Prepared for

Gulf Power Company
One Energy Place
Pensacola, Florida 32520

2018 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

GULF POWER COMPANY, PLANT CRIST GYPSUM STORAGE AREA

Prepared by

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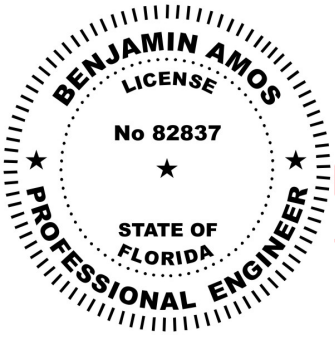
CERTIFICATION STATEMENT

This *2018 Annual Groundwater Monitoring and Corrective Action Report, Gulf Power Company – Plant Crist – Gypsum Storage Area* has been prepared in accordance to the requirements of the United States Environmental Protection Agency coal combustion residuals rule (40 Code of Federal Regulations [CFR] Part 257, Subpart D) under the supervision of a State of Florida licensed Professional Engineer and Professional Geologist with Geosyntec Consultants, Inc.



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EXECUTIVE SUMMARY

In accordance with the United States Environmental Protection Agency (USEPA) coal combustion residuals (CCR) rule (40 Code of Federal Regulations [CFR] Part 257, Subpart D) (CCR Rule), this *2018 Annual Groundwater Monitoring and Corrective Action Report* documents the CCR-groundwater monitoring activities completed in 2018 at Gulf Power Company's (Gulf Power's) Plant Crist (Site) Gypsum Storage Area (GSA).

Gulf Power previously installed a CCR-groundwater monitoring system around the GSA to monitor groundwater within the uppermost aquifer in the vicinity of this CCR unit. Monitoring wells in the GSA CCR-groundwater monitoring network are listed below:

- background wells: MW-100, MW-101, MW-107, MW-108, MW-306, and MW-307; and

- downgradient wells: MW-200, MW-201, MW-202, MW-203, MW-204, MW-205 and MW-206.

As reported previously (Southern Company, 2018), statistical evaluation of CCR-groundwater monitoring data collected through October 2017 identified statistically significant increases (SSIs) of certain Appendix III groundwater monitoring constituents above background. In accordance with the CCR Rule, Gulf Power initiated an assessment monitoring program for the GSA in March 2018. During the assessment monitoring scan event, samples from monitoring wells in the certified GSA CCR-groundwater monitoring network were collected and analyzed for Appendix III and Appendix IV constituents. The first semi-annual assessment monitoring event was conducted in June 2018 and the second semi-annual assessment monitoring event was conducted in October and November 2018. Samples collected during the semi-annual assessment monitoring events were analyzed for all Appendix III constituents and those Appendix IV constituents detected in the March 2018 assessment monitoring scan event.

Analytical data from the first semi-annual assessment monitoring event were analyzed in accordance with the *Statistical Analysis Plan* (GSC, 2017) and requirements of the CCR Rule. Statistical analysis of the CCR-groundwater monitoring data identified statistically significant levels (SSLs) of Appendix IV constituents above applicable groundwater protection standards (GWPSs). The following SSLs were identified at the GSA:

- radium 226 and 228 combined (total radium): MW-200, MW-201, MW-203, MW-204, and MW-206; and

- cobalt: MW-204.

In 2019, the GSA will remain in assessment monitoring. The 2019 assessment monitoring scan event is planned for March 2019 and semi-annual assessment monitoring events are planned for June and October 2019.

Geosyntec consultants

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1.0 INTRODUCTION

On behalf of Gulf Power Company (Gulf Power), Geosyntec Consultants, Inc. (Geosyntec) has prepared this *2018 Annual Groundwater Monitoring and Corrective Action Report* for Gulf Power's Plant Crist (Site) coal combustion residuals (CCR) unit, Gypsum Storage Area (GSA).

The Site is located at 11999 Pate Street in Pensacola, Escambia County, Florida, and is situated on approximately 670 acres. A Site location map is provided in **Figure 1**. Site topography ranges from approximately 120 feet (ft) relative to the North American Vertical Datum of 1988 (NAVD88) on the western portions of the Site and along Pate Street to approximately 5 ft NAVD88 near Clear Creek to the north and Governor's Bayou to the east. The GSA is located on the eastern portion of the property. Semi-annual monitoring and reporting for the GSA is being performed in accordance with the requirements of the United States Environmental Protection Agency (USEPA) CCR Rule (40 Code of Federal Regulations [CFR] Part 257, Subpart D).

In compliance with the CCR Rule, a CCR-groundwater detection monitoring program was implemented at the GSA. The *2017 Annual Groundwater Monitoring and Corrective Action Report* (Southern Company [SC], 2018) summarized the results of detection monitoring activities conducted through 2017. Statistical evaluation of CCR-groundwater monitoring data collected through October 2017 identified statistically significant increase (SSIs) of certain Appendix III groundwater monitoring constituents above background (SC, 2018). In accordance with the CCR Rule, Gulf Power initiated an assessment monitoring program for the GSA in March 2018. The assessment monitoring scan event was conducted in March 2018, followed by semi-annual assessment monitoring events in June and October 2018.

The purpose of this report is to present a summary of CCR-groundwater monitoring activities conducted in 2018, associated analytical laboratory data, and available statistical analysis results. This report was prepared to meet the annual reporting requirements of the CCR Rule.

1.1 Regional Geology & Hydrogeologic Setting

The Sand and Gravel Aquifer, the uppermost aquifer underlying the Site, includes Pleistocene terrace deposits, the Pleistocene Citronelle Formation, and the upper portion of the Pliocene/Miocene coarse clastics. The Sand and Gravel Aquifer has been subdivided into three major zones (listed in order from ground surface): (i) the surficial

zone; (ii) the low permeability zone; and (iii) the main producing zone (Roaza et al., 1991).

The surficial zone consists of the upper most layer of sand and gravel, although layers of silt and clay may also occur within this zone. Beneath the surficial zone is the low permeability zone. The low permeability zone is the first substantial, more regionally continuous lower permeability layer encountered within the Sand and Gravel Aquifer (Roaza et al., 1991). This layer generally consists of a poorly sorted mixture of sand, silt, and clay, although actual lithology is variable. As a semi-confining interval, the low permeability zone limits vertical groundwater flow between the surficial zone above and the main producing zone below (Roaza et al., 1991). The main producing zone is lithologically similar to the surficial zone with moderate to well sorted quartz sands and gravels with interbedded layers of sandy clay and clay. Groundwater in the main producing zone is under semi-confined conditions due to the nature of the low permeability zone that lies above and a regionally extensive confining unit that lies underneath (Richards, 2001).

The Sand and Gravel Aquifer underlies the Site (Barraclough and Marsh, 1962). Site-specific lithology in the uppermost aquifer consists primarily of silty or clayey sands interbedded with well-graded sands and gravels. Groundwater in the uppermost aquifer at the Site is generally encountered between 15 and 4 ft NAVD88 within the Sand and Gravel Aquifer in a laterally-extensive water-bearing zone of fine to coarse sand. This aquifer is considered the uppermost aquifer for groundwater monitoring purposes. The GSA CCR-groundwater monitoring wells were screened in the uppermost aquifer between approximately 6 and -23 ft NAVD88.

1.2 GSA CCR Unit and Groundwater Monitoring System Descriptions

The GSA is an active, gypsum storage pond occupying approximately 14.3 acres. The pond bottom is constructed of an engineered composite liner including 60-mil high-density polyethylene (HDPE) underlain by a geosynthetic liner. Gypsum, process water, and stormwater are conveyed to the GSA. Decant water from the GSA is managed through gravity feed pipes to two associated ponds – the Process Sedimentation Pond and the Process Return Water Pond.

Pursuant to the CCR Rule, Gulf Power installed a CCR-groundwater monitoring system around the GSA to monitor groundwater within the uppermost aquifer at the Site (SC, 2018). Upgradient (background) monitoring wells were installed to establish Site-wide

background water quality. The downgradient monitoring well network was installed at the waste boundary of the GSA. Monitoring wells in the GSA groundwater monitoring network are as follows:

- background wells: MW-100, MW-101, MW-107, MW-108, MW-306, and MW-307; and
- downgradient wells: MW-200, MW-201, MW-202, MW-203, MW-204, MW-205 and MW-206.

Monitoring well details, including installation date, coordinates, elevations, screen intervals, and designations are summarized in **Table 1**. **Figure 2** depicts the CCR-groundwater monitoring network for the GSA.

1.3 Groundwater Corrective Action

As reported by SC (2018) and pursuant to Consent Order OGC No. 16-1250 (Consent Order) between Gulf Power and the Florida Department of Environmental Protection (FDEP), Gulf Power installed a groundwater pump and treat system downgradient of the GSA to promote the removal of groundwater impacts resulting from unpermitted discharge from GSA-related infrastructure (SC, 2018). Extracted groundwater is treated onsite and disposed through permitted deep injection wells. Groundwater extraction and treatment are ongoing at the GSA and Gulf Power will continue to operate the groundwater pump and treat system in 2019.

2.0 GROUNDWATER MONITORING ACTIVITIES

In accordance with the CCR Rule, the following section describes CCR-groundwater monitoring-related activities performed during 2018 for the GSA. Groundwater samples were collected from monitoring wells in the GSA CCR-monitoring system shown on **Figure 2**. A summary of GSA CCR-groundwater sampling events completed in 2018, including one assessment monitoring scan event and two semi-annual assessment monitoring events, is provided in **Table 2**. Analytical data associated with the assessment monitoring scan and semi-annual events are summarized in **Table 3**; laboratory analytical reports are included in **Appendix A**.

2.1 Monitoring Well Installation and Maintenance

Monitoring well and piezometer installation activities were completed for the GSA in 2015 and 2016 (SC, 2018). No additional CCR monitoring wells were installed in the GSA in 2018.

2.2 Assessment Monitoring Scan

An assessment monitoring scan event for the GSA was conducted in March 2018. Samples were collected from each monitoring well in the GSA CCR-monitoring network and analyzed for Appendix III and Appendix IV constituents. The following Appendix IV constituents were detected during the 2018 assessment monitoring scan event: arsenic, barium, beryllium, cadmium, cobalt, radium 226 and 228 combined (total radium), fluoride, lead, lithium, mercury, molybdenum, selenium, and thallium.

2.3 Assessment Monitoring Events

The first semi-annual assessment monitoring event for the GSA was performed in June 2018. The second semi-annual assessment monitoring event was conducted in October and November 2018. Groundwater samples were collected from each GSA monitoring well and analyzed for all Appendix III constituents and those Appendix IV constituents detected in the March 2018 scan event.

3.0 SAMPLE METHODOLOGY & ANALYSES

The following section describes the methods used to conduct CCR-groundwater monitoring at the GSA.

3.1 Groundwater Elevation Measurement

Prior to each 2018 CCR-sampling event, groundwater elevations were recorded from the CCR-monitoring well networks at the Site. Groundwater elevations recorded during the assessment monitoring scan and two semi-annual assessment monitoring events are summarized in **Table 4**. **Figure 3**, **Figure 4**, and **Figure 5** present Site-wide potentiometric surface elevation contour maps developed using groundwater elevation data collected in March, June, and October 2018, respectively. As shown on the potentiometric figures, the general direction of groundwater flow is to the northeast. The groundwater flow patterns observed during the 2018 assessment monitoring events are generally consistent with observations from 2017 (SC, 2018).

3.2 Groundwater Sampling

Groundwater samples were collected in general accordance with FDEP Standard Operation Procedure FS2200 (FDEP, 2017) and the CCR Rule. A SmarTroll (In-Situ field instrument) was used to monitor and record field water quality parameters (pH, conductivity, and dissolved oxygen) during well purging to evaluate stabilization prior to sampling. Turbidity was measured using a Hach 2100Q (or similar) portable turbidimeter. Following sample collection, samples were placed in ice-packed coolers and submitted to TestAmerica Laboratories, Inc. (TAL), in Pensacola, Florida following chain-of-custody protocol. Field sampling data sheets are provided in **Appendix A**.

3.3 Laboratory Analyses

Groundwater samples collected for the assessment monitoring scan and the semi-annual assessment monitoring events at the GSA included both Appendix III and Appendix IV constituents. Applicable analytical methods are provided in laboratory reports in **Appendix A**.

Laboratory analyses were performed by TAL. TAL is accredited by the National Environmental Laboratory Accreditation Program (NELAP) and maintain a NELAP certification for all parameters analyzed for this project. In addition, TAL is certified to

perform analysis by the State of Florida. Groundwater data and chain-of-custody records for the monitoring events are presented in **Appendix A**.

3.4 Quality Assurance & Quality Control Summary

During each sampling event for the GSA, quality assurance/quality control (QA/QC) samples including equipment blanks, field blanks, and duplicate samples were collected. Data from these QA/QC samples were evaluated during data validation.

GSA groundwater quality data in this report were independently validated in accordance with USEPA guidance (USEPA, 2011) and the analytical methods. Data validation generally consisted of reviewing sample integrity, holding times, laboratory method blanks, laboratory control samples, matrix spikes/matrix spike duplicate recoveries and relative percent differences (RPDs), post digestions spikes, laboratory and field duplicate RDPs, field and equipment blanks, and reporting limits. Where appropriate, validation qualifiers and flags are applied to the data using USEPA procedures as guidance (USEPA, 2017). Data validation reports are included in **Appendix A** for the assessment monitoring scan and first semi-annual assessment monitoring events. Data validation of data collected during the second 2018 semi-annual assessment monitoring event is ongoing and will be reported in 2020.

4.0 STATISTICAL ANALYSIS

The following section describes the statistical methods and analyses performed to assess CCR-groundwater monitoring data collected in 2018 from the GSA.

4.1 Statistical Method

Pursuant to the CCR Rule, statistical analysis of Appendix III and detected Appendix IV constituents was performed on CCR-groundwater monitoring data collected in 2018 from the GSA CCR-groundwater monitoring network in accordance with the Site *Statistical Analysis Plan* (SAP) (Groundwater Stats Consulting [GSC], 2017). The SAP describes site-specific statistical methods that are used to evaluate CCR-groundwater data at the GSA.

Statistical analysis of GSA CCR-groundwater data was performed using the Sanitas™ v.9.6.05 groundwater statistical software. Sanitas™ is a decision support software package that incorporates statistical tests required of Subtitle C and D facilities by USEPA regulations and incorporates methods recommended in the *Statistical Analysis of Groundwater Data at RCRA Facilities, Unified Guidance* (USEPA, 2009).

4.1.1 Assessment Monitoring Statistical Method

Groundwater protection standards (GWPSs) for Appendix IV constituents at the GSA were established in accordance with the CCR Rule and the July 30, 2018 CCR Rule amendment (USEPA, 2018) and are presented in **Table 5**. Additional details are presented in the statistical analysis packages provided in **Appendix B**.

To identify statistically significant levels (SSLs) of Appendix IV constituents, confidence intervals were constructed for each detected Appendix IV constituent in each downgradient well and compared to the GWPSs. An SSL was identified only when the entire confidence interval is above the GWPS. Other statistical tests including time-series plots and trend analyses, were performed in accordance with the SAP.

4.1.2 Appendix III Constituent Statistical Method

Statistical analysis of Appendix III constituents was performed to evaluate if concentrations had returned to background values. Statistical tests used to evaluate the CCR-groundwater monitoring data at the GSA consisted of interwell prediction limits combined with a 1-of-2 resample strategy for the following Appendix III constituents: boron, calcium, chloride, fluoride, sulfate, and TDS. Interwell prediction limits pool

upgradient well data to establish a background prediction limit for an individual constituent, and the most recent sample from each downgradient well is compared to the background prediction limit for each parameter. Intrawell prediction limits combined with a 1-of-2 resample strategy were used to evaluate pH at each well. Intrawell prediction limits are constructed using historical data within a given well and compare the most recent sample to background levels within the same well. The 1-of-2 resample strategy allows for collection of a verification sample when a statistically significant increase is identified. If the most recent sample exceeded its respective background prediction limit and a verification sample is not collected, a statistically significant increase (SSI) is identified.

4.2 Statistical Analyses Results

Analytical data from the first semi-annual assessment monitoring event in June 2018 for the GSA was analyzed in accordance with the SAP. Appendix III statistical analysis was performed to evaluate if constituents in the GSA groundwater have returned to background levels. Appendix IV constituents were evaluated to assess if GSA groundwater concentrations statistically exceeded the established GWPSs.

4.2.1 Assessment Monitoring Statistical Results

A summary of the Sanitas™ outputs for the June 2018 assessment event is provided in **Appendix B**. Based on the statistical analysis of Appendix IV constituents the following SSLs were identified at the GSA:

- total radium: MW-200, MW-201, MW-203, MW-204, and MW-206; and
- cobalt: MW-204.

In accordance with the CCR Rule, a notification identifying the SSLs for total radium and cobalt was prepared for the GSA and placed in the facility's Operating Record. Statistical analysis of data collected during the second semi-annual assessment monitoring event is ongoing and will be reported in 2020.

4.2.2 Appendix III Constituent Statistical Results

Based on review of the Appendix III statistical analysis, concentrations of the previously noted constituents have not returned to background levels and assessment monitoring

should continue at the GSA. A summary of Sanitas™ output of Appendix III statistical analysis is presented in **Appendix B**.

5.0 CONCLUSIONS AND FUTURE ACTIONS

In accordance with the CCR Rule, Gulf Power initiated assessment monitoring in March 2018 for the GSA. SSLs of select Appendix IV constituents (i.e., total radium and cobalt) relative to GWPSs were identified at the GSA during the first semi-annual assessment monitoring event in 2018. Statistical analysis of Appendix III constituents indicated that concentrations downgradient of the GSA have not returned to background levels. In accordance with the CCR Rule, Gulf Power initiated assessment of corrective measures at the GSA in January 2019 for the identified SSLs at the GSA. Additionally, Gulf Power will continue to operate the groundwater pump and treat system in 2019 to promote the removal of impacted groundwater.

Assessment monitoring will continue at the GSA in 2019. The 2019 CCR-groundwater assessment monitoring scan event is planned for March 2019 and semi-annual CCR-groundwater assessment monitoring events are planned for June and October 2019.

6.0 REFERENCES

Barraclough, J.T., and Marsh, O.T., 1962, *Aquifers and quality of ground water along the Gulf Coast of Florida: Florida Geological Survey Report of Investigations No. 29*, 28p.

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USEPA, 2018. *Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals from Electric Utilities; Amendments to the National Minimum Criteria (Phase One, Part One).* EPA-HQ-OLEM-2017-0286; FRL-9981-18-OLEM.

TABLES

TABLE 1: MONITORING WELL NETWORK SUMMARY
Plant Crist - GSA, Gulf Power Company, Pensacola, Florida

Well Name	Installation Date	Northing	Easting	Ground Elevation	Top of Casing Elevation	Top of Screen Elevation	Bottom of Screen Elevation	Designation
MW-100	11/11/2015	578116.11	1107316.00	99.84	103.03	-5.16	-15.16	Upgradient
MW-101	11/10/2015	577158.45	1107724.27	105.1	108	-1.9	-11.9	Upgradient
MW-107	11/17/2015	577201.66	1107442.83	111.4	114.71	1.4	-8.6	Upgradient
MW-108	11/17/2015	576208.36	1107577.06	80.51	83.54	-4.49	-14.49	Upgradient
MW-200	11/11/2015	581703.17	1108041.01	17.2	20.13	-2.8	-12.8	Downgradient
MW-201	11/11/2015	581138.29	1108637.91	52.45	52.12	3.15	-6.85	Downgradient
MW-202	11/10/2015	580559.03	1109045.35	55.8	55.45	6.3	-3.7	Downgradient
MW-203	11/9/2015	580100.37	1108497.51	47.46	50.6	-2.54	-12.54	Downgradient
MW-204	11/9/2015	580325.06	1107978.45	16.43	19.47	-3.57	-13.57	Downgradient
MW-205	11/17/2015	581076.41	1107907.46	17.31	20.28	-2.69	-12.69	Downgradient
MW-206	2/9/2016	581888.48	1108613.37	26.25	29.11	1.25	-8.75	Downgradient
MW-306	11/19/2015	578417.11	1106200.44	67.61	70.56	-12.39	-22.39	Upgradient
MW-307	11/19/2015	578209.77	1106865.99	101.11	104.18	-8.89	-18.89	Upgradient

Notes:

1. Northing and easting are in feet relative to the State Plane Florida North Datum of 1983.
2. Elevations are in feet relative to the North American Vertical Datum on 1988.

TABLE 2: SUMMARY OF 2018 GROUNDWATER SAMPLING EVENTS
Plant Crist - GSA, Gulf Power Company, Pensacola, Florida

Well Name	2018 Assessment Monitoring Scan	2018 Assessment Monitoring Event 1	2018 Assessment Monitoring Event 2
MW-100	3/12/2018	6/5/2018	10/16/2018
MW-101	3/14/2018	6/10/2018	10/18/2018
MW-107	3/12/2018	6/5/2018	10/16/2018
MW-108	3/12/2018	6/5/2018	10/16/2018
MW-200	3/13/2018	6/8/2018	11/13/2018
MW-201	3/14/2018	6/9/2018	11/14/2018
MW-202	3/13/2018	6/9/2018	11/14/2018
MW-203	3/13/2018	6/8/2018	11/13/2018
MW-204	3/13/2018	6/8/2018	10/19/2018
MW-205	3/13/2018	6/8/2018	10/19/2018
MW-206	3/14/2018	6/8/2018	10/17/2018
MW-306	3/12/2018	6/6/2018	10/17/2018
MW-307	3/12/2018	6/6/2018	10/17/2018

Notes:

1. Assessment indicates a sampling event conducted during assessment monitoring, and includes groundwater samples analyzed for Appendix III and Appendix IV parameters.

TABLE 3: SUMMARY OF 2018 GROUNDWATER LABORATORY ANALYTICAL DATA
Plant Crist - GSA, Gulf Power Company, Pensacola, Florida

Monitoring Well	Well Designation	Sample Date	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Combined Radium (pCi/L)	Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	pH (SU)	Selenium (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Thallium (mg/L)
Assessment Monitoring Scan Event																							
MW-100	Background	3/12/2018	0.001 U	0.00046 U	0.017	0.00034 U	0.021 U	0.00034 U	0.88	5.3	0.0011 U	0.00055 I	0.933	0.032 U	0.00035 U	0.0011 I	0.00007 U	0.00085 U	4.85	0.00046 I	1.4 U	18	0.000085 U
MW-101	Background	3/14/2018	0.001 U	0.00046 U	0.0089	0.00034 U	0.021 U	0.00034 U	0.49	5.2	0.0011 U	0.0004 U	0.614	0.12	0.00035 U	0.0011 U	0.000093 I V	0.00085 U	5.14	0.00067 I V	1.4 U	8	0.000085 U
MW-107	Background	3/12/2018	0.001 U	0.00046 U	0.013	0.00034 U	0.021 U	0.00034 U	0.49	6.1	0.0011 U	0.00055 I	1.09	0.032 U	0.00035 U	0.0014 I	0.00007 U	0.00085 U	4.81	0.00064 I	1.4 U	14	0.000085 U
MW-108	Background	3/12/2018	0.001 U	0.00046 U	0.01	0.00034 U	0.021 U	0.00034 U	1.4	5.9	0.0011 U	0.0004 U	1.97	0.032 U	0.00035 U	0.0011 U	0.00007 U	0.00085 U	4.81	0.00047 I	2.6 I	3.4 U	0.000085 U
MW-306	Background	3/12/2018	0.001 U	0.00046 U	0.013	0.00034 U	0.021 U	0.00034 U	0.59	5.6	0.0011 U	0.00044 I	0.783	0.032 U	0.00035 U	0.0011 U	0.00007 U	0.00085 U	5.07	0.00026 I	1.4 U	3.4 U	0.000085 U
MW-307	Background	3/12/2018	0.001 U	0.00046 U	0.015	0.00034 U	0.021 U	0.00034 U	0.71	4	0.0011 U	0.0004 U	0.848	0.032 U	0.00035 U	0.0011 U	0.00007 U	0.00085 U	5.6	0.00024 U	1.4 U	3.4 U	0.000085 U
MW-200	Downgradient	3/13/2018	0.001 U	0.0013	0.042	0.00034 U	10	0.00039 I	290	530	0.0011 U	0.0011 I	10.9	0.05 I	0.00047 I	0.0011 U	0.0014	0.00085 U	5.19	0.0064	160	1600	0.00018 I
MW-201	Downgradient	3/14/2018	0.001 U	0.00062 I	0.03	0.00034 U	4.4	0.0032	75	110	0.0011 U	0.0022 I	6.95	0.84	0.00035 U	0.0053	0.00051	0.00085 U	4.82	0.0049	190	490	0.00027 I
MW-202	Downgradient	3/13/2018	0.001 U	0.00046 U	0.037	0.00034 U	0.027 I	0.00034 U	4.1	14	0.0011 U	0.0015 I	1.82	0.032 U	0.00035 U	0.0011 U	0.000087 I	0.00085 U	4.67	0.00029 I	8.6	52	0.000085 U
MW-203	Downgradient	3/13/2018	0.001 U	0.00054 I	0.047	0.00034 U	0.69	0.00034 U	31	14	0.0011 U	0.003	6.95	0.06 I	0.00035 U	0.0011 U	0.00011 I	0.00085 U	4.64	0.0019	100	210	0.000095 I
MW-204	Downgradient	3/13/2018	0.001 U	0.003	0.027	0.00057 I	6.2	0.00034 U	81	81	0.0011 U	0.017	14.1	0.29	0.0023	0.0015 I	0.00007 U	0.00085 U	4.34	0.0038	410	760	0.00035 I
MW-205	Downgradient	3/13/2018	0.001 U	0.00046 U	0.019	0.00034 U	0.084	0.00034 U	11	4.1	0.0011 U	0.0004 U	0.874	0.032 U	0.00035 U	0.0011 U	0.00007 U	0.00085 U	5.48	0.00024 U	14	66	0.000085 U
MW-206	Downgradient	3/14/2018	0.0011 I	0.0033	0.079	0.00034 U	48	0.0014 I	1100	2100	0.0011 U	0.0027	17.7	0.08 I	0.004	0.0011 U	0.0002	0.00092 I	4.35	0.019	470	6300	0.00055
Assessment Monitoring Event 1																							
MW-100	Background	6/5/2018	0.001 U	0.00046 U	0.018	0.00034 U	0.021 U	0.00034 U	0.9	5.3	0.0011 U	0.00051 I	0.713	0.032 U	0.00035 U	0.0011 U	0.00007 U	0.00085 U	4.92	0.00049 I V	1.4 U	10	0.000085 U
MW-101	Background	6/10/2018	0.001 U	0.00046 I	0.0092	0.00034 U	0.021 U	0.00034 U	0.39	5.2	0.0011 U	0.0004 U	0.959	0.032 U	0.00035 U	0.0011 U	0.00007 U	0.00085 U	5.12	0.00028 I	1.5 I	8	0.000085 U
MW-107	Background	6/5/2018	0.001 U	0.00046 U	0.014	0.00034 U	0.021 U	0.00034 U	0.49	5.5	0.0011 U	0.00052 I	0.927	0.032 U	0.00035 U	0.0012 I	0.00007 U	0.00088 I	5.04	0.00098 I V	1.4 U	3.4 U	0.000085 U
MW-108	Background	6/5/2018	0.001 U	0.00046 U	0.011	0.00034 U	0.021 U	0.00034 U	1.2	6.5	0.0011 U	0.0004 U	2.17	0.032 U	0.00035 U	0.0011 U	0.00007 U	0.00085 U	4.9	0.00065 I V	2.6 I	14	0.000085 U
MW-306	Background	6/6/2018	0.001 U	0.00046 U	0.014	0.00034 U	0.021 U	0.00034 U	0.59	5.6	0.0011 U	0.0004 I	1.08	0.032 U	0.00035 U	0.0011 U	0.00007 U	0.00085 U	5.09	0.00025 I V	1.4 U	20	0.000085 U
MW-307	Background	6/6/2018	0.001 U	0.00046 U	0.017	0.00034 U	0.021 U	0.00034 U	0.68	4.1	0.0011 U	0.00048 I	0.78	0.032 U	0.00035 U	0.0021 I	0.00007 U	0.00085 U	5.58	0.00026 I V	1.4 U	16	0.000085 U
MW-200	Downgradient	6/8/2018	0.001 U	0.0018	0.057	0.00034 U	12	0.00034 U	320	680	0.0011 U	0.0028	10.6	0.13	0.0013	0.0011 U	0.0018	0.00085 U	5.05	0.0076	160	2000	0.00018 I
MW-201	Downgradient	6/9/2018	0.001 U	0.00063 I	0.029	0.00034 U	4.1	0.0029	64	86	0.0011 U	0.0016 I	6.52	0.78	0.00035 U	0.0044 I	0.00032	0.00085 U	4.81	0.0047	170	430	0.00023 I
MW-202	Downgradient	6/9/2018	0.001 U	0.00046 U	0.072	0.00034 U	0.11	0.00034 U	5.8	24	0.0011 U	0.0019 I	3.36	0.07 I	0.00037 I	0.0013 I	0.0007	0.00085 U	4.58	0.00049 I	18	72	0.000085 U
MW-203	Downgradient	6/8/2018	0.001 U	0.00053 I	0.043	0.00034 U	0.99	0.00034 U	28	15	0.0011 U	0.0026	7.07	0.06 I	0.00035 U	0.0011 U	0.00007 U	0.00085 U	4.63	0.0022 V	100	98	0.000085 I
MW-204	Downgradient	6/8/2018	0.001 U	0.0029	0.027	0.00059 I	5.7	0.00034 U	77	82	0.0011 U	0.016	12.3	0.28	0.002	0.002 I	0.00007 U	0.00085 U	4.29	0.0048	390	700	0.00034 I
MW-205	Downgradient	6/8/2018	0.001 U	0.0018	0.057	0.00034 U	2	0.00034 U	44	43	0.0011 U	0.0026	7.65	0.1	0.00097 I	0.0011 U	0.00007 U	0.00085 U	4.89	0.0034	180	320	0.00012 I
MW-206	Downgradient	6/8/2018	0.001 U	0.003	0.07	0.00034 U	40	0.0014 I	800	1800	0.0011 U	0.0029	15.3	0.1	0.0034	0.0012 I	0.00016 I	0.00085 U	4.31	0.018	440	5200	0.00048 I
Assessment Monitoring Event 2																							
MW-100	Background	10/16/2018	0.001 U	0.00046 U	0.017	0.00034 U	0.021 U	0.00034 U	0.86	5.5	0.0011 U	0.00058 I	2.14	0.032 U	0.00035 U	0.0011 U	0.00007 U	0.002 U	4.93	0.00071 U	1.4 U	32	0.000085 U
MW-101	Background	10/18/2018	0.001 U	0.00046 U	0.0089	0.00034 U	0.081	0.00034 U	0.41	5.2	0.0011 U	0.0004 U	0.944	0.032 U	0.00035 U	0.0013 I	0.00007 U	0.002 U	4.97	0.00071 U	1.4 U	28	0.000085 U
MW-107	Background	10/16/2018	0.001 U	0.00046 U	0.011	0.00034 U	0.021 U	0.00034 U	0.42	5.1	0.0011 U	0.00045 I	1.07	0.032 U	0.00035 U	0.0015 I	0.00007 U	0.002 U	4.98	0.00071 U	1.4 U	12	0.000085 U
MW-108	Background	10/16/2018	0.001 U	0.00046 U	0.011	0.00034 U	0.021 U	0.00034 U	1.4	5.9	0.0011 U	0.0004 U	2.2	0.032 U	0.00035 U	0.0013 I	0.00007 U	0.002 U	4.81	0.00071 U	2.8 I	6	0.000085 U
MW-306	Background	10/17/2018	0.001 U	0.00046 U	0.012	0.00034 U	0.021 U	0.00034 U	0.54	5.5	0.0011 U	0.0004 U	1.19	0.032 U	0.00035 U	0.0011 U	0.00007 U	0.002 U	4.99	0.00071 U	1.4 U	44	0.000085 U
MW-307	Background	10/17/2018	0.001 U	0.00046 U	0.016	0.00034 U	0.021 U	0.00034 U	0.66	3.7	0.0011 U	0.00043 I	0.88	0.032 U	0.00035 U	0.0012 I	0.00007 U	0.002 U	5.54	0.00071 U	1.4 U	44	0.000085 U
MW-200	Downgradient	11/13/2018	0.001 U	0.00072 I	0.048	0.00034 U	9.1	0.00034 U	220	450	--	0.0019 I	9.09	0.1	0.0014	0.0024 I	0.0021	0.002 U	5.11	0.0062	130	1400	0.000085 U
MW-201	Downgradient	11/14/2018	0.001 I	0.00046 U	0.028	0.00034 U	2.3	0.0021 I	38	41	--	0.0016 I	5.66	0.67	0.00035 U	0.005	0.000082 I	0.002 U	4.85	0.0031	110	230	0.00015 I
MW-202	Downgradient	11/14/2018	0.001 U	0.00046 U	0.031	0.00034 U	0.21	0.00034 U	83	18	--	0.00053 I	1.31	0.08 I	0.00035 U	0.0023 I	0.00024	0.002 U	6.79	0.00085 I	21	230	0.000085 U
MW-203	Downgradient	11/13/2018	0.001 U	0.00046 U	0.037	0.00034 U	1.1	0.00034 U	30	17	--	0.0022 I	5.95	0.05 I	0.00035 U	0.0019 I	0.00007 U	0.002 U	4.83	0.0022	100	150	0.000085 U
MW-204	Downgradient	10/19/2018	0.001 U	0.0023	0.024	0.0005 I	5	0.00034 U	68	77	--	0.014	13.3	0.28	0.0019	0.0022 I	0.00013 I	0.002 U	4.3	0.0035	320	700	0.00028 I
MW-205	Downgradient	10/19/2018	0.001 U	0.00046 U	0.041	0.00034 U	2	0.00034 U	33	58	--	0.0023 I	3.9	0.07 I	0.00048 I	0.0029 I	0.000096 I	0.002 U	4.81	0.0021	120	310	0.00009 I
MW-206	Downgradient	10/17/2018	0.001 U	0.0028	0.059	0.00034 U	25	0.00088 I	530	1200	--	0.0027	12.6	0.12	0.0026	0.0014 I	0.00014 I	0.002 U	4.41	0.013	270	3800	0.0003 I

Notes:

1. mg/L indicates milligrams per liter, pCi/L indicates picocuries per liter, SU indicates standard units.
2. TDS indicates Total Dissolved Solids.
3. -- indicates that the constituent was not detected in the assessment monitoring scan event and therefore not sampled in the assessment monitoring events.
4. "U" indicates analyte was analyzed but not detected. "I" indicates that the reported value is between laboratory method detection limit and laboratory practical quantitation limit.
5. "V" indicates that the analyte was detected at or above the method detection limit in both the sample and associated method blank and the value of 10 times the blank was equal to or greater than the associated sample value.
6. Data validation was performed on assessment monitoring scan event and the first assessment monitoring event. Data validation is ongoing for the second assessment monitoring event. Data validation flags are not included in Table 3. Data validation reports are included in Appendix A.

