Prepared for

Crisp County Power Commission
202 S. 7th Street
Cordele, Georgia 31015

2019 ANNUAL GROUNDWATER MONITORING REPORT

CRISP COUNTY POWER COMMISSION
PLANT CRISP ASH POND
Warwick, Georgia

Prepared by

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January 2020

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CERTIFICATION BY QUALIFIED PROFESSIONAL ENGINEER

I certify that this Annual Groundwater Monitoring Report was prepared by me or under my direct supervision and meets the requirements of Section 40 C.F.R. §257 of the Federal Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule (40 C.F.R. §257) and the Georgia EPD Solid Waste Management Rule for Coal Combustion Residuals (391-3-4-.10). The Annual Groundwater Monitoring Report includes statistical methods and narrative description appropriate for evaluating the groundwater monitoring data for the CCR management area.

MEHMET ISCIMEN

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GEORGIA — Registration State

01/28/2020

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consultants

CERTIFICATION BY QUALIFIED GROUNDWATER SCIENTIST

I certify that this Annual Groundwater Monitoring Report meets the requirements of Section 40 C.F.R. §257 of the Federal Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule (40 C.F.R. §257) and the Georgia EPD Solid Waste Management Rule for Coal Combustion Residuals (391-3-4-.10). The Annual Groundwater Monitoring Report includes statistical methods and narrative description appropriate for evaluating the groundwater monitoring data for the CCR management area.

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LIST OF ACRONYMS

CCPC	Crisp County Power Commission
CCR	Coal Combustion Residuals
C.F.R.	Code of Federal Regulations
DO	Dissolved Oxygen
ft/day	Feet per Day
ft/ft	Feet per Foot
GA EPD	Georgia Environmental Protection Division
GWPS	Groundwater Protection Standard
K_h	Horizontal Hydraulic Conductivity
MCL	Maximum Contaminant Level
MW	Megawatt
ORP	Oxidation Reduction Potential
PE	Professional Engineer
RSL	Regional Screening Levels
SESD	Science and Ecosystem Support Division
SOP	Standard Operating Procedure
SSI	Statistically Significant Increase
SSL	Statistically Significant Level
USEPA	United States Environmental Protection Agency
UTL	Upper Tolerance Limit

1.0 INTRODUCTION

1.1 Overview

Geosyntec Consultants (Geosyntec) of Kennesaw, Georgia, at the request of Crisp County Power Commission (CCPC), prepared this 2019 Annual Groundwater Monitoring Report for the ash pond located at CCPC's Plant Crisp. Plant Crisp is located in Warwick, Georgia, on the southern end of Lake Blackshear. A site location map is provided in **Figure 1**. CCPC installed a groundwater monitoring well network in February 2017 in compliance with the requirements of the 40 Code of Federal Regulations (C.F.R.) §257.91 and Section 391-3-4-.10(6) of the Georgia Environmental Protection Division (GA EPD) Coal Combustion Residuals (CCR) Rule.

A groundwater detection monitoring program was conducted between February and September 2017 in compliance with the requirements of the 40 C.F.R. §257.94. The first Annual Groundwater Monitoring Report [Geosyntec, 2018] summarizing the results of detection groundwater monitoring activities was prepared in January 2018. In compliance with 40 C.F.R. §257.95(a), CCPC initiated an assessment monitoring program for the ash pond in 2018. The assessment monitoring continued in 2019 by performing semi-annual monitoring events in April 2019 and October 2019. The groundwater monitoring and statistical analysis were performed consistent with the Groundwater Monitoring and Statistical Analysis Plan prepared for the Plant Crisp Ash Pond in October 2017 and revised in December 2019.

The April 2019 assessment monitoring event was performed for constituents listed in Appendix IV to part §257 (referred herein as Appendix IV constituents) (40 C.F.R. §257.95(b)). The October 2019 semi-annual assessment monitoring event was performed for all parameters in Appendix III to part §257 (referred herein as Appendix III constituents) and for those constituents in Appendix IV that were detected during the April 2019 monitoring (40 C.F.R. §257.95(d)(1)). In compliance with GA EPD CCR Rule 391-3-4-.10(6)(c), a semi-annual groundwater monitoring report summarizing the April 2019 monitoring results was submitted to the GA EPD in July 2019.

The purpose of this report is to present a summary of the April 2019 and October 2019 groundwater assessment monitoring activities and associated laboratory and statistical analysis results. The report has been prepared to meet the annual reporting requirements

of 40 C.F.R. §257.90 (e) and semi-annual reporting requirements of GA EPD CCR Rule 391-3-4-.10(6)(c).

In summary, the April 2019 and October 2019 sampling events detected concentrations of 40 C.F.R. §257, Appendix IV constituents but all concentrations were below their respective USEPA's maximum contaminant levels (MCLs) for those parameters with an established MCL (Appendix I to 40 C.F.R. §257)[1] or below USEPA's health-based level as Groundwater Protection Standard (40 C.F.R. §257.95 (h)(2)) for those constituents without an established MCL.

1.2 Site History

Plant Crisp is a dual-fuel (coal and natural gas) electrical generation facility, with a 12.5-megawatt (MW) capacity coal-fired unit and 5 MW capacity natural gas combustion turbine. The byproducts of power generation from the combustion of coal (commonly referred to as CCR) at Plant Crisp included mainly fly ash and bottom ash. The CCR was disposed into a 6.5-acre ash pond located within the plant property using wet sluicing method. The ash pond was constructed in the mid-1970s, as an unlined pond [CDM Smith, 2014], and started to receive sluiced ash in 1976. The coal burning and resulting ash disposal was conducted until August 2015. The coal burn unit was briefly re-activated in December 2016 to eliminate an existing small coal supply. The last burning of coal took place on March 22, 2017. In October 2016, CCPC submitted notification of closure by removal in accordance with 40 C.F.R. §257. The original schedule for closure would have removed CCR by February 2018, however, Georgia DNR CCR management regulations were issued in November 2016, DNR Rule 391-3-4-.07(5), after the initial closure plan. DNR Rule 391-3-4-.07(5) required GA EPD's approval of CCR management plans for the receiving landfill. GA EPD approved the CCR management plan for the receiving landfill on March 28, 2019. On 19 November 2018, CCPC submitted a CCR permit application for the existing impoundment and closure of the ash pond by removal in accordance with 40 C.F.R. §257.102(c) and the GA EPD rule 391-3-4- .10 and other GA EPD regulations as applicable. In their letter dated January 25, 2019 GA EPD requested additional documents to complete the permit application. The requested documents were submitted to GA EPD on September 3, 2019. In a letter dated October 11, 2019, GA EPD requested additional detail in conjunction with the November

[1] MCLs are the maximum contaminant levels for potable drinking water which are established setting a lifetime consumption risk or acute level and would be applied to municipal or other drinking water sources.

2018 application for permit for the existing CCR impoundment pursuant to EPD rule 391-3-4-.10, which is being provided on a separate submittal.

The electrical generation facility, ash pond, and hydroelectric dam are located on approximately 100 acres of CCPC property near Lake Blackshear and the Flint River (**Figure 1**). The ash pond has embankments on the western and partially southern and northern sides. The maximum embankment height is on the west end and is approximately 22 feet [Rizzo Associates, 2015]. The ash pond was classified as a low hazard unit during the United States Environmental Protection Agency's (USEPA) coal combustion residuals impoundment assessment, dated February 2014 and conducted by CDM Smith [CDM Smith, 2014].

1.3 Geologic and Hydrogeologic Setting

CCPC is located in the Coastal Plain Physiographic Province of Georgia, which is generally characterized by gently rolling to nearly flat topography. The Coastal Plain Physiographic Province of Georgia is characterized by Late Cretaceous and Cenozoic sedimentary rocks and sediments. Based on the Geologic Map of Georgia [Georgia Department of Natural Resources, 1997], the Site is underlain by Quaternary-aged stream alluvium and undifferentiated terrace deposits underlain by residual soil derived by the weathering of Eocene-aged limestone. Beneath the residuum is Eocene-aged limestone (the Ocala Limestone) that dips gently to the southeast and generally thicken in that direction [Hicks et al, 1987]. The Ocala Limestone comprises part of the Upper Floridan aquifer, which is underlain by low permeability zones within the Lisbon Formation (argillaceous limestone). Subsurface investigations at the Site generally describe the surface geology as embankment fill, alluvium, residuum and limestone bedrock [ND&T, 1994, Rizzo, 2015, Geosyntec, 2017].

The uppermost aquifer at the Site is the unconfined groundwater aquifer that occurs in the alluvium and some upper portions of the residuum. The alluvial sediments consist of alternating layers of clay, silty sand, silty clayey sand, and some gravel (SM, SM-SC). While most of the of the residuum consists of clays and calcareous clay (marl) with limestone fragments, there may be sandy clay and gravelly clay lenses that could act along with the overlying alluvium as part of the uppermost aquifer. Based on field observations (increasing clay content with depth in the residuum and increasing blow counts with depth), the hydraulic conductivity of the residuum is expected to decline with depth. As such, the lower part of the residuum is likely a confining unit and represents the lower

boundary of the uppermost aquifer. Recharge to the uppermost aquifer is from infiltration of precipitation. In March 2019, Geosyntec performed slug testing in four monitoring wells to estimate horizontal hydraulic conductivity (K_h) of the uppermost aquifer. Based on the slug testing results, the geometric mean of the K_h in the uppermost aquifer was estimated as 1.44×10^{-4} cm/sec (0.41 ft/day). This value is similar to the K_h estimated for the alluvium and residuum during previous investigations.

Under natural conditions, the water table surface is a subdued reflection of the topography, with groundwater generally flowing from southeast to northwest from the higher elevations to lower elevations toward the Flint River. The movement of groundwater in the uppermost aquifer can be characterized as porous media flow.

1.4 Groundwater Monitoring Well Network

In accordance with 40 C.F.R. §257.91, a groundwater monitoring system was installed that (1) consists of a sufficient number of wells; (2) is installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer; and (3) represents the groundwater quality both upgradient of the units (i.e., background conditions) and passing the waste boundary of the units. The number, spacing, and depths of the groundwater monitoring wells were selected based on the characterization of site-specific hydrogeologic conditions. The well network was certified by a professional engineer (PE) on June 14, 2017; the certification is maintained in the facility's Operating Record. Well construction diagrams of the monitoring wells were included in the January 2018 Annual Groundwater Monitoring Report [Geosyntec, 2018]. The certified groundwater monitoring well network includes one monitoring well (MW-U1) located upgradient of the ash pond, representing background groundwater conditions, and three monitoring wells (MW-D1, MW-D2, and MW-D3) located downgradient of the ash pond. The locations of the monitoring wells are shown on **Figure 1** and well construction details are provided in **Table 1**. The monitoring wells are screened in the uppermost aquifer underlying the ash pond, which occurs in the alluvium and some upper portions of the residuum.

CCPC does not currently plan to expand the certified monitoring well network. No additional well installation or abandonment was conducted during the 2019 monitoring period. There was no dry well during the monitoring period and all wells were functioning properly.

2.0 GROUNDWATER SAMPLING AND LABORATORY ANALYSIS RESULTS

2.1 Groundwater Sampling and Laboratory Analysis

Groundwater assessment monitoring events were conducted on April 29, 2019 and October 23, 2019. The groundwater samples were collected in accordance with the USEPA Science and Ecosystem Support Division (SESD) Standard Operating Procedure (SOP No. SESDPROC-301-R4) [USEPA, Athens, Georgia, 2017]. Prior to sampling, depth to groundwater and total well depth were measured for each monitoring well using an electrical water level indicator. The water level indicator was cleaned between wells following the decontamination procedure listed under SESDPROC-205-R3 [USEPA, Athens, Georgia, 2015]. Depth to groundwater data and groundwater elevations from the April and October monitoring events are summarized in **Table 2**. The groundwater elevation data were used to prepare potentiometric surface maps. **Figure 2** presents a potentiometric surface map generated using the October 23, 2019 groundwater elevation data. Based on the October 2019 potentiometric surface map, groundwater flow direction is from southeast towards northwest and the hydraulic gradient is approximately 0.01 ft/ft (**Table 3**). The approximate horizontal flow velocity was calculated using Darcy's equation as 7.3 ft/year (**Table 3**).

Groundwater sampling was performed using a low-flow sampling method. To assess that the samples collected were representative of the groundwater in the aquifer, field water quality parameters were measured during purging using a Horiba U-52 water quality meter. These parameters include temperature, pH, conductivity, oxidation-reduction potential (ORP), and dissolved oxygen (DO). Measurements were taken within an enclosed flow-through cell to minimize effects of contact with air. Turbidity was measured using Hach 2100P turbidity meter. Purging was considered complete when the following stabilization criteria were met (as defined by USEPA SESD SOP No. SESDPROC-301-R4):

- pH ± 0.1 Standard Units.
- Conductivity ± 5%.
- ±0.2 milligrams per liter (mg/L) or ±10%, whichever is greater.

- Turbidity measured less than 10 nephelometric turbidity units (NTU).

Field groundwater sampling forms are provided in **Appendix A.**

The groundwater samples were collected in laboratory-provided containers. Following sampling, the bottles were sealed, labeled, packed in ice, and shipped under chain-of-custody protocol to Test America Laboratories in Pensacola, FL, a certified laboratory pursuant to the Georgia State Program. The chain-of-custody procedures were conducted in accordance with SESDPROC-005-R2 [USEPA, Athens, Georgia 2013]. The April 2019 groundwater samples were analyzed for Appendix IV constituents (antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, radium, selenium, and thallium). The metal constituents were analyzed as total recoverable as the samples were not field-filtered. The October 2019 groundwater samples were analyzed for Appendix III constituents (i.e., boron, calcium, chloride, fluoride, sulfate, total dissolved solids, and pH) and Appendix IV constituents that were detected during the April 2019 monitoring event (i.e., arsenic, barium, chromium, cobalt, fluoride, lithium, Radium 226 and 228 combined, and thallium).

Field duplicate samples (DUP-12 in April 2019 and DUP-13 in October 2019) were collected for Quality assurance/quality control (QA/QC). The duplicate samples were collected in laboratory-provided bottles and submitted under the same chain-of-custody as the primary samples for analysis of the same parameters by Test America laboratories.

2.2 April 2019 Groundwater Monitoring Results

Laboratory analytical results for Appendix III constituents from the April 2019 monitoring event are summarized in **Table 4**. All Appendix III constituents (boron, calcium, chloride, fluoride, sulfate, and total dissolved solids (TDS) were detected in the downgradient monitoring well locations. Similarly, all Appendix III constituents except boron, fluoride, and sulfate were detected in the upgradient monitoring well.

Laboratory analytical results for Appendix IV constituents are summarized in **Table 5**. The following Appendix IV constituents were detected at the downgradient monitoring well locations:

- Arsenic in MW-D3 (at an estimated concentration below the laboratory reporting limit);

- Barium in MW-D1, MW-D2, and MW-D3;
- Cobalt in MW-D3 (at an estimated concentration below the laboratory reporting limit);
- Fluoride in MW-D1, MW-D2, and MW-D3 (fluoride concentrations in MW-D1 and MW-D2 were estimated and below the laboratory reporting limit);
- Lithium in MW-D2 and MW-D3 (at estimated concentrations below the laboratory reporting limit);
- Radium 226 and 228 combined in MW-D3; and
- Thallium in MW-D3 (at an estimated concentration below the laboratory reporting limit).

In addition, barium and chromium were detected in the background/upgradient monitoring well at estimated concentrations below their respective laboratory reporting limits. The detected concentrations of Appendix IV constituents are below their respective USEPA's maximum contaminant levels (MCLs) for those parameters with an established MCL (Appendix I to 40 C.F.R. §257) or below USEPA's health-based level as Groundwater Protection Standard (40 C.F.R. §257.95 (h)(2)) for those constituents without an established MCL. Low level Appendix IV constituents detected during the April 2019 monitoring event can be naturally occurring as some of them were detected at low concentrations in the background well.

Laboratory reports for Appendix III and Appendix IV constituents are included in **Appendix B**. Groundwater data collected during the April 2019 assessment monitoring were statistically evaluated in accordance with 40 C.F.R. §257.93(g) as discussed in Section 3 below.

2.3 October 2019 Groundwater Monitoring Results

Laboratory analytical results of Appendix III constituents from the October 2019 groundwater assessment monitoring event are summarized in **Table 6**. All Appendix III constituents were detected in the downgradient and upgradient monitoring well locations.

Laboratory analytical results of Appendix IV constituents from the October 2019 groundwater assessment monitoring event are summarized in **Table 7**. The following Appendix IV constituents were detected at the downgradient monitoring well locations:

- Arsenic in MW-D3 (at an estimated concentration below the laboratory reporting limit);
- Barium in MW-D1, MW-D2, and MW-D3;
- Cobalt in MW-D3 (at an estimated concentration below the laboratory reporting limit);
- Fluoride in MW-D1, MW-D2, and MW-D3 (fluoride concentration in MW-D2 was estimated and below the laboratory reporting limit);
- Thallium in MW-D2 and MW-D3 (at a estimated concentrations below the laboratory reporting limit).

Barium and fluoride were detected in the background monitoring well at estimated concentrations below their respective laboratory reporting limits. The concentrations of Appendix IV constituents that were detected in the downgradient wells were below their respective USEPA's MCLs or below the groundwater protection standard for cobalt and molybdenum listed under 40 C.F.R. §257.95 (h)(2). Low level Appendix IV constituents detected during the October 2019 monitoring event can be naturally occurring as some of them were detected at low concentrations in the background well. The October 2019 laboratory reports are provided as **Appendix B**.

The April and October 2019 assessment monitoring results were statistically evaluated in accordance with 40 C.F.R. §257.93(g). The statistical analysis results are discussed in Section 3.

3.0 ASSESSMENT MONITORING STATISTICAL DATA ANALYSIS PROCEDURES

Statistical analysis of the groundwater data collected during the assessment monitoring event was performed in accordance with the methods listed in the Groundwater Monitoring and Statistical Analysis Plan prepared in October 2017. The statistical methods meet the requirements of the methods specified in 40 C.F.R. §257.93(f) (1) through (5) and the performance standards specified in 40 C.F.R. §257.93(g). Statistical analysis was performed using Sanitas™ v.9.6.05 software for Appendix IV constituents.

The primary objectives of the statistical data analysis conducted during this reporting period are:

(i) To calculate statistically derived background concentration for each Appendix IV constituent. The statistically derived background concentration is used as Groundwater Protection Standard (GWPS) when the statistically derived background concentration is higher than the MCL (if an MCL has been established under 40 C.F.R. §161.62 and 40 C.F.R. §141.66) or the standard listed under 40 C.F.R. §257.95 (h)(2) for those constituents without an established MCL.

(ii) To construct a lower confidence interval for each constituent at each downgradient well and compare the lower confidence interval to an established GWPS and determine whether a statistically significant level (SSL) is present at any of the downgradient monitoring wells.

3.1 GWPS for Appendix IV Constituents

As a first step in developing the GWPS, groundwater data from the background well were screened for potential outlier (anomalous) data. In addition to visual inspection using time-series plots, statistical methods, such as the USEPA 1989 Outlier Screening method, were used to identify outliers in the groundwater data (when the data was normally distributed). Tukey's Outlier Screening method was used when background well data was not normally distributed. Although outliers were detected, they were not removed from the statistical analysis due to: (i) a large number of non-detects in the data set; and (ii) the USEPA Unified Guidance recommendation on screening data only if the source of the outlier is known. Data distribution was checked using Shapiro Wilk method at 99%

confidence level. This method is appropriate for a sample size of less than 50. For statistical data analysis, non-detect laboratory results were replaced with their reporting limit in accordance with the USEPA Unified Guidance recommendation [USEPA, 2009].

The USEPA Unified Guidance recommends utilizing upper tolerance limits (UTL) from the background well to establish background concentrations. In addition, the CCR Rule lists the UTL method, calculated using data from the background well, as one of the methods acceptable for CCR data analysis [40 C.F.R. §257.93(f)(3)]. As a result, the GWPSs for the site were developed utilizing the UTL method and generally consisted of the following procedures:

- Parametric tolerance limits (95% coverage and 95% confidence) were constructed when the background data followed a normal or transformed-normal distribution.

- Non-parametric tolerance limits were calculated for data sets with greater than 50% non-detect values, and for data sets which do not follow a normal or transformed-normal distribution.

- The UTL was calculated for each constituent using background well data collected during the eight detection monitoring events and the assessment monitoring events conducted to date. As described in 40 C.F.R. §257.95(h), the GWPS is:

  (1) the maximum contaminant level (MCL) established under 40 C.F.R. §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) the UTL computed from background well data for constituents where the UTL is higher than the MCL or rule-specified GWPS.

- USEPA's updated GWPS have not yet been incorporated under GA EPD's CCR Rule[2]. The GWPS based on the GA EPD CCR Rule is:

  (1) The federally established MCL for Appendix IV constituents.

  (2) Where an MCL has not been established, the background concentration for Appendix IV constituents.

  (3) Background levels for constituents where the background level is higher than the MCL for Appendix IV constituents.

3.2 Evaluation of SSLs for Appendix IV Constituents

The USEPA Unified Guidance [USEPA, 2009] recommends utilizing the lower confidence interval from a downgradient well along with the double quantification rule to evaluate SSLs. A 99% lower confidence interval was constructed for each constituent at each downgradient well and the double quantification rule was used to evaluate SSLs. Under this rule, an SSL can be concluded if the lower confidence limit is higher than the GWPS.

[2] GA EPD has adopted Federal CCR Rule as provided in 80 Fed. Reg. 21468 (April 17, 2015); as amended at 80 Fed. Reg. 37988 (July 2, 2015) and 81 Fed. Reg. 51807 (August 5, 2016). Portions of these federal rules have since been repealed. See, e.g. 83 Fed. Reg. 36,435 (July 30, 2018).

4.0 STATISTICAL ANALYSIS RESULTS

The statistical analysis results are summarized in **Table 8**, which shows the (i) ratio of non-detects to total number of samples; (ii) basic statistics for each constituent in a monitoring well such as minimum and maximum; (iii) UTL of each constituent constructed based on the background well data; (iv) an MCL value for the constituent (if available) established under 40 C.F.R. §161.62 and 40 C.F.R. §141.66 or the standard listed under 40 C.F.R. §257.95(h)(2); and (v) the selected GWPS for each constituent.

Table 9 shows the lower confidence limit constructed for each constituent at each downgradient well and the results of comparison between the lower confidence limit and the selected GWPS to evaluate if there are any SSLs. Comparison of the lower confidence limit to the selected GWPS revealed no SSLs during the 2019 monitoring period. The Sanitas™ statistical calculations and time-series graphs for each constituent are provided in **Appendix C**.

5.0 FUTURE GROUNDWATER MONITORING PROGRAM

Data collected during the assessment monitoring events indicated that Appendix IV constituents detected in the downgradient monitoring wells were below their respective GWPS. Pursuant to the CCR Rule 40 C.F.R. §257.95(d)(1) and GA EPD's CCR Rules, groundwater samples will be collected semi-annually for Appendix III and Appendix IV constituents. The next annual groundwater monitoring report summarizing the 2020 groundwater monitoring results will be submitted by 31 January 2021. Pursuant to the Georgia rule 391-3-4-.10(6)(c), a semi-annual report that coincides with the semi-annual sampling event will be submitted to GA EPD by 31 July 2020.

6.0 REFERENCES

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TABLES

Table 1. Monitoring Well Network Summary
Crisp County Power Commission
Plant Crisp Ash Pond

Well ID	Hydraulic Location	Installation Date	Well Depth (ft, BTOC)	Easting	Northing	TOC Elevation (ft, MSL)	Screen Interval Elevation (ft, MSL)
MW-D1	Downgradient	2/22/2017	23.16	2365315.12	670708.47	241.77	218.85-228.85
MW-D2	Downgradient	2/21/2017	23.37	2365308.73	671291.61	232.66	209.64-219.64
MW-D3	Downgradient	2/22/2017	23.54	2365715.53	671291.07	233.78	210.52-220.52
MW-U1	Upgradient	2/23/2017	36.95	2366420.55	669996.79	249.52	212.78-222.78

Notes:
ft = feet
MSL = above mean sea level.
TOC = Top of casing
The easting, northing, and TOC elevation were obtained from a revised survey performed by J.B. Faircloth & Associates, P.C. on 26 November 2019.

Table 2. Groundwater Elevation Summary
Crisp County Power Commission
Plant Crisp Ash Pond

Well ID	TOC Elevation (ft, MSL)	4/29/2019		10/23/2019	
		Depth to Groundwater (ft, BTOC)	Groundwater Elevation (ft, MSL)	Depth to Groundwater (ft, BTOC)	Groundwater Elevation (ft, MSL)
MW-D1	241.77	14.38	227.39	16.08	225.69
MW-D2	232.66	12.68	219.98	14.65	218.01
MW-D3	233.78	5.92	227.86	7.70	226.08
MW-U1	249.52	11.47	238.05	14.90	234.62
Lake Blackshear	--	--	236.85	--	236.95

Notes:
ft = feet
MSL = above mean sea level.
TOC = Top of casing
BTOC = Below top of casing

Table 3. Hydraulic Gradient and Groundwater Flow Velocity Calculations
Crisp County Power Commission
Plant Crisp Ash Pond

Hydraulic Gradient - October 23, 2019 Data				Groundwater Flow Velocity		
h_1 (ft)	h_2 (ft)	Δl (ft)	Δh/Δl (ft/ft)	K_h(ft/day)	ηe	V (ft/year)[1]
234.62	218.01	1710	0.010	0.41	0.20	7.27

Notes:
ft = feet
ft/day = feet per day
ft/ft = feet per foot
h1 and h2 = groundwater elevation for MW-U1 and MW-D1, respectively.
Δh/Δl = hydraulic gradient
K_h = hydraulic conductivity of 0.59 ft/day estimated using slug testing in monitoring wells.
Δl = distance between MW-U1 and MW-D1.
ηe = effective porosity (estimated based on fine-grained sand aquifer) (Kresic, 2007)
V = groundwater flow velocity
(1) Groundwater flow velocity equation: $V = [K * (\Delta h/\Delta l)] / \eta e$

Table 4. Appendix III Analytical Data Summary - Sampling Performed on April 29, 2019
Crisp County Power Commission
Plant Crisp Ash Pond

Appendix III to 40 CFR Part 257 - Constituents for Detection Monitoring

Constituent	Unit	MCL[1,2]	MDL[3]	Upgradient Well ID	Downgradient Well ID			
				MW-U1	MW-D1	MW-D2	MW-D3	
							MW-D3	DUP-12
Boron	mg/L	N/A	0.021	ND	0.17	0.15	0.25	0.24
Calcium	mg/L	N/A	0.13[4]	34	28	2	110	110
Chloride	mg/L	N/A	1.4	<2 (1.4 J)	2.1	4.8	4	4.3
Fluoride	mg/L	4	0.032	ND	<0.1 (0.060 J)	<0.1 (0.060 J)	0.11	0.11
Sulfate	mg/L	N/A	1.4	ND	28	19	29	29
pH	mg/L	N/A	--	7.98	6.15	6.89	7.14	7.14
Total Dissolved Solids	mg/L	N/A	3.4	120	120	360	370	380

Notes:

J - result is less than the reporting level but greater than or equal to the MDL and the concentration is an approximate value.

1. MCLs indicate USEPA maximum contaminant levels. MCLs are established under 40 CFR §141.62 and 40 CFR§141.66.
2. N/A indicates constituent does not have an MCL.
3. MDL indicates minimum detection limit, which is the minimum concentration of analyte that can be measured and reported.
4. Value shown represents MDL for MW-D1, MW-D3, and MW-U1. Due to dilution of the sample, the MDL for calcium in MW-D2 is 0.25 mg

-- There is no MDL for pH. Groundwater pH was measured in the field using a Horiba U-53 water quality meter.

Table 5. Appendix IV Analytical Data Summary - Sampling Performed on April 29, 2019
Crisp County Power Commission
Plant Crisp Ash Pond

Appendix IV to 40 CFR Part 257 - Constituents for Assessment Monitoring

Constituent	Unit	MCL[1]	MDL[3]	Upgradient Well ID	Downgradient Well ID			
				MW-U1	MW-D1	MW-D2	MW-D3	
							MW-D3	DUP-12
Antimony	mg/L	0.006	0.0010	ND	ND	ND	ND	ND
Arsenic	mg/L	0.01	0.00046	ND	ND	ND	<0.0013 (0.00048 J)	ND
Barium	mg/L	2	0.00049	<0.0025 (0.0018 J)	0.015	0.16	0.10	0.10
Beryllium	mg/L	0.004	0.00034	ND	ND	ND	ND	ND
Cadmium	mg/L	0.005	0.00034	ND	ND	ND	ND	ND
Chromium	mg/L	0.1[4]	0.0011	<0.0025 (0.0011 J)	ND	ND	ND	ND
Cobalt	mg/L	0.006[2]	0.00040	ND	ND	ND	<0.0025 (0.0013 J)	<0.0025 (0.00092 J)
Fluoride	mg/L	4	0.032	ND	<0.10 (0.06 J)	<0.10 (0.06 J)	0.11	0.11
Lead	mg/L	0.015[5]	0.00035	ND	ND	ND	ND	ND
Lithium	mg/L	0.04[2]	0.0011	ND	ND	<0.0025 (0.0011 J)	<0.0025 (0.0013 J)	<0.0025 (0.0013 J)
Mercury	mg/L	0.002[6]	0.00007	ND	ND	ND	ND	ND
Molybdenum	mg/L	0.1[2]	0.002	ND	ND	ND	ND	ND
Radium 226 and 288 Combined	pCi/L	5	--[7]	0.328 U	0.112 U	0.00521 U	0.594	0.324 U
Selenium	mg/L	0.05	0.00071	ND	ND	ND	ND	ND
Thallium	mg/L	0.002	0.000085	ND	ND	ND	<0.0005 (0.00011 J)	<0.0005 (0.00011 J)

Notes:

ND - the substance was not detected above the analytical method detection limit (MDL).

J - concentration is less than the reporting level but greater than or equal to the MDL and the concentration is an approximate value.

U - result is less than the sample detection limit.

1. MCLs indicate USEPA maximum contaminant levels. MCLs are established under 40 CFR §141.62 and 40 CFR§141.66.
2. USEPA's health-based level as Groundwater Protection Standard (40 CFR §257.95 (h)(2)).
3. MDL indicates minimum detection limit, which is the minimum concentration of analyte that can be measured and reported.
4. MCL value for total chromium.
5. Lead Treatment Technology Action Level is 0.0015 mg/L.
6. Value for inorganic mercury.
7. During the analysis of radium, background concentrations are substracted, thus each sample have a different Minimum Detectable Concentration (MDC). The MDCs were as follows: 0.386 pCi/L for MW-U1, 0.457 pCi/L for MW-D1, 0.420 pCi/L for MW-D2, 0.357 pCi/L for MW-D3, and 0.387 pCi/L for DUP-12.

Table 6. Appendix III Analytical Data Summary - Sampling Performed on October 23, 2019
Crisp County Power Commission
Plant Crisp Ash Pond

Appendix III to 40 CFR Part 257 - Constituents for Detection Monitoring

Constituent	Unit	MCL[1,2]	MDL[3]	Upgradient Well ID	Downgradient Well ID			
				MW-U1	MW-D1	MW-D2		MW-D3
						MW-D2	DUP-13	
Boron	mg/L	N/A	0.0036-0.018	<0.01 (0.0051 J)	0.033	0.19	0.18	0.27
Calcium	mg/L	N/A	0.13-1.3	38	80	130 B^	120 B^	120 B^
Chloride	mg/L	N/A	1.4	1.8 J	4.1	6.1	6.0	5
Fluoride	mg/L	4	0.032	<0.1 (0.05 JB)	0.12 B	<0.1 (0.05 JB)	<0.1 (0.05 JB)	0.10 B
Sulfate	mg/L	N/A	1.4	2.8 J	26	20	20	31
pH	mg/L	N/A	--	7.54	6.78	6.60	6.60	6.72
Total Dissolved Solids	mg/L	N/A	3.4	120	240	360	490	360

Notes:
The pH value presented was recorded at the time of sample collection in the field.
B - Compound was found in the blank and sample.
J - Result is less than the reporting level but greater than or equal to the MDL and the concentration is an approximate value.
^ - Instrument related QC is outside acceptance limits.
1. MCLs indicate USEPA maximum contaminant levels. MCLs are established under 40 CFR §141.62 and 40 CFR§141.66.
2. N/A indicates constituent does not have an MCL.
3. MDL indicates minimum detection limit, which is the minimum concentration of analyte that can be measured and reported.

-- There is no MDL for pH.

Table 7. Appendix IV Analytical Data Summary - Sampling Performed on October 23, 2019
Crisp County Power Commission
Plant Crisp Ash Pond

Appendix IV to 40 CFR Part 257 - Constituents for Assessment Monitoring

Constituent	Unit	MCL[1]	MDL[2]	Upgradient Well ID	Downgradient Well ID			
				MW-U1	MW-D1	MW-D2		MW-D3
						MW-D2	DUP-13	
Arsenic	mg/L	0.01	0.00039	ND	ND	ND	ND	<0.0013 (0.00076 J)
Barium	mg/L	2	0.0007	<0.0025 (0.0022 J)	0.027	0.14	0.14	0.13
Chromium	mg/L	0.1[3]	0.001	ND	ND	ND	ND	ND
Cobalt	mg/L	0.006[4]	0.00056	ND ^	ND	ND ^	ND ^	<0.0025 (0.0012 J)
Fluoride	mg/L	4	0.032	<0.10 (0.050 JB)	0.12 B	<0.10 (0.05 JB)	<0.10 (0.050 JB)	0.10 B
Lithium	mg/L	0.04[4]	0.0019	ND ^	ND	ND	ND	ND
Radium 226 and 288 Combined	pCi/L	5	--[5]	-0.154 U	0.0596 U	0.372 U	0.397 U	0.315 U
Thallium	mg/L	0.002	0.00012	ND	ND	<0.0005 (0.00026 J)	<0.0005 (0.00025 J)	<0.0005 (0.00017 J)

Notes:

ND - the substance was not detected above the analytical method detection limit.

B - Compound was found in the blank and sample.

J - result is less than the reporting level but greater than or equal to the MDL and the concentration is an approximate value.

U - result is less than the sample detection limit.

^ - Instrument related QC is outside acceptance limits.

1. MCLs indicate USEPA maximum contaminant levels. MCLs are established under 40 CFR §141.62 and 40 CFR§141.66.
2. MDL indicates minimum detection limit, which is the minimum concentration of analyte that can be measured and reported.
3. MCL value for total chromium.
4. USEPA's health-based level as Groundwater Protection Standard (40 CFR §257.95 (h)(2)).
5. During the analysis of radium, background concentrations are substracted, thus each sample have a different Minimum Detectable Concentration (MDC). The MDCs were as follows: 0.508 pCi/L for MW-U1, 0.439 pCi/L for MW-D1, 0.484 pCi/L for MW-D2, and 0.465 pCi/L for MW-D3.

Table 8. Summary of Basic Groundwater Statistics and GWPS for Appendix IV Constituents
Crisp County Power Commission
Plant Crisp Ash Pond

Appendix IV to Part 257 - Constituents for Assessment Monitoring	Well ID	Number of Samples	Number of Non-detects	% Non-detects	Minimum	Maximum	Upper Tolerance Limit	Maximum Contaminant Level (MCL established under 40 CFR §161.62 and 40 CFR §141.66) or Groundwater Protection Standard (GWPS listed under 40 CFR §257.95(h)(2))	Selected Groundwater Protection Standard (GWPS) for the Site
Antimony [mg/L]	MW-U1	10	10	100%	<0.0025	<0.0025	0.0025	0.006	0.006
	MW-D1	10	10	100%	<0.0025	<0.0025			
	MW-D2	10	10	100%	<0.0025	<0.0025			
	MW-D3	10	10	100%	<0.0025	<0.0025			
Arsenic [mg/L]	MW-U1	12	11	92%	0.00046 (J)	<0.0013	0.0013	0.01	0.01
	MW-D1	12	12	100%	<0.0013	<0.0013			
	MW-D2	12	9	75%	0.00048 (J)	<0.0013			
	MW-D3	13	2	15%	0.00048 (J)	0.0016			
Barium [mg/L]	MW-U1	13	0	0%	0.002	0.0034	0.0037	2	2
	MW-D1	13	0	0%	0.0095	0.027			
	MW-D2	13	0	0%	0.087	0.190			
	MW-D3	13	0	0%	0.100	0.230			
Beryllium [mg/L]	MW-U1	10	10	100%	<0.002	<0.0025	0.002	0.004	0.004
	MW-D1	10	10	100%	<0.002	<0.0025			
	MW-D2	10	10	100%	<0.002	<0.0025			
	MW-D3	10	10	100%	<0.002	<0.0025			
Cadmium [mg/L]	MW-U1	10	10	100%	<0.001	<0.0025	0.001	0.005	0.005
	MW-D1	10	10	100%	<0.001	<0.0025			
	MW-D2	10	10	100%	<0.001	<0.0025			
	MW-D3	10	10	100%	<0.001	<0.0025			
Chromium [mg/L]	MW-U1	11	0	0%	0.0011	0.0051	0.0051	0.1	0.1
	MW-D1	11	10	91%	<0.0025	0.0034			
	MW-D2	11	10	91%	<0.0025	0.0038			
	MW-D3	11	10	91%	<0.0025	0.0029			
Cobalt [mg/L]	MW-U1	12	12	100%	<0.0005	<0.0025	0.0025	0.006	0.0025*
	MW-D1	12	12	100%	<0.0025	<0.0025			
	MW-D2	12	11	92%	0.00047 (J)	<0.0025			
	MW-D3	13	0	0%	0.00079 (J)	0.0017 (J)			
Fluoride [mg/L]	MW-U1	13	1	8%	0.040	0.100	0.084	4	4
	MW-D1	13	0	0%	0.040	0.120			
	MW-D2	13	0	0%	0.040	0.070			
	MW-D3	13	0	0%	0.060	0.130			
Lead [mg/L]	MW-U1	10	9	90%	0.00065 (J)	<0.0013	0.0013	0.015	0.0013*
	MW-D1	10	9	90%	0.0008 (J)	<0.0013			
	MW-D2	10	8	80%	0.00037 (J)	<0.0013			
	MW-D3	10	10	100%	<0.0013	<0.0013			
Lithium [mg/L]	MW-U1	11	10	91%	0.00034 (J)	<0.0025	0.0025	0.04	0.0025*
	MW-D1	11	11	100%	<0.0025	<0.005			
	MW-D2	11	10	91%	<0.0025	<0.005			
	MW-D3	11	10	91%	<0.0025	<0.005			
Mercury [mg/L]	MW-U1	10	9	90%	0.000099 (J)	<0.0002	0.0002	0.002	0.002
	MW-D1	10	9	90%	0.000077 (J)	<0.0002			
	MW-D2	10	8	80%	0.00011 (J)	<0.0002			
	MW-D3	10	9	90%	0.00011 (J)	<0.0002			
Molybdenum [mg/L]	MW-U1	12	12	100%	<0.01	<0.01	0.01	0.10	0.01*
	MW-D1	12	12	100%	<0.01	<0.015			
	MW-D2	12	9	75%	0.0012 (J)	0.0025			
	MW-D3	12	2	17%	<0.01	0.0088			
Radium 226 and 228 228 Combined [pCi/L]	MW-U1	13	2	15%	0.000	0.614	0.695	5	5
	MW-D1	13	2	15%	0.099	0.816			
	MW-D2	13	1	8%	0.014	1.280			
	MW-D3	13	2	15%	0.050	1.280			
Selenium [mg/L]	MW-U1	11	5	45%	0.00039	<0.0013	0.001	0.05	0.05
	MW-D1	11	10	91%	0.00033 (J)	<0.0013			
	MW-D2	11	8	73%	0.00033 (J)	<0.0013			
	MW-D3	11	8	73%	0.00037 (J)	0.0028			
Thallium [mg/L]	MW-U1	12	12	100%	<0.0005	<0.0005	0.0005	0.002	0.002
	MW-D1	12	12	100%	<0.0005	<0.0005			
	MW-D2	13	4	31%	0.000085 (J)	<0.0005			
	MW-D3	13	0	0%	0.000095 (J)	0.00013 (J)			

Notes:
mg/L = milligrams per liter
pCi/L = picocuries per liter
ND = Not Detected
NA = Not Available
Highlighted cells show the background well (MW-U1).
J - Result is less than the reporting level but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.
*: The background level or UTL was selected as GWPS because USEPA's updated GWPS have not yet been incorporated under GA EPD Rule.

