18 (J)					
10/25/2016			<0.1						
10/26/2016	0.24 (J)	0.05 (J)			<0.1	0.62	0.55		0.12 (J)
10/27/2016								0.26 (J)	
1/3/2017		0.08 (J)		0.18 (J)					
1/4/2017			0.18 (J)		<0.1				0.06 (J)
1/5/2017	0.11 (J)					0.17 (J)	0.09 (J)		
1/6/2017								0.25 (J)	
4/3/2017				0.12 (J)					
4/4/2017			<0.1			0.08 (J)			
4/5/2017									
4/6/2017	0.3	0.006 (J)			<0.1		<0.1	0.16 (J)	<0.1
7/10/2017									
7/11/2017				0.39	<0.1				0.03 (J)
7/12/2017	0.15 (J)	0.05 (J)	0.04 (J)				<0.1	0.2 (J)	
7/13/2017						0.06 (J)			
10/2/2017				0.12 (J)					
10/3/2017	0.11 (J)	0.11 (J)	<0.1		<0.1	0.06 (J)			
10/4/2017							<0.1	0.22 (J)	0.12 (J)
1/9/2018	<0.1			0.21 (J)					
1/10/2018		<0.1	<0.1			<0.1	<0.1		
1/11/2018					<0.1			0.98	<0.1
7/9/2018				0.04 (J)					
7/10/2018	<0.1	0.2 (J)	<0.1			<0.1			
7/11/2018					<0.1		<0.1	0.14 (J)	<0.1
1/16/2019	0.053 (J)	<0.1	<0.1	<0.1			<0.1		
1/17/2019					<0.1				
1/18/2019								0.24 (J)	<0.1
1/21/2019						<0.1			
3/25/2019				0.082 (J)					
3/26/2019	0.046 (J)	<0.1	0.051 (J)				0.052 (J)		
3/27/2019					<0.1			0.13 (J)	<0.1
7/30/2019						0.083 (J)			
8/26/2019				0.13					
8/27/2019	0.13 (J)		<0.1		<0.1	<0.1	<0.1		0.1
8/28/2019		0.097 (J)						0.088 (J)	
10/7/2019				<0.1					
10/8/2019					<0.1		<0.1		
10/9/2019	<0.1	<0.1	<0.1			<0.1		0.068 (J)	<0.1
4/6/2020				0.089 (J)					
4/7/2020	<0.1	<0.1	<0.1		<0.1				<0.1
4/8/2020						<0.1	<0.1	0.058 (J)	
8/17/2020				0.079 (J)			<0.1		
8/18/2020					<0.1	<0.1			<0.1
8/19/2020	<0.1	<0.1	<0.1					0.092 (J)	
9/28/2020			<0.1	<0.1			<0.1		
9/29/2020					<0.1	<0.1			
9/30/2020	<0.1	<0.1							<0.1
10/1/2020							<0.1		

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 4/9/2021 11:08 AM View: Appendix III
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-12	GWC-16	GWC-17	GWC-15	GWC-21	GWC-20	GWB-4R	GWA-7 (bg)	GWC-14
8/30/2016									
8/31/2016	0.7								
9/1/2016		0.55	0.68	<0.1	<0.1	<0.1	<0.1	<0.1	0.25 (J)
10/24/2016									
10/25/2016		0.36		0.5	<0.1	<0.1		0.07 (J)	0.43
10/26/2016	0.91		0.68				0.05 (J)		
10/27/2016									
1/3/2017									
1/4/2017	0.51	0.1 (J)			<0.1	0.04 (J)			
1/5/2017			0.73	0.22 (J)					0.21 (J)
1/6/2017							0.08 (J)	0.2 (J)	
4/3/2017				<0.1					
4/4/2017					<0.1	0.02 (J)	<0.1		0.45
4/5/2017	0.71	0.2 (J)	1.6						
4/6/2017								0.05 (J)	
7/10/2017	0.88								
7/11/2017				0.06 (J)		0.14 (J)			0.41
7/12/2017		0.04 (J)					0.38		
7/13/2017			1.7		<0.1			0.41	
10/2/2017				<0.1		<0.1			<0.1
10/3/2017		0.86			<0.1				
10/4/2017	0.37		1.8				<0.1	0.04 (J)	
1/9/2018				<0.1	<0.1			0.46	<0.1
1/10/2018		<0.1				<0.1			
1/11/2018	1.4		1.5				<0.1		
7/9/2018						<0.1			<0.1
7/10/2018		<0.1		0.15 (J)	<0.1				
7/11/2018	0.62		1.8				<0.1	<0.1	
1/16/2019			1.4				1.2	0.49	<0.1
1/17/2019	1.2	<0.1		<0.1	<0.1				
1/18/2019									
1/21/2019						<0.1			
3/25/2019						0.043 (J)	0.064 (J)	0.21 (J)	
3/26/2019		0.11 (J)	0.89	0.13 (J)	0.071 (J)				0.13 (J)
3/27/2019	0.036 (J)								
7/30/2019									
8/26/2019								<0.1	
8/27/2019	0.3			<0.1			0.031 (J)		<0.1
8/28/2019		<0.1	0.61		<0.1	<0.1			
10/7/2019									
10/8/2019		<0.1		<0.1	<0.1			<0.1	<0.1
10/9/2019	<0.1		<0.1			<0.1	<0.1		
4/6/2020								0.13 (J)	
4/7/2020	0.27 (J)	<0.1		<0.1	<0.1		<0.1		<0.1
4/8/2020			0.55			<0.1			
8/17/2020	0.19								
8/18/2020		<0.1	0.51	<0.1	<0.1	<0.1			<0.1
8/19/2020							0.17	0.21	
9/28/2020								0.069 (J)	
9/29/2020	0.16								<0.1
9/30/2020		<0.1	0.15	<0.1	<0.1	<0.1			
10/1/2020							<0.1		

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 4/9/2021 11:08 AM View: Appendix III
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-12	GWC-16	GWC-17	GWC-15	GWC-21	GWC-20	GWB-4R	GWA-7 (bg)	GWC-14
3/10/2021	0.14						<0.1		
3/11/2021			0.42					<0.1	
3/12/2021				<0.1		<0.1			
3/15/2021									
3/16/2021		<0.1			<0.1				<0.1

Prediction Limit

Constituent: pH (SU) Analysis Run 4/9/2021 11:08 AM View: Appendix III
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-14	GWB-6R	GWC-1	GWC-11	GWC-12	GWC-13	GWC-15	GWB-5R	GWC-16
7/16/2013	4.62	5.25	5.38	5.2	4.17	4.95	5.96	5.95	4.92
10/11/2014	4.58								5.17
10/24/2016									
10/25/2016	4.79		5.51				6.46		5.58
10/26/2016		5.21		5.08	4.04	4.95		5.27	
10/27/2016									
1/3/2017								5.09	
1/4/2017			5.46	5.06	4.01				5.51
1/5/2017	4.73	5.2				4.97	6.25		
1/6/2017									
4/3/2017							6.25		
4/4/2017	4.68		5.43						
4/5/2017					4	4.81			5.51
4/6/2017		5.17		4.97				5.22	
7/10/2017					3.89				
7/11/2017	4.72			5.26			6.5		
7/12/2017		5.24	5.46			4.83		5.29	5.84
7/13/2017									
10/2/2017	5.13						6.83		
10/3/2017		5.36	5.65	5.07				5.08	5.55
10/4/2017					4.06	4.71			
1/9/2018	5.59	5.4					6.57		
1/10/2018			5.67			5.17		5.83	5.99
1/11/2018				5.18	3.96				
7/9/2018	5.11								
7/10/2018		5.31	5.71				6.42	6.42	5.5
7/11/2018				4.82	3.95	4.49			
1/16/2019	6.82	5.99	5.59			6.45 (o)		6.66	
1/17/2019				4.91	3.89		8.44 (o)		7.13
1/18/2019									
1/21/2019									
3/25/2019									
3/26/2019	5.74	5.94	5.77			4.96	6.65	5.1	5.57
3/27/2019				5.18	4.11				
7/30/2019									
8/26/2019									
8/27/2019	5.58	5.67	5.84	5.17	4.02	4.9	6.57		
8/28/2019								5.95	5.57
10/7/2019									
10/8/2019	5.68			4.93		4.81	6.65		5.54
10/9/2019		5.66	5.82		4.25			6.11	
4/6/2020									
4/7/2020	6.2	5.86	5.3	5.05	4.1		6.83	5.45	5.94
4/8/2020						4.81			
8/17/2020					3.94	4.65			
8/18/2020	5.56			4.41			6.39		5.52
8/19/2020		5.21	5.73					5.14 (D)	
9/28/2020			5.79			4.76			
9/29/2020	5.69			4.77	3.95				
9/30/2020		5.39					6.71	4.99	5.47
10/1/2020									
3/10/2021		5.69	5.42	4.97	4.08			4.73	

Prediction Limit

Constituent: pH (SU) Analysis Run 4/9/2021 11:08 AM View: Appendix III
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-4R	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWA-8 (bg)	GWA-7 (bg)
7/16/2013	6.22	4.55	4.52	6.1	5.71	4.91	5.05		
10/11/2014								4.42	
10/24/2016								4.36	
10/25/2016				6.06	5.41				6.17
10/26/2016	6.06	4.45	4.48			4.6			
10/27/2016							4.65		
1/3/2017								4.28	
1/4/2017				6.05	5.6	4.63			
1/5/2017		4.45	4.85						
1/6/2017	6.02						4.56		6.16
4/3/2017								4.29	
4/4/2017	6.08		4.58	6.03	5.94				
4/5/2017		4.33							
4/6/2017						4.79	4.5		6.26
7/10/2017									
7/11/2017				5.96		4.73		4.35	
7/12/2017	5.93						4.56		
7/13/2017		4.11	4.74		5.6				5.99
10/2/2017				5.88				4.32	
10/3/2017			4.57		5.18				
10/4/2017	5.77	4.09				4.74	4.72		6.16
1/9/2018					6.14			4.44	6.43
1/10/2018			5.31	6.21					
1/11/2018	5.98	4.4				5.22	4.34		
7/9/2018				6.24				4.4	
7/10/2018			4.58		5.7				
7/11/2018	6.01	4.07				4.68	4.68		6.1
1/16/2019	5.83	4.05						6.16 (o)	6.05
1/17/2019					7.39				
1/18/2019						6.98 (o)	6.87 (o)		
1/21/2019			5.05	7.73 (o)					
3/25/2019	5.74			6.28				4.4	6.06
3/26/2019		4.62			6.08				
3/27/2019						4.77	4.38		
7/30/2019			4.74						
8/26/2019								4.26	5.91
8/27/2019	5.7		4.77			4.89			
8/28/2019		4.62		6.34	6.05		4.68		
10/7/2019								4.24	
10/8/2019					6.09				5.74
10/9/2019	5.79	4.66	4.79	6.5		4.68	4.62		
4/6/2020								4.52	6.02
4/7/2020	5.74				6	4.8			
4/8/2020		4.71	4.66	6.31			4.73		
8/17/2020								4.23	
8/18/2020		4.31	4.6	5.89	5.82	4.52			
8/19/2020	5.7						4.58		5.81 (D)
9/28/2020								4.41	5.86
9/29/2020			4.6						
9/30/2020		4.08		6.04	5.82	4.63			
10/1/2020	5.75						4.42		
3/10/2021	5.23					4.82	4.55		

Prediction Limit

Constituent: pH (SU) Analysis Run 4/9/2021 11:08 AM View: Appendix III
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-4R	GWC-17	GWC-2	GWC-20	GWC-21	GWC-22	GWC-9	GWA-8 (bg)	GWA-7 (bg)
3/11/2021		5.2							5.85
3/12/2021				5.86				4.54	
3/15/2021			4.56						
3/16/2021					5.74				

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 4/9/2021 11:08 AM View: Appendix III
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-22	GWA-7 (bg)	GWB-4R	GWC-17	GWC-21	GWC-16	GWC-20	GWC-15	GWC-14
8/30/2016									
8/31/2016	700								
9/1/2016		73	210	310	36	430	180	120	730
10/24/2016									
10/25/2016		26			16	360	79	100	420
10/26/2016	850		230	280					
10/27/2016									
1/3/2017									
1/4/2017	680				45	360	170		
1/5/2017				310				140	430
1/6/2017		23	220						
4/3/2017								150	
4/4/2017			230		46		300		600
4/5/2017				460		440			
4/6/2017	220	25							
7/10/2017									
7/11/2017	210						400	110	400
7/12/2017			210			490			
7/13/2017		65		490	33				
10/2/2017							390	56	470
10/3/2017					34	780			
10/4/2017	730	13	290	1100					
1/9/2018		45			29			84	440
1/10/2018						470	99		
1/11/2018	180		210	810					
7/9/2018							99.2		369
7/10/2018					33.2	787		43	
7/11/2018	381	37.7	177	902					
1/16/2019		24.5	244	422					291
1/17/2019					24.1	780		45.2	
1/18/2019	107								
1/21/2019							35.5		
3/25/2019		14.7	245				95.6		
3/26/2019				439	83.9	87.9		54	192
3/27/2019	103								
7/30/2019									
10/7/2019									
10/8/2019		32.8			85.6	872		45.8	428
10/9/2019	80.2		38.5	346			58.5		
4/6/2020		20.3							
4/7/2020	333		221		33.2	844		26.9	456
4/8/2020				239			428		
9/28/2020		20							
9/29/2020									93.5
9/30/2020	65.5			193	306	736	956	18.5	
10/1/2020			178						
3/10/2021	101		160						
3/11/2021		12		244					
3/12/2021							933	21.1	
3/15/2021									
3/16/2021					343	821			92

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/9/2021 11:08 AM View: Appendix III
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-12	GWA-7 (bg)	GWC-15	GWC-17	GWC-20	GWC-21	GWC-16	GWB-4R	GWC-14
8/30/2016									
8/31/2016	1560								
9/1/2016		3660	539	1270	470	184	878	1080	1170
10/24/2016									
10/25/2016		3560	449		289	<10	585		633
10/26/2016	1520			1320				1050	
10/27/2016									
1/3/2017									
1/4/2017	1430				639	242	783		
1/5/2017			565	1770					781
1/6/2017		3490						1060	
4/3/2017			632						
4/4/2017					660	187		994	916
4/5/2017	1200			1600			722		
4/6/2017		3170							
7/10/2017	1100								
7/11/2017			569		836				675
7/12/2017							962	1070	
7/13/2017		2280		1940		86			
10/2/2017			559		698				689
10/3/2017						66	1240		
10/4/2017	986	3350		2370				1100	
1/9/2018		2640	520			167			653
1/10/2018					322		935		
1/11/2018	1020			2350				838	
7/9/2018					461				659
7/10/2018			524			180	1040		
7/11/2018	888	2200		2260				799	
1/16/2019		2100		1540				530	656
1/17/2019	765		518 (D)			178	1320		
1/18/2019									
1/21/2019					307				
3/25/2019		2100			449			479	
3/26/2019			541	1220		292	1380		496
3/27/2019	673								
7/30/2019									
10/7/2019									
10/8/2019		1840	526			278	1500		841
10/9/2019	647			1100	434			502	
4/6/2020		1670							
4/7/2020	464		428			106	1500	482	843
4/8/2020				881	986				
9/28/2020		1450							
9/29/2020	440								187
9/30/2020			434	752	1860	634	1140		
10/1/2020								424	
3/10/2021	566							434	
3/11/2021		1220		705					
3/12/2021			353		1730				
3/15/2021									
3/16/2021						454	980		137

FIGURE G.