TABLE 4: SUMMARY OF 2018 GROUNDWATER ELEVATIONS
Plant Crist, Gulf Power Company, Pensacola, Florida

Monitoring Well	Northing	Easting	Top of Casing Elevation	Date	Depth to Water	Groundwater Elevation
MW-100	578116.11	1107316.00	103.03	3/12/2018	89.92	13.11
MW-101	577158.45	1107724.27	108	3/12/2018	95.39	12.61
MW-102	576886.86	1108472.89	112.17	3/12/2018	101.67	10.50
MW-103	577354.11	1109233.05	120.79	3/12/2018	111.87	8.92
MW-104	578494.34	1108915.77	68.25	3/12/2018	59.08	9.17
MW-105	579092.61	1108688.61	30.53	3/12/2018	21.59	8.94
MW-106	578765.08	1107895.05	77.99	3/12/2018	66.63	11.36
MW-107	577201.66	1107442.83	114.71	3/12/2018	100.97	13.74
MW-108	576208.36	1107577.06	83.54	3/12/2018	68.91	14.63
MW-109	577624.83	1109293.64	119.85	3/12/2018	111.17	8.68
MW-110	578095.94	1109139.45	90.33	3/12/2018	81.48	8.85
MW-200	581703.17	1108041.01	20.13	3/12/2018	17.46	2.67
MW-201	581138.29	1108637.91	52.12	3/12/2018	48.5	3.62
MW-202	580559.03	1109045.35	55.45	3/12/2018	51.41	4.04
MW-203	580100.37	1108497.51	50.6	3/12/2018	45.03	5.57
MW-204	580325.06	1107978.45	19.47	3/12/2018	13.21	6.26
MW-205	581076.41	1107907.46	20.28	3/12/2018	16.17	4.11
MW-206	581888.48	1108613.37	29.11	3/12/2018	26.74	2.37
MW-300	579587.59	1106288.51	68.8	3/12/2018	57.16	11.64
MW-301	579282.59	1106601.15	80.51	3/12/2018	68.18	12.33
MW-302	579752.44	1107202.72	57.97	3/12/2018	46.71	11.26
MW-303	580183.01	1107460.45	44.97	3/12/2018	35.64	9.33
MW-304	580661.43	1106931.50	41.82	3/12/2018	34.42	7.40
MW-305	580179.89	1106680.03	58.57	3/12/2018	49.18	9.39
MW-306	578417.11	1106200.44	70.56	3/12/2018	55.45	15.11
MW-307	578209.77	1106865.99	104.18	3/12/2018	90.04	14.14
MW-308	580349.51	1107304.17	42.65	3/12/2018	33.8	8.85

Notes:

1. Northing and easting are in feet relative to the State Plane Florida North Datum of 1983.
2. Elevations are in feet relative to the North American Vertical Datum of 1988.
3. Depth to water measurements are in feet.

TABLE 4: SUMMARY OF 2018 GROUNDWATER ELEVATIONS
Plant Crist, Gulf Power Company, Pensacola, Florida

Monitoring Well	Northing	Easting	Top of Casing Elevation	Date	Depth to Water	Groundwater Elevation
MW-100	578116.11	1107316.00	103.03	6/4/2018	90.61	12.42
MW-101	577158.45	1107724.27	108	6/4/2018	96.62	11.38
MW-102	576886.86	1108472.89	112.17	6/4/2018	102.01	10.16
MW-103	577354.11	1109233.05	120.79	6/4/2018	112.09	8.70
MW-104	578494.34	1108915.77	68.25	6/4/2018	59.56	8.69
MW-105	579092.61	1108688.61	30.53	6/4/2018	22.4	8.13
MW-106	578765.08	1107895.05	77.99	6/4/2018	67.41	10.58
MW-107	577201.66	1107442.83	114.71	6/4/2018	102.01	12.70
MW-108	576208.36	1107577.06	83.54	6/4/2018	70.22	13.32
MW-109	577624.83	1109293.64	119.85	6/4/2018	111.52	8.33
MW-110	578095.94	1109139.45	90.33	6/4/2018	81.83	8.50
MW-200	581703.17	1108041.01	20.13	6/4/2018	19.70	0.43
MW-201	581138.29	1108637.91	52.12	6/4/2018	48.99	3.13
MW-202	580559.03	1109045.35	55.45	6/4/2018	51.97	3.48
MW-203	580100.37	1108497.51	50.6	6/4/2018	45.88	4.72
MW-204	580325.06	1107978.45	19.47	6/4/2018	14.28	5.19
MW-205	581076.41	1107907.46	20.28	6/4/2018	17.06	3.22
MW-206	581888.48	1108613.37	29.11	6/4/2018	28.10	1.01
MW-300	579587.59	1106288.51	68.8	6/4/2018	57.95	10.85
MW-301	579282.59	1106601.15	80.51	6/4/2018	68.92	11.59
MW-302	579752.44	1107202.72	57.97	6/4/2018	47.80	10.17
MW-303	580183.01	1107460.45	44.97	6/4/2018	36.81	8.16
MW-304	580661.43	1106931.50	41.82	6/4/2018	35.38	6.44
MW-305	580179.89	1106680.03	58.57	6/4/2018	50.04	8.53
MW-306	578417.11	1106200.44	70.56	6/4/2018	56.15	14.41
MW-307	578209.77	1106865.99	104.18	6/4/2018	90.73	13.45
MW-308	580349.51	1107304.17	42.65	6/4/2018	34.88	7.77

Notes:

1. Northing and easting are in feet relative to the State Plane Florida North Datum of 1983.
2. Elevations are in feet relative to the North American Vertical Datum of 1988.
3. Depth to water measurements are in feet.

TABLE 4: SUMMARY OF 2018 GROUNDWATER ELEVATIONS
Plant Crist, Gulf Power Company, Pensacola, Florida

Monitoring Well	Northing	Easting	Top of Casing Elevation	Date	Depth to Water	Groundwater Elevation
MW-100	578116.11	1107316.00	103.03	10/5/2018	91.23	11.80
MW-101	577158.45	1107724.27	108	10/5/2018	97.55	10.45
MW-102	576886.86	1108472.89	112.17	10/5/2018	104.24	7.93
MW-103	577354.11	1109233.05	120.79	10/5/2018	113.2	7.59
MW-104	578494.34	1108915.77	68.25	10/5/2018	59.99	8.26
MW-105	579092.61	1108688.61	30.53	10/5/2018	21.86	8.67
MW-106	578765.08	1107895.05	77.99	10/5/2018	67.54	10.45
MW-107	577201.66	1107442.83	114.71	10/5/2018	103.07	11.64
MW-108	576208.36	1107577.06	83.54	10/5/2018	71.5	12.04
MW-109	577624.83	1109293.64	119.85	10/5/2018	112.36	7.49
MW-110	578095.94	1109139.45	90.33	10/5/2018	82.45	7.88
MW-200	581703.17	1108041.01	20.13	10/5/2018	17.86	2.27
MW-201	581138.29	1108637.91	52.12	10/5/2018	48.65	3.47
MW-202	580559.03	1109045.35	55.45	10/5/2018	51.37	4.08
MW-203	580100.37	1108497.51	50.6	10/5/2018	45.05	5.55
MW-204	580325.06	1107978.45	19.47	10/5/2018	13.20	6.27
MW-205	581076.41	1107907.46	20.28	10/5/2018	16.27	4.01
MW-206	581888.48	1108613.37	29.11	10/5/2018	26.66	2.45
MW-300	579587.59	1106288.51	68.8	10/5/2018	57.21	11.59
MW-301	579282.59	1106601.15	80.51	10/5/2018	68.36	12.15
MW-302	579752.44	1107202.72	57.97	10/5/2018	46.70	11.27
MW-303	580183.01	1107460.45	44.97	10/5/2018	35.18	9.79
MW-304	580661.43	1106931.50	41.82	10/5/2018	33.80	8.02
MW-305	580179.89	1106680.03	58.57	10/5/2018	48.83	9.74
MW-306	578417.11	1106200.44	70.56	10/5/2018	56.27	14.29
MW-307	578209.77	1106865.99	104.18	10/5/2018	91.18	13.00
MW-308	580349.51	1107304.17	42.65	10/5/2018	33.20	9.45

Notes:

1. Northing and easting are in feet relative to the State Plane Florida North Datum of 1983.
2. Elevations are in feet relative to the North American Vertical Datum of 1988.
3. Depth to water measurements are in feet.

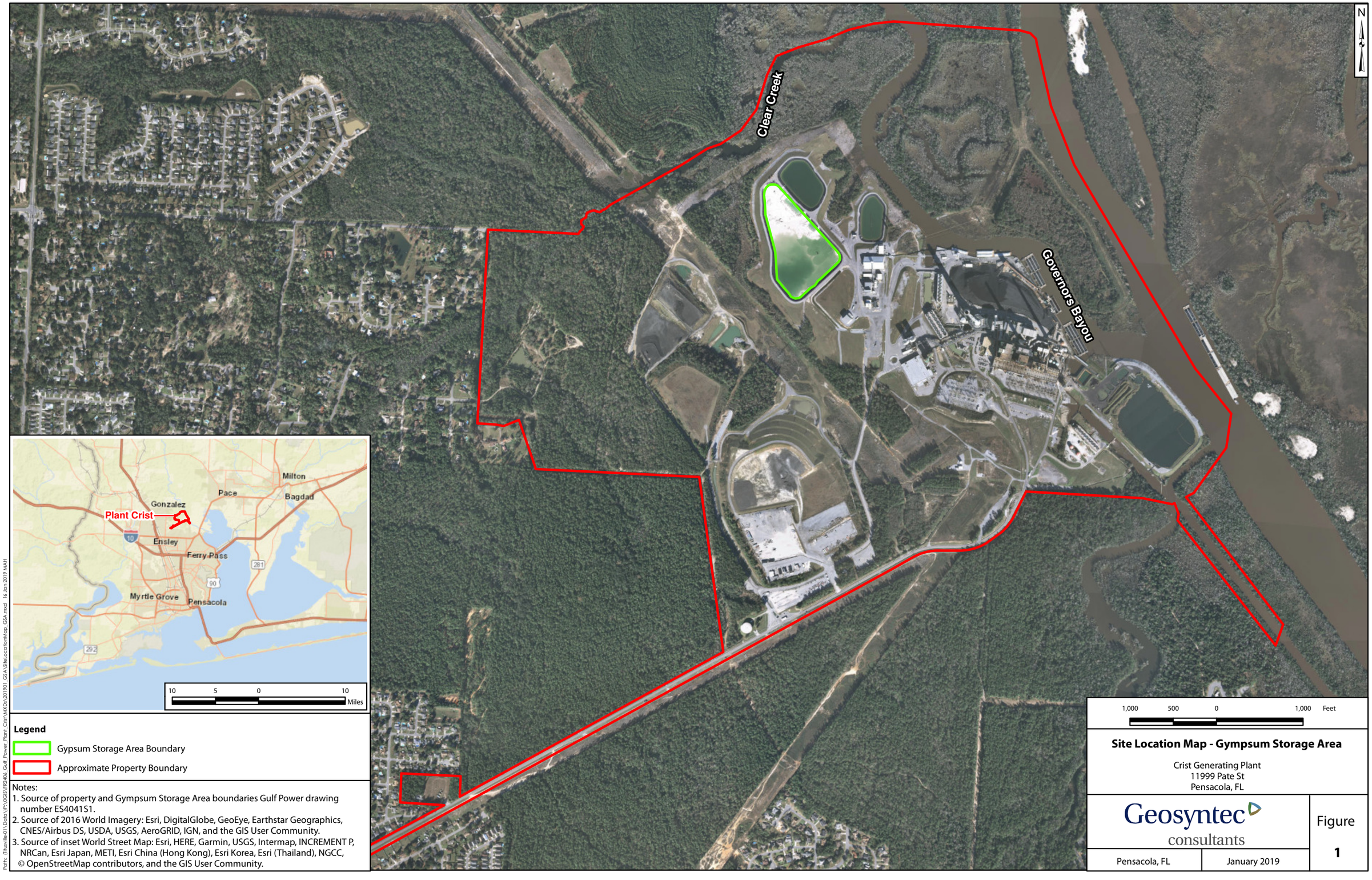
TABLE 5: SUMMARY OF BACKGROUND LIMITS AND GROUNDWATER PROTECTION STANDARDS
Plant Crist - GSA, Gulf Power Company, Pensacola, Florida

Analyte	Units[1]	USEPA MCL or RSL[2]	Statistically Derived Upper Tolerance Limit (UTL)	Groundwater Protection Standard (GWPS)[4]
Antimony	mg/L	0.006	0.003	0.006
Arsenic	mg/L	0.01	0.001	0.010
Barium	mg/L	2	0.019	2.000
Beryllium	mg/L	0.004	0.003	0.004
Cadmium	mg/L	0.005	0.003	0.005
Chromium	mg/L	0.1	0.017	0.100
Cobalt[3]	mg/L	0.006	0.003	0.006
Fluoride	mg/L	4	0.120	4
Lead[3]	mg/L	0.015	0.001	0.015
Lithium[3]	mg/L	0.04	0.005	0.040
Mercury	mg/L	0.002	0.0002	0.002
Molybdenum[3]	mg/L	0.1	0.015	0.100
Selenium	mg/L	0.05	0.003	0.050
Thallium	mg/L	0.002	0.001	0.002
Combined Radium-226/228	pCi/L	5	2.507	5

Notes:

1. mg/L indicates milligrams per liter; pCi/L indicates picocuries per liter.
2. MCL: Maximum Contaminant Level; RSL : Regional Screening Levels.
3. Numerical limit established in CCR Rule Ammendment dated July 30, 2018.
4. GWPS selected as the higher of EPA MCL or RSL and Statistically Derived Upper Tolerance Limit.

FIGURES



Legend

Gypsum Storage Area Boundary

Approximate Property Boundary

Notes:
1. Source of property and Gympsum Storage Area boundaries Gulf Power drawing number ES4041S1.
2. Source of 2016 World Imagery: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.
3. Source of inset World Street Map: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community.

Site Location Map - Gympsum Storage Area

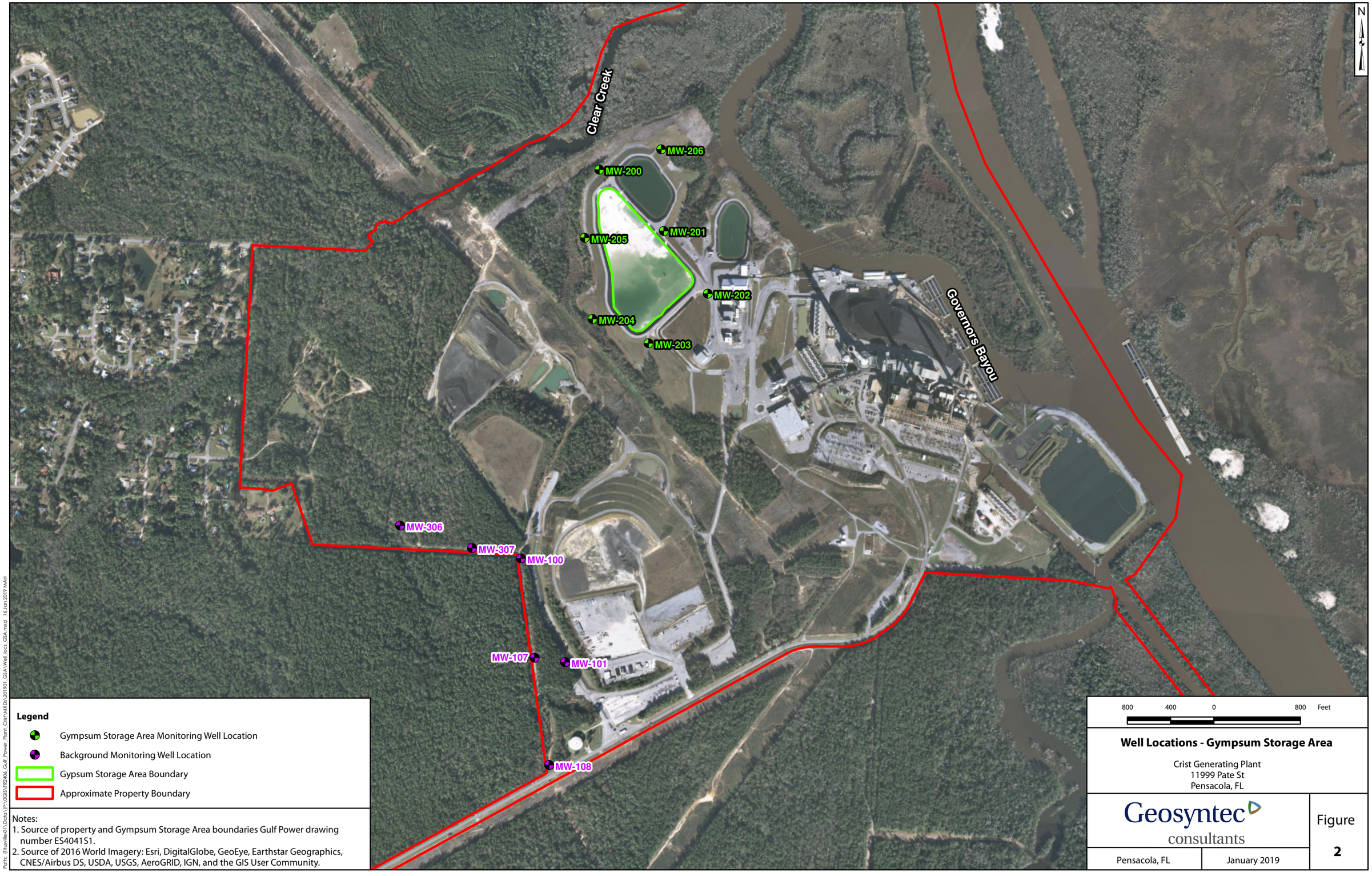
Crist Generating Plant
11999 Pate St
Pensacola, FL

Geosyntec consultants

Figure 1

Pensacola, FL | January 2019

Path: (Titusville-01\Data\JP\0GIS\FR2406_Gulf_Power_Plant_Crist\MXDs\201901_GSA\SiteLocationMap_GSA.mxd 16 Jan 2019 MAH



Legend

- Gympsum Storage Area Monitoring Well Location
- Background Monitoring Well Location
- Gypsum Storage Area Boundary
- Approximate Property Boundary

Notes:
1. Source of property and Gympsum Storage Area boundaries Gulf Power drawing number ES4041S1.
2. Source of 2016 World Imagery: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.

Well Locations - Gympsum Storage Area

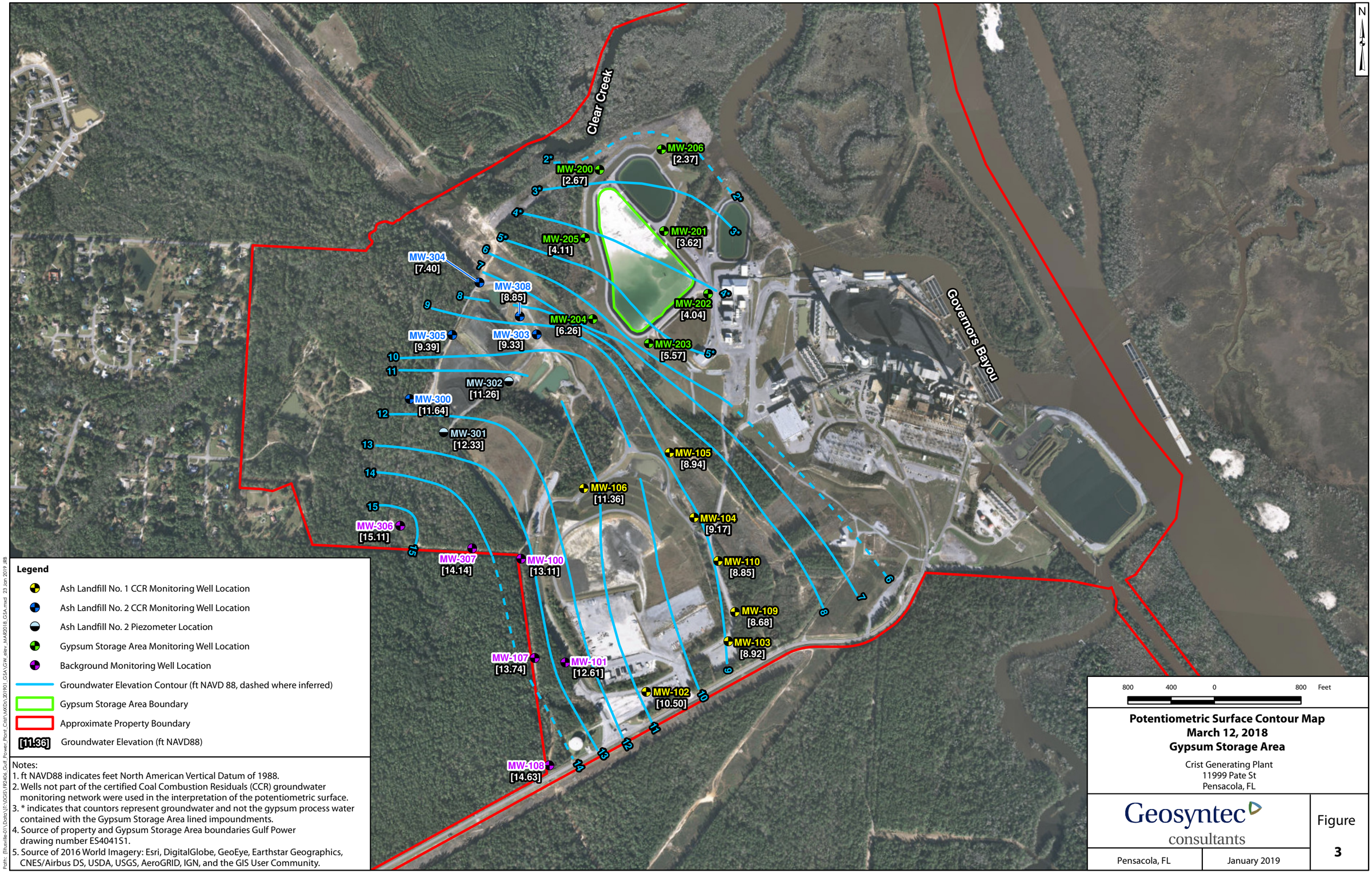
Crist Generating Plant
11999 Pate St
Pensacola, FL

Geosyntec consultants

Pensacola, FL | January 2019

Figure 2

Path: (Titusville-01\Data\JP\0GIS\FR2406_Gulf_Power_Plant_Crist\MXDs\201901_GSA\Well_locs_GSA.mxd 16 Jan 2019 MAH



Legend

- Ash Landfill No. 1 CCR Monitoring Well Location
- Ash Landfill No. 2 CCR Monitoring Well Location
- Ash Landfill No. 2 Piezometer Location
- Gypsum Storage Area Monitoring Well Location
- Background Monitoring Well Location
- Groundwater Elevation Contour (ft NAVD 88, dashed where inferred)
- Gypsum Storage Area Boundary
- Approximate Property Boundary
- [11.36] Groundwater Elevation (ft NAVD88)

Notes:
1. ft NAVD88 indicates feet North American Vertical Datum of 1988.
2. Wells not part of the certified Coal Combustion Residuals (CCR) groundwater monitoring network were used in the interpretation of the potentiometric surface.
3. * indicates that countors represent groundwater and not the gypsum process water contained with the Gypsum Storage Area lined impoundments.
4. Source of property and Gypsum Storage Area boundaries Gulf Power drawing number ES4041S1.
5. Source of 2016 World Imagery: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.

800 400 0 800 Feet

Potentiometric Surface Contour Map
March 12, 2018
Gypsum Storage Area

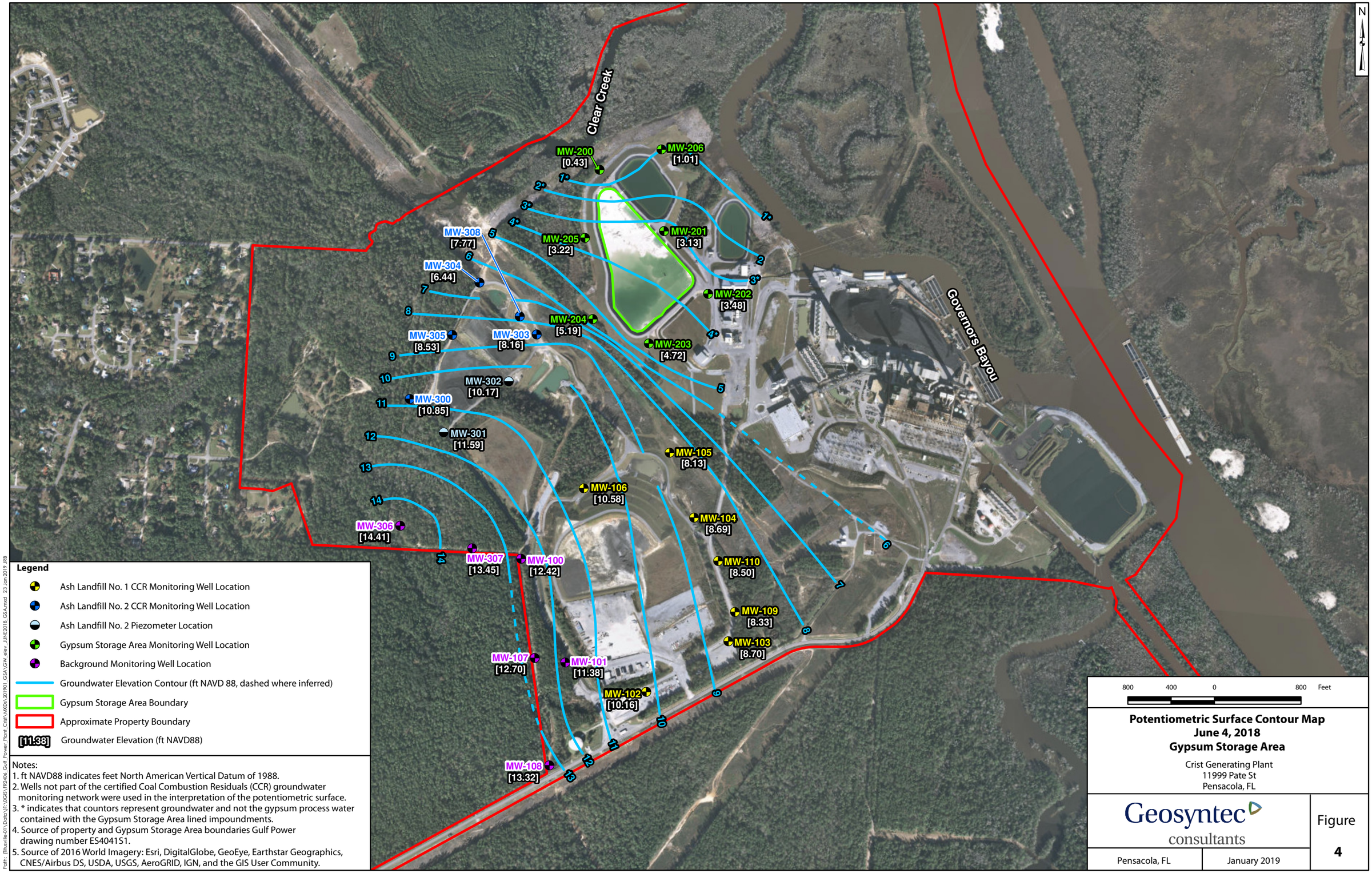
Crist Generating Plant
11999 Pate St
Pensacola, FL

Geosyntec consultants

Pensacola, FL | January 2019

Figure **3**

Path: \\Tallnvlfile01\Data\1\TAGIS\192464.Gulf_Power_Plant_Crist\MXDs\2019\01_GSA\GW_elev_MAR2018_GSA.mxd 23 Jan 2019 JRB



Legend

- Ash Landfill No. 1 CCR Monitoring Well Location
- Ash Landfill No. 2 CCR Monitoring Well Location
- Ash Landfill No. 2 Piezometer Location
- Gypsum Storage Area Monitoring Well Location
- Background Monitoring Well Location
- Groundwater Elevation Contour (ft NAVD 88, dashed where inferred)
- Gypsum Storage Area Boundary
- Approximate Property Boundary
- [11.38] Groundwater Elevation (ft NAVD88)

Notes:
1. ft NAVD88 indicates feet North American Vertical Datum of 1988.
2. Wells not part of the certified Coal Combustion Residuals (CCR) groundwater monitoring network were used in the interpretation of the potentiometric surface.
3. * indicates that countors represent groundwater and not the gypsum process water contained with the Gypsum Storage Area lined impoundments.
4. Source of property and Gypsum Storage Area boundaries Gulf Power drawing number ES4041S1.
5. Source of 2016 World Imagery: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.

Potentiometric Surface Contour Map
June 4, 2018
Gypsum Storage Area

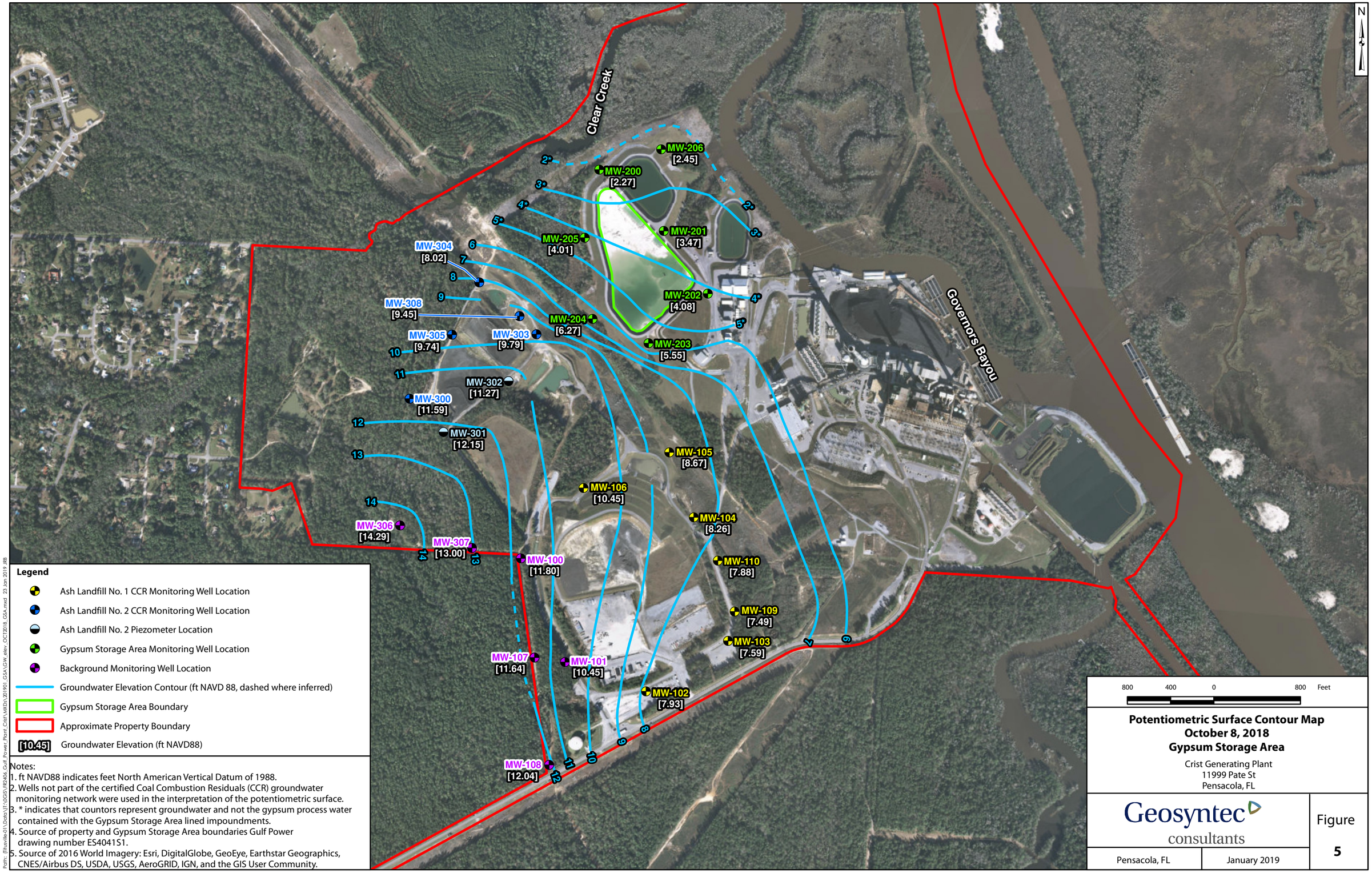
Crist Generating Plant
11999 Pate St
Pensacola, FL

Geosyntec consultants

Pensacola, FL | January 2019

Figure 4

Path: (Titusville-01\Data\)T:\0GIS\FR2406_Gulf_Power_Plant_Crist\MXDs\201901_GSA\GW_elev_JUNE2018_GSA.mxd 23 Jan 2019 JRB



Legend

- Ash Landfill No. 1 CCR Monitoring Well Location
- Ash Landfill No. 2 CCR Monitoring Well Location
- Ash Landfill No. 2 Piezometer Location
- Gypsum Storage Area Monitoring Well Location
- Background Monitoring Well Location
- Groundwater Elevation Contour (ft NAVD 88, dashed where inferred)
- Gypsum Storage Area Boundary
- Approximate Property Boundary
- [10.45] Groundwater Elevation (ft NAVD88)

Notes:
1. ft NAVD88 indicates feet North American Vertical Datum of 1988.
2. Wells not part of the certified Coal Combustion Residuals (CCR) groundwater monitoring network were used in the interpretation of the potentiometric surface.
3. * indicates that countors represent groundwater and not the gypsum process water contained with the Gypsum Storage Area lined impoundments.
4. Source of property and Gypsum Storage Area boundaries Gulf Power drawing number ES4041S1.
5. Source of 2016 World Imagery: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.