Table 9. Evaluation of SSLs for Appendix IV Constituents
Crisp County Power Commission
Plant Crisp Ash Pond

Appendix IV to Part 257 - Constituents for Assessment Monitoring	Well ID	Selected Groundwater Protection Standard (GWPS) for the Site (From Table 8)	Lower Confidence Limit if Detected During the 2019 Monitoring Period	Concentrations in Downgradient Well Show Statistically Significant Level (SSL) Above GWPS?
Antimony [mg/L]	MW-U1	0.006	Background Well	
	MW-D1		ND	No
	MW-D2		ND	No
	MW-D3		ND	No
Arsenic [mg/L]	MW-U1	0.01	Background Well	
	MW-D1		ND	No
	MW-D2		ND	No
	MW-D3		0.0005	No
Barium [mg/L]	MW-U1	2	Background Well	
	MW-D1		0.010	No
	MW-D2		0.118	No
	MW-D3		0.149	No
Beryllium [mg/L]	MW-U1	0.004	Background Well	
	MW-D1		ND	No
	MW-D2		ND	No
	MW-D3		ND	No
Cadmium [mg/L]	MW-U1	0.005	Background Well	
	MW-D1		ND	No
	MW-D2		ND	No
	MW-D3		ND	No
Chromium [mg/L]	MW-U1	0.1	Background Well	
	MW-D1		ND	No
	MW-D2		ND	No
	MW-D3		ND	No
Cobalt [mg/L]	MW-U1	0.0025	Background Well	
	MW-D1		ND	No
	MW-D2		ND	No
	MW-D3		0.001	No
Fluoride [mg/L]	MW-U1	4	Background Well	
	MW-D1		0.057	No
	MW-D2		0.050	No
	MW-D3		0.101	No
Lead [mg/L]	MW-U1	0.0013	Background Well	
	MW-D1		ND	No
	MW-D2		ND	No
	MW-D3		ND	No
Lithium [mg/L]	MW-U1	0.0025	Background Well	
	MW-D1		ND	No
	MW-D2		0.001	No
	MW-D3		0.001	No
Mercury [mg/L]	MW-U1	0.002	Background Well	
	MW-D1		ND	No
	MW-D2		ND	No
	MW-D3		ND	No
Molybdenum [mg/L]	MW-U1	0.01	Background Well	
	MW-D1		ND	No
	MW-D2		ND	No
	MW-D3		0.002	No
Radium 226 and 228 228 Combined [pCi/L]	MW-U1	5	Background Well	
	MW-D1		0.149	No
	MW-D2		0.229	No
	MW-D3		0.326	No
Selenium [mg/L]	MW-U1	0.05	Background Well	
	MW-D1		ND	No
	MW-D2		ND	No
	MW-D3		ND	No
Thallium [mg/L]	MW-U1	0.002	Background Well	
	MW-D1		ND	No
	MW-D2		0.0001	No
	MW-D3		0.0001	No

Notes:
mg/L = milligrams per liter
pCi/L = picocuries per liter
ND = Not Detected
Highlighted cells show the background well (MW-U1).

FIGURES

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community Aerial Photograph from June 2016.

Legend

- Groundwater Monitoring Well
- Ash Pond Limits
- CCPC Property Boundary

0 250 500 1,000 Feet

Groundwater Monitoring Well Location Map

Crisp County Power Commission
Warwick, Georgia

Geosyntec consultants
KENNESAW, GA

DATE:	JANUARY 2020
PROJECT NO.	GW6152
DOCUMENT NO.	GA 200017
FILE NO.	GW MONITORING WELL LOCATION MAP.MXD
FIGURE NO.	1

N:\Crisp County\GIS\MXD\2020\GW Monitoing Well Location Map.mxd 1/9/2020 9:09:50 AM

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community Aerial Photograph from June 2016.

Legend

- Groundwater Monitoring Well
- Groundwater Elevation Contour - 23 October 2019
- Groundwater Flow Direction
- Ash Pond Limits
- CCPC Property Boundary

0 250 500 1,000 Feet

Potentiometric Surface Map
October 23, 2019
Crisp County Power Commission
Warwick, Georgia

Geosyntec consultants
KENNESAW, GA

DATE:	JANUARY 2020
PROJECT NO.	GW6152
DOCUMENT NO.	GA 200017
FILE NO.	OCTOBER 2020 POTENTIOMETRIC SURFACE MAP.MXD
FIGURE NO.	2

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APPENDIX A

Field Groundwater Sampling Forms

WATER LEVEL MEASUREMENTS

Site Name: CRISP CO. POWER
Location: WARWICK, GA
Date: 4/29/19
Sampling Personnel: S. RANDALL
Field Conditions:

Well ID	Time	TOC Elevation	Depth to Water (ft)	Well Depth (ft)	GW Elevation	Field Observations
MW-D3	0825		5.92	22.52		
MW-D2	0830		12.68	22.4		
MW-D1	0835		14.38	22.6		
MW-U1	0840		11.47	37.15		
		END	OF DAY	CHECKS		
MW-D3	1443		6.06	22.52		
MW-D2	1448		12.74	22.4		
MW-D1	1453		14.37	22.6		
MW-U1	1458		11.47	37.15		

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME:	Crisp County Power Commision	SITE LOCATION:	961 Power Dam Rd Warwick, GA 31796
WELL NO:	MW-D1	SAMPLE ID:	MW-D1-20190429
		DATE:	4/29/19

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
2	0.25	12.6 feet to 22.6 feet	14.38	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (22.6 feet – 14.38 8.22 feet) X 0.16 gallons/foot = 1.32 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
17'	17'	1145	1215	1.98

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ ODOR (describe)
1145	0.0	0.0	0.066	14.6	6.49	22.07	212	5.20	19	144	
1205	0.33	1.32	0.066	14.55	6.21	21.09	217	2.32	3	182	
1210	0.33	1.65	0.066	14.55	6.18	21.77	216	2.23	1	187	
1215	0.33	1.98	0.066	14.55	6.15	21.85	215	2.08	1	192	

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
Stephen Randall/Geosyntec	Stephen W. Randall	1220	1235

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N)	FILTER SIZE: ____ µm
17'	LDPE	Filtration Equipment Type:	

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N (replaced)) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	HDPE	1.9 L	HNO3	---	---	9315, 9320, Ra226_Ra228	APP	250
	1	HDPE	1 L	---	---	---	SM 4500	APP	250
	1	HDPE	0.25 L	HNO3	---	---	6020, 7470A	APP	250

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME:	Crisp County Power Commision	SITE LOCATION:	961 Power Dam Rd Warwick, GA 31796
WELL NO:	MW-D2	SAMPLE ID:	MW-D2-20190429
		DATE:	4/29/19

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
2	0.25	12.4 feet to 22.4 feet	12.68	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (22.4 feet − 12.68 feet) X 9.72 0.16 gallons/foot = 1.55 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
17'	17'	0905	0935	2.16

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ ODOR (describe)
0905	0.0	0.0	0.066	12.9	7.19	17.49	653	2.72	3	50	
0925	0.33	1.5	0.066	13.56	6.84	18.23	666	0.23	2	63	
0930	0.33	1.83	0.066	13.9	6.87	18.29	663	0.21	2	69	
0935	0.33	2.16	0.066	14.1	6.89	18.32	663	0.19	2	72	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
Stephen Randall/Geosyntec	Stephen W. Randall	0940	0956

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
17'	LDPE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N (replaced)) DUPLICATE: (Y) (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	HDPE	1.9 L	HNO3	---	---	9315, 9320, Ra226_Ra228	APP	250
	1	HDPE	1 L	---	---	---	SM 4500	APP	250
	1	HDPE	0.25 L	HNO3	---	---	6020, 7470A	APP	250

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME:	Crisp County Power Commision	SITE LOCATION:	961 Power Dam Rd Warwick, GA 31796
WELL NO:	MW-03	SAMPLE ID:	MW-03-2019 0429
DATE:	4/29/19		

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
2	0.25	12.5 feet to 22.5 feet	5.92	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (22.5 feet – 5.92 feet) X 0.16 gallons/foot = 2.65 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
17'	17'	1007	1047	3.31

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ ODOR (describe)
1007	0.0	0.0	0.066	6.55	7.22	19.29	628	2.00	8	127	
1037	0.33	2.65	0.066	8.14	7.15	20.55	617	0.00	7	88	
1042	0.33	2.98	0.066	8.35	7.14	21.06	610	0.00	6	84	
1047	0.33	3.31	0.066	8.27	7.14	21.51	601	0.00	6	82	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
Stephen Randall/Geosyntec	Stephen W. Randall	1055	1126

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
17'	LDPE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N (replaced)) DUPLICATE: (Y) N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	HDPE	1 L	HNO3	---	---	9315, 9320, Ra226_Ra228	APP	250
	1	HDPE	1 L	---	---	---	SM 4500	APP	250
	1	HDPE	0.25 L	HNO3	---	---	6020, 7470A	APP	250
DUP-12-2019	1	HDPE	1 L	HNO3	—	—	9315, 9320, Ra226, Ra228	APP	250
0429	1	HDPE	1 L	—	—	—	SM 4500	APP	250
	1	HDPE	0.25 L	HNO3	—	—	6020, 7470A	APP	250

REMARKS:
DUP-12 TIME ON COC IS 0800 DUP-12-20190429

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME:	Crisp County Power Commision	SITE LOCATION:	961 Power Dam Rd Warwick, GA 31796
WELL NO:	MW-U1	SAMPLE ID:	MW-U1-20181129
DATE:	4/29/19		

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 37.1 feet to feet	STATIC DEPTH TO WATER (feet): 11.47	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (37.1 feet − 11.47 25.6 feet) X 0.16 gallons/foot = 4.10 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 32.1	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 32.1	PURGING INITIATED AT: 1252	PURGING ENDED AT: 1405	TOTAL VOLUME PURGED (gallons): 4.76

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ ODOR (describe)
1252	0.0	0.0	0.066	11.74	7.84	22.86	190	7.24	3	159	
1355	0.33	4.10	0.066	12.00	7.97	24.14	188	7.45	1	158	
1400	0.33	4.43	0.066	12.01	7.98	24.22	187	7.47	1	158	
1405	0.33	4.76	0.066	12.01	7.98	24.36	187	7.43	1	159	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
Stephen Randall/Geosyntec	Stephen W. Randall	1410	1430

PUMP OR TUBING DEPTH IN WELL (feet): 32.1	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE: ____ µm

FIELD DECONTAMINATION: PUMP Y N TUBING Y N (replaced) DUPLICATE: Y N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	HDPE	1.9 L	HNO3	---	---	9315, 9320, Ra226_Ra228	APP	250
	1	HDPE	1 L	---	---	---	SM 4500	APP	250
	1	HDPE	0.25 L	HNO3	---	---	6020, 7470A	APP	250

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

WATER LEVEL MEASUREMENTS

Site Name: CRISP CO. POWER
Location: WARWICK, GA
Date: 10/23/19

Sampling Personnel: S. RANDALL
Field Conditions: CLEAR, COLD 49°

Well ID	Time	TOC Elevation	Depth to Water (ft)	Well Depth (ft)	GW Elevation	Field Observations
MW-D3	0830		7.7	22.52		
MW-D2	0835		14.65	22.4		
MW-D1	0840		16.08	22.6		
MW-U1	0845		14.9	37.15		
	END	OF	DAY	LEVELS		
MW-D3	1510		7.81	22.52		
MW-D2	1515		14.7	22.4		
MW-D1	1520		16.44	22.6		
MW-U1	1528		14.91	37.15		

GROUNDWATER SAMPLING LOG

SITE NAME: CRISP COUNTY POWER COMMISSION	SITE LOCATION: 961 Power Dam Road, Warwick, GA 31796	
WELL NO: MW-41	SAMPLE ID: MW-41-20191023	DATE: 10/23/19

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 27.15 feet to 37.15 feet	STATIC DEPTH TO WATER (feet): 14.9	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable) = (37.15 feet – 14.9 22.25 feet) X 0.16 gallons/foot = 3.5 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 32.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 32.0	PURGING INITIATED AT: 1325	PURGING ENDED AT: 1432	TOTAL VOLUME PURGED (gallons): 4.82

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1325	0.0	0.0	0.066	14.93	7.62	23.42	210	11.51	4	CLEAR	NONE
1412	3.5	3.5	0.066	15.72	7.49	22.96	204	7.61	1	"	"
1417	.33	3.83	0.066	15.68	7.53	22.96	204	7.58	1	"	"
~~1422~~	~~.33~~	~~4.16~~	~~0.066~~	~~15.68~~	~~7.~~						(SM)
1422	.33	4.16	0.066	15.63	7.56	23.11	203	7.49	1	"	"
1427	.33	4.49	0.066	15.59	7.53	23.10	203	7.51	1	"	"
1432	.33	4.82	0.066	15.55	7.54	23.13	203	7.48	1	"	"

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: STEPHEN W. RANDALL	SAMPLER(S) SIGNATURE(S): Stephen W. Randall	SAMPLING INITIATED AT: 1435	SAMPLING ENDED AT: 1455
PUMP OR TUBING DEPTH IN WELL (feet): 32.0	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: _____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	HDPE	1.9L	HNO3	----	7.54	9315, 9320, Ra226, Ra228	APP	250
	1	HDPE	1.0L	NONE	----	7.54	SM 4500	APP	250
	1	HDPE	0.25L	HNO3	----	7.54	6020	APP	250

FIELD SAMPLING CONDITIONS:

1. Well Sign Present: ✓ Yes _____ No
2. Well Access: CLEARED, GRASS MOWED
3. Sampling & Purging Equipment Condition: GOOD
4. Site Condition that may Affect Sampling Present? _____ Yes (describe below) ✓ No

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SESDPROC-301-R4)

pH: ± 0.1 units **Specific Conductance:** ± 5% **Dissolved Oxygen:** 0.2 mg/L or 10% change in saturation (whichever is greater) **Turbidity:** readings ≤ 10 NTU; **ORP:** ± 20 mV.

GROUNDWATER SAMPLING LOG

SITE NAME: **CRISP COUNTY POWER COMMISSION**	SITE LOCATION: **961 Power Dam Road, Warwick, GA 31796**	
WELL NO: MW-D1	SAMPLE ID: MW-D1-20191023	DATE: 10/23/19

PURGING DATA

WELL DIAMETER (inches): **2**	TUBING DIAMETER (inches): **0.25**	WELL SCREEN INTERVAL DEPTH: 12.6 feet to 22.6 feet	STATIC DEPTH TO WATER (feet): 16.08	PURGE PUMP TYPE OR BAILER: **PP**

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable) = (22.6 feet – 16.08 6.52 feet) X **0.16** gallons/foot = 1.0 (1.04) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 17'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18.5'	PURGING INITIATED AT: 1157	PURGING ENDED AT: 1250	TOTAL VOLUME PURGED (gallons): 1.99

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1220	0.0	0.0	0.066	16.08	6.94	24.94	444	1.04	7	CLEAR	NONE
1235	1.0	1.0	0.066	16.52	6.72	24.35	437	1.05	3	CLEAR	NONE
1240	.33	1.33	0.066	16.82	6.73	24.19	438	1.03	1	CLEAR	NONE
1245	.33	1.66	0.066	17.18	6.75	24.06	443	1.00	1	CLEAR	NONE
1250	.33	1.99	0.066	17.35	6.78	23.91	446	.98	1	CLEAR	NONE

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: STEPHEN W. RANDALL	SAMPLER(S) SIGNATURE(S): Stephen W. Randall	SAMPLING INITIATED AT: 1255	SAMPLING ENDED AT: 1310
PUMP OR TUBING DEPTH IN WELL (feet): 18.5'	TUBING MATERIAL CODE: **LDPE**	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: _____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	HDPE	1.9L	HNO3	----	6.78	9315, 9320, Ra226, Ra228	APP	250
	1	HDPE	1.0L	NONE	----	6.78	SM 4500	APP	250
	1	HDPE	0.25L	HNO3	----	6.78	6020	APP	250

FIELD SAMPLING CONDITIONS:

1. Well Sign Present: ✓ Yes _____ No
2. Well Access: CLEARED, GRASS MOWED
3. Sampling & Purging Equipment Condition: GOOD
4. Site Condition that may Affect Sampling Present? _____ Yes (describe below) ✓ No

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SESDPROC-301-R4)

pH: ± 0.1 units **Specific Conductance:** ± 5% **Dissolved Oxygen:** 0.2 mg/L or 10% change in saturation (whichever is greater) **Turbidity:** readings ≤ 10 NTU; **ORP:** ± 20 mV.

0800 DUP-13-20191023

GROUNDWATER SAMPLING LOG

SITE NAME: CRISP COUNTY POWER COMMISSION	SITE LOCATION: 961 Power Dam Road, Warwick, GA 31796	
WELL NO: MW-D2	SAMPLE ID: MW-D2-20191023	DATE: 10/23/19

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 12.4 feet to 22.4 feet	STATIC DEPTH TO WATER (feet): 14.65	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable) = (22.4 feet – 14.65 7.75 feet) X 0.16 gallons/foot = 1.25 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 17'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 17'	PURGING INITIATED AT: 0913	PURGING ENDED AT: 0949	TOTAL VOLUME PURGED (gallons): 2.49

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
0913	Ø	Ø	0.066	15.0	6.98	20.36	682	5.16	5.0	CLEAR	NONE
0934	1.5	1.5	0.066	15.32	6.73	21.49	676	1.25	3	"	"
0939	.33	1.83	0.066	15.61	6.65	21.77	679	1.25	2	"	"
0944	.33	2.16	0.066	15.80	6.62	21.85	681	1.20	1	"	"
0949	.33	2.49	0.066	15.92	6.60	21.99	682	1.20	1	"	"

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: STEPHEN W. RANDALL	SAMPLER(S) SIGNATURE(S): Stephen W. Randall	SAMPLING INITIATED AT: 0955	SAMPLING ENDED AT: 1030
PUMP OR TUBING DEPTH IN WELL (feet): 17'	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: _____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: (Y) N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	HDPE	1.9L	HNO3	----	6.60	9315, 9320, Ra226, Ra228	APP	250
	1	HDPE	1.0L	NONE	----	6.60	SM 4500	APP	250
	1	HDPE	0.25L	HNO3	----	6.60	6020	APP	250

FIELD SAMPLING CONDITIONS:

1. Well Sign Present: ✓ Yes _____ No
2. Well Access: CLEARED, GRASS MOWED
3. Sampling & Purging Equipment Condition: GOOD
4. Site Condition that may Affect Sampling Present? _____ Yes (describe below) ✓ No

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SESDPROC-301-R4)
pH: ± 0.1 units **Specific Conductance:** ± 5% **Dissolved Oxygen:** 0.2 mg/L or 10% change in saturation (whichever is greater) **Turbidity:** readings ≤ 10 NTU; **ORP:** ± 20 mV.

GROUNDWATER SAMPLING LOG

SITE NAME: CRISP COUNTY POWER COMMISSION	SITE LOCATION: 961 Power Dam Road, Warwick, GA 31796	
WELL NO: MW-D3	SAMPLE ID: MW-D3-20191023	DATE: 10/23/19

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 12.5 feet to 22.5 feet	STATIC DEPTH TO WATER (feet): 7.9	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable) = (22.5 feet – 7.9 14.6 feet) X 0.16 gallons/foot = 2.5 (2.33) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 17'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 17'	PURGING INITIATED AT: 1039	PURGING ENDED AT: 1128	TOTAL VOLUME PURGED (gallons): 3.49

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1039	Ø	Ø	0.066	8.75	6.96	23.59	581	8.35	15	CLEAR	NONE
1113	2.5	2.5	0.066	10.23	6.82	25.82	593	0.25	2	"	"
1118	0.33	2.83	0.066	10.27	6.76	26.17	589	0.16	1	"	"
1123	0.33	3.16	0.066	10.33	6.75	26.41	586	0.17	1	"	"
1128	0.33	3.49	0.066	10.38	6.72	26.91	583	0.13	1	"	"

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: STEPHEN W. RANDALL	SAMPLER(S) SIGNATURE(S): Stephen W. Randall	SAMPLING INITIATED AT: 1130	SAMPLING ENDED AT: 1145
PUMP OR TUBING DEPTH IN WELL (feet): 17'	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: _____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	HDPE	1.9L	HNO3	----	6.72	9315, 9320, Ra226, Ra228	APP	250
	1	HDPE	1.0L	NONE	----	6.72	SM 4500	APP	250
	1	HDPE	0.25L	HNO3	----	6.72	6020	APP	250

FIELD SAMPLING CONDITIONS:

1. Well Sign Present: ✓ Yes _____ No
2. Well Access: CLEARED, GRASS MOWED
3. Sampling & Purging Equipment Condition: GOOD
4. Site Condition that may Affect Sampling Present? _____ Yes (describe below) ✓ No

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SESDPROC-301-R4)
pH: ± 0.1 units **Specific Conductance:** ± 5% **Dissolved Oxygen:** 0.2 mg/L or 10% change in saturation (whichever is greater) **Turbidity:** readings ≤ 10 NTU; **ORP:** ± 20 mV.

APPENDIX B

Laboratory Analytical Reports

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

Laboratory Job ID: 400-169546-1
Laboratory SDG: Crisp County Power Cooperative
Client Project/Site: CCR App.III/IV GW Monitoring

For:
Geosyntec Consultants, Inc.
1255 Roberts Blvd, NW
Suite 200
Kennesaw, Georgia 30144

Attn: Dawit Yifru

Cheyenne Whitmire

Authorized for release by:
5/20/2019 3:55:00 PM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

Table of Contents

Job ID: 400-169546-1

Laboratory: Eurofins TestAmerica, Pensacola

Narrative

Job Narrative
400-169546-1

Metals

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 440793 and analytical batch 440957 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 6020: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-D2-20190429 (400-169546-2). Elevated reporting limits (RLs) are provided.

Method(s) 7470A: The matrix spike duplicate (MSD) recoveries for preparation batch 440417 and analytical batch 440709 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Detection Summary

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-169546-1
SDG: Crisp County Power Cooperative

Client Sample ID: DUP-12-20190429 — Lab Sample ID: 400-169546-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.10		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.24		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	110		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00092	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0013	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Thallium	0.00011	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	380		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	4.3		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.11		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	29		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.55				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-D2-20190429 — Lab Sample ID: 400-169546-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.16		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.15		0.050	0.021	mg/L	5		6020	Total Recoverable
Lithium	0.0011	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Calcium - DL	2.0		0.50	0.25	mg/L	10		6020	Total Recoverable
Total Dissolved Solids	360		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	4.8		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.060	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	19		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	7.19				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-D3-20190429 — Lab Sample ID: 400-169546-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00048	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.10		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.25		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	110		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0013	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0013	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Thallium	0.00011	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	370		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	4.0		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.11		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	29		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-169546-1
SDG: Crisp County Power Cooperative

Client Sample ID: MW-D3-20190429 (Continued)

Lab Sample ID: 400-169546-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Field pH	8.27				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-D1-20190429

Lab Sample ID: 400-169546-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.015		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.17		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	28		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	120		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	2.1		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.060	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	28		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.49				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-U1-20190429

Lab Sample ID: 400-169546-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0018	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	34		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0011	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	120		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	1.4	J	2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	7.84				SU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-169546-1
SDG: Crisp County Power Cooperative

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN
SM 4500 Cl- E	Chloride, Total	SM	TAL PEN
SM 4500 F C	Fluoride	SM	TAL PEN
SM 4500 SO4 E	Sulfate, Total	SM	TAL PEN
Field Sampling	Field Sampling	EPA	TAL PEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-169546-1
SDG: Crisp County Power Cooperative

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-169546-1	DUP-12-20190429	Water	04/29/19 08:00	05/01/19 08:52
400-169546-2	MW-D2-20190429	Water	04/29/19 09:40	05/01/19 08:52
400-169546-3	MW-D3-20190429	Water	04/29/19 10:55	05/01/19 08:52
400-169546-4	MW-D1-20190429	Water	04/29/19 12:20	05/01/19 08:52
400-169546-5	MW-U1-20190429	Water	04/29/19 14:10	05/01/19 08:52

Client Sample ID: DUP-12-20190429

Date Collected: 04/29/19 08:00
Date Received: 05/01/19 08:52

Lab Sample ID: 400-169546-1

Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0025	0.0010	mg/L		05/14/19 12:20	05/14/19 20:09	5
Arsenic	ND		0.0013	0.00046	mg/L		05/14/19 12:20	05/14/19 20:09	5
Barium	**0.10**		0.0025	0.00049	mg/L		05/14/19 12:20	05/14/19 20:09	5
Beryllium	ND		0.0020	0.00034	mg/L		05/14/19 12:20	05/14/19 20:09	5
Boron	**0.24**		0.050	0.021	mg/L		05/14/19 12:20	05/14/19 20:09	5
Cadmium	ND		0.0010	0.00034	mg/L		05/14/19 12:20	05/14/19 20:09	5
Calcium	**110**		0.25	0.13	mg/L		05/14/19 12:20	05/14/19 20:09	5
Chromium	ND		0.0025	0.0011	mg/L		05/14/19 12:20	05/14/19 20:09	5
Cobalt	**0.00092**	**J**	0.0025	0.00040	mg/L		05/14/19 12:20	05/14/19 20:09	5
Lead	ND		0.0013	0.00035	mg/L		05/14/19 12:20	05/14/19 20:09	5
Lithium	**0.0013**	**J**	0.0025	0.0011	mg/L		05/14/19 12:20	05/14/19 20:09	5
Molybdenum	ND		0.010	0.0020	mg/L		05/14/19 12:20	05/14/19 20:09	5
Selenium	ND		0.0013	0.00071	mg/L		05/14/19 12:20	05/14/19 20:09	5
Thallium	**0.00011**	**J**	0.00050	0.000085	mg/L		05/14/19 12:20	05/14/19 20:09	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000070	mg/L		05/10/19 11:41	05/13/19 15:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**380**		5.0	3.4	mg/L			05/02/19 12:56	1
Chloride	**4.3**		2.0	1.4	mg/L			05/07/19 15:02	1
Fluoride	**0.11**		0.10	0.032	mg/L			05/14/19 13:44	1
Sulfate	**29**		5.0	1.4	mg/L			05/09/19 14:40	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**6.55**				SU			04/29/19 07:00	1

Client Sample ID: MW-D2-20190429

Date Collected: 04/29/19 09:40
Date Received: 05/01/19 08:52

Lab Sample ID: 400-169546-2

Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0025	0.0010	mg/L		05/14/19 12:20	05/14/19 20:13	5
Arsenic	ND		0.0013	0.00046	mg/L		05/14/19 12:20	05/14/19 20:13	5
Barium	**0.16**		0.0025	0.00049	mg/L		05/14/19 12:20	05/14/19 20:13	5
Beryllium	ND		0.0020	0.00034	mg/L		05/14/19 12:20	05/14/19 20:13	5
Boron	**0.15**		0.050	0.021	mg/L		05/14/19 12:20	05/14/19 20:13	5
Cadmium	ND		0.0010	0.00034	mg/L		05/14/19 12:20	05/14/19 20:13	5
Chromium	ND		0.0025	0.0011	mg/L		05/14/19 12:20	05/14/19 20:13	5
Cobalt	ND		0.0025	0.00040	mg/L		05/14/19 12:20	05/14/19 20:13	5
Lead	ND		0.0013	0.00035	mg/L		05/14/19 12:20	05/14/19 20:13	5
Lithium	**0.0011**	**J**	0.0025	0.0011	mg/L		05/14/19 12:20	05/14/19 20:13	5
Molybdenum	ND		0.010	0.0020	mg/L		05/14/19 12:20	05/14/19 20:13	5
Selenium	ND		0.0013	0.00071	mg/L		05/14/19 12:20	05/14/19 20:13	5
Thallium	ND		0.00050	0.000085	mg/L		05/14/19 12:20	05/14/19 20:13	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**2.0**		0.50	0.25	mg/L		05/14/19 12:20	05/15/19 09:13	10

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000070	mg/L		05/10/19 11:41	05/13/19 15:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**360**		5.0	3.4	mg/L			05/02/19 12:56	1
Chloride	**4.8**		2.0	1.4	mg/L			05/09/19 11:27	1
Fluoride	**0.060**	**J**	0.10	0.032	mg/L			05/08/19 13:26	1
Sulfate	**19**		5.0	1.4	mg/L			05/09/19 14:40	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**7.19**				SU			04/29/19 08:40	1

Client Sample ID: MW-D3-20190429

Lab Sample ID: 400-169546-3

Date Collected: 04/29/19 10:55
Matrix: Water
Date Received: 05/01/19 08:52

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0025	0.0010	mg/L		05/14/19 12:20	05/14/19 20:17	5
Arsenic	**0.00048**	**J**	0.0013	0.00046	mg/L		05/14/19 12:20	05/14/19 20:17	5
Barium	**0.10**		0.0025	0.00049	mg/L		05/14/19 12:20	05/14/19 20:17	5
Beryllium	ND		0.0020	0.00034	mg/L		05/14/19 12:20	05/14/19 20:17	5
Boron	**0.25**		0.050	0.021	mg/L		05/14/19 12:20	05/14/19 20:17	5
Cadmium	ND		0.0010	0.00034	mg/L		05/14/19 12:20	05/14/19 20:17	5
Calcium	**110**		0.25	0.13	mg/L		05/14/19 12:20	05/14/19 20:17	5
Chromium	ND		0.0025	0.0011	mg/L		05/14/19 12:20	05/14/19 20:17	5
Cobalt	**0.0013**	**J**	0.0025	0.00040	mg/L		05/14/19 12:20	05/14/19 20:17	5
Lead	ND		0.0013	0.00035	mg/L		05/14/19 12:20	05/14/19 20:17	5
Lithium	**0.0013**	**J**	0.0025	0.0011	mg/L		05/14/19 12:20	05/14/19 20:17	5
Molybdenum	ND		0.010	0.0020	mg/L		05/14/19 12:20	05/14/19 20:17	5
Selenium	ND		0.0013	0.00071	mg/L		05/14/19 12:20	05/14/19 20:17	5
Thallium	**0.00011**	**J**	0.00050	0.000085	mg/L		05/14/19 12:20	05/14/19 20:17	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000070	mg/L		05/10/19 11:41	05/13/19 15:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**370**		5.0	3.4	mg/L			05/02/19 12:56	1
Chloride	**4.0**		2.0	1.4	mg/L			05/09/19 11:27	1
Fluoride	**0.11**		0.10	0.032	mg/L			05/08/19 13:30	1
Sulfate	**29**		5.0	1.4	mg/L			05/09/19 14:40	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**8.27**				SU			04/29/19 09:55	1

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-169546-1
SDG: Crisp County Power Cooperative

Client Sample ID: MW-D1-20190429

Date Collected: 04/29/19 12:20
Date Received: 05/01/19 08:52

Lab Sample ID: 400-169546-4

Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0025	0.0010	mg/L		05/14/19 12:20	05/14/19 20:21	5
Arsenic	ND		0.0013	0.00046	mg/L		05/14/19 12:20	05/14/19 20:21	5
Barium	**0.015**		0.0025	0.00049	mg/L		05/14/19 12:20	05/14/19 20:21	5
Beryllium	ND		0.0020	0.00034	mg/L		05/14/19 12:20	05/14/19 20:21	5
Boron	**0.17**		0.050	0.021	mg/L		05/14/19 12:20	05/14/19 20:21	5
Cadmium	ND		0.0010	0.00034	mg/L		05/14/19 12:20	05/14/19 20:21	5
Calcium	**28**		0.25	0.13	mg/L		05/14/19 12:20	05/14/19 20:21	5
Chromium	ND		0.0025	0.0011	mg/L		05/14/19 12:20	05/14/19 20:21	5
Cobalt	ND		0.0025	0.00040	mg/L		05/14/19 12:20	05/14/19 20:21	5
Lead	ND		0.0013	0.00035	mg/L		05/14/19 12:20	05/14/19 20:21	5
Lithium	ND		0.0025	0.0011	mg/L		05/14/19 12:20	05/14/19 20:21	5
Molybdenum	ND		0.010	0.0020	mg/L		05/14/19 12:20	05/14/19 20:21	5
Selenium	ND		0.0013	0.00071	mg/L		05/14/19 12:20	05/14/19 20:21	5
Thallium	ND		0.00050	0.000085	mg/L		05/14/19 12:20	05/14/19 20:21	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000070	mg/L		05/10/19 11:41	05/13/19 15:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**120**		5.0	3.4	mg/L			05/02/19 12:56	1
Chloride	**2.1**		2.0	1.4	mg/L			05/09/19 11:27	1
Fluoride	**0.060**	**J**	0.10	0.032	mg/L			05/08/19 13:34	1
Sulfate	**28**		5.0	1.4	mg/L			05/09/19 14:40	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**6.49**				SU			04/29/19 11:20	1

Client Sample ID: MW-U1-20190429

Date Collected: 04/29/19 14:10
Date Received: 05/01/19 08:52

Lab Sample ID: 400-169546-5

Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0025	0.0010	mg/L		05/14/19 12:20	05/14/19 20:25	5
Arsenic	ND		0.0013	0.00046	mg/L		05/14/19 12:20	05/14/19 20:25	5
Barium	**0.0018**	**J**	0.0025	0.00049	mg/L		05/14/19 12:20	05/14/19 20:25	5
Beryllium	ND		0.0020	0.00034	mg/L		05/14/19 12:20	05/14/19 20:25	5
Boron	ND		0.050	0.021	mg/L		05/14/19 12:20	05/14/19 20:25	5
Cadmium	ND		0.0010	0.00034	mg/L		05/14/19 12:20	05/14/19 20:25	5
Calcium	**34**		0.25	0.13	mg/L		05/14/19 12:20	05/14/19 20:25	5
Chromium	**0.0011**	**J**	0.0025	0.0011	mg/L		05/14/19 12:20	05/14/19 20:25	5
Cobalt	ND		0.0025	0.00040	mg/L		05/14/19 12:20	05/14/19 20:25	5
Lead	ND		0.0013	0.00035	mg/L		05/14/19 12:20	05/14/19 20:25	5
Lithium	ND		0.0025	0.0011	mg/L		05/14/19 12:20	05/14/19 20:25	5
Molybdenum	ND		0.010	0.0020	mg/L		05/14/19 12:20	05/14/19 20:25	5
Selenium	ND		0.0013	0.00071	mg/L		05/14/19 12:20	05/14/19 20:25	5
Thallium	ND		0.00050	0.000085	mg/L		05/14/19 12:20	05/14/19 20:25	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000070	mg/L		05/10/19 11:41	05/13/19 15:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**120**		5.0	3.4	mg/L			05/02/19 12:56	1
Chloride	**1.4**	**J**	2.0	1.4	mg/L			05/09/19 11:27	1
Fluoride	ND		0.10	0.032	mg/L			05/08/19 13:36	1
Sulfate	ND		5.0	1.4	mg/L			05/09/19 14:40	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**7.84**				SU			04/29/19 13:10	1

Qualifiers

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-169546-1
SDG: Crisp County Power Cooperative

Client Sample ID: DUP-12-20190429
Date Collected: 04/29/19 08:00
Date Received: 05/01/19 08:52

Lab Sample ID: 400-169546-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			440793	05/14/19 12:20	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	440957	05/14/19 20:09	DRE	TAL PEN
Total/NA	Prep	7470A			440417	05/10/19 11:41	JAP	TAL PEN
Total/NA	Analysis	7470A		1	440709	05/13/19 15:12	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	439402	05/02/19 12:56	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	440002	05/07/19 15:02	CLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	440828	05/14/19 13:44	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	440319	05/09/19 14:40	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	441520	04/29/19 07:00	AW	TAL PEN

Client Sample ID: MW-D2-20190429
Date Collected: 04/29/19 09:40
Date Received: 05/01/19 08:52

Lab Sample ID: 400-169546-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			440793	05/14/19 12:20	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	440957	05/14/19 20:13	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		440793	05/14/19 12:20	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	10	440957	05/15/19 09:13	DRE	TAL PEN
Total/NA	Prep	7470A			440417	05/10/19 11:41	JAP	TAL PEN
Total/NA	Analysis	7470A		1	440709	05/13/19 15:16	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	439402	05/02/19 12:56	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	440287	05/09/19 11:27	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	440132	05/08/19 13:26	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	440319	05/09/19 14:40	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	441520	04/29/19 08:40	AW	TAL PEN

Client Sample ID: MW-D3-20190429
Date Collected: 04/29/19 10:55
Date Received: 05/01/19 08:52

Lab Sample ID: 400-169546-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			440793	05/14/19 12:20	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	440957	05/14/19 20:17	DRE	TAL PEN
Total/NA	Prep	7470A			440417	05/10/19 11:41	JAP	TAL PEN
Total/NA	Analysis	7470A		1	440709	05/13/19 15:17	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	439402	05/02/19 12:56	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	440287	05/09/19 11:27	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	440132	05/08/19 13:30	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	440319	05/09/19 14:40	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	441520	04/29/19 09:55	AW	TAL PEN

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-169546-1
SDG: Crisp County Power Cooperative

Client Sample ID: MW-D1-20190429
Date Collected: 04/29/19 12:20
Date Received: 05/01/19 08:52

Lab Sample ID: 400-169546-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			440793	05/14/19 12:20	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	440957	05/14/19 20:21	DRE	TAL PEN
Total/NA	Prep	7470A			440417	05/10/19 11:41	JAP	TAL PEN
Total/NA	Analysis	7470A		1	440709	05/13/19 15:19	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	439402	05/02/19 12:56	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	440287	05/09/19 11:27	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	440132	05/08/19 13:34	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	440319	05/09/19 14:40	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	441520	04/29/19 11:20	AW	TAL PEN

Client Sample ID: MW-U1-20190429
Date Collected: 04/29/19 14:10
Date Received: 05/01/19 08:52

Lab Sample ID: 400-169546-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			440793	05/14/19 12:20	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	440957	05/14/19 20:25	DRE	TAL PEN
Total/NA	Prep	7470A			440417	05/10/19 11:41	JAP	TAL PEN
Total/NA	Analysis	7470A		1	440709	05/13/19 15:21	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	439402	05/02/19 12:56	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	440287	05/09/19 11:27	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	440132	05/08/19 13:36	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	440319	05/09/19 14:40	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	441520	04/29/19 13:10	AW	TAL PEN

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Metals

Prep Batch: 440417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-169546-1	DUP-12-20190429	Total/NA	Water	7470A	
400-169546-2	MW-D2-20190429	Total/NA	Water	7470A	
400-169546-3	MW-D3-20190429	Total/NA	Water	7470A	
400-169546-4	MW-D1-20190429	Total/NA	Water	7470A	
400-169546-5	MW-U1-20190429	Total/NA	Water	7470A	
MB 400-440417/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-440417/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-169723-A-3-B MS	Matrix Spike	Total/NA	Water	7470A	
400-169723-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 440709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-169546-1	DUP-12-20190429	Total/NA	Water	7470A	440417
400-169546-2	MW-D2-20190429	Total/NA	Water	7470A	440417
400-169546-3	MW-D3-20190429	Total/NA	Water	7470A	440417
400-169546-4	MW-D1-20190429	Total/NA	Water	7470A	440417
400-169546-5	MW-U1-20190429	Total/NA	Water	7470A	440417
MB 400-440417/14-A	Method Blank	Total/NA	Water	7470A	440417
LCS 400-440417/15-A	Lab Control Sample	Total/NA	Water	7470A	440417
400-169723-A-3-B MS	Matrix Spike	Total/NA	Water	7470A	440417
400-169723-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	440417

Prep Batch: 440793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-169546-1	DUP-12-20190429	Total Recoverable	Water	3005A	
400-169546-2	MW-D2-20190429	Total Recoverable	Water	3005A	
400-169546-2 - DL	MW-D2-20190429	Total Recoverable	Water	3005A	
400-169546-3	MW-D3-20190429	Total Recoverable	Water	3005A	
400-169546-4	MW-D1-20190429	Total Recoverable	Water	3005A	
400-169546-5	MW-U1-20190429	Total Recoverable	Water	3005A	
MB 400-440793/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-440793/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-169685-B-1-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-169685-B-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 440957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-169546-1	DUP-12-20190429	Total Recoverable	Water	6020	440793
400-169546-2	MW-D2-20190429	Total Recoverable	Water	6020	440793
400-169546-2 - DL	MW-D2-20190429	Total Recoverable	Water	6020	440793
400-169546-3	MW-D3-20190429	Total Recoverable	Water	6020	440793
400-169546-4	MW-D1-20190429	Total Recoverable	Water	6020	440793
400-169546-5	MW-U1-20190429	Total Recoverable	Water	6020	440793
MB 400-440793/1-A ^5	Method Blank	Total Recoverable	Water	6020	440793
LCS 400-440793/2-A	Lab Control Sample	Total Recoverable	Water	6020	440793
400-169685-B-1-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	440793
400-169685-B-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	440793

General Chemistry

Analysis Batch: 439402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-169546-1	DUP-12-20190429	Total/NA	Water	SM 2540C	
400-169546-2	MW-D2-20190429	Total/NA	Water	SM 2540C	
400-169546-3	MW-D3-20190429	Total/NA	Water	SM 2540C	
400-169546-4	MW-D1-20190429	Total/NA	Water	SM 2540C	
400-169546-5	MW-U1-20190429	Total/NA	Water	SM 2540C	
MB 400-439402/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-439402/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-169546-3 DU	MW-D3-20190429	Total/NA	Water	SM 2540C	