Appendix III Trend Tests - Prediction Limit Exceedances - Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/9/2021, 1:56 PM

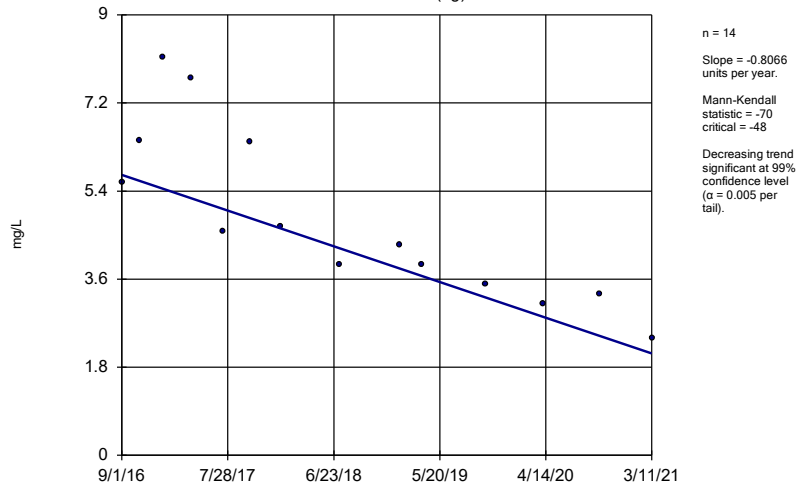
<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Calcium (mg/L)	GWA-7 (bg)	-0.8066	-70	-48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWB-4R	13.98	51	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWB-5R	8.091	52	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-1	8.001	57	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-11	20.6	65	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-12	-14.41	-85	-48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-16	25.25	50	48	Yes	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GWA-7 (bg)	-23.17	-50	-48	Yes	14	0	n/a	n/a	0.01	NP
pH (SU)	GWA-7 (bg)	-0.09169	-64	-53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWB-6R	51.25	57	48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-11	111.8	57	48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-12	-175	-73	-48	Yes	14	0	n/a	n/a	0.01	NP

Appendix III Trend Tests - Prediction Limit Exceedances - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/9/2021, 1:56 PM

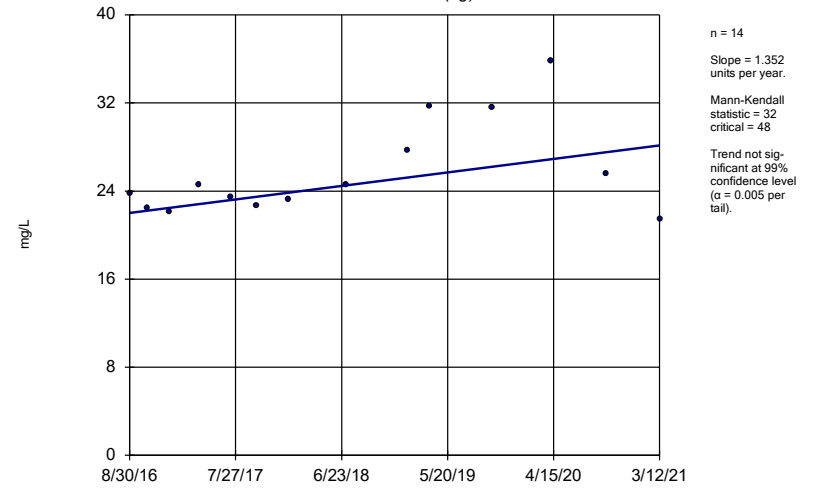
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Calcium (mg/L)	GWA-7 (bg)	-0.8066	-70	-48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWA-8 (bg)	1.352	32	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWB-4R	13.98	51	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWB-5R	8.091	52	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWB-6R	1.869	42	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-1	8.001	57	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-11	20.6	65	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-12	-14.41	-85	-48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-15	-1.606	-13	-48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-16	25.25	50	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-17	-7.019	-29	-48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-20	28.6	33	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-21	14.18	38	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GWC-9	-0.5668	-32	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GWA-7 (bg)	-23.17	-50	-48	Yes	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GWA-8 (bg)	0.2573	28	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GWC-17	-118.7	-38	-48	No	14	0	n/a	n/a	0.01	NP
pH (SU)	GWA-7 (bg)	-0.09169	-64	-53	Yes	15	0	n/a	n/a	0.01	NP
pH (SU)	GWA-8 (bg)	0.01272	8	53	No	15	0	n/a	n/a	0.01	NP
pH (SU)	GWC-12	-0.005903	-6	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWA-7 (bg)	-5.236	-41	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWA-8 (bg)	-7.472	-33	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWB-5R	35.28	37	48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWB-6R	51.25	57	48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-11	111.8	57	48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-12	-175	-73	-48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-16	97.68	45	48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-17	-22.13	-18	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-20	42.47	15	48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GWC-21	16.98	32	48	No	14	0	n/a	n/a	0.01	NP

Sen's Slope Estimator
GWA-7 (bg)



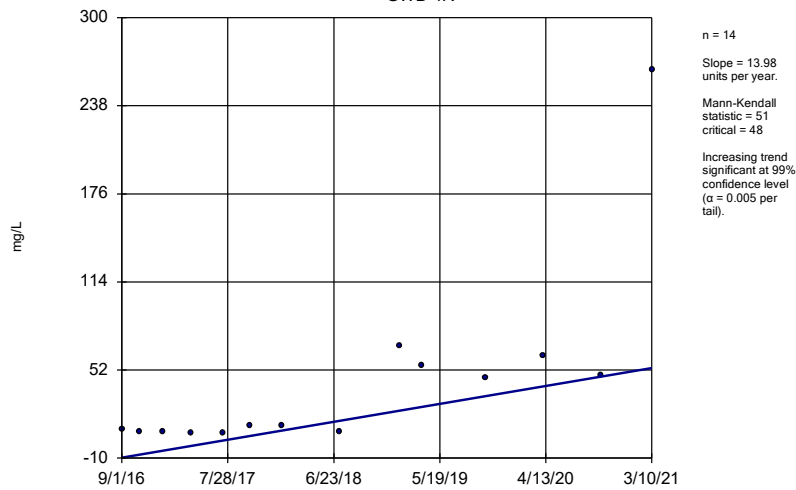
Constituent: Calcium Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWA-8 (bg)



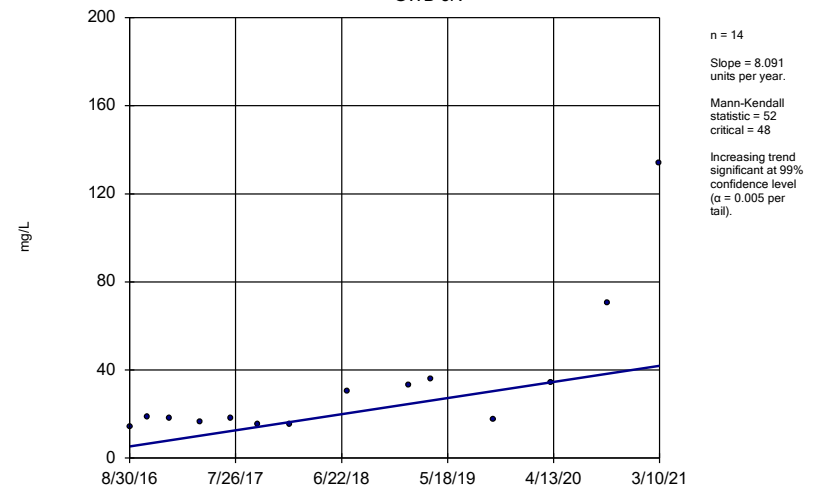
Constituent: Calcium Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWB-4R



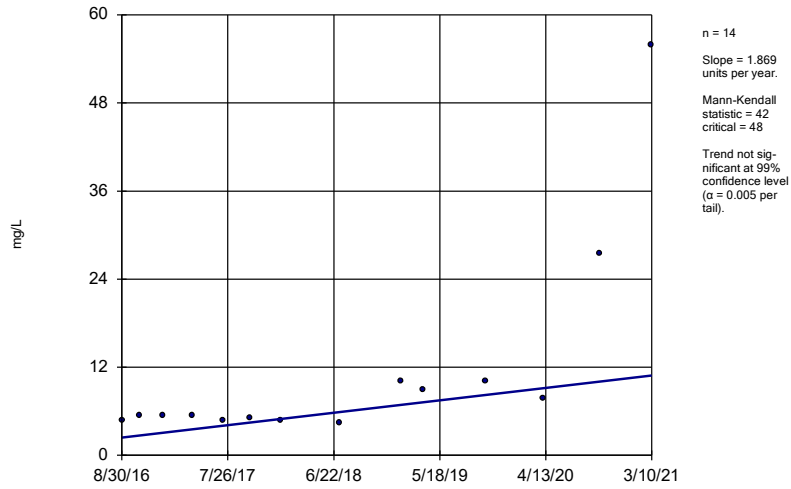
Constituent: Calcium Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWB-5R

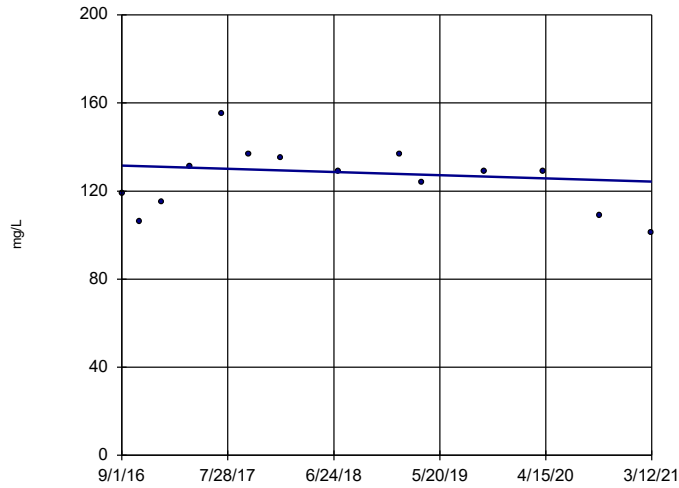


Constituent: Calcium Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWB-6R



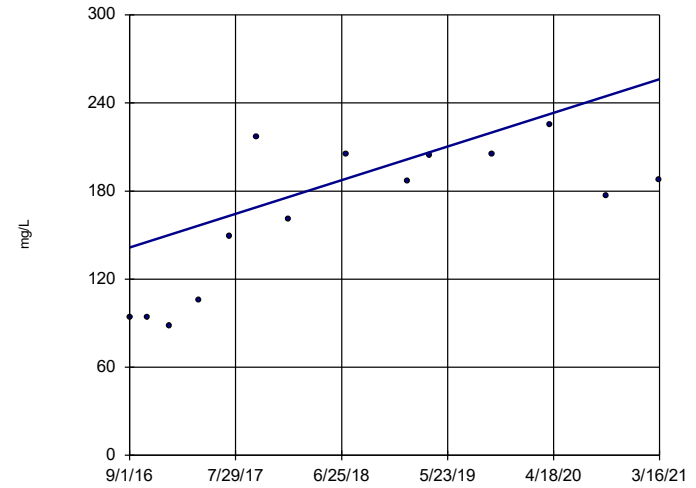
Sen's Slope Estimator
GWC-15



n = 14
Slope = -1.606
units per year.
Mann-Kendall
statistic = -13
critical = -48
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Calcium Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

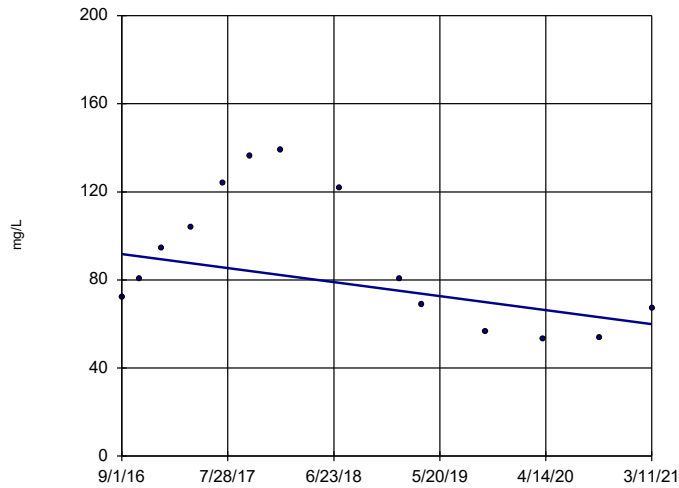
Sen's Slope Estimator
GWC-16



n = 14
Slope = 25.25
units per year.
Mann-Kendall
statistic = 50
critical = 48
Increasing trend
significant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Calcium Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

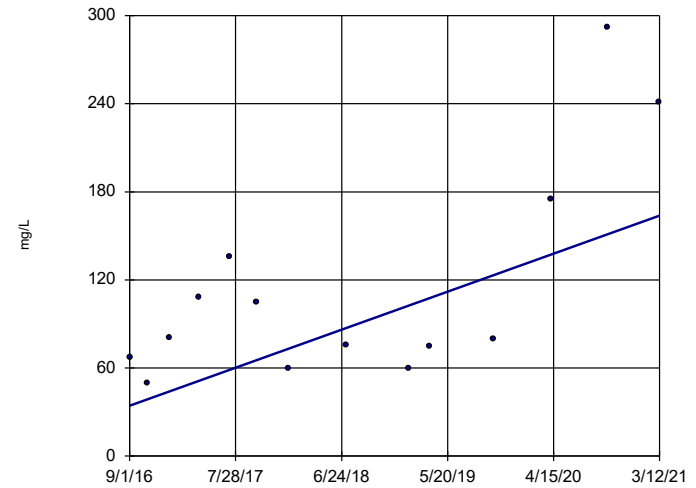
Sen's Slope Estimator
GWC-17



n = 14
Slope = -7.019
units per year.
Mann-Kendall
statistic = -29
critical = -48
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Calcium Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

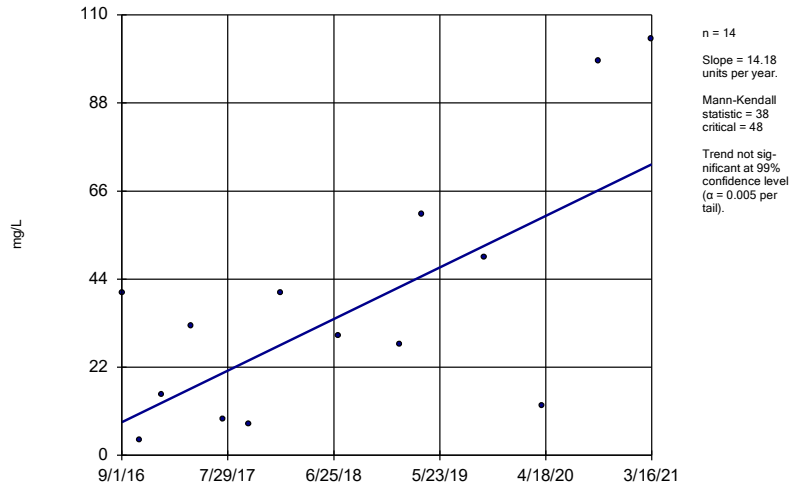
Sen's Slope Estimator
GWC-20



n = 14
Slope = 28.6
units per year.
Mann-Kendall
statistic = 33
critical = 48
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

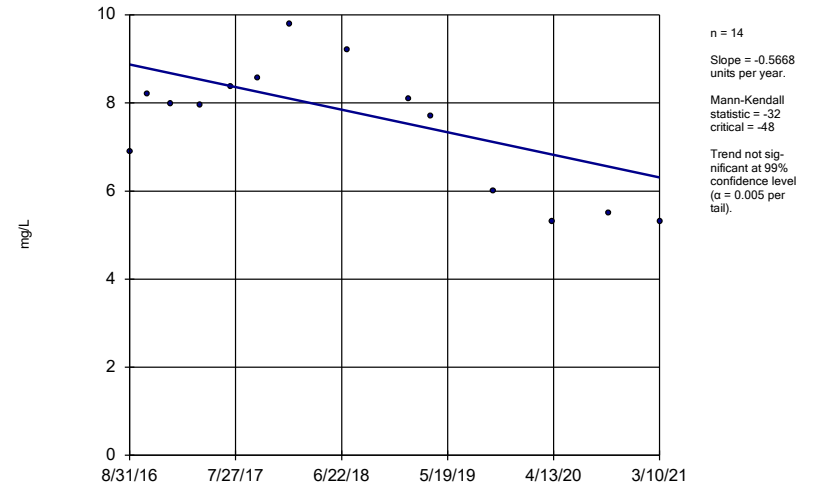
Constituent: Calcium Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWC-21



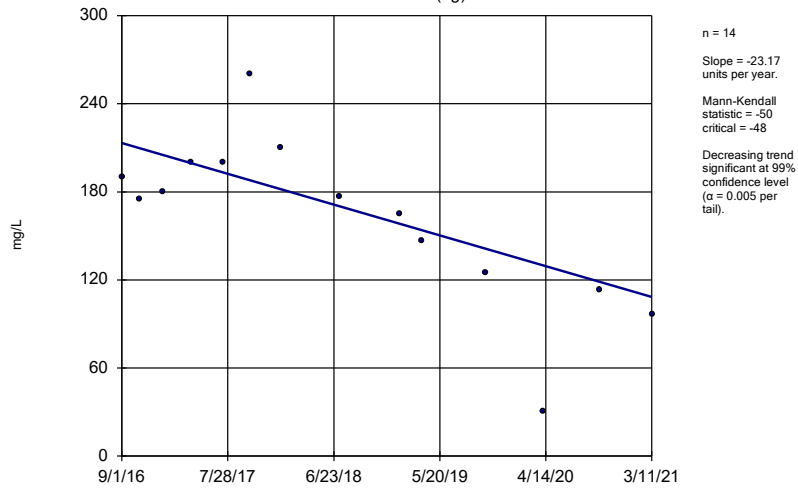
Constituent: Calcium Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWC-9