Potentiometric Surface Contour Map
October 8, 2018
Gypsum Storage Area

Crist Generating Plant
11999 Pate St
Pensacola, FL

Geosyntec consultants

Pensacola, FL | January 2019

Figure **5**

Path: I:\tallofile01\Data\J\GGIS\P2406.Gulf Power.Plant Crist\MXD\c201901_GSA\GW elev_OCT2018_GSA.mxd 23 Jan 2019 JRB

APPENDIX A

Laboratory Analytical and Field Sampling Reports

Product Name: Low-Flow System

Date: 2018-03-13 18:25:34

Project Information:		Pump Information:	
Operator Name	Rick Hagendorfer	Pump Model/Type	PP
Company Name	RDH Env	Tubing Type	PE
Project Name	Crist Gypsum CCR	Tubing Diameter	.17 in
Site Name	Crist plant	Tubing Length	34 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	29 ft

Well Information:		Pumping Information:	
Well ID	MW-200	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.2417564 L
Well Total Depth	34 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.02 in
Depth to Water	17.50 ft	Total Volume Pumped	12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	18:00:20	600.02	22.00	5.22	1843.28	2.04	17.52	1.78	125.17
Last 5	18:05:20	900.02	22.02	5.21	1895.83	2.30	17.52	1.55	126.40
Last 5	18:10:20	1200.02	22.10	5.21	1925.47	1.29	17.52	1.39	127.10
Last 5	18:15:20	1500.02	22.10	5.20	1948.17	1.05	17.52	1.29	127.63
Last 5	18:20:20	1800.02	21.95	5.19	1961.35	1.18	17.52	1.22	127.51
Variance 0			0.08	-0.01	29.64			-0.16	0.69
Variance 1			0.00	-0.01	22.70			-0.11	0.53
Variance 2			-0.15	-0.01	13.18			-0.07	-0.11

Notes

Sample time 1823. EB-02 sample time 1731. FB-02 sample time 1726. Dup-02 fake time 1723. Sunny 59.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-14 11:51:50

Project Information:		Pump Information:	
Operator Name	Rick Hagendorfer	Pump Model/Type	QED
Company Name	RDH Env	Tubing Type	PE
Project Name	Crist Gypsum CCR	Tubing Diameter	.17 in
Site Name	Crist plant	Tubing Length	62 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	55.0 ft

Well Information:		Pumping Information:	
Well ID	MW-201	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.4967322 L
Well Total Depth	60 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.02 in
Depth to Water	48.56 ft	Total Volume Pumped	14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	11:29:43	900.02	24.29	4.83	784.90	3.74	48.58	0.68	135.07
Last 5	11:34:43	1200.02	24.18	4.83	779.88	2.26	48.58	0.67	135.07
Last 5	11:39:43	1500.02	24.45	4.85	778.95	1.31	48.58	0.64	134.23
Last 5	11:44:43	1800.02	24.42	4.84	778.60	0.88	48.58	0.60	134.03
Last 5	11:49:43	2100.02	24.32	4.82	781.12	0.83	48.58	0.57	134.18
Variance 0			0.27	0.01	-0.93			-0.03	-0.83
Variance 1			-0.03	-0.01	-0.35			-0.04	-0.20
Variance 2			-0.10	-0.02	2.52			-0.03	0.15

Notes

Sample time 1152. Sunny 55.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-13 11:35:24

Project Information:		Pump Information:	
Operator Name	Rick Hagendorfer	Pump Model/Type	QED
Company Name	RDH Env	Tubing Type	PE
Project Name	Crist Gypsum CCR	Tubing Diameter	.17 in
Site Name	Crist plant	Tubing Length	62 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	55.0 ft

Well Information:		Pumping Information:	
Well ID	MW-202	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.4967322 L
Well Total Depth	60.0 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.09 in
Depth to Water	51.49 ft	Total Volume Pumped	18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	11:11:24	1500.02	22.80	4.64	85.60	1.55	51.58	2.05	106.72
Last 5	11:16:24	1800.02	22.75	4.65	86.37	1.32	51.58	2.18	108.76
Last 5	11:21:24	2100.02	22.63	4.66	85.17	1.38	51.58	2.29	110.44
Last 5	11:26:24	2400.02	22.54	4.66	85.50	1.43	51.58	2.34	112.45
Last 5	11:31:24	2700.00	22.64	4.67	84.49	1.69	51.58	2.41	113.96
Variance 0			-0.12	0.01	-1.20			0.11	1.68
Variance 1			-0.10	0.00	0.33			0.05	2.01
Variance 2			0.10	0.01	-1.01			0.07	1.51

Notes

Sample time 1135. Sunny 51.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-13 13:31:05

Project Information:		Pump Information:	
Operator Name	Rick Hagendorfer	Pump Model/Type	QED
Company Name	RDH Env	Tubing Type	PE
Project Name	Crist Gypsum CCR	Tubing Diameter	.17 in
Site Name	Crist plant	Tubing Length	64 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	58.0 ft

Well Information:		Pumping Information:	
Well ID	MW-203	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.5056591 L
Well Total Depth	63.0 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.11 in
Depth to Water	45.02 ft	Total Volume Pumped	22 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:08:21	2100.02	22.26	4.64	292.09	6.47	45.13	0.40	111.10
Last 5	13:13:21	2400.02	22.19	4.64	294.20	5.24	45.13	0.41	111.74
Last 5	13:18:21	2700.02	22.34	4.64	294.91	4.69	45.13	0.42	111.93
Last 5	13:23:21	2999.95	22.26	4.64	296.05	4.36	45.13	0.43	112.36
Last 5	13:28:21	3299.95	22.30	4.64	298.01	3.55	45.13	0.45	112.86
Variance 0			0.15	0.00	0.71			0.01	0.19
Variance 1			-0.08	0.01	1.14			0.00	0.42
Variance 2			0.04	-0.00	1.96			0.02	0.51

Notes

Sample time 1331. Sunny 59.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-13 15:25:18

Project Information:		Pump Information:	
Operator Name	Rick Hagendorfer	Pump Model/Type	QED
Company Name	RDH Env	Tubing Type	PE
Project Name	Crist Gypsum CCR	Tubing Diameter	.17 in
Site Name	Crist plant	Tubing Length	33 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	28.0 ft

Well Information:		Pumping Information:	
Well ID	MW-204	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.367293 L
Well Total Depth	33.0 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	19 in
Depth to Water	13.18 ft	Total Volume Pumped	18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	15:03:18	1499.95	21.37	4.34	1125.50	0.70	14.88	0.17	187.30
Last 5	15:08:18	1799.95	21.46	4.34	1121.92	0.46	14.88	0.15	187.43
Last 5	15:13:18	2099.95	21.17	4.34	1121.99	0.44	14.88	0.14	185.32
Last 5	15:18:18	2400.01	21.15	4.34	1117.90	0.26	14.88	0.14	182.63
Last 5	15:23:18	2699.97	21.16	4.34	1097.85	0.37	14.88	0.16	180.99
Variance 0			-0.29	0.00	0.06			-0.01	-2.11
Variance 1			-0.03	0.00	-4.09			-0.00	-2.69
Variance 2			0.01	0.00	-20.05			0.01	-1.64

Notes

Sample time 1525. Sunny 61.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-13 16:46:28

Project Information:		Pump Information:	
Operator Name	Rick Hagendorfer	Pump Model/Type	PP
Company Name	RDH Env	Tubing Type	PE
Project Name	Crist Gypsum CCR	Tubing Diameter	.17 in
Site Name	Crist plant	Tubing Length	37 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	MW-205	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.2551467 L
Well Total Depth	33 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.01 in
Depth to Water	16.18 ft	Total Volume Pumped	14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	16:23:11	900.02	21.46	5.47	85.71	0.45	16.19	2.34	82.58
Last 5	16:28:11	1200.02	21.45	5.46	88.48	0.39	16.19	2.33	86.36
Last 5	16:33:11	1499.94	21.46	5.46	83.96	0.25	16.19	2.29	84.74
Last 5	16:38:11	1799.95	21.46	5.47	87.25	0.30	16.19	2.31	87.51
Last 5	16:43:11	2099.94	21.50	5.48	86.21	0.26	16.19	2.29	87.96
Variance 0			0.01	-0.01	-4.52			-0.03	-1.62
Variance 1			0.00	0.01	3.29			0.02	2.78
Variance 2			0.04	0.01	-1.03			-0.03	0.45

Notes

Sample time 1645. Sunny 61.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-14 10:31:04

Project Information:		Pump Information:	
Operator Name	Rick Hagendorfer	Pump Model/Type	QED
Company Name	RDH Env	Tubing Type	PE
Project Name	Crist Gypsum CCR	Tubing Diameter	.17 in
Site Name	Crist plant	Tubing Length	36 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	33.0 ft

Well Information:		Pumping Information:	
Well ID	MW-206	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.3806832 L
Well Total Depth	38 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.12 in
Depth to Water	26.80 ft	Total Volume Pumped	10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	10:08:09	300.07	22.02	4.40	6276.68	4.14	26.92	0.20	158.61
Last 5	10:13:09	600.02	22.89	4.35	6439.62	2.44	26.92	0.13	161.11
Last 5	10:18:09	900.02	23.21	4.35	6503.77	1.65	26.92	0.11	160.97
Last 5	10:23:09	1200.02	23.21	4.36	6509.87	1.28	26.92	0.10	160.20
Last 5	10:28:09	1500.02	23.34	4.35	6607.20	0.92	26.92	0.08	159.47
Variance 0			0.32	0.01	64.16			-0.03	-0.15
Variance 1			-0.00	0.00	6.09			-0.01	-0.76
Variance 2			0.13	-0.00	97.34			-0.01	-0.74

Notes

Sample time 1031. Sunny 53.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-12 11:27:27

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	QED
Company Name	RDH	Tubing Type	PE
Project Name	CCR Background	Tubing Diameter	.17 in
Site Name	Crist plant CCR	Tubing Length	121 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	383005		
Turbidity Make/Model	HACH	Pump placement from TOC	114 ft

Well Information:		Pumping Information:	
Well ID	MW-100	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.7600741 L
Well Total Depth	119 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	89.92 ft	Total Volume Pumped	12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:06:08	600.03	19.45	4.83	38.52	3.25	89.92	8.35	146.44
Last 5	11:11:08	900.02	19.63	4.84	38.61	0.98	89.92	8.37	144.13
Last 5	11:16:08	1200.02	19.94	4.84	38.44	1.02	89.92	8.34	143.51
Last 5	11:21:08	1500.02	19.97	4.84	38.36	0.93	89.92	8.29	142.46
Last 5	11:26:08	1800.02	19.99	4.85	38.52	0.90	89.92	8.26	141.13
Variance 0			0.31	0.00	-0.17			-0.03	-0.62
Variance 1			0.03	0.00	-0.09			-0.05	-1.05
Variance 2			0.02	0.01	0.17			-0.03	-1.33

Notes

Sample@1126, Sunny 50

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-14 08:47:30

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	QED
Company Name	RDH	Tubing Type	PE
Project Name	LF-1	Tubing Diameter	.17 in
Site Name	Crist LF1	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	383005		
Turbidity Make/Model	HACH	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID		Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.22 L
Well Total Depth	ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.03 in
Depth to Water	ft	Total Volume Pumped	16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	08:26:02	1200.02	17.80	5.47	27.78	1.51	95.63	8.94	120.33
Last 5	08:31:02	1500.03	18.11	5.36	27.72	0.97	95.63	8.90	119.23
Last 5	08:36:02	1800.02	18.27	5.26	27.75	0.83	95.63	8.87	117.94
Last 5	08:41:02	2100.02	18.34	5.19	27.68	0.79	95.63	8.81	118.09
Last 5	08:46:02	2400.03	18.37	5.14	27.67	0.51	95.63	8.80	117.88
Variance 0			0.16	-0.10	0.03			-0.03	-1.30
Variance 1			0.06	-0.08	-0.07			-0.06	0.15
Variance 2			0.04	-0.05	-0.01			-0.01	-0.21

Notes

Sample@0846, Sunny 45

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-12 09:41:20

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	QED
Company Name	RDH	Tubing Type	PE
Project Name	CCR Background	Tubing Diameter	.17 in
Site Name	Crist plant CCR	Tubing Length	126 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	383005		
Turbidity Make/Model	HACH	Pump placement from TOC	119 ft

Well Information:		Pumping Information:	
Well ID	MW-107	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.7823914 L
Well Total Depth	124 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.05 in
Depth to Water	100.97 ft	Total Volume Pumped	8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:24:46	300.02	17.97	4.84	30.21	6.51	101.02	9.44	164.00
Last 5	09:29:46	600.02	18.02	4.82	30.47	3.26	101.02	9.30	160.24
Last 5	09:34:46	900.02	18.16	4.81	30.67	1.66	101.02	9.36	157.88
Last 5	09:39:46	1200.02	18.02	4.81	30.80	0.92	101.02	9.37	156.41
Last 5									
Variance 0			0.05	-0.02	0.26			-0.14	-3.77
Variance 1			0.14	-0.00	0.19			0.06	-2.36
Variance 2			-0.14	-0.01	0.13			0.01	-1.47

Notes

Sample@0940, partly cloudy 48

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-12 08:00:23

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	QED
Company Name	RDH	Tubing Type	PE
Project Name	CCR Background	Tubing Diameter	.17 in
Site Name	Crist plant CCR	Tubing Length	100 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	383005		
Turbidity Make/Model	HACH	Pump placement from TOC	93 ft

Well Information:		Pumping Information:	
Well ID	MW-108	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.6663423 L
Well Total Depth	98 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.07 in
Depth to Water	68.91 ft	Total Volume Pumped	12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	07:34:46	600.02	19.19	5.12	38.77	6.33	68.99	8.83	182.82
Last 5	07:39:46	900.02	19.23	4.98	38.16	3.89	68.99	8.83	180.65
Last 5	07:44:46	1200.02	19.32	4.89	37.99	22.90	68.98	8.86	178.64
Last 5	07:49:46	1500.02	19.43	4.84	37.60	0.85	68.98	8.86	175.91
Last 5	07:54:46	1800.02	19.31	4.81	37.35	0.54	68.98	8.85	173.05
Variance 0			0.09	-0.09	-0.17			0.03	-2.02
Variance 1			0.11	-0.05	-0.38			-0.00	-2.72
Variance 2			-0.11	-0.03	-0.26			-0.01	-2.86

Notes

Sample@0756,Cloudy 46,

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-12 12:54:12

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	QED
Company Name	RDH	Tubing Type	PE
Project Name	CCR Background	Tubing Diameter	.17 in
Site Name	Crist plant CCR	Tubing Length	95 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	383005		
Turbidity Make/Model	HACH	Pump placement from TOC	88 ft

Well Information:		Pumping Information:	
Well ID	MW-306	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.6440251 L
Well Total Depth	93 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.07 in
Depth to Water	55.45 ft	Total Volume Pumped	12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:32:21	600.02	19.71	5.08	32.39	5.76	55.52	8.60	120.92
Last 5	12:37:21	900.02	19.77	5.07	32.40	4.94	55.52	8.61	121.63
Last 5	12:42:21	1200.02	19.67	5.07	32.44	4.64	55.52	8.65	122.06
Last 5	12:47:21	1500.02	19.72	5.07	32.31	2.87	55.52	8.62	122.89
Last 5	12:52:21	1800.03	19.67	5.07	32.27	2.45	55.52	8.62	123.63
Variance 0			-0.09	-0.00	0.04			0.04	0.43
Variance 1			0.04	-0.00	-0.13			-0.03	0.83
Variance 2			-0.05	0.00	-0.05			0.01	0.74

Notes

Sample@1253, Sunny 55

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-12 15:22:26

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	QED
Company Name	RDH	Tubing Type	PE
Project Name	CCR Background	Tubing Diameter	.17 in
Site Name	Crist plant CCR	Tubing Length	125 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	383005		
Turbidity Make/Model	HACH	Pump placement from TOC	118 ft

Well Information:		Pumping Information:	
Well ID	MW-307	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.7779279 L
Well Total Depth	123 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.86 in
Depth to Water	90.04 ft	Total Volume Pumped	24 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	14:59:49	2400.02	20.84	5.53	28.71	0.76	90.90	4.86	61.14
Last 5	15:04:49	2700.02	20.87	5.55	29.33	0.70	90.90	4.76	57.42
Last 5	15:09:49	3000.02	20.95	5.56	29.36	0.47	90.90	5.00	57.93
Last 5	15:14:49	3300.03	21.14	5.58	30.32	0.57	90.90	4.83	53.78
Last 5	15:19:49	3600.03	21.10	5.60	30.54	0.66	90.90	4.85	52.39
Variance 0			0.07	0.01	0.03			0.24	0.52
Variance 1			0.20	0.02	0.97			-0.17	-4.15
Variance 2			-0.05	0.02	0.22			0.03	-1.39

Notes

Sample@1521, DUP-01@1421, Sunny 59

Grab Samples

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

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

TestAmerica Job ID: 400-150790-1
TestAmerica Sample Delivery Group: Background
Client Project/Site: CCR Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Cheyenne Whitmire

Authorized for release by:
4/12/2018 10:58:36 AM

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

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-150790-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-150790-1

Metals
Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 390576 and analytical batch 390726 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.

General Chemistry
Method(s) SM 4500 F C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 391117 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.

Detection Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150790-1
SDG: Background

Client Sample ID: MW-100 — Lab Sample ID: 400-150790-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.017		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.88		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00055	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0011	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00046	I	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	18		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.3		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.85				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-107 — Lab Sample ID: 400-150790-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.013		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.49		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00055	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0014	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00064	I	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	14		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	6.1		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.81				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-108 — Lab Sample ID: 400-150790-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.010		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Selenium	0.00047	I	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Chloride	5.9		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	2.6	I	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	4.81				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-306 — Lab Sample ID: 400-150790-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.013		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.59		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00044	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Selenium	0.00026	I	0.0013	0.00024	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-306 (Continued) — Lab Sample ID: 400-150790-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.6		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	5.07				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-307 — Lab Sample ID: 400-150790-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.015		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.71		0.25	0.13	mg/L	5		6020	Total Recoverable
Chloride	4.0		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	5.6				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-01 — Lab Sample ID: 400-150790-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.015		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.70		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0014	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Chloride	3.9		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150790-1
SDG: Background

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

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

Sample Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150790-1
SDG: Background

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-150790-1	MW-100	Water	03/12/18 11:26	03/13/18 14:40
400-150790-2	MW-107	Water	03/12/18 09:40	03/13/18 14:40
400-150790-3	MW-108	Water	03/12/18 07:56	03/13/18 14:40
400-150790-4	MW-306	Water	03/12/18 12:53	03/13/18 14:40
400-150790-5	MW-307	Water	03/12/18 15:21	03/13/18 14:40
400-150790-6	DUP-01	Water	03/12/18 14:21	03/13/18 14:40

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150790-1
SDG: Background

Client Sample ID: MW-100
Date Collected: 03/12/18 11:26
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-1
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/19/18 10:18	03/19/18 18:28	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/19/18 10:18	03/19/18 18:28	5
Barium	**0.017**		0.0025	0.00049	mg/L		03/19/18 10:18	03/19/18 18:28	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:18	03/19/18 18:28	5
Boron	0.021	U	0.050	0.021	mg/L		03/19/18 10:18	03/19/18 18:28	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:18	03/19/18 18:28	5
Calcium	**0.88**		0.25	0.13	mg/L		03/19/18 10:18	03/19/18 18:28	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/19/18 10:18	03/19/18 18:28	5
Cobalt	**0.00055**	**I**	0.0025	0.00040	mg/L		03/19/18 10:18	03/19/18 18:28	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/19/18 10:18	03/19/18 18:28	5
Lithium	**0.0011**	**I**	0.0050	0.0011	mg/L		03/19/18 10:18	03/19/18 18:28	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/19/18 10:18	03/19/18 18:28	5
Selenium	**0.00046**	**I**	0.0013	0.00024	mg/L		03/19/18 10:18	03/19/18 18:28	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/19/18 10:18	03/19/18 18:28	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		03/15/18 09:20	03/19/18 10:12	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**18**		5.0	3.4	mg/L			03/17/18 15:53	1
Chloride	**5.3**		2.0	0.60	mg/L			03/20/18 09:49	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/22/18 12:16	1
Sulfate	1.4	U	5.0	1.4	mg/L			03/20/18 13:51	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.85**				SU			03/12/18 11:26	1

Client Sample ID: MW-107

Date Collected: 03/12/18 09:40
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-2

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/19/18 10:18	03/19/18 18:51	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/19/18 10:18	03/19/18 18:51	5
Barium	**0.013**		0.0025	0.00049	mg/L		03/19/18 10:18	03/19/18 18:51	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:18	03/19/18 18:51	5
Boron	0.021	U	0.050	0.021	mg/L		03/19/18 10:18	03/19/18 18:51	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:18	03/19/18 18:51	5
Calcium	**0.49**		0.25	0.13	mg/L		03/19/18 10:18	03/19/18 18:51	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/19/18 10:18	03/19/18 18:51	5
Cobalt	**0.00055**	**I**	0.0025	0.00040	mg/L		03/19/18 10:18	03/19/18 18:51	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/19/18 10:18	03/19/18 18:51	5
Lithium	**0.0014**	**I**	0.0050	0.0011	mg/L		03/19/18 10:18	03/19/18 18:51	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/19/18 10:18	03/19/18 18:51	5
Selenium	**0.00064**	**I**	0.0013	0.00024	mg/L		03/19/18 10:18	03/19/18 18:51	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/19/18 10:18	03/19/18 18:51	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		03/15/18 09:20	03/19/18 10:13	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**14**		5.0	3.4	mg/L			03/15/18 19:27	1
Chloride	**6.1**		2.0	0.60	mg/L			03/20/18 09:52	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/22/18 12:19	1
Sulfate	1.4	U	5.0	1.4	mg/L			03/20/18 13:58	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.81**				SU			03/12/18 09:40	1

Client Sample ID: MW-108

Date Collected: 03/12/18 07:56
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-3

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/19/18 10:18	03/19/18 18:55	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/19/18 10:18	03/19/18 18:55	5
Barium	**0.010**		0.0025	0.00049	mg/L		03/19/18 10:18	03/19/18 18:55	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:18	03/19/18 18:55	5
Boron	0.021	U	0.050	0.021	mg/L		03/19/18 10:18	03/19/18 18:55	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:18	03/19/18 18:55	5
Calcium	**1.4**		0.25	0.13	mg/L		03/19/18 10:18	03/19/18 18:55	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/19/18 10:18	03/19/18 18:55	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/19/18 10:18	03/19/18 18:55	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/19/18 10:18	03/19/18 18:55	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		03/19/18 10:18	03/19/18 18:55	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/19/18 10:18	03/19/18 18:55	5
Selenium	**0.00047**	**I**	0.0013	0.00024	mg/L		03/19/18 10:18	03/19/18 18:55	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/19/18 10:18	03/19/18 18:55	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		03/15/18 09:20	03/19/18 10:15	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			03/17/18 15:53	1
Chloride	**5.9**		2.0	0.60	mg/L			03/20/18 09:52	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/22/18 12:22	1
Sulfate	**2.6**	**I**	5.0	1.4	mg/L			03/20/18 13:58	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.81**				SU			03/12/18 07:56	1

Client Sample ID: MW-306

Date Collected: 03/12/18 12:53
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-4

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/19/18 10:18	03/19/18 19:22	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/19/18 10:18	03/19/18 19:22	5
Barium	**0.013**		0.0025	0.00049	mg/L		03/19/18 10:18	03/19/18 19:22	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:18	03/19/18 19:22	5
Boron	0.021	U	0.050	0.021	mg/L		03/19/18 10:18	03/19/18 19:22	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:18	03/19/18 19:22	5
Calcium	**0.59**		0.25	0.13	mg/L		03/19/18 10:18	03/19/18 19:22	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/19/18 10:18	03/19/18 19:22	5
Cobalt	**0.00044**	**I**	0.0025	0.00040	mg/L		03/19/18 10:18	03/19/18 19:22	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/19/18 10:18	03/19/18 19:22	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		03/19/18 10:18	03/19/18 19:22	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/19/18 10:18	03/19/18 19:22	5
Selenium	**0.00026**	**I**	0.0013	0.00024	mg/L		03/19/18 10:18	03/19/18 19:22	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/19/18 10:18	03/19/18 19:22	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		03/15/18 09:20	03/19/18 10:17	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			03/17/18 15:53	1
Chloride	**5.6**		2.0	0.60	mg/L			03/20/18 09:52	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/22/18 12:24	1
Sulfate	1.4	U	5.0	1.4	mg/L			03/20/18 13:58	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**5.07**				SU			03/12/18 12:53	1

Client Sample ID: MW-307

Date Collected: 03/12/18 15:21
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-5

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/19/18 10:18	03/19/18 19:27	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/19/18 10:18	03/19/18 19:27	5
Barium	**0.015**		0.0025	0.00049	mg/L		03/19/18 10:18	03/19/18 19:27	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:18	03/19/18 19:27	5
Boron	0.021	U	0.050	0.021	mg/L		03/19/18 10:18	03/19/18 19:27	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:18	03/19/18 19:27	5
Calcium	**0.71**		0.25	0.13	mg/L		03/19/18 10:18	03/19/18 19:27	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/19/18 10:18	03/19/18 19:27	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/19/18 10:18	03/19/18 19:27	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/19/18 10:18	03/19/18 19:27	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		03/19/18 10:18	03/19/18 19:27	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/19/18 10:18	03/19/18 19:27	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		03/19/18 10:18	03/19/18 19:27	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/19/18 10:18	03/19/18 19:27	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		03/15/18 09:20	03/19/18 10:35	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			03/17/18 15:53	1
Chloride	**4.0**		2.0	0.60	mg/L			03/20/18 09:52	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/22/18 11:50	1
Sulfate	1.4	U	5.0	1.4	mg/L			03/20/18 13:58	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**5.6**				SU			03/12/18 15:21	1

Client Sample ID: DUP-01

Date Collected: 03/12/18 14:21
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-6

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/19/18 10:18	03/19/18 19:31	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/19/18 10:18	03/19/18 19:31	5
Barium	**0.015**		0.0025	0.00049	mg/L		03/19/18 10:18	03/19/18 19:31	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:18	03/19/18 19:31	5
Boron	0.021	U	0.050	0.021	mg/L		03/19/18 10:18	03/19/18 19:31	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:18	03/19/18 19:31	5
Calcium	**0.70**		0.25	0.13	mg/L		03/19/18 10:18	03/19/18 19:31	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/19/18 10:18	03/19/18 19:31	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/19/18 10:18	03/19/18 19:31	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/19/18 10:18	03/19/18 19:31	5
Lithium	**0.0014**	**I**	0.0050	0.0011	mg/L		03/19/18 10:18	03/19/18 19:31	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/19/18 10:18	03/19/18 19:31	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		03/19/18 10:18	03/19/18 19:31	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/19/18 10:18	03/19/18 19:31	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		03/15/18 09:20	03/19/18 10:37	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			03/17/18 15:53	1
Chloride	**3.9**		2.0	0.60	mg/L			03/20/18 09:57	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/22/18 17:02	1
Sulfate	1.4	U	5.0	1.4	mg/L			03/20/18 13:58	1

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.

General Chemistry

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.

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)

Client Sample ID: MW-100
Date Collected: 03/12/18 11:26
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			390576	03/19/18 10:18	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	390726	03/19/18 18:28	DRE	TAL PEN
Total/NA	Prep	7470A			390174	03/15/18 09:20	JAP	TAL PEN
Total/NA	Analysis	7470A		1	390627	03/19/18 10:12	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390489	03/17/18 15:53	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	390740	03/20/18 09:49	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391059	03/22/18 12:16	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	390781	03/20/18 13:51	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/12/18 11:26	AW	TAL PEN

Client Sample ID: MW-107
Date Collected: 03/12/18 09:40
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			390576	03/19/18 10:18	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	390726	03/19/18 18:51	DRE	TAL PEN
Total/NA	Prep	7470A			390174	03/15/18 09:20	JAP	TAL PEN
Total/NA	Analysis	7470A		1	390627	03/19/18 10:13	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390294	03/15/18 19:27	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	390740	03/20/18 09:52	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391059	03/22/18 12:19	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	390781	03/20/18 13:58	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/12/18 09:40	AW	TAL PEN

Client Sample ID: MW-108
Date Collected: 03/12/18 07:56
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			390576	03/19/18 10:18	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	390726	03/19/18 18:55	DRE	TAL PEN
Total/NA	Prep	7470A			390174	03/15/18 09:20	JAP	TAL PEN
Total/NA	Analysis	7470A		1	390627	03/19/18 10:15	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390489	03/17/18 15:53	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	390740	03/20/18 09:52	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391059	03/22/18 12:22	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	390781	03/20/18 13:58	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/12/18 07:56	AW	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150790-1
SDG: Background

Client Sample ID: MW-306
Date Collected: 03/12/18 12:53
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			390576	03/19/18 10:18	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	390726	03/19/18 19:22	DRE	TAL PEN
Total/NA	Prep	7470A			390174	03/15/18 09:20	JAP	TAL PEN
Total/NA	Analysis	7470A		1	390627	03/19/18 10:17	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390489	03/17/18 15:53	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	390740	03/20/18 09:52	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391059	03/22/18 12:24	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	390781	03/20/18 13:58	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/12/18 12:53	AW	TAL PEN

Client Sample ID: MW-307
Date Collected: 03/12/18 15:21
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			390576	03/19/18 10:18	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	390726	03/19/18 19:27	DRE	TAL PEN
Total/NA	Prep	7470A			390174	03/15/18 09:20	JAP	TAL PEN
Total/NA	Analysis	7470A		1	390627	03/19/18 10:35	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390489	03/17/18 15:53	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	390740	03/20/18 09:52	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391059	03/22/18 11:50	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	390781	03/20/18 13:58	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/12/18 15:21	AW	TAL PEN

Client Sample ID: DUP-01
Date Collected: 03/12/18 14:21
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			390576	03/19/18 10:18	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	390726	03/19/18 19:31	DRE	TAL PEN
Total/NA	Prep	7470A			390174	03/15/18 09:20	JAP	TAL PEN
Total/NA	Analysis	7470A		1	390627	03/19/18 10:37	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390489	03/17/18 15:53	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	390740	03/20/18 09:57	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391117	03/22/18 17:02	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	390781	03/20/18 13:58	RRC	TAL PEN

Laboratory References:

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

Metals

Prep Batch: 390174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150790-1	MW-100	Total/NA	Water	7470A	
400-150790-2	MW-107	Total/NA	Water	7470A	
400-150790-3	MW-108	Total/NA	Water	7470A	
400-150790-4	MW-306	Total/NA	Water	7470A	
400-150790-5	MW-307	Total/NA	Water	7470A	
400-150790-6	DUP-01	Total/NA	Water	7470A	
MB 400-390174/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-390174/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-150834-A-3-B MS	Matrix Spike	Total/NA	Water	7470A	
400-150834-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 390576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150790-1	MW-100	Total Recoverable	Water	3005A	
400-150790-2	MW-107	Total Recoverable	Water	3005A	
400-150790-3	MW-108	Total Recoverable	Water	3005A	
400-150790-4	MW-306	Total Recoverable	Water	3005A	
400-150790-5	MW-307	Total Recoverable	Water	3005A	
400-150790-6	DUP-01	Total Recoverable	Water	3005A	
MB 400-390576/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-390576/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-150790-1 MS	MW-100	Total Recoverable	Water	3005A	
400-150790-1 MSD	MW-100	Total Recoverable	Water	3005A	

Analysis Batch: 390627

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150790-1	MW-100	Total/NA	Water	7470A	390174
400-150790-2	MW-107	Total/NA	Water	7470A	390174
400-150790-3	MW-108	Total/NA	Water	7470A	390174
400-150790-4	MW-306	Total/NA	Water	7470A	390174
400-150790-5	MW-307	Total/NA	Water	7470A	390174
400-150790-6	DUP-01	Total/NA	Water	7470A	390174
MB 400-390174/14-A	Method Blank	Total/NA	Water	7470A	390174
LCS 400-390174/15-A	Lab Control Sample	Total/NA	Water	7470A	390174
400-150834-A-3-B MS	Matrix Spike	Total/NA	Water	7470A	390174
400-150834-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	390174

Analysis Batch: 390726

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150790-1	MW-100	Total Recoverable	Water	6020	390576
400-150790-2	MW-107	Total Recoverable	Water	6020	390576
400-150790-3	MW-108	Total Recoverable	Water	6020	390576
400-150790-4	MW-306	Total Recoverable	Water	6020	390576
400-150790-5	MW-307	Total Recoverable	Water	6020	390576
400-150790-6	DUP-01	Total Recoverable	Water	6020	390576
MB 400-390576/1-A ^5	Method Blank	Total Recoverable	Water	6020	390576
LCS 400-390576/2-A	Lab Control Sample	Total Recoverable	Water	6020	390576
400-150790-1 MS	MW-100	Total Recoverable	Water	6020	390576
400-150790-1 MSD	MW-100	Total Recoverable	Water	6020	390576

General Chemistry

Analysis Batch: 390294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150790-2	MW-107	Total/NA	Water	SM 2540C	
MB 400-390294/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-390294/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-150734-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 390489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150790-1	MW-100	Total/NA	Water	SM 2540C	
400-150790-3	MW-108	Total/NA	Water	SM 2540C	
400-150790-4	MW-306	Total/NA	Water	SM 2540C	
400-150790-5	MW-307	Total/NA	Water	SM 2540C	
400-150790-6	DUP-01	Total/NA	Water	SM 2540C	
MB 400-390489/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-390489/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-150790-1 DU	MW-100	Total/NA	Water	SM 2540C	

Analysis Batch: 390740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150790-1	MW-100	Total/NA	Water	SM 4500 Cl- E	
400-150790-2	MW-107	Total/NA	Water	SM 4500 Cl- E	
400-150790-3	MW-108	Total/NA	Water	SM 4500 Cl- E	
400-150790-4	MW-306	Total/NA	Water	SM 4500 Cl- E	
400-150790-5	MW-307	Total/NA	Water	SM 4500 Cl- E	
400-150790-6	DUP-01	Total/NA	Water	SM 4500 Cl- E	
MB 400-390740/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-390740/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-390740/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-150790-1 MS	MW-100	Total/NA	Water	SM 4500 Cl- E	
400-150790-1 MSD	MW-100	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 390781

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150790-1	MW-100	Total/NA	Water	SM 4500 SO4 E	
400-150790-2	MW-107	Total/NA	Water	SM 4500 SO4 E	
400-150790-3	MW-108	Total/NA	Water	SM 4500 SO4 E	
400-150790-4	MW-306	Total/NA	Water	SM 4500 SO4 E	
400-150790-5	MW-307	Total/NA	Water	SM 4500 SO4 E	
400-150790-6	DUP-01	Total/NA	Water	SM 4500 SO4 E	
MB 400-390781/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-390781/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-390781/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-150790-1 MS	MW-100	Total/NA	Water	SM 4500 SO4 E	
400-150790-1 MSD	MW-100	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 391059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150790-1	MW-100	Total/NA	Water	SM 4500 F C	
400-150790-2	MW-107	Total/NA	Water	SM 4500 F C	
400-150790-3	MW-108	Total/NA	Water	SM 4500 F C	
400-150790-4	MW-306	Total/NA	Water	SM 4500 F C	
400-150790-5	MW-307	Total/NA	Water	SM 4500 F C	

General Chemistry (Continued)

Analysis Batch: 391059 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-391059/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-391059/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
660-86021-C-1 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
660-86021-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
660-86091-C-1 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 391117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150790-6	DUP-01	Total/NA	Water	SM 4500 F C	
MB 400-391117/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-391117/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
660-86135-C-6 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
660-86135-C-6 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
660-86135-C-1 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Field Service / Mobile Lab

Analysis Batch: 393575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150790-1	MW-100	Total/NA	Water	Field Sampling	
400-150790-2	MW-107	Total/NA	Water	Field Sampling	
400-150790-3	MW-108	Total/NA	Water	Field Sampling	
400-150790-4	MW-306	Total/NA	Water	Field Sampling	
400-150790-5	MW-307	Total/NA	Water	Field Sampling	

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-390576/1-A ^5
Matrix: Water
Analysis Batch: 390726

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 390576

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/19/18 10:18	03/19/18 18:15	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/19/18 10:18	03/19/18 18:15	5
Barium	0.00049	U	0.0025	0.00049	mg/L		03/19/18 10:18	03/19/18 18:15	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:18	03/19/18 18:15	5
Boron	0.021	U	0.050	0.021	mg/L		03/19/18 10:18	03/19/18 18:15	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:18	03/19/18 18:15	5
Calcium	0.13	U	0.25	0.13	mg/L		03/19/18 10:18	03/19/18 18:15	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/19/18 10:18	03/19/18 18:15	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/19/18 10:18	03/19/18 18:15	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/19/18 10:18	03/19/18 18:15	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		03/19/18 10:18	03/19/18 18:15	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/19/18 10:18	03/19/18 18:15	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		03/19/18 10:18	03/19/18 18:15	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/19/18 10:18	03/19/18 18:15	5

Lab Sample ID: LCS 400-390576/2-A
Matrix: Water
Analysis Batch: 390726

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 390576

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0541		mg/L		108	80 - 120
Arsenic	0.0500	0.0523		mg/L		105	80 - 120
Barium	0.0500	0.0511		mg/L		102	80 - 120
Beryllium	0.0500	0.0513		mg/L		103	80 - 120
Boron	0.100	0.109		mg/L		109	80 - 120
Cadmium	0.0500	0.0539		mg/L		108	80 - 120
Calcium	5.00	5.37		mg/L		107	80 - 120
Chromium	0.0500	0.0527		mg/L		105	80 - 120
Cobalt	0.0500	0.0523		mg/L		105	80 - 120
Lead	0.0500	0.0540		mg/L		108	80 - 120
Lithium	0.0500	0.0529		mg/L		106	80 - 120
Molybdenum	0.0500	0.0531		mg/L		106	80 - 120
Selenium	0.0500	0.0495		mg/L		99	80 - 120
Thallium	0.0100	0.0107		mg/L		107	80 - 120

Lab Sample ID: 400-150790-1 MS
Matrix: Water
Analysis Batch: 390726

Client Sample ID: MW-100
Prep Type: Total Recoverable
Prep Batch: 390576

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0010	U	0.0500	0.0561		mg/L		112	75 - 125
Arsenic	0.00046	U	0.0500	0.0535		mg/L		107	75 - 125
Barium	0.017		0.0500	0.0670		mg/L		101	75 - 125
Beryllium	0.00034	U	0.0500	0.0544		mg/L		109	75 - 125
Boron	0.021	U	0.100	0.126	J3	mg/L		126	75 - 125
Cadmium	0.00034	U	0.0500	0.0534		mg/L		107	75 - 125
Calcium	0.88		5.00	6.28		mg/L		108	75 - 125
Chromium	0.0011	U	0.0500	0.0537		mg/L		107	75 - 125