Analysis Batch: 440002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-169546-1	DUP-12-20190429	Total/NA	Water	SM 4500 Cl- E	
MB 400-440002/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-440002/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-440002/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-169469-C-1 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-169469-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 440132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-169546-2	MW-D2-20190429	Total/NA	Water	SM 4500 F C	
400-169546-3	MW-D3-20190429	Total/NA	Water	SM 4500 F C	
400-169546-4	MW-D1-20190429	Total/NA	Water	SM 4500 F C	
400-169546-5	MW-U1-20190429	Total/NA	Water	SM 4500 F C	
MB 400-440132/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-440132/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-169698-G-4 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-169698-G-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 440287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-169546-2	MW-D2-20190429	Total/NA	Water	SM 4500 Cl- E	
400-169546-3	MW-D3-20190429	Total/NA	Water	SM 4500 Cl- E	
400-169546-4	MW-D1-20190429	Total/NA	Water	SM 4500 Cl- E	
400-169546-5	MW-U1-20190429	Total/NA	Water	SM 4500 Cl- E	
MB 400-440287/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-440287/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-440287/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-169640-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-169640-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 440319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-169546-1	DUP-12-20190429	Total/NA	Water	SM 4500 SO4 E	
400-169546-2	MW-D2-20190429	Total/NA	Water	SM 4500 SO4 E	
400-169546-3	MW-D3-20190429	Total/NA	Water	SM 4500 SO4 E	
400-169546-4	MW-D1-20190429	Total/NA	Water	SM 4500 SO4 E	
400-169546-5	MW-U1-20190429	Total/NA	Water	SM 4500 SO4 E	
MB 400-440319/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-440319/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-440319/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

General Chemistry (Continued)

Analysis Batch: 440319 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-169628-J-3 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-169628-J-3 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 440828

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-169546-1	DUP-12-20190429	Total/NA	Water	SM 4500 F C	
MB 400-440828/4	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-440828/5	Lab Control Sample	Total/NA	Water	SM 4500 F C	
240-112114-B-3 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
240-112114-B-3 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-169995-O-2 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Field Service / Mobile Lab

Analysis Batch: 441520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-169546-1	DUP-12-20190429	Total/NA	Water	Field Sampling	
400-169546-2	MW-D2-20190429	Total/NA	Water	Field Sampling	
400-169546-3	MW-D3-20190429	Total/NA	Water	Field Sampling	
400-169546-4	MW-D1-20190429	Total/NA	Water	Field Sampling	
400-169546-5	MW-U1-20190429	Total/NA	Water	Field Sampling	

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-440793/1-A ^5
Matrix: Water
Analysis Batch: 440957

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 440793

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0025	0.0010	mg/L		05/14/19 12:20	05/14/19 18:17	5
Arsenic	ND		0.0013	0.00046	mg/L		05/14/19 12:20	05/14/19 18:17	5
Barium	ND		0.0025	0.00049	mg/L		05/14/19 12:20	05/14/19 18:17	5
Beryllium	ND		0.0020	0.00034	mg/L		05/14/19 12:20	05/14/19 18:17	5
Boron	ND		0.050	0.021	mg/L		05/14/19 12:20	05/14/19 18:17	5
Cadmium	ND		0.0010	0.00034	mg/L		05/14/19 12:20	05/14/19 18:17	5
Calcium	ND		0.25	0.13	mg/L		05/14/19 12:20	05/14/19 18:17	5
Chromium	ND		0.0025	0.0011	mg/L		05/14/19 12:20	05/14/19 18:17	5
Cobalt	ND		0.0025	0.00040	mg/L		05/14/19 12:20	05/14/19 18:17	5
Lead	ND		0.0013	0.00035	mg/L		05/14/19 12:20	05/14/19 18:17	5
Lithium	ND		0.0025	0.0011	mg/L		05/14/19 12:20	05/14/19 18:17	5
Molybdenum	ND		0.010	0.0020	mg/L		05/14/19 12:20	05/14/19 18:17	5
Selenium	ND		0.0013	0.00071	mg/L		05/14/19 12:20	05/14/19 18:17	5
Thallium	ND		0.00050	0.000085	mg/L		05/14/19 12:20	05/14/19 18:17	5

Lab Sample ID: LCS 400-440793/2-A
Matrix: Water
Analysis Batch: 440957

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 440793

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0472		mg/L		94	80 - 120
Arsenic	0.0500	0.0477		mg/L		95	80 - 120
Barium	0.0500	0.0459		mg/L		92	80 - 120
Beryllium	0.0500	0.0498		mg/L		100	80 - 120
Boron	0.100	0.104		mg/L		104	80 - 120
Cadmium	0.0500	0.0478		mg/L		96	80 - 120
Calcium	5.00	4.83		mg/L		97	80 - 120
Chromium	0.0500	0.0483		mg/L		97	80 - 120
Cobalt	0.0500	0.0496		mg/L		99	80 - 120
Lead	0.0500	0.0462		mg/L		92	80 - 120
Lithium	0.0500	0.0488		mg/L		98	80 - 120
Molybdenum	0.0500	0.0468		mg/L		94	80 - 120
Selenium	0.0500	0.0464		mg/L		93	80 - 120
Thallium	0.0100	0.00912		mg/L		91	80 - 120

Lab Sample ID: 400-169685-B-1-B MS ^5
Matrix: Water
Analysis Batch: 440957

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 440793

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND		0.0500	0.0502		mg/L		100	75 - 125
Arsenic	ND		0.0500	0.0483		mg/L		97	75 - 125
Barium	0.0093		0.0500	0.0545		mg/L		90	75 - 125
Beryllium	ND		0.0500	0.0509		mg/L		102	75 - 125
Boron	ND	F1	0.100	0.131	F1	mg/L		131	75 - 125
Cadmium	ND		0.0500	0.0477		mg/L		95	75 - 125
Calcium	1.5		5.00	6.19		mg/L		95	75 - 125
Chromium	ND		0.0500	0.0485		mg/L		97	75 - 125
Cobalt	ND		0.0500	0.0507		mg/L		101	75 - 125

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-169685-B-1-B MS ^5
Matrix: Water
Analysis Batch: 440957

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 440793

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	ND		0.0500	0.0457		mg/L		91	75 - 125
Lithium	0.0015	J	0.0500	0.0515		mg/L		100	75 - 125
Molybdenum	ND		0.0500	0.0463		mg/L		93	75 - 125
Selenium	0.0011	J	0.0500	0.0476		mg/L		93	75 - 125
Thallium	ND		0.0100	0.00931		mg/L		93	75 - 125

Lab Sample ID: 400-169685-B-1-C MSD ^5
Matrix: Water
Analysis Batch: 440957

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 440793

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND		0.0500	0.0478		mg/L		96	75 - 125	5	20
Arsenic	ND		0.0500	0.0477		mg/L		95	75 - 125	1	20
Barium	0.0093		0.0500	0.0554		mg/L		92	75 - 125	2	20
Beryllium	ND		0.0500	0.0495		mg/L		99	75 - 125	3	20
Boron	ND	F1	0.100	0.114		mg/L		114	75 - 125	13	20
Cadmium	ND		0.0500	0.0477		mg/L		95	75 - 125	0	20
Calcium	1.5		5.00	6.26		mg/L		96	75 - 125	1	20
Chromium	ND		0.0500	0.0491		mg/L		98	75 - 125	1	20
Cobalt	ND		0.0500	0.0508		mg/L		102	75 - 125	0	20
Lead	ND		0.0500	0.0464		mg/L		93	75 - 125	2	20
Lithium	0.0015	J	0.0500	0.0494		mg/L		96	75 - 125	4	20
Molybdenum	ND		0.0500	0.0460		mg/L		92	75 - 125	1	20
Selenium	0.0011	J	0.0500	0.0470		mg/L		92	75 - 125	1	20
Thallium	ND		0.0100	0.00935		mg/L		93	75 - 125	0	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-440417/14-A
Matrix: Water
Analysis Batch: 440709

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 440417

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000070	mg/L		05/10/19 10:11	05/13/19 14:19	1

Lab Sample ID: LCS 400-440417/15-A
Matrix: Water
Analysis Batch: 440709

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 440417

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.00105		mg/L		104	80 - 120

Lab Sample ID: 400-169723-A-3-B MS
Matrix: Water
Analysis Batch: 440709

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 440417

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND	F1	0.00201	0.00169		mg/L		84	80 - 120

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 400-169723-A-3-C MSD
Matrix: Water
Analysis Batch: 440709

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 440417

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND	F1	0.00201	0.00155	F1	mg/L		77	80 - 120	8	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-439402/1
Matrix: Water
Analysis Batch: 439402

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		5.0	3.4	mg/L			05/02/19 12:56	1

Lab Sample ID: LCS 400-439402/2
Matrix: Water
Analysis Batch: 439402

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	274		mg/L		94	78 - 122

Lab Sample ID: 400-169546-3 DU
Matrix: Water
Analysis Batch: 439402

Client Sample ID: MW-D3-20190429
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	370		376		mg/L		1	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-440002/6
Matrix: Water
Analysis Batch: 440002

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		2.0	1.4	mg/L			05/07/19 14:52	1

Lab Sample ID: LCS 400-440002/7
Matrix: Water
Analysis Batch: 440002

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	32.2		mg/L		107	90 - 110

Lab Sample ID: MRL 400-440002/3
Matrix: Water
Analysis Batch: 440002

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.32	J	mg/L		66	50 - 150

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: 400-169469-C-1 MS
Matrix: Water
Analysis Batch: 440002

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	4.5		10.0	16.0		mg/L		114	73 - 120		

Lab Sample ID: 400-169469-C-1 MSD
Matrix: Water
Analysis Batch: 440002

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	4.5		10.0	15.6		mg/L		111	73 - 120	2	8

Lab Sample ID: MB 400-440287/6
Matrix: Water
Analysis Batch: 440287

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		2.0	1.4	mg/L			05/09/19 11:17	1

Lab Sample ID: LCS 400-440287/7
Matrix: Water
Analysis Batch: 440287

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			30.0	31.4		mg/L		105	90 - 110		

Lab Sample ID: MRL 400-440287/3
Matrix: Water
Analysis Batch: 440287

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			2.00	1.84	J	mg/L		92	50 - 150		

Lab Sample ID: 400-169640-A-1 MS
Matrix: Water
Analysis Batch: 440287

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	21		10.0	30.2		mg/L		90	73 - 120		

Lab Sample ID: 400-169640-A-1 MSD
Matrix: Water
Analysis Batch: 440287

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	21		10.0	29.8		mg/L		86	73 - 120	1	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-440132/3
Matrix: Water
Analysis Batch: 440132

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10	0.032	mg/L			05/08/19 12:46	1

Lab Sample ID: LCS 400-440132/4
Matrix: Water
Analysis Batch: 440132

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	3.61		mg/L		90	90 - 110

Lab Sample ID: 400-169698-G-4 MS
Matrix: Water
Analysis Batch: 440132

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.79		1.00	1.74		mg/L		95	75 - 125

Lab Sample ID: 400-169698-G-4 MSD
Matrix: Water
Analysis Batch: 440132

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.79		1.00	1.81		mg/L		102	75 - 125	4	4

Lab Sample ID: MB 400-440828/4
Matrix: Water
Analysis Batch: 440828

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10	0.032	mg/L			05/14/19 12:54	1

Lab Sample ID: LCS 400-440828/5
Matrix: Water
Analysis Batch: 440828

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	3.61		mg/L		90	90 - 110

Lab Sample ID: 240-112114-B-3 MS
Matrix: Water
Analysis Batch: 440828

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.16		1.00	1.14		mg/L		98	75 - 125

Lab Sample ID: 240-112114-B-3 MSD
Matrix: Water
Analysis Batch: 440828

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.16		1.00	1.12		mg/L		96	75 - 125	2	4

Method: SM 4500 F C - Fluoride

Lab Sample ID: 400-169995-O-2 DU
Matrix: Water
Analysis Batch: 440828

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.16		0.160		mg/L		0	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-440319/6
Matrix: Water
Analysis Batch: 440319

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		5.0	1.4	mg/L			05/09/19 14:28	1

Lab Sample ID: LCS 400-440319/7
Matrix: Water
Analysis Batch: 440319

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	14.5		mg/L		96	90 - 110

Lab Sample ID: MRL 400-440319/3
Matrix: Water
Analysis Batch: 440319

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	4.46	J	mg/L		89	50 - 150

Lab Sample ID: 400-169628-J-3 MS
Matrix: Water
Analysis Batch: 440319

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	3.8	J	10.0	15.4		mg/L		116	77 - 128

Lab Sample ID: 400-169628-J-3 MSD
Matrix: Water
Analysis Batch: 440319

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	3.8	J	10.0	15.6		mg/L		118	77 - 128	1	5

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

681-Atlanta

Chain of Custody Record

681-Atlanta

eurofins Environment Testing TestAmerica

Client Information	Sampler: STEPHEN W. RANDALL	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No: 400-83511-29334.1
Client Contact: Dawit Yifru	Phone: 478-328-6181	E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 1 of 1
Company: Geosyntec Consultants, Inc.				Job #:
Address: 1255 Roberts Blvd, NW Suite 200	Due Date Requested:			
City: Kennesaw	TAT Requested (days): STANDARD			
State, Zip: GA, 30144				
Phone:	PO #: Purchase Order not required			
Email: dyifru@geosyntec.com	WO #:			
Project Name: CCR App.III/IV GW Monitoring	Project #: 40007960			
Site: Crisp County Power Cooperative	SSOW#:			

400-169546 COC

Analysis Reques

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)		9315_Ra226, 9320_Ra228, Rad226Ra228_GFPC	SM4500_Cl_E-Chloride, SM4500_SO4_E-Sulfate, 2540C-Total Dissolved Solids, 4500_F_C-Fluoride	Field Sampling - Field pH	6020-Sb,As,Ba,B,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, 7470A-Hg	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	D	N	N	D	X	
DUP-12-20190429	4/29/19	0800	G	Water	N	N	1	1	0	1		PH: 6.55
MW-D2-20190429	4/29/19	0940	G	Water	N	N	1	1	0	1		PH: 7.19
MW-D3-20190429	4/29/19	1055	G	Water	N	N	1	1	0	1		PH: 8.27
MW-D1-20190429	4/29/19	1220	G	Water	N	N	1	1	0	1		PH: 6.49
MW-U1-20190429	4/29/19	1410	G	Water	N	N	1	1	0	1		PH: 7.84

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) LEVEL II

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Stephen W. Randall	4/30/19 1700	GEOSYNTEC			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time 5-1-19 0852	Company TA-PEN

Custody Seals Intact: Δ Yes Δ No

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 23.8°C (RADS) 0.4°C IR-8

Ver: 01/16/2019

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5/20/2019

Login Sample Receipt Checklist

Client: Geosyntec Consultants, Inc.

Job Number: 400-169546-1
SDG Number: Crisp County Power Cooperative

Login Number: 169546
List Number: 1
Creator: Conrady, Hank W

List Source: Eurofins TestAmerica, Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.38°C (RADS) 0.4°C IR-8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc. Job ID: 400-169546-1
Project/Site: CCR App.III/IV GW Monitoring SDG: Crisp County Power Cooperative

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-20
West Virginia DEP	State Program	3	136	07-31-19

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

Laboratory Job ID: 400-169546-2
Laboratory SDG: Crisp County Power Cooperative
Client Project/Site: CCR App.III/IV GW Monitoring

For:
Geosyntec Consultants, Inc.
1255 Roberts Blvd, NW
Suite 200
Kennesaw, Georgia 30144

Attn: Dawit Yifru

Cheyenne R Whitmire

Authorized for release by:
8/2/2019 7:23:00 PM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

Table of Contents

Job ID: 400-169546-2

Laboratory: Eurofins TestAmerica, Pensacola

Narrative

Job Narrative
400-169546-2

RAD
Method(s) 9320: Ra-228 Prep Batch 160-429784. Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. DUP-12-20190429 (400-169546-1), MW-D2-20190429 (400-169546-2), MW-D3-20190429 (400-169546-3), MW-D1-20190429 (400-169546-4), MW-U1-20190429 (400-169546-5), (LCS 160-429784/1-A), (MB 160-429784/24-A), (240-111981-I-8-B), (240-111981-A-8-C MS) and (240-111981-A-8-D MSD)

Detection Summary

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-169546-2
SDG: Crisp County Power Cooperative

Client Sample ID: DUP-12-20190429 — Lab Sample ID: 400-169546-1

No Detections.

Client Sample ID: MW-D2-20190429 — Lab Sample ID: 400-169546-2

No Detections.

Client Sample ID: MW-D3-20190429 — Lab Sample ID: 400-169546-3

No Detections.

Client Sample ID: MW-D1-20190429 — Lab Sample ID: 400-169546-4

No Detections.

Client Sample ID: MW-U1-20190429 — Lab Sample ID: 400-169546-5

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-169546-2
SDG: Crisp County Power Cooperative

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-169546-2
SDG: Crisp County Power Cooperative

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
400-169546-1	DUP-12-20190429	Water	04/29/19 08:00	05/01/19 08:52	
400-169546-2	MW-D2-20190429	Water	04/29/19 09:40	05/01/19 08:52	
400-169546-3	MW-D3-20190429	Water	04/29/19 10:55	05/01/19 08:52	
400-169546-4	MW-D1-20190429	Water	04/29/19 12:20	05/01/19 08:52	
400-169546-5	MW-U1-20190429	Water	04/29/19 14:10	05/01/19 08:52	

Client Sample ID: DUP-12-20190429

Date Collected: 04/29/19 08:00
Date Received: 05/01/19 08:52

Lab Sample ID: 400-169546-1

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.202**		0.147	0.148	1.00	0.201	pCi/L	07/08/19 12:50	07/31/19 18:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*78.0*		*40 - 110*	*07/08/19 12:50*	*07/31/19 18:52*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.123	U	0.228	0.228	1.00	0.387	pCi/L	05/24/19 12:58	06/20/19 16:18	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*106*		*40 - 110*	*05/24/19 12:58*	*06/20/19 16:18*	*1*
Y Carrier	*82.2*		*40 - 110*	*05/24/19 12:58*	*06/20/19 16:18*	*1*

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.324	U	0.271	0.272	5.00	0.387	pCi/L		08/01/19 08:17	1

Client Sample ID: MW-D2-20190429

Date Collected: 04/29/19 09:40
Date Received: 05/01/19 08:52

Lab Sample ID: 400-169546-2

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.119	U	0.117	0.118	1.00	0.178	pCi/L	07/08/19 12:50	07/31/19 18:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*77.7*		*40 - 110*	*07/08/19 12:50*	*07/31/19 18:52*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.114	U	0.224	0.224	1.00	0.420	pCi/L	05/24/19 12:58	06/20/19 16:18	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*107*		*40 - 110*	*05/24/19 12:58*	*06/20/19 16:18*	*1*
Y Carrier	*76.6*		*40 - 110*	*05/24/19 12:58*	*06/20/19 16:18*	*1*

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.00521	U	0.253	0.253	5.00	0.420	pCi/L		08/01/19 08:17	1

Client Sample ID: MW-D3-20190429

Date Collected: 04/29/19 10:55
Date Received: 05/01/19 08:52

Lab Sample ID: 400-169546-3

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.252**		0.174	0.176	1.00	0.245	pCi/L	07/08/19 12:50	07/31/19 18:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*74.6*		*40 - 110*	*07/08/19 12:50*	*07/31/19 18:52*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.342	U	0.231	0.233	1.00	0.357	pCi/L	05/24/19 12:58	06/20/19 16:18	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*107*		*40 - 110*	*05/24/19 12:58*	*06/20/19 16:18*	*1*
Y Carrier	*83.4*		*40 - 110*	*05/24/19 12:58*	*06/20/19 16:18*	*1*

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.594**		0.289	0.292	5.00	0.357	pCi/L		08/01/19 08:17	1

Client Sample ID: MW-D1-20190429

Date Collected: 04/29/19 12:20
Date Received: 05/01/19 08:52

Lab Sample ID: 400-169546-4

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0171	U	0.126	0.126	1.00	0.247	pCi/L	07/08/19 12:50	07/31/19 18:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*78.0*		*40 - 110*	*07/08/19 12:50*	*07/31/19 18:52*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0947	U	0.266	0.266	1.00	0.457	pCi/L	05/24/19 12:58	06/20/19 16:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*108*		*40 - 110*	*05/24/19 12:58*	*06/20/19 16:24*	*1*
Y Carrier	*75.1*		*40 - 110*	*05/24/19 12:58*	*06/20/19 16:24*	*1*

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.112	U	0.294	0.294	5.00	0.457	pCi/L		08/01/19 08:17	1

Client Sample ID: MW-U1-20190429

Date Collected: 04/29/19 14:10
Date Received: 05/01/19 08:52

Lab Sample ID: 400-169546-5

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0759	U	0.124	0.124	1.00	0.216	pCi/L	07/08/19 12:50	07/31/19 18:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*76.8*		*40 - 110*	*07/08/19 12:50*	*07/31/19 18:52*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.253	U	0.239	0.240	1.00	0.386	pCi/L	05/24/19 12:58	06/20/19 16:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*05/24/19 12:58*	*06/20/19 16:24*	*1*
Y Carrier	*80.7*		*40 - 110*	*05/24/19 12:58*	*06/20/19 16:24*	*1*

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.328	U	0.269	0.270	5.00	0.386	pCi/L		08/01/19 08:17	1

Definitions/Glossary

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-169546-2
SDG: Crisp County Power Cooperative

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

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

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-169546-2
SDG: Crisp County Power Cooperative

Client Sample ID: DUP-12-20190429
Date Collected: 04/29/19 08:00
Date Received: 05/01/19 08:52

Lab Sample ID: 400-169546-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			434095	07/08/19 12:50	KAW	TAL SL
Total/NA	Analysis	9315		1	437243	07/31/19 18:52	CDR	TAL SL
Total/NA	Prep	PrecSep_0			429784	05/24/19 12:58	EJQ	TAL SL
Total/NA	Analysis	9320		1	432305	06/20/19 16:18	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	437441	08/01/19 08:17	SMP	TAL SL

Client Sample ID: MW-D2-20190429
Date Collected: 04/29/19 09:40
Date Received: 05/01/19 08:52

Lab Sample ID: 400-169546-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			434095	07/08/19 12:50	KAW	TAL SL
Total/NA	Analysis	9315		1	437243	07/31/19 18:52	CDR	TAL SL
Total/NA	Prep	PrecSep_0			429784	05/24/19 12:58	EJQ	TAL SL
Total/NA	Analysis	9320		1	432305	06/20/19 16:18	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	437441	08/01/19 08:17	SMP	TAL SL

Client Sample ID: MW-D3-20190429
Date Collected: 04/29/19 10:55
Date Received: 05/01/19 08:52

Lab Sample ID: 400-169546-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			434095	07/08/19 12:50	KAW	TAL SL
Total/NA	Analysis	9315		1	437243	07/31/19 18:52	CDR	TAL SL
Total/NA	Prep	PrecSep_0			429784	05/24/19 12:58	EJQ	TAL SL
Total/NA	Analysis	9320		1	432305	06/20/19 16:18	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	437441	08/01/19 08:17	SMP	TAL SL

Client Sample ID: MW-D1-20190429
Date Collected: 04/29/19 12:20
Date Received: 05/01/19 08:52

Lab Sample ID: 400-169546-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			434095	07/08/19 12:50	KAW	TAL SL
Total/NA	Analysis	9315		1	437243	07/31/19 18:52	CDR	TAL SL
Total/NA	Prep	PrecSep_0			429784	05/24/19 12:58	EJQ	TAL SL
Total/NA	Analysis	9320		1	432304	06/20/19 16:24	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	437441	08/01/19 08:17	SMP	TAL SL

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-169546-2
SDG: Crisp County Power Cooperative

Client Sample ID: MW-U1-20190429

Date Collected: 04/29/19 14:10
Date Received: 05/01/19 08:52

Lab Sample ID: 400-169546-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			434095	07/08/19 12:50	KAW	TAL SL
Total/NA	Analysis	9315		1	437243	07/31/19 18:52	CDR	TAL SL
Total/NA	Prep	PrecSep_0			429784	05/24/19 12:58	EJQ	TAL SL
Total/NA	Analysis	9320		1	432304	06/20/19 16:24	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	437441	08/01/19 08:17	SMP	TAL SL

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Association Summary

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-169546-2
SDG: Crisp County Power Cooperative

Rad

Prep Batch: 429784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-169546-1	DUP-12-20190429	Total/NA	Water	PrecSep_0	
400-169546-2	MW-D2-20190429	Total/NA	Water	PrecSep_0	
400-169546-3	MW-D3-20190429	Total/NA	Water	PrecSep_0	
400-169546-4	MW-D1-20190429	Total/NA	Water	PrecSep_0	
400-169546-5	MW-U1-20190429	Total/NA	Water	PrecSep_0	
MB 160-429784/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-429784/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
240-111981-A-8-C MS	Matrix Spike	Total/NA	Water	PrecSep_0	
240-111981-A-8-D MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep_0	

Prep Batch: 434095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-169546-1	DUP-12-20190429	Total/NA	Water	PrecSep-21	
400-169546-2	MW-D2-20190429	Total/NA	Water	PrecSep-21	
400-169546-3	MW-D3-20190429	Total/NA	Water	PrecSep-21	
400-169546-4	MW-D1-20190429	Total/NA	Water	PrecSep-21	
400-169546-5	MW-U1-20190429	Total/NA	Water	PrecSep-21	
MB 160-434095/17-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-434095/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-434095/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-434095/17-A
Matrix: Water
Analysis Batch: 437243

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434095

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03873	U	0.0543	0.0544	1.00	0.0920	pCi/L	07/08/19 12:50	07/31/19 18:53	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.6*		*40 - 110*	*07/08/19 12:50*	*07/31/19 18:53*	*1*

Lab Sample ID: LCS 160-434095/1-A
Matrix: Water
Analysis Batch: 437243

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434095

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.4	10.00		1.04	1.00	0.0911	pCi/L	88	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*86.7*		*40 - 110*

Lab Sample ID: LCSD 160-434095/2-A
Matrix: Water
Analysis Batch: 437386

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 434095

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.4	9.379		1.01	1.00	0.116	pCi/L	83	75 - 125	0.30	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*86.7*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-429784/24-A
Matrix: Water
Analysis Batch: 432304

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 429784

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.4413		0.252	0.255	1.00	0.379	pCi/L	05/24/19 12:58	06/20/19 16:25	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*05/24/19 12:58*	*06/20/19 16:25*	*1*
Y Carrier	*83.0*		*40 - 110*	*05/24/19 12:58*	*06/20/19 16:25*	*1*

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-429784/1-A
Matrix: Water
Analysis Batch: 432305

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 429784

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			9.10	7.614		0.952	1.00	0.438	pCi/L	84	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*108*		*40 - 110*
Y Carrier	*69.5*		*40 - 110*

Lab Sample ID: 240-111981-A-8-C MS
Matrix: Water
Analysis Batch: 432304

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 429784

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228	0.330	U	9.09	8.934		1.09	1.00	0.449	pCi/L	97	45 - 150		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*96.9*		*40 - 110*
Y Carrier	*75.5*		*40 - 110*

Lab Sample ID: 240-111981-A-8-D MSD
Matrix: Water
Analysis Batch: 432304

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 429784

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	0.330	U	9.10	9.193		1.10	1.00	0.447	pCi/L	100	45 - 150	0.12	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*92.9*		*40 - 110*
Y Carrier	*80.4*		*40 - 110*

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

681-Atlanta

Chain of Custody Record

681-Atlanta

eurofins Environment Testing TestAmerica

Client Information	Sampler: STEPHEN W. RANDALL	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No: 400-83511-29334.1
Client Contact: Dawit Yifru	Phone: 478-328-6181	E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 1 of 1
Company: Geosyntec Consultants, Inc.				Job #:
Address: 1255 Roberts Blvd, NW Suite 200	Due Date Requested:			
City: Kennesaw	TAT Requested (days): STANDARD			
State, Zip: GA, 30144				
Phone:	PO #: Purchase Order not required			
Email: dyifru@geosyntec.com	WO #:			
Project Name: CCR App.III/IV GW Monitoring	Project #: 40007960			
Site: Crisp County Power Cooperative	SSOW#:			

400-169546 COC

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)		9315_Ra226, 9320_Ra228, Rad226Ra228_GFPC	SM4500_Cl_E-Chloride, SM4500_SO4_E-Sulfate, 2540C-Total Dissolved Solids, 4500_F_C-Fluoride	Field Sampling - Field pH	6020-Sb,As,Ba,B,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, 7470A-Hg	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	D	N	N	D	X	
DUP-12-20190429	4/29/19	0800	G	Water	N	N	1	1	0	1		PH: 6.55
MW-D2-20190429	4/29/19	0940	G	Water	N	N	1	1	0	1		PH: 7.19
MW-D3-20190429	4/29/19	1055	G	Water	N	N	1	1	0	1		PH: 8.27
MW-D1-20190429	4/29/19	1220	G	Water	N	N	1	1	0	1		PH: 6.49
MW-U1-20190429	4/29/19	1410	G	Water	N	N	1	1	0	1		PH: 7.84

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) LEVEL II

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Stephen W. Randall	4/30/19 1700	GEOSYNTEC			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time 5-1-19 0852	Company TA-PEN

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 23.8°C (RADS) 0.4°C IR-8

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: Geosyntec Consultants, Inc.

Job Number: 400-169546-2
SDG Number: Crisp County Power Cooperative

Login Number: 169546
List Number: 1
Creator: Conrady, Hank W

List Source: Eurofins TestAmerica, Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.38°C (RADS) 0.4°C IR-8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Geosyntec Consultants, Inc.

Job Number: 400-169546-2
SDG Number: Crisp County Power Cooperative

Login Number: 169546
List Number: 2
Creator: Hellm, Michael

List Source: Eurofins TestAmerica, St. Louis
List Creation: 05/08/19 08:58 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	17.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc. Job ID: 400-169546-2
Project/Site: CCR App.III/IV GW Monitoring SDG: Crisp County Power Cooperative

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State		40150	07-01-20
Alabama	State Program	4	40150	06-30-20
ANAB	ISO/IEC 17025		L2471	02-22-20
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State		AZ0710	01-12-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19 *
Florida	NELAP	4	E81010	06-30-20 *
Florida	NELAP		E81010	06-30-20
Georgia	State Program	4	E81010 (FL)	06-30-20
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-20
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-20
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-20
Massachusetts	State Program	1	M-FL094	06-30-20
Michigan	State		9912	05-06-20
Michigan	State Program	5	9912	05-06-20
New Jersey	NELAP	2	FL006	06-30-20
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State		9810-186	08-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Pennsylvania	NELAP		68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19 *
Tennessee	State Program	4	TN02907	06-30-20
Texas	NELAP	6	T104704286-18-15	09-30-19
Texas	NELAP		T104704286	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-20
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-20
Washington	State Program	10	C915	05-15-20

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc. Job ID: 400-169546-2
Project/Site: CCR App.III/IV GW Monitoring SDG: Crisp County Power Cooperative

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP		L2305	04-06-22
ANAB	DoD		L2305	04-06-22
ANAB	DOE		L2305.01	04-06-22
Arizona	State		AZ0813	12-08-19
Arizona	State Program	9	AZ0813	12-08-19
California	State Program	9	2886	06-30-20
Connecticut	State Program	1	PH-0241	03-31-21
Florida	NELAP	4	E87689	06-30-20
Florida	NELAP		E87689	06-30-20
Hawaii	State Program	9	NA	06-30-19 *
Illinois	NELAP	5	200023	11-30-19
Iowa	State Program	7	373	12-01-20
Kansas	NELAP	7	E-10236	10-31-19
Kentucky (DW)	State Program	4	KY90125	12-31-19
Louisiana	NELAP	6	04080	06-30-20
Louisiana (DW)	NELAP	6	LA011	12-31-19
Maryland	State Program	3	310	09-30-20
Michigan	State Program	5	9005	06-30-19 *
Missouri	State Program	7	780	06-30-20
Nevada	State Program	9	MO000542018-1	07-31-19 *
New Jersey	NELAP	2	MO002	06-30-20
New York	NELAP	2	11616	03-31-20
New York	NELAP		11616	04-01-20
North Dakota	State Program	8	R207	06-30-20
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State		9997	08-31-19
Oklahoma	State Program	6	9997	08-31-19 *
Pennsylvania	NELAP	3	68-00540	02-28-20
Pennsylvania	NELAP		68-00540	02-28-20
South Carolina	State Program	4	85002001	06-30-20
Texas	NELAP	6	T104704193-18-13	07-31-19 *
Texas	NELAP		T104704193-19-13	07-31-20
US Fish & Wildlife	Federal		058448	07-31-20
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19 *
Virginia	NELAP	3	460230	06-14-20
Virginia	NELAP		10310	06-14-20
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

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ANALYTICAL REPORT

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

Laboratory Job ID: 400-178555-1
Laboratory Sample Delivery Group: Crisp Co. Power
Client Project/Site: CCR App.III/IV GW Monitoring

For:
Geosyntec Consultants, Inc.
1255 Roberts Blvd, NW
Suite 200
Kennesaw, Georgia 30144

Attn: Dawit Yifru

Cheyenne R Whitmire

Authorized for release by:
11/12/2019 5:17:11 PM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

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Table of Contents

Job ID: 400-178555-1

Laboratory: Eurofins TestAmerica, Pensacola

Narrative

Job Narrative
400-178555-1

Metals

Method 6020: The method blank for preparation batch 400-463231 and analytical batch 400-463770 contained Boron and or Thallium above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 400-463231 and analytical batch 400-465115 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 6020: The method blank for preparation batch 400-463231 and analytical batch 400-465115 contained Calcium above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 6020: The continuing calibration verification (CCV) associated with batch 400-465115 recovered above the upper control limit for Calcium. The samples associated with this CCV were greater than 10x the CCV result for the affected analytes; therefore, the data have been reported. The following samples are impacted: DUP13-20191023 (400-178555-1), MW-D2-20191023 (400-178555-2) and MW-D3-20191023 (400-178555-3).

General Chemistry

Method SM 2540C: The sample duplicate (DUP) precision for analytical batch 400-463838 was outside control limits. Sample non-homogeneity is suspected.

Method SM 4500 F C: The method blank for analytical batch 400-463764 contained Fluoride above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Methods SM 4500 Cl- E: Due to the concentration of chlorides in the parent sample the MS/MSD was diluted after the spike. The spike amount was adjusted by the dilution factor. (400-178517-B-2 MS) and (400-178517-B-2 MSD)

Methods SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-463256 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Methods SM 4500 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: (400-178517-B-2), (400-178517-B-2 MS) and (400-178517-B-2 MSD). Elevated reporting limits (RLs) are provided.

Detection Summary

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-178555-1
SDG: Crisp Co. Power

Client Sample ID: DUP 13-20191023 — Lab Sample ID: 400-178555-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.14		0.0025	0.00070	mg/L	5		6020	Total Recoverable
Boron	0.18		0.050	0.018	mg/L	5		6020	Total Recoverable
Calcium	120	B ^	2.5	1.3	mg/L	50		6020	Total Recoverable
Thallium	0.00025	J	0.00050	0.00012	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	490		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	6.0		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.050	J B	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	20		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.82				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-D2-20191023 — Lab Sample ID: 400-178555-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.14		0.0025	0.00070	mg/L	5		6020	Total Recoverable
Boron	0.19		0.050	0.018	mg/L	5		6020	Total Recoverable
Calcium	130	B ^	2.5	1.3	mg/L	50		6020	Total Recoverable
Thallium	0.00026	J	0.00050	0.00012	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	360		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	6.1		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.050	J B	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	20		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.79				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-D3-20191023 — Lab Sample ID: 400-178555-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00076	J	0.0013	0.00039	mg/L	5		6020	Total Recoverable
Barium	0.13		0.0025	0.00070	mg/L	5		6020	Total Recoverable
Boron	0.27		0.050	0.018	mg/L	5		6020	Total Recoverable
Calcium	120	B ^	2.5	1.3	mg/L	50		6020	Total Recoverable
Cobalt	0.0012	J	0.0025	0.00056	mg/L	5		6020	Total Recoverable
Thallium	0.00017	J	0.00050	0.00012	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	360		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.0		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.10	B	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	31		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.96				SU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-178555-1
SDG: Crisp Co. Power

Client Sample ID: MW-D1-20191023 — Lab Sample ID: 400-178555-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.027		0.0025	0.00070	mg/L	5		6020	Total Recoverable
Boron	0.033		0.010	0.0036	mg/L	1		6020	Total Recoverable
Calcium	80		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	240		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	4.1		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.12	B	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	26		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.78				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-U1-20191023 — Lab Sample ID: 400-178555-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0022	J	0.0025	0.00070	mg/L	5		6020	Total Recoverable
Boron	0.0051	J	0.010	0.0036	mg/L	1		6020	Total Recoverable
Calcium	38		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	120		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	1.8	J	2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.050	J B	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2.8	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	7.54				SU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-178555-1
SDG: Crisp Co. Power

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN
SM 4500 Cl- E	Chloride, Total	SM	TAL PEN
SM 4500 F C	Fluoride	SM	TAL PEN
SM 4500 SO4 E	Sulfate, Total	SM	TAL PEN
Field Sampling	Field Sampling	EPA	TAL PEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-178555-1
SDG: Crisp Co. Power

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
400-178555-1	DUP 13-20191023	Water	10/23/19 08:00	10/25/19 08:41	
400-178555-2	MW-D2-20191023	Water	10/23/19 09:55	10/25/19 08:41	
400-178555-3	MW-D3-20191023	Water	10/23/19 11:30	10/25/19 08:41	
400-178555-4	MW-D1-20191023	Water	10/23/19 12:55	10/25/19 08:41	
400-178555-5	MW-U1-20191023	Water	10/23/19 14:35	10/25/19 08:41	

Client Sample Results

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-178555-1
SDG: Crisp Co. Power

Client Sample ID: DUP 13-20191023

Date Collected: 10/23/19 08:00
Date Received: 10/25/19 08:41

Lab Sample ID: 400-178555-1

Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0013	0.00039	mg/L		10/25/19 16:53	10/30/19 00:46	5
Barium	**0.14**		0.0025	0.00070	mg/L		10/25/19 16:53	10/30/19 00:46	5
Boron	**0.18**		0.050	0.018	mg/L		10/25/19 16:53	11/09/19 17:02	5
Calcium	**120**	**B ^**	2.5	1.3	mg/L		10/25/19 16:53	11/07/19 23:55	50
Chromium	ND		0.0025	0.0010	mg/L		10/25/19 16:53	10/30/19 00:46	5
Cobalt	ND	^	0.0025	0.00056	mg/L		10/25/19 16:53	10/30/19 00:46	5
Lithium	ND		0.0025	0.0019	mg/L		10/25/19 16:53	11/02/19 19:03	5
Thallium	**0.00025**	**J**	0.00050	0.00012	mg/L		10/25/19 16:53	10/30/19 00:46	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**490**		5.0	3.4	mg/L			10/28/19 15:04	1
Chloride	**6.0**		2.0	1.4	mg/L			10/25/19 21:09	1
Fluoride	**0.050**	**J B**	0.10	0.032	mg/L			10/30/19 08:30	1
Sulfate	**20**		5.0	1.4	mg/L			11/05/19 15:01	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**6.82**				SU			10/23/19 07:00	1

Client Sample Results

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-178555-1
SDG: Crisp Co. Power

Client Sample ID: MW-D2-20191023

Date Collected: 10/23/19 09:55
Date Received: 10/25/19 08:41

Lab Sample ID: 400-178555-2

Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0013	0.00039	mg/L		10/25/19 16:53	10/30/19 01:12	5
Barium	**0.14**		0.0025	0.00070	mg/L		10/25/19 16:53	10/30/19 01:12	5
Boron	**0.19**		0.050	0.018	mg/L		10/25/19 16:53	11/09/19 17:17	5
Calcium	**130**	**B ^**	2.5	1.3	mg/L		10/25/19 16:53	11/08/19 00:15	50
Chromium	ND		0.0025	0.0010	mg/L		10/25/19 16:53	10/30/19 01:12	5
Cobalt	ND	^	0.0025	0.00056	mg/L		10/25/19 16:53	10/30/19 01:12	5
Lithium	ND		0.0025	0.0019	mg/L		10/25/19 16:53	11/02/19 19:08	5
Thallium	**0.00026**	**J**	0.00050	0.00012	mg/L		10/25/19 16:53	10/30/19 01:12	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**360**		5.0	3.4	mg/L			10/28/19 15:04	1
Chloride	**6.1**		2.0	1.4	mg/L			10/25/19 21:09	1
Fluoride	**0.050**	**J B**	0.10	0.032	mg/L			10/30/19 08:34	1
Sulfate	**20**		5.0	1.4	mg/L			11/05/19 15:01	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**6.79**				SU			10/23/19 08:55	1

Client Sample ID: MW-D3-20191023

Lab Sample ID: 400-178555-3

Date Collected: 10/23/19 11:30

Matrix: Water

Date Received: 10/25/19 08:41

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00076	J	0.0013	0.00039	mg/L		10/25/19 16:53	10/30/19 01:17	5
Barium	0.13		0.0025	0.00070	mg/L		10/25/19 16:53	10/30/19 01:17	5
Boron	0.27		0.050	0.018	mg/L		10/25/19 16:53	11/09/19 17:22	5
Calcium	120	B ^	2.5	1.3	mg/L		10/25/19 16:53	11/08/19 00:25	50
Chromium	ND		0.0025	0.0010	mg/L		10/25/19 16:53	10/30/19 01:17	5
Cobalt	0.0012	J	0.0025	0.00056	mg/L		10/25/19 16:53	11/02/19 19:13	5
Lithium	ND		0.0025	0.0019	mg/L		10/25/19 16:53	11/02/19 19:13	5
Thallium	0.00017	J	0.00050	0.00012	mg/L		10/25/19 16:53	10/30/19 01:17	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	360		5.0	3.4	mg/L			10/30/19 13:29	1
Chloride	5.0		2.0	1.4	mg/L			10/25/19 21:09	1
Fluoride	0.10	B	0.10	0.032	mg/L			10/30/19 08:38	1
Sulfate	31		5.0	1.4	mg/L			11/05/19 15:01	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.96				SU			10/23/19 10:30	1