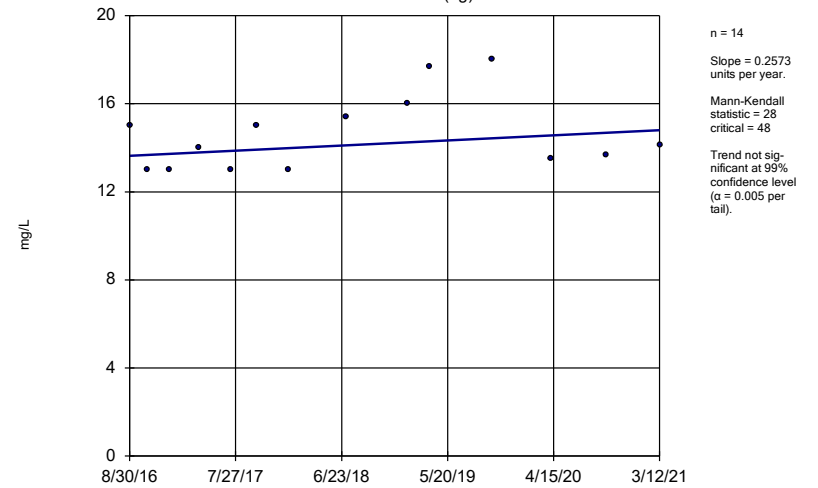
Constituent: Calcium Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWA-7 (bg)



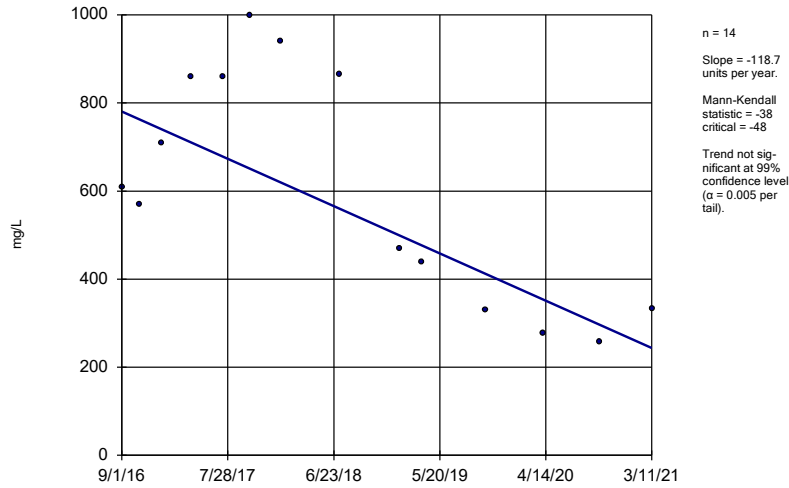
Constituent: Chloride Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWA-8 (bg)



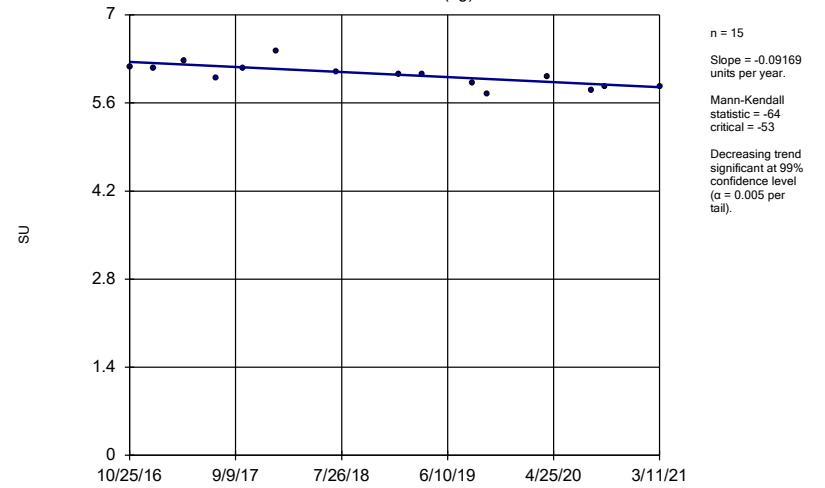
Constituent: Chloride Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWC-17



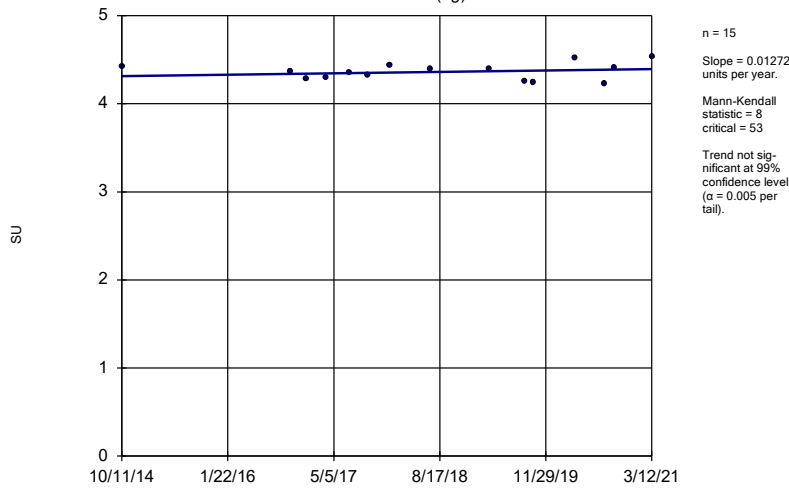
Constituent: Chloride Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWA-7 (bg)



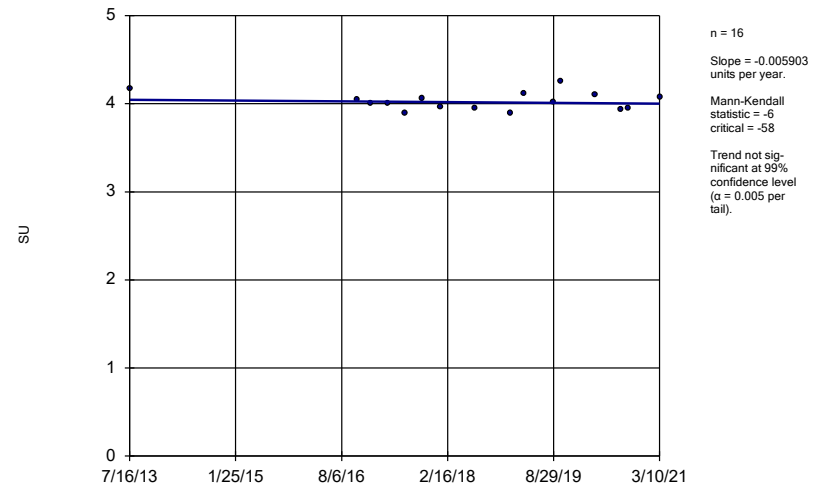
Constituent: pH Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWA-8 (bg)



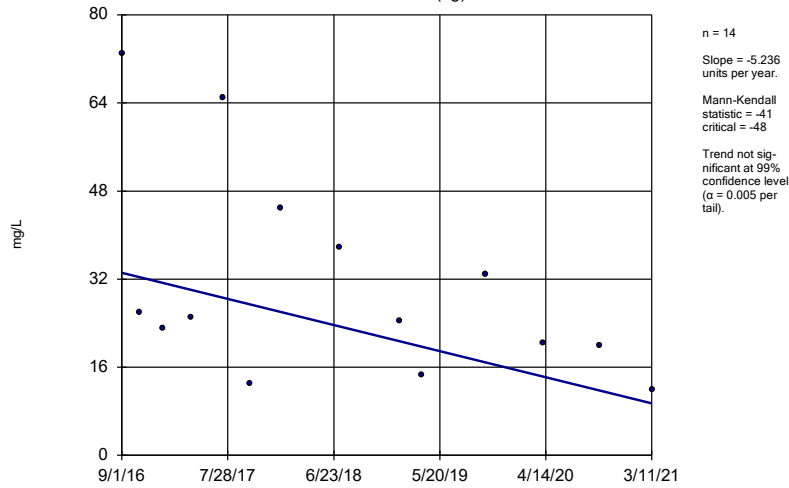
Constituent: pH Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWC-12



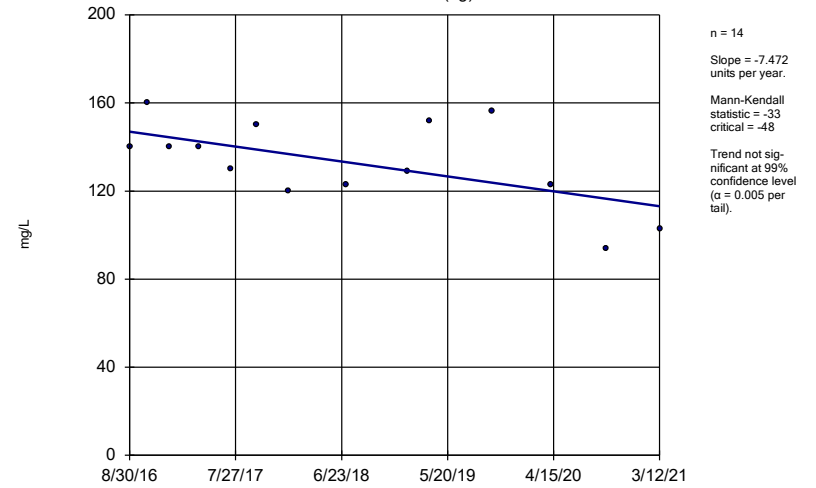
Constituent: pH Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWA-7 (bg)



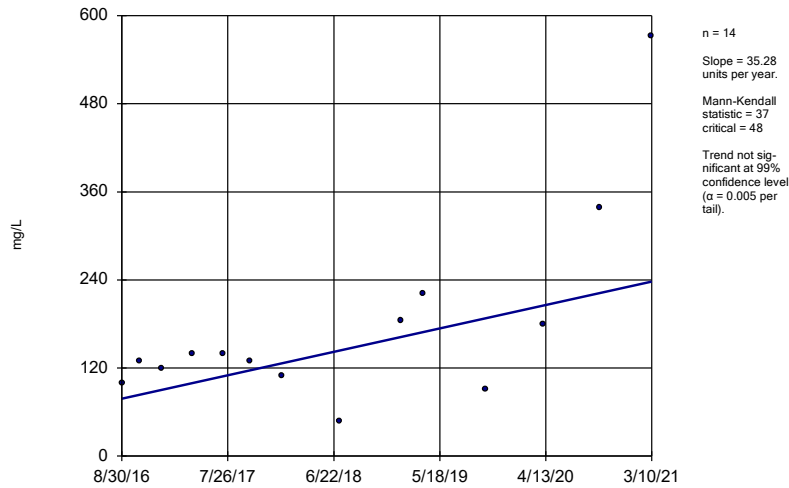
Constituent: Sulfate Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWA-8 (bg)



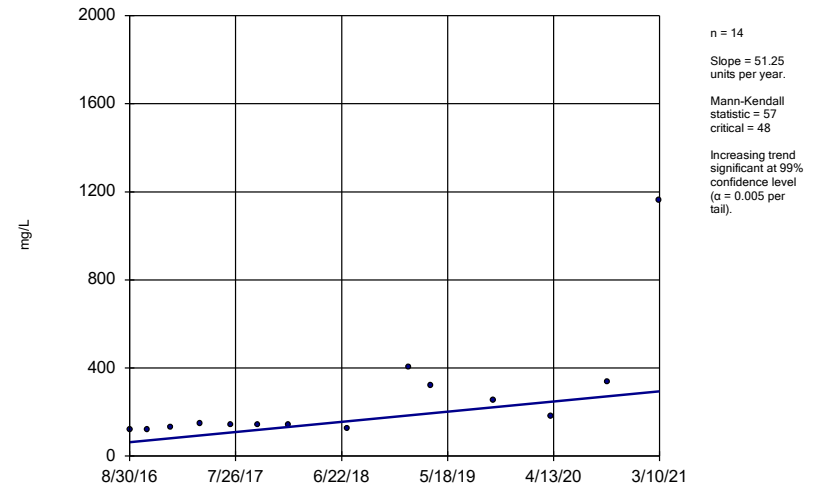
Constituent: Sulfate Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWB-5R



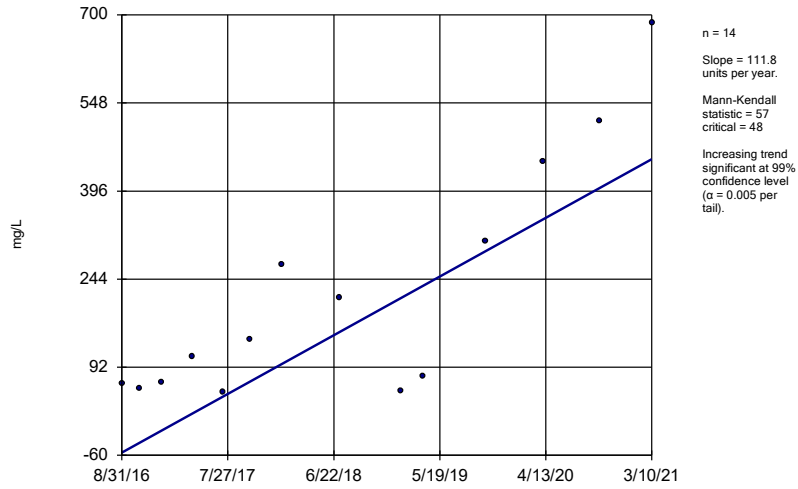
Constituent: Sulfate Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWB-6R



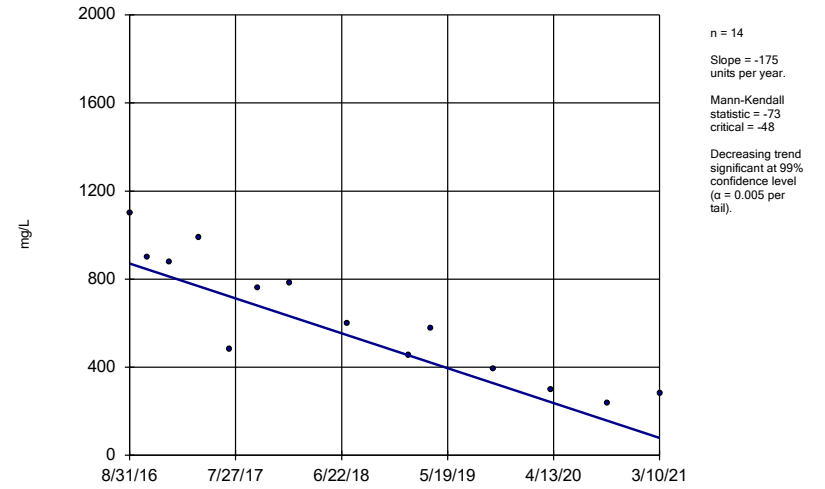
Constituent: Sulfate Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWC-11



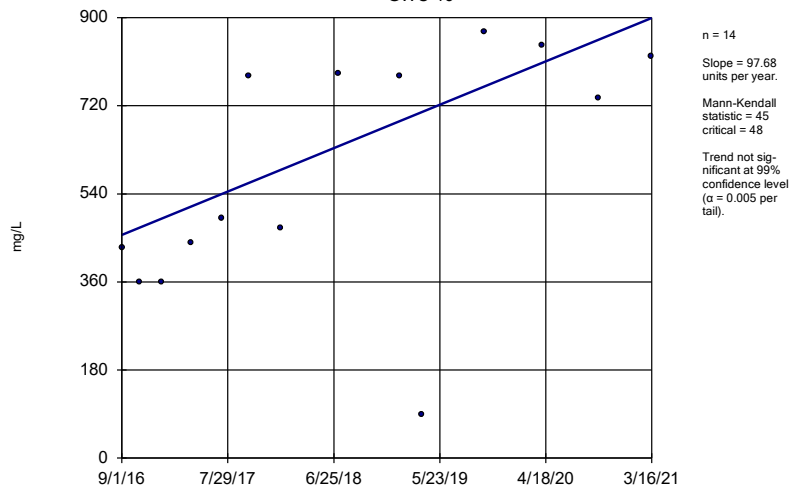
Constituent: Sulfate Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWC-12