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

Lab Sample ID: 400-150790-1 MS
Matrix: Water
Analysis Batch: 390726

Client Sample ID: MW-100
Prep Type: Total Recoverable
Prep Batch: 390576

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.00055	I	0.0500	0.0530		mg/L		105	75 - 125
Lead	0.00035	U	0.0500	0.0500		mg/L		100	75 - 125
Lithium	0.0011	I	0.0500	0.0669	J3	mg/L		134	75 - 125
Molybdenum	0.00085	U	0.0500	0.0539		mg/L		108	75 - 125
Selenium	0.00046	I	0.0500	0.0524		mg/L		104	75 - 125
Thallium	0.000085	U	0.0100	0.0108		mg/L		108	75 - 125

Lab Sample ID: 400-150790-1 MSD
Matrix: Water
Analysis Batch: 390726

Client Sample ID: MW-100
Prep Type: Total Recoverable
Prep Batch: 390576

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.0010	U	0.0500	0.0541		mg/L		108	75 - 125	4	20
Arsenic	0.00046	U	0.0500	0.0522		mg/L		104	75 - 125	2	20
Barium	0.017		0.0500	0.0676		mg/L		102	75 - 125	1	20
Beryllium	0.00034	U	0.0500	0.0526		mg/L		105	75 - 125	3	20
Boron	0.021	U	0.100	0.120		mg/L		120	75 - 125	4	20
Cadmium	0.00034	U	0.0500	0.0521		mg/L		104	75 - 125	2	20
Calcium	0.88		5.00	6.21		mg/L		107	75 - 125	1	20
Chromium	0.0011	U	0.0500	0.0527		mg/L		105	75 - 125	2	20
Cobalt	0.00055	I	0.0500	0.0526		mg/L		104	75 - 125	1	20
Lead	0.00035	U	0.0500	0.0489		mg/L		98	75 - 125	2	20
Lithium	0.0011	I	0.0500	0.0657	J3	mg/L		131	75 - 125	2	20
Molybdenum	0.00085	U	0.0500	0.0534		mg/L		107	75 - 125	1	20
Selenium	0.00046	I	0.0500	0.0493		mg/L		98	75 - 125	6	20
Thallium	0.000085	U	0.0100	0.0106		mg/L		106	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-390174/14-A
Matrix: Water
Analysis Batch: 390627

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 390174

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		03/15/18 09:19	03/19/18 10:02	1

Lab Sample ID: LCS 400-390174/15-A
Matrix: Water
Analysis Batch: 390627

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 390174

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.000924		mg/L		92	80 - 120

Lab Sample ID: 400-150834-A-3-B MS
Matrix: Water
Analysis Batch: 390627

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 390174

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00027		0.00201	0.00201		mg/L		86	80 - 120

Lab Sample ID: 400-150834-A-3-C MSD
Matrix: Water
Analysis Batch: 390627

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 390174

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00027		0.00201	0.00197		mg/L		84	80 - 120	2	20

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

Lab Sample ID: MB 400-390294/1
Matrix: Water
Analysis Batch: 390294

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			03/15/18 19:27	1

Lab Sample ID: LCS 400-390294/2
Matrix: Water
Analysis Batch: 390294

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	264		mg/L		90	78 - 122

Lab Sample ID: 400-150734-A-1 DU
Matrix: Water
Analysis Batch: 390294

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	620		618		mg/L		0.3	5

Lab Sample ID: MB 400-390489/1
Matrix: Water
Analysis Batch: 390489

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			03/17/18 15:53	1

Lab Sample ID: LCS 400-390489/2
Matrix: Water
Analysis Batch: 390489

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	260		mg/L		89	78 - 122

Lab Sample ID: 400-150790-1 DU
Matrix: Water
Analysis Batch: 390489

Client Sample ID: MW-100
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	18		18.0		mg/L		0	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-390740/6
Matrix: Water
Analysis Batch: 390740

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.60	U	2.0	0.60	mg/L			03/20/18 09:48	1

Lab Sample ID: LCS 400-390740/7
Matrix: Water
Analysis Batch: 390740

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	31.1		mg/L		104	90 - 110

Lab Sample ID: MRL 400-390740/3
Matrix: Water
Analysis Batch: 390740

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	1.92	I	mg/L		96	50 - 150

Lab Sample ID: 400-150790-1 MS
Matrix: Water
Analysis Batch: 390740

Client Sample ID: MW-100
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.3		10.0	15.8		mg/L		105	73 - 120

Lab Sample ID: 400-150790-1 MSD
Matrix: Water
Analysis Batch: 390740

Client Sample ID: MW-100
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	5.3		10.0	16.0		mg/L		107	73 - 120	1	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-391059/3
Matrix: Water
Analysis Batch: 391059

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.032	U	0.10	0.032	mg/L			03/22/18 11:08	1

Lab Sample ID: LCS 400-391059/4
Matrix: Water
Analysis Batch: 391059

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	4.18		mg/L		105	90 - 110

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 660-86021-C-1 MS
Matrix: Water
Analysis Batch: 391059

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	0.032	U	1.00	1.12		mg/L		112	75 - 125

Lab Sample ID: 660-86021-C-1 MSD
Matrix: Water
Analysis Batch: 391059

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	0.032	U	1.00	1.12		mg/L		112	75 - 125	0	4

Lab Sample ID: 660-86091-C-1 DU
Matrix: Water
Analysis Batch: 391059

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.032	U	0.032	U	mg/L		NC	4

Lab Sample ID: MB 400-391117/3
Matrix: Water
Analysis Batch: 391117

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.032	U	0.10	0.032	mg/L			03/22/18 15:38	1

Lab Sample ID: LCS 400-391117/4
Matrix: Water
Analysis Batch: 391117

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	4.18		mg/L		105	90 - 110

Lab Sample ID: 660-86135-C-6 MS
Matrix: Water
Analysis Batch: 391117

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	0.29		1.00	0.910	J3	mg/L		62	75 - 125

Lab Sample ID: 660-86135-C-6 MSD
Matrix: Water
Analysis Batch: 391117

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	0.29		1.00	0.890	J3	mg/L		60	75 - 125	2	4

Lab Sample ID: 660-86135-C-1 DU
Matrix: Water
Analysis Batch: 391117

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.032	U	0.032	U	mg/L		NC	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-390781/6
Matrix: Water
Analysis Batch: 390781

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.4	U	5.0	1.4	mg/L			03/20/18 13:37	1

Lab Sample ID: LCS 400-390781/7
Matrix: Water
Analysis Batch: 390781

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	14.0		mg/L		93	90 - 110		

Lab Sample ID: MRL 400-390781/3
Matrix: Water
Analysis Batch: 390781

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	4.69	I	mg/L		94	50 - 150		

Lab Sample ID: 400-150790-1 MS
Matrix: Water
Analysis Batch: 390781

Client Sample ID: MW-100
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate	1.4	U	10.0	10.2		mg/L		102	77 - 128		

Lab Sample ID: 400-150790-1 MSD
Matrix: Water
Analysis Batch: 390781

Client Sample ID: MW-100
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	1.4	U	10.0	10.1		mg/L		101	77 - 128	1	5

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brett Swles	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No:
Client Contact: Kristi Mitchell	Phone: 850 380 345-8	E-Mail: cheyenne.whitmire@testamericainc.com		Page: 1-1
Company: Gulf Power Company				Job #:

Address: BIN 731 One Energy Place	Due Date Requested:	Analysis Requested	Preservation Codes:
City: Pensacola	TAT Requested (days):		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:
State, Zip: FL, 32520			
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required		
Email: krmitche@southernco.com	WO #:		
Project Name: CCR Plant Crist	Project #: 40005424		
Site: Background	SSOW#:		

400-150790 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)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	SM4500_Cl_E - Chloride, SM4500_SO4_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C - Fluoride	6020 - Sb,As,Ba,B,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, 7470A - Mercury	FieldSampling - Field Sampling Parameters	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
MW-100	3/12/18	1126	G	Water			X	X	X	X		
MW-107	3/12/18	0940	G	Water			X	X	X	X		
MW-108	3/12/18	0750	G	Water			X	X	X	X		
MW-306	3/12/18	1253	G	Water			X	X	X	X		
MW-307	3/12/18	1521	G	Water			X	X	X	X		
Dup-01	3/12/18	1421	G	W			X	X	X	X		

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		3/13/18 1440	RDH		3/13/17 1440	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.6 C

4/12/2018

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-150790-1
SDG Number: Background

Login Number: 150790
List Number: 1
Creator: Whitmire, Cheyenne R

List Source: 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	0.0°C 0.0°C IR7
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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150790-1
SDG: Background

Laboratory: 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	06-30-18
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	ELAP	9	2510	03-31-18 *
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-18
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-18
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-17-12	09-30-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

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

TestAmerica

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ANALYTICAL REPORT

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

TestAmerica Job ID: 400-150790-2
TestAmerica Sample Delivery Group: Background
Client Project/Site: CCR Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Cheyenne Whitmire

Authorized for release by:
4/12/2018 10:59:21 AM

Cheyenne Whitmire, Project Manager II
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LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-150790-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-150790-2

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-356132: Insufficient sample volume was available to perform a sample duplicate (DUP, MS, MSD) for the following samples: MW-100 (400-150790-1), MW-107 (400-150790-2), MW-108 (400-150790-3), MW-306 (400-150790-4), MW-307 (400-150790-5) and DUP-01 (400-150790-6). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-356125: Insufficient sample volume was available to perform a sample duplicate (DUP, MS, MSD) for the following samples: MW-100 (400-150790-1), MW-107 (400-150790-2), MW-108 (400-150790-3), MW-306 (400-150790-4), MW-307 (400-150790-5) and DUP-01 (400-150790-6). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150790-2
SDG: Background

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

Protocol References:

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

Sample Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150790-2
SDG: Background

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-150790-1	MW-100	Water	03/12/18 11:26	03/13/18 14:40
400-150790-2	MW-107	Water	03/12/18 09:40	03/13/18 14:40
400-150790-3	MW-108	Water	03/12/18 07:56	03/13/18 14:40
400-150790-4	MW-306	Water	03/12/18 12:53	03/13/18 14:40
400-150790-5	MW-307	Water	03/12/18 15:21	03/13/18 14:40
400-150790-6	DUP-01	Water	03/12/18 14:21	03/13/18 14:40

Client Sample ID: MW-100

Date Collected: 03/12/18 11:26
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-1

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	0.370		0.105	0.110	1.00	0.0778	pCi/L	03/16/18 09:35	04/09/18 09:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.3*		*40 - 110*	*03/16/18 09:35*	*04/09/18 09:55*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.563		0.282	0.286	1.00	0.422	pCi/L	03/16/18 10:05	03/26/18 14:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.3*		*40 - 110*	*03/16/18 10:05*	*03/26/18 14:53*	*1*
Y Carrier	*92.3*		*40 - 110*	*03/16/18 10:05*	*03/26/18 14:53*	*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	0.933		0.301	0.306	5.00	0.422	pCi/L		04/10/18 14:48	1

Client Sample ID: MW-107

Date Collected: 03/12/18 09:40
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-2

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	0.442		0.112	0.119	1.00	0.0751	pCi/L	03/16/18 09:35	04/09/18 09:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.3*		*40 - 110*	*03/16/18 09:35*	*04/09/18 09:55*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.650		0.269	0.275	1.00	0.380	pCi/L	03/16/18 10:05	03/26/18 14:54	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.3*		*40 - 110*	*03/16/18 10:05*	*03/26/18 14:54*	*1*
Y Carrier	*86.7*		*40 - 110*	*03/16/18 10:05*	*03/26/18 14:54*	*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	1.09		0.291	0.300	5.00	0.380	pCi/L		04/10/18 14:48	1

Client Sample ID: MW-108

Date Collected: 03/12/18 07:56
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-3

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	0.439		0.108	0.115	1.00	0.0602	pCi/L	03/16/18 09:35	04/09/18 09:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.4*		*40 - 110*	*03/16/18 09:35*	*04/09/18 09:55*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.53		0.313	0.343	1.00	0.352	pCi/L	03/16/18 10:05	03/26/18 14:54	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.4*		*40 - 110*	*03/16/18 10:05*	*03/26/18 14:54*	*1*
Y Carrier	*92.7*		*40 - 110*	*03/16/18 10:05*	*03/26/18 14:54*	*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	1.97		0.331	0.362	5.00	0.352	pCi/L		04/10/18 14:48	1

Client Sample ID: MW-306

Date Collected: 03/12/18 12:53
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-4

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	0.220		0.0881	0.0903	1.00	0.0761	pCi/L	03/16/18 09:35	04/09/18 09:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.6*		*40 - 110*	*03/16/18 09:35*	*04/09/18 09:55*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.563		0.255	0.260	1.00	0.367	pCi/L	03/16/18 10:05	03/26/18 14:54	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.6*		*40 - 110*	*03/16/18 10:05*	*03/26/18 14:54*	*1*
Y Carrier	*90.1*		*40 - 110*	*03/16/18 10:05*	*03/26/18 14:54*	*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	0.783		0.270	0.275	5.00	0.367	pCi/L		04/10/18 14:48	1

Client Sample ID: MW-307

Date Collected: 03/12/18 15:21
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-5

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	0.194		0.0831	0.0849	1.00	0.0882	pCi/L	03/16/18 09:35	04/09/18 09:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.3*		*40 - 110*	*03/16/18 09:35*	*04/09/18 09:55*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.654		0.325	0.330	1.00	0.490	pCi/L	03/16/18 10:05	03/26/18 14:54	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.3*		*40 - 110*	*03/16/18 10:05*	*03/26/18 14:54*	*1*
Y Carrier	*91.2*		*40 - 110*	*03/16/18 10:05*	*03/26/18 14:54*	*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	0.848		0.335	0.341	5.00	0.490	pCi/L		04/10/18 14:48	1

Client Sample ID: DUP-01

Date Collected: 03/12/18 14:21
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-6

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	0.204		0.0789	0.0810	1.00	0.0739	pCi/L	03/16/18 09:35	04/09/18 09:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*03/16/18 09:35*	*04/09/18 09:55*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.566		0.261	0.266	1.00	0.383	pCi/L	03/16/18 10:05	03/26/18 14:54	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*03/16/18 10:05*	*03/26/18 14:54*	*1*
Y Carrier	*94.2*		*40 - 110*	*03/16/18 10:05*	*03/26/18 14:54*	*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	0.769		0.273	0.278	5.00	0.383	pCi/L		04/10/18 14:48	1

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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150790-2
SDG: Background

Client Sample ID: MW-100
Date Collected: 03/12/18 11:26
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356125	03/16/18 09:35	TJT	TAL SL
Total/NA	Analysis	9315		1	359688	04/09/18 09:55	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356132	03/16/18 10:05	TJT	TAL SL
Total/NA	Analysis	9320		1	357534	03/26/18 14:53	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Client Sample ID: MW-107
Date Collected: 03/12/18 09:40
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356125	03/16/18 09:35	TJT	TAL SL
Total/NA	Analysis	9315		1	359688	04/09/18 09:55	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356132	03/16/18 10:05	TJT	TAL SL
Total/NA	Analysis	9320		1	357534	03/26/18 14:54	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Client Sample ID: MW-108
Date Collected: 03/12/18 07:56
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356125	03/16/18 09:35	TJT	TAL SL
Total/NA	Analysis	9315		1	359688	04/09/18 09:55	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356132	03/16/18 10:05	TJT	TAL SL
Total/NA	Analysis	9320		1	357534	03/26/18 14:54	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Client Sample ID: MW-306
Date Collected: 03/12/18 12:53
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356125	03/16/18 09:35	TJT	TAL SL
Total/NA	Analysis	9315		1	359688	04/09/18 09:55	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356132	03/16/18 10:05	TJT	TAL SL
Total/NA	Analysis	9320		1	357534	03/26/18 14:54	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150790-2
SDG: Background

Client Sample ID: MW-307

Date Collected: 03/12/18 15:21
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356125	03/16/18 09:35	TJT	TAL SL
Total/NA	Analysis	9315		1	359688	04/09/18 09:55	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356132	03/16/18 10:05	TJT	TAL SL
Total/NA	Analysis	9320		1	357534	03/26/18 14:54	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Client Sample ID: DUP-01

Date Collected: 03/12/18 14:21
Date Received: 03/13/18 14:40

Lab Sample ID: 400-150790-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356125	03/16/18 09:35	TJT	TAL SL
Total/NA	Analysis	9315		1	359688	04/09/18 09:55	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356132	03/16/18 10:05	TJT	TAL SL
Total/NA	Analysis	9320		1	357534	03/26/18 14:54	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Laboratory References:

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

QC Association Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150790-2
SDG: Background

Rad

Prep Batch: 356125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150790-1	MW-100	Total/NA	Water	PrecSep-21	
400-150790-2	MW-107	Total/NA	Water	PrecSep-21	
400-150790-3	MW-108	Total/NA	Water	PrecSep-21	
400-150790-4	MW-306	Total/NA	Water	PrecSep-21	
400-150790-5	MW-307	Total/NA	Water	PrecSep-21	
400-150790-6	DUP-01	Total/NA	Water	PrecSep-21	
MB 160-356125/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-356125/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-356125/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 356132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150790-1	MW-100	Total/NA	Water	PrecSep_0	
400-150790-2	MW-107	Total/NA	Water	PrecSep_0	
400-150790-3	MW-108	Total/NA	Water	PrecSep_0	
400-150790-4	MW-306	Total/NA	Water	PrecSep_0	
400-150790-5	MW-307	Total/NA	Water	PrecSep_0	
400-150790-6	DUP-01	Total/NA	Water	PrecSep_0	
MB 160-356132/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-356132/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-356132/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-356125/23-A
Matrix: Water
Analysis Batch: 359686

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 356125

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.01872	U	0.0333	0.0334	1.00	0.0872	pCi/L	03/16/18 09:36	04/09/18 09:58	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*03/16/18 09:36*	*04/09/18 09:58*	*1*

Lab Sample ID: LCS 160-356125/1-A
Matrix: Water
Analysis Batch: 359688

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 356125

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.8	10.93		1.11	1.00	0.0682	pCi/L	93	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*106*		*40 - 110*

Lab Sample ID: LCSD 160-356125/2-A
Matrix: Water
Analysis Batch: 359688

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 356125

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.8	10.30		1.05	1.00	0.0764	pCi/L	87	68 - 137	0.29	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*106*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-356132/23-A
Matrix: Water
Analysis Batch: 357685

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 356132

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.4085		0.250	0.253	1.00	0.384	pCi/L	03/16/18 10:05	03/26/18 14:57	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*03/16/18 10:05*	*03/26/18 14:57*	*1*
Y Carrier	*92.0*		*40 - 110*	*03/16/18 10:05*	*03/26/18 14:57*	*1*

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

Lab Sample ID: LCS 160-356132/1-A
Matrix: Water
Analysis Batch: 357534

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 356132

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			8.45	9.297		1.06	1.00	0.341	pCi/L	110	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*106*		*40 - 110*
Y Carrier	*90.1*		*40 - 110*

Lab Sample ID: LCSD 160-356132/2-A
Matrix: Water
Analysis Batch: 357534

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 356132

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			8.45	8.578		0.991	1.00	0.333	pCi/L	102	56 - 140	0.35	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*106*		*40 - 110*
Y Carrier	*90.8*		*40 - 110*

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brett Swles	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No:
Client Contact: Kristi Mitchell	Phone: 850 380 345-8	E-Mail: cheyenne.whitmire@testamericainc.com		Page: 1-1
Company: Gulf Power Company				Job #:

Address: BIN 731 One Energy Place	Due Date Requested:
City: Pensacola	TAT Requested (days):
State, Zip: FL, 32520	
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required
Email: krmitche@southernco.com	WO #:
Project Name: CCR Plant Crist	Project #: 40005424
Site: Background	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:

400-150790 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)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	SM4500_Cl_E - Chloride, SM4500_SO4_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C - Fluoride	6020 - Sb,As,Ba,B,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, 7470A - Mercury	FieldSampling - Field Sampling Parameters	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
MW-100	3/12/18	1126	G	Water			X	X	X	X		
MW-107	3/12/18	0940	G	Water			X	X	X	X		
MW-108	3/12/18	0756	G	Water			X	X	X	X		
MW-306	3/12/18	1253	G	Water			X	X	X	X		
MW-307	3/12/18	1521	G	Water			X	X	X	X		
Dup-01	3/12/18	1421	G	W			X	X	X	X		

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)

Special Instructions/QC Requirements:

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

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	3/13/18 1440	RDH		3/13/17 1440	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.6 C IR

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-150790-2
SDG Number: Background

Login Number: 150790
List Number: 1
Creator: Whitmire, Cheyenne R

List Source: 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	0.0°C 0.0°C IR7
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: Gulf Power Company

Job Number: 400-150790-2
SDG Number: Background

Login Number: 150790
List Number: 2
Creator: Taylor, Kristene N

List Source: TestAmerica St. Louis
List Creation: 03/15/18 01:17 PM

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.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.1,0.7
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?	False	
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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150790-2
SDG: Background

Laboratory: 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	06-30-18
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	ELAP	9	2510	03-31-18 *
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-18
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-18
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-17-12	09-30-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

Laboratory: 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
Alaska	State Program	10	MO00054	06-30-18
Arizona	State Program	9	AZ0813	12-08-18
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-18
Illinois	NELAP	5	200023	11-30-18
Iowa	State Program	7	373	12-01-18
Kansas	NELAP	7	E-10236	10-31-18
Kentucky (DW)	State Program	4	90125	12-31-18
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-18
Louisiana (DW)	NELAP	6	LA180017	12-31-18
Maryland	State Program	3	310	09-30-18
Michigan	State Program	5	9005	06-30-18
Missouri	State Program	7	780	06-30-18
Nevada	State Program	9	MO000542018-1	07-31-18
New Jersey	NELAP	2	MO002	06-30-18 *

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

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150790-2
SDG: Background

Laboratory: TestAmerica St. Louis (Continued)

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
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-18
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-18
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-18
Texas	NELAP	6	T104704193-17-11	07-31-18
US Fish & Wildlife	Federal		058448	08-31-18
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-18
Virginia	NELAP	3	460230	06-14-18
Washington	State Program	10	C592	08-30-18
West Virginia DEP	State Program	3	381	08-31-18 *

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

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

TestAmerica Job ID: 400-150860-1
TestAmerica Sample Delivery Group: Gypsum Storage Area
Client Project/Site: CCR Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Cheyenne Whitmire

Authorized for release by:
4/12/2018 11:02:34 AM

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

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-150860-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-150860-1

Metals
Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 390579 and analytical batch 390726 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: Due to the high concentration of Boron and Calcium, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 390579 and analytical batch 390726 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method(s) 6020: The trailing continuing calibration blank (CCB) for analytical batch 390726 contained Boron below the absolute value of the reporting limit (RL) due to the matrix of samples prior to the CCB. Samples listed here were not affected and meet QC requirements. Data has been reported as qualified.

Method(s) 6020: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-200 (400-150860-1), MW-201 (400-150860-2), MW-204 (400-150860-5), MW-206 (400-150860-7) and DUP-02 (400-150860-10) at 200.0, 100.0, 50.0, 500.0 and 200.0. Elevated reporting limits (RLs) are provided.

General Chemistry
Method(s) SM 4500 F C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 391874 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) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries 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) SM 4500 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-200 (400-150860-1), MW-201 (400-150860-2), MW-204 (400-150860-5), MW-206 (400-150860-7), DUP-02 (400-150860-10), (400-150860-A-1 MS) and (400-150860-A-1 MSD). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 391085 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) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-200 (400-150860-1), MW-201 (400-150860-2), MW-203 (400-150860-4), MW-204 (400-150860-5), DUP-02 (400-150860-10), (400-150793-A-3), (400-150793-A-3 MS), (400-150793-A-3 MSD), (400-150860-A-1 MS), (400-150860-A-1 MSD) and MW-206 (400-150860-7). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 391847 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.

Detection Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150860-1
SDG: Gypsum Storage Area

Client Sample ID: MW-200 — Lab Sample ID: 400-150860-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0013		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.042		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00039	I	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cobalt	0.0011	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00047	I	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Selenium	0.0064		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00018	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	10		2.0	0.84	mg/L	200		6020	Total Recoverable
Calcium - DL	290		10	5.0	mg/L	200		6020	Total Recoverable
Mercury	0.0014		0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	1600		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	530		40	12	mg/L	20		SM 4500 Cl- E	Total/NA
Fluoride	0.050	I	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	160		25	7.0	mg/L	5		SM 4500 SO4 E	Total/NA
Field pH	5.19				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-201 — Lab Sample ID: 400-150860-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00062	I	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.030		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.0032		0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	75		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0022	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0053		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0049		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00027	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	4.4		1.0	0.42	mg/L	100		6020	Total Recoverable
Mercury	0.00051		0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	490		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	110		10	3.0	mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.84		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	190		50	14	mg/L	10		SM 4500 SO4 E	Total/NA
Field pH	4.82				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-202 — Lab Sample ID: 400-150860-3

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-202 (Continued) — Lab Sample ID: 400-150860-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.037		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.027	I	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	4.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0015	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Selenium	0.00029	I	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Mercury	0.000087	I	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	52		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	14		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	8.6		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	4.67				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-203 — Lab Sample ID: 400-150860-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00054	I	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.047		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.69		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	31		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0030		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Selenium	0.0019		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.000095	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Mercury	0.00011	I	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	210		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	14		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.060	I	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	100		25	7.0	mg/L	5		SM 4500 SO4 E	Total/NA
Field pH	4.64				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-204 — Lab Sample ID: 400-150860-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0030		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.027		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00057	I	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	81		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.017		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0023		0.0013	0.00035	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-204 (Continued) — Lab Sample ID: 400-150860-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.0015	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0038		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00035	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	6.2		0.50	0.21	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	760		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	81		4.0	1.2	mg/L	2		SM 4500 Cl- E	Total/NA
Fluoride	0.29		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	410		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	4.34				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-205 — Lab Sample ID: 400-150860-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.019		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.084		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	11		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	66		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	4.1		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	14		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	5.48				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-206 — Lab Sample ID: 400-150860-7

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.0011	I	0.0025	0.0010	mg/L	5		6020	Total Recoverable
Arsenic	0.0033		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.079		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.0014	I	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cobalt	0.0027		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0040		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Molybdenum	0.00092	I	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.019		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00055		0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	48		5.0	2.1	mg/L	500		6020	Total Recoverable
Calcium - DL	1100		25	13	mg/L	500		6020	Total Recoverable
Mercury	0.00020		0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	6300		25	17	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-206 (Continued) — Lab Sample ID: 400-150860-7

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2100		160	48	mg/L	80		SM 4500 Cl- E	Total/NA
Fluoride	0.080	I	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	470		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	4.35				SU	1		Field Sampling	Total/NA

Client Sample ID: EB-02 — Lab Sample ID: 400-150860-8

No Detections.

Client Sample ID: FB-02 — Lab Sample ID: 400-150860-9

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	6.0		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-02 — Lab Sample ID: 400-150860-10

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00085	I	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.042		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cobalt	0.0012	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00044	I	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Selenium	0.0049		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00015	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	10		2.0	0.84	mg/L	200		6020	Total Recoverable
Calcium - DL	270		10	5.0	mg/L	200		6020	Total Recoverable
Mercury	0.0014		0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	1600		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	530		40	12	mg/L	20		SM 4500 Cl- E	Total/NA
Fluoride	0.050	I	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	160		25	7.0	mg/L	5		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150860-1
SDG: Gypsum Storage Area

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

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

Sample Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150860-1
SDG: Gypsum Storage Area

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-150860-1	MW-200	Water	03/13/18 18:23	03/14/18 18:30
400-150860-2	MW-201	Water	03/14/18 11:52	03/14/18 18:30
400-150860-3	MW-202	Water	03/13/18 11:35	03/14/18 18:30
400-150860-4	MW-203	Water	03/13/18 13:31	03/14/18 18:30
400-150860-5	MW-204	Water	03/13/18 15:25	03/14/18 18:30
400-150860-6	MW-205	Water	03/13/18 16:45	03/14/18 18:30
400-150860-7	MW-206	Water	03/14/18 10:31	03/14/18 18:30
400-150860-8	EB-02	Water	03/13/18 17:31	03/14/18 18:30
400-150860-9	FB-02	Water	03/13/18 17:26	03/14/18 18:30
400-150860-10	DUP-02	Water	03/13/18 17:23	03/14/18 18:30

Client Sample ID: MW-200

Date Collected: 03/13/18 18:23
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-1

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/19/18 10:20	03/19/18 15:14	5
Arsenic	**0.0013**		0.0013	0.00046	mg/L		03/19/18 10:20	03/19/18 15:14	5
Barium	**0.042**		0.0025	0.00049	mg/L		03/19/18 10:20	03/19/18 15:14	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:20	03/19/18 15:14	5
Cadmium	**0.00039**	**I**	0.0025	0.00034	mg/L		03/19/18 10:20	03/19/18 15:14	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/19/18 10:20	03/19/18 15:14	5
Cobalt	**0.0011**	**I**	0.0025	0.00040	mg/L		03/19/18 10:20	03/19/18 15:14	5
Lead	**0.00047**	**I**	0.0013	0.00035	mg/L		03/19/18 10:20	03/19/18 15:14	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		03/19/18 10:20	03/19/18 15:14	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/19/18 10:20	03/19/18 15:14	5
Selenium	**0.0064**		0.0013	0.00024	mg/L		03/19/18 10:20	03/19/18 15:14	5
Thallium	**0.00018**	**I**	0.00050	0.000085	mg/L		03/19/18 10:20	03/19/18 15:14	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**10**		2.0	0.84	mg/L		03/19/18 10:20	03/20/18 14:34	200
Calcium	**290**		10	5.0	mg/L		03/19/18 10:20	03/20/18 14:34	200

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.0014**		0.00020	0.000070	mg/L		03/20/18 10:29	03/26/18 13:22	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1600**		5.0	3.4	mg/L			03/17/18 16:47	1
Chloride	**530**		40	12	mg/L			03/20/18 15:14	20
Fluoride	**0.050**	**I**	0.10	0.032	mg/L			03/27/18 14:02	1
Sulfate	**160**		25	7.0	mg/L			03/22/18 12:28	5

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**5.19**				SU			03/13/18 18:23	1

Client Sample ID: MW-201
Date Collected: 03/14/18 11:52
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-2
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/19/18 10:20	03/19/18 15:45	5
Arsenic	**0.00062**	**I**	0.0013	0.00046	mg/L		03/19/18 10:20	03/19/18 15:45	5
Barium	**0.030**		0.0025	0.00049	mg/L		03/19/18 10:20	03/19/18 15:45	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:20	03/19/18 15:45	5
Cadmium	**0.0032**		0.0025	0.00034	mg/L		03/19/18 10:20	03/19/18 15:45	5
Calcium	**75**		0.25	0.13	mg/L		03/19/18 10:20	03/19/18 15:45	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/19/18 10:20	03/19/18 15:45	5
Cobalt	**0.0022**	**I**	0.0025	0.00040	mg/L		03/19/18 10:20	03/19/18 15:45	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/19/18 10:20	03/19/18 15:45	5
Lithium	**0.0053**		0.0050	0.0011	mg/L		03/19/18 10:20	03/19/18 15:45	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/19/18 10:20	03/19/18 15:45	5
Selenium	**0.0049**		0.0013	0.00024	mg/L		03/19/18 10:20	03/19/18 15:45	5
Thallium	**0.00027**	**I**	0.00050	0.000085	mg/L		03/19/18 10:20	03/19/18 15:45	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**4.4**		1.0	0.42	mg/L		03/19/18 10:20	03/20/18 14:43	100

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00051**		0.00020	0.000070	mg/L		03/20/18 10:29	03/26/18 13:24	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**490**		5.0	3.4	mg/L			03/17/18 17:26	1
Chloride	**110**		10	3.0	mg/L			03/20/18 15:17	5
Fluoride	**0.84**		0.10	0.032	mg/L			03/27/18 14:06	1
Sulfate	**190**		50	14	mg/L			03/28/18 12:05	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.82**				SU			03/14/18 11:52	1

Client Sample ID: MW-202
Date Collected: 03/13/18 11:35
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-3
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/19/18 10:20	03/19/18 17:16	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/19/18 10:20	03/19/18 17:16	5
Barium	**0.037**		0.0025	0.00049	mg/L		03/19/18 10:20	03/19/18 17:16	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:20	03/19/18 17:16	5
Boron	**0.027**	**I**	0.050	0.021	mg/L		03/19/18 10:20	03/19/18 17:16	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:20	03/19/18 17:16	5
Calcium	**4.1**		0.25	0.13	mg/L		03/19/18 10:20	03/19/18 17:16	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/19/18 10:20	03/19/18 17:16	5
Cobalt	**0.0015**	**I**	0.0025	0.00040	mg/L		03/19/18 10:20	03/19/18 17:16	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/19/18 10:20	03/19/18 17:16	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		03/19/18 10:20	03/19/18 17:16	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/19/18 10:20	03/19/18 17:16	5
Selenium	**0.00029**	**I**	0.0013	0.00024	mg/L		03/19/18 10:20	03/19/18 17:16	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/19/18 10:20	03/19/18 17:16	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.000087**	**I**	0.00020	0.000070	mg/L		03/20/18 10:29	03/26/18 13:26	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**52**		5.0	3.4	mg/L			03/17/18 16:47	1
Chloride	**14**		2.0	0.60	mg/L			03/20/18 14:51	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/27/18 14:09	1
Sulfate	**8.6**		5.0	1.4	mg/L			03/22/18 11:41	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.67**				SU			03/13/18 11:35	1

Client Sample ID: MW-203
Date Collected: 03/13/18 13:31
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-4
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/19/18 10:20	03/19/18 17:21	5
Arsenic	**0.00054**	**I**	0.0013	0.00046	mg/L		03/19/18 10:20	03/19/18 17:21	5
Barium	**0.047**		0.0025	0.00049	mg/L		03/19/18 10:20	03/19/18 17:21	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:20	03/19/18 17:21	5
Boron	**0.69**		0.050	0.021	mg/L		03/19/18 10:20	03/19/18 17:21	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:20	03/19/18 17:21	5
Calcium	**31**		0.25	0.13	mg/L		03/19/18 10:20	03/19/18 17:21	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/19/18 10:20	03/19/18 17:21	5
Cobalt	**0.0030**		0.0025	0.00040	mg/L		03/19/18 10:20	03/19/18 17:21	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/19/18 10:20	03/19/18 17:21	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		03/19/18 10:20	03/19/18 17:21	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/19/18 10:20	03/19/18 17:21	5
Selenium	**0.0019**		0.0013	0.00024	mg/L		03/19/18 10:20	03/19/18 17:21	5
Thallium	**0.000095**	**I**	0.00050	0.000085	mg/L		03/19/18 10:20	03/19/18 17:21	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00011**	**I**	0.00020	0.000070	mg/L		03/20/18 10:29	03/26/18 13:28	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**210**		5.0	3.4	mg/L			03/17/18 16:47	1
Chloride	**14**		2.0	0.60	mg/L			03/20/18 14:51	1
Fluoride	**0.060**	**I**	0.10	0.032	mg/L			03/27/18 14:13	1
Sulfate	**100**		25	7.0	mg/L			03/22/18 12:37	5

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.64**				SU			03/13/18 13:31	1

Client Sample ID: MW-204
Date Collected: 03/13/18 15:25
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-5
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/19/18 10:20	03/19/18 15:41	5
Arsenic	**0.0030**		0.0013	0.00046	mg/L		03/19/18 10:20	03/19/18 15:41	5
Barium	**0.027**		0.0025	0.00049	mg/L		03/19/18 10:20	03/19/18 15:41	5
Beryllium	**0.00057**	**I**	0.0025	0.00034	mg/L		03/19/18 10:20	03/19/18 15:41	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:20	03/19/18 15:41	5
Calcium	**81**		0.25	0.13	mg/L		03/19/18 10:20	03/19/18 15:41	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/19/18 10:20	03/19/18 15:41	5
Cobalt	**0.017**		0.0025	0.00040	mg/L		03/19/18 10:20	03/19/18 15:41	5
Lead	**0.0023**		0.0013	0.00035	mg/L		03/19/18 10:20	03/19/18 15:41	5
Lithium	**0.0015**	**I**	0.0050	0.0011	mg/L		03/19/18 10:20	03/19/18 15:41	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/19/18 10:20	03/19/18 15:41	5
Selenium	**0.0038**		0.0013	0.00024	mg/L		03/19/18 10:20	03/19/18 15:41	5
Thallium	**0.00035**	**I**	0.00050	0.000085	mg/L		03/19/18 10:20	03/19/18 15:41	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**6.2**		0.50	0.21	mg/L		03/19/18 10:20	03/20/18 14:48	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		03/20/18 10:29	03/26/18 13:30	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**760**		5.0	3.4	mg/L			03/17/18 16:47	1
Chloride	**81**		4.0	1.2	mg/L			03/20/18 15:27	2
Fluoride	**0.29**		0.10	0.032	mg/L			03/27/18 14:17	1
Sulfate	**410**		100	28	mg/L			03/22/18 12:51	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.34**				SU			03/13/18 15:25	1