Client Sample Results

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-178555-1
SDG: Crisp Co. Power

Client Sample ID: MW-D1-20191023

Date Collected: 10/23/19 12:55
Date Received: 10/25/19 08:41

Lab Sample ID: 400-178555-4

Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0013	0.00039	mg/L		10/25/19 16:53	10/30/19 01:22	5
Barium	**0.027**		0.0025	0.00070	mg/L		10/25/19 16:53	10/30/19 01:22	5
Boron	**0.033**		0.010	0.0036	mg/L		10/25/19 16:53	11/09/19 17:27	1
Calcium	**80**		0.25	0.13	mg/L		10/25/19 16:53	11/02/19 19:18	5
Chromium	ND		0.0025	0.0010	mg/L		10/25/19 16:53	10/30/19 01:22	5
Cobalt	ND	^	0.0025	0.00056	mg/L		10/25/19 16:53	10/30/19 01:22	5
Lithium	ND		0.0025	0.0019	mg/L		10/25/19 16:53	11/02/19 19:18	5
Thallium	ND		0.00050	0.00012	mg/L		10/25/19 16:53	10/30/19 01:22	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**240**		5.0	3.4	mg/L			10/28/19 15:04	1
Chloride	**4.1**		2.0	1.4	mg/L			10/25/19 21:09	1
Fluoride	**0.12**	**B**	0.10	0.032	mg/L			10/30/19 08:42	1
Sulfate	**26**		5.0	1.4	mg/L			11/05/19 15:01	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**6.78**				SU			10/23/19 11:55	1

Client Sample ID: MW-U1-20191023

Date Collected: 10/23/19 14:35
Date Received: 10/25/19 08:41

Lab Sample ID: 400-178555-5

Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0013	0.00039	mg/L		10/25/19 16:53	10/30/19 01:38	5
Barium	**0.0022**	**J**	0.0025	0.00070	mg/L		10/25/19 16:53	10/30/19 01:38	5
Boron	**0.0051**	**J**	0.010	0.0036	mg/L		10/25/19 16:53	11/09/19 17:32	1
Calcium	**38**		0.25	0.13	mg/L		10/25/19 16:53	11/02/19 19:23	5
Chromium	ND		0.0025	0.0010	mg/L		10/25/19 16:53	10/30/19 01:38	5
Cobalt	ND		0.0025	0.00056	mg/L		10/25/19 16:53	10/30/19 01:38	5
Lithium	ND	^	0.0025	0.0019	mg/L		10/25/19 16:53	10/30/19 01:38	5
Thallium	ND		0.00050	0.00012	mg/L		10/25/19 16:53	10/30/19 01:38	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**120**		5.0	3.4	mg/L			10/30/19 13:29	1
Chloride	**1.8**	**J**	2.0	1.4	mg/L			10/25/19 21:09	1
Fluoride	**0.050**	**J B**	0.10	0.032	mg/L			10/30/19 08:46	1
Sulfate	**2.8**	**J**	5.0	1.4	mg/L			11/05/19 15:01	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**7.54**				SU			10/23/19 13:35	1

Definitions/Glossary

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-178555-1
SDG: Crisp Co. Power

Qualifiers

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
F3	Duplicate RPD exceeds the control limit
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-178555-1
SDG: Crisp Co. Power

Client Sample ID: DUP 13-20191023

Lab Sample ID: 400-178555-1

Date Collected: 10/23/19 08:00

Matrix: Water

Date Received: 10/25/19 08:41

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			463231	10/25/19 16:53	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	463770	10/30/19 00:46	AW	TAL PEN
Total Recoverable	Prep	3005A			463231	10/25/19 16:53	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	464350	11/02/19 19:03	AC	TAL PEN
Total Recoverable	Prep	3005A			463231	10/25/19 16:53	KWN	TAL PEN
Total Recoverable	Analysis	6020		50	465115	11/07/19 23:55	AW	TAL PEN
Total Recoverable	Prep	3005A			463231	10/25/19 16:53	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	465403	11/09/19 17:02	AW	TAL PEN
Total/NA	Analysis	SM 2540C		1	463468	10/28/19 15:04	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	463256	10/25/19 21:09	HES	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	463764	10/30/19 08:30	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	464705	11/05/19 15:01	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	462449	10/23/19 07:00	EHS	TAL PEN

Client Sample ID: MW-D2-20191023

Lab Sample ID: 400-178555-2

Date Collected: 10/23/19 09:55

Matrix: Water

Date Received: 10/25/19 08:41

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			463231	10/25/19 16:53	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	463770	10/30/19 01:12	AW	TAL PEN
Total Recoverable	Prep	3005A			463231	10/25/19 16:53	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	464350	11/02/19 19:08	AC	TAL PEN
Total Recoverable	Prep	3005A			463231	10/25/19 16:53	KWN	TAL PEN
Total Recoverable	Analysis	6020		50	465115	11/08/19 00:15	AW	TAL PEN
Total Recoverable	Prep	3005A			463231	10/25/19 16:53	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	465403	11/09/19 17:17	AW	TAL PEN
Total/NA	Analysis	SM 2540C		1	463468	10/28/19 15:04	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	463256	10/25/19 21:09	HES	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	463764	10/30/19 08:34	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	464705	11/05/19 15:01	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	462449	10/23/19 08:55	EHS	TAL PEN

Client Sample ID: MW-D3-20191023

Lab Sample ID: 400-178555-3

Date Collected: 10/23/19 11:30

Matrix: Water

Date Received: 10/25/19 08:41

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			463231	10/25/19 16:53	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	463770	10/30/19 01:17	AW	TAL PEN
Total Recoverable	Prep	3005A			463231	10/25/19 16:53	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	464350	11/02/19 19:13	AC	TAL PEN
Total Recoverable	Prep	3005A			463231	10/25/19 16:53	KWN	TAL PEN
Total Recoverable	Analysis	6020		50	465115	11/08/19 00:25	AW	TAL PEN

Client Sample ID: MW-D3-20191023

Lab Sample ID: 400-178555-3

Date Collected: 10/23/19 11:30

Matrix: Water

Date Received: 10/25/19 08:41

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			463231	10/25/19 16:53	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	465403	11/09/19 17:22	AW	TAL PEN
Total/NA	Analysis	SM 2540C		1	463838	10/30/19 13:29	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	463256	10/25/19 21:09	HES	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	463764	10/30/19 08:38	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	464705	11/05/19 15:01	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	462449	10/23/19 10:30	EHS	TAL PEN

Client Sample ID: MW-D1-20191023

Lab Sample ID: 400-178555-4

Date Collected: 10/23/19 12:55

Matrix: Water

Date Received: 10/25/19 08:41

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			463231	10/25/19 16:53	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	463770	10/30/19 01:22	AW	TAL PEN
Total Recoverable	Prep	3005A			463231	10/25/19 16:53	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	464350	11/02/19 19:18	AC	TAL PEN
Total Recoverable	Prep	3005A			463231	10/25/19 16:53	KWN	TAL PEN
Total Recoverable	Analysis	6020		1	465403	11/09/19 17:27	AW	TAL PEN
Total/NA	Analysis	SM 2540C		1	463468	10/28/19 15:04	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	463256	10/25/19 21:09	HES	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	463764	10/30/19 08:42	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	464705	11/05/19 15:01	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	462449	10/23/19 11:55	EHS	TAL PEN

Client Sample ID: MW-U1-20191023

Lab Sample ID: 400-178555-5

Date Collected: 10/23/19 14:35

Matrix: Water

Date Received: 10/25/19 08:41

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			463231	10/25/19 16:53	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	463770	10/30/19 01:38	AW	TAL PEN
Total Recoverable	Prep	3005A			463231	10/25/19 16:53	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	464350	11/02/19 19:23	AC	TAL PEN
Total Recoverable	Prep	3005A			463231	10/25/19 16:53	KWN	TAL PEN
Total Recoverable	Analysis	6020		1	465403	11/09/19 17:32	AW	TAL PEN
Total/NA	Analysis	SM 2540C		1	463838	10/30/19 13:29	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	463256	10/25/19 21:09	HES	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	463764	10/30/19 08:46	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	464705	11/05/19 15:01	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	462449	10/23/19 13:35	EHS	TAL PEN

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Metals

Prep Batch: 463231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178555-1	DUP 13-20191023	Total Recoverable	Water	3005A	
400-178555-2	MW-D2-20191023	Total Recoverable	Water	3005A	
400-178555-3	MW-D3-20191023	Total Recoverable	Water	3005A	
400-178555-4	MW-D1-20191023	Total Recoverable	Water	3005A	
400-178555-5	MW-U1-20191023	Total Recoverable	Water	3005A	
MB 400-463231/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-463231/2-A ^5	Lab Control Sample	Total Recoverable	Water	3005A	
400-178555-1 MS	DUP 13-20191023	Total Recoverable	Water	3005A	
400-178555-1 MSD	DUP 13-20191023	Total Recoverable	Water	3005A	

Analysis Batch: 463770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178555-1	DUP 13-20191023	Total Recoverable	Water	6020	463231
400-178555-2	MW-D2-20191023	Total Recoverable	Water	6020	463231
400-178555-3	MW-D3-20191023	Total Recoverable	Water	6020	463231
400-178555-4	MW-D1-20191023	Total Recoverable	Water	6020	463231
400-178555-5	MW-U1-20191023	Total Recoverable	Water	6020	463231
MB 400-463231/1-A ^5	Method Blank	Total Recoverable	Water	6020	463231
LCS 400-463231/2-A ^5	Lab Control Sample	Total Recoverable	Water	6020	463231
400-178555-1 MS	DUP 13-20191023	Total Recoverable	Water	6020	463231
400-178555-1 MSD	DUP 13-20191023	Total Recoverable	Water	6020	463231

Analysis Batch: 464350

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178555-1	DUP 13-20191023	Total Recoverable	Water	6020	463231
400-178555-2	MW-D2-20191023	Total Recoverable	Water	6020	463231
400-178555-3	MW-D3-20191023	Total Recoverable	Water	6020	463231
400-178555-4	MW-D1-20191023	Total Recoverable	Water	6020	463231
400-178555-5	MW-U1-20191023	Total Recoverable	Water	6020	463231
MB 400-463231/1-A ^5	Method Blank	Total Recoverable	Water	6020	463231
LCS 400-463231/2-A ^5	Lab Control Sample	Total Recoverable	Water	6020	463231

Analysis Batch: 465115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178555-1	DUP 13-20191023	Total Recoverable	Water	6020	463231
400-178555-2	MW-D2-20191023	Total Recoverable	Water	6020	463231
400-178555-3	MW-D3-20191023	Total Recoverable	Water	6020	463231
MB 400-463231/1-A ^5	Method Blank	Total Recoverable	Water	6020	463231
LCS 400-463231/2-A ^5	Lab Control Sample	Total Recoverable	Water	6020	463231
400-178555-1 MS	DUP 13-20191023	Total Recoverable	Water	6020	463231
400-178555-1 MSD	DUP 13-20191023	Total Recoverable	Water	6020	463231

Analysis Batch: 465295

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-463231/1-A ^5	Method Blank	Total Recoverable	Water	6020	463231
LCS 400-463231/2-A ^5	Lab Control Sample	Total Recoverable	Water	6020	463231
400-178555-1 MS	DUP 13-20191023	Total Recoverable	Water	6020	463231
400-178555-1 MSD	DUP 13-20191023	Total Recoverable	Water	6020	463231

Metals

Analysis Batch: 465403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178555-1	DUP 13-20191023	Total Recoverable	Water	6020	463231
400-178555-2	MW-D2-20191023	Total Recoverable	Water	6020	463231
400-178555-3	MW-D3-20191023	Total Recoverable	Water	6020	463231
400-178555-4	MW-D1-20191023	Total Recoverable	Water	6020	463231
400-178555-5	MW-U1-20191023	Total Recoverable	Water	6020	463231
MB 400-463231/1-A ^5	Method Blank	Total Recoverable	Water	6020	463231
400-178555-1 MS	DUP 13-20191023	Total Recoverable	Water	6020	463231
400-178555-1 MSD	DUP 13-20191023	Total Recoverable	Water	6020	463231

General Chemistry

Analysis Batch: 463256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178555-1	DUP 13-20191023	Total/NA	Water	SM 4500 Cl- E	
400-178555-2	MW-D2-20191023	Total/NA	Water	SM 4500 Cl- E	
400-178555-3	MW-D3-20191023	Total/NA	Water	SM 4500 Cl- E	
400-178555-4	MW-D1-20191023	Total/NA	Water	SM 4500 Cl- E	
400-178555-5	MW-U1-20191023	Total/NA	Water	SM 4500 Cl- E	
MB 400-463256/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-463256/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-463256/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-178517-B-2 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-178517-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 463468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178555-1	DUP 13-20191023	Total/NA	Water	SM 2540C	
400-178555-2	MW-D2-20191023	Total/NA	Water	SM 2540C	
400-178555-4	MW-D1-20191023	Total/NA	Water	SM 2540C	
MB 400-463468/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-463468/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-178555-4 DU	MW-D1-20191023	Total/NA	Water	SM 2540C	

Analysis Batch: 463515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-463515/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-463515/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-463515/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-178555-5 MS	MW-U1-20191023	Total/NA	Water	SM 4500 Cl- E	
400-178555-5 MSD	MW-U1-20191023	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 463764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178555-1	DUP 13-20191023	Total/NA	Water	SM 4500 F C	
400-178555-2	MW-D2-20191023	Total/NA	Water	SM 4500 F C	
400-178555-3	MW-D3-20191023	Total/NA	Water	SM 4500 F C	
400-178555-4	MW-D1-20191023	Total/NA	Water	SM 4500 F C	
400-178555-5	MW-U1-20191023	Total/NA	Water	SM 4500 F C	
MB 400-463764/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-463764/8	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-178094-S-1 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	

General Chemistry (Continued)

Analysis Batch: 463764 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178094-S-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 463838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178555-3	MW-D3-20191023	Total/NA	Water	SM 2540C	
400-178555-5	MW-U1-20191023	Total/NA	Water	SM 2540C	
MB 400-463838/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-463838/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-178718-D-3 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 464705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178555-1	DUP 13-20191023	Total/NA	Water	SM 4500 SO4 E	
400-178555-2	MW-D2-20191023	Total/NA	Water	SM 4500 SO4 E	
400-178555-3	MW-D3-20191023	Total/NA	Water	SM 4500 SO4 E	
400-178555-4	MW-D1-20191023	Total/NA	Water	SM 4500 SO4 E	
400-178555-5	MW-U1-20191023	Total/NA	Water	SM 4500 SO4 E	
MB 400-464705/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-464705/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-464705/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-178573-O-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-178573-O-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Field Service / Mobile Lab

Analysis Batch: 462449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178555-1	DUP 13-20191023	Total/NA	Water	Field Sampling	
400-178555-2	MW-D2-20191023	Total/NA	Water	Field Sampling	
400-178555-3	MW-D3-20191023	Total/NA	Water	Field Sampling	
400-178555-4	MW-D1-20191023	Total/NA	Water	Field Sampling	
400-178555-5	MW-U1-20191023	Total/NA	Water	Field Sampling	

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-463231/1-A ^5
Matrix: Water
Analysis Batch: 463770

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 463231

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0013	0.00039	mg/L		10/25/19 16:53	10/30/19 00:35	5
Barium	ND		0.0025	0.00070	mg/L		10/25/19 16:53	10/30/19 00:35	5
Chromium	ND		0.0025	0.0010	mg/L		10/25/19 16:53	10/30/19 00:35	5
Cobalt	ND	^	0.0025	0.00056	mg/L		10/25/19 16:53	10/30/19 00:35	5
Lithium	ND	^	0.0025	0.0019	mg/L		10/25/19 16:53	10/30/19 00:35	5
Thallium	ND		0.00050	0.00012	mg/L		10/25/19 16:53	10/30/19 00:35	5

Lab Sample ID: MB 400-463231/1-A ^5
Matrix: Water
Analysis Batch: 464350

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 463231

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0013	0.00039	mg/L		10/25/19 16:53	11/02/19 18:53	5
Barium	ND		0.0025	0.00070	mg/L		10/25/19 16:53	11/02/19 18:53	5
Calcium	ND		0.25	0.13	mg/L		10/25/19 16:53	11/02/19 18:53	5
Chromium	ND		0.0025	0.0010	mg/L		10/25/19 16:53	11/02/19 18:53	5
Cobalt	ND		0.0025	0.00056	mg/L		10/25/19 16:53	11/02/19 18:53	5
Lithium	ND		0.0025	0.0019	mg/L		10/25/19 16:53	11/02/19 18:53	5
Thallium	ND		0.00050	0.00012	mg/L		10/25/19 16:53	11/02/19 18:53	5

Lab Sample ID: MB 400-463231/1-A ^5
Matrix: Water
Analysis Batch: 465115

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 463231

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	0.134	J ^	0.25	0.13	mg/L		10/25/19 16:53	11/07/19 23:40	5

Lab Sample ID: MB 400-463231/1-A ^5
Matrix: Water
Analysis Batch: 465295

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 463231

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0013	0.00039	mg/L		10/25/19 16:53	11/08/19 23:03	5
Barium	ND		0.0025	0.00070	mg/L		10/25/19 16:53	11/08/19 23:03	5
Calcium	ND	^	0.25	0.13	mg/L		10/25/19 16:53	11/08/19 23:03	5
Chromium	ND		0.0025	0.0010	mg/L		10/25/19 16:53	11/08/19 23:03	5
Cobalt	ND		0.0025	0.00056	mg/L		10/25/19 16:53	11/08/19 23:03	5
Lithium	ND		0.0025	0.0019	mg/L		10/25/19 16:53	11/08/19 23:03	5

Lab Sample ID: MB 400-463231/1-A ^5
Matrix: Water
Analysis Batch: 465403

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 463231

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.018	mg/L		10/25/19 16:53	11/09/19 16:57	5

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 400-463231/2-A ^5
Matrix: Water
Analysis Batch: 463770

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 463231

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0500	0.0558		mg/L		112	80 - 120
Barium	0.0500	0.0513		mg/L		103	80 - 120
Chromium	0.0500	0.0522		mg/L		104	80 - 120
Thallium	0.0100	0.0101		mg/L		101	80 - 120

Lab Sample ID: LCS 400-463231/2-A ^5
Matrix: Water
Analysis Batch: 464350

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 463231

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0500	0.0560		mg/L		112	80 - 120
Barium	0.0500	0.0530		mg/L		106	80 - 120
Calcium	5.00	5.38		mg/L		108	80 - 120
Chromium	0.0500	0.0542		mg/L		108	80 - 120
Cobalt	0.0500	0.0567		mg/L		113	80 - 120
Lithium	0.0500	0.0551		mg/L		110	80 - 120
Thallium	0.0100	0.0100		mg/L		100	80 - 120

Lab Sample ID: LCS 400-463231/2-A ^5
Matrix: Water
Analysis Batch: 465115

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 463231

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.100	0.0913	^	mg/L		91	80 - 120
Calcium	5.00	5.25	^	mg/L		105	80 - 120

Lab Sample ID: LCS 400-463231/2-A ^5
Matrix: Water
Analysis Batch: 465295

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 463231

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0500	0.0525		mg/L		105	80 - 120
Barium	0.0500	0.0506		mg/L		101	80 - 120
Chromium	0.0500	0.0524		mg/L		105	80 - 120
Cobalt	0.0500	0.0536		mg/L		107	80 - 120
Lithium	0.0500	0.0518		mg/L		104	80 - 120

Lab Sample ID: 400-178555-1 MS
Matrix: Water
Analysis Batch: 463770

Client Sample ID: DUP 13-20191023
Prep Type: Total Recoverable
Prep Batch: 463231

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		0.0500	0.0544		mg/L		109	75 - 125
Barium	0.14		0.0500	0.190		mg/L		101	75 - 125
Chromium	ND		0.0500	0.0510		mg/L		102	75 - 125
Thallium	0.00025	J	0.0100	0.00982		mg/L		96	75 - 125

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-178555-1 MS — **Client Sample ID: DUP 13-20191023**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 465115 — **Prep Batch: 463231**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	0.14		0.0500	0.188		mg/L		103	75 - 125
Boron	0.12	^ B	0.100	0.202	^	mg/L		79	75 - 125
Calcium	120	E B ^	5.00	124	E 4 ^	mg/L		37	75 - 125
Chromium	ND		0.0500	0.0512		mg/L		102	75 - 125

Lab Sample ID: 400-178555-1 MS — **Client Sample ID: DUP 13-20191023**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 465295 — **Prep Batch: 463231**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		0.0500	0.0550		mg/L		110	75 - 125
Barium	0.14		0.0500	0.199		mg/L		116	75 - 125
Chromium	ND		0.0500	0.0535		mg/L		107	75 - 125
Cobalt	ND		0.0500	0.0540		mg/L		108	75 - 125
Lithium	0.0026		0.0500	0.0591		mg/L		113	75 - 125

Lab Sample ID: 400-178555-1 MS — **Client Sample ID: DUP 13-20191023**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 465403 — **Prep Batch: 463231**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.18		0.100	0.292		mg/L		116	75 - 125

Lab Sample ID: 400-178555-1 MSD — **Client Sample ID: DUP 13-20191023**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 463770 — **Prep Batch: 463231**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		0.0500	0.0518		mg/L		104	75 - 125	5	20
Barium	0.14		0.0500	0.190		mg/L		99	75 - 125	0	20
Chromium	ND		0.0500	0.0508		mg/L		102	75 - 125	0	20
Thallium	0.00025	J	0.0100	0.00982		mg/L		96	75 - 125	0	20

Lab Sample ID: 400-178555-1 MSD — **Client Sample ID: DUP 13-20191023**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 465115 — **Prep Batch: 463231**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Barium	0.14		0.0500	0.192		mg/L		110	75 - 125	2	20
Boron	0.12	^ B	0.100	0.209	^	mg/L		86	75 - 125	3	20
Calcium	120	E B ^	5.00	132	E 4 ^	mg/L		207	75 - 125	7	20
Chromium	ND		0.0500	0.0536		mg/L		107	75 - 125	5	20

Lab Sample ID: 400-178555-1 MSD — **Client Sample ID: DUP 13-20191023**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 465295 — **Prep Batch: 463231**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		0.0500	0.0544		mg/L		109	75 - 125	1	20
Barium	0.14		0.0500	0.192		mg/L		103	75 - 125	3	20

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-178555-1 MSD
Matrix: Water
Analysis Batch: 465295

Client Sample ID: DUP 13-20191023
Prep Type: Total Recoverable
Prep Batch: 463231

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chromium	ND		0.0500	0.0522		mg/L		104	75 - 125	3	20
Cobalt	ND		0.0500	0.0527		mg/L		105	75 - 125	2	20
Lithium	0.0026		0.0500	0.0543		mg/L		103	75 - 125	8	20

Lab Sample ID: 400-178555-1 MSD
Matrix: Water
Analysis Batch: 465403

Client Sample ID: DUP 13-20191023
Prep Type: Total Recoverable
Prep Batch: 463231

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	0.18		0.100	0.289		mg/L		113	75 - 125	1	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-463468/1
Matrix: Water
Analysis Batch: 463468

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		5.0	3.4	mg/L			10/28/19 15:04	1

Lab Sample ID: LCS 400-463468/2
Matrix: Water
Analysis Batch: 463468

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	322		mg/L		110	78 - 122

Lab Sample ID: 400-178555-4 DU
Matrix: Water
Analysis Batch: 463468

Client Sample ID: MW-D1-20191023
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	240		250		mg/L		2	5

Lab Sample ID: MB 400-463838/1
Matrix: Water
Analysis Batch: 463838

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		5.0	3.4	mg/L			10/30/19 13:29	1

Lab Sample ID: LCS 400-463838/2
Matrix: Water
Analysis Batch: 463838

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	354		mg/L		121	78 - 122

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 400-178718-D-3 DU
Matrix: Water
Analysis Batch: 463838

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	190		146	F3	mg/L		26	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-463256/6
Matrix: Water
Analysis Batch: 463256

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		2.0	1.4	mg/L			10/25/19 21:07	1

Lab Sample ID: LCS 400-463256/7
Matrix: Water
Analysis Batch: 463256

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	31.7		mg/L		106	90 - 110

Lab Sample ID: MRL 400-463256/3
Matrix: Water
Analysis Batch: 463256

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.87	J	mg/L		94	50 - 150

Lab Sample ID: 400-178517-B-2 MS
Matrix: Water
Analysis Batch: 463256

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1500		10.0	1450	4	mg/L		-437	73 - 120

Lab Sample ID: 400-178517-B-2 MSD
Matrix: Water
Analysis Batch: 463256

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1500		10.0	1470	4	mg/L		-241	73 - 120	1	8

Lab Sample ID: MB 400-463515/6
Matrix: Water
Analysis Batch: 463515

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		2.0	1.4	mg/L			10/28/19 21:56	1

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: LCS 400-463515/7
Matrix: Water
Analysis Batch: 463515

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	31.8		mg/L		106	90 - 110

Lab Sample ID: MRL 400-463515/3
Matrix: Water
Analysis Batch: 463515

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	2.15		mg/L		108	50 - 150

Lab Sample ID: 400-178555-5 MS
Matrix: Water
Analysis Batch: 463515

Client Sample ID: MW-U1-20191023
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.7		10.0	14.0		mg/L		113	73 - 120

Lab Sample ID: 400-178555-5 MSD
Matrix: Water
Analysis Batch: 463515

Client Sample ID: MW-U1-20191023
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	2.7		10.0	13.6		mg/L		109	73 - 120	3	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-463764/3
Matrix: Water
Analysis Batch: 463764

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.0600	J	0.10	0.032	mg/L			10/30/19 07:52	1

Lab Sample ID: LCS 400-463764/8
Matrix: Water
Analysis Batch: 463764

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	3.80		mg/L		95	90 - 110

Lab Sample ID: 400-178094-S-1 MS
Matrix: Water
Analysis Batch: 463764

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	ND		1.00	1.03		mg/L		103	75 - 125

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 400-178094-S-1 MSD
Matrix: Water
Analysis Batch: 463764

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	ND		1.00	1.03		mg/L		103	75 - 125	0	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-464705/6
Matrix: Water
Analysis Batch: 464705

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		5.0	1.4	mg/L			11/05/19 14:09	1

Lab Sample ID: LCS 400-464705/7
Matrix: Water
Analysis Batch: 464705

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	15.4		mg/L		102	90 - 110

Lab Sample ID: MRL 400-464705/3
Matrix: Water
Analysis Batch: 464705

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	5.57		mg/L		111	50 - 150

Lab Sample ID: 400-178573-O-1 MS
Matrix: Water
Analysis Batch: 464705

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	14		10.0	24.7		mg/L		111	77 - 128

Lab Sample ID: 400-178573-O-1 MSD
Matrix: Water
Analysis Batch: 464705

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	14		10.0	23.5		mg/L		99	77 - 128	5	5

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone: 850-474-1001 Fax: 850-478-2671

681-Atlanta

Chain of Custody Record

eurofins Environment Testing TestAmerica

Client Information	Sampler: STEPHEN W. RANDALL	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No: 400-87774-29334.1
Client Contact: Dawit Yifru	Phone: 478-328-6181	E-Mail: cheyenne.whitmire@testamericainc.com	4651 0084 1242	Page: Page 1 of 1
Company: Geosyntec Consultants, Inc.				Job #:
Address: 1255 Roberts Blvd, NW Suite 200	Due Date Requested:			
City: Kennesaw	TAT Requested (days): STANDARD			
State, Zip: GA, 30144				
Phone: 678-202-9500	PO #: Purchase Order not required			
Email: dyifru@geosyntec.com	WO #:			
Project Name: CCR App.III/IV GW Monitoring	Project #: 40007960			
Site: CRISP Co. POWER	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	SM4500_Cl_E, SM4500_SO4_E	FieldSampling_Field pH	6020 - As,B,Ba,Ca,Cr,Co,Li,Tl	25_0C_Total Dissolved Solids	4500_F_C - Fluoride	Total Number of containers	Special Instructions/Note:
			Preservation Code:			D	N	N	D	N	N		
DUP 13-20191023	10/23/19	0800	G	Water	N	N	Ø	1		1		2	PH: 6.82
MW-D2-20191023	10/23/19	0955	G	Water	N	N	Ø	1		1		2	PH: 6.79
MW-D3-20191023	10/23/19	1130	G	Water	N	N	Ø	1		1		2	PH: 6.96
MW-D1-20191023	10/23/19	1255	G	Water	N	N	Ø	1		1		2	PH: 6.78
MW-U1-20191023	10/23/19	1435	G	Water	N	N	Ø	1		1		2	PH: 7.54
				Water									

LAST ITEM

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) LEVEL II

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Stephen W. Randall	10/24/19 1800	GEOSYNTEC		10/25/19 841	TA-PEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 11.6°, 6.1° C IR

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: Geosyntec Consultants, Inc.

Job Number: 400-178555-1
SDG Number: Crisp Co. Power

Login Number: 178555
List Number: 1
Creator: Gore, Beija K

List Source: Eurofins TestAmerica, Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.1°C & 11.6 °C IR 8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-178555-1
SDG: Crisp Co. Power

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	07-01-20
ANAB	ISO/IEC 17025	L2471	02-22-20
Arizona	State	AZ0710	01-12-20
Arkansas DEQ	State	88-0689	09-01-20
California	State	2510	07-01-20
Florida	NELAP	E81010	06-30-20
Florida	NELAP	E81010	06-30-20
Georgia	State	E81010(FL)	06-30-20
Iowa	State	367	08-01-20
Iowa	State Program	367	08-01-20
Kansas	NELAP	E-10253	08-16-20
Kentucky (UST)	State	53	06-30-20
Kentucky (UST)	State Program	53	06-30-20
Kentucky (WW)	State	KY98030	12-30-19
Louisiana	NELAP	30976	06-30-20
Louisiana	NELAP	30976	06-30-20
Louisiana (DW)	NELAP	LA017	12-31-19
Louisiana (DW)	State	<cert No.>	12-31-19
Maryland	State	233	09-30-20
Massachusetts	State	M-FL094	06-30-20
Michigan	State	9912	05-06-20
Minnesota	NELAP	012-999-481	12-31-19
New Jersey	NELAP	FL006	07-30-20
North Carolina (WW/SW)	State	314	12-31-19
North Carolina (WW/SW)	State Program	314	12-31-19
Oklahoma	State	9810-186	08-31-20
Pennsylvania	NELAP	68-00467	01-31-20
Rhode Island	State	LAO00307	12-30-19
Rhode Island	State Program	LAO00307	12-30-19
South Carolina	State	96026002	06-30-20
South Carolina	State Program	96026	06-30-20
Tennessee	State	TN02907	06-30-20
Texas	NELAP	T104704286	09-30-20
US Fish & Wildlife	Federal	LE058448-0	07-31-20
US Fish & Wildlife	US Federal Programs	LE058448	06-07-20
USDA	Federal	P330-18-00148	05-17-21
USDA	US Federal Programs	P330-18-00148	05-17-21
Virginia	NELAP	460166	06-14-20
Washington	State	C915	05-15-20
West Virginia DEP	State	136	06-30-20

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

Laboratory Job ID: 400-178555-2
Laboratory Sample Delivery Group: Crisp Co. Power
Client Project/Site: CCR App.III/IV GW Monitoring

For:
Geosyntec Consultants, Inc.
1255 Roberts Blvd, NW
Suite 200
Kennesaw, Georgia 30144

Attn: Dawit Yifru

Cheyenne R Whitmire

Authorized for release by:
11/22/2019 6:39:46 PM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

Table of Contents

Job ID: 400-178555-2

Laboratory: Eurofins TestAmerica, Pensacola

Narrative

Job Narrative
400-178555-2

RAD

Methods 9315: Ra-226 Prep Batch 160-448393. Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. DUP 13-20191023 (400-178555-1), MW-D2-20191023 (400-178555-2), MW-D3-20191023 (400-178555-3), MW-D1-20191023 (400-178555-4), MW-U1-20191023 (400-178555-5), (LCS 160-448393/1-A), (LCSD 160-448393/2-A) and (MB 160-448393/15-A)

Methods 9320: Radium-228 Prep Batch 160-448396. Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. DUP 13-20191023 (400-178555-1), MW-D2-20191023 (400-178555-2), MW-D3-20191023 (400-178555-3), MW-D1-20191023 (400-178555-4), MW-U1-20191023 (400-178555-5), (LCS 160-448396/1-A), (LCSD 160-448396/2-A) and (MB 160-448396/15-A)

Method PrecSep_0: Radium 228 Prep Batch 160-448396. Insufficient sample volume was available to perform a sample duplicate for the following samples: DUP 13-20191023 (400-178555-1), MW-D2-20191023 (400-178555-2), MW-D3-20191023 (400-178555-3), MW-D1-20191023 (400-178555-4) and MW-U1-20191023 (400-178555-5). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method PrecSep-21: Radium 226 Prep Batch 160-448393. Insufficient sample volume was available to perform a sample duplicate for the following samples: DUP 13-20191023 (400-178555-1), MW-D2-20191023 (400-178555-2), MW-D3-20191023 (400-178555-3), MW-D1-20191023 (400-178555-4) and MW-U1-20191023 (400-178555-5). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method Summary

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-178555-2
SDG: Crisp Co. Power

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-178555-2
SDG: Crisp Co. Power

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
400-178555-1	DUP 13-20191023	Water	10/23/19 08:00	10/25/19 08:41	
400-178555-2	MW-D2-20191023	Water	10/23/19 09:55	10/25/19 08:41	
400-178555-3	MW-D3-20191023	Water	10/23/19 11:30	10/25/19 08:41	
400-178555-4	MW-D1-20191023	Water	10/23/19 12:55	10/25/19 08:41	
400-178555-5	MW-U1-20191023	Water	10/23/19 14:35	10/25/19 08:41	

Client Sample ID: DUP 13-20191023

Date Collected: 10/23/19 08:00
Date Received: 10/25/19 08:41

Lab Sample ID: 400-178555-1

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0419	U	0.0838	0.0839	1.00	0.148	pCi/L	10/30/19 16:38	11/21/19 06:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.7*		*40 - 110*	*10/30/19 16:38*	*11/21/19 06:43*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.355	U	0.295	0.297	1.00	0.469	pCi/L	10/30/19 18:01	11/08/19 12:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.7*		*40 - 110*	*10/30/19 18:01*	*11/08/19 12:42*	*1*
Y Carrier	*83.4*		*40 - 110*	*10/30/19 18:01*	*11/08/19 12:42*	*1*

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.397	U	0.307	0.309	5.00	0.469	pCi/L		11/22/19 08:25	1

Client Sample ID: MW-D2-20191023

Date Collected: 10/23/19 09:55
Date Received: 10/25/19 08:41

Lab Sample ID: 400-178555-2

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0249	U	0.0763	0.0763	1.00	0.139	pCi/L	10/30/19 16:38	11/21/19 06:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.7*		*40 - 110*	*10/30/19 16:38*	*11/21/19 06:43*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.347	U	0.302	0.304	1.00	0.484	pCi/L	10/30/19 18:01	11/08/19 12:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.7*		*40 - 110*	*10/30/19 18:01*	*11/08/19 12:43*	*1*
Y Carrier	*84.5*		*40 - 110*	*10/30/19 18:01*	*11/08/19 12:43*	*1*

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.372	U	0.311	0.313	5.00	0.484	pCi/L		11/22/19 08:25	1

Client Sample ID: MW-D3-20191023

Date Collected: 10/23/19 11:30
Date Received: 10/25/19 08:41

Lab Sample ID: 400-178555-3

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0687	U	0.0856	0.0858	1.00	0.142	pCi/L	10/30/19 16:38	11/21/19 06:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.0*		*40 - 110*	*10/30/19 16:38*	*11/21/19 06:43*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.246	U	0.283	0.283	1.00	0.465	pCi/L	10/30/19 18:01	11/08/19 12:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.0*		*40 - 110*	*10/30/19 18:01*	*11/08/19 12:43*	*1*
Y Carrier	*84.5*		*40 - 110*	*10/30/19 18:01*	*11/08/19 12:43*	*1*

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.315	U	0.296	0.296	5.00	0.465	pCi/L		11/22/19 08:25	1

Client Sample ID: MW-D1-20191023

Date Collected: 10/23/19 12:55
Date Received: 10/25/19 08:41

Lab Sample ID: 400-178555-4

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0229	U	0.0586	0.0586	1.00	0.128	pCi/L	10/30/19 16:38	11/21/19 06:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.2*		*40 - 110*	*10/30/19 16:38*	*11/21/19 06:43*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0825	U	0.253	0.253	1.00	0.439	pCi/L	10/30/19 18:01	11/08/19 12:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.2*		*40 - 110*	*10/30/19 18:01*	*11/08/19 12:43*	*1*
Y Carrier	*85.6*		*40 - 110*	*10/30/19 18:01*	*11/08/19 12:43*	*1*

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0596	U	0.260	0.260	5.00	0.439	pCi/L		11/22/19 08:25	1

Client Sample ID: MW-U1-20191023

Date Collected: 10/23/19 14:35
Date Received: 10/25/19 08:41

Lab Sample ID: 400-178555-5

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0355	U	0.0578	0.0578	1.00	0.130	pCi/L	10/30/19 16:38	11/21/19 06:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*83.2*		*40 - 110*	*10/30/19 16:38*	*11/21/19 06:43*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.119	U	0.276	0.276	1.00	0.508	pCi/L	10/30/19 18:01	11/08/19 12:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*83.2*		*40 - 110*	*10/30/19 18:01*	*11/08/19 12:43*	*1*
Y Carrier	*85.2*		*40 - 110*	*10/30/19 18:01*	*11/08/19 12:43*	*1*

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.154	U	0.282	0.282	5.00	0.508	pCi/L		11/22/19 08:25	1

Definitions/Glossary

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-178555-2
SDG: Crisp Co. Power

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

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

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-178555-2
SDG: Crisp Co. Power

Client Sample ID: DUP 13-20191023
Date Collected: 10/23/19 08:00
Date Received: 10/25/19 08:41

Lab Sample ID: 400-178555-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			448393	10/30/19 16:38	ORM	TAL SL
Total/NA	Analysis	9315		1	451498	11/21/19 06:43	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			448396	10/30/19 18:01	ORM	TAL SL
Total/NA	Analysis	9320		1	449588	11/08/19 12:42	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	451579	11/22/19 08:25	SMP	TAL SL

Client Sample ID: MW-D2-20191023
Date Collected: 10/23/19 09:55
Date Received: 10/25/19 08:41

Lab Sample ID: 400-178555-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			448393	10/30/19 16:38	ORM	TAL SL
Total/NA	Analysis	9315		1	451498	11/21/19 06:43	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			448396	10/30/19 18:01	ORM	TAL SL
Total/NA	Analysis	9320		1	449588	11/08/19 12:43	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	451579	11/22/19 08:25	SMP	TAL SL

Client Sample ID: MW-D3-20191023
Date Collected: 10/23/19 11:30
Date Received: 10/25/19 08:41

Lab Sample ID: 400-178555-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			448393	10/30/19 16:38	ORM	TAL SL
Total/NA	Analysis	9315		1	451498	11/21/19 06:43	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			448396	10/30/19 18:01	ORM	TAL SL
Total/NA	Analysis	9320		1	449588	11/08/19 12:43	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	451579	11/22/19 08:25	SMP	TAL SL

Client Sample ID: MW-D1-20191023
Date Collected: 10/23/19 12:55
Date Received: 10/25/19 08:41

Lab Sample ID: 400-178555-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			448393	10/30/19 16:38	ORM	TAL SL
Total/NA	Analysis	9315		1	451498	11/21/19 06:43	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			448396	10/30/19 18:01	ORM	TAL SL
Total/NA	Analysis	9320		1	449588	11/08/19 12:43	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	451579	11/22/19 08:25	SMP	TAL SL

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-178555-2
SDG: Crisp Co. Power

Client Sample ID: MW-U1-20191023

Date Collected: 10/23/19 14:35
Date Received: 10/25/19 08:41

Lab Sample ID: 400-178555-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			448393	10/30/19 16:38	ORM	TAL SL
Total/NA	Analysis	9315		1	451496	11/21/19 06:43	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			448396	10/30/19 18:01	ORM	TAL SL
Total/NA	Analysis	9320		1	449588	11/08/19 12:43	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	451579	11/22/19 08:25	SMP	TAL SL

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Association Summary

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-178555-2
SDG: Crisp Co. Power

Rad

Prep Batch: 448393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178555-1	DUP 13-20191023	Total/NA	Water	PrecSep-21	
400-178555-2	MW-D2-20191023	Total/NA	Water	PrecSep-21	
400-178555-3	MW-D3-20191023	Total/NA	Water	PrecSep-21	
400-178555-4	MW-D1-20191023	Total/NA	Water	PrecSep-21	
400-178555-5	MW-U1-20191023	Total/NA	Water	PrecSep-21	
MB 160-448393/15-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-448393/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-448393/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 448396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178555-1	DUP 13-20191023	Total/NA	Water	PrecSep_0	
400-178555-2	MW-D2-20191023	Total/NA	Water	PrecSep_0	
400-178555-3	MW-D3-20191023	Total/NA	Water	PrecSep_0	
400-178555-4	MW-D1-20191023	Total/NA	Water	PrecSep_0	
400-178555-5	MW-U1-20191023	Total/NA	Water	PrecSep_0	
MB 160-448396/15-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-448396/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-448396/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-448393/15-A
Matrix: Water
Analysis Batch: 451496

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 448393

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.03125	U	0.0659	0.0659	1.00	0.144	pCi/L	10/30/19 16:38	11/21/19 08:33	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*73.6*		*40 - 110*	*10/30/19 16:38*	*11/21/19 08:33*	*1*

Lab Sample ID: LCS 160-448393/1-A
Matrix: Water
Analysis Batch: 451498

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 448393

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.4	10.21		1.06	1.00	0.120	pCi/L	90	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*92.2*		*40 - 110*

Lab Sample ID: LCSD 160-448393/2-A
Matrix: Water
Analysis Batch: 451498

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 448393

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.4	10.31		1.07	1.00	0.126	pCi/L	91	75 - 125	0.05	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*95.2*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-448396/15-A
Matrix: Water
Analysis Batch: 449588

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 448396

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.02810	U	0.303	0.303	1.00	0.536	pCi/L	10/30/19 18:01	11/08/19 12:43	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*73.6*		*40 - 110*	*10/30/19 18:01*	*11/08/19 12:43*	*1*
Y Carrier	*85.2*		*40 - 110*	*10/30/19 18:01*	*11/08/19 12:43*	*1*

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-448396/1-A
Matrix: Water
Analysis Batch: 449588

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 448396

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			9.42	9.361		1.12	1.00	0.509	pCi/L	99	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*92.2*		*40 - 110*
Y Carrier	*81.9*		*40 - 110*

Lab Sample ID: LCSD 160-448396/2-A
Matrix: Water
Analysis Batch: 449588

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 448396

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			9.42	7.976		0.983	1.00	0.468	pCi/L	85	75 - 125	0.66	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*95.2*		*40 - 110*
Y Carrier	*82.2*		*40 - 110*

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone: 850-474-1001 Fax: 850-478-2671

Chain of Custody Record

eurofins Environment Testing TestAmerica

681-Atlanta

L

Client Information	Sampler: STEPHEN W. RANDALL	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s): 4651 0084 1231	COC No: 400-87774-29334.1
Client Contact: Dawit Yifru	Phone: 478-328-6181	E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 1 of 1
Company: Geosyntec Consultants, Inc.				Job #:
Address: 1255 Roberts Blvd, NW Suite 200	Due Date Requested:			
City: Kennesaw	TAT Requested (days): STANDARD			
State, Zip: GA, 30144				
Phone: 678-202-9500	PO #: Purchase Order not required			
Email: dyifru@geosyntec.com	WO #:			
Project Name: CCR App.III/IV GW Monitoring	Project #: 40007960			
Site: CRISP Co. POWER	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

400-178555 COC

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)		9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	SM4500_Cl_E, SM4500_SO4_E	FieldSampling_Field_pH	6020 - As,B,Ba,Ca,Cr,Co,Li,Tl	25400 - Total Dissolved Solids	1500_F_C - Fluoride	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	D	N	N		
DUP 13-20191023	10/23/19	0800	G	Water	N	N	1	Ø		Ø			1	PH: 6.87 ER
MW-D2-20191023	10/23/19	0955	G	Water	N	N	1	Ø		Ø			1	PH: 6.79
MW-D3-20191023	10/23/19	1130	G	Water	N	N	1	Ø		Ø			1	PH: 6.96
MW-D1-20191023	10/23/19	1255	G	Water	N	N	1	Ø		Ø			1	PH: 6.78
MW-U1-20191023	10/23/19	1435	G	Water	N	N	1	Ø		Ø			1	PH: 7.54
				Water										

LAST ITEM

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) LEVEL II

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Stephen W. Randall	10/24/19 1800	GEOSYNTEC			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 10-25-19 8:41	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 11.6°c, 0.1°c IR8

Ver: 01/16/2019

11/22/2019

Login Sample Receipt Checklist

Client: Geosyntec Consultants, Inc.