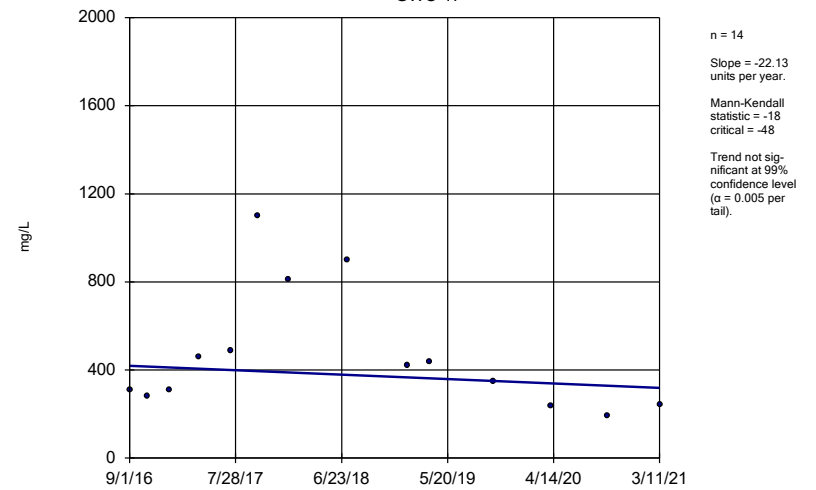
Constituent: Sulfate Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWC-16



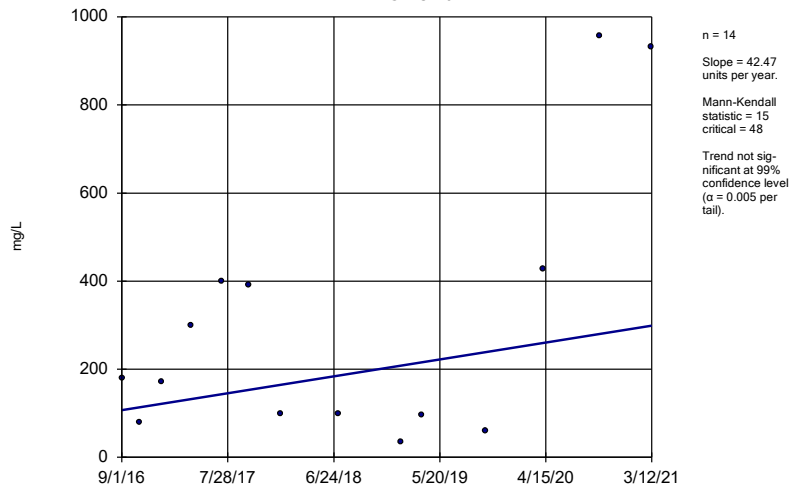
Constituent: Sulfate Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator
GWC-17



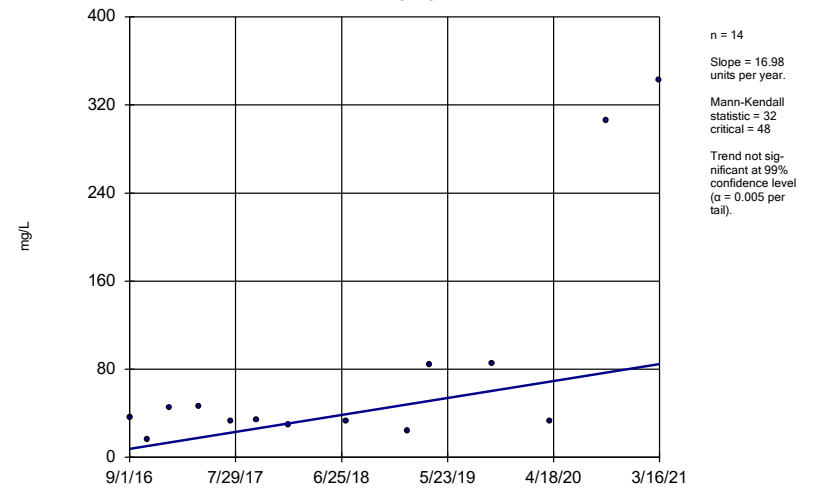
Constituent: Sulfate Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWC-20



Constituent: Sulfate Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sen's Slope Estimator GWC-21



Constituent: Sulfate Analysis Run 4/9/2021 1:55 PM View: Appendix III Trend Tests
Grumman Road Landfill Client: Southern Company Data: Grumman Road

FIGURE H.

Tolerance Limits Summary Table

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/19/2021, 1:57 PM

<u>Constituent</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	0.003	n/a	n/a	121	n/a	n/a	95.04	n/a	n/a	0.002016	NP Inter
Arsenic (mg/L)	0.0287	n/a	n/a	121	n/a	n/a	76.86	n/a	n/a	0.002016	NP Inter
Barium (mg/L)	0.22	n/a	n/a	119	n/a	n/a	0	n/a	n/a	0.002234	NP Inter
Beryllium (mg/L)	0.003	n/a	n/a	41	n/a	n/a	51.22	n/a	n/a	0.1221	NP Inter
Cadmium (mg/L)	0.0007	n/a	n/a	39	n/a	n/a	94.87	n/a	n/a	0.1353	NP Inter
Chromium (mg/L)	0.068	n/a	n/a	120	n/a	n/a	62.5	n/a	n/a	0.002122	NP Inter
Cobalt (mg/L)	0.0102	n/a	n/a	40	n/a	n/a	50	n/a	n/a	0.1285	NP Inter
Combined Radium 226 + 228 (pCi/L)	33.8	n/a	n/a	28	n/a	n/a	0	n/a	n/a	0.2378	NP Inter
Fluoride (mg/L)	0.49	n/a	n/a	32	n/a	n/a	25	n/a	n/a	0.1937	NP Inter
Lead (mg/L)	0.013	n/a	n/a	117	n/a	n/a	75.21	n/a	n/a	0.002475	NP Inter
Lithium (mg/L)	0.03	n/a	n/a	28	n/a	n/a	75	n/a	n/a	0.2378	NP Inter
Mercury (mg/L)	0.0002	n/a	n/a	22	n/a	n/a	86.36	n/a	n/a	0.3235	NP Inter
Molybdenum (mg/L)	0.01	n/a	n/a	28	n/a	n/a	89.29	n/a	n/a	0.2378	NP Inter
Selenium (mg/L)	0.0438	n/a	n/a	121	n/a	n/a	83.47	n/a	n/a	0.002016	NP Inter
Thallium (mg/L)	0.001	n/a	n/a	60	n/a	n/a	93.33	n/a	n/a	0.04607	NP Inter
Vanadium (mg/L)	0.425	n/a	n/a	115	n/a	n/a	63.48	n/a	n/a	0.002743	NP Inter
Zinc (mg/L)	0.16	n/a	n/a	113	n/a	n/a	25.66	n/a	n/a	0.003039	NP Inter

FIGURE I.

GRUMMAN ROAD LANDFILL GWPS			
Constituent Name	MCL	Background Limit	GWPS
Antimony, Total (mg/L)	0.006	0.003	0.006
Arsenic, Total (mg/L)	0.01	0.029	0.029
Barium, Total (mg/L)	2	0.22	2
Beryllium, Total (mg/L)	0.004	0.003	0.004
Cadmium, Total (mg/L)	0.005	0.0007	0.005
Chromium, Total (mg/L)	0.1	0.068	0.1
Cobalt, Total (mg/L)	n/a	0.01	0.01
Combined Radium, Total (pCi/L)	5	33.8	33.8
Fluoride, Total (mg/L)	4	0.49	4
Lead, Total (mg/L)	n/a	0.013	0.013
Lithium, Total (mg/L)	n/a	0.03	0.03
Mercury, Total (mg/L)	0.002	0.0002	0.002
Molybdenum, Total (mg/L)	n/a	0.01	0.01
Selenium, Total (mg/L)	0.05	0.044	0.05
Thallium, Total (mg/L)	0.002	0.001	0.002
Vanadium, Total (mg/L)	n/a	0.43	0.43
Zinc, Total (mg/L)	n/a	0.16	0.16

**Highlighted cells indicated Background is higher than MCLs*

**MCL = Maximum Contaminant Level*

**GWPS = Groundwater Protection Standard*

FIGURE J.

Confidence Intervals - Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/15/2021, 11:10 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	GWC-15	0.1488	0.06159	0.029	Yes18	0.1126	0.07735	0	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	GWC-16	0.088	0.0466	0.029	Yes19	0.0701	0.01728	0	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-20	0.3614	0.2799	0.029	Yes18	0.3206	0.06734	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWB-4R	0.13	0.0237	0.01	Yes14	0.06876	0.05443	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	GWC-1	0.1643	0.06968	0.01	Yes14	0.117	0.06681	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-15	0.1132	0.09144	0.01	Yes14	0.1023	0.01534	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-16	0.2131	0.1171	0.01	Yes14	0.1651	0.06775	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-20	0.3038	0.109	0.01	Yes14	0.2064	0.1375	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-21	0.06218	0.01951	0.01	Yes14	0.04084	0.03012	0	None	No	0.01	Param.

Confidence Intervals - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/15/2021, 11:10 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	GWB-4R	0.003	0.0003	0.006	No 18	0.00285	0.0006364	94.44	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWB-5R	0.003	0.00054	0.006	No 18	0.002713	0.0008353	88.89	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWB-6R	0.003	0.00059	0.006	No 18	0.002716	0.0008295	88.89	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-1	0.003	0.00069	0.006	No 18	0.002592	0.0009415	83.33	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-11	0.003	0.00051	0.006	No 18	0.00167	0.00123	44.44	None	No	0.01	NP (normality)
Antimony (mg/L)	GWC-12	0.003	0.0003	0.006	No 18	0.00285	0.0006364	94.44	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-13	0.003	0.0006	0.006	No 18	0.002867	0.0005657	94.44	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-15	0.003	0.0018	0.006	No 18	0.002933	0.0002828	94.44	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-17	0.003	0.00039	0.006	No 18	0.002855	0.0006152	94.44	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-2	0.003	0.0016	0.006	No 18	0.002828	0.0005039	88.89	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-20	0.003	0.0019	0.006	No 18	0.002808	0.0005976	88.89	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-21	0.003	0.00033	0.006	No 18	0.002852	0.0006293	94.44	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-22	0.003	0.0016	0.006	No 18	0.002452	0.000993	72.22	None	No	0.01	NP (NDs)
Antimony (mg/L)	GWC-9	0.003	0.0016	0.006	No 18	0.002774	0.0006932	88.89	None	No	0.01	NP (NDs)
Arsenic (mg/L)	GWB-4R	0.003088	0.001819	0.029	No 18	0.002519	0.001115	11.11	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	GWB-5R	0.005	0.001	0.029	No 18	0.002378	0.001764	22.22	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWB-6R	0.005	0.0014	0.029	No 18	0.003079	0.001714	27.78	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-1	0.005206	0.002059	0.029	No 17	0.004653	0.005994	0	None	ln(x)	0.01	Param.
Arsenic (mg/L)	GWC-12	0.005	0.0009	0.029	No 18	0.004294	0.001624	83.33	None	No	0.01	NP (NDs)
Arsenic (mg/L)	GWC-13	0.005	0.0006	0.029	No 18	0.00451	0.001426	88.89	None	No	0.01	NP (NDs)
Arsenic (mg/L)	GWC-14	0.003	0.0018	0.029	No 19	0.002502	0.00118	15.79	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-15	0.1488	0.06159	0.029	Yes18	0.1126	0.07735	0	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	GWC-16	0.088	0.0466	0.029	Yes19	0.0701	0.01728	0	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-17	0.005	0.0011	0.029	No 18	0.002496	0.001841	33.33	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-2	0.005	0.00094	0.029	No 18	0.004274	0.001673	83.33	None	No	0.01	NP (NDs)
Arsenic (mg/L)	GWC-20	0.3614	0.2799	0.029	Yes18	0.3206	0.06734	0	None	No	0.01	Param.
Arsenic (mg/L)	GWC-21	0.004635	0.002674	0.029	No 18	0.004422	0.00187	33.33	Kaplan-Meier	sqrt(x)	0.01	Param.
Arsenic (mg/L)	GWC-22	0.005	0.0006	0.029	No 18	0.003087	0.002034	50	None	No	0.01	NP (normality)
Arsenic (mg/L)	GWC-9	0.005	0.00084	0.029	No 18	0.004769	0.0009805	94.44	None	No	0.01	NP (NDs)
Barium (mg/L)	GWB-4R	0.0924	0.07768	2	No 18	0.08538	0.01282	0	None	x^(1/3)	0.01	Param.
Barium (mg/L)	GWB-5R	0.153	0.09438	2	No 18	0.1276	0.05539	0	None	x^(1/3)	0.01	Param.
Barium (mg/L)	GWB-6R	0.107	0.013	2	No 18	0.07144	0.04271	0	None	No	0.01	NP (normality)
Barium (mg/L)	GWC-1	0.05679	0.05042	2	No 18	0.05361	0.005262	0	None	No	0.01	Param.
Barium (mg/L)	GWC-11	0.1172	0.06578	2	No 18	0.09149	0.0425	0	None	No	0.01	Param.
Barium (mg/L)	GWC-12	0.0191	0.017	2	No 18	0.01894	0.004275	0	None	No	0.01	NP (normality)
Barium (mg/L)	GWC-13	0.02612	0.02055	2	No 18	0.02334	0.004605	0	None	No	0.01	Param.
Barium (mg/L)	GWC-14	0.038	0.025	2	No 19	0.03616	0.01812	0	None	No	0.01	NP (normality)
Barium (mg/L)	GWC-15	0.04725	0.03843	2	No 18	0.04284	0.007282	0	None	No	0.01	Param.
Barium (mg/L)	GWC-16	0.1318	0.06155	2	No 17	0.1034	0.06904	0	None	x^(1/3)	0.01	Param.
Barium (mg/L)	GWC-17	0.1103	0.04704	2	No 18	0.08393	0.05792	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	GWC-2	0.054	0.049	2	No 17	0.05347	0.007723	0	None	No	0.01	NP (normality)
Barium (mg/L)	GWC-20	0.19	0.078	2	No 18	0.1487	0.1022	0	None	No	0.01	NP (normality)
Barium (mg/L)	GWC-21	0.099	0.05137	2	No 18	0.08227	0.04914	0	None	ln(x)	0.01	Param.
Barium (mg/L)	GWC-22	0.09364	0.0616	2	No 18	0.07894	0.02836	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	GWC-9	0.259	0.187	2	No 18	0.223	0.05951	0	None	No	0.01	Param.
Beryllium (mg/L)	GWB-4R	0.003	0.0001	0.004	No 14	0.001779	0.001466	57.14	None	No	0.01	NP (NDs)
Beryllium (mg/L)	GWB-5R	0.003	0.000082	0.004	No 14	0.0007788	0.001207	21.43	None	No	0.01	NP (normality)
Beryllium (mg/L)	GWB-6R	0.003	0.00005	0.004	No 14	0.002578	0.001072	85.71	None	No	0.01	NP (NDs)
Beryllium (mg/L)	GWC-11	0.003	0.000047	0.004	No 14	0.002789	0.0007892	92.86	None	No	0.01	NP (NDs)
Beryllium (mg/L)	GWC-12	0.0008176	0.0005067	0.004	No 14	0.00067	0.0002317	0	None	sqrt(x)	0.01	Param.
Beryllium (mg/L)	GWC-13	0.003	0.000058	0.004	No 14	0.00279	0.0007863	92.86	None	No	0.01	NP (NDs)
Beryllium (mg/L)	GWC-14	0.003	0.0001	0.004	No 14	0.002375	0.001242	78.57	None	No	0.01	NP (NDs)
Beryllium (mg/L)	GWC-16	0.003	0.00008	0.004	No 14	0.001127	0.001449	35.71	None	No	0.01	NP (normality)
Beryllium (mg/L)	GWC-17	0.002704	0.001532	0.004	No 14	0.0022	0.0009373	0	None	ln(x)	0.01	Param.
Beryllium (mg/L)	GWC-2	0.003	0.000075	0.004	No 15	0.001845	0.001465	60	None	No	0.01	NP (NDs)