Client Sample ID: MW-205

Date Collected: 03/13/18 16:45
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-6

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/19/18 10:20	03/19/18 17:25	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/19/18 10:20	03/19/18 17:25	5
Barium	**0.019**		0.0025	0.00049	mg/L		03/19/18 10:20	03/19/18 17:25	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:20	03/19/18 17:25	5
Boron	**0.084**		0.050	0.021	mg/L		03/19/18 10:20	03/19/18 17:25	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:20	03/19/18 17:25	5
Calcium	**11**		0.25	0.13	mg/L		03/19/18 10:20	03/19/18 17:25	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/19/18 10:20	03/19/18 17:25	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/19/18 10:20	03/19/18 17:25	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/19/18 10:20	03/19/18 17:25	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		03/19/18 10:20	03/19/18 17:25	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/19/18 10:20	03/19/18 17:25	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		03/19/18 10:20	03/19/18 17:25	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/19/18 10:20	03/19/18 17:25	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		03/20/18 10:29	03/26/18 13:31	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**66**		5.0	3.4	mg/L			03/17/18 16:47	1
Chloride	**4.1**		2.0	0.60	mg/L			03/20/18 14:51	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/27/18 14:20	1
Sulfate	**14**		5.0	1.4	mg/L			03/22/18 11:41	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**5.48**				SU			03/13/18 16:45	1

Client Sample ID: MW-206

Date Collected: 03/14/18 10:31
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-7

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0011	I	0.0025	0.0010	mg/L		03/19/18 10:20	03/19/18 15:36	5
Arsenic	0.0033		0.0013	0.00046	mg/L		03/19/18 10:20	03/19/18 15:36	5
Barium	0.079		0.0025	0.00049	mg/L		03/19/18 10:20	03/19/18 15:36	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:20	03/19/18 15:36	5
Cadmium	0.0014	I	0.0025	0.00034	mg/L		03/19/18 10:20	03/19/18 15:36	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/19/18 10:20	03/19/18 15:36	5
Cobalt	0.0027		0.0025	0.00040	mg/L		03/19/18 10:20	03/19/18 15:36	5
Lead	0.0040		0.0013	0.00035	mg/L		03/19/18 10:20	03/19/18 15:36	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		03/19/18 10:20	03/19/18 15:36	5
Molybdenum	0.00092	I	0.015	0.00085	mg/L		03/19/18 10:20	03/19/18 15:36	5
Selenium	0.019		0.0013	0.00024	mg/L		03/19/18 10:20	03/19/18 15:36	5
Thallium	0.00055		0.00050	0.000085	mg/L		03/19/18 10:20	03/19/18 15:36	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	48		5.0	2.1	mg/L		03/19/18 10:20	03/20/18 14:30	500
Calcium	1100		25	13	mg/L		03/19/18 10:20	03/20/18 14:30	500

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020		0.00020	0.000070	mg/L		03/20/18 10:29	03/26/18 13:47	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6300		25	17	mg/L			03/17/18 17:26	1
Chloride	2100		160	48	mg/L			03/20/18 15:17	80
Fluoride	0.080	I	0.10	0.032	mg/L			03/28/18 13:53	1
Sulfate	470		100	28	mg/L			03/28/18 12:29	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.35				SU			03/14/18 10:31	1

Client Sample ID: EB-02
Date Collected: 03/13/18 17:31
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-8
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/19/18 10:20	03/19/18 16:53	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/19/18 10:20	03/19/18 16:53	5
Barium	0.00049	U	0.0025	0.00049	mg/L		03/19/18 10:20	03/19/18 16:53	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:20	03/19/18 16:53	5
Boron	0.021	U	0.050	0.021	mg/L		03/19/18 10:20	03/19/18 16:53	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:20	03/19/18 16:53	5
Calcium	0.13	U	0.25	0.13	mg/L		03/19/18 10:20	03/19/18 16:53	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/19/18 10:20	03/19/18 16:53	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/19/18 10:20	03/19/18 16:53	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/19/18 10:20	03/19/18 16:53	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		03/19/18 10:20	03/19/18 16:53	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/19/18 10:20	03/19/18 16:53	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		03/19/18 10:20	03/19/18 16:53	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/19/18 10:20	03/19/18 16:53	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		03/20/18 10:29	03/26/18 13:49	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			03/17/18 16:47	1
Chloride	0.60	U	2.0	0.60	mg/L			03/20/18 14:51	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/28/18 14:05	1
Sulfate	1.4	U	5.0	1.4	mg/L			03/22/18 11:41	1

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150860-1
SDG: Gypsum Storage Area

Client Sample ID: FB-02
Date Collected: 03/13/18 17:26
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-9
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/19/18 10:20	03/19/18 16:48	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/19/18 10:20	03/19/18 16:48	5
Barium	0.00049	U	0.0025	0.00049	mg/L		03/19/18 10:20	03/19/18 16:48	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:20	03/19/18 16:48	5
Boron	0.021	U	0.050	0.021	mg/L		03/19/18 10:20	03/19/18 16:48	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:20	03/19/18 16:48	5
Calcium	0.13	U	0.25	0.13	mg/L		03/19/18 10:20	03/19/18 16:48	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/19/18 10:20	03/19/18 16:48	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/19/18 10:20	03/19/18 16:48	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/19/18 10:20	03/19/18 16:48	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		03/19/18 10:20	03/19/18 16:48	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/19/18 10:20	03/19/18 16:48	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		03/19/18 10:20	03/19/18 16:48	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/19/18 10:20	03/19/18 16:48	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		03/20/18 10:29	03/26/18 13:51	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6.0		5.0	3.4	mg/L			03/17/18 16:47	1
Chloride	0.60	U	2.0	0.60	mg/L			03/20/18 14:51	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/28/18 14:09	1
Sulfate	1.4	U	5.0	1.4	mg/L			03/22/18 11:41	1

Client Sample ID: DUP-02

Date Collected: 03/13/18 17:23
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-10

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/19/18 10:20	03/19/18 16:57	5
Arsenic	**0.00085**	**I**	0.0013	0.00046	mg/L		03/19/18 10:20	03/19/18 16:57	5
Barium	**0.042**		0.0025	0.00049	mg/L		03/19/18 10:20	03/19/18 16:57	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:20	03/19/18 16:57	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:20	03/19/18 16:57	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/19/18 10:20	03/19/18 16:57	5
Cobalt	**0.0012**	**I**	0.0025	0.00040	mg/L		03/19/18 10:20	03/19/18 16:57	5
Lead	**0.00044**	**I**	0.0013	0.00035	mg/L		03/19/18 10:20	03/19/18 16:57	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		03/19/18 10:20	03/19/18 16:57	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/19/18 10:20	03/19/18 16:57	5
Selenium	**0.0049**		0.0013	0.00024	mg/L		03/19/18 10:20	03/19/18 16:57	5
Thallium	**0.00015**	**I**	0.00050	0.000085	mg/L		03/19/18 10:20	03/19/18 16:57	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**10**		2.0	0.84	mg/L		03/19/18 10:20	03/20/18 14:39	200
Calcium	**270**		10	5.0	mg/L		03/19/18 10:20	03/20/18 14:39	200

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.0014**		0.00020	0.000070	mg/L		03/20/18 10:29	03/26/18 13:53	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1600**		5.0	3.4	mg/L			03/17/18 16:47	1
Chloride	**530**		40	12	mg/L			03/20/18 15:17	20
Fluoride	**0.050**	**I**	0.10	0.032	mg/L			03/28/18 14:13	1
Sulfate	**160**		25	7.0	mg/L			03/22/18 12:37	5

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
L	Off-scale high. Actual value is known to be greater than the value given.

General Chemistry

Qualifier	Qualifier Description
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
U	Indicates that the compound was analyzed for but not detected.

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)

Client Sample ID: MW-200

Lab Sample ID: 400-150860-1

Date Collected: 03/13/18 18:23

Matrix: Water

Date Received: 03/14/18 18:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			390579	03/19/18 10:20	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	390726	03/19/18 15:14	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		390579	03/19/18 10:20	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	200	390916	03/20/18 14:34	DRE	TAL PEN
Total/NA	Prep	7470A			390725	03/20/18 10:29	JAP	TAL PEN
Total/NA	Analysis	7470A		1	391500	03/26/18 13:22	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390490	03/17/18 16:47	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		20	390817	03/20/18 15:14	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391669	03/27/18 14:02	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		5	391085	03/22/18 12:28	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/13/18 18:23	AW	TAL PEN

Client Sample ID: MW-201

Lab Sample ID: 400-150860-2

Date Collected: 03/14/18 11:52

Matrix: Water

Date Received: 03/14/18 18:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			390579	03/19/18 10:20	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	390726	03/19/18 15:45	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		390579	03/19/18 10:20	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100	390916	03/20/18 14:43	DRE	TAL PEN
Total/NA	Prep	7470A			390725	03/20/18 10:29	JAP	TAL PEN
Total/NA	Analysis	7470A		1	391500	03/26/18 13:24	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390491	03/17/18 17:26	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		5	390817	03/20/18 15:17	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391669	03/27/18 14:06	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	391847	03/28/18 12:05	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/14/18 11:52	AW	TAL PEN

Client Sample ID: MW-202

Lab Sample ID: 400-150860-3

Date Collected: 03/13/18 11:35

Matrix: Water

Date Received: 03/14/18 18:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			390579	03/19/18 10:20	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	390726	03/19/18 17:16	DRE	TAL PEN
Total/NA	Prep	7470A			390725	03/20/18 10:29	JAP	TAL PEN
Total/NA	Analysis	7470A		1	391500	03/26/18 13:26	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390490	03/17/18 16:47	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	390817	03/20/18 14:51	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391669	03/27/18 14:09	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	391085	03/22/18 11:41	RRC	TAL PEN

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Field Sampling		1	393575	03/13/18 11:35	AW	TAL PEN

Client Sample ID: MW-203
Date Collected: 03/13/18 13:31
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			390579	03/19/18 10:20	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	390726	03/19/18 17:21	DRE	TAL PEN
Total/NA	Prep	7470A			390725	03/20/18 10:29	JAP	TAL PEN
Total/NA	Analysis	7470A		1	391500	03/26/18 13:28	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390490	03/17/18 16:47	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	390817	03/20/18 14:51	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391669	03/27/18 14:13	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		5	391085	03/22/18 12:37	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/13/18 13:31	AW	TAL PEN

Client Sample ID: MW-204
Date Collected: 03/13/18 15:25
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			390579	03/19/18 10:20	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	390726	03/19/18 15:41	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		390579	03/19/18 10:20	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	390916	03/20/18 14:48	DRE	TAL PEN
Total/NA	Prep	7470A			390725	03/20/18 10:29	JAP	TAL PEN
Total/NA	Analysis	7470A		1	391500	03/26/18 13:30	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390490	03/17/18 16:47	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		2	390817	03/20/18 15:27	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391669	03/27/18 14:17	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	391085	03/22/18 12:51	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/13/18 15:25	AW	TAL PEN

Client Sample ID: MW-205
Date Collected: 03/13/18 16:45
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			390579	03/19/18 10:20	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	390726	03/19/18 17:25	DRE	TAL PEN
Total/NA	Prep	7470A			390725	03/20/18 10:29	JAP	TAL PEN
Total/NA	Analysis	7470A		1	391500	03/26/18 13:31	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390490	03/17/18 16:47	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	390817	03/20/18 14:51	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391669	03/27/18 14:20	BAB	TAL PEN

Client Sample ID: MW-205
Date Collected: 03/13/18 16:45
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 SO4 E		1	391085	03/22/18 11:41	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/13/18 16:45	AW	TAL PEN

Client Sample ID: MW-206
Date Collected: 03/14/18 10:31
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			390579	03/19/18 10:20	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	390726	03/19/18 15:36	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		390579	03/19/18 10:20	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	500	390916	03/20/18 14:30	DRE	TAL PEN
Total/NA	Prep	7470A			390725	03/20/18 10:29	JAP	TAL PEN
Total/NA	Analysis	7470A		1	391500	03/26/18 13:47	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390491	03/17/18 17:26	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		80	390817	03/20/18 15:17	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391874	03/28/18 13:53	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	391847	03/28/18 12:29	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/14/18 10:31	AW	TAL PEN

Client Sample ID: EB-02
Date Collected: 03/13/18 17:31
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			390579	03/19/18 10:20	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	390726	03/19/18 16:53	DRE	TAL PEN
Total/NA	Prep	7470A			390725	03/20/18 10:29	JAP	TAL PEN
Total/NA	Analysis	7470A		1	391500	03/26/18 13:49	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390490	03/17/18 16:47	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	390817	03/20/18 14:51	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391874	03/28/18 14:05	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	391085	03/22/18 11:41	RRC	TAL PEN

Client Sample ID: FB-02
Date Collected: 03/13/18 17:26
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			390579	03/19/18 10:20	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	390726	03/19/18 16:48	DRE	TAL PEN
Total/NA	Prep	7470A			390725	03/20/18 10:29	JAP	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150860-1
SDG: Gypsum Storage Area

Client Sample ID: FB-02

Date Collected: 03/13/18 17:26
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7470A		1	391500	03/26/18 13:51	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390490	03/17/18 16:47	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	390817	03/20/18 14:51	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391874	03/28/18 14:09	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	391085	03/22/18 11:41	RRC	TAL PEN

Client Sample ID: DUP-02

Date Collected: 03/13/18 17:23
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			390579	03/19/18 10:20	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	390726	03/19/18 16:57	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		390579	03/19/18 10:20	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	200	390916	03/20/18 14:39	DRE	TAL PEN
Total/NA	Prep	7470A			390725	03/20/18 10:29	JAP	TAL PEN
Total/NA	Analysis	7470A		1	391500	03/26/18 13:53	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390490	03/17/18 16:47	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		20	390817	03/20/18 15:17	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391874	03/28/18 14:13	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		5	391085	03/22/18 12:37	RRC	TAL PEN

Laboratory References:

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

Metals

Prep Batch: 390579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150860-1 - DL	MW-200	Total Recoverable	Water	3005A	
400-150860-1	MW-200	Total Recoverable	Water	3005A	
400-150860-2 - DL	MW-201	Total Recoverable	Water	3005A	
400-150860-2	MW-201	Total Recoverable	Water	3005A	
400-150860-3	MW-202	Total Recoverable	Water	3005A	
400-150860-4	MW-203	Total Recoverable	Water	3005A	
400-150860-5	MW-204	Total Recoverable	Water	3005A	
400-150860-5 - DL	MW-204	Total Recoverable	Water	3005A	
400-150860-6	MW-205	Total Recoverable	Water	3005A	
400-150860-7	MW-206	Total Recoverable	Water	3005A	
400-150860-7 - DL	MW-206	Total Recoverable	Water	3005A	
400-150860-8	EB-02	Total Recoverable	Water	3005A	
400-150860-9	FB-02	Total Recoverable	Water	3005A	
400-150860-10	DUP-02	Total Recoverable	Water	3005A	
400-150860-10 - DL	DUP-02	Total Recoverable	Water	3005A	
MB 400-390579/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-390579/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-150860-1 MS	MW-200	Total Recoverable	Water	3005A	
400-150860-1 MSD	MW-200	Total Recoverable	Water	3005A	

Prep Batch: 390725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150860-1	MW-200	Total/NA	Water	7470A	
400-150860-2	MW-201	Total/NA	Water	7470A	
400-150860-3	MW-202	Total/NA	Water	7470A	
400-150860-4	MW-203	Total/NA	Water	7470A	
400-150860-5	MW-204	Total/NA	Water	7470A	
400-150860-6	MW-205	Total/NA	Water	7470A	
400-150860-7	MW-206	Total/NA	Water	7470A	
400-150860-8	EB-02	Total/NA	Water	7470A	
400-150860-9	FB-02	Total/NA	Water	7470A	
400-150860-10	DUP-02	Total/NA	Water	7470A	
MB 400-390725/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-390725/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-150957-C-1-C MS	Matrix Spike	Total/NA	Water	7470A	
400-150957-C-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 390726

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150860-1	MW-200	Total Recoverable	Water	6020	390579
400-150860-2	MW-201	Total Recoverable	Water	6020	390579
400-150860-3	MW-202	Total Recoverable	Water	6020	390579
400-150860-4	MW-203	Total Recoverable	Water	6020	390579
400-150860-5	MW-204	Total Recoverable	Water	6020	390579
400-150860-6	MW-205	Total Recoverable	Water	6020	390579
400-150860-7	MW-206	Total Recoverable	Water	6020	390579
400-150860-8	EB-02	Total Recoverable	Water	6020	390579
400-150860-9	FB-02	Total Recoverable	Water	6020	390579
400-150860-10	DUP-02	Total Recoverable	Water	6020	390579
MB 400-390579/1-A ^5	Method Blank	Total Recoverable	Water	6020	390579
LCS 400-390579/2-A	Lab Control Sample	Total Recoverable	Water	6020	390579

Metals (Continued)

Analysis Batch: 390726 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150860-1 MS	MW-200	Total Recoverable	Water	6020	390579
400-150860-1 MSD	MW-200	Total Recoverable	Water	6020	390579

Analysis Batch: 390916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150860-1 - DL	MW-200	Total Recoverable	Water	6020	390579
400-150860-2 - DL	MW-201	Total Recoverable	Water	6020	390579
400-150860-5 - DL	MW-204	Total Recoverable	Water	6020	390579
400-150860-7 - DL	MW-206	Total Recoverable	Water	6020	390579
400-150860-10 - DL	DUP-02	Total Recoverable	Water	6020	390579

Analysis Batch: 391500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150860-1	MW-200	Total/NA	Water	7470A	390725
400-150860-2	MW-201	Total/NA	Water	7470A	390725
400-150860-3	MW-202	Total/NA	Water	7470A	390725
400-150860-4	MW-203	Total/NA	Water	7470A	390725
400-150860-5	MW-204	Total/NA	Water	7470A	390725
400-150860-6	MW-205	Total/NA	Water	7470A	390725
400-150860-7	MW-206	Total/NA	Water	7470A	390725
400-150860-8	EB-02	Total/NA	Water	7470A	390725
400-150860-9	FB-02	Total/NA	Water	7470A	390725
400-150860-10	DUP-02	Total/NA	Water	7470A	390725
MB 400-390725/14-A	Method Blank	Total/NA	Water	7470A	390725
LCS 400-390725/15-A	Lab Control Sample	Total/NA	Water	7470A	390725
400-150957-C-1-C MS	Matrix Spike	Total/NA	Water	7470A	390725
400-150957-C-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	390725

General Chemistry

Analysis Batch: 390490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150860-1	MW-200	Total/NA	Water	SM 2540C	
400-150860-3	MW-202	Total/NA	Water	SM 2540C	
400-150860-4	MW-203	Total/NA	Water	SM 2540C	
400-150860-5	MW-204	Total/NA	Water	SM 2540C	
400-150860-6	MW-205	Total/NA	Water	SM 2540C	
400-150860-8	EB-02	Total/NA	Water	SM 2540C	
400-150860-9	FB-02	Total/NA	Water	SM 2540C	
400-150860-10	DUP-02	Total/NA	Water	SM 2540C	
MB 400-390490/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-390490/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-150860-6 DU	MW-205	Total/NA	Water	SM 2540C	

Analysis Batch: 390491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150860-2	MW-201	Total/NA	Water	SM 2540C	
400-150860-7	MW-206	Total/NA	Water	SM 2540C	
MB 400-390491/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-390491/2	Lab Control Sample	Total/NA	Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 390491 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150825-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 390817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150860-1	MW-200	Total/NA	Water	SM 4500 Cl- E	
400-150860-2	MW-201	Total/NA	Water	SM 4500 Cl- E	
400-150860-3	MW-202	Total/NA	Water	SM 4500 Cl- E	
400-150860-4	MW-203	Total/NA	Water	SM 4500 Cl- E	
400-150860-5	MW-204	Total/NA	Water	SM 4500 Cl- E	
400-150860-6	MW-205	Total/NA	Water	SM 4500 Cl- E	
400-150860-7	MW-206	Total/NA	Water	SM 4500 Cl- E	
400-150860-8	EB-02	Total/NA	Water	SM 4500 Cl- E	
400-150860-9	FB-02	Total/NA	Water	SM 4500 Cl- E	
400-150860-10	DUP-02	Total/NA	Water	SM 4500 Cl- E	
MB 400-390817/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-390817/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-390817/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-150860-1 MS	MW-200	Total/NA	Water	SM 4500 Cl- E	
400-150860-1 MSD	MW-200	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 391085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150860-1	MW-200	Total/NA	Water	SM 4500 SO4 E	
400-150860-3	MW-202	Total/NA	Water	SM 4500 SO4 E	
400-150860-4	MW-203	Total/NA	Water	SM 4500 SO4 E	
400-150860-5	MW-204	Total/NA	Water	SM 4500 SO4 E	
400-150860-6	MW-205	Total/NA	Water	SM 4500 SO4 E	
400-150860-8	EB-02	Total/NA	Water	SM 4500 SO4 E	
400-150860-9	FB-02	Total/NA	Water	SM 4500 SO4 E	
400-150860-10	DUP-02	Total/NA	Water	SM 4500 SO4 E	
MB 400-391085/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-391085/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-391085/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-150860-1 MS	MW-200	Total/NA	Water	SM 4500 SO4 E	
400-150860-1 MSD	MW-200	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 391669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150860-1	MW-200	Total/NA	Water	SM 4500 F C	
400-150860-2	MW-201	Total/NA	Water	SM 4500 F C	
400-150860-3	MW-202	Total/NA	Water	SM 4500 F C	
400-150860-4	MW-203	Total/NA	Water	SM 4500 F C	
400-150860-5	MW-204	Total/NA	Water	SM 4500 F C	
400-150860-6	MW-205	Total/NA	Water	SM 4500 F C	
MB 400-391669/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-391669/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
660-86202-B-7 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
660-86202-B-7 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-150793-A-5 DU	Duplicate	Total/NA	Water	SM 4500 F C	

General Chemistry (Continued)

Analysis Batch: 391847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150860-2	MW-201	Total/NA	Water	SM 4500 SO4 E	
400-150860-7	MW-206	Total/NA	Water	SM 4500 SO4 E	
MB 400-391847/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-391847/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-391847/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-150861-A-3 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-150861-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	
400-151360-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-151360-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 391874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150860-7	MW-206	Total/NA	Water	SM 4500 F C	
400-150860-8	EB-02	Total/NA	Water	SM 4500 F C	
400-150860-9	FB-02	Total/NA	Water	SM 4500 F C	
400-150860-10	DUP-02	Total/NA	Water	SM 4500 F C	
MB 400-391874/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-391874/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-150860-7 MS	MW-206	Total/NA	Water	SM 4500 F C	
400-150860-7 MSD	MW-206	Total/NA	Water	SM 4500 F C	
400-151256-A-5 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Field Service / Mobile Lab

Analysis Batch: 393575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150860-1	MW-200	Total/NA	Water	Field Sampling	
400-150860-2	MW-201	Total/NA	Water	Field Sampling	
400-150860-3	MW-202	Total/NA	Water	Field Sampling	
400-150860-4	MW-203	Total/NA	Water	Field Sampling	
400-150860-5	MW-204	Total/NA	Water	Field Sampling	
400-150860-6	MW-205	Total/NA	Water	Field Sampling	
400-150860-7	MW-206	Total/NA	Water	Field Sampling	

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-390579/1-A ^5
Matrix: Water
Analysis Batch: 390726

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 390579

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/19/18 10:20	03/19/18 15:00	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/19/18 10:20	03/19/18 15:00	5
Barium	0.00049	U	0.0025	0.00049	mg/L		03/19/18 10:20	03/19/18 15:00	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:20	03/19/18 15:00	5
Boron	0.021	U	0.050	0.021	mg/L		03/19/18 10:20	03/19/18 15:00	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/19/18 10:20	03/19/18 15:00	5
Calcium	0.13	U	0.25	0.13	mg/L		03/19/18 10:20	03/19/18 15:00	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/19/18 10:20	03/19/18 15:00	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/19/18 10:20	03/19/18 15:00	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/19/18 10:20	03/19/18 15:00	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		03/19/18 10:20	03/19/18 15:00	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/19/18 10:20	03/19/18 15:00	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		03/19/18 10:20	03/19/18 15:00	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/19/18 10:20	03/19/18 15:00	5

Lab Sample ID: LCS 400-390579/2-A
Matrix: Water
Analysis Batch: 390726

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 390579

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0548		mg/L		110	80 - 120
Arsenic	0.0500	0.0535		mg/L		107	80 - 120
Barium	0.0500	0.0510		mg/L		102	80 - 120
Beryllium	0.0500	0.0516		mg/L		103	80 - 120
Boron	0.100	0.109		mg/L		109	80 - 120
Cadmium	0.0500	0.0535		mg/L		107	80 - 120
Calcium	5.00	5.43		mg/L		109	80 - 120
Chromium	0.0500	0.0523		mg/L		105	80 - 120
Cobalt	0.0500	0.0514		mg/L		103	80 - 120
Lead	0.0500	0.0492		mg/L		98	80 - 120
Lithium	0.0500	0.0526		mg/L		105	80 - 120
Molybdenum	0.0500	0.0537		mg/L		107	80 - 120
Selenium	0.0500	0.0515		mg/L		103	80 - 120
Thallium	0.0100	0.0105		mg/L		105	80 - 120

Lab Sample ID: 400-150860-1 MS
Matrix: Water
Analysis Batch: 390726

Client Sample ID: MW-200
Prep Type: Total Recoverable
Prep Batch: 390579

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0010	U	0.0500	0.0567		mg/L		113	75 - 125
Arsenic	0.0013		0.0500	0.0553		mg/L		108	75 - 125
Barium	0.042		0.0500	0.0928		mg/L		101	75 - 125
Beryllium	0.00034	U	0.0500	0.0509		mg/L		102	75 - 125
Boron	9.7	L	0.100	9.59	L J3	mg/L		-113	75 - 125
Cadmium	0.00039	I	0.0500	0.0533		mg/L		106	75 - 125
Calcium	270	L	5.00	267	L J3	mg/L		-43	75 - 125
Chromium	0.0011	U	0.0500	0.0509		mg/L		102	75 - 125

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

Lab Sample ID: 400-150860-1 MS
Matrix: Water
Analysis Batch: 390726

Client Sample ID: MW-200
Prep Type: Total Recoverable
Prep Batch: 390579

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.0011	I	0.0500	0.0513		mg/L		100	75 - 125
Lead	0.00047	I	0.0500	0.0487		mg/L		96	75 - 125
Lithium	0.0011	U	0.0500	0.0631	J3	mg/L		126	75 - 125
Molybdenum	0.00085	U	0.0500	0.0534		mg/L		107	75 - 125
Selenium	0.0064		0.0500	0.0579		mg/L		103	75 - 125
Thallium	0.00018	I	0.0100	0.0106		mg/L		104	75 - 125

Lab Sample ID: 400-150860-1 MSD
Matrix: Water
Analysis Batch: 390726

Client Sample ID: MW-200
Prep Type: Total Recoverable
Prep Batch: 390579

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.0010	U	0.0500	0.0563		mg/L		113	75 - 125	1	20
Arsenic	0.0013		0.0500	0.0557		mg/L		109	75 - 125	1	20
Barium	0.042		0.0500	0.0926		mg/L		100	75 - 125	0	20
Beryllium	0.00034	U	0.0500	0.0520		mg/L		104	75 - 125	2	20
Boron	9.7	L	0.100	9.86	L J3	mg/L		154	75 - 125	3	20
Cadmium	0.00039	I	0.0500	0.0552		mg/L		110	75 - 125	4	20
Calcium	270	L	5.00	273	L	mg/L		84	75 - 125	2	20
Chromium	0.0011	U	0.0500	0.0519		mg/L		104	75 - 125	2	20
Cobalt	0.0011	I	0.0500	0.0518		mg/L		101	75 - 125	1	20
Lead	0.00047	I	0.0500	0.0500		mg/L		99	75 - 125	3	20
Lithium	0.0011	U	0.0500	0.0649	J3	mg/L		130	75 - 125	3	20
Molybdenum	0.00085	U	0.0500	0.0542		mg/L		108	75 - 125	2	20
Selenium	0.0064		0.0500	0.0574		mg/L		102	75 - 125	1	20
Thallium	0.00018	I	0.0100	0.0106		mg/L		104	75 - 125	0	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-390725/14-A
Matrix: Water
Analysis Batch: 391500

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 390725

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		03/20/18 10:25	03/26/18 12:55	1

Lab Sample ID: LCS 400-390725/15-A
Matrix: Water
Analysis Batch: 391500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 390725

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.00109		mg/L		108	80 - 120

Lab Sample ID: 400-150957-C-1-C MS
Matrix: Water
Analysis Batch: 391500

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 390725

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.000070	U	0.00201	0.00212		mg/L		105	80 - 120

Lab Sample ID: 400-150957-C-1-D MSD
Matrix: Water
Analysis Batch: 391500

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 390725

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.000070	U	0.00201	0.00217		mg/L		108	80 - 120	2	20

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

Lab Sample ID: MB 400-390490/1
Matrix: Water
Analysis Batch: 390490

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			03/17/18 16:47	1

Lab Sample ID: LCS 400-390490/2
Matrix: Water
Analysis Batch: 390490

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	302		mg/L		103	78 - 122

Lab Sample ID: 400-150860-6 DU
Matrix: Water
Analysis Batch: 390490

Client Sample ID: MW-205
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	66		66.0		mg/L		0	5

Lab Sample ID: MB 400-390491/1
Matrix: Water
Analysis Batch: 390491

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			03/17/18 17:26	1

Lab Sample ID: LCS 400-390491/2
Matrix: Water
Analysis Batch: 390491

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	288		mg/L		98	78 - 122

Lab Sample ID: 400-150825-A-1 DU
Matrix: Water
Analysis Batch: 390491

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	54		54.0		mg/L		0	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-390817/6
Matrix: Water
Analysis Batch: 390817

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.60	U	2.0	0.60	mg/L			03/20/18 14:48	1

Lab Sample ID: LCS 400-390817/7
Matrix: Water
Analysis Batch: 390817

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	30.4		mg/L		101	90 - 110

Lab Sample ID: MRL 400-390817/3
Matrix: Water
Analysis Batch: 390817

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	1.81	I	mg/L		90	50 - 150

Lab Sample ID: 400-150860-1 MS
Matrix: Water
Analysis Batch: 390817

Client Sample ID: MW-200
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	530		200	513	J3	mg/L		-9	73 - 120

Lab Sample ID: 400-150860-1 MSD
Matrix: Water
Analysis Batch: 390817

Client Sample ID: MW-200
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	530		200	513	J3	mg/L		-9	73 - 120	0	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-391669/3
Matrix: Water
Analysis Batch: 391669

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.032	U	0.10	0.032	mg/L			03/27/18 12:43	1

Lab Sample ID: LCS 400-391669/4
Matrix: Water
Analysis Batch: 391669

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	4.10		mg/L		103	90 - 110

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 660-86202-B-7 MS
Matrix: Water
Analysis Batch: 391669

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	1.6		1.00	2.62		mg/L		106	75 - 125

Lab Sample ID: 660-86202-B-7 MSD
Matrix: Water
Analysis Batch: 391669

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	1.6		1.00	2.62		mg/L		106	75 - 125	0	4

Lab Sample ID: 400-150793-A-5 DU
Matrix: Water
Analysis Batch: 391669

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.10		0.100		mg/L		0	4

Lab Sample ID: MB 400-391874/3
Matrix: Water
Analysis Batch: 391874

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.032	U	0.10	0.032	mg/L			03/28/18 13:36	1

Lab Sample ID: LCS 400-391874/4
Matrix: Water
Analysis Batch: 391874

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	4.18		mg/L		105	90 - 110

Lab Sample ID: 400-150860-7 MS
Matrix: Water
Analysis Batch: 391874

Client Sample ID: MW-206
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.080	I	1.00	0.710	J3	mg/L		63	75 - 125

Lab Sample ID: 400-150860-7 MSD
Matrix: Water
Analysis Batch: 391874

Client Sample ID: MW-206
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.080	I	1.00	0.710	J3	mg/L		63	75 - 125	0	4

Lab Sample ID: 400-151256-A-5 DU
Matrix: Water
Analysis Batch: 391874

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.032	U	0.032	U	mg/L		NC	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-391085/6
Matrix: Water
Analysis Batch: 391085

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.4	U	5.0	1.4	mg/L			03/22/18 11:00	1

Lab Sample ID: LCS 400-391085/7
Matrix: Water
Analysis Batch: 391085

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	15.1		mg/L		101	90 - 110

Lab Sample ID: MRL 400-391085/3
Matrix: Water
Analysis Batch: 391085

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	4.66	I	mg/L		93	50 - 150

Lab Sample ID: 400-150860-1 MS
Matrix: Water
Analysis Batch: 391085

Client Sample ID: MW-200
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	160		50.0	161	J3	mg/L		0.08	77 - 128

Lab Sample ID: 400-150860-1 MSD
Matrix: Water
Analysis Batch: 391085

Client Sample ID: MW-200
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	160		50.0	161	J3	mg/L		-0.3	77 - 128	0	5

Lab Sample ID: MB 400-391847/6
Matrix: Water
Analysis Batch: 391847

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.4	U	5.0	1.4	mg/L			03/28/18 11:24	1

Lab Sample ID: LCS 400-391847/7
Matrix: Water
Analysis Batch: 391847

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	14.8		mg/L		99	90 - 110

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: MRL 400-391847/3
Matrix: Water
Analysis Batch: 391847

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	4.53	I	mg/L		91	50 - 150		

Lab Sample ID: 400-150861-A-3 MS
Matrix: Water
Analysis Batch: 391847

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	38		20.0	45.6	J3	mg/L		40	77 - 128		

Lab Sample ID: 400-150861-A-3 MSD
Matrix: Water
Analysis Batch: 391847

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	38		20.0	44.6	J3	mg/L		35	77 - 128	2	5

Lab Sample ID: 400-151360-A-1 MS
Matrix: Water
Analysis Batch: 391847

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	5.1		10.0	16.7		mg/L		116	77 - 128		

Lab Sample ID: 400-151360-A-1 MSD
Matrix: Water
Analysis Batch: 391847

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	5.1		10.0	16.8		mg/L		117	77 - 128	0	5

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Rick Hagendorfer	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No:
Client Contact: Kristi Mitchell	Phone: 850-336-0192	E-Mail: cheyenne.whitmire@testamericainc.com		Page:
Company: Gulf Power Company				Job #: 1T0860
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days):			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: CCR Plant Crist	Project #: 40005424			
Site: Gypsum Storage Area	SSOW#:			

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:

400-150860 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)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	SM4500_Cl_E - Chloride, SM4500_SO4_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C - Fluoride	6020 - Sb,As,Ba,Be,Cs,Cd,Cr,Co,Pb,Li,Mo,Se,Ti, 7470A - Mercury	FieldSampling - Field Sampling Parameters	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
MW-200	3-13-18	1823	G	Water			X	X	X	X	3	
MW-201	3-14-18	1152	G	Water			X	X	X	X	3	
MW-202	3-13-18	1135	G	Water			X	X	X	X	3	
MW-203	3-13-18	1331	G	Water			X	X	X	X	3	
MW-204	3-13-18	1525	G	Water			X	X	X	X	3	
MW-205	3-13-18	1645	G	Water			X	X	X	X	3	
MW-206	3-14-18	1031	G	Water			X	X	X	X	3	
EB-02	3-13-18	1731	G				X	X	X		3	
FB-02	3-13-18	1726	G				X	X	X		3	
Dup-02	3-13-18	1723	G				X	X	X		3	