Job Number: 400-178555-2
SDG Number: Crisp Co. Power

Login Number: 178555
List Number: 1
Creator: Gore, Beija K

List Source: Eurofins TestAmerica, Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.1°C & 11.6 °C IR 8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-178555-2
SDG: Crisp Co. Power

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	07-01-20
ANAB	ISO/IEC 17025	L2471	02-22-20
Arizona	State	AZ0710	01-12-20
Arkansas DEQ	State	88-0689	09-01-20
California	State	2510	07-01-20
Florida	NELAP	E81010	06-30-20
Florida	NELAP	E81010	06-30-20
Georgia	State	E81010(FL)	06-30-20
Iowa	State	367	08-01-20
Iowa	State Program	367	08-01-20
Kansas	NELAP	E-10253	08-16-20
Kentucky (UST)	State	53	06-30-20
Kentucky (UST)	State Program	53	06-30-20
Kentucky (WW)	State	KY98030	12-30-19
Louisiana	NELAP	30976	06-30-20
Louisiana	NELAP	30976	06-30-20
Louisiana (DW)	NELAP	LA017	12-31-19
Louisiana (DW)	State	<cert No.>	12-31-19
Maryland	State	233	09-30-20
Massachusetts	State	M-FL094	06-30-20
Michigan	State	9912	05-06-20
Minnesota	NELAP	012-999-481	12-31-19
New Jersey	NELAP	FL006	07-30-20
North Carolina (WW/SW)	State	314	12-31-19
North Carolina (WW/SW)	State Program	314	12-31-19
Oklahoma	State	9810-186	08-31-20
Pennsylvania	NELAP	68-00467	01-31-20
Rhode Island	State	LAO00307	12-30-19
Rhode Island	State Program	LAO00307	12-30-19
South Carolina	State	96026002	06-30-20
South Carolina	State Program	96026	06-30-20
Tennessee	State	TN02907	06-30-20
Texas	NELAP	T104704286	09-30-20
US Fish & Wildlife	Federal	LE058448-0	07-31-20
US Fish & Wildlife	US Federal Programs	LE058448	06-07-20
USDA	Federal	P330-18-00148	05-17-21
USDA	US Federal Programs	P330-18-00148	05-17-21
Virginia	NELAP	460166	06-14-20
Washington	State	C915	05-15-20
West Virginia DEP	State	136	06-30-20

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc.
Project/Site: CCR App.III/IV GW Monitoring

Job ID: 400-178555-2
SDG: Crisp Co. Power

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-19
California	Los Angeles County Sanitation Districts	10259	06-30-20
California	State	2886	06-30-20
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-20
Florida	NELAP	E87689	06-30-20
HI - RadChem Recognition	State	n/a	06-30-20
Illinois	NELAP	004553	11-30-19
Iowa	State	373	09-17-20
Kansas	NELAP	E-10236	10-31-20
Kentucky (DW)	State	KY90125	12-31-19
Louisiana	NELAP	04080	06-30-20
Louisiana	NELAP	04080	06-30-20
Louisiana (DW)	State	LA011	12-31-19
Maryland	State	310	09-30-20
MI - RadChem Recognition	State	9005	06-30-20
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-20
New Jersey	NELAP	MO002	06-30-20
New York	NELAP	11616	04-01-20
North Dakota	State	R-207	06-30-20
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-20
Pennsylvania	NELAP	68-00540	02-28-20
South Carolina	State	85002001	06-30-20
Texas	NELAP	T104704193-19-13	07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00028	02-02-20
Utah	NELAP	MO000542019-11	07-31-20
Virginia	NELAP	10310	06-14-20
Washington	State	C592	08-30-20
West Virginia DEP	State	381	12-01-19

APPENDIX C

Statistical Calculations and Time-series Graphs

Summary Report

Constituent: Antimony Analysis Run 12/30/2019 10:02 AM View: Sanitas_Statistics Sampling Events 1 through 12
CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

For observations made between 2/28/2017 and 4/29/2019, a summary of the selected data set:

Observations = 40
ND/Trace = 40
Wells = 4
Minimum Value = 0.0025
Maximum Value = 0.0025
Mean Value = 0.0025
Median Value = 0.0025
Standard Deviation = 0
Coefficient of Variation = 0
Skewness = NaN

Well	#Obs.	ND/Trace	Min	Max	Mean	Median	Std.Dev.	CV	Skewness
MW-D1	10	10	0.0025	0.0025	0.0025	0.0025	0	0	NaN
MW-D2	10	10	0.0025	0.0025	0.0025	0.0025	0	0	NaN
MW-D3	10	10	0.0025	0.0025	0.0025	0.0025	0	0	NaN
MW-U1 (bg)	10	10	0.0025	0.0025	0.0025	0.0025	0	0	NaN

Summary Report

Constituent: Arsenic Analysis Run 12/30/2019 10:02 AM View: Sanitas_Statistics Sampling Events 1 through 12
CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

For observations made between 2/28/2017 and 10/23/2019, a summary of the selected data set:

Observations = 49
ND/Trace = 34
Wells = 4
Minimum Value = 0.00046
Maximum Value = 0.0016
Mean Value = 0.001147
Median Value = 0.0013
Standard Deviation = 0.0003011
Coefficient of Variation = 0.2625
Skewness = -1.262

Well	#Obs.	ND/Trace	Min	Max	Mean	Median	Std.Dev.	CV	Skewness
MW-D1	12	12	0.0013	0.0013	0.0013	0.0013	0	0	NaN
MW-D2	12	9	0.00048	0.0013	0.001163	0.0013	0.0002683	0.2306	-1.686
MW-D3	13	2	0.00048	0.0016	0.0009146	0.00079	0.000392	0.4286	0.5184
MW-U1 (bg)	12	11	0.00046	0.0013	0.00123	0.0013	0.0002425	0.1971	-3.015

Summary Report

Constituent: Barium Analysis Run 12/30/2019 10:02 AM View: Sanitas_Statistics Sampling Events 1 through 12
CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

For observations made between 2/28/2017 and 10/23/2019, a summary of the selected data set:

Observations = 52
ND/Trace = 0
Wells = 4
Minimum Value = 0.0018
Maximum Value = 0.23
Mean Value = 0.08278
Median Value = 0.057
Standard Deviation = 0.0807
Coefficient of Variation = 0.9748
Skewness = 0.3159

Well	#Obs.	ND/Trace	Min	Max	Mean	Median	Std.Dev.	CV	Skewness
MW-D1	13	0	0.0095	0.027	0.01295	0.012	0.004587	0.3543	2.38
MW-D2	13	0	0.087	0.19	0.1382	0.14	0.02688	0.1944	-0.09738
MW-D3	13	0	0.1	0.23	0.1777	0.18	0.03919	0.2206	-0.5032
MW-U1 (bg)	13	0	0.0018	0.0034	0.002269	0.0022	0.0004231	0.1864	1.433

Summary Report

Constituent: Beryllium Analysis Run 12/30/2019 10:02 AM View: Sanitas_Statistics Sampling Events 1 through 12
CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

For observations made between 2/28/2017 and 4/29/2019, a summary of the selected data set:

Observations = 40
ND/Trace = 40
Wells = 4
Minimum Value = 0.002
Maximum Value = 0.002
Mean Value = 0.002
Median Value = 0.002
Standard Deviation = 0
Coefficient of Variation = 0
Skewness = NaN

Well	#Obs.	ND/Trace	Min	Max	Mean	Median	Std.Dev.	CV	Skewness
MW-D1	10	10	0.002	0.002	0.002	0.002	0	0	NaN
MW-D2	10	10	0.002	0.002	0.002	0.002	0	0	NaN
MW-D3	10	10	0.002	0.002	0.002	0.002	0	0	NaN
MW-U1 (bg)	10	10	0.002	0.002	0.002	0.002	0	0	NaN

Summary Report

Constituent: Cadmium Analysis Run 12/30/2019 10:02 AM View: Sanitas_Statistics Sampling Events 1 through 12
CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

For observations made between 2/28/2017 and 4/29/2019, a summary of the selected data set:

Observations = 40
ND/Trace = 40
Wells = 4
Minimum Value = 0.001
Maximum Value = 0.001
Mean Value = 0.001
Median Value = 0.001
Standard Deviation = 0
Coefficient of Variation = 0
Skewness = NaN

Well	#Obs.	ND/Trace	Min	Max	Mean	Median	Std.Dev.	CV	Skewness
MW-D1	10	10	0.001	0.001	0.001	0.001	0	0	NaN
MW-D2	10	10	0.001	0.001	0.001	0.001	0	0	NaN
MW-D3	10	10	0.001	0.001	0.001	0.001	0	0	NaN
MW-U1 (bg)	10	10	0.001	0.001	0.001	0.001	0	0	NaN

Summary Report

Constituent: Chromium Analysis Run 12/30/2019 10:02 AM View: Sanitas_Statistics Sampling Events 1 through 12
CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

For observations made between 2/28/2017 and 4/29/2019, a summary of the selected data set:

Observations = 44
ND/Trace = 30
Wells = 4
Minimum Value = 0.0011
Maximum Value = 0.0051
Mean Value = 0.002364
Median Value = 0.0025
Standard Deviation = 0.0007061
Coefficient of Variation = 0.2988
Skewness = 0.9631

Well	#Obs.	ND/Trace	Min	Max	Mean	Median	Std.Dev.	CV	Skewness
MW-D1	11	10	0.0025	0.0034	0.002582	0.0025	0.0002714	0.1051	2.846
MW-D2	11	10	0.0025	0.0038	0.002618	0.0025	0.000392	0.1497	2.846
MW-D3	11	10	0.0025	0.0029	0.002536	0.0025	0.0001206	0.04755	2.846
MW-U1 (bg)	11	0	0.0011	0.0051	0.001718	0.0014	0.001135	0.6604	2.728

Summary Report

Constituent: Cobalt Analysis Run 12/30/2019 10:02 AM View: Sanitas_Statistics Sampling Events 1 through 12
CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

For observations made between 2/28/2017 and 10/23/2019, a summary of the selected data set:

Observations = 49
ND/Trace = 35
Wells = 4
Minimum Value = 0.00047
Maximum Value = 0.0025
Mean Value = 0.002129
Median Value = 0.0025
Standard Deviation = 0.000615
Coefficient of Variation = 0.2888
Skewness = -1.207

Well	#Obs.	ND/Trace	Min	Max	Mean	Median	Std.Dev.	CV	Skewness
MW-D1	12	12	0.0025	0.0025	0.0025	0.0025	0	0	NaN
MW-D2	12	11	0.00047	0.0025	0.002331	0.0025	0.000586	0.2514	-3.015
MW-D3	13	0	0.00079	0.0017	0.001259	0.0013	0.0002501	0.1987	-0.1535
MW-U1 (bg)	12	12	0.0025	0.0025	0.0025	0.0025	0	0	NaN

Summary Report

Constituent: Combined Radium 226 + 228 Analysis Run 12/30/2019 10:02 AM View: Sanitas_Statistics Sampling Events 1 through 12
CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

For observations made between 2/28/2017 and 10/23/2019, a summary of the selected data set:

Observations = 52
ND/Trace = 7
Wells = 4
Minimum Value = -0.0586
Maximum Value = 1.28
Mean Value = 0.423
Median Value = 0.4525
Standard Deviation = 0.3035
Coefficient of Variation = 0.7175
Skewness = 0.8845

Well	#Obs.	ND/Trace	Min	Max	Mean	Median	Std.Dev.	CV	Skewness
MW-D1	13	2	0.0994	0.816	0.3687	0.287	0.2373	0.6437	0.5113
MW-D2	13	2	0.0139	1.28	0.5098	0.506	0.3034	0.595	0.9785
MW-D3	13	1	0.0501	1.28	0.6002	0.557	0.3248	0.5411	0.7837
MW-U1 (bg)	13	2	-0.0586	0.614	0.2133	0.135	0.2114	0.9909	0.6807

Summary Report

Constituent: Fluoride Analysis Run 12/30/2019 10:02 AM View: Sanitas_Statistics Sampling Events 1 through 12
CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

For observations made between 2/28/2017 and 10/23/2019, a summary of the selected data set:

Observations = 52
ND/Trace = 1
Wells = 4
Minimum Value = 0.04
Maximum Value = 0.13
Mean Value = 0.07527
Median Value = 0.0605
Standard Deviation = 0.02639
Coefficient of Variation = 0.3505
Skewness = 0.6831

Well	#Obs.	ND/Trace	Min	Max	Mean	Median	Std.Dev.	CV	Skewness
MW-D1	13	0	0.04	0.12	0.07346	0.07	0.02174	0.2959	0.8
MW-D2	13	0	0.04	0.07	0.05854	0.06	0.008027	0.1371	-0.766
MW-D3	13	0	0.06	0.13	0.11	0.11	0.01732	0.1575	-1.903
MW-U1 (bg)	13	1	0.04	0.1	0.05908	0.06	0.01498	0.2536	1.405

Summary Report

Constituent: Lead Analysis Run 12/30/2019 10:02 AM View: Sanitas_Statistics Sampling Events 1 through 12
CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

For observations made between 2/28/2017 and 4/29/2019, a summary of the selected data set:

Observations = 40
ND/Trace = 36
Wells = 4
Minimum Value = 0.00037
Maximum Value = 0.0013
Mean Value = 0.001228
Median Value = 0.0013
Standard Deviation = 0.0002248
Coefficient of Variation = 0.183
Skewness = -2.917

Well	#Obs.	ND/Trace	Min	Max	Mean	Median	Std.Dev.	CV	Skewness
MW-D1	10	9	0.0008	0.0013	0.00125	0.0013	0.0001581	0.1265	-2.667
MW-D2	10	8	0.00037	0.0013	0.001127	0.0013	0.000366	0.3248	-1.526
MW-D3	10	10	0.0013	0.0013	0.0013	0.0013	0	0	NaN
MW-U1 (bg)	10	9	0.00065	0.0013	0.001235	0.0013	0.0002055	0.1664	-2.667

Summary Report

Constituent: Lithium Analysis Run 12/30/2019 10:02 AM View: Sanitas_Statistics Sampling Events 1 through 12
CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

For observations made between 2/28/2017 and 4/29/2019, a summary of the selected data set:

Observations = 44
ND/Trace = 41
Wells = 4
Minimum Value = 0.00034
Maximum Value = 0.0025
Mean Value = 0.002392
Median Value = 0.0025
Standard Deviation = 0.000419
Coefficient of Variation = 0.1752
Skewness = -3.85

Well	#Obs.	ND/Trace	Min	Max	Mean	Median	Std.Dev.	CV	Skewness
MW-D1	11	11	0.0025	0.0025	0.0025	0.0025	0	0	NaN
MW-D2	11	10	0.0011	0.0025	0.002373	0.0025	0.0004221	0.1779	-2.846
MW-D3	11	10	0.0013	0.0025	0.002391	0.0025	0.0003618	0.1513	-2.846
MW-U1 (bg)	11	10	0.00034	0.0025	0.002304	0.0025	0.0006513	0.2827	-2.846

Summary Report

Constituent: Mercury Analysis Run 12/30/2019 10:02 AM View: Sanitas_Statistics Sampling Events 1 through 12
CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

For observations made between 2/28/2017 and 4/29/2019, a summary of the selected data set:

Observations = 40
ND/Trace = 35
Wells = 4
Minimum Value = 0.000077
Maximum Value = 0.0002
Mean Value = 0.0001894
Median Value = 0.0002
Standard Deviation = 0.00003098
Coefficient of Variation = 0.1636
Skewness = -2.724

Well	#Obs.	ND/Trace	Min	Max	Mean	Median	Std.Dev.	CV	Skewness
MW-D1	10	9	0.000077	0.0002	0.0001877	0.0002	0.0000389	0.2072	-2.667
MW-D2	10	8	0.00011	0.0002	0.000189	0.0002	0.00002846	0.1506	-2.455
MW-D3	10	9	0.00011	0.0002	0.000191	0.0002	0.00002846	0.149	-2.667
MW-U1 (bg)	10	9	0.000099	0.0002	0.0001899	0.0002	0.00003194	0.1682	-2.667

Summary Report

Constituent: Molybdenum Analysis Run 12/30/2019 10:02 AM View: Sanitas_Statistics Sampling Events 1 through 12
CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

For observations made between 2/28/2017 and 4/29/2019, a summary of the selected data set:

Observations = 48
ND/Trace = 35
Wells = 4
Minimum Value = 0.0012
Maximum Value = 0.01
Mean Value = 0.008052
Median Value = 0.01
Standard Deviation = 0.003378
Coefficient of Variation = 0.4196
Skewness = -1.189

Well	#Obs.	ND/Trace	Min	Max	Mean	Median	Std.Dev.	CV	Skewness
MW-D1	12	12	0.01	0.01	0.01	0.01	0	0	NaN
MW-D2	12	9	0.0012	0.01	0.007942	0.01	0.003734	0.4702	-1.174
MW-D3	12	2	0.0017	0.01	0.004267	0.0025	0.003301	0.7737	1.048
MW-U1 (bg)	12	12	0.01	0.01	0.01	0.01	0	0	NaN

Summary Report

Constituent: Selenium Analysis Run 12/30/2019 10:02 AM View: Sanitas_Statistics Sampling Events 1 through 12
CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

For observations made between 2/28/2017 and 4/29/2019, a summary of the selected data set:

Observations = 44
ND/Trace = 31
Wells = 4
Minimum Value = 0.00033
Maximum Value = 0.0028
Mean Value = 0.00114
Median Value = 0.0013
Standard Deviation = 0.0004263
Coefficient of Variation = 0.3738
Skewness = 0.5261

Well	#Obs.	ND/Trace	Min	Max	Mean	Median	Std.Dev.	CV	Skewness
MW-D1	11	10	0.00033	0.0013	0.001212	0.0013	0.0002925	0.2413	-2.846
MW-D2	11	8	0.00033	0.0013	0.00112	0.0013	0.0003433	0.3065	-1.547
MW-D3	11	8	0.00037	0.0028	0.001325	0.0013	0.0005655	0.427	1.338
MW-U1 (bg)	11	5	0.00039	0.0013	0.0009055	0.00076	0.0003925	0.4334	-0.03638

Summary Report

Constituent: Thallium Analysis Run 12/30/2019 10:02 AM View: Sanitas_Statistics Sampling Events 1 through 12
CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

For observations made between 2/28/2017 and 10/23/2019, a summary of the selected data set:

Observations = 50
ND/Trace = 28
Wells = 4
Minimum Value = 0.000085
Maximum Value = 0.0005
Mean Value = 0.0003329
Median Value = 0.0005
Standard Deviation = 0.0001919
Coefficient of Variation = 0.5764
Skewness = -0.2788

Well	#Obs.	ND/Trace	Min	Max	Mean	Median	Std.Dev.	CV	Skewness
MW-D1	12	12	0.0005	0.0005	0.0005	0.0005	0	0	NaN
MW-D2	13	4	0.000085	0.0005	0.00024	0.00012	0.0001855	0.7729	0.6932
MW-D3	13	0	0.000095	0.00017	0.0001173	0.00011	0.00001922	0.1638	1.558
MW-U1 (bg)	12	12	0.0005	0.0005	0.0005	0.0005	0	0	NaN

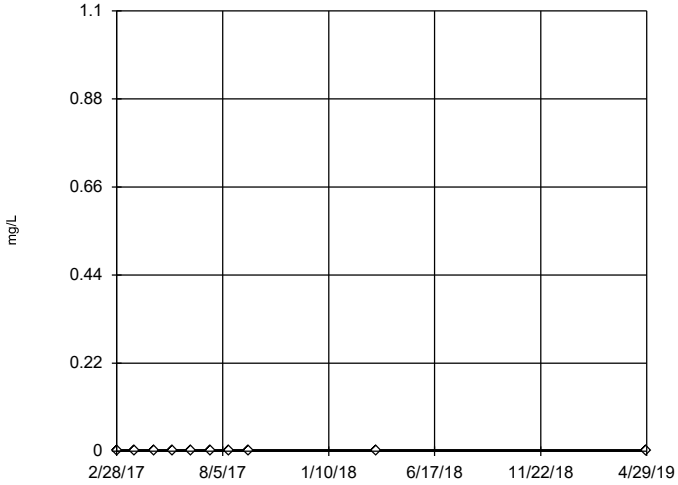
Outlier Analysis

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10 Printed 12/30/2019, 9:48 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Barium (mg/L)	**MW-D1**	**Yes**	**0.027**	**10/23/2019**	**EPA 1989**	**0.05**	**13**	**0.01295**	**0.004587**	**normal**	**ShapiroWilk**
Barium (mg/L)	**MW-U1 (bg)**	**Yes**	**0.0034**	**2/28/2017**	**EPA 1989**	**0.05**	**13**	**0.002269**	**0.0004231**	**normal**	**ShapiroWilk**
Chromium (mg/L)	**MW-U1 (bg)**	**Yes**	**0.0051**	**2/28/2017**	**EPA 1989**	**0.05**	**11**	**0.001718**	**0.001135**	**normal**	**ShapiroWilk**
Combined Radium 226 + 228 (pCi/L)	**MW-D2**	**Yes**	**0.0139**	**6/5/2018**	**EPA 1989**	**0.05**	**13**	**0.5061**	**0.3035**	**normal**	**ShapiroWilk**
Combined Radium 226 + 228 (pCi/L)	**MW-D3**	**Yes**	**0.0501**	**11/29/2018**	**EPA 1989**	**0.05**	**13**	**0.5969**	**0.326**	**ln(x)**	**ShapiroWilk**
Fluoride (mg/L)	**MW-D3**	**Yes**	**0.06**	**7/17/2017**	**EPA 1989**	**0.05**	**13**	**0.11**	**0.01732**	**normal**	**ShapiroWilk**
Thallium (mg/L)	**MW-D3**	**Yes**	**0.00017**	**10/23/2019**	**EPA 1989**	**0.05**	**13**	**0.000...**	**0.0000...**	**normal**	**ShapiroWilk**

Tukey's Outlier Screening

MW-D1



n = 10

No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Antimony Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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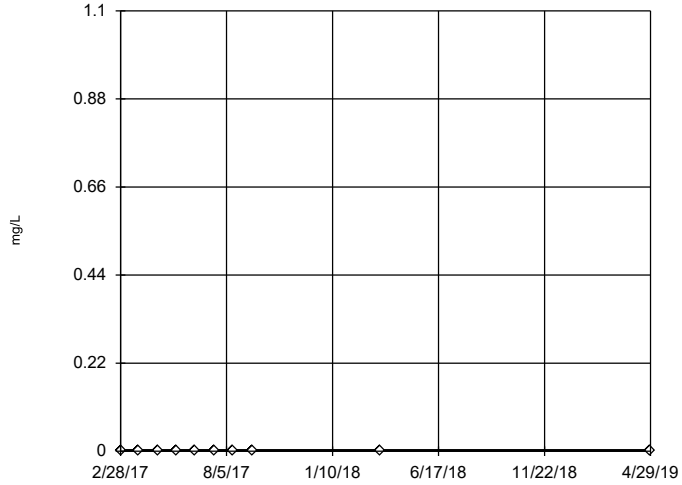
Tukey's Outlier Screening

MW-D2



n = 10

No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Antimony Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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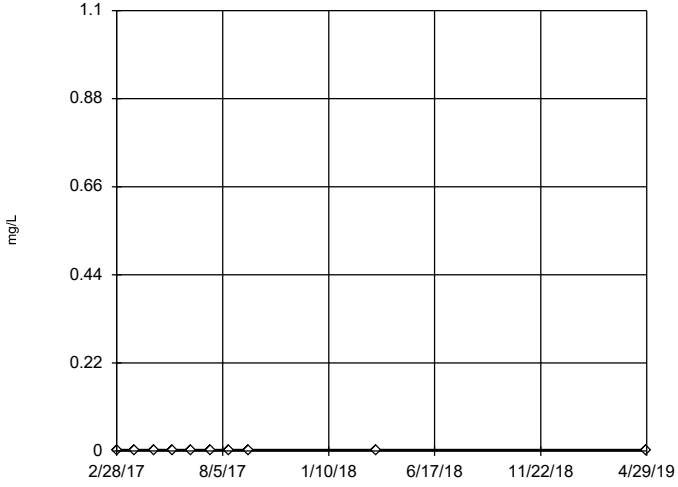
Tukey's Outlier Screening

MW-D3



n = 10

No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Antimony Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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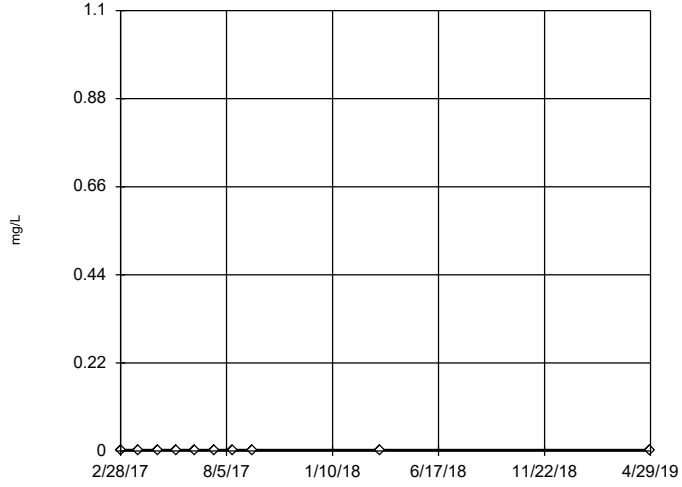
Tukey's Outlier Screening

MW-U1 (bg)



n = 10

No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

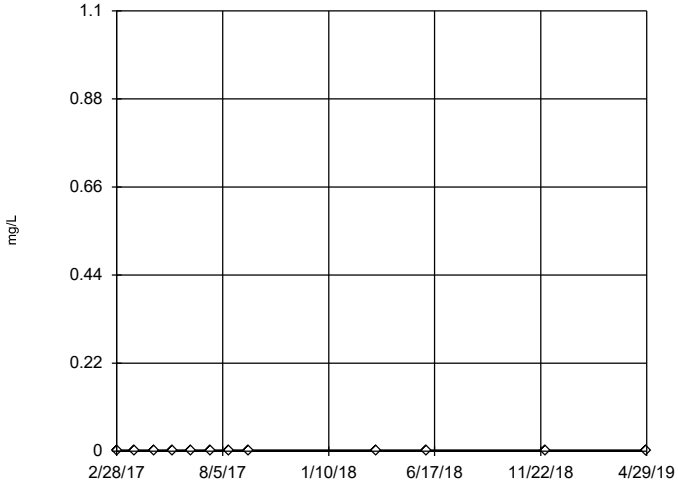
The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Antimony Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Tukey's Outlier Screening

MW-D1



n = 12

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Arsenic Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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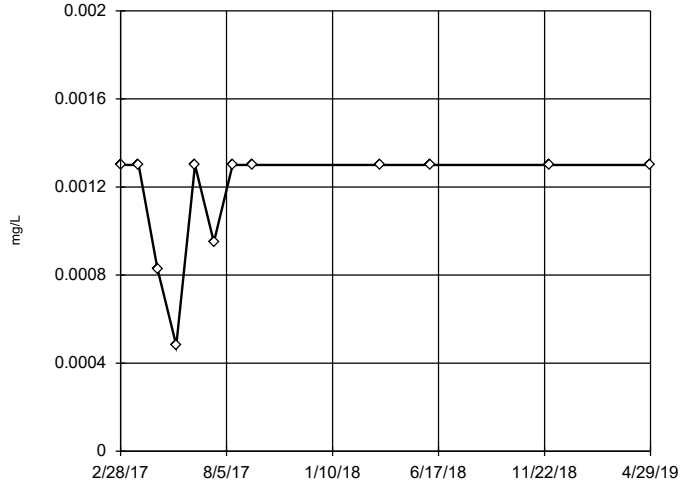
Tukey's Outlier Screening

MW-D2



n = 12

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were square transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.001694, low cutoff = 0.0003391, based on IQR multiplier of 3.

Constituent: Arsenic Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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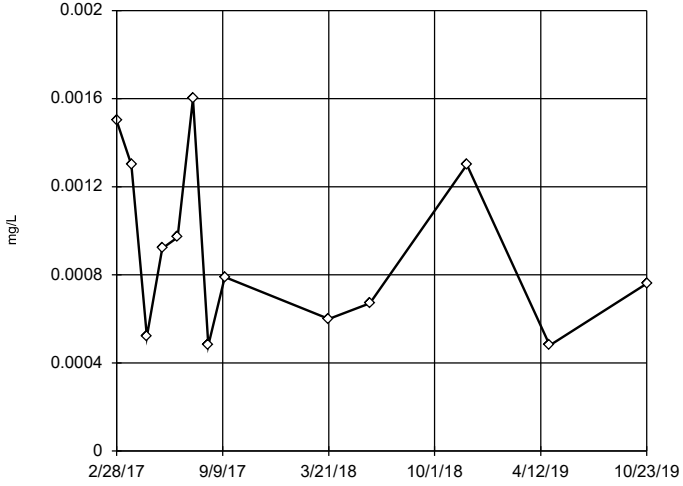
EPA 1989 Outlier Screening

MW-D3



n = 13

No statistical outliers.
Mean 0.0009146, std. dev. 0.000392, critical Tn 2.331

Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.9003
Critical = 0.814
The distribution was found to be normally distributed.

Constituent: Arsenic Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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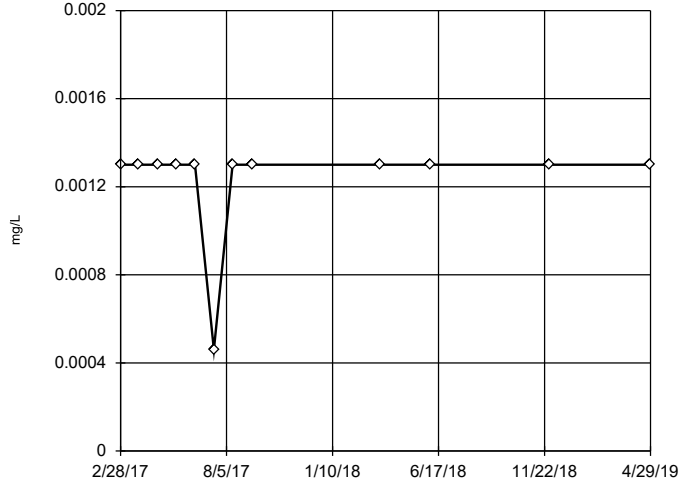
Tukey's Outlier Screening

MW-U1 (bg)



n = 12

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were cube transformed to achieve best W statistic (graph shown in original units).

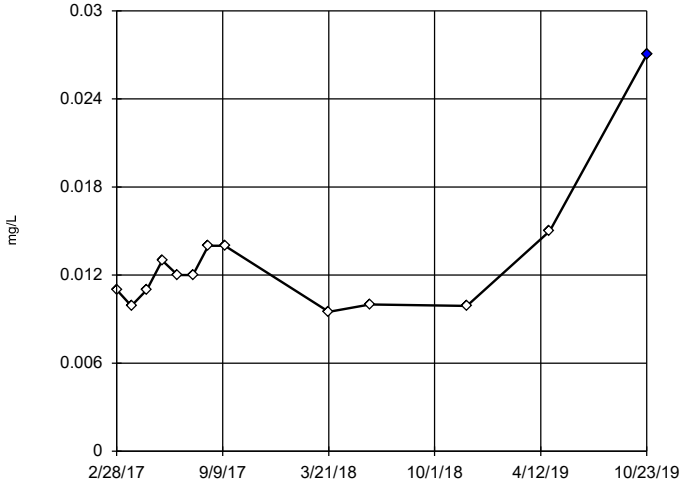
The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Arsenic Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

EPA 1989 Outlier Screening

MW-D1



n = 13

Statistical outlier is drawn as solid.
Mean 0.01295, std. dev. 0.004587, critical Tn 2.331. After removing suspect data: mean 0.01178, std. dev. 0.00187, Tn 2.285.

Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.9158
Critical = 0.805
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Barium Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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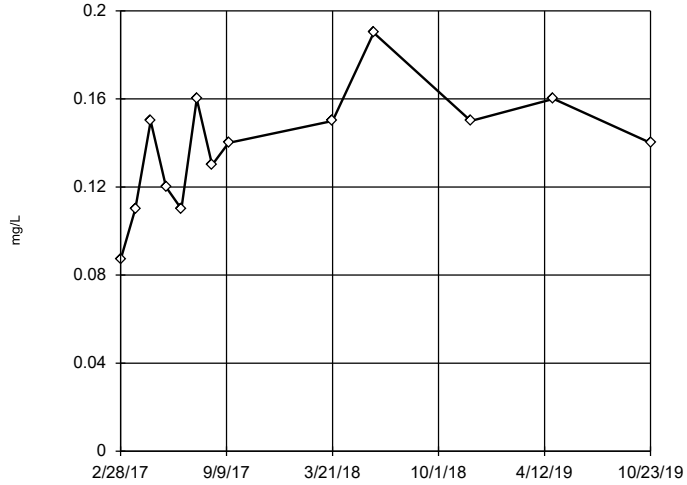
EPA 1989 Outlier Screening

MW-D2



n = 13

No statistical outliers.
Mean 0.1382, std. dev. 0.02688, critical Tn 2.331

Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.9709
Critical = 0.814
The distribution was found to be normally distributed.

Constituent: Barium Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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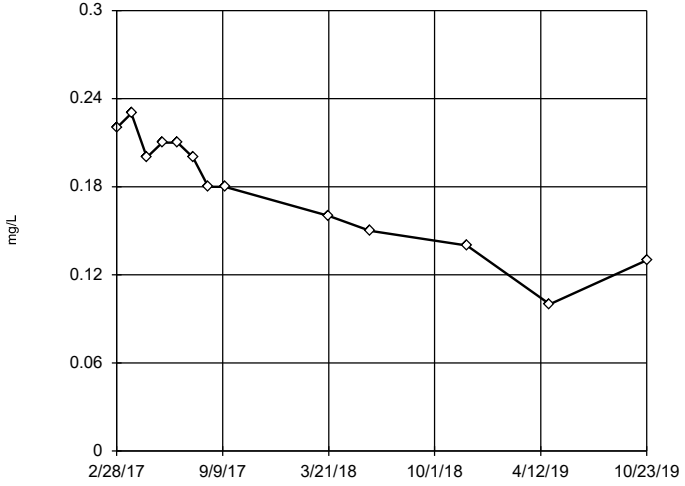
EPA 1989 Outlier Screening

MW-D3



n = 13

No statistical outliers.
Mean 0.1777, std. dev. 0.03919, critical Tn 2.331

Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.9481
Critical = 0.814
The distribution was found to be normally distributed.

Constituent: Barium Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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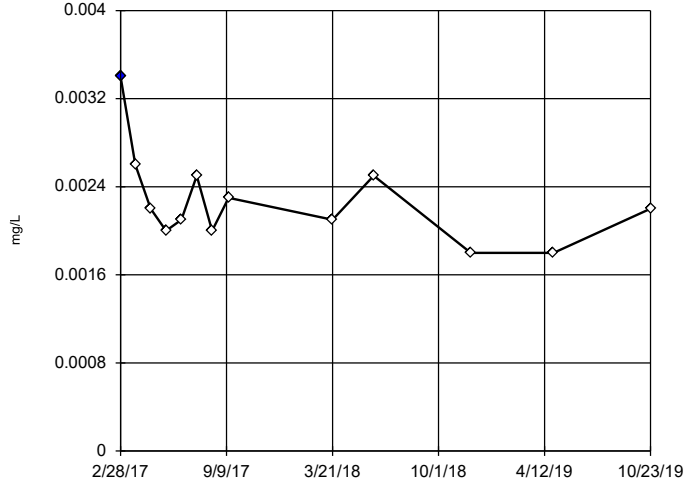
EPA 1989 Outlier Screening

MW-U1 (bg)



n = 13

Statistical outlier is drawn as solid.
Mean 0.002269, std. dev. 0.0004231, critical Tn 2.331. After removing suspect data: mean 0.002175, std. dev. 0.0002633, Tn 2.285.