Confidence Intervals - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/15/2021, 11:10 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Beryllium (mg/L)	GWC-22	0.003	0.00009	0.004	No 14	0.00156	0.001495	50	None	No	0.01	NP (normality)
Beryllium (mg/L)	GWC-9	0.0003	0.00019	0.004	No 14	0.0002464	0.0000494	0	None	No	0.01	NP (normality)
Cadmium (mg/L)	GWB-4R	0.0005	0.0002	0.005	No 14	0.0003986	0.0001692	71.43	None	No	0.01	NP (NDs)
Cadmium (mg/L)	GWC-1	0.0005	0.0001	0.005	No 14	0.0004407	0.0001508	85.71	None	No	0.01	NP (NDs)
Cadmium (mg/L)	GWC-11	0.0005998	0.0002616	0.005	No 14	0.0004307	0.0002387	7.143	None	No	0.01	Param.
Cadmium (mg/L)	GWC-14	0.0005	0.00017	0.005	No 14	0.000335	0.0001737	50	None	No	0.01	NP (normality)
Cadmium (mg/L)	GWC-20	0.0005	0.00018	0.005	No 14	0.0004771	0.00008552	92.86	None	No	0.01	NP (NDs)
Cadmium (mg/L)	GWC-22	0.0002218	0.00009636	0.005	No 14	0.0002893	0.0001774	28.57	Kaplan-Meier	ln(x)	0.01	Param.
Chromium (mg/L)	GWB-4R	0.0106	0.0022	0.1	No 18	0.006778	0.00451	0	None	No	0.01	NP (normality)
Chromium (mg/L)	GWB-5R	0.01	0.0011	0.1	No 18	0.008311	0.01642	22.22	None	No	0.01	NP (normality)
Chromium (mg/L)	GWB-6R	0.006307	0.002039	0.1	No 18	0.005461	0.005371	0	None	ln(x)	0.01	Param.
Chromium (mg/L)	GWC-1	0.0024	0.0016	0.1	No 18	0.002628	0.002124	5.556	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-11	0.01	0.0007	0.1	No 18	0.004443	0.004544	33.33	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-12	0.0028	0.00085	0.1	No 18	0.002658	0.003408	16.67	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-13	0.01	0.0007	0.1	No 18	0.005459	0.004681	50	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-14	0.01	0.00074	0.1	No 19	0.004245	0.004521	36.84	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-15	0.01	0.0013	0.1	No 18	0.00435	0.004137	33.33	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-16	0.01	0.00098	0.1	No 19	0.004783	0.004574	36.84	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-17	0.01	0.0009	0.1	No 18	0.003783	0.004104	27.78	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-2	0.01	0.00069	0.1	No 18	0.005896	0.004723	55.56	None	No	0.01	NP (NDs)
Chromium (mg/L)	GWC-20	0.01	0.0009	0.1	No 18	0.004511	0.004509	38.89	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-21	0.01	0.00065	0.1	No 18	0.004847	0.004745	38.89	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-22	0.01	0.00057	0.1	No 18	0.005299	0.004838	50	None	No	0.01	NP (normality)
Chromium (mg/L)	GWC-9	0.01	0.001	0.1	No 18	0.004194	0.00424	33.33	None	No	0.01	NP (normality)
Cobalt (mg/L)	GWB-4R	0.0015	0.00072	0.01	No 14	0.001322	0.001153	7.143	None	No	0.01	NP (normality)
Cobalt (mg/L)	GWB-5R	0.0057	0.00056	0.01	No 14	0.003592	0.001982	50	None	No	0.01	NP (normality)
Cobalt (mg/L)	GWB-6R	0.005	0.00038	0.01	No 14	0.00467	0.001235	92.86	None	No	0.01	NP (NDs)
Cobalt (mg/L)	GWC-11	0.005	0.00055	0.01	No 14	0.003719	0.002104	71.43	None	No	0.01	NP (NDs)
Cobalt (mg/L)	GWC-12	0.001337	0.000813	0.01	No 14	0.001075	0.0003699	0	None	No	0.01	Param.
Cobalt (mg/L)	GWC-14	0.005	0.0003	0.01	No 14	0.004664	0.001256	92.86	None	No	0.01	NP (NDs)
Cobalt (mg/L)	GWC-17	0.007	0.0023	0.01	No 14	0.004514	0.002238	0	None	No	0.01	NP (normality)
Cobalt (mg/L)	GWC-2	0.005	0.00032	0.01	No 15	0.003492	0.002215	66.67	None	No	0.01	NP (NDs)
Cobalt (mg/L)	GWC-22	0.005	0.0007	0.01	No 14	0.003174	0.002192	57.14	None	No	0.01	NP (NDs)
Cobalt (mg/L)	GWC-9	0.0017	0.00099	0.01	No 14	0.001409	0.000386	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GWB-4R	5	2.32	33.8	No 14	3.411	1.219	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GWB-5R	4.048	2.152	33.8	No 14	3.164	1.503	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWB-6R	4.87	2.515	33.8	No 14	3.692	1.663	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-1	2.29	1.589	33.8	No 14	1.939	0.4952	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-11	6.794	3.046	33.8	No 14	4.92	2.645	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-12	2.958	1.807	33.8	No 14	2.383	0.8119	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-13	1.332	0.7764	33.8	No 14	1.054	0.3923	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-14	1.238	0.6261	33.8	No 14	0.932	0.4319	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-15	1.812	1.035	33.8	No 14	1.423	0.5483	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-16	2.47	1.72	33.8	No 14	2.237	0.8871	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GWC-17	4.101	2.772	33.8	No 14	3.436	0.9383	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-2	1.003	0.6389	33.8	No 14	0.821	0.2571	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-20	4.37	1.813	33.8	No 14	3.091	1.805	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-21	2.51	1.195	33.8	No 14	1.853	0.9278	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GWC-22	7.57	3	33.8	No 14	5.45	2.039	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GWC-9	3.31	2.08	33.8	No 14	3.193	1.588	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWB-4R	0.17	0.064	4	No 16	0.1797	0.2829	56.25	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWB-5R	0.11	0.05	4	No 16	0.08956	0.04179	50	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWB-6R	0.15	0.09	4	No 16	0.1206	0.06411	43.75	None	No	0.01	NP (normality)
Fluoride (mg/L)	GWC-1	0.18	0.051	4	No 16	0.1057	0.04186	75	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWC-12	0.7978	0.2642	4	No 16	0.531	0.4101	6.25	None	No	0.01	Param.

Confidence Intervals - All Results

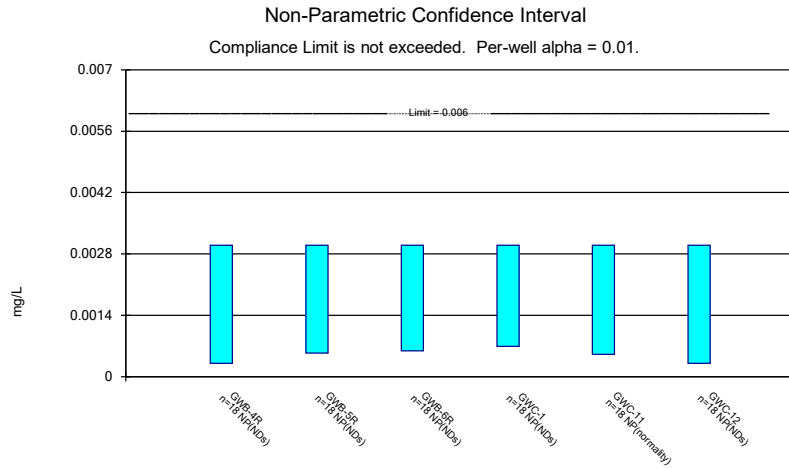
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Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	GWC-13	0.55	0.09	4	No 16	0.1245	0.1141	81.25	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWC-14	0.41	0.1	4	No 16	0.18	0.1318	62.5	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWC-15	0.15	0.06	4	No 16	0.135	0.1032	68.75	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWC-16	0.36	0.1	4	No 16	0.195	0.2186	56.25	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWC-17	1.33	0.5603	4	No 16	0.945	0.5913	6.25	None	No	0.01	Param.
Fluoride (mg/L)	GWC-2	0.17	0.07	4	No 16	0.1277	0.1336	56.25	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWC-20	0.14	0.043	4	No 16	0.09019	0.02979	75	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWC-21	0.1	0.071	4	No 16	0.09819	0.00725	93.75	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWC-22	0.12	0.06	4	No 16	0.09188	0.02562	62.5	None	No	0.01	NP (NDs)
Fluoride (mg/L)	GWC-9	0.2687	0.09779	4	No 16	0.2251	0.2351	6.25	None	ln(x)	0.01	Param.
Lead (mg/L)	GWB-4R	0.006	0.00048	0.013	No 17	0.003352	0.003028	11.76	None	No	0.01	NP (normality)
Lead (mg/L)	GWB-5R	0.0005196	0.00008849	0.013	No 18	0.0007573	0.0006351	33.33	Kaplan-Meier	x^(1/3)	0.01	Param.
Lead (mg/L)	GWB-6R	0.001	0.00014	0.013	No 18	0.000582	0.0004147	38.89	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-1	0.001	0.00012	0.013	No 18	0.0007979	0.0003892	77.78	None	No	0.01	NP (NDs)
Lead (mg/L)	GWC-11	0.00036	0.0002	0.013	No 18	0.000345	0.0002525	11.11	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-12	0.0001814	0.00005146	0.013	No 18	0.0005501	0.0008187	27.78	Kaplan-Meier	ln(x)	0.01	Param.
Lead (mg/L)	GWC-13	0.001	0.00013	0.013	No 18	0.0005878	0.0004423	27.78	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-14	0.001	0.00051	0.013	No 19	0.0008311	0.0003467	78.95	None	No	0.01	NP (NDs)
Lead (mg/L)	GWC-15	0.001	0.00009	0.013	No 18	0.0005292	0.0004394	44.44	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-16	0.001	0.0001	0.013	No 19	0.000456	0.0004291	36.84	None	No	0.01	NP (normality)
Lead (mg/L)	GWC-17	0.001	0.0001	0.013	No 18	0.0006513	0.0004394	55.56	None	No	0.01	NP (NDs)
Lead (mg/L)	GWC-2	0.001	0.0002	0.013	No 18	0.0007158	0.0004172	66.67	None	No	0.01	NP (NDs)
Lead (mg/L)	GWC-20	0.001	0.00018	0.013	No 18	0.0007564	0.0004054	72.22	None	No	0.01	NP (NDs)
Lead (mg/L)	GWC-21	0.001	0.00009	0.013	No 18	0.0006119	0.0004489	55.56	None	No	0.01	NP (NDs)
Lead (mg/L)	GWC-22	0.0007979	0.000319	0.013	No 18	0.0006817	0.0006622	5.556	None	ln(x)	0.01	Param.
Lead (mg/L)	GWC-9	0.001	0.000096	0.013	No 18	0.0005897	0.0004446	50	None	No	0.01	NP (normality)
Lithium (mg/L)	GWB-4R	0.014	0.0041	0.03	No 14	0.008521	0.004407	0	None	No	0.01	NP (normality)
Lithium (mg/L)	GWB-5R	0.03	0.0031	0.03	No 14	0.0169	0.01361	50	None	No	0.01	NP (normality)
Lithium (mg/L)	GWC-12	0.03	0.00091	0.03	No 14	0.01342	0.0149	42.86	None	No	0.01	NP (normality)
Lithium (mg/L)	GWC-17	0.00692	0.004937	0.03	No 14	0.005929	0.0014	0	None	No	0.01	Param.
Lithium (mg/L)	GWC-9	0.002092	0.001816	0.03	No 13	0.001954	0.0001854	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWB-4R	0.13	0.0237	0.01	Yes14	0.06876	0.05443	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	GWB-5R	0.01	0.0012	0.01	No 14	0.009371	0.002352	92.86	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	GWB-6R	0.01	0.0013	0.01	No 14	0.007562	0.004017	71.43	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	GWC-1	0.1643	0.06968	0.01	Yes14	0.117	0.06681	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-11	0.01	0.0018	0.01	No 14	0.008755	0.003171	85.71	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	GWC-13	0.01	0.0056	0.01	No 14	0.009686	0.001176	92.86	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	GWC-14	0.0122	0.003014	0.01	No 14	0.009707	0.01025	0	None	ln(x)	0.01	Param.
Molybdenum (mg/L)	GWC-15	0.1132	0.09144	0.01	Yes14	0.1023	0.01534	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-16	0.2131	0.1171	0.01	Yes14	0.1651	0.06775	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-17	0.01	0.0036	0.01	No 14	0.007059	0.003609	57.14	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	GWC-20	0.3038	0.109	0.01	Yes14	0.2064	0.1375	0	None	No	0.01	Param.
Molybdenum (mg/L)	GWC-21	0.06218	0.01951	0.01	Yes14	0.04084	0.03012	0	None	No	0.01	Param.
Selenium (mg/L)	GWB-4R	0.01	0.0029	0.05	No 18	0.006061	0.003404	38.89	None	No	0.01	NP (normality)
Selenium (mg/L)	GWB-5R	0.01	0.0073	0.05	No 18	0.0088	0.002538	77.78	None	No	0.01	NP (NDs)
Selenium (mg/L)	GWB-6R	0.05	0.0033	0.05	No 18	0.01019	0.0105	66.67	None	No	0.01	NP (NDs)
Selenium (mg/L)	GWC-1	0.0052	0.0018	0.05	No 18	0.004267	0.005362	11.11	None	No	0.01	NP (normality)
Selenium (mg/L)	GWC-11	0.0091	0.003637	0.05	No 18	0.008061	0.00564	22.22	Kaplan-Meier	sqrt(x)	0.01	Param.
Selenium (mg/L)	GWC-12	0.01	0.003	0.05	No 18	0.0083	0.00328	77.78	Kaplan-Meier	No	0.01	NP (NDs)
Selenium (mg/L)	GWC-14	0.004887	0.002834	0.05	No 19	0.003983	0.001946	5.263	None	sqrt(x)	0.01	Param.
Selenium (mg/L)	GWC-15	0.01	0.0029	0.05	No 18	0.008083	0.003425	50	None	No	0.01	NP (normality)
Selenium (mg/L)	GWC-16	0.006161	0.003709	0.05	No 19	0.004935	0.002093	5.263	None	No	0.01	Param.
Selenium (mg/L)	GWC-17	0.01	0.0013	0.05	No 18	0.005889	0.004281	50	None	No	0.01	NP (normality)
Selenium (mg/L)	GWC-2	0.01	0.0035	0.05	No 18	0.009194	0.002359	88.89	None	No	0.01	NP (NDs)
Selenium (mg/L)	GWC-20	0.01	0.0014	0.05	No 18	0.007606	0.003973	72.22	None	No	0.01	NP (NDs)

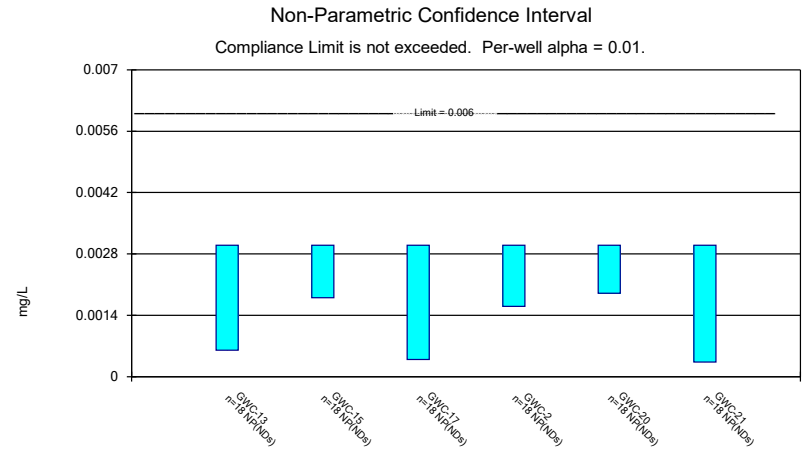
Confidence Intervals - All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 4/15/2021, 11:10 AM