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)

Special Instructions/QC Requirements:

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

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	3-14-18 1830	RDH ENV		3.14.18 1830	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: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

4/12/2018

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-150860-1
SDG Number: Gypsum Storage Area

Login Number: 150860
List Number: 1
Creator: Whitmire, Cheyenne R

List Source: 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	0.0°C, 0.0°C IR7
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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150860-1
SDG: Gypsum Storage Area

Laboratory: 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	06-30-18
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	ELAP	9	2510	03-31-18 *
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-18
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-18
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-17-12	09-30-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
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Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-150860-2
TestAmerica Sample Delivery Group: Gypsum Storage Area
Client Project/Site: CCR Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Cheyenne Whitmire

Authorized for release by:
4/12/2018 11:03:06 AM

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LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-150860-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-150860-2

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-356321: Insufficient sample volume was available to perform a sample duplicate (DUP,MS,MSD) for the following samples:MW-200 (400-150860-1), MW-201 (400-150860-2), MW-202 (400-150860-3), MW-203 (400-150860-4), MW-204 (400-150860-5), MW-205 (400-150860-6), MW-206 (400-150860-7), EB-02 (400-150860-8), FB-02 (400-150860-9) and DUP-02 (400-150860-10). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-356315: Insufficient sample volume was available to perform a sample duplicate (DUP,MS,MSD) for the following samples:MW-200 (400-150860-1), MW-201 (400-150860-2), MW-202 (400-150860-3), MW-203 (400-150860-4), MW-204 (400-150860-5), MW-205 (400-150860-6), MW-206 (400-150860-7), EB-02 (400-150860-8), FB-02 (400-150860-9) and DUP-02 (400-150860-10). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150860-2
SDG: Gypsum Storage Area

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

Protocol References:

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

Sample Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150860-2
SDG: Gypsum Storage Area

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-150860-1	MW-200	Water	03/13/18 18:23	03/14/18 18:30
400-150860-2	MW-201	Water	03/14/18 11:52	03/14/18 18:30
400-150860-3	MW-202	Water	03/13/18 11:35	03/14/18 18:30
400-150860-4	MW-203	Water	03/13/18 13:31	03/14/18 18:30
400-150860-5	MW-204	Water	03/13/18 15:25	03/14/18 18:30
400-150860-6	MW-205	Water	03/13/18 16:45	03/14/18 18:30
400-150860-7	MW-206	Water	03/14/18 10:31	03/14/18 18:30
400-150860-8	EB-02	Water	03/13/18 17:31	03/14/18 18:30
400-150860-9	FB-02	Water	03/13/18 17:26	03/14/18 18:30
400-150860-10	DUP-02	Water	03/13/18 17:23	03/14/18 18:30

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150860-2
SDG: Gypsum Storage Area

Client Sample ID: MW-200
Date Collected: 03/13/18 18:23
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-1
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	5.22		0.358	0.591	1.00	0.0720	pCi/L	03/19/18 09:01	04/10/18 05:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.1*		*40 - 110*	*03/19/18 09:01*	*04/10/18 05:36*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	5.70		0.530	0.746	1.00	0.405	pCi/L	03/19/18 09:32	03/23/18 16:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.1*		*40 - 110*	*03/19/18 09:32*	*03/23/18 16:30*	*1*
Y Carrier	*88.2*		*40 - 110*	*03/19/18 09:32*	*03/23/18 16:30*	*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	10.9		0.640	0.952	5.00	0.405	pCi/L		04/10/18 14:48	1

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150860-2
SDG: Gypsum Storage Area

Client Sample ID: MW-201
Date Collected: 03/14/18 11:52
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-2
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	3.01		0.270	0.382	1.00	0.0577	pCi/L	03/19/18 09:01	04/10/18 05:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*03/19/18 09:01*	*04/10/18 05:36*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.94		0.451	0.579	1.00	0.395	pCi/L	03/19/18 09:32	03/23/18 16:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*03/19/18 09:32*	*03/23/18 16:31*	*1*
Y Carrier	*89.3*		*40 - 110*	*03/19/18 09:32*	*03/23/18 16:31*	*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	6.95		0.526	0.694	5.00	0.395	pCi/L		04/10/18 14:48	1

Client Sample ID: MW-202

Date Collected: 03/13/18 11:35
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-3

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	0.883		0.155	0.175	1.00	0.0738	pCi/L	03/19/18 09:01	04/10/18 05:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.2*		*40 - 110*	*03/19/18 09:01*	*04/10/18 05:36*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.941		0.318	0.329	1.00	0.427	pCi/L	03/19/18 09:32	03/23/18 16:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.2*		*40 - 110*	*03/19/18 09:32*	*03/23/18 16:31*	*1*
Y Carrier	*81.5*		*40 - 110*	*03/19/18 09:32*	*03/23/18 16:31*	*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	1.82		0.354	0.373	5.00	0.427	pCi/L		04/10/18 14:48	1

Client Sample ID: MW-203

Date Collected: 03/13/18 13:31
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-4

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	2.14		0.230	0.300	1.00	0.0776	pCi/L	03/19/18 09:01	04/10/18 05:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*03/19/18 09:01*	*04/10/18 05:36*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.81		0.500	0.667	1.00	0.406	pCi/L	03/19/18 09:32	03/23/18 16:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*03/19/18 09:32*	*03/23/18 16:31*	*1*
Y Carrier	*82.6*		*40 - 110*	*03/19/18 09:32*	*03/23/18 16:31*	*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	6.95		0.550	0.731	5.00	0.406	pCi/L		04/10/18 14:48	1

Client Sample ID: MW-204
Date Collected: 03/13/18 15:25
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-5
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	1.36		0.186	0.223	1.00	0.0706	pCi/L	03/19/18 09:01	04/10/18 05:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.1*		*40 - 110*	*03/19/18 09:01*	*04/10/18 05:36*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	12.8		0.773	1.41	1.00	0.367	pCi/L	03/19/18 09:32	03/23/18 16:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.1*		*40 - 110*	*03/19/18 09:32*	*03/23/18 16:31*	*1*
Y Carrier	*82.2*		*40 - 110*	*03/19/18 09:32*	*03/23/18 16:31*	*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	14.1		0.795	1.43	5.00	0.367	pCi/L		04/10/18 14:48	1

Client Sample ID: MW-205

Date Collected: 03/13/18 16:45
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-6

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	0.356		0.105	0.110	1.00	0.0926	pCi/L	03/19/18 09:01	04/10/18 05:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.9*		*40 - 110*	*03/19/18 09:01*	*04/10/18 05:36*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.518		0.264	0.268	1.00	0.392	pCi/L	03/19/18 09:32	03/23/18 16:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.9*		*40 - 110*	*03/19/18 09:32*	*03/23/18 16:31*	*1*
Y Carrier	*88.6*		*40 - 110*	*03/19/18 09:32*	*03/23/18 16:31*	*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	0.874		0.284	0.290	5.00	0.392	pCi/L		04/10/18 14:48	1

Client Sample ID: MW-206

Date Collected: 03/14/18 10:31
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-7

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	6.92		0.413	0.747	1.00	0.0883	pCi/L	03/19/18 09:01	04/10/18 05:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.6*		*40 - 110*	*03/19/18 09:01*	*04/10/18 05:36*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	10.7		0.714	1.22	1.00	0.375	pCi/L	03/19/18 09:32	03/23/18 16:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.6*		*40 - 110*	*03/19/18 09:32*	*03/23/18 16:31*	*1*
Y Carrier	*82.6*		*40 - 110*	*03/19/18 09:32*	*03/23/18 16:31*	*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	17.7		0.825	1.43	5.00	0.375	pCi/L		04/10/18 14:48	1

Client Sample ID: EB-02

Date Collected: 03/13/18 17:31
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-8

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	0.00986	U	0.0362	0.0362	1.00	0.0723	pCi/L	03/19/18 09:01	04/10/18 05:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.9*		*40 - 110*	*03/19/18 09:01*	*04/10/18 05:37*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0372	U	0.208	0.208	1.00	0.379	pCi/L	03/19/18 09:32	03/23/18 16:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.9*		*40 - 110*	*03/19/18 09:32*	*03/23/18 16:31*	*1*
Y Carrier	*87.5*		*40 - 110*	*03/19/18 09:32*	*03/23/18 16:31*	*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	-0.0273	U	0.211	0.211	5.00	0.379	pCi/L		04/10/18 14:48	1

Client Sample ID: FB-02

Date Collected: 03/13/18 17:26
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-9

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	-0.00354	U	0.0278	0.0278	1.00	0.0659	pCi/L	03/19/18 09:01	04/10/18 05:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*03/19/18 09:01*	*04/10/18 05:37*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.247	U	0.204	0.206	1.00	0.324	pCi/L	03/19/18 09:32	03/23/18 16:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*03/19/18 09:32*	*03/23/18 16:31*	*1*
Y Carrier	*87.9*		*40 - 110*	*03/19/18 09:32*	*03/23/18 16:31*	*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	0.244	U	0.206	0.208	5.00	0.324	pCi/L		04/10/18 14:48	1

Client Sample ID: DUP-02

Date Collected: 03/13/18 17:23
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-10

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	5.04		0.352	0.575	1.00	0.0762	pCi/L	03/19/18 09:01	04/10/18 05:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.8*		*40 - 110*	*03/19/18 09:01*	*04/10/18 05:37*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	6.15		0.539	0.782	1.00	0.361	pCi/L	03/19/18 09:32	03/23/18 16:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.8*		*40 - 110*	*03/19/18 09:32*	*03/23/18 16:31*	*1*
Y Carrier	*87.9*		*40 - 110*	*03/19/18 09:32*	*03/23/18 16:31*	*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	11.2		0.644	0.971	5.00	0.361	pCi/L		04/10/18 14:48	1

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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150860-2
SDG: Gypsum Storage Area

Client Sample ID: MW-200
Date Collected: 03/13/18 18:23
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356315	03/19/18 09:01	TJT	TAL SL
Total/NA	Analysis	9315		1	359778	04/10/18 05:36	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356321	03/19/18 09:32	TJT	TAL SL
Total/NA	Analysis	9320		1	357357	03/23/18 16:30	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Client Sample ID: MW-201
Date Collected: 03/14/18 11:52
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356315	03/19/18 09:01	TJT	TAL SL
Total/NA	Analysis	9315		1	359778	04/10/18 05:36	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356321	03/19/18 09:32	TJT	TAL SL
Total/NA	Analysis	9320		1	357357	03/23/18 16:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Client Sample ID: MW-202
Date Collected: 03/13/18 11:35
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356315	03/19/18 09:01	TJT	TAL SL
Total/NA	Analysis	9315		1	359778	04/10/18 05:36	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356321	03/19/18 09:32	TJT	TAL SL
Total/NA	Analysis	9320		1	357357	03/23/18 16:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Client Sample ID: MW-203
Date Collected: 03/13/18 13:31
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356315	03/19/18 09:01	TJT	TAL SL
Total/NA	Analysis	9315		1	359778	04/10/18 05:36	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356321	03/19/18 09:32	TJT	TAL SL
Total/NA	Analysis	9320		1	357357	03/23/18 16:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150860-2
SDG: Gypsum Storage Area

Client Sample ID: MW-204
Date Collected: 03/13/18 15:25
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356315	03/19/18 09:01	TJT	TAL SL
Total/NA	Analysis	9315		1	359778	04/10/18 05:36	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356321	03/19/18 09:32	TJT	TAL SL
Total/NA	Analysis	9320		1	357357	03/23/18 16:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Client Sample ID: MW-205
Date Collected: 03/13/18 16:45
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356315	03/19/18 09:01	TJT	TAL SL
Total/NA	Analysis	9315		1	359778	04/10/18 05:36	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356321	03/19/18 09:32	TJT	TAL SL
Total/NA	Analysis	9320		1	357357	03/23/18 16:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Client Sample ID: MW-206
Date Collected: 03/14/18 10:31
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356315	03/19/18 09:01	TJT	TAL SL
Total/NA	Analysis	9315		1	359778	04/10/18 05:36	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356321	03/19/18 09:32	TJT	TAL SL
Total/NA	Analysis	9320		1	357357	03/23/18 16:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Client Sample ID: EB-02
Date Collected: 03/13/18 17:31
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356315	03/19/18 09:01	TJT	TAL SL
Total/NA	Analysis	9315		1	359778	04/10/18 05:37	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356321	03/19/18 09:32	TJT	TAL SL
Total/NA	Analysis	9320		1	357357	03/23/18 16:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150860-2
SDG: Gypsum Storage Area

Client Sample ID: FB-02

Date Collected: 03/13/18 17:26
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356315	03/19/18 09:01	TJT	TAL SL
Total/NA	Analysis	9315		1	359778	04/10/18 05:37	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356321	03/19/18 09:32	TJT	TAL SL
Total/NA	Analysis	9320		1	357357	03/23/18 16:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Client Sample ID: DUP-02

Date Collected: 03/13/18 17:23
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150860-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356315	03/19/18 09:01	TJT	TAL SL
Total/NA	Analysis	9315		1	359778	04/10/18 05:37	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356321	03/19/18 09:32	TJT	TAL SL
Total/NA	Analysis	9320		1	357357	03/23/18 16:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Laboratory References:

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

Rad

Prep Batch: 356315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150860-1	MW-200	Total/NA	Water	PrecSep-21	
400-150860-2	MW-201	Total/NA	Water	PrecSep-21	
400-150860-3	MW-202	Total/NA	Water	PrecSep-21	
400-150860-4	MW-203	Total/NA	Water	PrecSep-21	
400-150860-5	MW-204	Total/NA	Water	PrecSep-21	
400-150860-6	MW-205	Total/NA	Water	PrecSep-21	
400-150860-7	MW-206	Total/NA	Water	PrecSep-21	
400-150860-8	EB-02	Total/NA	Water	PrecSep-21	
400-150860-9	FB-02	Total/NA	Water	PrecSep-21	
400-150860-10	DUP-02	Total/NA	Water	PrecSep-21	
MB 160-356315/17-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-356315/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-356315/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 356321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150860-1	MW-200	Total/NA	Water	PrecSep_0	
400-150860-2	MW-201	Total/NA	Water	PrecSep_0	
400-150860-3	MW-202	Total/NA	Water	PrecSep_0	
400-150860-4	MW-203	Total/NA	Water	PrecSep_0	
400-150860-5	MW-204	Total/NA	Water	PrecSep_0	
400-150860-6	MW-205	Total/NA	Water	PrecSep_0	
400-150860-7	MW-206	Total/NA	Water	PrecSep_0	
400-150860-8	EB-02	Total/NA	Water	PrecSep_0	
400-150860-9	FB-02	Total/NA	Water	PrecSep_0	
400-150860-10	DUP-02	Total/NA	Water	PrecSep_0	
MB 160-356321/17-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-356321/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-356321/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-356315/17-A
Matrix: Water
Analysis Batch: 359778

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 356315

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0006187	U	0.0344	0.0344	1.00	0.0754	pCi/L	03/19/18 09:01	04/10/18 05:37	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*03/19/18 09:01*	*04/10/18 05:37*	*1*

Lab Sample ID: LCS 160-356315/1-A
Matrix: Water
Analysis Batch: 359778

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 356315

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.8	11.32		1.14	1.00	0.0605	pCi/L	96	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*106*		*40 - 110*

Lab Sample ID: LCSD 160-356315/2-A
Matrix: Water
Analysis Batch: 359778

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 356315

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.8	10.43		1.07	1.00	0.0797	pCi/L	88	68 - 137	0.40	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*102*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-356321/17-A
Matrix: Water
Analysis Batch: 357357

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 356321

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.02781	U	0.192	0.192	1.00	0.340	pCi/L	03/19/18 09:32	03/23/18 16:31	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*03/19/18 09:32*	*03/23/18 16:31*	*1*
Y Carrier	*87.9*		*40 - 110*	*03/19/18 09:32*	*03/23/18 16:31*	*1*

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

Lab Sample ID: LCS 160-356321/1-A
Matrix: Water
Analysis Batch: 357357

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 356321

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			8.46	8.533		1.00	1.00	0.354	pCi/L	101	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*106*		*40 - 110*
Y Carrier	*84.1*		*40 - 110*

Lab Sample ID: LCSD 160-356321/2-A
Matrix: Water
Analysis Batch: 357357

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 356321

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			8.46	8.768		1.02	1.00	0.394	pCi/L	104	56 - 140	0.12	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*102*		*40 - 110*
Y Carrier	*87.9*		*40 - 110*

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Rick Hagendorfer	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No:
Client Contact: Kristi Mitchell	Phone: 850-336-0192	E-Mail: cheyenne.whitmire@testamericainc.com		Page:
Company: Gulf Power Company				Job #: 150860
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days):			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: CCR Plant Crist	Project #: 40005424			
Site: Gypsum Storage Area	SSOW#:			

Analysis Requested

400-150860 COC

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)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	SM4500_Cl_E - Chloride, SM4500_SO4_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C - Fluoride	6020 - Sb,As,Ba,B,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, 7470A - Mercury	FieldSampling - Field Sampling Parameters	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
MW-200	3-13-18	1823	G	Water			X	X	X	X	3	
MW-201	3-14-18	1152	G	Water			X	X	X	X	3	
MW-202	3-13-18	1135	G	Water			X	X	X	X	3	
MW-203	3-13-18	1331	G	Water			X	X	X	X	3	
MW-204	3-13-18	1525	G	Water			X	X	X	X	3	
MW-205	3-13-18	1645	G	Water			X	X	X	X	3	
MW-206	3-14-18	1031	G	Water			X	X	X	X	3	
EB-02	3-13-18	1731	G				X	X	X		3	
FB-02	3-13-18	1726	G				X	X	X		3	
Dup-02	3-13-18	1723	G				X	X	X		3	

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)

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	3-14-18 1830	RDH EW	[signature]	3.14.18 1830	TA-Pen

Custody Seals Intact: Δ Yes Λ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
		0.0 °C [signature]

4/12/2018

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-150860-2
SDG Number: Gypsum Storage Area

Login Number: 150860
List Number: 1
Creator: Whitmire, Cheyenne R

List Source: 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	0.0°C, 0.0°C IR7
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: Gulf Power Company

Job Number: 400-150860-2
SDG Number: Gypsum Storage Area

Login Number: 150860
List Number: 2
Creator: Daniels, Brian J

List Source: TestAmerica St. Louis
List Creation: 03/16/18 02:29 PM

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	18,18
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?	False	
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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150860-2
SDG: Gypsum Storage Area

Laboratory: 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	06-30-18
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	ELAP	9	2510	03-31-18 *
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-18
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-18
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-17-12	09-30-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

Laboratory: 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
Alaska	State Program	10	MO00054	06-30-18
Arizona	State Program	9	AZ0813	12-08-18
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-18
Illinois	NELAP	5	200023	11-30-18
Iowa	State Program	7	373	12-01-18
Kansas	NELAP	7	E-10236	10-31-18
Kentucky (DW)	State Program	4	90125	12-31-18
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-18
Louisiana (DW)	NELAP	6	LA180017	12-31-18
Maryland	State Program	3	310	09-30-18
Michigan	State Program	5	9005	06-30-18
Missouri	State Program	7	780	06-30-18
Nevada	State Program	9	MO000542018-1	07-31-18
New Jersey	NELAP	2	MO002	06-30-18 *

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

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150860-2
SDG: Gypsum Storage Area

Laboratory: TestAmerica St. Louis (Continued)

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
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-18
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-18
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-18
Texas	NELAP	6	T104704193-17-11	07-31-18
US Fish & Wildlife	Federal		058448	08-31-18
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-18
Virginia	NELAP	3	460230	06-14-18
Washington	State Program	10	C592	08-30-18
West Virginia DEP	State Program	3	381	08-31-18 *

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

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

TestAmerica Job ID: 400-150861-1
TestAmerica Sample Delivery Group: Landfill 1
Client Project/Site: CCR Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Authorized for release by:
4/12/2018 11:03:51 AM

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

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-150861-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-150861-1

Metals

Method(s) 6020: The method blank for preparation batch 391369 and analytical batch 391638 contained Selenium 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(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 391369 and analytical batch 391638 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 samples were diluted to bring the concentration of target analytes within the calibration range: MW-104 (400-150861-4) and MW-110 (400-150861-8). Elevated reporting limits (RLs) are provided.

Method(s) 7470A: The method blank for preparation batch 392233 and analytical batch 392873 contained Mercury above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-analysis of samples was not performed.

General Chemistry

Method(s) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries 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) SM 4500 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-104 (400-150861-4), (400-150860-A-1), (400-150860-A-1 MS), (400-150860-A-1 MSD) and MW-110 (400-150861-8). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 Cl- E: The method blank for analytical batch 392314 contained chloride 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(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-103 (400-150861-3), MW-104 (400-150861-4) and MW-110 (400-150861-8). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-391847 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.

Detection Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150861-1
SDG: Landfill 1

Client Sample ID: MW-101 — Lab Sample ID: 400-150861-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0089		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.49		0.25	0.13	mg/L	5		6020	Total Recoverable
Selenium	0.00067	I V	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Mercury	0.000093	I V	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	8.0		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.2		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.12		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Field pH	5.14				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-102 — Lab Sample ID: 400-150861-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0084		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.63		0.25	0.13	mg/L	5		6020	Total Recoverable
Selenium	0.0010	I V	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Mercury	0.000094	I V	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	14		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.2		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	5.08				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-103 — Lab Sample ID: 400-150861-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.052		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.32		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	3.9		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0020	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0032		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Mercury	0.00012	I V	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	66		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	7.7		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	38		10	2.8	mg/L	2		SM 4500 SO4 E	Total/NA
Field pH	4.89				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-104 — Lab Sample ID: 400-150861-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0027		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.025		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.0011	I	0.0025	0.00034	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-104 (Continued) — Lab Sample ID: 400-150861-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.00052	I	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	55		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0023	I	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.014		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0023		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.028		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0057		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00021	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	11		1.0	0.42	mg/L	100		6020	Total Recoverable
Mercury	0.0011		0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	1100		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	160		10	3.0	mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.30		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	540		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	4.2				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-105 — Lab Sample ID: 400-150861-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0039		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.038		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.70		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	62		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0022	I	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0054	I	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00060	I V	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	300		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	45		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	22		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.29				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-106 — Lab Sample ID: 400-150861-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0096		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.47		0.25	0.13	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-106 (Continued) — Lab Sample ID: 400-150861-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.00044	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.000080	I V	0.00020	0.000070	mg/L	1		7470A	Total/NA
Chloride	3.7		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	5.28				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-109 — Lab Sample ID: 400-150861-7

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.017		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	3.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0038		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0059		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Mercury	0.000097	I V	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	12		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	6.9	V	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	9.7		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	4.71				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-110 — Lab Sample ID: 400-150861-8

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00056	I	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.036		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	35		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.012		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.012		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0038		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00029	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	4.6		0.50	0.21	mg/L	50		6020	Total Recoverable
Mercury	0.0059		0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	660		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	140		10	3.0	mg/L	5		SM 4500 Cl- E	Total/NA
Sulfate	270		50	14	mg/L	10		SM 4500 SO4 E	Total/NA
Field pH	4.75				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-03 — Lab Sample ID: 400-150861-9

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0039		0.0013	0.00046	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150861-1
SDG: Landfill 1

Client Sample ID: DUP-03 (Continued) — Lab Sample ID: 400-150861-9

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.038		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.71		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	65		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0027		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00040	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0052	I	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00034	I V	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	4.0	I	5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	1.3	I V	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA

Client Sample ID: EB-03 — Lab Sample ID: 400-150861-10

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	0.87		0.25	0.13	mg/L	5		6020	Total Recoverable
Lead	0.00048	I	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Mercury	0.000088	I V	0.00020	0.000070	mg/L	1		7470A	Total/NA
Chloride	1.3	I V	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA

Client Sample ID: FB-03 — Lab Sample ID: 400-150861-11

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.00011	I V	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	6.0		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	46		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	22		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150861-1
SDG: Landfill 1

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

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

Sample Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150861-1
SDG: Landfill 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-150861-1	MW-101	Water	03/14/18 08:46	03/14/18 18:30
400-150861-2	MW-102	Water	03/14/18 14:17	03/14/18 18:30
400-150861-3	MW-103	Water	03/14/18 17:50	03/14/18 18:30
400-150861-4	MW-104	Water	03/14/18 15:55	03/14/18 18:30
400-150861-5	MW-105	Water	03/14/18 12:45	03/14/18 18:30
400-150861-6	MW-106	Water	03/14/18 10:32	03/14/18 18:30
400-150861-7	MW-109	Water	03/14/18 16:23	03/14/18 18:30
400-150861-8	MW-110	Water	03/14/18 14:38	03/14/18 18:30
400-150861-9	DUP-03	Water	03/14/18 11:45	03/14/18 18:30
400-150861-10	EB-03	Water	03/14/18 15:45	03/14/18 18:30
400-150861-11	FB-03	Water	03/14/18 12:00	03/14/18 18:30

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150861-1
SDG: Landfill 1

Client Sample ID: MW-101
Date Collected: 03/14/18 08:46
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-1
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/25/18 13:50	03/26/18 18:23	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/25/18 13:50	03/26/18 18:23	5
Barium	**0.0089**		0.0025	0.00049	mg/L		03/25/18 13:50	03/26/18 18:23	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 18:23	5
Boron	0.021	U	0.050	0.021	mg/L		03/25/18 13:50	03/26/18 18:23	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 18:23	5
Calcium	**0.49**		0.25	0.13	mg/L		03/25/18 13:50	03/26/18 18:23	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/25/18 13:50	03/26/18 18:23	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/25/18 13:50	03/26/18 18:23	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/25/18 13:50	03/26/18 18:23	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		03/25/18 13:50	03/26/18 18:23	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/25/18 13:50	03/26/18 18:23	5
Selenium	**0.00067**	**I V**	0.0013	0.00024	mg/L		03/25/18 13:50	03/26/18 18:23	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/25/18 13:50	03/26/18 18:23	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.000093**	**I V**	0.00020	0.000070	mg/L		03/31/18 15:08	04/05/18 11:13	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**8.0**		5.0	3.4	mg/L			03/17/18 17:26	1
Chloride	**5.2**		2.0	0.60	mg/L			03/20/18 14:51	1
Fluoride	**0.12**		0.10	0.032	mg/L			03/29/18 13:20	1
Sulfate	1.4	U	5.0	1.4	mg/L			03/28/18 11:34	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**5.14**				SU			03/14/18 08:46	1

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150861-1
SDG: Landfill 1

Client Sample ID: MW-102

Date Collected: 03/14/18 14:17
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-2

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/25/18 13:50	03/26/18 18:45	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/25/18 13:50	03/26/18 18:45	5
Barium	**0.0084**		0.0025	0.00049	mg/L		03/25/18 13:50	03/26/18 18:45	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 18:45	5
Boron	0.021	U	0.050	0.021	mg/L		03/25/18 13:50	03/26/18 18:45	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 18:45	5
Calcium	**0.63**		0.25	0.13	mg/L		03/25/18 13:50	03/26/18 18:45	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/25/18 13:50	03/26/18 18:45	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/25/18 13:50	03/26/18 18:45	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/25/18 13:50	03/26/18 18:45	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		03/25/18 13:50	03/26/18 18:45	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/25/18 13:50	03/26/18 18:45	5
Selenium	**0.0010**	**I V**	0.0013	0.00024	mg/L		03/25/18 13:50	03/26/18 18:45	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/25/18 13:50	03/26/18 18:45	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.000094**	**I V**	0.00020	0.000070	mg/L		03/31/18 15:08	04/05/18 11:15	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**14**		5.0	3.4	mg/L			03/17/18 17:26	1
Chloride	**5.2**		2.0	0.60	mg/L			03/20/18 14:57	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/29/18 10:23	1
Sulfate	1.4	U	5.0	1.4	mg/L			03/28/18 11:34	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**5.08**				SU			03/14/18 14:17	1

Client Sample ID: MW-103

Date Collected: 03/14/18 17:50
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-3

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/25/18 13:50	03/26/18 18:50	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/25/18 13:50	03/26/18 18:50	5
Barium	**0.052**		0.0025	0.00049	mg/L		03/25/18 13:50	03/26/18 18:50	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 18:50	5
Boron	**0.32**		0.050	0.021	mg/L		03/25/18 13:50	03/26/18 18:50	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 18:50	5
Calcium	**3.9**		0.25	0.13	mg/L		03/25/18 13:50	03/26/18 18:50	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/25/18 13:50	03/26/18 18:50	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/25/18 13:50	03/26/18 18:50	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/25/18 13:50	03/26/18 18:50	5
Lithium	**0.0020**	**I**	0.0050	0.0011	mg/L		03/25/18 13:50	03/26/18 18:50	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/25/18 13:50	03/26/18 18:50	5
Selenium	**0.0032**		0.0013	0.00024	mg/L		03/25/18 13:50	03/26/18 18:50	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/25/18 13:50	03/26/18 18:50	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00012**	**I V**	0.00020	0.000070	mg/L		03/31/18 15:08	04/05/18 11:16	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**66**		5.0	3.4	mg/L			03/17/18 17:26	1
Chloride	**7.7**		2.0	0.60	mg/L			03/20/18 14:57	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/29/18 10:27	1
Sulfate	**38**		10	2.8	mg/L			03/28/18 12:00	2

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.89**				SU			03/14/18 17:50	1

Client Sample ID: MW-104

Date Collected: 03/14/18 15:55
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-4

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/25/18 13:50	03/26/18 18:54	5
Arsenic	**0.0027**		0.0013	0.00046	mg/L		03/25/18 13:50	03/26/18 18:54	5
Barium	**0.025**		0.0025	0.00049	mg/L		03/25/18 13:50	03/26/18 18:54	5
Beryllium	**0.0011**	**I**	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 18:54	5
Cadmium	**0.00052**	**I**	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 18:54	5
Calcium	**55**		0.25	0.13	mg/L		03/25/18 13:50	03/26/18 18:54	5
Chromium	**0.0023**	**I**	0.0025	0.0011	mg/L		03/25/18 13:50	03/26/18 18:54	5
Cobalt	**0.014**		0.0025	0.00040	mg/L		03/25/18 13:50	03/26/18 18:54	5
Lead	**0.0023**		0.0013	0.00035	mg/L		03/25/18 13:50	03/26/18 18:54	5
Lithium	**0.028**		0.0050	0.0011	mg/L		03/25/18 13:50	03/26/18 18:54	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/25/18 13:50	03/26/18 18:54	5
Selenium	**0.0057**		0.0013	0.00024	mg/L		03/25/18 13:50	03/26/18 18:54	5
Thallium	**0.00021**	**I**	0.00050	0.000085	mg/L		03/25/18 13:50	03/26/18 18:54	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**11**		1.0	0.42	mg/L		03/25/18 13:50	03/27/18 13:55	100

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.0011**		0.00020	0.000070	mg/L		03/31/18 15:08	04/05/18 11:18	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1100**		5.0	3.4	mg/L			03/17/18 17:26	1
Chloride	**160**		10	3.0	mg/L			03/20/18 15:29	5
Fluoride	**0.30**		0.10	0.032	mg/L			03/29/18 10:08	1
Sulfate	**540**		100	28	mg/L			03/28/18 12:29	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.2**				SU			03/14/18 15:55	1

Client Sample ID: MW-105

Date Collected: 03/14/18 12:45
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-5

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/25/18 13:50	03/26/18 19:21	5
Arsenic	**0.0039**		0.0013	0.00046	mg/L		03/25/18 13:50	03/26/18 19:21	5
Barium	**0.038**		0.0025	0.00049	mg/L		03/25/18 13:50	03/26/18 19:21	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 19:21	5
Boron	**0.70**		0.050	0.021	mg/L		03/25/18 13:50	03/26/18 19:21	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 19:21	5
Calcium	**62**		0.25	0.13	mg/L		03/25/18 13:50	03/26/18 19:21	5
Chromium	**0.0022**	**I**	0.0025	0.0011	mg/L		03/25/18 13:50	03/26/18 19:21	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/25/18 13:50	03/26/18 19:21	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/25/18 13:50	03/26/18 19:21	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		03/25/18 13:50	03/26/18 19:21	5
Molybdenum	**0.0054**	**I**	0.015	0.00085	mg/L		03/25/18 13:50	03/26/18 19:21	5
Selenium	**0.00060**	**I V**	0.0013	0.00024	mg/L		03/25/18 13:50	03/26/18 19:21	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/25/18 13:50	03/26/18 19:21	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		03/31/18 15:08	04/05/18 11:20	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**300**		5.0	3.4	mg/L			03/17/18 17:26	1
Chloride	**45**		2.0	0.60	mg/L			03/20/18 14:57	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/29/18 10:30	1
Sulfate	**22**		5.0	1.4	mg/L			03/28/18 11:39	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**6.29**				SU			03/14/18 12:45	1

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150861-1
SDG: Landfill 1

Client Sample ID: MW-106

Date Collected: 03/14/18 10:32
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-6

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/25/18 13:50	03/26/18 19:26	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/25/18 13:50	03/26/18 19:26	5
Barium	**0.0096**		0.0025	0.00049	mg/L		03/25/18 13:50	03/26/18 19:26	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 19:26	5
Boron	0.021	U	0.050	0.021	mg/L		03/25/18 13:50	03/26/18 19:26	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 19:26	5
Calcium	**0.47**		0.25	0.13	mg/L		03/25/18 13:50	03/26/18 19:26	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/25/18 13:50	03/26/18 19:26	5
Cobalt	**0.00044**	**I**	0.0025	0.00040	mg/L		03/25/18 13:50	03/26/18 19:26	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/25/18 13:50	03/26/18 19:26	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		03/25/18 13:50	03/26/18 19:26	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/25/18 13:50	03/26/18 19:26	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		03/25/18 13:50	03/26/18 19:26	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/25/18 13:50	03/26/18 19:26	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.000080**	**I V**	0.00020	0.000070	mg/L		03/31/18 15:08	04/05/18 11:22	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			03/17/18 17:26	1
Chloride	**3.7**		2.0	0.60	mg/L			03/20/18 14:57	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/29/18 10:33	1
Sulfate	1.4	U	5.0	1.4	mg/L			03/28/18 11:39	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**5.28**				SU			03/14/18 10:32	1

Client Sample ID: MW-109

Date Collected: 03/14/18 16:23
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-7

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/25/18 13:50	03/26/18 19:30	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/25/18 13:50	03/26/18 19:30	5
Barium	**0.017**		0.0025	0.00049	mg/L		03/25/18 13:50	03/26/18 19:30	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 19:30	5
Boron	0.021	U	0.050	0.021	mg/L		03/25/18 13:50	03/26/18 19:30	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 19:30	5
Calcium	**3.1**		0.25	0.13	mg/L		03/25/18 13:50	03/26/18 19:30	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/25/18 13:50	03/26/18 19:30	5
Cobalt	**0.0038**		0.0025	0.00040	mg/L		03/25/18 13:50	03/26/18 19:30	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/25/18 13:50	03/26/18 19:30	5
Lithium	**0.0059**		0.0050	0.0011	mg/L		03/25/18 13:50	03/26/18 19:30	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/25/18 13:50	03/26/18 19:30	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		03/25/18 13:50	03/26/18 19:30	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/25/18 13:50	03/26/18 19:30	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.000097**	**I V**	0.00020	0.000070	mg/L		03/31/18 15:08	04/05/18 11:24	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**12**		5.0	3.4	mg/L			03/17/18 17:26	1
Chloride	**6.9**	**V**	2.0	0.60	mg/L			04/02/18 09:32	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/29/18 10:37	1
Sulfate	**9.7**		5.0	1.4	mg/L			03/28/18 11:39	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.71**				SU			03/14/18 16:23	1

Client Sample ID: MW-110

Date Collected: 03/14/18 14:38
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-8