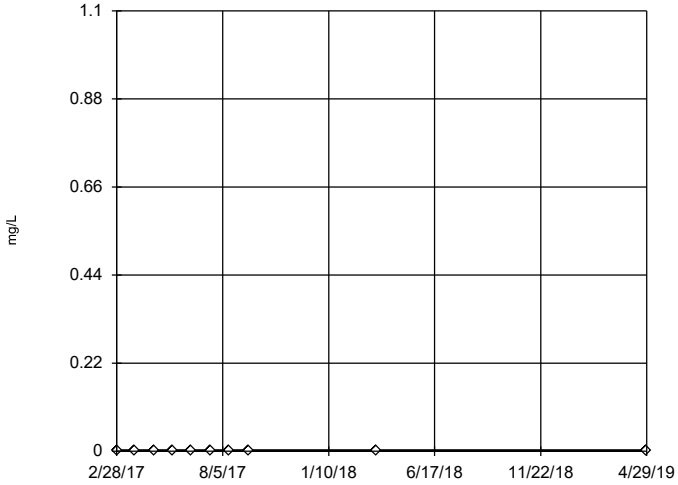
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.9429
Critical = 0.805
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Barium Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Tukey's Outlier Screening

MW-D1



n = 10

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Beryllium Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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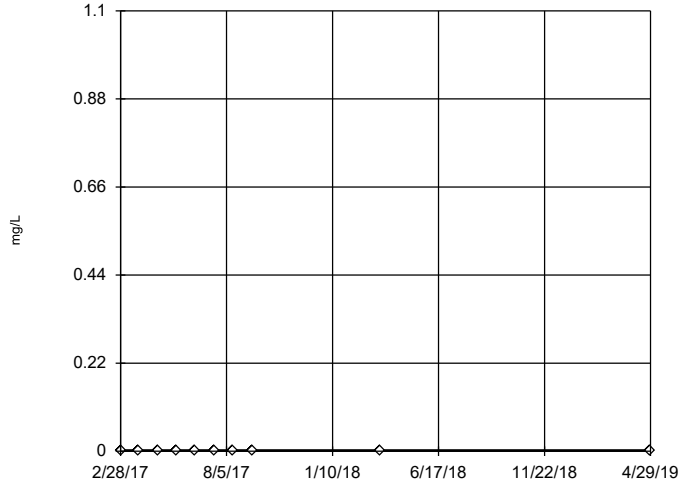
Tukey's Outlier Screening

MW-D2



n = 10

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Beryllium Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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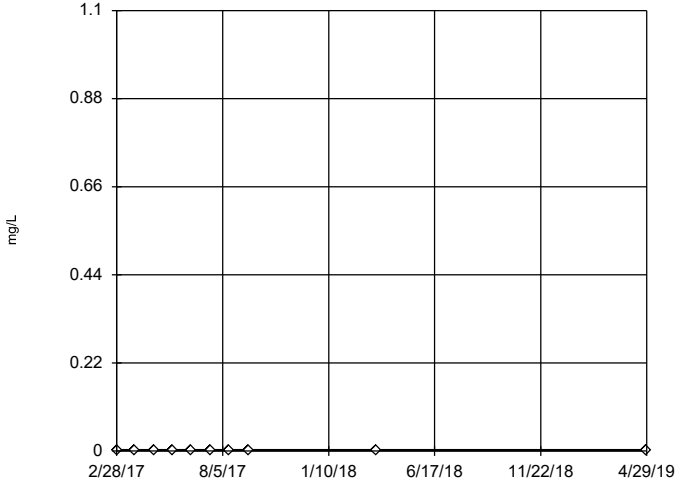
Tukey's Outlier Screening

MW-D3



n = 10

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Beryllium Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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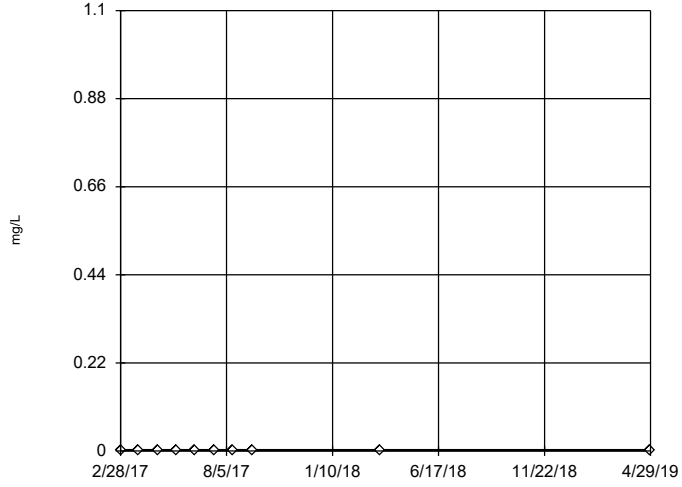
Tukey's Outlier Screening

MW-U1 (bg)



n = 10

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

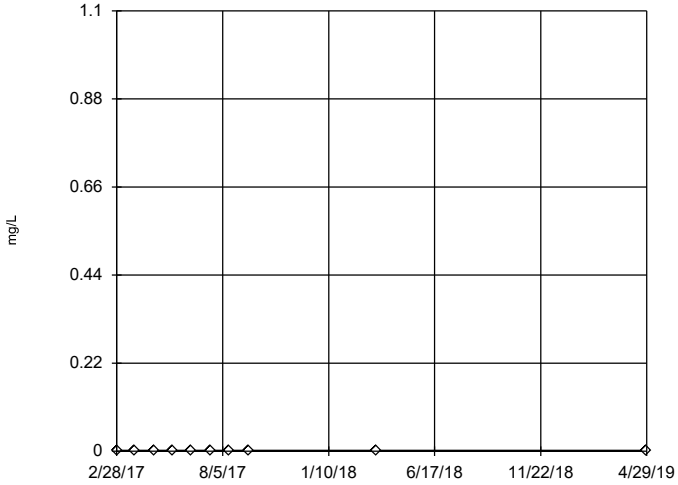
The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Beryllium Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Tukey's Outlier Screening

MW-D1



n = 10

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were cube root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Cadmium Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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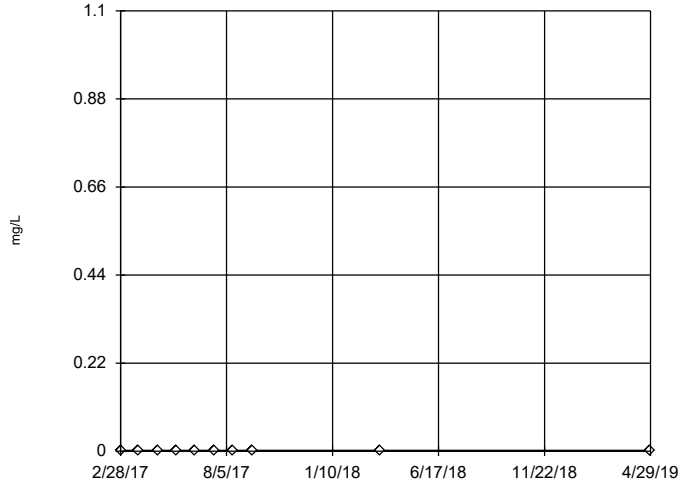
Tukey's Outlier Screening

MW-D2



n = 10

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were cube root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Cadmium Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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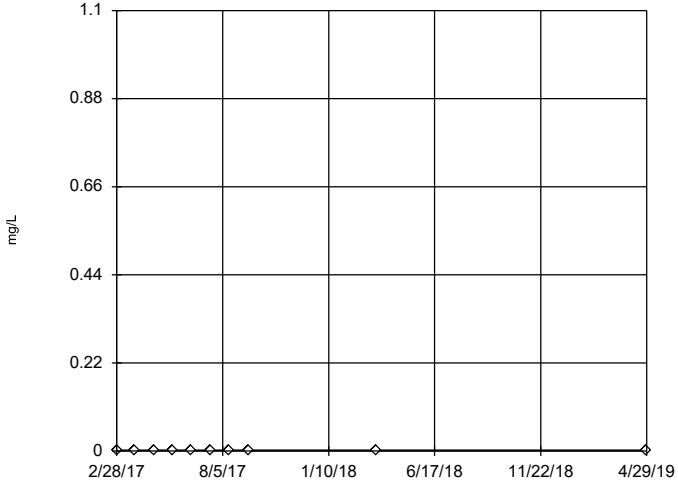
Tukey's Outlier Screening

MW-D3



n = 10

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were cube root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Cadmium Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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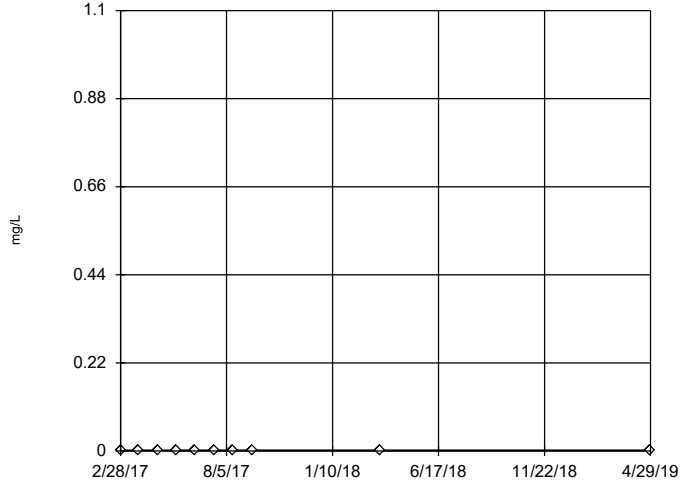
Tukey's Outlier Screening

MW-U1 (bg)



n = 10

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were cube root transformed to achieve best W statistic (graph shown in original units).

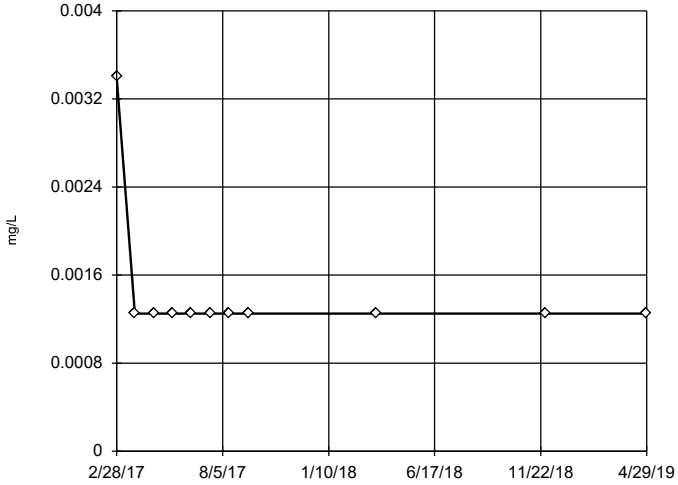
The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Cadmium Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Tukey's Outlier Screening

MW-D1



n = 11

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were x^4 transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Chromium Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 thr

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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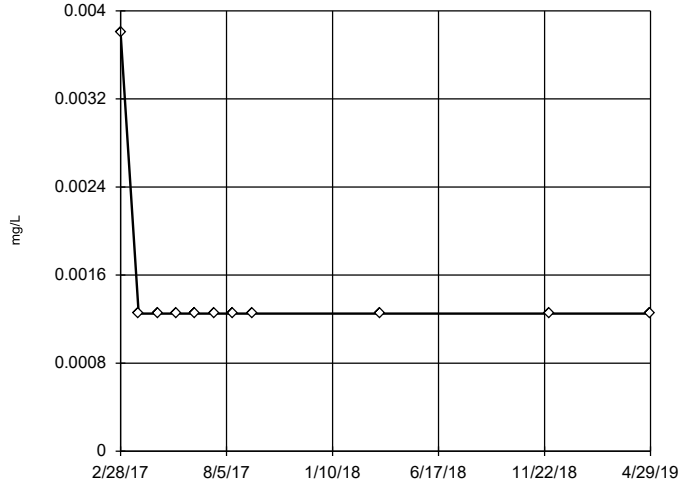
Tukey's Outlier Screening

MW-D2



n = 11

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were cube root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Chromium Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 thr

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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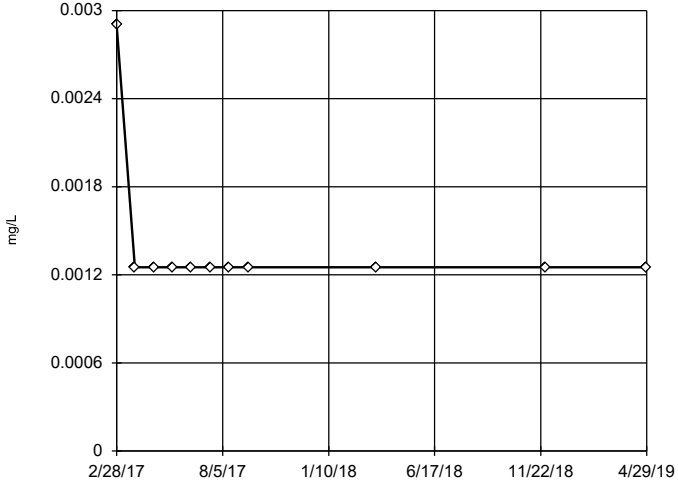
Tukey's Outlier Screening

MW-D3



n = 11

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Chromium Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 thr

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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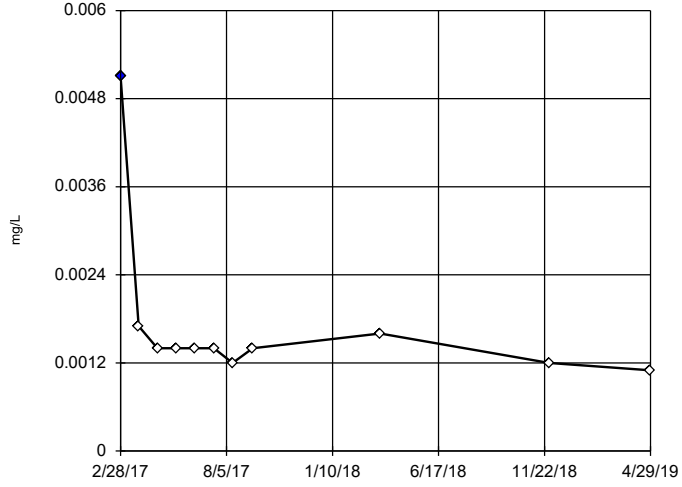
EPA 1989 Outlier Screening

MW-U1 (bg)



n = 11

Statistical outlier is drawn as solid.
Mean 0.001718, std. dev. 0.001135, critical Tn 2.234. After removing suspect data: mean 0.00138, std. dev. 0.0001814, Tn 2.176.

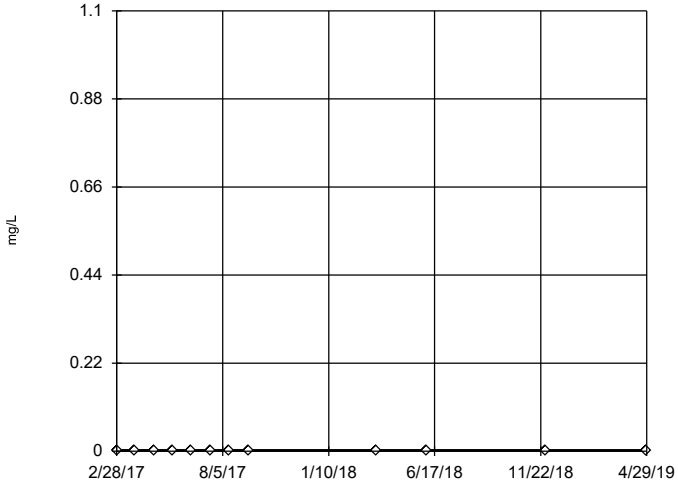
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.9093
Critical = 0.781
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Chromium Analysis Run 12/30/2019 9:45 AM View: Sanitas_Statistics Sampling Events 1 thr

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Tukey's Outlier Screening

MW-D1



n = 12

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Cobalt Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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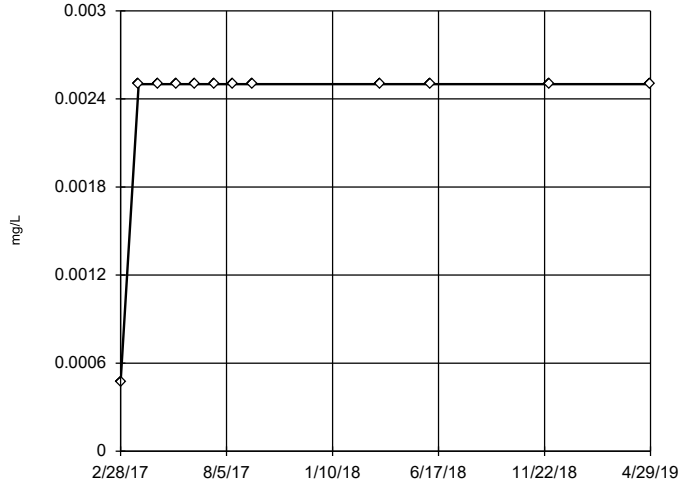
Tukey's Outlier Screening

MW-D2



n = 12

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were x^6 transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Cobalt Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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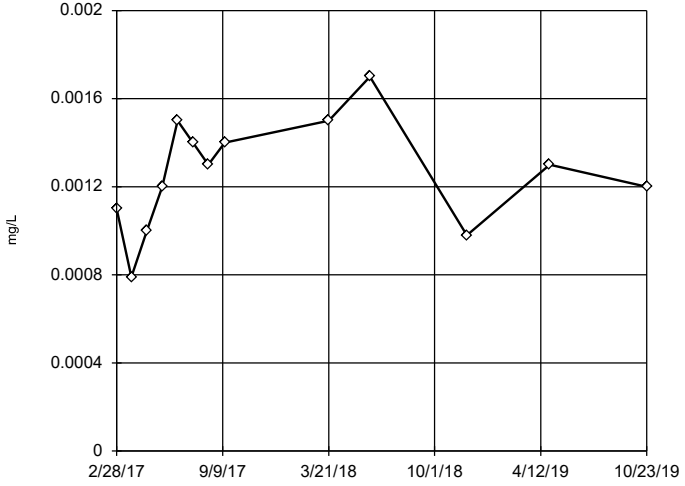
EPA 1989 Outlier Screening

MW-D3



n = 13

No statistical outliers.
Mean 0.001259, std. dev. 0.0002501, critical Tn 2.331

Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.9844
Critical = 0.814
The distribution was found to be normally distributed.

Constituent: Cobalt Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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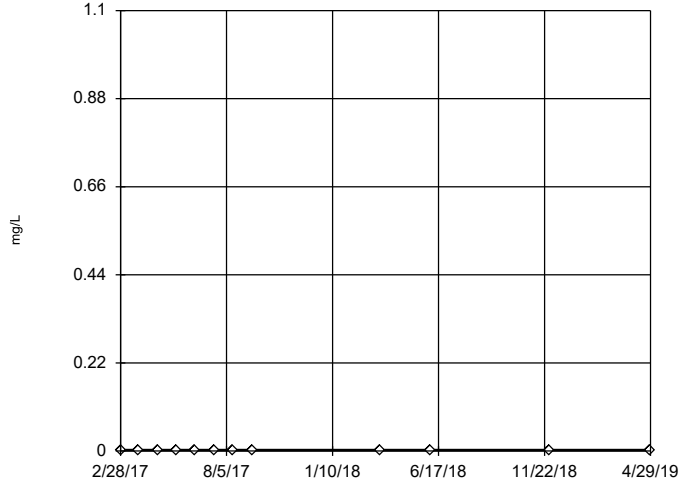
Tukey's Outlier Screening

MW-U1 (bg)



n = 12

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

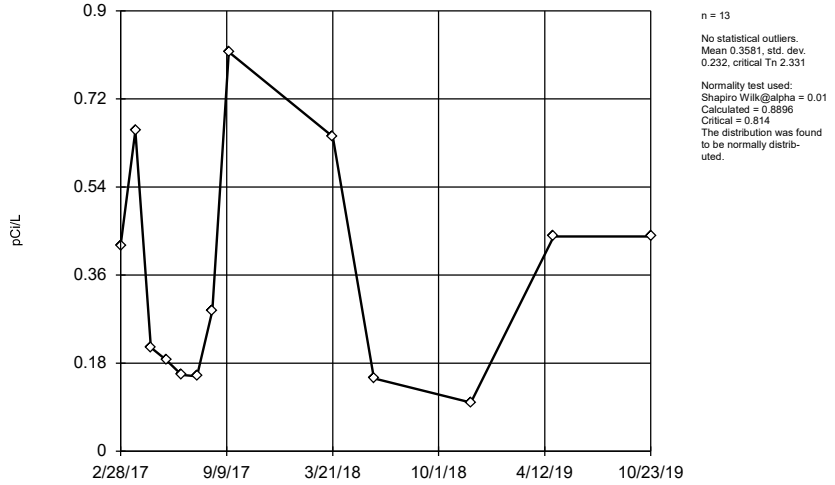
The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Cobalt Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

EPA 1989 Outlier Screening

MW-D1



n = 13

No statistical outliers.
Mean 0.3581, std. dev. 0.232, critical Tn 2.331

Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.8896
Critical = 0.814
The distribution was found to be normally distributed.

Constituent: Combined Radium 226 + 228 Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sa

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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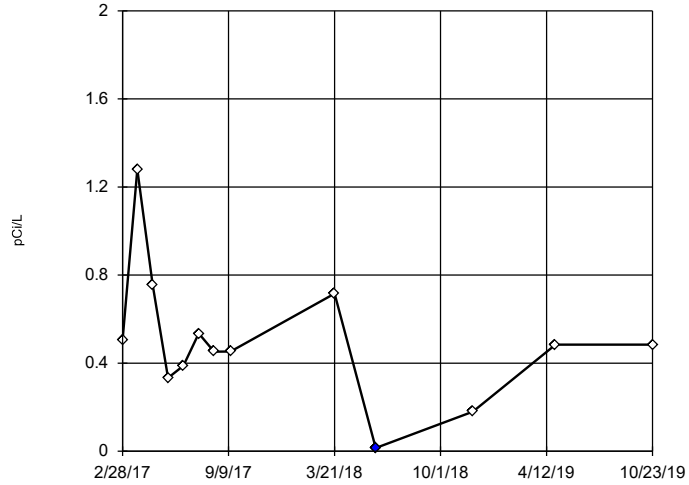
EPA 1989 Outlier Screening

MW-D2



n = 13

Statistical outlier is drawn as solid.
Mean 0.5061, std. dev. 0.3035, critical Tn 2.331.
After removing suspect data: mean 0.5472, std. dev. 0.2768, Tn 2.285.

Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.8326
Critical = 0.805
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Combined Radium 226 + 228 Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sa

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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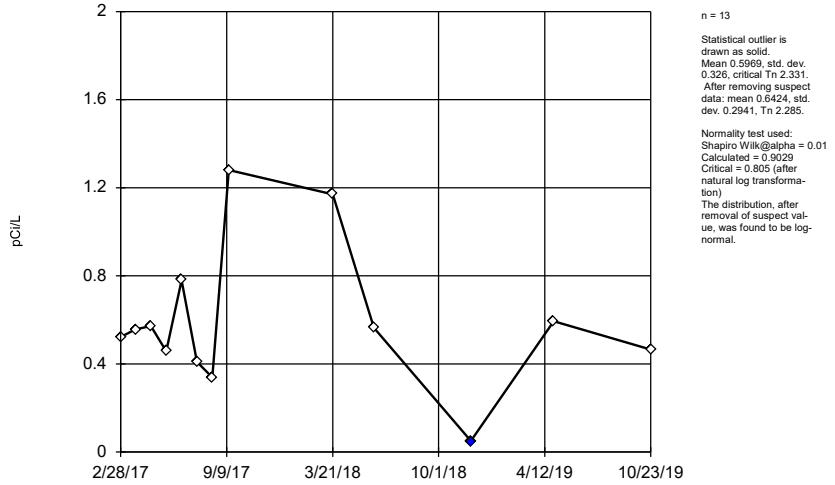
EPA 1989 Outlier Screening

MW-D3



n = 13

Statistical outlier is drawn as solid.
Mean 0.5969, std. dev. 0.326, critical Tn 2.331.
After removing suspect data: mean 0.6424, std. dev. 0.2941, Tn 2.285.

Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.9029
Critical = 0.805 (after natural log transformation)
The distribution, after removal of suspect value, was found to be log-normal.

Constituent: Combined Radium 226 + 228 Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sa

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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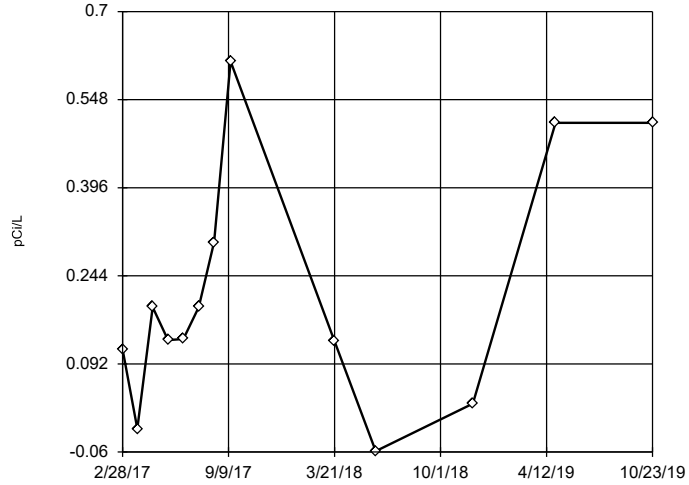
EPA 1989 Outlier Screening

MW-U1 (bg)



n = 13

No statistical outliers.
Mean 0.2133, std. dev. 0.2114, critical Tn 2.331

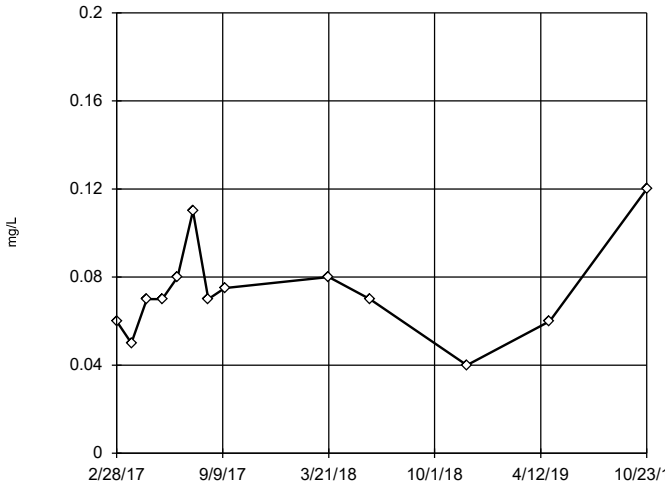
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.8982
Critical = 0.814
The distribution was found to be normally distributed.

Constituent: Combined Radium 226 + 228 Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sa

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

EPA 1989 Outlier Screening

MW-D1



n = 13

No statistical outliers.
Mean 0.07346, std. dev. 0.02174, critical Tn 2.331

Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.9045
Critical = 0.814
The distribution was found to be normally distrib-uted.

Constituent: Fluoride Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sampling Events 1 throu

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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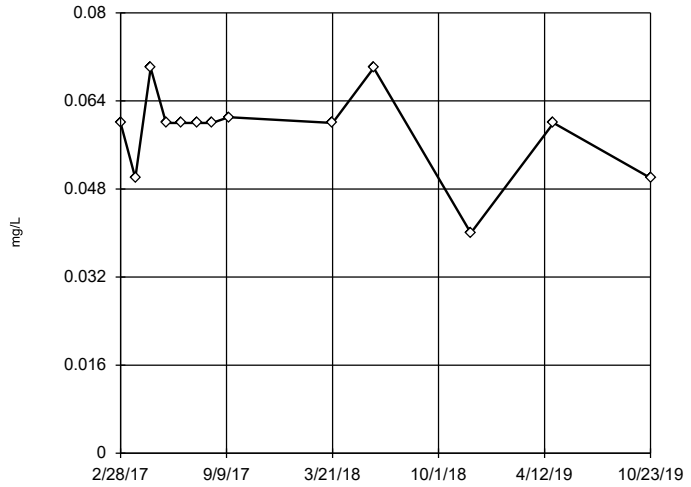
Tukey's Outlier Screening

MW-D2



n = 13

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were square trans-formed to achieve best W statistic (graph shown in original units).

High cutoff = 0.07411, low cutoff = 0.03491, based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sampling Events 1 throu

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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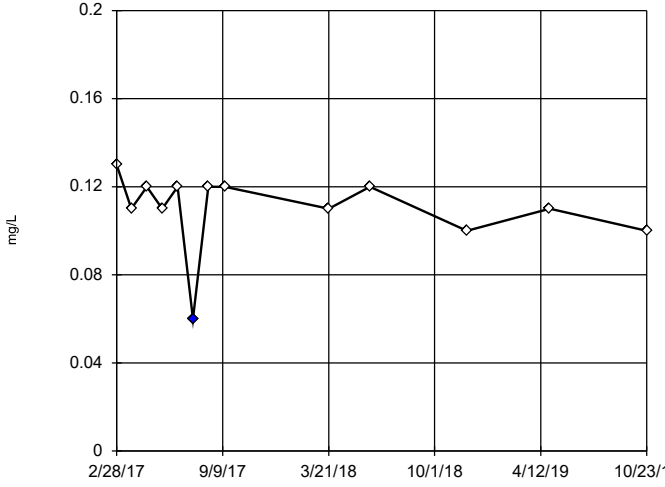
EPA 1989 Outlier Screening

MW-D3



n = 13

Statistical outlier is drawn as solid.
Mean 0.11, std. dev. 0.01732, critical Tn 2.331. After removing suspect data: mean 0.1142, std. dev. 0.009003, Tn 2.285.

Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.8939
Critical = 0.805
The distribution, after removal of suspect val-ue, was found to be nor-mally distributed.

Constituent: Fluoride Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sampling Events 1 throu

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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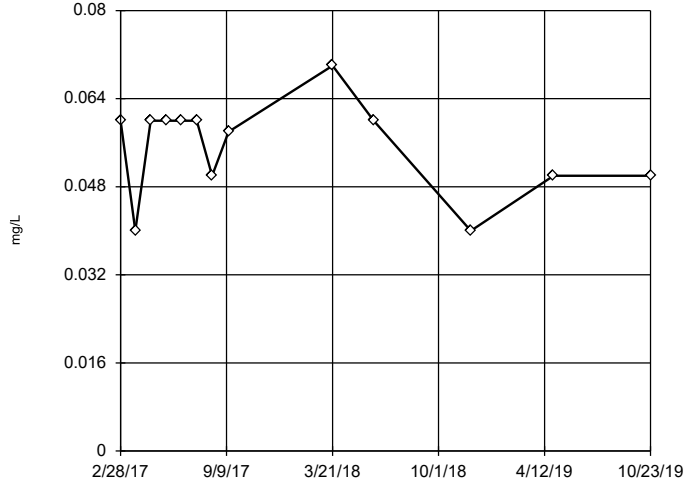
EPA 1989 Outlier Screening

MW-U1 (bg)



n = 13

No statistical outliers.
Mean 0.05523, std. dev. 0.0087, critical Tn 2.331

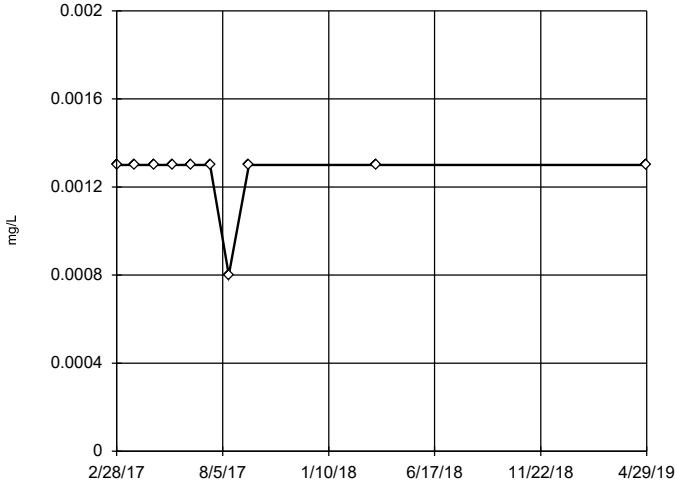
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.8664
Critical = 0.814
The distribution was found to be normally distrib-uted.

Constituent: Fluoride Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sampling Events 1 throu

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Tukey's Outlier Screening

MW-D1



n = 10

No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were cube transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Lead Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sampling Events 1 through

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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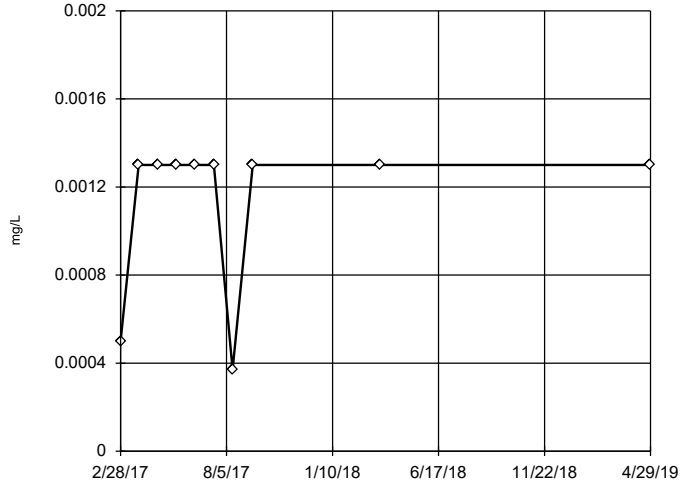
Tukey's Outlier Screening

MW-D2



n = 10

No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.00545, low cutoff = 0.0001923, based on IQR multiplier of 3.

Constituent: Lead Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sampling Events 1 through

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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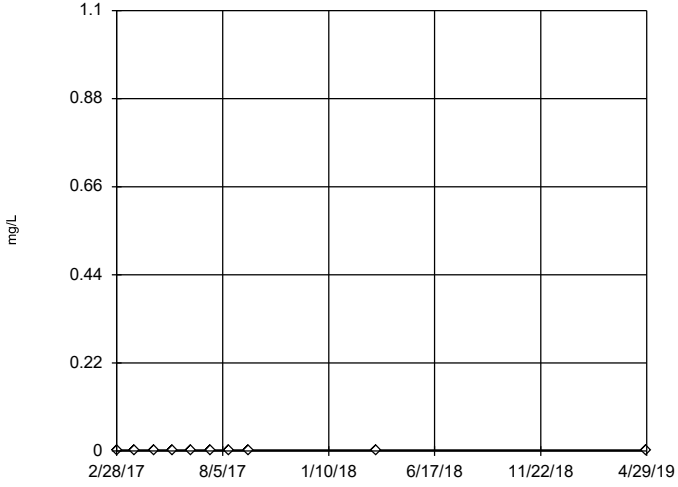
Tukey's Outlier Screening

MW-D3



n = 10

No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Lead Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sampling Events 1 through

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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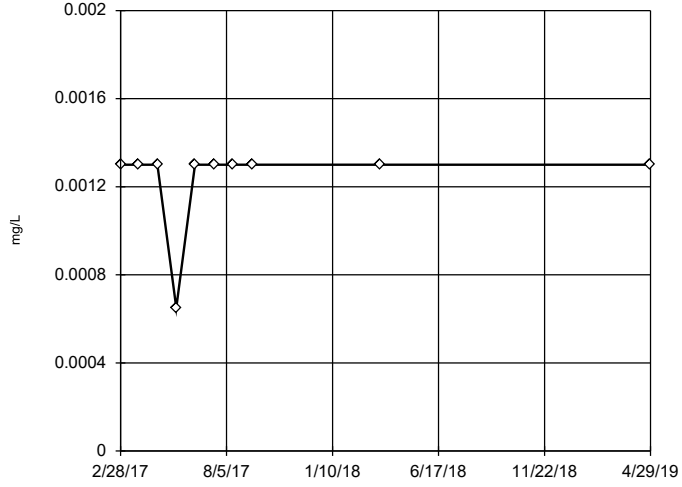
Tukey's Outlier Screening

MW-U1 (bg)



n = 10

No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

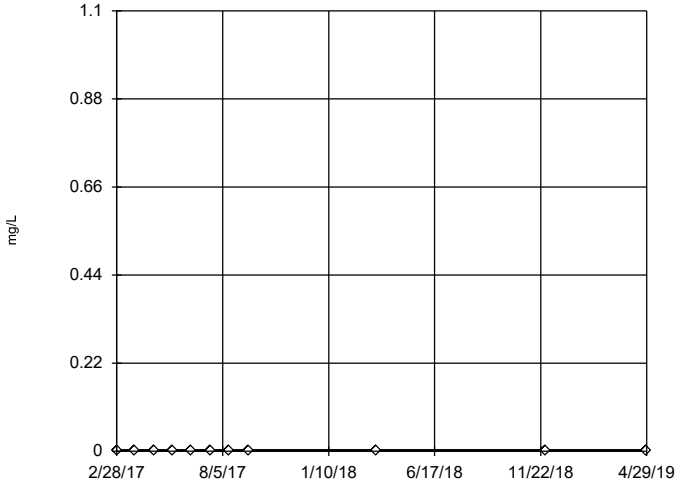
The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Lead Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sampling Events 1 through

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Tukey's Outlier Screening

MW-D1



n = 11

No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Lithium Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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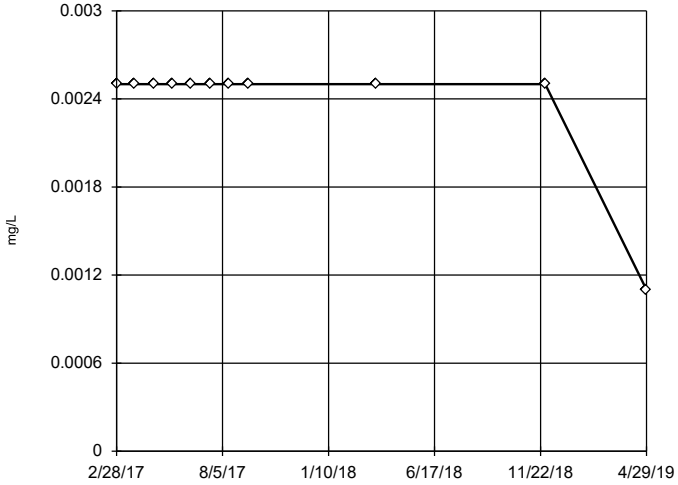
Tukey's Outlier Screening

MW-D2



n = 11

No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were x^6 transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Lithium Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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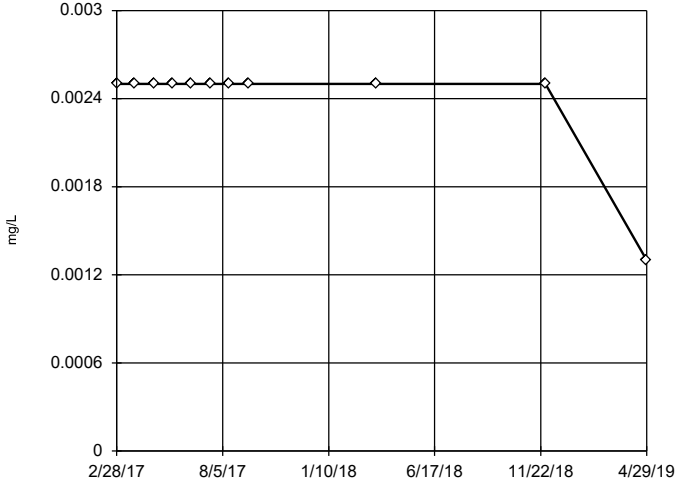
Tukey's Outlier Screening

MW-D3



n = 11

No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Lithium Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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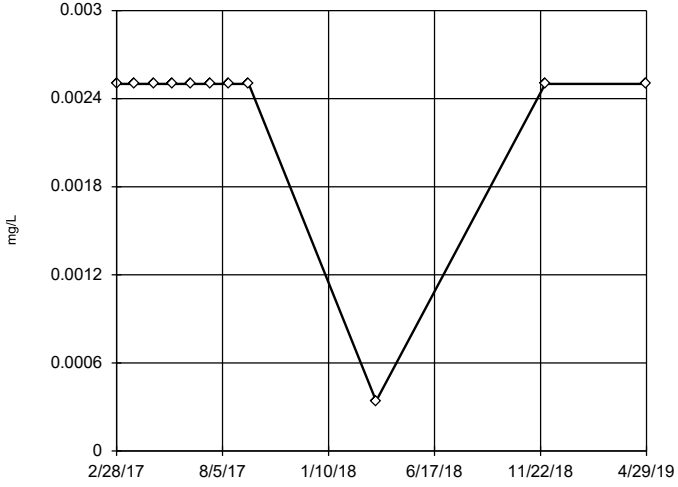
Tukey's Outlier Screening

MW-U1 (bg)



n = 11

No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were cube transformed to achieve best W statistic (graph shown in original units).

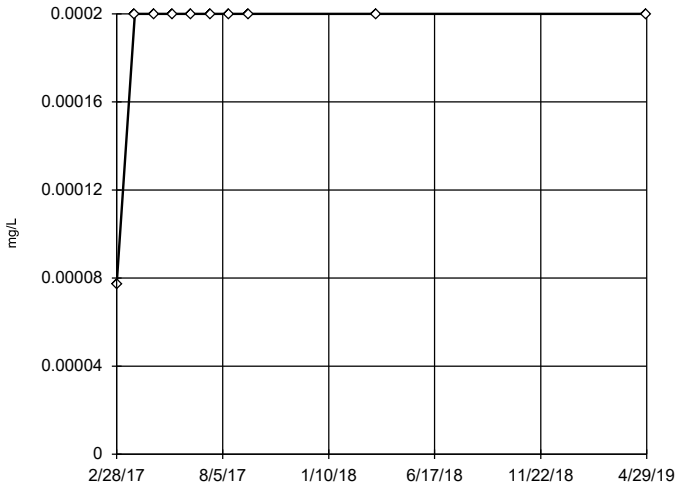
The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Lithium Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Tukey's Outlier Screening

MW-D1



n = 10

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were square transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Mercury Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sampling Events 1 throu

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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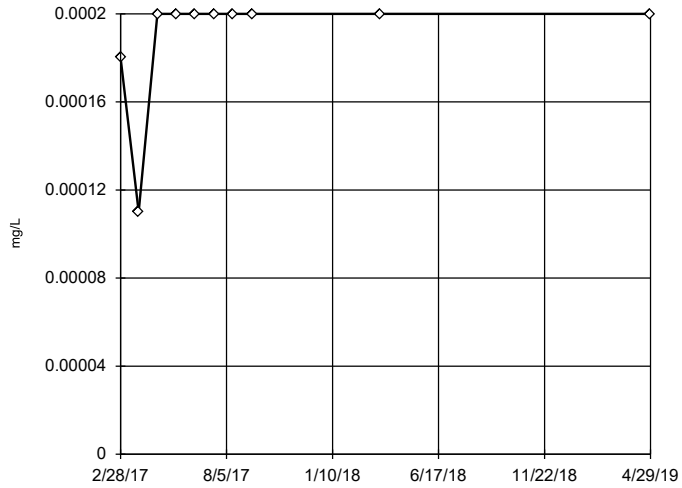
Tukey's Outlier Screening

MW-D2



n = 10

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were x^5 transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because both the lower and upper quartiles represent reporting limits.