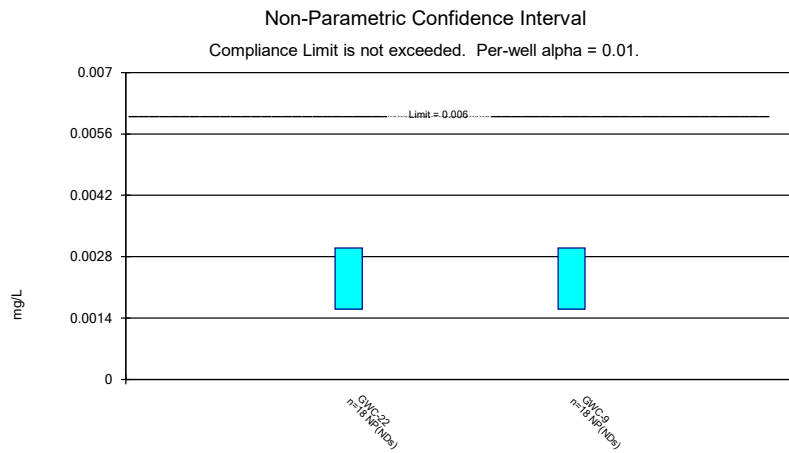
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Selenium (mg/L)	GWC-21	0.02151	0.01213	0.05	No 18	0.01682	0.007752	0	None	No	0.01	Param.
Selenium (mg/L)	GWC-22	0.01	0.0023	0.05	No 18	0.008161	0.00355	77.78	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWB-4R	0.001	0.00007	0.002	No 14	0.0008671	0.0003377	85.71	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWB-5R	0.001	0.00031	0.002	No 14	0.0008834	0.0003006	85.71	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-1	0.001	0.000054	0.002	No 14	0.000797	0.0004034	78.57	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-11	0.001	0.000098	0.002	No 14	0.0005084	0.0004443	42.86	None	No	0.01	NP (normality)
Thallium (mg/L)	GWC-12	0.001	0.00014	0.002	No 14	0.0005343	0.0004208	42.86	None	No	0.01	NP (normality)
Thallium (mg/L)	GWC-14	0.001	0.00007	0.002	No 14	0.0008664	0.0003395	85.71	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-16	0.001	0.00006	0.002	No 14	0.000865	0.0003432	85.71	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-17	0.001	0.000076	0.002	No 14	0.000607	0.0004711	57.14	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-2	0.001	0.00011	0.002	No 15	0.0009407	0.0002298	93.33	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-21	0.001	0.00005	0.002	No 14	0.0009321	0.0002539	92.86	None	No	0.01	NP (NDs)
Thallium (mg/L)	GWC-22	0.001	0.000086	0.002	No 14	0.0006772	0.0004501	64.29	None	No	0.01	NP (NDs)
Vanadium (mg/L)	GWB-4R	0.0399	0.0037	0.43	No 13	0.02166	0.0173	7.692	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWB-5R	0.011	0.004035	0.43	No 13	0.008585	0.008107	7.692	None	ln(x)	0.01	Param.
Vanadium (mg/L)	GWB-6R	0.03572	0.006872	0.43	No 13	0.02446	0.0274	0	None	x^(1/3)	0.01	Param.
Vanadium (mg/L)	GWC-1	0.005927	0.003821	0.43	No 13	0.005777	0.002282	15.38	Kaplan-Meier	No	0.01	Param.
Vanadium (mg/L)	GWC-11	0.01	0.0021	0.43	No 13	0.004108	0.003367	23.08	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-12	0.005419	0.003217	0.43	No 13	0.005354	0.002499	15.38	Kaplan-Meier	No	0.01	Param.
Vanadium (mg/L)	GWC-13	0.01	0.0016	0.43	No 13	0.007477	0.003906	61.54	None	No	0.01	NP (NDs)
Vanadium (mg/L)	GWC-14	0.01778	0.007775	0.43	No 16	0.01367	0.007188	18.75	Kaplan-Meier	No	0.01	Param.
Vanadium (mg/L)	GWC-15	0.01	0.0021	0.43	No 15	0.005427	0.003897	40	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-16	0.01	0.0026	0.43	No 16	0.004785	0.003142	25	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-17	0.01	0.0024	0.43	No 13	0.006138	0.003744	46.15	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-2	0.01	0.0024	0.43	No 13	0.009415	0.002108	92.31	None	No	0.01	NP (NDs)
Vanadium (mg/L)	GWC-20	0.01	0.0024	0.43	No 15	0.005193	0.003536	33.33	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-21	0.01	0.0022	0.43	No 13	0.004685	0.003125	23.08	None	No	0.01	NP (normality)
Vanadium (mg/L)	GWC-22	0.01	0.0014	0.43	No 13	0.006454	0.004101	53.85	None	No	0.01	NP (NDs)
Vanadium (mg/L)	GWC-9	0.01	0.0015	0.43	No 13	0.008677	0.00323	84.62	None	No	0.01	NP (NDs)
Zinc (mg/L)	GWB-4R	0.009085	0.004399	0.16	No 13	0.007577	0.003146	15.38	Kaplan-Meier	No	0.01	Param.
Zinc (mg/L)	GWB-5R	0.01	0.0022	0.16	No 13	0.008008	0.003469	69.23	Kaplan-Meier	No	0.01	NP (NDs)
Zinc (mg/L)	GWB-6R	0.016	0.0029	0.16	No 13	0.007938	0.004109	53.85	Kaplan-Meier	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-1	0.01	0.0021	0.16	No 13	0.008338	0.003157	69.23	Kaplan-Meier	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-11	0.01	0.0029	0.16	No 13	0.007531	0.003381	61.54	Kaplan-Meier	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-12	0.0074	0.0023	0.16	No 13	0.004469	0.002872	15.38	None	No	0.01	NP (normality)
Zinc (mg/L)	GWC-13	0.047	0.0021	0.16	No 13	0.01751	0.01893	0	None	No	0.01	NP (normality)
Zinc (mg/L)	GWC-14	0.01	0.0052	0.16	No 16	0.008725	0.002817	81.25	None	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-15	0.032	0.0051	0.16	No 15	0.01114	0.005907	86.67	None	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-16	0.01	0.0025	0.16	No 16	0.0073	0.00367	56.25	None	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-17	0.01331	0.007565	0.16	No 13	0.01044	0.003864	7.692	None	No	0.01	Param.
Zinc (mg/L)	GWC-2	0.056	0.0015	0.16	No 13	0.01095	0.014	53.85	None	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-20	0.031	0.0049	0.16	No 15	0.01062	0.006005	80	None	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-21	0.01	0.0016	0.16	No 13	0.007831	0.003585	61.54	None	No	0.01	NP (NDs)
Zinc (mg/L)	GWC-22	0.008122	0.003391	0.16	No 13	0.007808	0.003427	38.46	Kaplan-Meier	No	0.01	Param.
Zinc (mg/L)	GWC-9	0.006349	0.002422	0.16	No 13	0.006269	0.006222	15.38	Kaplan-Meier	ln(x)	0.01	Param.



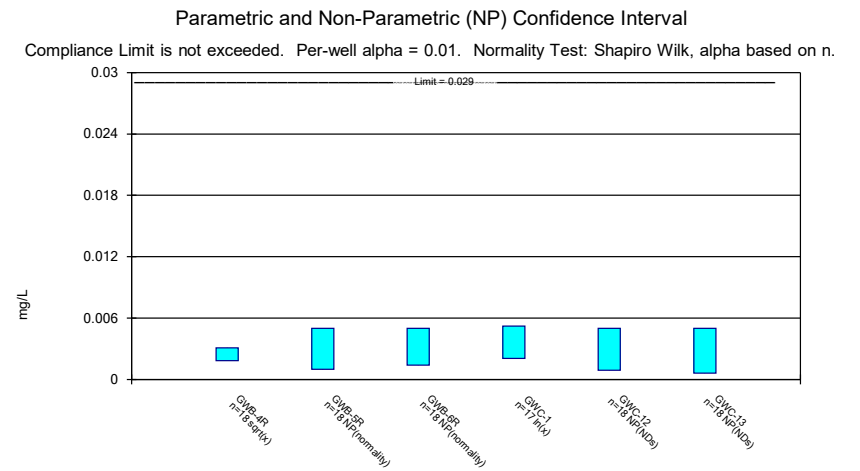
Constituent: Antimony Analysis Run 4/15/2021 11:05 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road



Constituent: Antimony Analysis Run 4/15/2021 11:05 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road



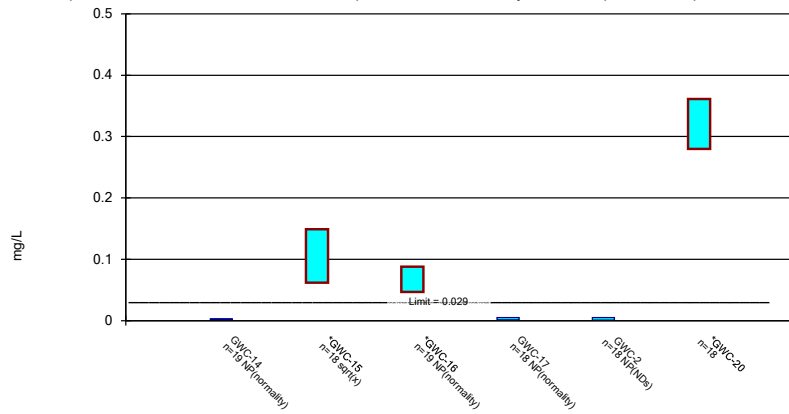
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road



Constituent: Arsenic Analysis Run 4/15/2021 11:05 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

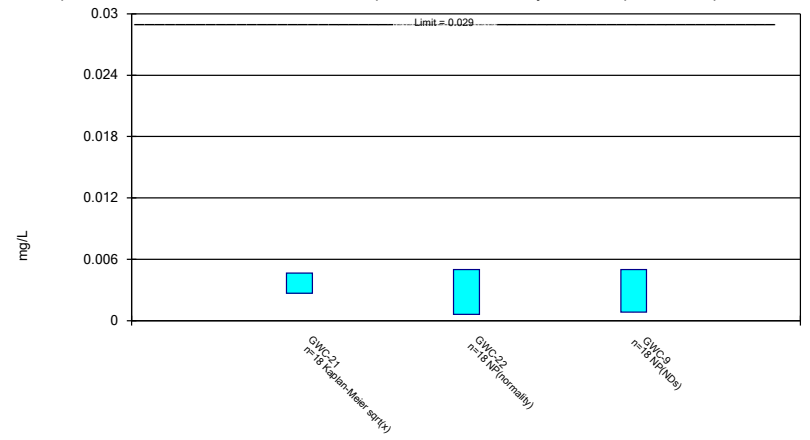
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Constituent: Arsenic Analysis Run 4/15/2021 11:05 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

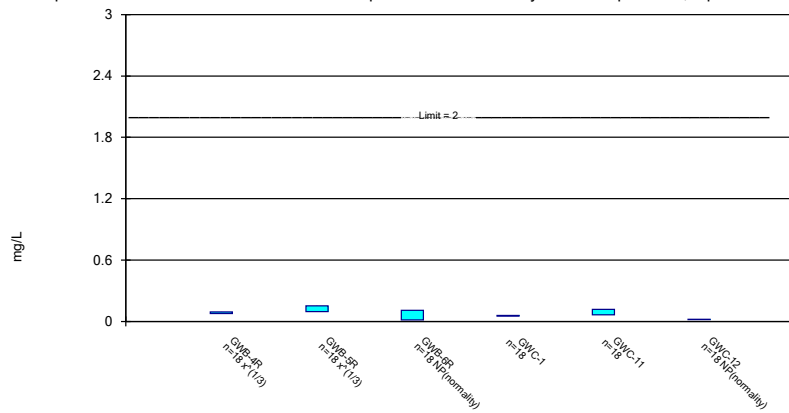
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Constituent: Arsenic Analysis Run 4/15/2021 11:05 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

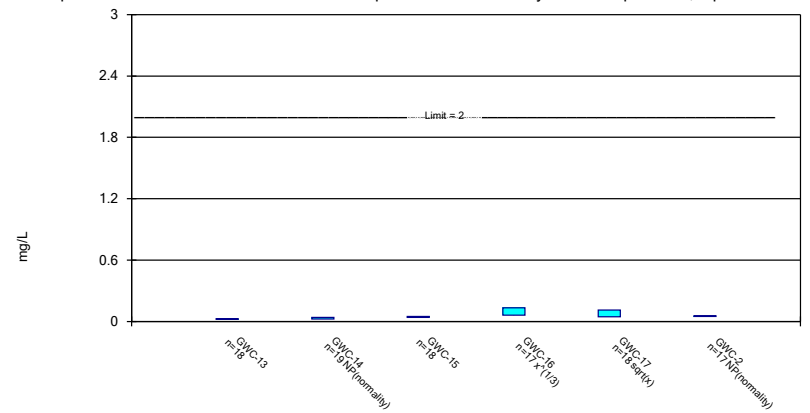
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Constituent: Barium Analysis Run 4/15/2021 11:05 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

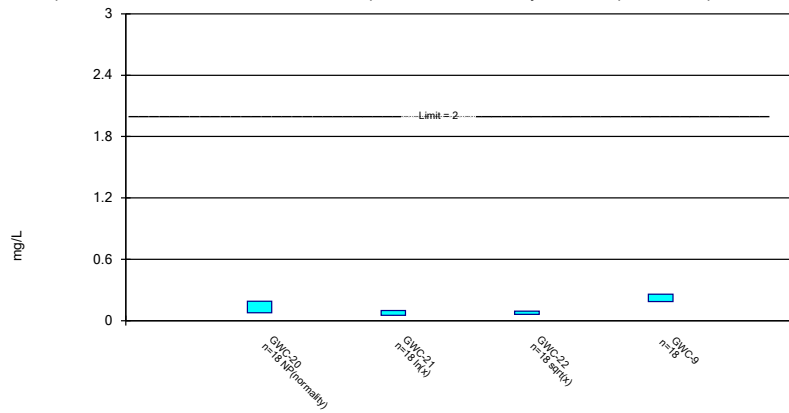
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Constituent: Barium Analysis Run 4/15/2021 11:05 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

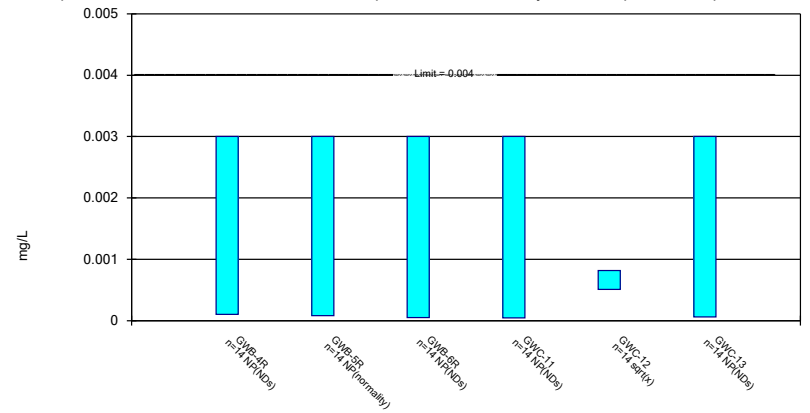
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Constituent: Barium Analysis Run 4/15/2021 11:05 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

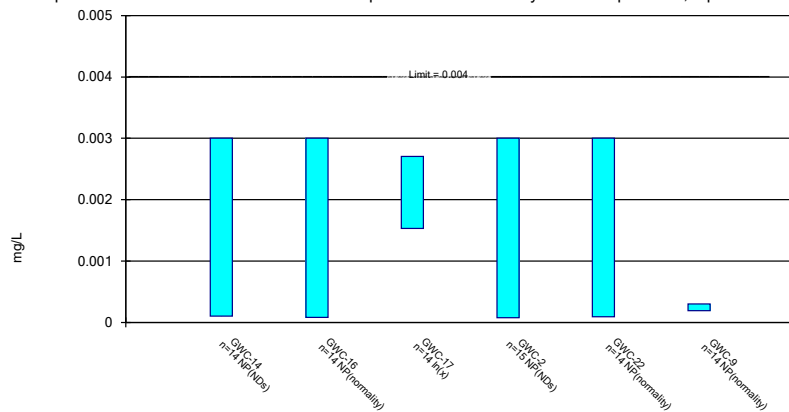
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Constituent: Beryllium Analysis Run 4/15/2021 11:05 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

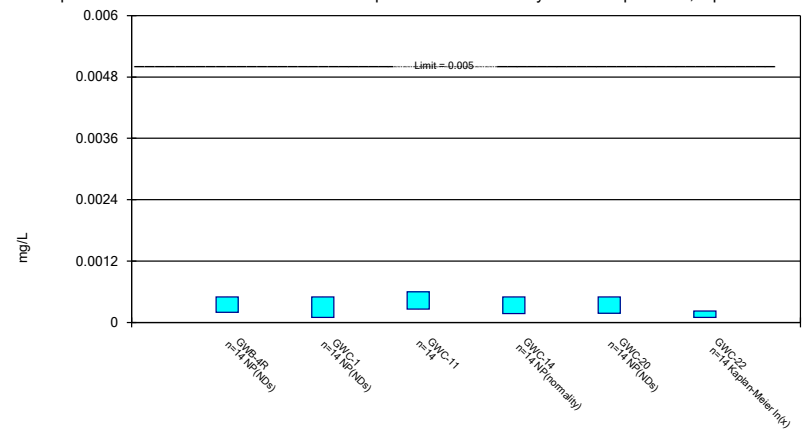
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Constituent: Beryllium Analysis Run 4/15/2021 11:05 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