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/25/18 13:50	03/26/18 19:35	5
Arsenic	**0.00056**	**I**	0.0013	0.00046	mg/L		03/25/18 13:50	03/26/18 19:35	5
Barium	**0.036**		0.0025	0.00049	mg/L		03/25/18 13:50	03/26/18 19:35	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 19:35	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 19:35	5
Calcium	**35**		0.25	0.13	mg/L		03/25/18 13:50	03/26/18 19:35	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/25/18 13:50	03/26/18 19:35	5
Cobalt	**0.012**		0.0025	0.00040	mg/L		03/25/18 13:50	03/26/18 19:35	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/25/18 13:50	03/26/18 19:35	5
Lithium	**0.012**		0.0050	0.0011	mg/L		03/25/18 13:50	03/26/18 19:35	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/25/18 13:50	03/26/18 19:35	5
Selenium	**0.0038**		0.0013	0.00024	mg/L		03/25/18 13:50	03/26/18 19:35	5
Thallium	**0.00029**	**I**	0.00050	0.000085	mg/L		03/25/18 13:50	03/26/18 19:35	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**4.6**		0.50	0.21	mg/L		03/25/18 13:50	03/27/18 14:00	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.0059**		0.00020	0.000070	mg/L		03/31/18 15:08	04/05/18 11:25	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**660**		5.0	3.4	mg/L			03/17/18 17:26	1
Chloride	**140**		10	3.0	mg/L			04/02/18 09:43	5
Fluoride	0.032	U	0.10	0.032	mg/L			03/29/18 10:41	1
Sulfate	**270**		50	14	mg/L			03/28/18 12:09	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.75**				SU			03/14/18 14:38	1

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150861-1
SDG: Landfill 1

Client Sample ID: DUP-03
Date Collected: 03/14/18 11:45
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-9
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/25/18 13:50	03/26/18 19:48	5
Arsenic	**0.0039**		0.0013	0.00046	mg/L		03/25/18 13:50	03/26/18 19:48	5
Barium	**0.038**		0.0025	0.00049	mg/L		03/25/18 13:50	03/26/18 19:48	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 19:48	5
Boron	**0.71**		0.050	0.021	mg/L		03/25/18 13:50	03/26/18 19:48	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 19:48	5
Calcium	**65**		0.25	0.13	mg/L		03/25/18 13:50	03/26/18 19:48	5
Chromium	**0.0027**		0.0025	0.0011	mg/L		03/25/18 13:50	03/26/18 19:48	5
Cobalt	**0.00040**	**I**	0.0025	0.00040	mg/L		03/25/18 13:50	03/26/18 19:48	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/25/18 13:50	03/26/18 19:48	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		03/25/18 13:50	03/26/18 19:48	5
Molybdenum	**0.0052**	**I**	0.015	0.00085	mg/L		03/25/18 13:50	03/26/18 19:48	5
Selenium	**0.00034**	**I V**	0.0013	0.00024	mg/L		03/25/18 13:50	03/26/18 19:48	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/25/18 13:50	03/26/18 19:48	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		03/31/18 15:08	04/05/18 11:53	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**4.0**	**I**	5.0	3.4	mg/L			03/17/18 17:26	1
Chloride	**1.3**	**I V**	2.0	0.60	mg/L			04/02/18 09:31	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/29/18 10:51	1
Sulfate	1.4	U	5.0	1.4	mg/L			03/28/18 11:30	1

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150861-1
SDG: Landfill 1

Client Sample ID: EB-03
Date Collected: 03/14/18 15:45
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-10
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/25/18 13:50	03/26/18 19:44	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/25/18 13:50	03/26/18 19:44	5
Barium	0.00049	U	0.0025	0.00049	mg/L		03/25/18 13:50	03/26/18 19:44	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 19:44	5
Boron	0.021	U	0.050	0.021	mg/L		03/25/18 13:50	03/26/18 19:44	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 19:44	5
Calcium	**0.87**		0.25	0.13	mg/L		03/25/18 13:50	03/26/18 19:44	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/25/18 13:50	03/26/18 19:44	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/25/18 13:50	03/26/18 19:44	5
Lead	**0.00048**	**I**	0.0013	0.00035	mg/L		03/25/18 13:50	03/26/18 19:44	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		03/25/18 13:50	03/26/18 19:44	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/25/18 13:50	03/26/18 19:44	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		03/25/18 13:50	03/26/18 19:44	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/25/18 13:50	03/26/18 19:44	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.000088**	**I V**	0.00020	0.000070	mg/L		03/31/18 15:08	04/05/18 11:55	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			03/17/18 17:26	1
Chloride	**1.3**	**I V**	2.0	0.60	mg/L			04/02/18 09:31	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/29/18 10:56	1
Sulfate	1.4	U	5.0	1.4	mg/L			03/28/18 11:35	1

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150861-1
SDG: Landfill 1

Client Sample ID: FB-03
Date Collected: 03/14/18 12:00
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-11
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/25/18 13:50	03/26/18 19:39	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/25/18 13:50	03/26/18 19:39	5
Barium	0.00049	U	0.0025	0.00049	mg/L		03/25/18 13:50	03/26/18 19:39	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 19:39	5
Boron	0.021	U	0.050	0.021	mg/L		03/25/18 13:50	03/26/18 19:39	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 19:39	5
Calcium	0.13	U	0.25	0.13	mg/L		03/25/18 13:50	03/26/18 19:39	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/25/18 13:50	03/26/18 19:39	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/25/18 13:50	03/26/18 19:39	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/25/18 13:50	03/26/18 19:39	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		03/25/18 13:50	03/26/18 19:39	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/25/18 13:50	03/26/18 19:39	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		03/25/18 13:50	03/26/18 19:39	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/25/18 13:50	03/26/18 19:39	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00011**	**I V**	0.00020	0.000070	mg/L		03/31/18 15:08	04/05/18 11:57	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**6.0**		5.0	3.4	mg/L			03/17/18 17:26	1
Chloride	**46**		2.0	0.60	mg/L			04/02/18 09:31	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/29/18 10:59	1
Sulfate	**22**		5.0	1.4	mg/L			04/03/18 09:48	1

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
V	Indicates that the analyte was detected at or above the method detection limit in both the sample and the associated method blank and the value of 10 times the blank value was equal to or greater than the associated sample value.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.

General Chemistry

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
V	Indicates that the analyte was detected at or above the method detection limit in both the sample and the associated method blank and the value of 10 times the blank value was equal to or greater than the associated sample 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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150861-1
SDG: Landfill 1

Client Sample ID: MW-101
Date Collected: 03/14/18 08:46
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			391369	03/25/18 13:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	391638	03/26/18 18:23	DRE	TAL PEN
Total/NA	Prep	7470A			392233	03/31/18 15:08	DN1	TAL PEN
Total/NA	Analysis	7470A		1	392873	04/05/18 11:13	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390491	03/17/18 17:26	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	390817	03/20/18 14:51	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	392016	03/29/18 13:20	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	391847	03/28/18 11:34	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/14/18 08:46	AW	TAL PEN

Client Sample ID: MW-102
Date Collected: 03/14/18 14:17
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			391369	03/25/18 13:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	391638	03/26/18 18:45	DRE	TAL PEN
Total/NA	Prep	7470A			392233	03/31/18 15:08	DN1	TAL PEN
Total/NA	Analysis	7470A		1	392873	04/05/18 11:15	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390491	03/17/18 17:26	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	390817	03/20/18 14:57	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391977	03/29/18 10:23	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	391847	03/28/18 11:34	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/14/18 14:17	AW	TAL PEN

Client Sample ID: MW-103
Date Collected: 03/14/18 17:50
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			391369	03/25/18 13:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	391638	03/26/18 18:50	DRE	TAL PEN
Total/NA	Prep	7470A			392233	03/31/18 15:08	DN1	TAL PEN
Total/NA	Analysis	7470A		1	392873	04/05/18 11:16	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390491	03/17/18 17:26	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	390817	03/20/18 14:57	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391977	03/29/18 10:27	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		2	391847	03/28/18 12:00	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/14/18 17:50	AW	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150861-1
SDG: Landfill 1

Client Sample ID: MW-104
Date Collected: 03/14/18 15:55
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			391369	03/25/18 13:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	391638	03/26/18 18:54	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		391369	03/25/18 13:50	DN1	TAL PEN
Total Recoverable	Analysis	6020	DL	100	391757	03/27/18 13:55	DRE	TAL PEN
Total/NA	Prep	7470A			392233	03/31/18 15:08	DN1	TAL PEN
Total/NA	Analysis	7470A		1	392873	04/05/18 11:18	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390491	03/17/18 17:26	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		5	390817	03/20/18 15:29	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391977	03/29/18 10:08	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	391847	03/28/18 12:29	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/14/18 15:55	AW	TAL PEN

Client Sample ID: MW-105
Date Collected: 03/14/18 12:45
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			391369	03/25/18 13:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	391638	03/26/18 19:21	DRE	TAL PEN
Total/NA	Prep	7470A			392233	03/31/18 15:08	DN1	TAL PEN
Total/NA	Analysis	7470A		1	392873	04/05/18 11:20	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390491	03/17/18 17:26	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	390817	03/20/18 14:57	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391977	03/29/18 10:30	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	391847	03/28/18 11:39	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/14/18 12:45	AW	TAL PEN

Client Sample ID: MW-106
Date Collected: 03/14/18 10:32
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			391369	03/25/18 13:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	391638	03/26/18 19:26	DRE	TAL PEN
Total/NA	Prep	7470A			392233	03/31/18 15:08	DN1	TAL PEN
Total/NA	Analysis	7470A		1	392873	04/05/18 11:22	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390491	03/17/18 17:26	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	390817	03/20/18 14:57	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391977	03/29/18 10:33	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	391847	03/28/18 11:39	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/14/18 10:32	AW	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150861-1
SDG: Landfill 1

Client Sample ID: MW-109
Date Collected: 03/14/18 16:23
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			391369	03/25/18 13:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	391638	03/26/18 19:30	DRE	TAL PEN
Total/NA	Prep	7470A			392233	03/31/18 15:08	DN1	TAL PEN
Total/NA	Analysis	7470A		1	392873	04/05/18 11:24	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390491	03/17/18 17:26	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	392314	04/02/18 09:32	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391977	03/29/18 10:37	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	391847	03/28/18 11:39	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/14/18 16:23	AW	TAL PEN

Client Sample ID: MW-110
Date Collected: 03/14/18 14:38
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			391369	03/25/18 13:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	391638	03/26/18 19:35	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		391369	03/25/18 13:50	DN1	TAL PEN
Total Recoverable	Analysis	6020	DL	50	391757	03/27/18 14:00	DRE	TAL PEN
Total/NA	Prep	7470A			392233	03/31/18 15:08	DN1	TAL PEN
Total/NA	Analysis	7470A		1	392873	04/05/18 11:25	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390491	03/17/18 17:26	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		5	392314	04/02/18 09:43	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391977	03/29/18 10:41	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	391847	03/28/18 12:09	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/14/18 14:38	AW	TAL PEN

Client Sample ID: DUP-03
Date Collected: 03/14/18 11:45
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			391369	03/25/18 13:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	391638	03/26/18 19:48	DRE	TAL PEN
Total/NA	Prep	7470A			392233	03/31/18 15:08	DN1	TAL PEN
Total/NA	Analysis	7470A		1	392873	04/05/18 11:53	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390491	03/17/18 17:26	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	392314	04/02/18 09:31	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391977	03/29/18 10:51	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	391847	03/28/18 11:30	RRC	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150861-1
SDG: Landfill 1

Client Sample ID: EB-03

Date Collected: 03/14/18 15:45
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			391369	03/25/18 13:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	391638	03/26/18 19:44	DRE	TAL PEN
Total/NA	Prep	7470A			392233	03/31/18 15:08	DN1	TAL PEN
Total/NA	Analysis	7470A		1	392873	04/05/18 11:55	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390491	03/17/18 17:26	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	392314	04/02/18 09:31	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391977	03/29/18 10:56	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	391847	03/28/18 11:35	RRC	TAL PEN

Client Sample ID: FB-03

Date Collected: 03/14/18 12:00
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			391369	03/25/18 13:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	391638	03/26/18 19:39	DRE	TAL PEN
Total/NA	Prep	7470A			392233	03/31/18 15:08	DN1	TAL PEN
Total/NA	Analysis	7470A		1	392873	04/05/18 11:57	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	390491	03/17/18 17:26	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	392314	04/02/18 09:31	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391977	03/29/18 10:59	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	392490	04/03/18 09:48	RRC	TAL PEN

Laboratory References:

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

Metals

Prep Batch: 391369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150861-1	MW-101	Total Recoverable	Water	3005A	
400-150861-2	MW-102	Total Recoverable	Water	3005A	
400-150861-3	MW-103	Total Recoverable	Water	3005A	
400-150861-4 - DL	MW-104	Total Recoverable	Water	3005A	
400-150861-4	MW-104	Total Recoverable	Water	3005A	
400-150861-5	MW-105	Total Recoverable	Water	3005A	
400-150861-6	MW-106	Total Recoverable	Water	3005A	
400-150861-7	MW-109	Total Recoverable	Water	3005A	
400-150861-8 - DL	MW-110	Total Recoverable	Water	3005A	
400-150861-8	MW-110	Total Recoverable	Water	3005A	
400-150861-9	DUP-03	Total Recoverable	Water	3005A	
400-150861-10	EB-03	Total Recoverable	Water	3005A	
400-150861-11	FB-03	Total Recoverable	Water	3005A	
MB 400-391369/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-391369/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-150861-1 MS	MW-101	Total Recoverable	Water	3005A	
400-150861-1 MSD	MW-101	Total Recoverable	Water	3005A	

Analysis Batch: 391638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150861-1	MW-101	Total Recoverable	Water	6020	391369
400-150861-2	MW-102	Total Recoverable	Water	6020	391369
400-150861-3	MW-103	Total Recoverable	Water	6020	391369
400-150861-4	MW-104	Total Recoverable	Water	6020	391369
400-150861-5	MW-105	Total Recoverable	Water	6020	391369
400-150861-6	MW-106	Total Recoverable	Water	6020	391369
400-150861-7	MW-109	Total Recoverable	Water	6020	391369
400-150861-8	MW-110	Total Recoverable	Water	6020	391369
400-150861-9	DUP-03	Total Recoverable	Water	6020	391369
400-150861-10	EB-03	Total Recoverable	Water	6020	391369
400-150861-11	FB-03	Total Recoverable	Water	6020	391369
MB 400-391369/1-A ^5	Method Blank	Total Recoverable	Water	6020	391369
LCS 400-391369/2-A	Lab Control Sample	Total Recoverable	Water	6020	391369
400-150861-1 MS	MW-101	Total Recoverable	Water	6020	391369
400-150861-1 MSD	MW-101	Total Recoverable	Water	6020	391369

Analysis Batch: 391757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150861-4 - DL	MW-104	Total Recoverable	Water	6020	391369
400-150861-8 - DL	MW-110	Total Recoverable	Water	6020	391369

Prep Batch: 392233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150861-1	MW-101	Total/NA	Water	7470A	
400-150861-2	MW-102	Total/NA	Water	7470A	
400-150861-3	MW-103	Total/NA	Water	7470A	
400-150861-4	MW-104	Total/NA	Water	7470A	
400-150861-5	MW-105	Total/NA	Water	7470A	
400-150861-6	MW-106	Total/NA	Water	7470A	
400-150861-7	MW-109	Total/NA	Water	7470A	
400-150861-8	MW-110	Total/NA	Water	7470A	

Metals (Continued)

Prep Batch: 392233 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150861-9	DUP-03	Total/NA	Water	7470A	
400-150861-10	EB-03	Total/NA	Water	7470A	
400-150861-11	FB-03	Total/NA	Water	7470A	
MB 400-392233/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-392233/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-151309-A-1-C MS	Matrix Spike	Total/NA	Water	7470A	
400-151309-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 392873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150861-1	MW-101	Total/NA	Water	7470A	392233
400-150861-2	MW-102	Total/NA	Water	7470A	392233
400-150861-3	MW-103	Total/NA	Water	7470A	392233
400-150861-4	MW-104	Total/NA	Water	7470A	392233
400-150861-5	MW-105	Total/NA	Water	7470A	392233
400-150861-6	MW-106	Total/NA	Water	7470A	392233
400-150861-7	MW-109	Total/NA	Water	7470A	392233
400-150861-8	MW-110	Total/NA	Water	7470A	392233
400-150861-9	DUP-03	Total/NA	Water	7470A	392233
400-150861-10	EB-03	Total/NA	Water	7470A	392233
400-150861-11	FB-03	Total/NA	Water	7470A	392233
MB 400-392233/14-A	Method Blank	Total/NA	Water	7470A	392233
LCS 400-392233/15-A	Lab Control Sample	Total/NA	Water	7470A	392233
400-151309-A-1-C MS	Matrix Spike	Total/NA	Water	7470A	392233
400-151309-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	392233

General Chemistry

Analysis Batch: 390491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150861-1	MW-101	Total/NA	Water	SM 2540C	
400-150861-2	MW-102	Total/NA	Water	SM 2540C	
400-150861-3	MW-103	Total/NA	Water	SM 2540C	
400-150861-4	MW-104	Total/NA	Water	SM 2540C	
400-150861-5	MW-105	Total/NA	Water	SM 2540C	
400-150861-6	MW-106	Total/NA	Water	SM 2540C	
400-150861-7	MW-109	Total/NA	Water	SM 2540C	
400-150861-8	MW-110	Total/NA	Water	SM 2540C	
400-150861-9	DUP-03	Total/NA	Water	SM 2540C	
400-150861-10	EB-03	Total/NA	Water	SM 2540C	
400-150861-11	FB-03	Total/NA	Water	SM 2540C	
MB 400-390491/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-390491/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-150861-6 DU	MW-106	Total/NA	Water	SM 2540C	

Analysis Batch: 390817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150861-1	MW-101	Total/NA	Water	SM 4500 Cl- E	
400-150861-2	MW-102	Total/NA	Water	SM 4500 Cl- E	
400-150861-3	MW-103	Total/NA	Water	SM 4500 Cl- E	

General Chemistry (Continued)

Analysis Batch: 390817 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150861-4	MW-104	Total/NA	Water	SM 4500 Cl- E	
400-150861-5	MW-105	Total/NA	Water	SM 4500 Cl- E	
400-150861-6	MW-106	Total/NA	Water	SM 4500 Cl- E	
MB 400-390817/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-390817/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-390817/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-150861-1 MS	MW-101	Total/NA	Water	SM 4500 Cl- E	
400-150861-1 MSD	MW-101	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 391847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150861-1	MW-101	Total/NA	Water	SM 4500 SO4 E	
400-150861-2	MW-102	Total/NA	Water	SM 4500 SO4 E	
400-150861-3	MW-103	Total/NA	Water	SM 4500 SO4 E	
400-150861-4	MW-104	Total/NA	Water	SM 4500 SO4 E	
400-150861-5	MW-105	Total/NA	Water	SM 4500 SO4 E	
400-150861-6	MW-106	Total/NA	Water	SM 4500 SO4 E	
400-150861-7	MW-109	Total/NA	Water	SM 4500 SO4 E	
400-150861-8	MW-110	Total/NA	Water	SM 4500 SO4 E	
400-150861-9	DUP-03	Total/NA	Water	SM 4500 SO4 E	
400-150861-10	EB-03	Total/NA	Water	SM 4500 SO4 E	
MB 400-391847/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-391847/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-391847/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-150861-3 MS	MW-103	Total/NA	Water	SM 4500 SO4 E	
400-150861-3 MSD	MW-103	Total/NA	Water	SM 4500 SO4 E	
400-151360-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-151360-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 391977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150861-2	MW-102	Total/NA	Water	SM 4500 F C	
400-150861-3	MW-103	Total/NA	Water	SM 4500 F C	
400-150861-4	MW-104	Total/NA	Water	SM 4500 F C	
400-150861-5	MW-105	Total/NA	Water	SM 4500 F C	
400-150861-6	MW-106	Total/NA	Water	SM 4500 F C	
400-150861-7	MW-109	Total/NA	Water	SM 4500 F C	
400-150861-8	MW-110	Total/NA	Water	SM 4500 F C	
400-150861-9	DUP-03	Total/NA	Water	SM 4500 F C	
400-150861-10	EB-03	Total/NA	Water	SM 4500 F C	
400-150861-11	FB-03	Total/NA	Water	SM 4500 F C	
MB 400-391977/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-391977/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-150861-4 MS	MW-104	Total/NA	Water	SM 4500 F C	
400-150861-4 MSD	MW-104	Total/NA	Water	SM 4500 F C	
400-150861-9 DU	DUP-03	Total/NA	Water	SM 4500 F C	

Analysis Batch: 392016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150861-1	MW-101	Total/NA	Water	SM 4500 F C	
MB 400-392016/3	Method Blank	Total/NA	Water	SM 4500 F C	

General Chemistry (Continued)

Analysis Batch: 392016 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-392016/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
660-86203-C-4 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
660-86203-C-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 392314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150861-7	MW-109	Total/NA	Water	SM 4500 Cl- E	
400-150861-8	MW-110	Total/NA	Water	SM 4500 Cl- E	
400-150861-9	DUP-03	Total/NA	Water	SM 4500 Cl- E	
400-150861-10	EB-03	Total/NA	Water	SM 4500 Cl- E	
400-150861-11	FB-03	Total/NA	Water	SM 4500 Cl- E	
MB 400-392314/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-392314/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-392314/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-150861-7 MS	MW-109	Total/NA	Water	SM 4500 Cl- E	
400-150861-7 MSD	MW-109	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 392490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150861-11	FB-03	Total/NA	Water	SM 4500 SO4 E	
MB 400-392490/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-392490/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-392490/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-151411-E-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-151411-E-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Field Service / Mobile Lab

Analysis Batch: 393575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150861-1	MW-101	Total/NA	Water	Field Sampling	
400-150861-2	MW-102	Total/NA	Water	Field Sampling	
400-150861-3	MW-103	Total/NA	Water	Field Sampling	
400-150861-4	MW-104	Total/NA	Water	Field Sampling	
400-150861-5	MW-105	Total/NA	Water	Field Sampling	
400-150861-6	MW-106	Total/NA	Water	Field Sampling	
400-150861-7	MW-109	Total/NA	Water	Field Sampling	
400-150861-8	MW-110	Total/NA	Water	Field Sampling	

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-391369/1-A ^5
Matrix: Water
Analysis Batch: 391638

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 391369

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/25/18 13:50	03/26/18 18:09	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/25/18 13:50	03/26/18 18:09	5
Barium	0.00049	U	0.0025	0.00049	mg/L		03/25/18 13:50	03/26/18 18:09	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 18:09	5
Boron	0.021	U	0.050	0.021	mg/L		03/25/18 13:50	03/26/18 18:09	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/25/18 13:50	03/26/18 18:09	5
Calcium	0.13	U	0.25	0.13	mg/L		03/25/18 13:50	03/26/18 18:09	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/25/18 13:50	03/26/18 18:09	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/25/18 13:50	03/26/18 18:09	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/25/18 13:50	03/26/18 18:09	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		03/25/18 13:50	03/26/18 18:09	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/25/18 13:50	03/26/18 18:09	5
Selenium	0.000275	I	0.0013	0.00024	mg/L		03/25/18 13:50	03/26/18 18:09	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/25/18 13:50	03/26/18 18:09	5

Lab Sample ID: LCS 400-391369/2-A
Matrix: Water
Analysis Batch: 391638

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 391369

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0530		mg/L		106	80 - 120
Arsenic	0.0500	0.0522		mg/L		104	80 - 120
Barium	0.0500	0.0484		mg/L		97	80 - 120
Beryllium	0.0500	0.0538		mg/L		108	80 - 120
Boron	0.100	0.109		mg/L		109	80 - 120
Cadmium	0.0500	0.0510		mg/L		102	80 - 120
Calcium	5.00	5.71		mg/L		114	80 - 120
Chromium	0.0500	0.0534		mg/L		107	80 - 120
Cobalt	0.0500	0.0511		mg/L		102	80 - 120
Lead	0.0500	0.0481		mg/L		96	80 - 120
Lithium	0.0500	0.0524		mg/L		105	80 - 120
Molybdenum	0.0500	0.0523		mg/L		105	80 - 120
Selenium	0.0500	0.0501		mg/L		100	80 - 120
Thallium	0.0100	0.00956		mg/L		96	80 - 120

Lab Sample ID: 400-150861-1 MS
Matrix: Water
Analysis Batch: 391638

Client Sample ID: MW-101
Prep Type: Total Recoverable
Prep Batch: 391369

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0010	U	0.0500	0.0556		mg/L		111	75 - 125
Arsenic	0.00046	U	0.0500	0.0522		mg/L		104	75 - 125
Barium	0.0089		0.0500	0.0593		mg/L		101	75 - 125
Beryllium	0.00034	U	0.0500	0.0543		mg/L		109	75 - 125
Boron	0.021	U	0.100	0.104		mg/L		104	75 - 125
Cadmium	0.00034	U	0.0500	0.0523		mg/L		105	75 - 125
Calcium	0.49		5.00	6.14		mg/L		113	75 - 125
Chromium	0.0011	U	0.0500	0.0534		mg/L		107	75 - 125

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

Lab Sample ID: 400-150861-1 MS
Matrix: Water
Analysis Batch: 391638

Client Sample ID: MW-101
Prep Type: Total Recoverable
Prep Batch: 391369

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.00040	U	0.0500	0.0519		mg/L		104	75 - 125
Lead	0.00035	U	0.0500	0.0482		mg/L		96	75 - 125
Lithium	0.0011	U	0.0500	0.0673	J3	mg/L		135	75 - 125
Molybdenum	0.00085	U	0.0500	0.0552		mg/L		110	75 - 125
Selenium	0.00067	I V	0.0500	0.0519		mg/L		102	75 - 125
Thallium	0.000085	U	0.0100	0.00996		mg/L		100	75 - 125

Lab Sample ID: 400-150861-1 MSD
Matrix: Water
Analysis Batch: 391638

Client Sample ID: MW-101
Prep Type: Total Recoverable
Prep Batch: 391369

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.0010	U	0.0500	0.0539		mg/L		108	75 - 125	3	20
Arsenic	0.00046	U	0.0500	0.0515		mg/L		103	75 - 125	1	20
Barium	0.0089		0.0500	0.0579		mg/L		98	75 - 125	2	20
Beryllium	0.00034	U	0.0500	0.0540		mg/L		108	75 - 125	0	20
Boron	0.021	U	0.100	0.0990		mg/L		99	75 - 125	4	20
Cadmium	0.00034	U	0.0500	0.0544		mg/L		109	75 - 125	4	20
Calcium	0.49		5.00	6.14		mg/L		113	75 - 125	0	20
Chromium	0.0011	U	0.0500	0.0529		mg/L		106	75 - 125	1	20
Cobalt	0.00040	U	0.0500	0.0518		mg/L		104	75 - 125	0	20
Lead	0.00035	U	0.0500	0.0475		mg/L		95	75 - 125	1	20
Lithium	0.0011	U	0.0500	0.0661	J3	mg/L		132	75 - 125	2	20
Molybdenum	0.00085	U	0.0500	0.0541		mg/L		108	75 - 125	2	20
Selenium	0.00067	I V	0.0500	0.0506		mg/L		100	75 - 125	3	20
Thallium	0.000085	U	0.0100	0.00964		mg/L		96	75 - 125	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-392233/14-A
Matrix: Water
Analysis Batch: 392873

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 392233

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000922	I	0.00020	0.000070	mg/L		03/31/18 15:08	04/05/18 10:37	1

Lab Sample ID: LCS 400-392233/15-A
Matrix: Water
Analysis Batch: 392873

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 392233

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.00114		mg/L		114	80 - 120

Lab Sample ID: 400-151309-A-1-C MS
Matrix: Water
Analysis Batch: 392873

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 392233

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.000070	U	0.00201	0.00228		mg/L		113	80 - 120

Lab Sample ID: 400-151309-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 392873 — **Prep Batch: 392233**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.000070	U	0.00201	0.00215		mg/L		107	80 - 120	6	20

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

Lab Sample ID: MB 400-390491/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 390491

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			03/17/18 17:26	1

Lab Sample ID: LCS 400-390491/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 390491

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	288		mg/L		98	78 - 122

Lab Sample ID: 400-150861-6 DU — **Client Sample ID: MW-106**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 390491

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	3.4	U	3.4	U	mg/L		NC	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-390817/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 390817

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.60	U	2.0	0.60	mg/L			03/20/18 14:48	1

Lab Sample ID: LCS 400-390817/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 390817

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	30.4		mg/L		101	90 - 110

Lab Sample ID: MRL 400-390817/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 390817

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.81	I	mg/L		90	50 - 150

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

Lab Sample ID: 400-150861-1 MS
Matrix: Water
Analysis Batch: 390817

Client Sample ID: MW-101
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.2		10.0	4.89	J3	mg/L		-3	73 - 120

Lab Sample ID: 400-150861-1 MSD
Matrix: Water
Analysis Batch: 390817

Client Sample ID: MW-101
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	5.2		10.0	4.63	J3	mg/L		-5	73 - 120	6	8

Lab Sample ID: MB 400-392314/6
Matrix: Water
Analysis Batch: 392314

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.54	I	2.0	0.60	mg/L			04/02/18 09:28	1

Lab Sample ID: LCS 400-392314/7
Matrix: Water
Analysis Batch: 392314

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	31.3		mg/L		104	90 - 110

Lab Sample ID: MRL 400-392314/3
Matrix: Water
Analysis Batch: 392314

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	2.63		mg/L		131	50 - 150

Lab Sample ID: 400-150861-7 MS
Matrix: Water
Analysis Batch: 392314

Client Sample ID: MW-109
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	6.9	V	10.0	17.2		mg/L		103	73 - 120

Lab Sample ID: 400-150861-7 MSD
Matrix: Water
Analysis Batch: 392314

Client Sample ID: MW-109
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	6.9	V	10.0	17.1		mg/L		101	73 - 120	1	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-391977/3
Matrix: Water
Analysis Batch: 391977

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.032	U	0.10	0.032	mg/L			03/29/18 09:56	1

Lab Sample ID: LCS 400-391977/4
Matrix: Water
Analysis Batch: 391977

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	4.18		mg/L		105	90 - 110

Lab Sample ID: 400-150861-4 MS
Matrix: Water
Analysis Batch: 391977

Client Sample ID: MW-104
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.30		1.00	1.24		mg/L		94	75 - 125

Lab Sample ID: 400-150861-4 MSD
Matrix: Water
Analysis Batch: 391977

Client Sample ID: MW-104
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.30		1.00	1.24		mg/L		94	75 - 125	0	4

Lab Sample ID: 400-150861-9 DU
Matrix: Water
Analysis Batch: 391977

Client Sample ID: DUP-03
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.032	U	0.032	U	mg/L		NC	4

Lab Sample ID: MB 400-392016/3
Matrix: Water
Analysis Batch: 392016

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.032	U	0.10	0.032	mg/L			03/29/18 12:46	1

Lab Sample ID: LCS 400-392016/4
Matrix: Water
Analysis Batch: 392016

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	4.18		mg/L		105	90 - 110

Lab Sample ID: 660-86203-C-4 MS
Matrix: Water
Analysis Batch: 392016

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	0.12		1.00	1.21		mg/L		109	75 - 125

Lab Sample ID: 660-86203-C-4 MSD
Matrix: Water
Analysis Batch: 392016

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	0.12		1.00	1.21		mg/L		109	75 - 125	0	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-391847/6
Matrix: Water
Analysis Batch: 391847

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.4	U	5.0	1.4	mg/L			03/28/18 11:24	1

Lab Sample ID: LCS 400-391847/7
Matrix: Water
Analysis Batch: 391847

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	14.8		mg/L		99	90 - 110

Lab Sample ID: MRL 400-391847/3
Matrix: Water
Analysis Batch: 391847

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	4.53	I	mg/L		91	50 - 150

Lab Sample ID: 400-150861-3 MS
Matrix: Water
Analysis Batch: 391847

Client Sample ID: MW-103
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	38		20.0	45.6	J3	mg/L		40	77 - 128

Lab Sample ID: 400-150861-3 MSD
Matrix: Water
Analysis Batch: 391847

Client Sample ID: MW-103
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	38		20.0	44.6	J3	mg/L		35	77 - 128	2	5

Lab Sample ID: 400-151360-A-1 MS
Matrix: Water
Analysis Batch: 391847

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	5.1		10.0	16.7		mg/L		116	77 - 128

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: 400-151360-A-1 MSD
Matrix: Water
Analysis Batch: 391847

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	5.1		10.0	16.8		mg/L		117	77 - 128	0	5

Lab Sample ID: MB 400-392490/6
Matrix: Water
Analysis Batch: 392490

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.4	U	5.0	1.4	mg/L			04/03/18 09:42	1

Lab Sample ID: LCS 400-392490/7
Matrix: Water
Analysis Batch: 392490

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	14.9		mg/L		99	90 - 110

Lab Sample ID: MRL 400-392490/3
Matrix: Water
Analysis Batch: 392490

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	4.54	I	mg/L		91	50 - 150

Lab Sample ID: 400-151411-E-1 MS
Matrix: Water
Analysis Batch: 392490

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	1.4	U	10.0	8.54		mg/L		85	77 - 128

Lab Sample ID: 400-151411-E-1 MSD
Matrix: Water
Analysis Batch: 392490

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	1.4	U	10.0	8.81		mg/L		88	77 - 128	3	5

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

Chain of Custody Record

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Client Information	Sampler: Brett Surles	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No:
Client Contact: Kristi Mitchell	Phone: 850 380 3458	E-Mail: cheyenne.whitmire@testamericainc.com		Page: 1-1
Company: Gulf Power Company				Job #: 150861
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days):			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: CCR Plant Crist	Project #: 40005424			
Site: Landfill 1	SSOW#:			

Analysis Requested

400-150861 COC

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=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	SM4500_Cl_E - Chloride, SM4500_SO4_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C - Fluoride	6020 - Sb,As,Ba,B,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, 7470A - Mercury	FieldSampling - Field Sampling Parameters	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	D	N	D	N	X	
MW-101	3/14/18	0846	G	Water			X	X	X	X		
MW-102	3/14/18	1417		Water								
MW-103	3/14/18	1750		Water								
MW-104	3/14/18	1555		Water								
MW-105	3/14/18	1245		Water								
MW-106	3/14/18	1032		Water								
MW-109	3/14/18	1623		Water								
MW-110	3/14/18	1438		Water								
DUP-03	3/14/18	1145		W								
EB-03	3/14/18	1545		W								
FB-03	3/14/18	1200	G	W			X	X	X	X		

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)

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	3-14-18 1830	RDH EW.	[signature]	3.14.18 1830	TA-Pen

Custody Seals Intact: Δ Yes Δ No

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: [signature]

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-150861-1
SDG Number: Landfill 1

Login Number: 150861
List Number: 1
Creator: Whitmire, Cheyenne R

List Source: 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	0.0°C 0.0°C IR7
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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150861-1
SDG: Landfill 1

Laboratory: 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	06-30-18
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	ELAP	9	2510	03-31-18 *
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-18
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-18
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-17-12	09-30-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

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

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ANALYTICAL REPORT

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

TestAmerica Job ID: 400-150861-2
TestAmerica Sample Delivery Group: Landfill 1
Client Project/Site: CCR Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Authorized for release by:
4/12/2018 11:04:18 AM

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

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-150861-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-150861-2

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-356424: Insufficient sample volume was available to perform a sample duplicate (DUP,MS,MSD) for the following samples:MW-101 (400-150861-1), MW-102 (400-150861-2), MW-103 (400-150861-3), MW-104 (400-150861-4), MW-105 (400-150861-5), MW-106 (400-150861-6), MW-109 (400-150861-7), MW-110 (400-150861-8), DUP-03 (400-150861-9), EB-03 (400-150861-10) and FB-03 (400-150861-11). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium 226 Prep batch 160-356422: Insufficient sample volume was available to perform a sample duplicate (DUP,MS,MSD) for the following samples:MW-101 (400-150861-1), MW-102 (400-150861-2), MW-103 (400-150861-3), MW-104 (400-150861-4), MW-105 (400-150861-5), MW-106 (400-150861-6), MW-109 (400-150861-7), MW-110 (400-150861-8), DUP-03 (400-150861-9), EB-03 (400-150861-10) and FB-03 (400-150861-11). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150861-2
SDG: Landfill 1