Constituent: Mercury Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sampling Events 1 throu

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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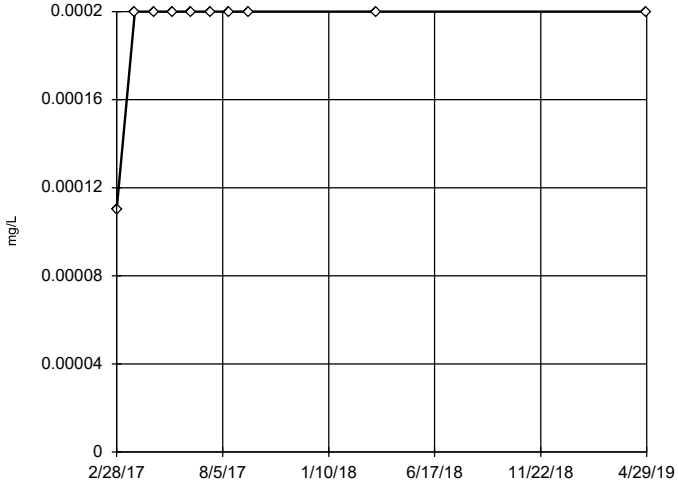
Tukey's Outlier Screening

MW-D3



n = 10

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Mercury Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sampling Events 1 throu

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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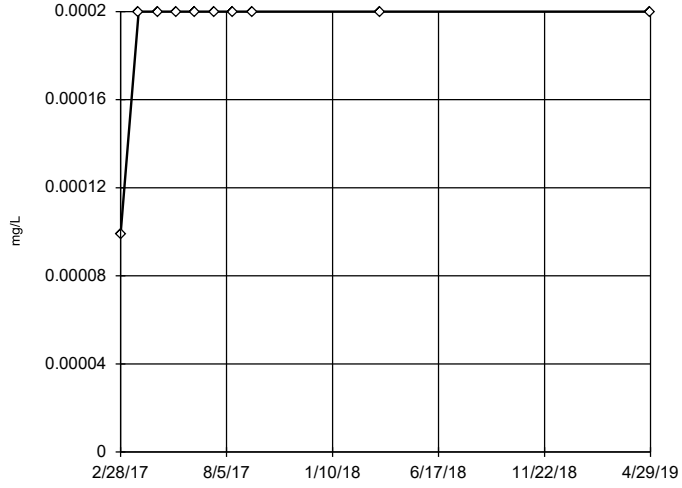
Tukey's Outlier Screening

MW-U1 (bg)



n = 10

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were cube transformed to achieve best W statistic (graph shown in original units).

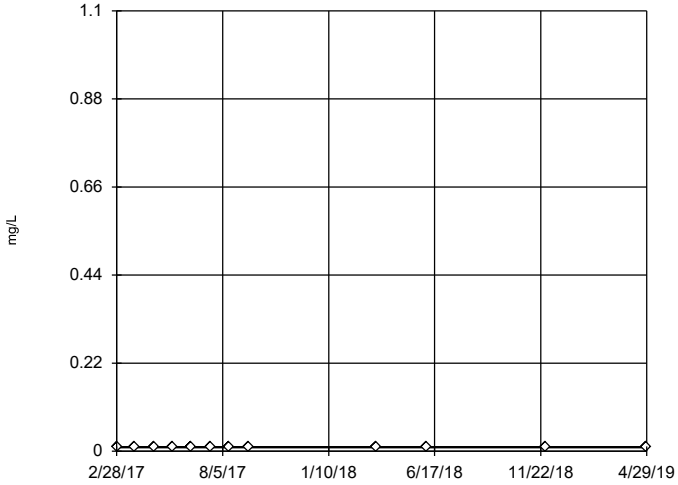
The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Mercury Analysis Run 12/30/2019 9:46 AM View: Sanitas_Statistics Sampling Events 1 throu

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Tukey's Outlier Screening

MW-D1



n = 12

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Molybdenum Analysis Run 12/30/2019 9:47 AM View: Sanitas_Statistics Sampling Events 1 t

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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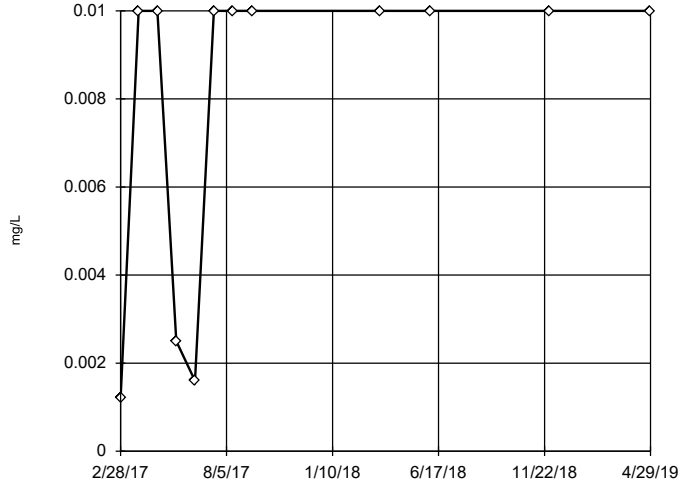
Tukey's Outlier Screening

MW-D2



n = 12

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.08, low cutoff = 0.000625, based on IQR multiplier of 3.

Constituent: Molybdenum Analysis Run 12/30/2019 9:47 AM View: Sanitas_Statistics Sampling Events 1 t

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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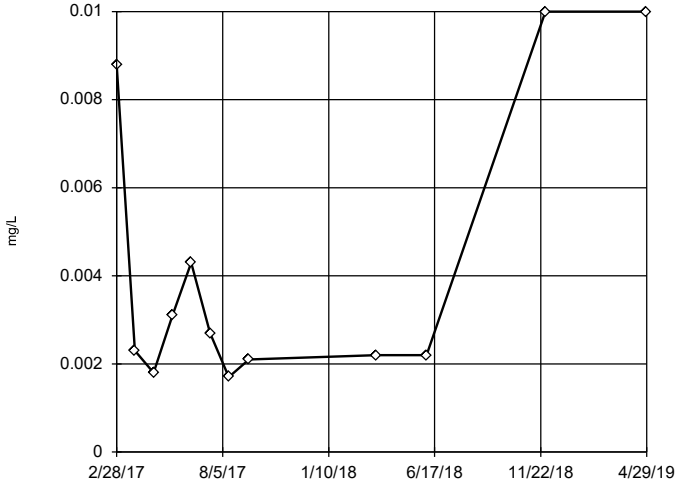
EPA 1989 Outlier Screening

MW-D3



n = 12

No statistical outliers.
Mean 0.004267, std. dev. 0.003301, critical Tn 2.285

Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.816
Critical = 0.805 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Molybdenum Analysis Run 12/30/2019 9:47 AM View: Sanitas_Statistics Sampling Events 1 t

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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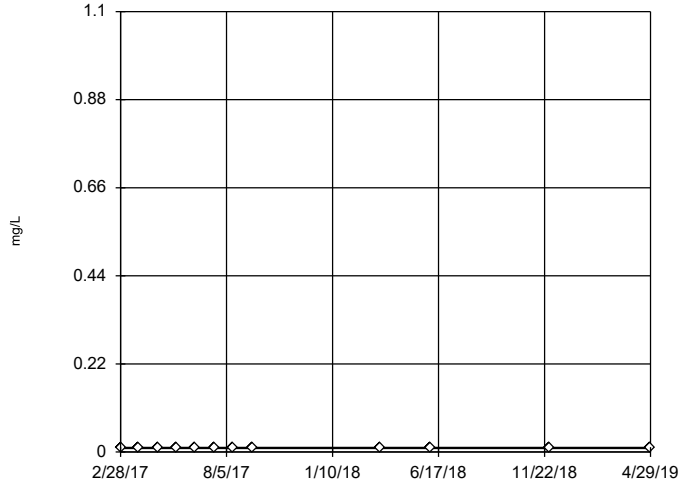
Tukey's Outlier Screening

MW-U1 (bg)



n = 12

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

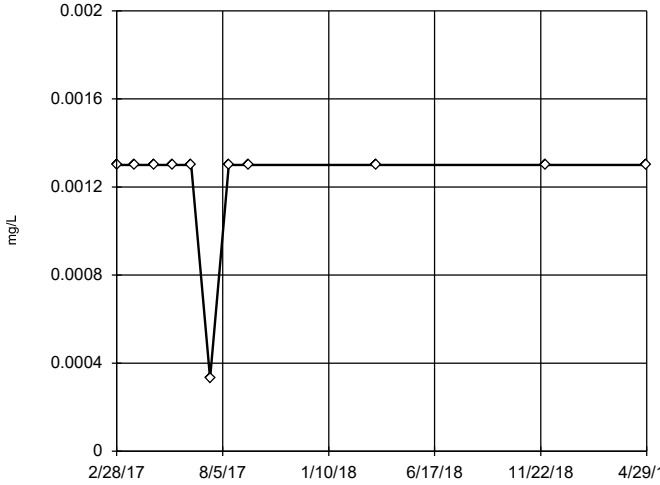
The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Molybdenum Analysis Run 12/30/2019 9:47 AM View: Sanitas_Statistics Sampling Events 1 t

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Tukey's Outlier Screening

MW-D1



n = 11

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Selenium Analysis Run 12/30/2019 9:47 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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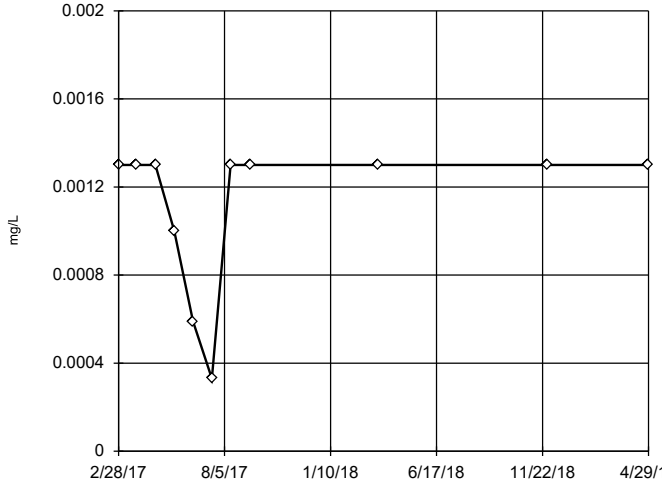
Tukey's Outlier Screening

MW-D2



n = 11

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were square transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.001939, low cutoff = -0.001034, based on IQR multiplier of 3.

Constituent: Selenium Analysis Run 12/30/2019 9:47 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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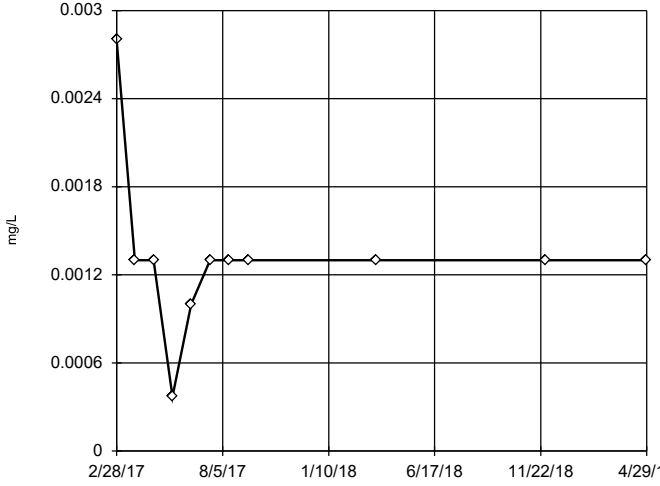
Tukey's Outlier Screening

MW-D3



n = 11

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Selenium Analysis Run 12/30/2019 9:47 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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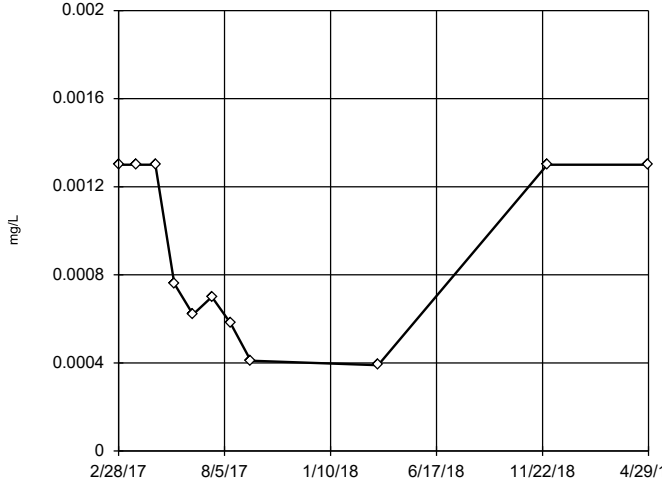
EPA 1989 Outlier Screening

MW-U1 (bg)



n = 11

No statistical outliers.
Mean 0.0009055, std. dev. 0.0003925, critical Tn 2.234

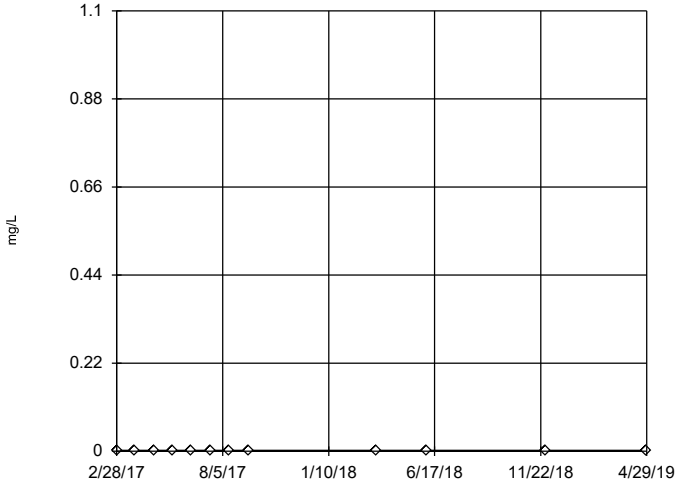
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.7946
Critical = 0.792
The distribution was found to be normally distributed.

Constituent: Selenium Analysis Run 12/30/2019 9:47 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Tukey's Outlier Screening

MW-D1



n = 12

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Thallium Analysis Run 12/30/2019 9:47 AM View: Sanitas_Statistics Sampling Events 1 throu

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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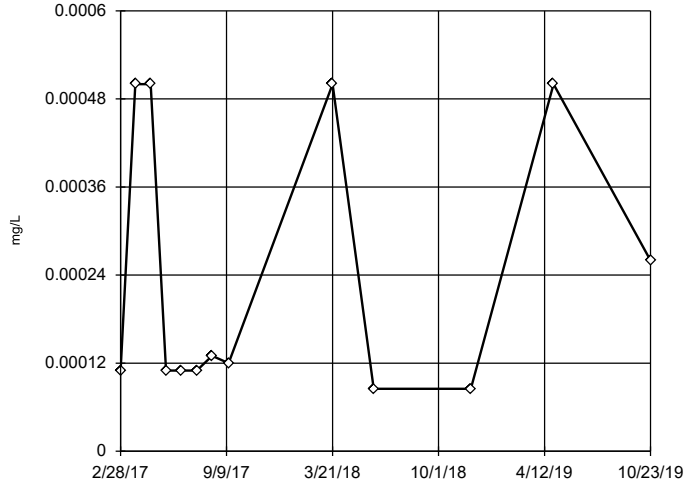
Tukey's Outlier Screening

MW-D2



n = 13

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.04696, low cutoff = 0.000001171, based on IQR multiplier of 3.

Constituent: Thallium Analysis Run 12/30/2019 9:47 AM View: Sanitas_Statistics Sampling Events 1 throu

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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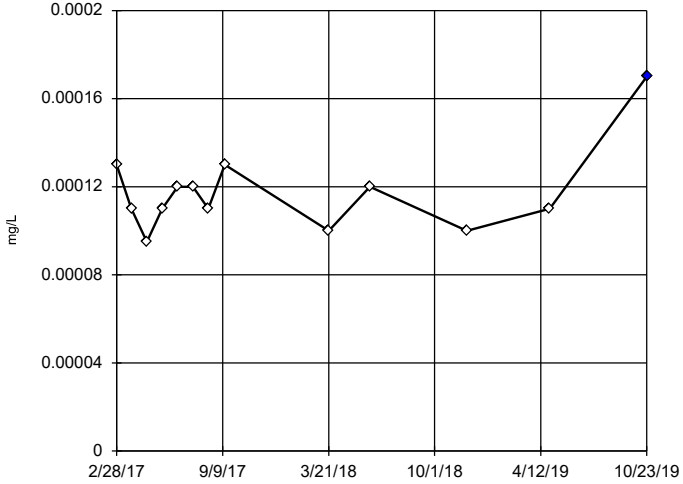
EPA 1989 Outlier Screening

MW-D3



n = 13

Statistical outlier is drawn as solid.
Mean 0.0001173, std. dev. 0.00001922, critical Tn 2.331. After removing suspect data: mean 0.0001129, std. dev. 0.00001137, Tn 2.285.

Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.9281
Critical = 0.805
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Thallium Analysis Run 12/30/2019 9:47 AM View: Sanitas_Statistics Sampling Events 1 throu

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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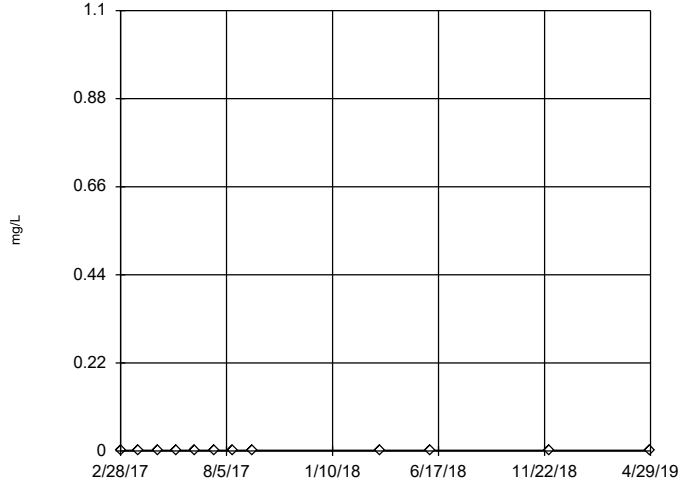
Tukey's Outlier Screening

MW-U1 (bg)



n = 12

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

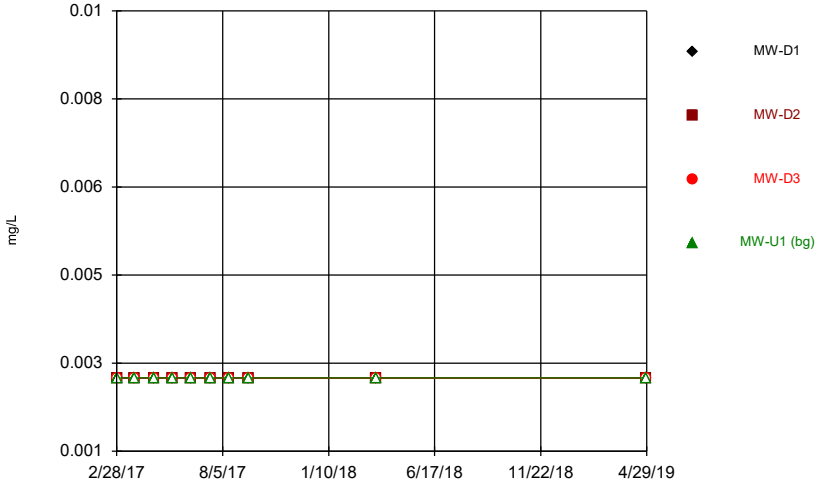
The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Thallium Analysis Run 12/30/2019 9:47 AM View: Sanitas_Statistics Sampling Events 1 throu

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Hollow symbols indicate censored values.

Time Series

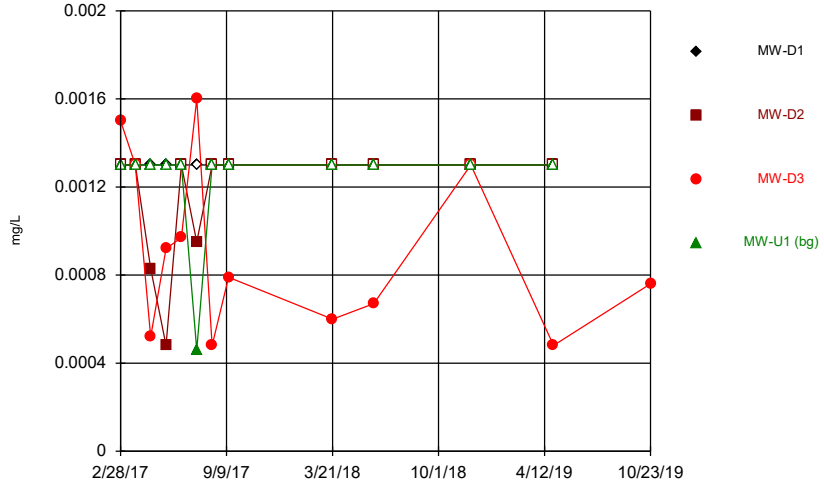


Constituent: Antimony Analysis Run 12/30/2019 9:48 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Hollow symbols indicate censored values.

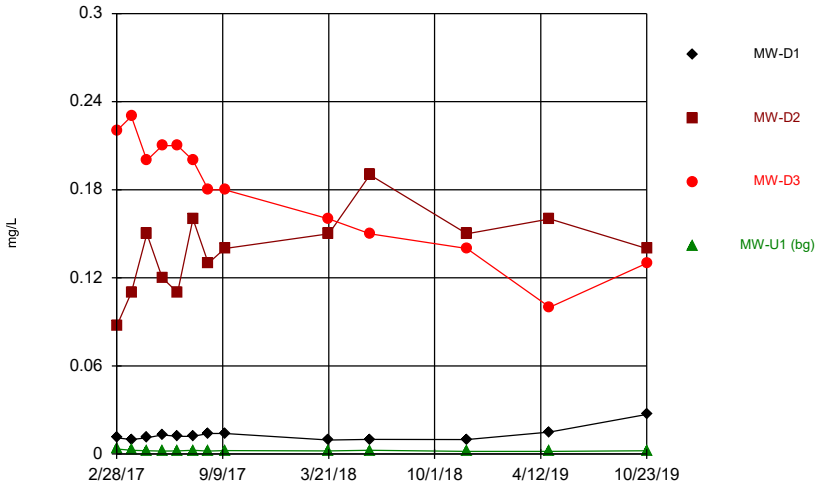
Time Series



Constituent: Arsenic Analysis Run 12/30/2019 9:48 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Time Series

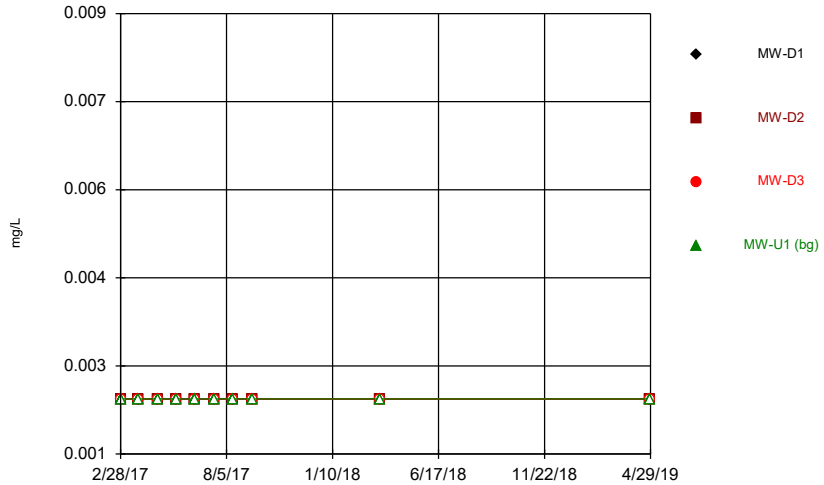


Constituent: Barium Analysis Run 12/30/2019 9:48 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Hollow symbols indicate censored values.

Time Series

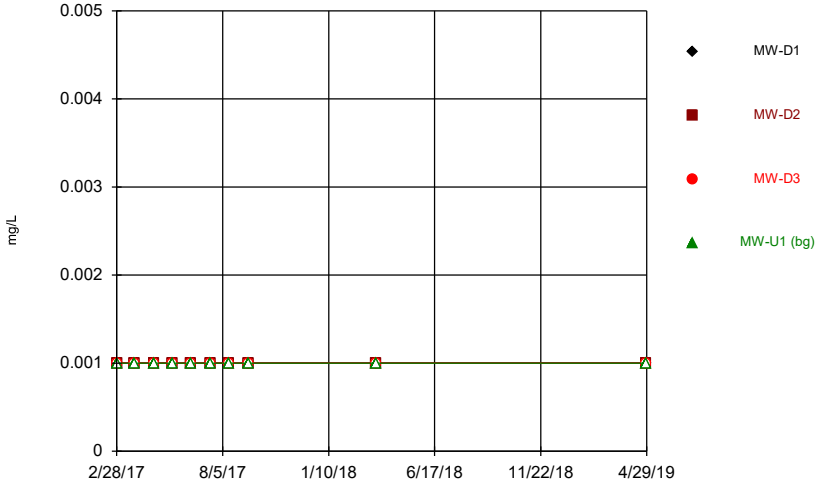


Constituent: Beryllium Analysis Run 12/30/2019 9:48 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Hollow symbols indicate censored values.

Time Series

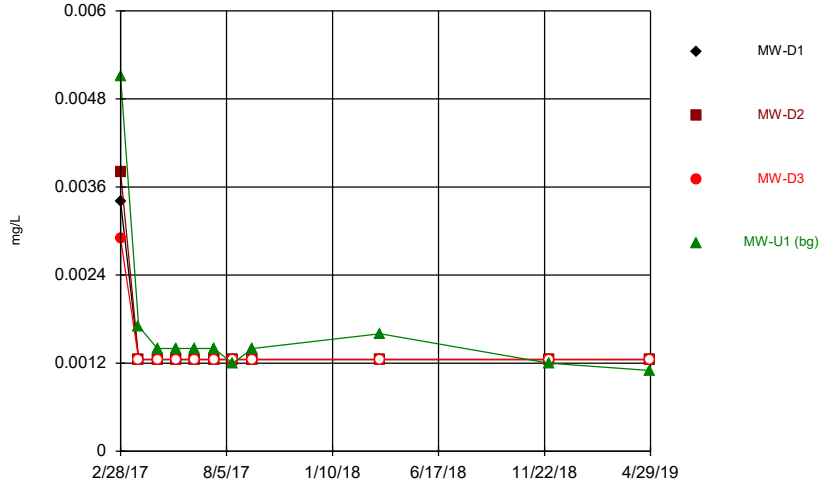


Constituent: Cadmium Analysis Run 12/30/2019 9:49 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Hollow symbols indicate censored values.

Time Series

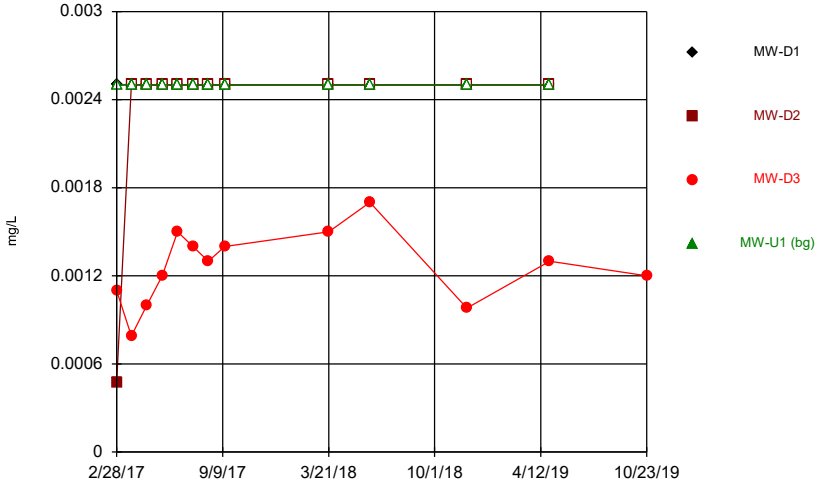


Constituent: Chromium Analysis Run 12/30/2019 9:49 AM View: Sanitas_Statistics Sampling Events 1 thr

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Hollow symbols indicate censored values.

Time Series

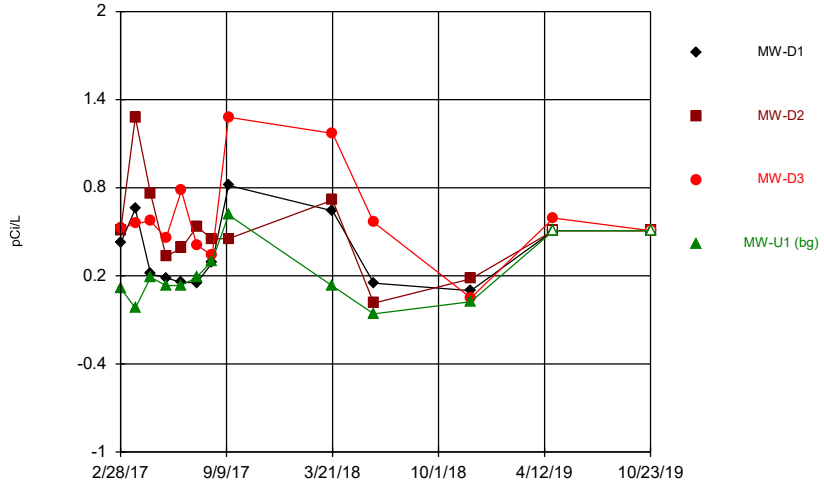


Constituent: Cobalt Analysis Run 12/30/2019 9:49 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Hollow symbols indicate censored values.

Time Series



Constituent: Combined Radium 226 + 228 Analysis Run 12/30/2019 9:49 AM View: Sanitas_Statistics Sa

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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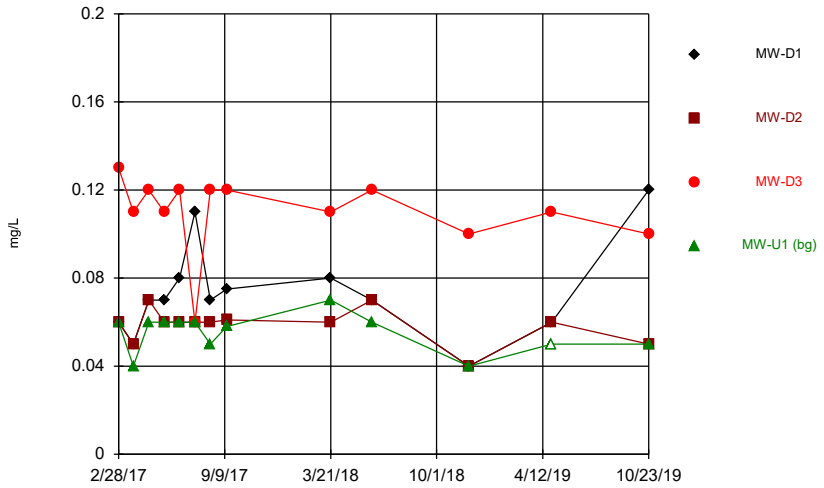
Hollow symbols indicate censored values.

Time Series



Constituent: Fluoride Analysis Run 12/30/2019 9:49 AM View: Sanitas_Statistics Sampling Events 1 throu

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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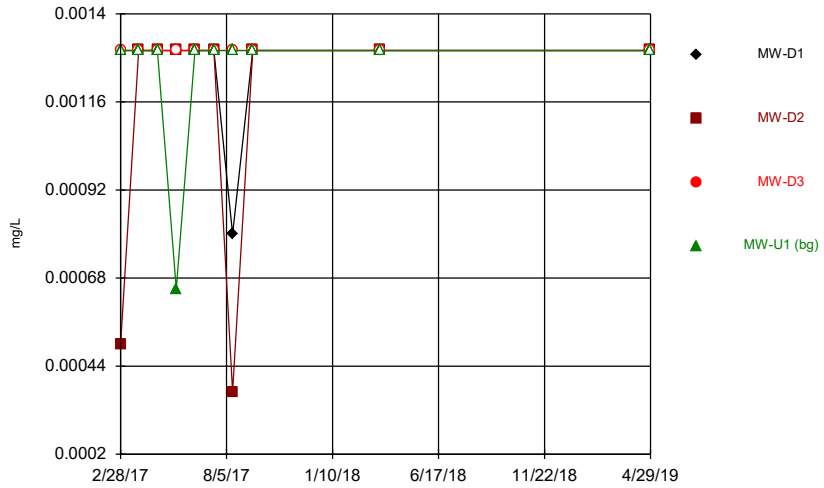
Hollow symbols indicate censored values.

Time Series



Constituent: Lead Analysis Run 12/30/2019 9:49 AM View: Sanitas_Statistics Sampling Events 1 through

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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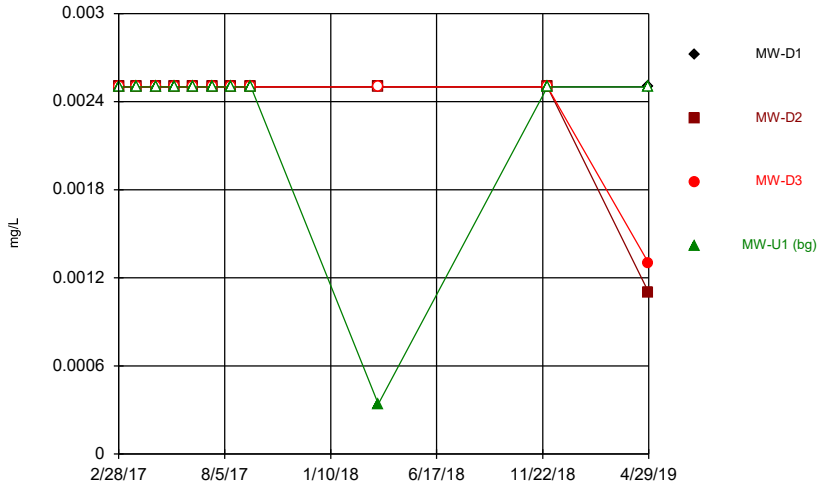
Hollow symbols indicate censored values.

Time Series



Constituent: Lithium Analysis Run 12/30/2019 9:49 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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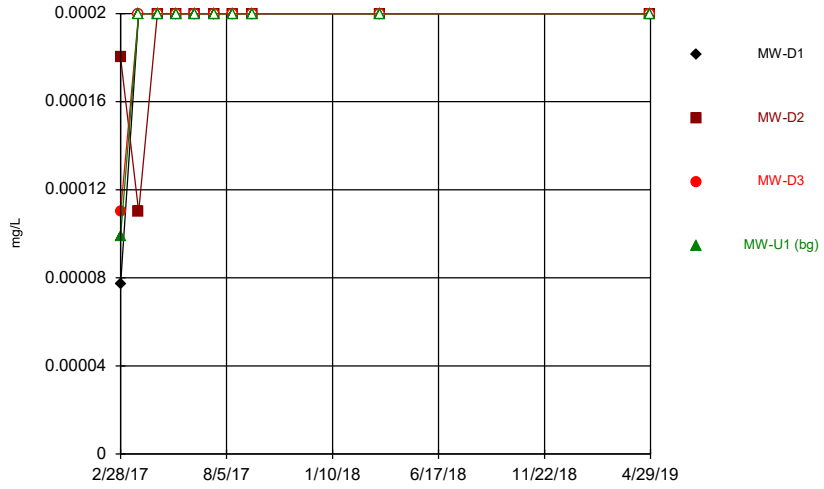
Hollow symbols indicate censored values.

Time Series

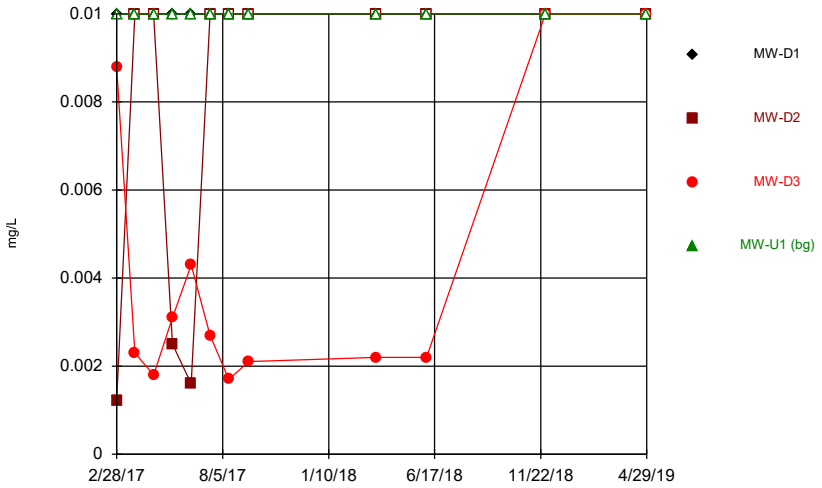


Constituent: Mercury Analysis Run 12/30/2019 9:49 AM View: Sanitas_Statistics Sampling Events 1 throu

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Hollow symbols indicate censored values.

Time Series

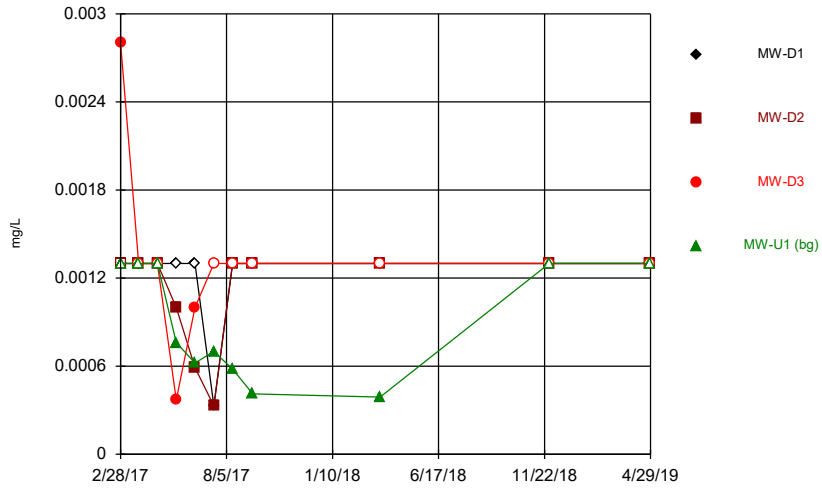


Constituent: Molybdenum Analysis Run 12/30/2019 9:49 AM View: Sanitas_Statistics Sampling Events 1 t

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Hollow symbols indicate censored values.

Time Series

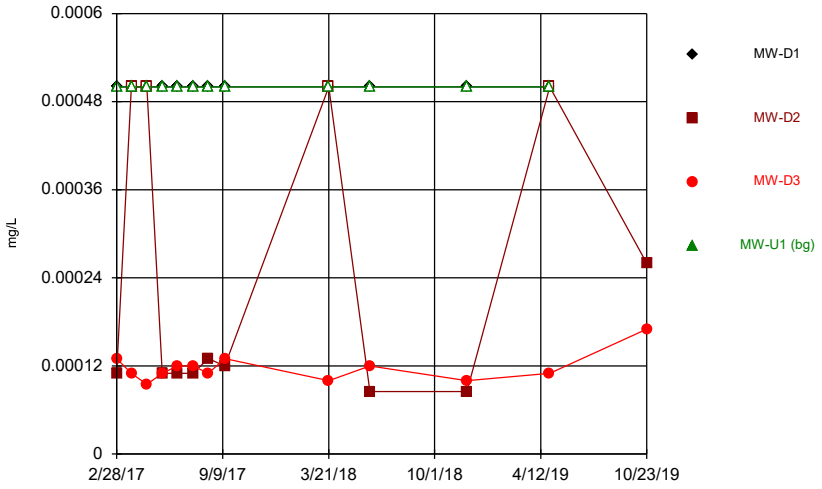


Constituent: Selenium Analysis Run 12/30/2019 9:49 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Hollow symbols indicate censored values.