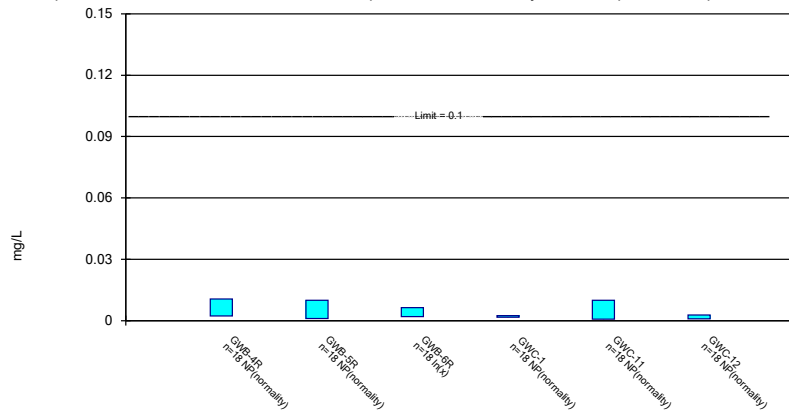
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Constituent: Cadmium Analysis Run 4/15/2021 11:05 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

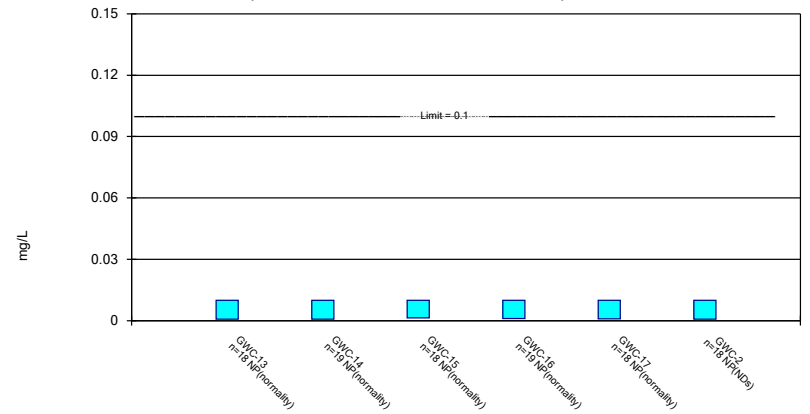
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Constituent: Chromium Analysis Run 4/15/2021 11:05 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Non-Parametric Confidence Interval

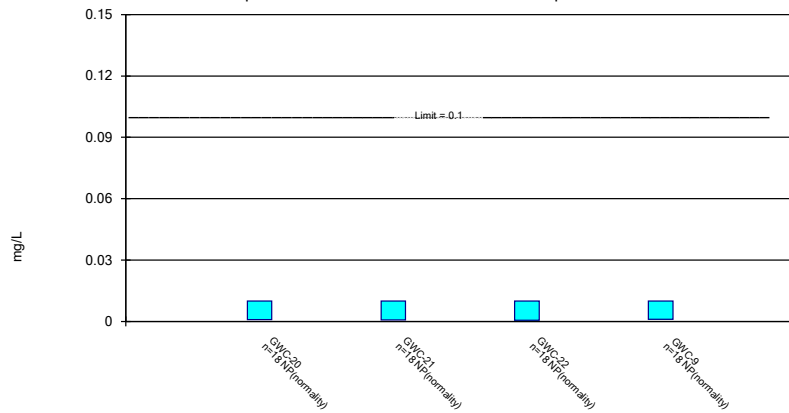
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Constituent: Chromium Analysis Run 4/15/2021 11:05 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Non-Parametric Confidence Interval

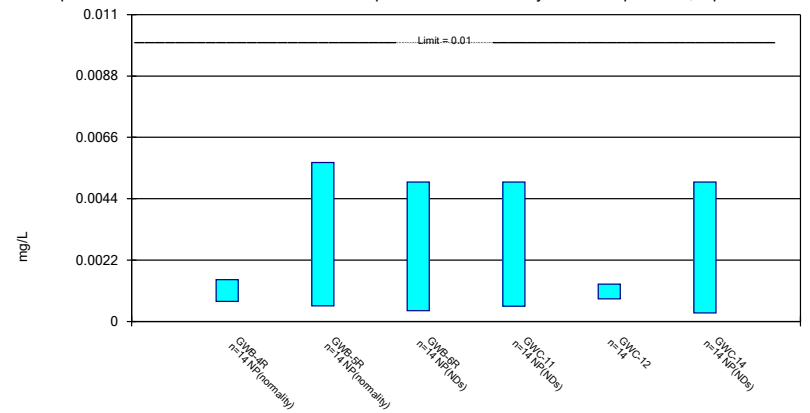
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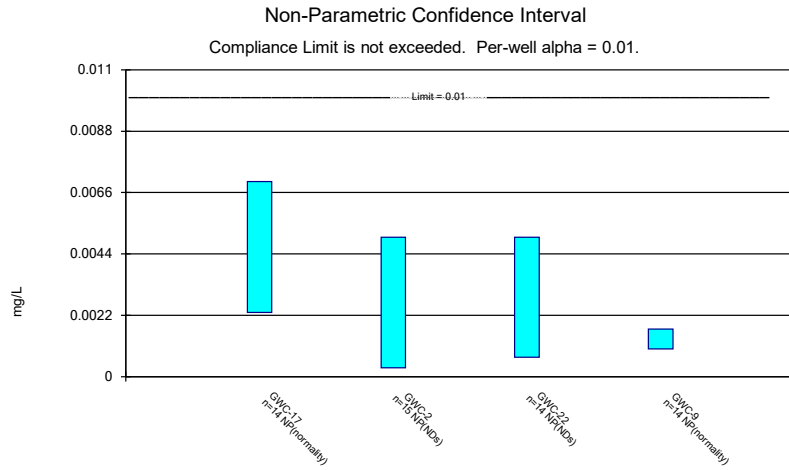
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

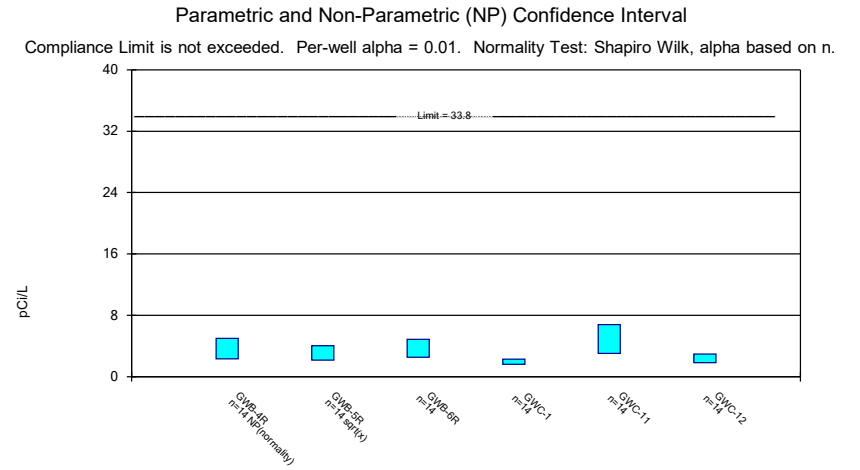
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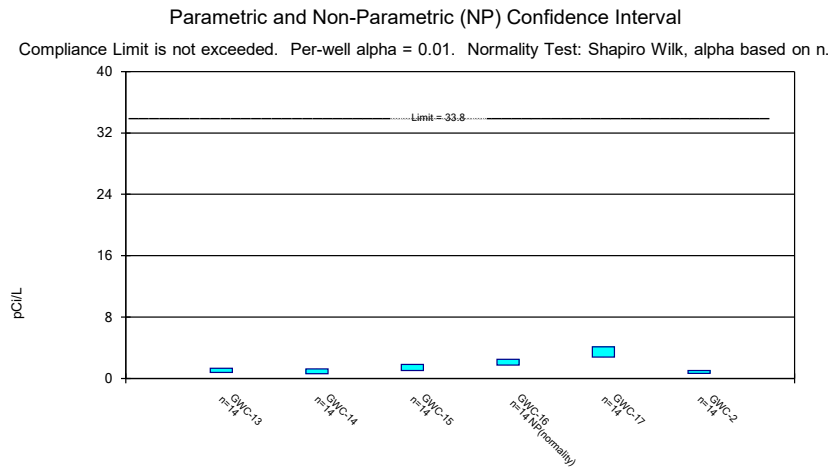
Constituent: Cobalt Analysis Run 4/15/2021 11:05 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road



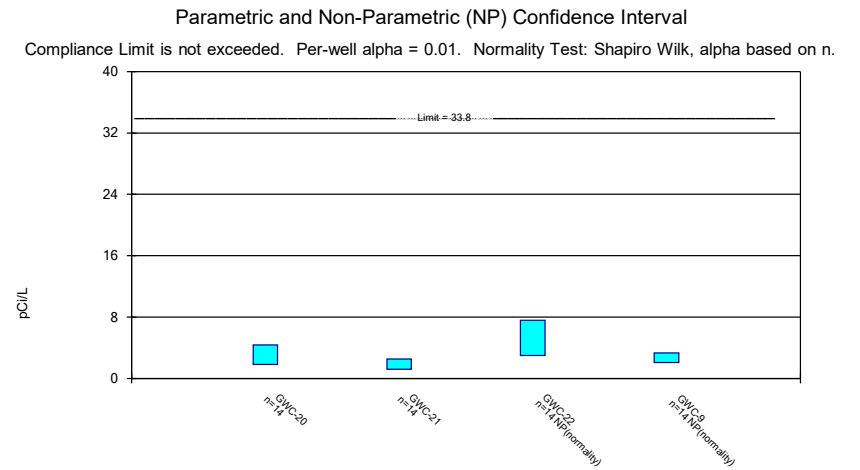
Constituent: Cobalt Analysis Run 4/15/2021 11:05 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road



Constituent: Combined Radium 226 + 228 Analysis Run 4/15/2021 11:05 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road



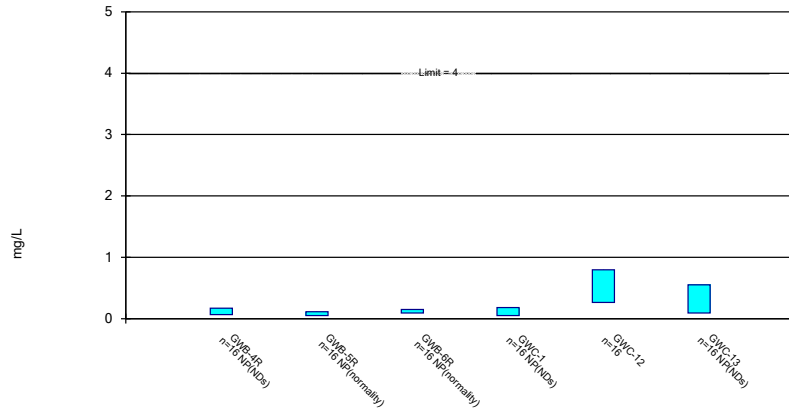
Constituent: Combined Radium 226 + 228 Analysis Run 4/15/2021 11:05 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road



Constituent: Combined Radium 226 + 228 Analysis Run 4/15/2021 11:05 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

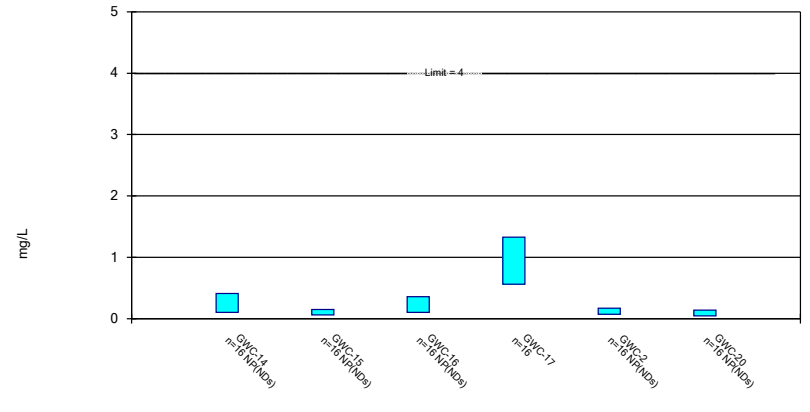
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Constituent: Fluoride Analysis Run 4/15/2021 11:06 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

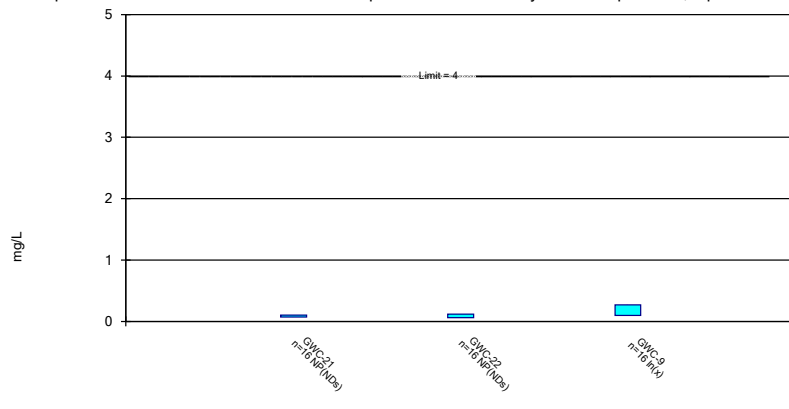
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Constituent: Fluoride Analysis Run 4/15/2021 11:06 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

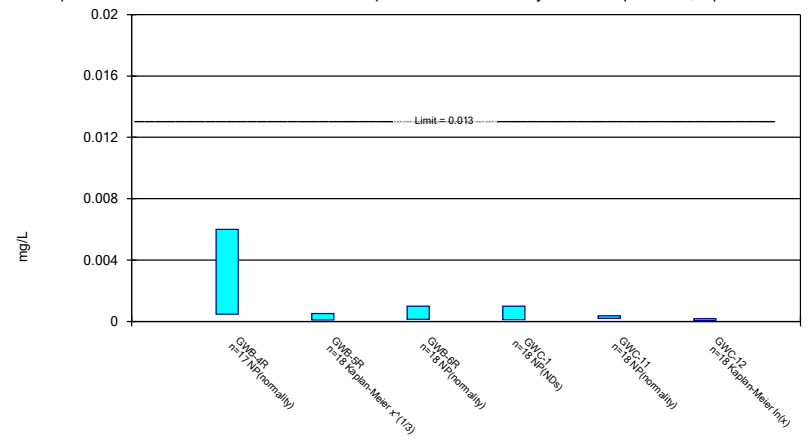
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 4/15/2021 11:06 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

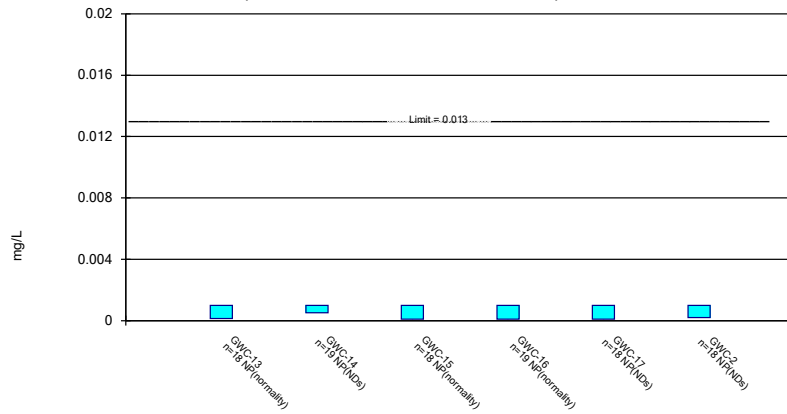
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 4/15/2021 11:06 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Non-Parametric Confidence Interval

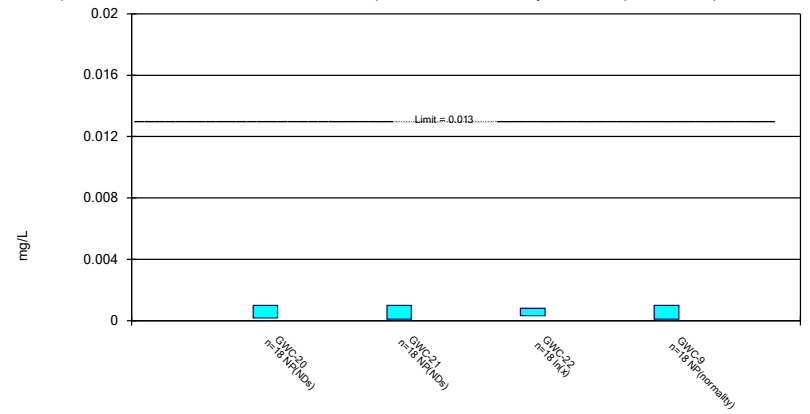
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 4/15/2021 11:06 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

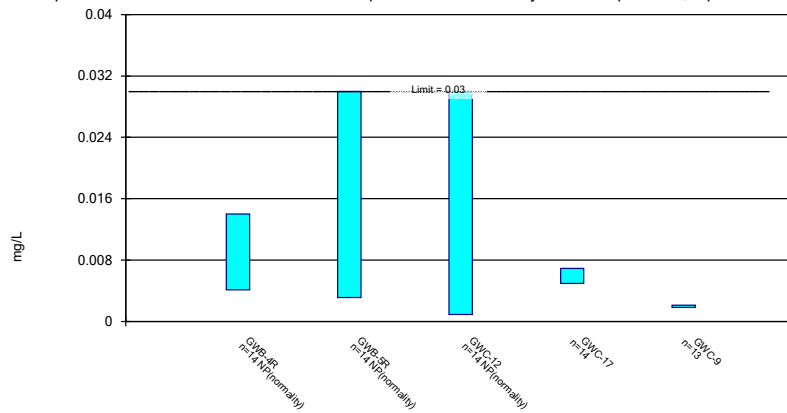
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 4/15/2021 11:06 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

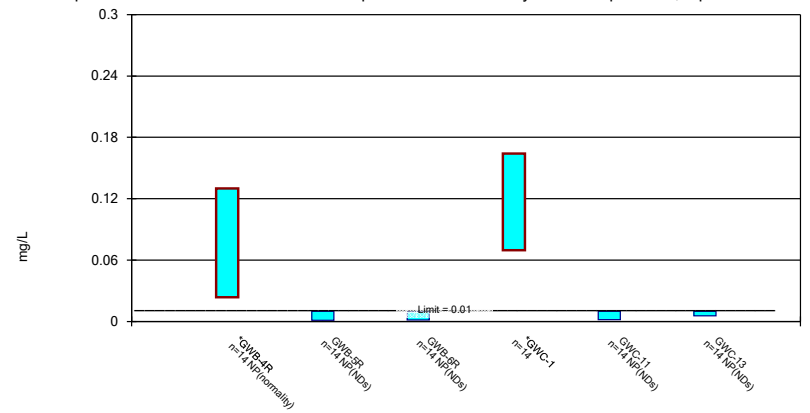
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 4/15/2021 11:06 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

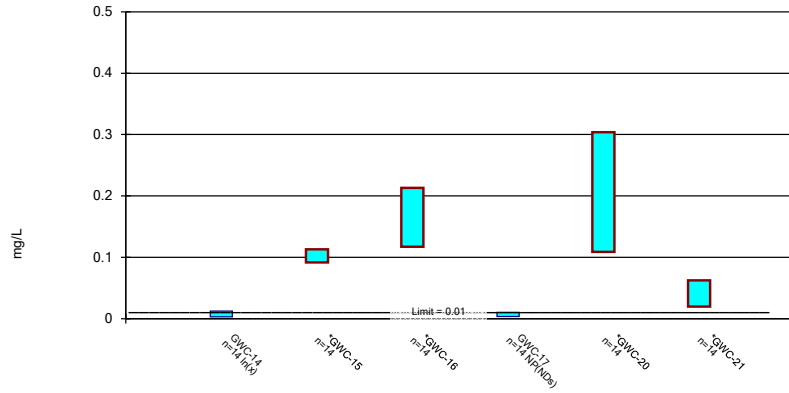
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 4/15/2021 11:06 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

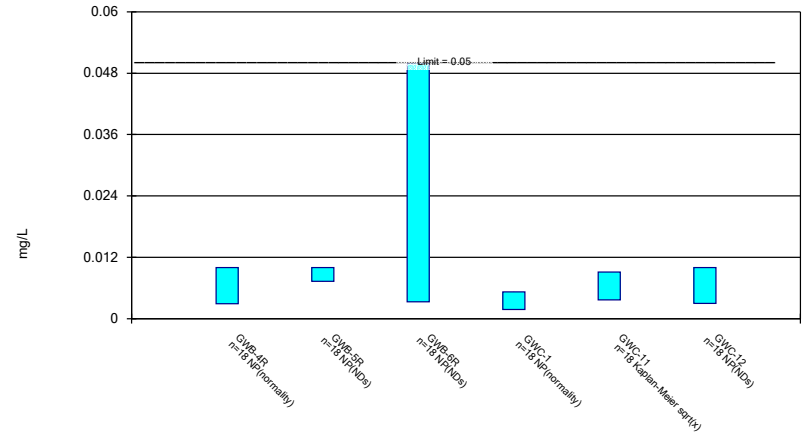
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 4/15/2021 11:06 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

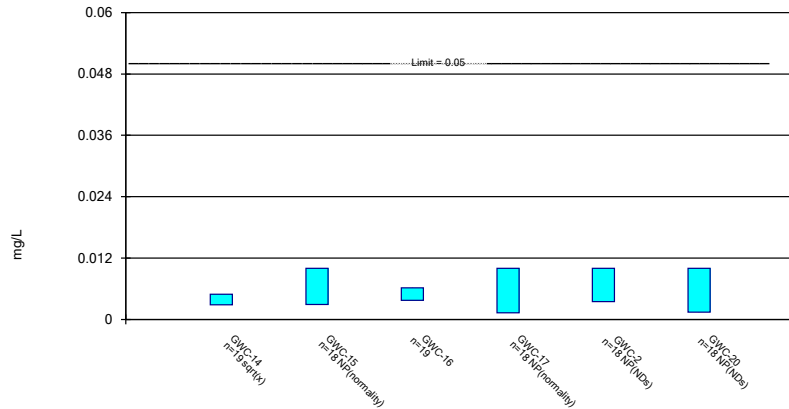
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 4/15/2021 11:06 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

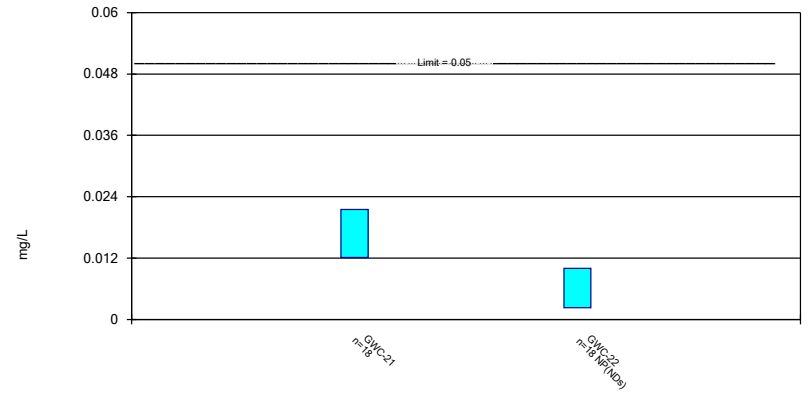
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 4/15/2021 11:06 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

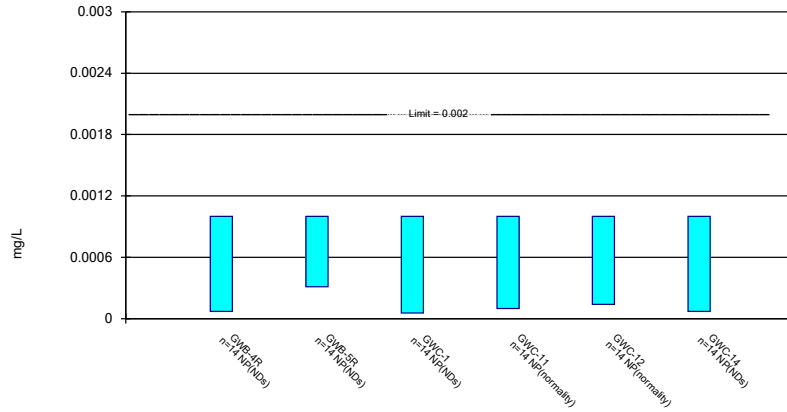
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 4/15/2021 11:06 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Non-Parametric Confidence Interval

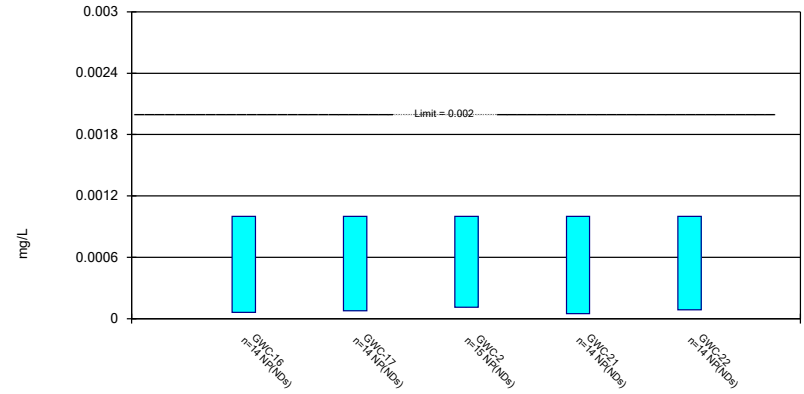
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Thallium Analysis Run 4/15/2021 11:06 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Non-Parametric Confidence Interval

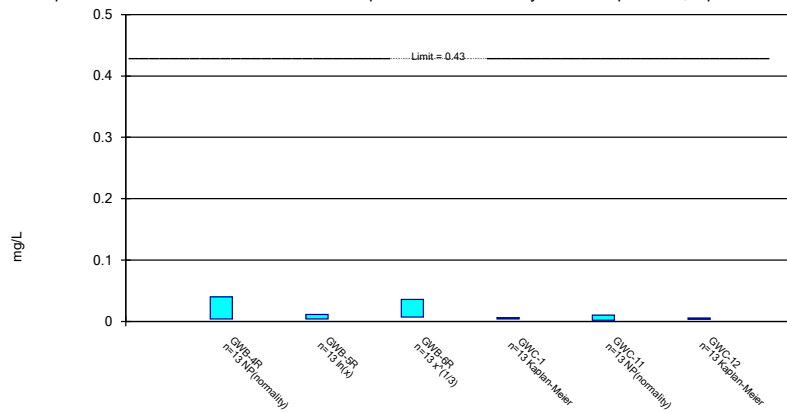
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Thallium Analysis Run 4/15/2021 11:06 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

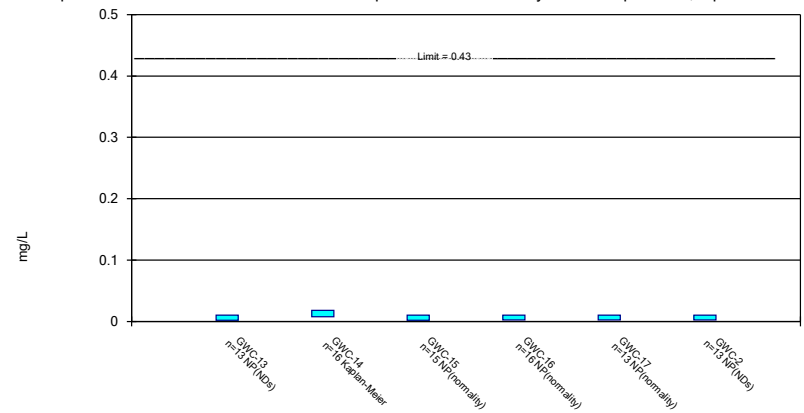
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Vanadium Analysis Run 4/15/2021 11:06 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

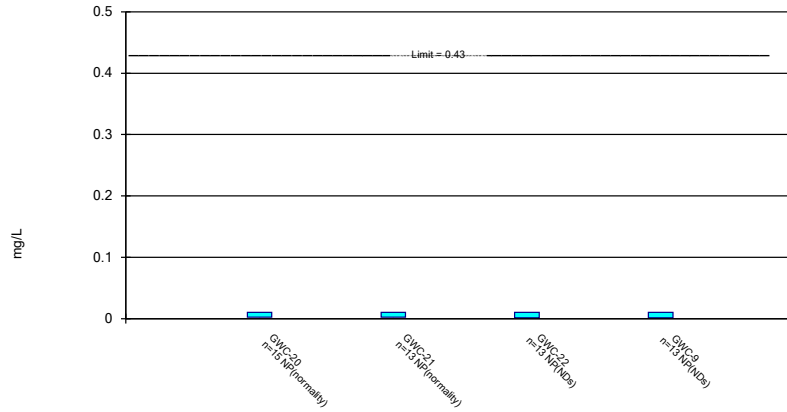
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Vanadium Analysis Run 4/15/2021 11:06 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Non-Parametric Confidence Interval

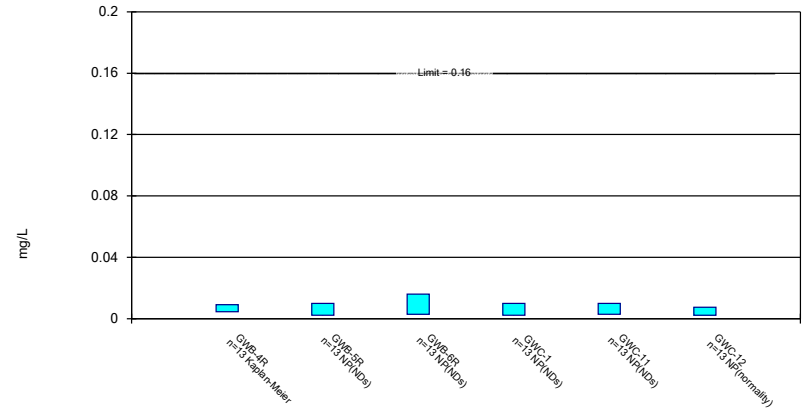
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Vanadium Analysis Run 4/15/2021 11:06 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

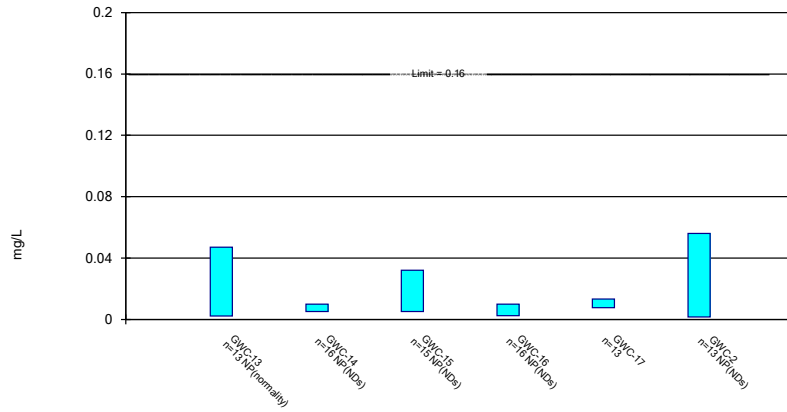
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Zinc Analysis Run 4/15/2021 11:06 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

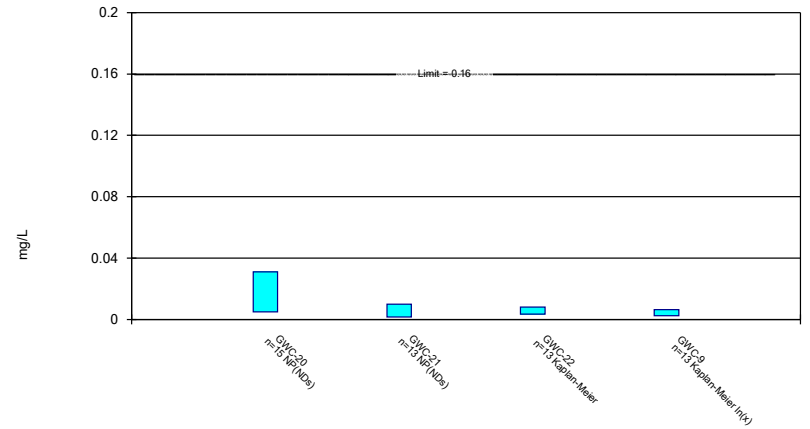
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Zinc Analysis Run 4/15/2021 11:06 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Zinc Analysis Run 4/15/2021 11:06 AM View: Confidence Intervals
 Grumman Road Landfill Client: Southern Company Data: Grumman Road



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