Time Series



Constituent: Thallium Analysis Run 12/30/2019 9:49 AM View: Sanitas_Statistics Sampling Events 1 throu

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

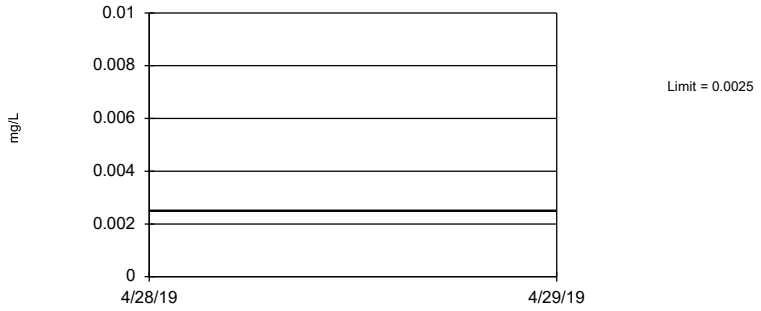
Tolerance Limit

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10 Printed 12/30/2019, 9:51 AM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.0025	n/a	n/a	n/a	10	100	n/a	0.5987	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.0013	n/a	n/a	n/a	12	91.67	n/a	0.5404	NP Inter(NDs)
Barium (mg/L)	n/a	0.003661	n/a	n/a	n/a	13	0	No	0.01	Inter
Beryllium (mg/L)	n/a	0.002	n/a	n/a	n/a	10	100	n/a	0.5987	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.001	n/a	n/a	n/a	10	100	n/a	0.5987	NP Inter(NDs)
Chromium (mg/L)	n/a	0.0051	n/a	n/a	n/a	11	0	n/a	0.5688	NP Inter(normal...
Cobalt (mg/L)	n/a	0.0025	n/a	n/a	n/a	12	100	n/a	0.5404	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	n/a	0.6947	n/a	n/a	n/a	13	15.38	No	0.01	Inter
Fluoride (mg/L)	n/a	0.08385	n/a	n/a	n/a	13	7.692	No	0.01	Inter
Lead (mg/L)	n/a	0.0013	n/a	n/a	n/a	10	90	n/a	0.5987	NP Inter(NDs)
Lithium (mg/L)	n/a	0.0025	n/a	n/a	n/a	11	90.91	n/a	0.5688	NP Inter(NDs)
Mercury (mg/L)	n/a	0.0002	n/a	n/a	n/a	10	90	n/a	0.5987	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.01	n/a	n/a	n/a	12	100	n/a	0.5404	NP Inter(NDs)
Selenium (mg/L)	n/a	0.001066	n/a	n/a	n/a	11	45.45	No	0.01	Inter
Thallium (mg/L)	n/a	0.0005	n/a	n/a	n/a	12	100	n/a	0.5404	NP Inter(NDs)

Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 10 background values. 100% NDs. 63.09% coverage at alpha=0.01; 74.02% coverage at alpha=0.05; 93.16% coverage at alpha=0.5. Report alpha = 0.5987.

Constituent: Antimony Analysis Run 12/30/2019 9:50 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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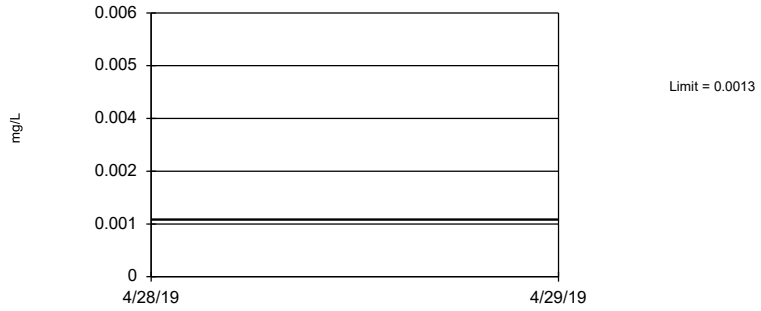
Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 12 background values. 91.67% NDs. 68.16% coverage at alpha=0.01; 77.93% coverage at alpha=0.05; 94.34% coverage at alpha=0.5. Report alpha = 0.5404.

Constituent: Arsenic Analysis Run 12/30/2019 9:50 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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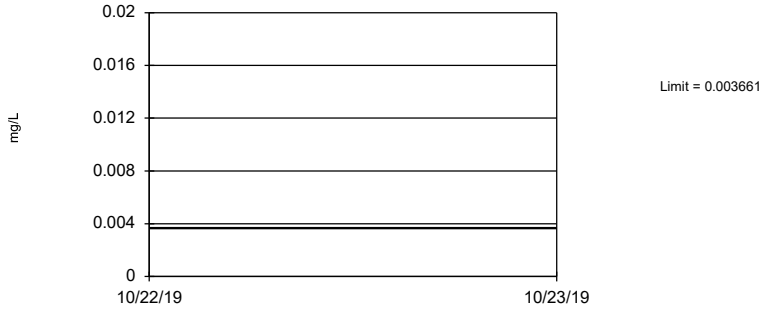
Tolerance Limit

Interwell Parametric



95% coverage. Background Data Summary: Mean=0.002269, Std. Dev.=0.0004231, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8571, critical = 0.814. Report alpha = 0.01.

Constituent: Barium Analysis Run 12/30/2019 9:50 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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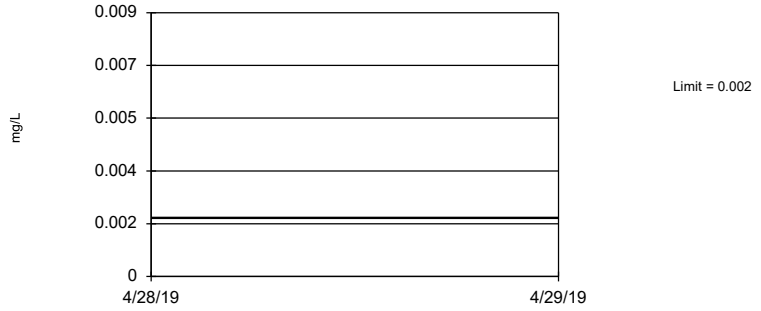
Tolerance Limit

Interwell Non-parametric



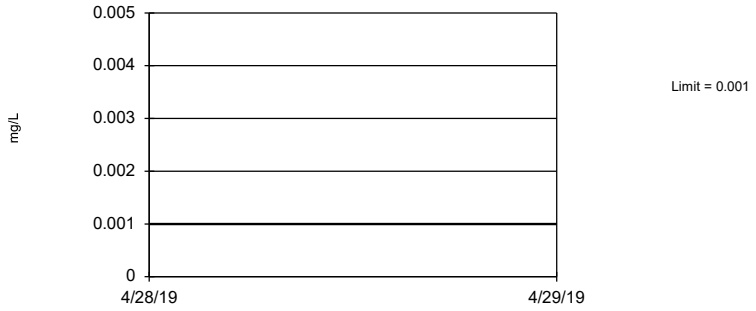
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 10 background values. 100% NDs. 63.09% coverage at alpha=0.01; 74.02% coverage at alpha=0.05; 93.16% coverage at alpha=0.5. Report alpha = 0.5987.

Constituent: Beryllium Analysis Run 12/30/2019 9:50 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 10 background values. 100% NDs. 63.09% coverage at alpha=0.01; 74.02% coverage at alpha=0.05; 93.16% coverage at alpha=0.5. Report alpha = 0.5987.

Constituent: Cadmium Analysis Run 12/30/2019 9:50 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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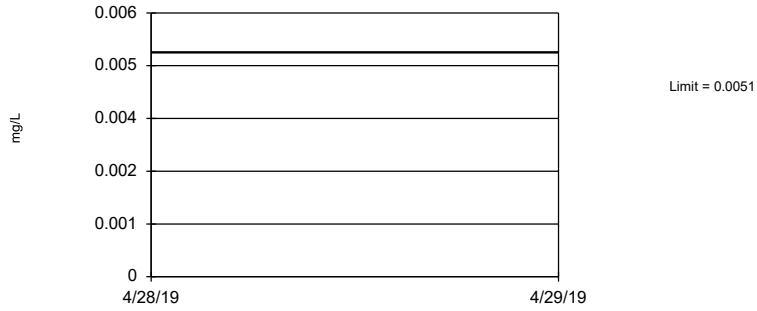
Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 11 background values. 65.82% coverage at alpha=0.01; 75.98% coverage at alpha=0.05; 93.95% coverage at alpha=0.5. Report alpha = 0.5688.

Constituent: Chromium Analysis Run 12/30/2019 9:50 AM View: Sanitas_Statistics Sampling Events 1 thr

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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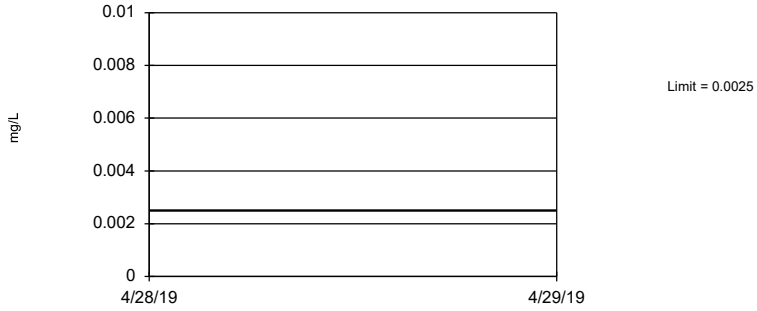
Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 12 background values. 100% NDs. 68.16% coverage at alpha=0.01; 77.93% coverage at alpha=0.05; 94.34% coverage at alpha=0.5. Report alpha = 0.5404.

Constituent: Cobalt Analysis Run 12/30/2019 9:50 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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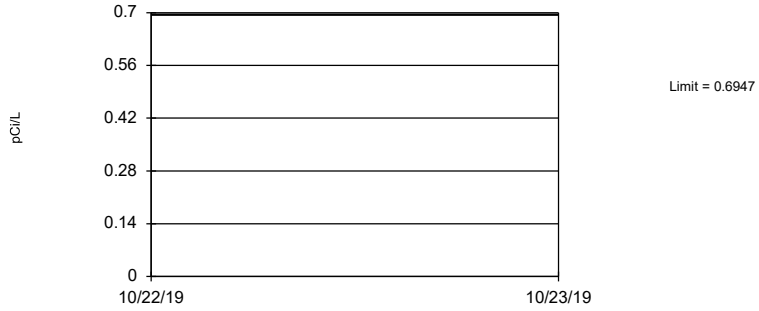
Tolerance Limit

Interwell Parametric



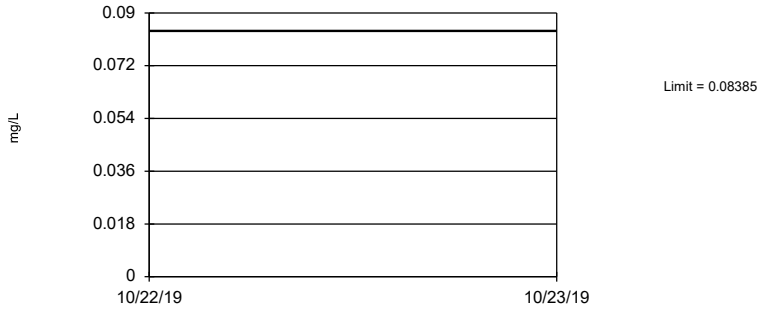
95% coverage. Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.1413, Std. Dev.=0.1682, n=13, 15.38% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8982, critical = 0.814. Report alpha = 0.01.

Constituent: Combined Radium 226 + 228 Analysis Run 12/30/2019 9:50 AM View: Sanitas_Statistics Sa

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Tolerance Limit

Interwell Parametric



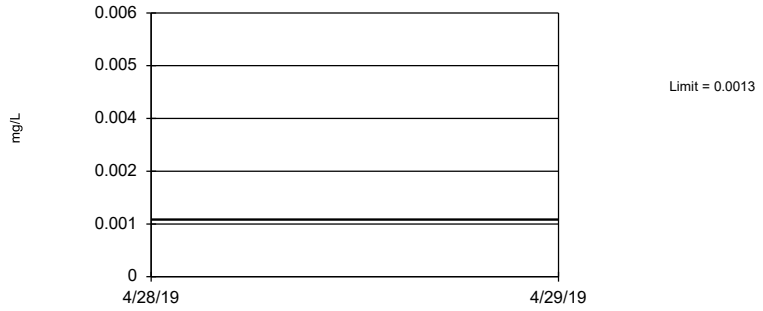
95% coverage. Background Data Summary: Mean=0.05523, Std. Dev.=0.0087, n=13, 7.692% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8664, critical = 0.814. Report alpha = 0.01.

Constituent: Fluoride Analysis Run 12/30/2019 9:50 AM View: Sanitas_Statistics Sampling Events 1 throu

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Tolerance Limit

Interwell Non-parametric



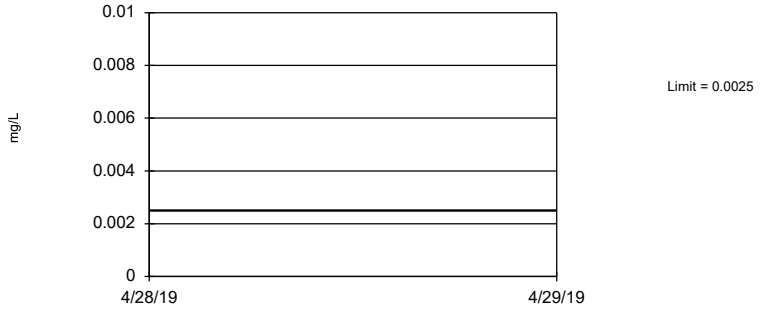
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 10 background values. 90% NDs. 63.09% coverage at alpha=0.01; 74.02% coverage at alpha=0.05; 93.16% coverage at alpha=0.5. Report alpha = 0.5987.

Constituent: Lead Analysis Run 12/30/2019 9:50 AM View: Sanitas_Statistics Sampling Events 1 through

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Tolerance Limit

Interwell Non-parametric



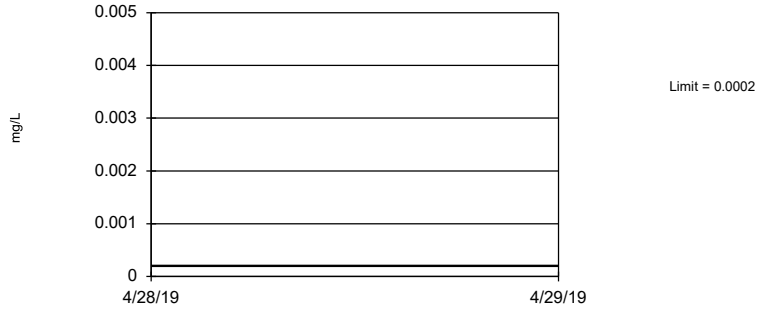
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 11 background values. 90.91% NDs. 65.82% coverage at alpha=0.01; 75.98% coverage at alpha=0.05; 93.95% coverage at alpha=0.5. Report alpha = 0.5688.

Constituent: Lithium Analysis Run 12/30/2019 9:51 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Tolerance Limit

Interwell Non-parametric



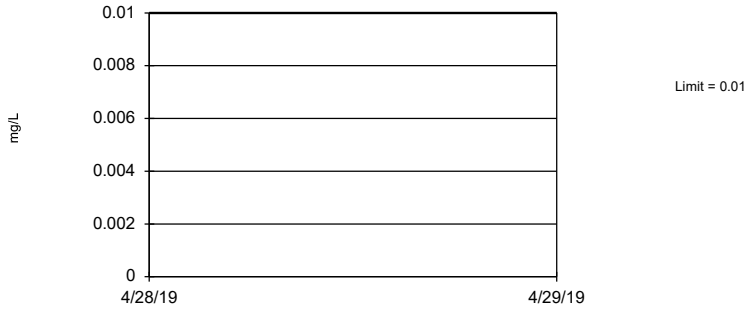
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 10 background values. 90% NDs. 63.09% coverage at alpha=0.01; 74.02% coverage at alpha=0.05; 93.16% coverage at alpha=0.5. Report alpha = 0.5987.

Constituent: Mercury Analysis Run 12/30/2019 9:51 AM View: Sanitas_Statistics Sampling Events 1 throu

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Tolerance Limit

Interwell Non-parametric



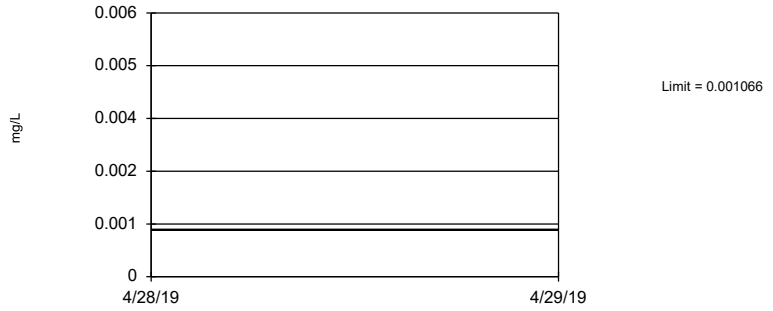
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 12 background values. 100% NDs. 68.16% coverage at alpha=0.01; 77.93% coverage at alpha=0.05; 94.34% coverage at alpha=0.5. Report alpha = 0.5404.

Constituent: Molybdenum Analysis Run 12/30/2019 9:51 AM View: Sanitas_Statistics Sampling Events 1 t

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Tolerance Limit

Interwell Parametric



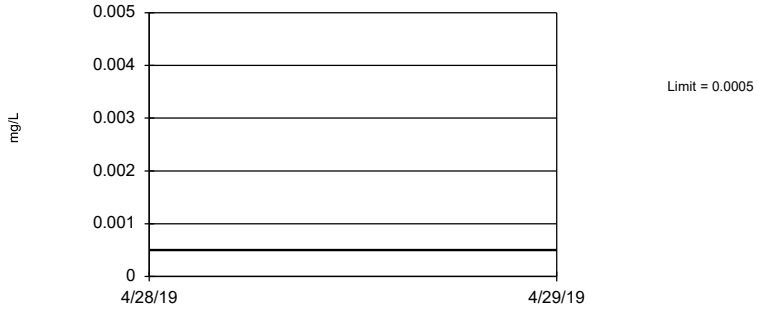
95% coverage. Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.0005767, Std. Dev.=0.0001374, n=11, 45.45% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7946, critical = 0.792. Report alpha = 0.01.

Constituent: Selenium Analysis Run 12/30/2019 9:51 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 12 background values. 100% NDs. 68.16% coverage at alpha=0.01; 77.93% coverage at alpha=0.05; 94.34% coverage at alpha=0.5. Report alpha = 0.5404.

Constituent: Thallium Analysis Run 12/30/2019 9:51 AM View: Sanitas_Statistics Sampling Events 1 throu

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

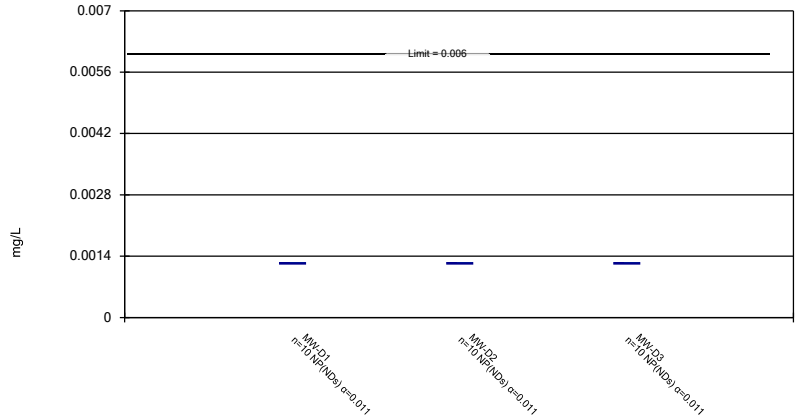
Confidence Interval

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10 Printed 12/30/2019, 9:53 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	MW-D1	0.00125	0.00125	0.006	No	10	100	No	0.011	NP (NDs)
Antimony (mg/L)	MW-D2	0.00125	0.00125	0.006	No	10	100	No	0.011	NP (NDs)
Antimony (mg/L)	MW-D3	0.00125	0.00125	0.006	No	10	100	No	0.011	NP (NDs)
Arsenic (mg/L)	MW-D1	0.00065	0.00065	0.01	No	12	100	No	0.01	NP (NDs)
Arsenic (mg/L)	MW-D2	0.00083	0.00048	0.01	No	12	75	No	0.01	NP (normality)
Arsenic (mg/L)	MW-D3	0.0015	0.00052	0.01	No	13	15.38	No	0.01	NP (Cohens/xfrm)
Barium (mg/L)	MW-D1	0.015	0.0099	2	No	13	0	No	0.01	NP (normality)
Barium (mg/L)	MW-D2	0.1582	0.1182	2	No	13	0	No	0.01	Param.
Barium (mg/L)	MW-D3	0.2068	0.1486	2	No	13	0	No	0.01	Param.
Beryllium (mg/L)	MW-D1	0.001	0.001	0.004	No	10	100	No	0.011	NP (NDs)
Beryllium (mg/L)	MW-D2	0.001	0.001	0.004	No	10	100	No	0.011	NP (NDs)
Beryllium (mg/L)	MW-D3	0.001	0.001	0.004	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	MW-D1	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	MW-D2	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	MW-D3	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Chromium (mg/L)	MW-D1	0.00125	0.00125	0.1	No	11	90.91	No	0.006	NP (NDs)
Chromium (mg/L)	MW-D2	0.00125	0.00125	0.1	No	11	90.91	No	0.006	NP (NDs)
Chromium (mg/L)	MW-D3	0.00125	0.00125	0.1	No	11	90.91	No	0.006	NP (NDs)
Cobalt (mg/L)	MW-D1	0.00125	0.00125	0.0025	No	12	100	No	0.01	NP (NDs)
Cobalt (mg/L)	MW-D2	0.00125	0.00047	0.0025	No	12	91.67	No	0.01	NP (NDs)
Cobalt (mg/L)	MW-D3	0.001445	0.001073	0.0025	No	13	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-D1	0.655	0.149	5	No	13	15.38	No	0.01	NP (Cohens/xfrm)
Combined Radium 226 + 228 (pCi/L)	MW-D2	0.706	0.2289	5	No	13	15.38	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-D3	0.8317	0.3262	5	No	13	7.692	No	0.01	Param.
Fluoride (mg/L)	MW-D1	0.08962	0.0573	4	No	13	0	No	0.01	Param.
Fluoride (mg/L)	MW-D2	0.061	0.05	4	No	13	0	No	0.01	NP (normality)
Fluoride (mg/L)	MW-D3	0.1212	0.1016	4	No	13	0	x^3	0.01	Param.
Lead (mg/L)	MW-D1	0.00065	0.00065	0.0013	No	10	90	No	0.011	NP (NDs)
Lead (mg/L)	MW-D2	0.00065	0.00037	0.0013	No	10	80	No	0.011	NP (NDs)
Lead (mg/L)	MW-D3	0.00065	0.00065	0.0013	No	10	100	No	0.011	NP (NDs)
Lithium (mg/L)	MW-D1	0.00125	0.00125	0.0025	No	11	100	No	0.006	NP (NDs)
Lithium (mg/L)	MW-D2	0.00125	0.0011	0.0025	No	11	90.91	No	0.006	NP (NDs)
Lithium (mg/L)	MW-D3	0.00125	0.00125	0.0025	No	11	90.91	No	0.006	NP (NDs)
Mercury (mg/L)	MW-D1	0.0001	0.000077	0.002	No	10	90	No	0.011	NP (NDs)
Mercury (mg/L)	MW-D2	0.00011	0.0001	0.002	No	10	80	No	0.011	NP (NDs)
Mercury (mg/L)	MW-D3	0.0001	0.0001	0.002	No	10	90	No	0.011	NP (NDs)
Molybdenum (mg/L)	MW-D1	0.005	0.005	0.01	No	12	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	MW-D2	0.005	0.0016	0.01	No	12	75	No	0.01	NP (normality)
Molybdenum (mg/L)	MW-D3	0.005	0.0018	0.01	No	12	16.67	No	0.01	NP (Cohens/xfrm)
Selenium (mg/L)	MW-D1	0.00065	0.00033	0.05	No	11	90.91	No	0.006	NP (NDs)
Selenium (mg/L)	MW-D2	0.00065	0.00033	0.05	No	11	72.73	No	0.006	NP (normality)
Selenium (mg/L)	MW-D3	0.001	0.00037	0.05	No	11	72.73	No	0.006	NP (normality)
Thallium (mg/L)	MW-D1	0.00025	0.00025	0.002	No	12	100	No	0.01	NP (NDs)
Thallium (mg/L)	MW-D2	0.00025	0.000085	0.002	No	13	30.77	No	0.01	NP (normality)
Thallium (mg/L)	MW-D3	0.0001303	0.0001036	0.002	No	13	0	x^(1/3)	0.01	Param.

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 12/30/2019 9:52 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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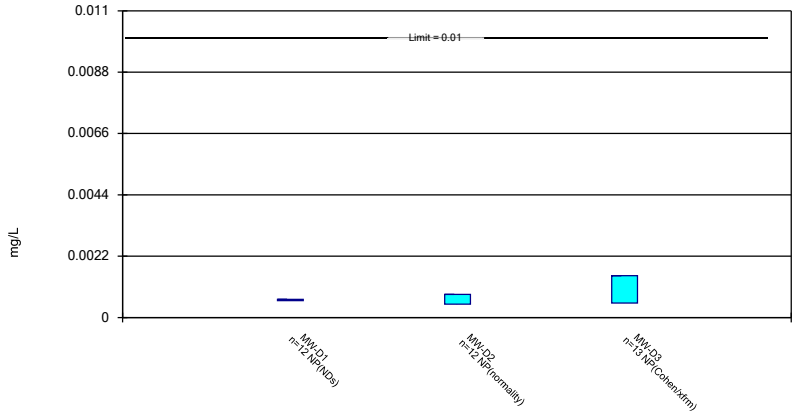
Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Arsenic Analysis Run 12/30/2019 9:52 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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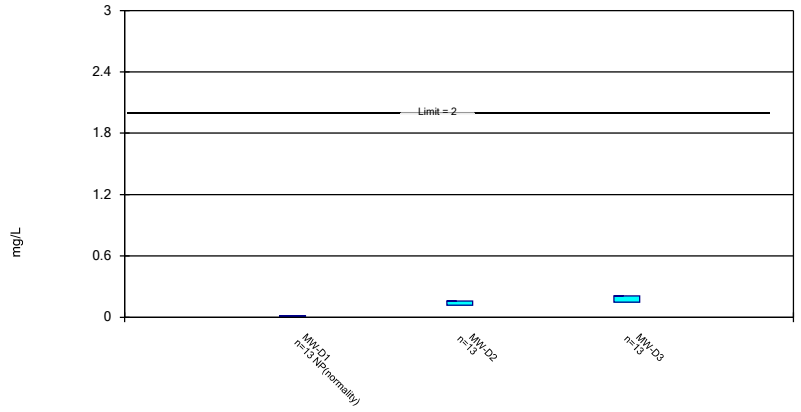
Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 12/30/2019 9:52 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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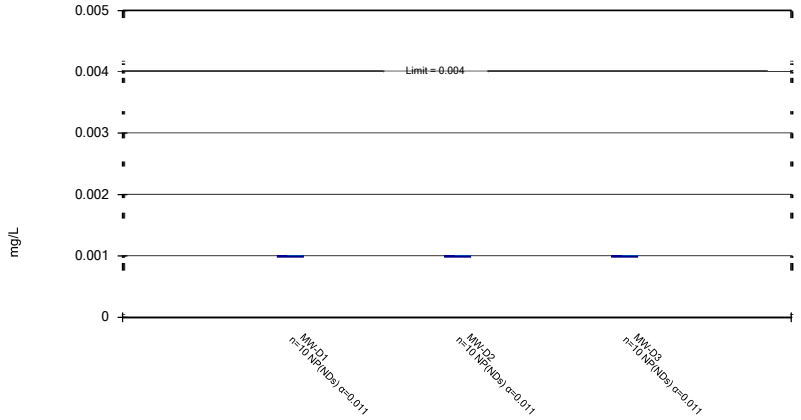
Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

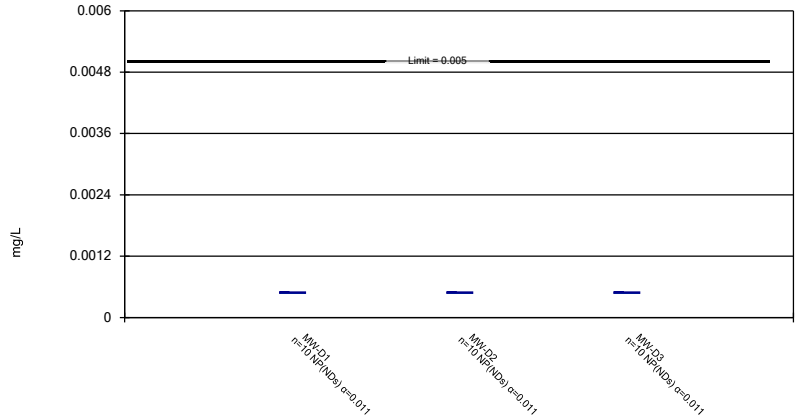


Constituent: Beryllium Analysis Run 12/30/2019 9:52 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Cadmium Analysis Run 12/30/2019 9:52 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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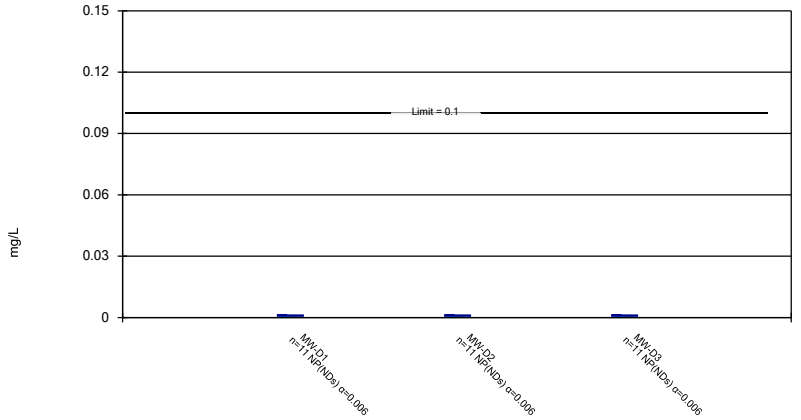
Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Chromium Analysis Run 12/30/2019 9:52 AM View: Sanitas_Statistics Sampling Events 1 thr

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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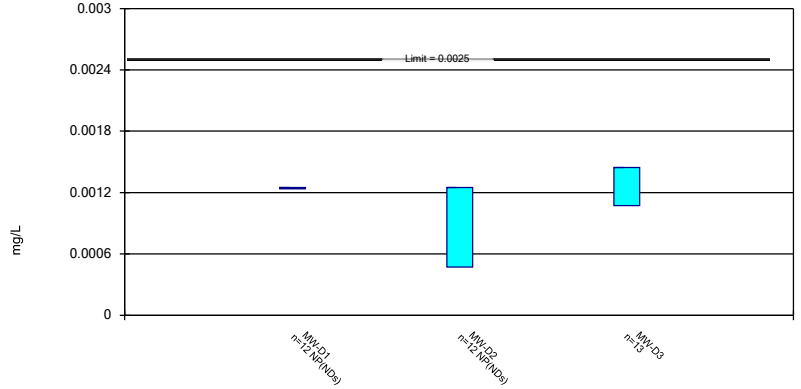
Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 12/30/2019 9:52 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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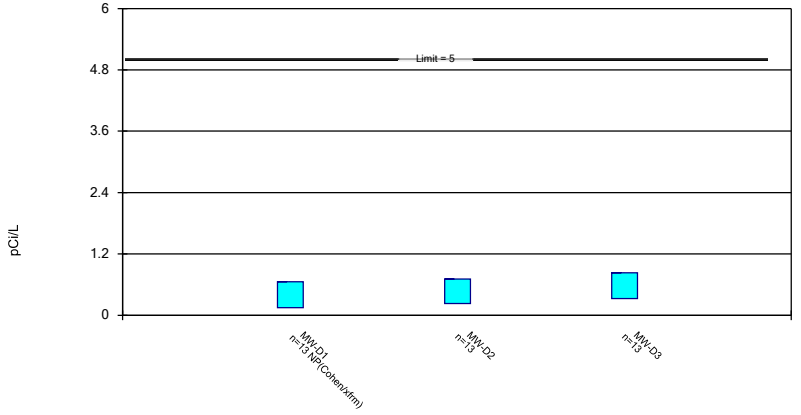
Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

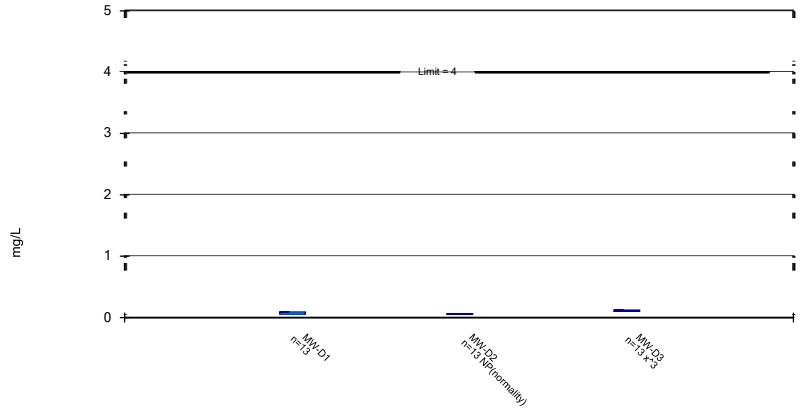


Constituent: Combined Radium 226 + 228 Analysis Run 12/30/2019 9:52 AM View: Sanitas_Statistics Sa

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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 12/30/2019 9:52 AM View: Sanitas_Statistics Sampling Events 1 throu

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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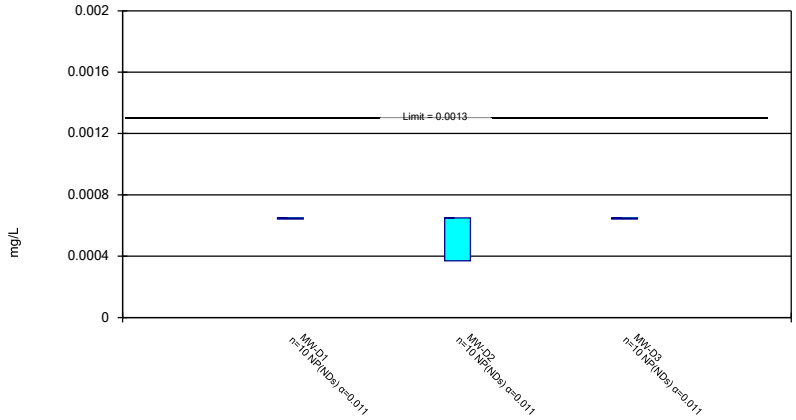
Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Lead Analysis Run 12/30/2019 9:52 AM View: Sanitas_Statistics Sampling Events 1 through

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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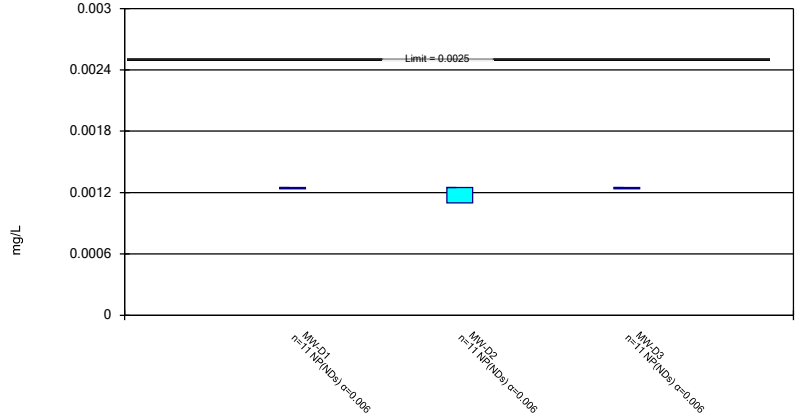
Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Lithium Analysis Run 12/30/2019 9:52 AM View: Sanitas_Statistics Sampling Events 1 throug

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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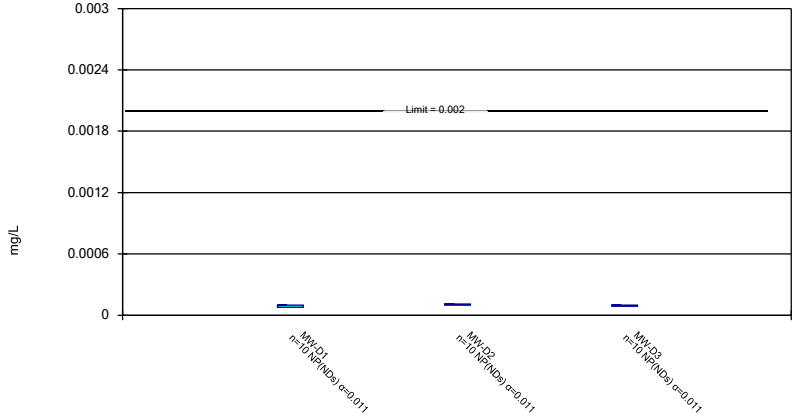
Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

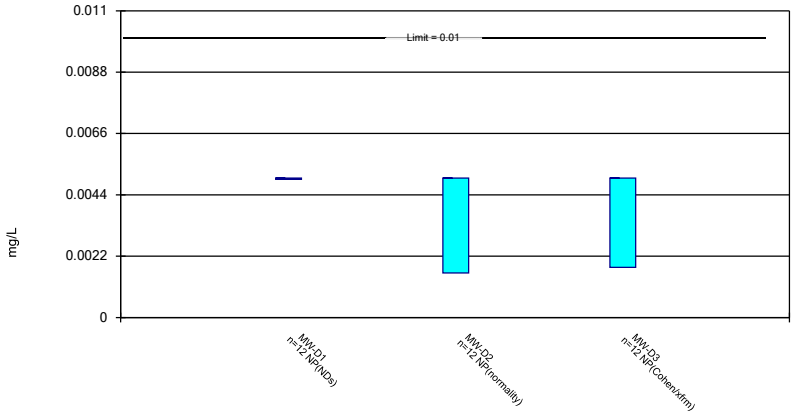


Constituent: Mercury Analysis Run 12/30/2019 9:53 AM View: Sanitas_Statistics Sampling Events 1 throu

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Molybdenum Analysis Run 12/30/2019 9:53 AM View: Sanitas_Statistics Sampling Events 1 t

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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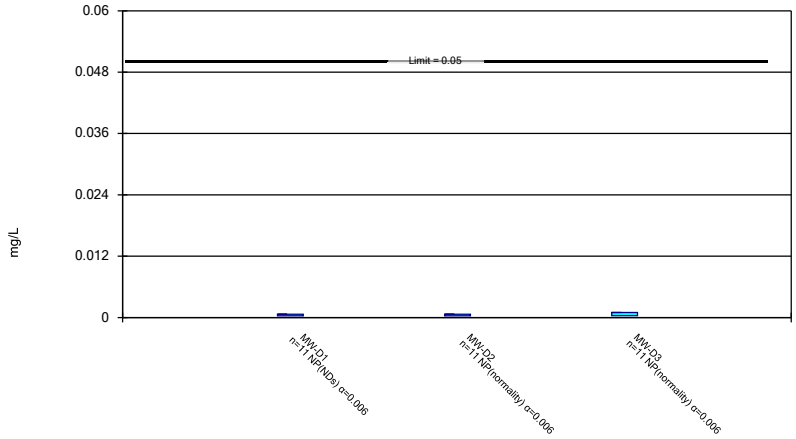
Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Selenium Analysis Run 12/30/2019 9:53 AM View: Sanitas_Statistics Sampling Events 1 thro

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10

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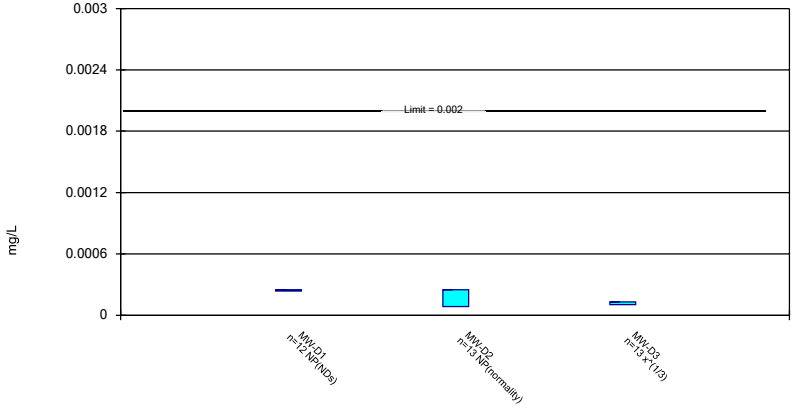
Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium Analysis Run 12/30/2019 9:53 AM View: Sanitas_Statistics Sampling Events 1 throu

CCPC Plant Crisp Ash Pond Site Client: Geosyntec Data: Sanitas_Statistics Sampling Events 1 through 10