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

Protocol References:

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

Sample Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150861-2
SDG: Landfill 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-150861-1	MW-101	Water	03/14/18 08:46	03/14/18 18:30
400-150861-2	MW-102	Water	03/14/18 14:17	03/14/18 18:30
400-150861-3	MW-103	Water	03/14/18 17:50	03/14/18 18:30
400-150861-4	MW-104	Water	03/14/18 15:55	03/14/18 18:30
400-150861-5	MW-105	Water	03/14/18 12:45	03/14/18 18:30
400-150861-6	MW-106	Water	03/14/18 10:32	03/14/18 18:30
400-150861-7	MW-109	Water	03/14/18 16:23	03/14/18 18:30
400-150861-8	MW-110	Water	03/14/18 14:38	03/14/18 18:30
400-150861-9	DUP-03	Water	03/14/18 11:45	03/14/18 18:30
400-150861-10	EB-03	Water	03/14/18 15:45	03/14/18 18:30
400-150861-11	FB-03	Water	03/14/18 12:00	03/14/18 18:30

Client Sample ID: MW-101

Date Collected: 03/14/18 08:46
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-1

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	0.277		0.0877	0.0912	1.00	0.0742	pCi/L	03/19/18 10:39	04/10/18 05:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*03/19/18 10:39*	*04/10/18 05:28*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.337		0.217	0.220	1.00	0.333	pCi/L	03/19/18 10:56	03/26/18 15:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:00*	*1*
Y Carrier	*93.1*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:00*	*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	0.614		0.234	0.238	5.00	0.333	pCi/L		04/10/18 14:48	1

Client Sample ID: MW-102

Date Collected: 03/14/18 14:17
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-2

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	0.405		0.103	0.110	1.00	0.0686	pCi/L	03/19/18 10:39	04/10/18 05:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.8*		*40 - 110*	*03/19/18 10:39*	*04/10/18 05:28*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.24		0.304	0.324	1.00	0.365	pCi/L	03/19/18 10:56	03/26/18 15:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.8*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:00*	*1*
Y Carrier	*90.5*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:00*	*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	1.64		0.321	0.342	5.00	0.365	pCi/L		04/10/18 14:48	1

Client Sample ID: MW-103

Date Collected: 03/14/18 17:50
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-3

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	1.97		0.222	0.283	1.00	0.0697	pCi/L	03/19/18 10:39	04/10/18 05:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.5*		*40 - 110*	*03/19/18 10:39*	*04/10/18 05:28*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	5.06		0.487	0.674	1.00	0.330	pCi/L	03/19/18 10:56	03/26/18 15:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.5*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:00*	*1*
Y Carrier	*92.7*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:00*	*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	7.02		0.535	0.731	5.00	0.330	pCi/L		04/10/18 14:48	1

Client Sample ID: MW-104

Date Collected: 03/14/18 15:55
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-4

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	1.47		0.191	0.233	1.00	0.0771	pCi/L	03/19/18 10:39	04/10/18 05:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.1*		*40 - 110*	*03/19/18 10:39*	*04/10/18 05:29*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	11.6		0.726	1.29	1.00	0.366	pCi/L	03/19/18 10:56	03/26/18 15:01	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.1*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:01*	*1*
Y Carrier	*91.2*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:01*	*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	13.1		0.751	1.31	5.00	0.366	pCi/L		04/10/18 14:48	1

Client Sample ID: MW-105

Date Collected: 03/14/18 12:45
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-5

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	0.957		0.157	0.179	1.00	0.0822	pCi/L	03/19/18 10:39	04/10/18 05:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.1*		*40 - 110*	*03/19/18 10:39*	*04/10/18 05:29*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.86		0.337	0.378	1.00	0.360	pCi/L	03/19/18 10:56	03/26/18 15:01	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.1*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:01*	*1*
Y Carrier	*93.1*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:01*	*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	2.82		0.372	0.418	5.00	0.360	pCi/L		04/10/18 14:48	1

Client Sample ID: MW-106

Date Collected: 03/14/18 10:32
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-6

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	0.246		0.0836	0.0865	1.00	0.0738	pCi/L	03/19/18 10:39	04/10/18 05:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*03/19/18 10:39*	*04/10/18 05:29*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.543		0.238	0.243	1.00	0.339	pCi/L	03/19/18 10:56	03/26/18 15:01	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:01*	*1*
Y Carrier	*92.7*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:01*	*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	0.789		0.252	0.258	5.00	0.339	pCi/L		04/10/18 14:48	1

Client Sample ID: MW-109

Date Collected: 03/14/18 16:23
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-7

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	0.610		0.123	0.135	1.00	0.0829	pCi/L	03/19/18 10:39	04/10/18 05:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.5*		*40 - 110*	*03/19/18 10:39*	*04/10/18 05:29*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.38		0.300	0.325	1.00	0.338	pCi/L	03/19/18 10:56	03/26/18 15:01	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.5*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:01*	*1*
Y Carrier	*92.7*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:01*	*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	1.99		0.324	0.352	5.00	0.338	pCi/L		04/10/18 14:48	1

Client Sample ID: MW-110

Date Collected: 03/14/18 14:38
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-8

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	2.45		0.244	0.329	1.00	0.0741	pCi/L	03/19/18 10:39	04/10/18 05:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.1*		*40 - 110*	*03/19/18 10:39*	*04/10/18 05:29*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.61		0.462	0.627	1.00	0.316	pCi/L	03/19/18 10:56	03/26/18 15:01	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.1*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:01*	*1*
Y Carrier	*93.1*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:01*	*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	7.06		0.522	0.708	5.00	0.316	pCi/L		04/10/18 14:48	1

Client Sample ID: DUP-03

Date Collected: 03/14/18 11:45
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-9

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	0.989		0.156	0.180	1.00	0.0777	pCi/L	03/19/18 10:39	04/10/18 05:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*03/19/18 10:39*	*04/10/18 05:29*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.81		0.320	0.361	1.00	0.322	pCi/L	03/19/18 10:56	03/26/18 15:01	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:01*	*1*
Y Carrier	*92.7*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:01*	*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	2.80		0.356	0.403	5.00	0.322	pCi/L		04/10/18 14:48	1

Client Sample ID: EB-03

Date Collected: 03/14/18 15:45
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-10

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	0.0318	U	0.0425	0.0426	1.00	0.0711	pCi/L	03/19/18 10:39	04/10/18 05:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.9*		*40 - 110*	*03/19/18 10:39*	*04/10/18 05:29*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0309	U	0.210	0.210	1.00	0.381	pCi/L	03/19/18 10:56	03/26/18 15:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.9*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:02*	*1*
Y Carrier	*91.2*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:02*	*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	0.000972	U	0.214	0.214	5.00	0.381	pCi/L		04/10/18 14:48	1

Client Sample ID: FB-03

Date Collected: 03/14/18 12:00
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-11

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	0.0481	U	0.0447	0.0449	1.00	0.0657	pCi/L	03/19/18 10:39	04/10/18 05:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.2*		*40 - 110*	*03/19/18 10:39*	*04/10/18 05:29*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.686**		0.264	0.272	1.00	0.371	pCi/L	03/19/18 10:56	03/26/18 15:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.2*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:02*	*1*
Y Carrier	*95.7*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:02*	*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	**0.735**		0.268	0.276	5.00	0.371	pCi/L		04/10/18 14:48	1

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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150861-2
SDG: Landfill 1

Client Sample ID: MW-101
Date Collected: 03/14/18 08:46
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356422	03/19/18 10:39	TJT	TAL SL
Total/NA	Analysis	9315		1	359781	04/10/18 05:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356424	03/19/18 10:56	TJT	TAL SL
Total/NA	Analysis	9320		1	357685	03/26/18 15:00	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Client Sample ID: MW-102
Date Collected: 03/14/18 14:17
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356422	03/19/18 10:39	TJT	TAL SL
Total/NA	Analysis	9315		1	359781	04/10/18 05:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356424	03/19/18 10:56	TJT	TAL SL
Total/NA	Analysis	9320		1	357685	03/26/18 15:00	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Client Sample ID: MW-103
Date Collected: 03/14/18 17:50
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356422	03/19/18 10:39	TJT	TAL SL
Total/NA	Analysis	9315		1	359781	04/10/18 05:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356424	03/19/18 10:56	TJT	TAL SL
Total/NA	Analysis	9320		1	357685	03/26/18 15:00	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Client Sample ID: MW-104
Date Collected: 03/14/18 15:55
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356422	03/19/18 10:39	TJT	TAL SL
Total/NA	Analysis	9315		1	359781	04/10/18 05:29	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356424	03/19/18 10:56	TJT	TAL SL
Total/NA	Analysis	9320		1	357685	03/26/18 15:01	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150861-2
SDG: Landfill 1

Client Sample ID: MW-105
Date Collected: 03/14/18 12:45
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356422	03/19/18 10:39	TJT	TAL SL
Total/NA	Analysis	9315		1	359781	04/10/18 05:29	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356424	03/19/18 10:56	TJT	TAL SL
Total/NA	Analysis	9320		1	357685	03/26/18 15:01	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Client Sample ID: MW-106
Date Collected: 03/14/18 10:32
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356422	03/19/18 10:39	TJT	TAL SL
Total/NA	Analysis	9315		1	359781	04/10/18 05:29	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356424	03/19/18 10:56	TJT	TAL SL
Total/NA	Analysis	9320		1	357685	03/26/18 15:01	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Client Sample ID: MW-109
Date Collected: 03/14/18 16:23
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356422	03/19/18 10:39	TJT	TAL SL
Total/NA	Analysis	9315		1	359781	04/10/18 05:29	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356424	03/19/18 10:56	TJT	TAL SL
Total/NA	Analysis	9320		1	357685	03/26/18 15:01	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Client Sample ID: MW-110
Date Collected: 03/14/18 14:38
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356422	03/19/18 10:39	TJT	TAL SL
Total/NA	Analysis	9315		1	359781	04/10/18 05:29	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356424	03/19/18 10:56	TJT	TAL SL
Total/NA	Analysis	9320		1	357685	03/26/18 15:01	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150861-2
SDG: Landfill 1

Client Sample ID: DUP-03

Date Collected: 03/14/18 11:45
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356422	03/19/18 10:39	TJT	TAL SL
Total/NA	Analysis	9315		1	359781	04/10/18 05:29	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356424	03/19/18 10:56	TJT	TAL SL
Total/NA	Analysis	9320		1	357685	03/26/18 15:01	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Client Sample ID: EB-03

Date Collected: 03/14/18 15:45
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356422	03/19/18 10:39	TJT	TAL SL
Total/NA	Analysis	9315		1	359781	04/10/18 05:29	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356424	03/19/18 10:56	TJT	TAL SL
Total/NA	Analysis	9320		1	357685	03/26/18 15:02	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Client Sample ID: FB-03

Date Collected: 03/14/18 12:00
Date Received: 03/14/18 18:30

Lab Sample ID: 400-150861-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			356422	03/19/18 10:39	TJT	TAL SL
Total/NA	Analysis	9315		1	359781	04/10/18 05:29	RTM	TAL SL
Total/NA	Prep	PrecSep_0			356424	03/19/18 10:56	TJT	TAL SL
Total/NA	Analysis	9320		1	357685	03/26/18 15:02	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	360101	04/10/18 14:48	RTM	TAL SL

Laboratory References:

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

Rad

Prep Batch: 356422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150861-1	MW-101	Total/NA	Water	PrecSep-21	
400-150861-2	MW-102	Total/NA	Water	PrecSep-21	
400-150861-3	MW-103	Total/NA	Water	PrecSep-21	
400-150861-4	MW-104	Total/NA	Water	PrecSep-21	
400-150861-5	MW-105	Total/NA	Water	PrecSep-21	
400-150861-6	MW-106	Total/NA	Water	PrecSep-21	
400-150861-7	MW-109	Total/NA	Water	PrecSep-21	
400-150861-8	MW-110	Total/NA	Water	PrecSep-21	
400-150861-9	DUP-03	Total/NA	Water	PrecSep-21	
400-150861-10	EB-03	Total/NA	Water	PrecSep-21	
400-150861-11	FB-03	Total/NA	Water	PrecSep-21	
MB 160-356422/14-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-356422/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-356422/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 356424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-150861-1	MW-101	Total/NA	Water	PrecSep_0	
400-150861-2	MW-102	Total/NA	Water	PrecSep_0	
400-150861-3	MW-103	Total/NA	Water	PrecSep_0	
400-150861-4	MW-104	Total/NA	Water	PrecSep_0	
400-150861-5	MW-105	Total/NA	Water	PrecSep_0	
400-150861-6	MW-106	Total/NA	Water	PrecSep_0	
400-150861-7	MW-109	Total/NA	Water	PrecSep_0	
400-150861-8	MW-110	Total/NA	Water	PrecSep_0	
400-150861-9	DUP-03	Total/NA	Water	PrecSep_0	
400-150861-10	EB-03	Total/NA	Water	PrecSep_0	
400-150861-11	FB-03	Total/NA	Water	PrecSep_0	
MB 160-356424/14-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-356424/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-356424/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-356422/14-A
Matrix: Water
Analysis Batch: 359781

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 356422

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.04093	U	0.0444	0.0446	1.00	0.0698	pCi/L	03/19/18 10:39	04/10/18 05:29	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*03/19/18 10:39*	*04/10/18 05:29*	*1*

Lab Sample ID: LCS 160-356422/1-A
Matrix: Water
Analysis Batch: 359781

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 356422

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.8	10.63		1.08	1.00	0.0877	pCi/L	90	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*103*		*40 - 110*

Lab Sample ID: LCSD 160-356422/2-A
Matrix: Water
Analysis Batch: 359781

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 356422

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.8	10.41		1.06	1.00	0.0710	pCi/L	88	68 - 137	0.1	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*102*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-356424/14-A
Matrix: Water
Analysis Batch: 357685

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 356424

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1879	U	0.201	0.202	1.00	0.329	pCi/L	03/19/18 10:56	03/26/18 15:02	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:02*	*1*
Y Carrier	*91.2*		*40 - 110*	*03/19/18 10:56*	*03/26/18 15:02*	*1*

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

Lab Sample ID: LCS 160-356424/1-A
Matrix: Water
Analysis Batch: 357685

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 356424

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			8.45	8.300		0.978	1.00	0.331	pCi/L	98	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*103*		*40 - 110*
Y Carrier	*88.6*		*40 - 110*

Lab Sample ID: LCSD 160-356424/2-A
Matrix: Water
Analysis Batch: 357685

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 356424

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			8.45	8.750		1.01	1.00	0.325	pCi/L	104	56 - 140	0.23	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*102*		*40 - 110*
Y Carrier	*91.6*		*40 - 110*

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brett Surles	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No:
Client Contact: Kristi Mitchell	Phone: 850 380 3458	E-Mail: cheyenne.whitmire@testamericainc.com		Page: 1-1
Company: Gulf Power Company				Job #: 150861
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days):			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: CCR Plant Crist	Project #: 40005424			
Site: Landfill 1	SSOW#:			

Analysis Requested

400-150861 COC

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=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	SM4500_Cl_E - Chloride, SM4500_SO4_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C - Fluoride	6020 - Sb,As,Ba,B,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, 7470A - Mercury	FieldSampling - Field Sampling Parameters	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	D	N	D	N	X	
MW-101	3/14/18	0846	G	Water			X	X	X	X		
MW-102	3/14/18	1417		Water								
MW-103	3/14/18	1750		Water								
MW-104	3/14/18	1555		Water								
MW-105	3/14/18	1245		Water								
MW-106	3/14/18	1032		Water								
MW-109	3/14/18	1623		Water								
MW-110	3/14/18	1438		Water								
DUP-03	3/14/18	1145		W								
EB-03	3/14/18	1545		W								
FB-03	3/14/18	1200	G	W			X	X	X	X		

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)

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	3-14-18 1830	RDH EW.	[signature]	3.14.18 1830	TA-Pen

Custody Seals Intact: Δ Yes Δ No

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: [signature]

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-150861-2
SDG Number: Landfill 1

Login Number: 150861
List Number: 1
Creator: Whitmire, Cheyenne R

List Source: 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	0.0°C 0.0°C IR7
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: Gulf Power Company

Job Number: 400-150861-2
SDG Number: Landfill 1

Login Number: 150861
List Number: 2
Creator: Daniels, Brian J

List Source: TestAmerica St. Louis
List Creation: 03/16/18 02:29 PM

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	18,18
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?	False	
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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150861-2
SDG: Landfill 1

Laboratory: 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	06-30-18
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	ELAP	9	2510	03-31-18 *
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-18
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-18
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-17-12	09-30-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

Laboratory: 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
Alaska	State Program	10	MO00054	06-30-18
Arizona	State Program	9	AZ0813	12-08-18
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-18
Illinois	NELAP	5	200023	11-30-18
Iowa	State Program	7	373	12-01-18
Kansas	NELAP	7	E-10236	10-31-18
Kentucky (DW)	State Program	4	90125	12-31-18
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-18
Louisiana (DW)	NELAP	6	LA180017	12-31-18
Maryland	State Program	3	310	09-30-18
Michigan	State Program	5	9005	06-30-18
Missouri	State Program	7	780	06-30-18
Nevada	State Program	9	MO000542018-1	07-31-18
New Jersey	NELAP	2	MO002	06-30-18 *

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

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-150861-2
SDG: Landfill 1

Laboratory: TestAmerica St. Louis (Continued)

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
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-18
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-18
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-18
Texas	NELAP	6	T104704193-17-11	07-31-18
US Fish & Wildlife	Federal		058448	08-31-18
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-18
Virginia	NELAP	3	460230	06-14-18
Washington	State Program	10	C592	08-30-18
West Virginia DEP	State Program	3	381	08-31-18 *

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

Geosyntec consultants

180A Market Place Boulevard
Knoxville, TN 37922
PH 865.330.0037
www.geosyntec.com

Memorandum

Date: August 17, 2018

To: Carl Eldred

From: Chris Pracheil

CC: H. Parthasarathy and J. Caprio

Subject: Stage 2A Data Validations - Level II Data Deliverables – TestAmerica Laboratories, Inc. Job Numbers 400-150790-1, 400-150790-2, 400-150793-1, 400-150793-2, 400-150860-1, 400-150860-2, 400-150861-1 and 400-150861-2

SITE: Plant Crist

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of twenty-five aqueous samples, three field duplicate samples, three field blanks and three equipment blanks collected from March 12 to March 14, 2018, as part of the Plant Crist CCR sampling event.

The samples were analyzed at TestAmerica Pensacola, Pensacola, Florida for the following analytical tests:

- Metals by EPA Methods 3005A/6020
- Mercury by EPA Method 7470A
- Chloride by Standard Methods (SM) 4500 Cl
- Fluoride by SM 45000 F
- Sulfate by SM 4500 SO_4
- Total Dissolved Solids by SM 2540 C

The samples were analyzed at TestAmerica St. Louis, Earth City, MO for the following analytical tests:

- Radium-226 by EPA Method 9315
- Radium-228 by EPA Method 9320
- Combine Radium 226 + 228 by Calculation

EXECUTIVE SUMMARY

The samples were handled, prepared and measured in the same manner under similar prescribed conditions.

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below, the data as qualified are usable for meeting project objectives, with the following exceptions. Due to MS/MSD recoveries of less than 10% for chloride and sulfate, the non-detect results of chloride in batch 390817 and sulfate in batch 391085 were UR qualified as rejected and the estimated concentrations of sulfate in batch 391085 were R qualified as rejected. The qualified data that were not rejected should be used within the limitations of the qualifications.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment and the following documents:

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- National Functional Guidelines for Inorganic Superfund Data Review, August 2014 (OSWER 9355.0-131, EPA 540-R-013-001);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017 (EPA 540-R-2017-001);
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012); and,
- Southern Company Services, Inc., Standard Operating Procedure (hereafter referred to as the SOP) for Level 2A Verification of Coal Combustion Residuals Data, Environmental Testing Laboratory Program, Draft, November 21, 2017, Revision 0, Prepared by Environmental Standards, Inc., Valley Forge, Pennsylvania.

The following samples were analyzed and reported in the laboratory reports:

Laboratory ID	Client ID
400-150790-1	MW-100
400-150790-2	MW-107
400-150790-3	MW-108
400-150790-4	MW-306
400-150790-5	MW-307
400-150790-6	DUP-01
400-150793-1	MW-300
400-150793-2	MW-303
400-150793-3	MW-304
400-150793-4	MW-305

Laboratory ID	Client ID
400-150793-5	MW-308
400-150793-6	EB-01
400-150793-7	FB-01
400-150860-1	MW-200
400-150860-2	MW-201
400-150860-3	MW-202
400-150860-4	MW-203
400-150860-5	MW-204
400-150860-6	MW-205
400-150860-7	MW-206

Laboratory ID	Client ID
400-150860-8	EB-02
400-150860-9	FB-02
400-150860-10	DUP-02
400-150861-1	MW-101
400-150861-2	MW-102
400-150861-3	MW-103
400-150861-4	MW-104

Laboratory ID	Client ID
400-150861-5	MW-105
400-150861-6	MW-106
400-150861-7	MW-109
400-150861-8	MW-110
400-150861-9	DUP-03
400-150861-10	EB-03
400-150861-11	FB-03

The samples were received within 0-6°C, with the following exceptions. The samples in laboratory reports 400-150860-2 and 400-150861-2 were received at the TestAmerica St. Louis at 18.0˚C, since these samples were being analyzed for radium-226 and radium-228 and did not require cooling, no qualifications were applied to the data.

No sample preservation issues were noted by the laboratory.

The following issue was noted with the chain of custody (COC) forms:

- The sample receipt date for report 400-150790-1 was incorrectly listed as 3/13/17 instead of the correct date of March 13, 2018.

1.0 METALS

The samples were analyzed by EPA methods 3005A/6020 (Mercury evaluated separately in Section 2.0, below).

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment
✓ Holding Time
⊗ Method Blank
⊗ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
⊗ Equipment Blank
✓ Field Blank
⊗ Field Duplicate
✓ Sensitivity
✓ Electronic Data Deliverables Review

1.1 Overall Assessment

The metals data reported in these packages are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for the sample set is 100%.

1.2 Holding Time

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported (batches 390576, 390579 and 391369). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exception.

Selenium was detected at an estimated concentration, greater than the MDL and less the RL in the method blank for batch 391369. Therefore, the concentrations of selenium in the associated samples that were less than five times the method blank concentration were U* qualified as not detected at the reported value.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
DUP-03	Selenium	0.00034	I V	0.00034	U*	BL
MW-101	Selenium	0.00067	I V	0.00067	U*	BL
MW-102	Selenium	0.001	I V	0.001	U*	BL
MW-105	Selenium	0.0006	I V	0.0006	U*	BL

mg/L- milligram per liter
I-the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
V-indicates that the analyte was detected at or above the MDL in both the sample and the associated method blank
* Validation qualifiers are defined in Attachment 1 at the end of this report
**Reason codes are defined in Attachment 2 at the end of this report

1.4 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three sample set specific MS/MSD pairs were reported using

samples MW-100, MW-101 and MW-200. The recovery and relative percent difference (RPD) results were within the laboratory and SOP specified acceptance criteria, with the following exceptions.

One or both recoveries of boron and lithium in the MS/MSD pair using sample MW-100 were high and outside the laboratory and SOP specified acceptance criteria. Therefore, the concentrations of lithium were J qualified as estimated in the associated samples. Since boron was not detected in the associated samples, no qualifications were applied to the boron data.

The recoveries of lithium were high and outside the laboratory specified acceptance criteria in the MS/MSD pairs using samples MW-101 and MW-200. Therefore, the concentrations of lithium in the associated samples were J qualified as estimated. Additionally, one or both recoveries of boron and calcium were low and outside the laboratory specified acceptance criteria in the MS/MSD pair using sample MW-200. Since the concentrations of boron and calcium in sample MW-200 were more than four times the spike amount, no qualifications were applied to the boron and calcium data.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
DUP-01	Lithium	0.0014	I	0.0014	J	M+
MW-100	Lithium	0.0011	I	0.0011	J	M+
MW-201	Lithium	0.0053	NA	0.0053	J	M+
MW-107	Lithium	0.0014	I	0.0014	J	M+
MW-303	Lithium	0.03	NA	0.03	J	M+
MW-204	Lithium	0.0015	I	0.0015	J	M+
MW-103	Lithium	0.002	I	0.002	J	M+
MW-104	Lithium	0.028	NA	0.028	J	M+
MW-109	Lithium	0.0059	NA	0.0059	J	M+
MW-110	Lithium	0.012	NA	0.012	J	M+

mg/L- milligram per liter
NA-not applicable
I-the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three LCSs were reported. The recovery results were within the laboratory and SOP specified acceptance criteria.

1.6 Equipment Blank

Three equipment blanks were collected with the sample sets, EB-01, EB-02 and EB-03. Metals were not detected in the equipment blanks above the MDLs, with the following exceptions.

Calcium was detected above the RL and lead was detected at an estimated concentration, greater than the MDL and less the RL in EB-03. Therefore, the concentrations of calcium and lead in the associated samples that were less than five times the equipment blank concentrations were U* qualified as not detected at the reported concentrations.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
MW-101	Calcium	0.49	NA	0.49	U*	BE
MW-102	Calcium	0.63	NA	0.63	U*	BE
MW-103	Calcium	3.9	NA	3.9	U*	BE
MW-104	Lead	0.0023	NA	0.0023	U*	BE
MW-106	Calcium	0.47	NA	0.47	U*	BE
MW-109	Calcium	3.1	NA	3.1	U*	BE

mg/L- milligram per liter
NA-not applicable

1.7 Field Blank

Three field blanks were collected with the sample sets, FB-01, FB-02 and FB-03. Metals were not detected in the field blanks above the MDLs.

1.8 Field Duplicate

Three field duplicate samples were collected with the sample sets, DUP-01, DUP-02 and DUP-03. Acceptable precision [(RPD $\leq$ 20% or the difference between the concentrations < reporting limit (RL)] was demonstrated between the field duplicates and original samples MW-307, MW-200 and MW-105, respectively, with the following exception.

The concentrations of selenium were less than 5 times the reporting limit for both DUP-02 and MW-200 and the difference between the concentrations of selenium in the field duplicate pair using samples DUP-02 and MW-200 was greater than the RL. Therefore the concentrations of selenium in samples DUP-02 and MW-200 were J qualified as estimated.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	RPD	Validation Result (mg/L)	Validation Qualifier	Reason Code
DUP-02	Selenium	0.0049	NA	27	0.0049	J	FD
MW-200	Selenium	0.0064	NA		0.0064	J	FD

mg/L- milligram per liter
NA-not applicable

Sensitivity

The samples were reported to the MDLs. Elevated non-detect results were reported due to the dilutions analyzed.

1.9 Electronic Data Deliverables (EDDs) Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II reports and the EDDs.

2.0 MERCURY

The samples were analyzed for mercury by EPA method 7470A.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment
✓ Holding Time
⊗ Method Blank
✓ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Equipment Blank
✓ Field Blank
✓ Field Duplicate
✓ Sensitivity
✓ Electronic Data Deliverables Review

2.1 Overall Assessment

The mercury data reported in these packages are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this sample set is 100%.

2.2 Holding Time

The holding time for mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported (batches 390174, 390725 and 392233). Mercury was not detected in the method blanks above the MDL, with the following exception.

Mercury was detected at an estimated concentration, greater than the MDL and less the RL in the method blank for batch 392233. Therefore, the concentrations of mercury in the associated samples that were less than five times the method blank concentration were U* qualified as not detected at the reported concentration.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
MW-101	Mercury	0.000093	I V	0.000093	U*	BL
MW-102	Mercury	0.000094	I V	0.000094	U*	BL
MW-103	Mercury	0.00012	I V	0.00012	U*	BL
MW-106	Mercury	0.00008	I V	0.00008	U*	BL
EB-03	Mercury	0.000088	I V	0.000088	U*	BL
FB-03	Mercury	0.00011	I V	0.00011	U*	BL
MW-109	Mercury	0.000097	I V	0.000097	U*	BL

mg/L- milligram per liter
I-the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
V-indicates that the analyte was detected at or above the MDL in both the sample and the associated method blank

2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three batch MS/MSD pairs were reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

2.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three LCSs were reported. The recovery results were within the laboratory and SOP specified acceptance criteria.

2.6 Equipment Blank

Three equipment blanks were collected with the sample sets, EB-01, EB-02 and EB-03. Mercury was not detected in the equipment blanks above the MDLs, with the following exception.

Mercury was detected at an estimated concentration, greater than the MDL and less the RL in EB-03. Since the concentration of mercury in EB-03 was U* qualified as not detected at the reported concentration due to method blank contamination, no qualifications were applied to the mercury data in the associated samples based on the equipment blank concentration.

2.7 Field Blank

Three field blanks were collected with the sample sets, FB-01, FB-02 and FB-03. Mercury was not detected in the field blanks above the MDLs, with the following exception.

Mercury was detected at an estimated concentration, greater than the MDL and less the RL in FB-03. Since the concentration of mercury in FB-03 was U* qualified as not detected at the reported concentration due to method blank contamination, no qualifications were applied to the mercury data in the associated samples based on the field blank concentration.

2.8 Field Duplicate

Three field duplicate samples were collected with the sample sets, DUP-01, DUP-02 and DUP-03. Acceptable precision [(RPD $\leq$ 20% or the difference between the concentrations < reporting limit (RL)] was demonstrated between the field duplicates and original samples MW-307, MW-200 and MW-105, respectively.

2.9 Sensitivity

The samples were reported to the MDLs. No elevated non-detect results were reported.

2.10 Electronic Data Deliverables Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II reports and the EDDs.

3.0 ANIONS

The samples were analyzed for chloride by SM 4500 Cl, fluoride by SM 4500 F and sulfate by SM 4500 SO_4.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

⊗ Overall Assessment
✓ Holding Times
⊗ Method Blank
⊗ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Equipment Blank
⊗ Field Blank
⊗ Field Duplicate
✓ Sensitivity
✓ Electronic Data Deliverables Review

3.1 Overall Assessment

The anion data reported in these packages are considered usable for meeting project objectives, with the following exceptions. Due to MS/MSD recoveries of less than 10% for chloride and sulfate, the non-detect results of chloride in batch 390817 and sulfate in batch 391085 were UR qualified as rejected and the estimated concentrations of sulfate in batch 391085 were R qualified as rejected. The results that were not rejected are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include

values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this sample set is 96.2%.

3.2 Holding Times

The holding time for anion analyses of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Thirteen method blanks were reported (chloride batches 390740, 390817 and 392314; fluoride batches 391059, 391117, 391669, 391874; 391977 and 392016; sulfate batches 390781, 391085, 391847 and 392490). Anions were not detected in the method blanks above the MDLs, with the following exception.

Chloride was detected at an estimated concentration, greater than the MDL and less the RL in batch 392314. Therefore, the concentrations of chloride in the associated samples that were less than five times the method blank concentration were U* qualified as not detected at the reported concentration.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
DUP-03	Chloride	1.3	I V	1.3	U*	BL
EB-03	Chloride	1.3	I V	1.3	U*	BL
MW-109	Chloride	6.9	V	6.9	U*	BL

mg/L- milligram per liter
I-the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
V-indicates that the analyte was detected at or above the MDL in both the sample and the associated method blank

3.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Twelve sample set specific MS/MSD pairs were reported, using samples MW-100, MW-101, MW-109, MW-200 and MW-300 for the chloride data; samples MW-104 and MW-206 for the fluoride data; and samples MW-100, MW-103, MW-200, MW-300 and MW-304 for the sulfate data. The recovery and RPD results were within the laboratory and SOP specified acceptance criteria, with the following exceptions.

The recoveries of sulfate were less than 10% in the MS/MSD pairs using samples MW-200 and MW-304. Therefore, the concentrations of sulfate in the associated samples were J qualified as estimated, the estimated concentrations of sulfate, greater than the MDL and less than the RL, in the associated samples were R qualified as rejected and the non-detect sulfate results were UR qualified as rejected. The recoveries of chloride were less than 10% in the MS/MSD pairs using samples MW-101 and MW-200. Therefore, the concentrations of chloride in the associated samples were J qualified as estimated, and the non-detect sulfate results were UR qualified as rejected. Additionally the recoveries of fluoride and sulfate were low and outside the laboratory and SOP specified acceptance criteria in the MS/MSD pairs using samples MW-206 and MW-103, respectively. Therefore, the concentrations of fluoride and sulfate in the associated samples were J qualified as estimated and the non-detect fluoride results were UJ qualified as estimated less than the MDL.

In addition, three batch MS/MSD pairs were reported for the fluoride data and two batch MS/MSD pairs were reported for the sulfate data. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
MW-200	Sulfate	160	NA	160	J	M-
EB-01	Sulfate	1.4	U	1.4	UR	M-
FB-01	Sulfate	1.4	U	1.4	UR	M-
MW-304	Sulfate	460	NA	460	J	M-
MW-305	Sulfate	1.5	I	1.5	R	M-
MW-308	Sulfate	210	NA	210	J	M-
DUP-02	Sulfate	160	NA	160	J	M-
EB-02	Sulfate	1.4	U	1.4	UR	M-
FB-02	Sulfate	1.4	U	1.4	UR	M-
MW-202	Sulfate	8.6	NA	8.6	J	M-
MW-203	Sulfate	100	NA	100	J	M-
MW-204	Sulfate	410	NA	410	J	M-
MW-205	Sulfate	14	NA	14	J	M-
MW-101	Sulfate	1.4	U	1.4	UJ	M-
MW-102	Sulfate	1.4	U	1.4	UJ	M-
MW-103	Sulfate	38	NA	38	J	M-
MW-104	Sulfate	540	NA	540	J	M-
MW-105	Sulfate	22	NA	22	J	M-
DUP-03	Sulfate	1.4	U	1.4	UJ	M-
EB-03	Sulfate	1.4	U	1.4	UJ	M-
MW-106	Sulfate	1.4	U	1.4	UJ	M-

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
MW-109	Sulfate	9.7	NA	9.7	J	M-
MW-110	Sulfate	270	NA	270	J	M-
DUP-02	Fluoride	0.05	I	0.05	J	M-
EB-02	Fluoride	0.032	U	0.032	UJ	M-
FB-02	Fluoride	0.032	U	0.032	UJ	M-
MW-206	Fluoride	0.08	I	0.08	J	M-
MW-200	Chloride	530	NA	530	J	M-
MW-201	Chloride	110	NA	110	J	M-
MW-202	Chloride	14	NA	14	J	M-
DUP-02	Chloride	530	NA	530	J	M-
EB-02	Chloride	0.6	U	0.6	UR	M-
FB-02	Chloride	0.6	U	0.6	UR	M-
MW-203	Chloride	14	NA	14	J	M-
MW-204	Chloride	81	NA	81	J	M-
MW-205	Chloride	4.1	NA	4.1	J	M-
MW-206	Chloride	2100	NA	2100	J	M-
MW-101	Chloride	5.2	NA	5.2	J	M-
MW-102	Chloride	5.2	NA	5.2	J	M-
MW-103	Chloride	7.7	NA	7.7	J	M-
MW-104	Chloride	160	NA	160	J	M-
MW-105	Chloride	45	NA	45	J	M-
MW-106	Chloride	3.7	NA	3.7	J	M-

mg/L- milligram per liter
NA- not applicable
U-not detected at the MDL
I-the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit

3.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Thirteen LCSs were reported. The recovery results were within the laboratory and SOP specified acceptance criteria.

3.6 Equipment Blank

Three equipment blanks were collected with the sample sets, EB-01, EB-02 and EB-03. Anions were not detected in the equipment blanks above the MDLs, with the following exception.

Chloride was detected at an estimated concentration, greater than the MDL and less than the RL in EB-03. Since the concentration of chloride in EB-03 was U* qualified as not detected at the

reported concentration due to method blank contamination, no qualifications were applied to the chloride data in the associated samples based on the equipment blank concentration.

3.7 Field Blank

Three field blanks were collected with the sample sets, FB-01, FB-02 and FB-03. Anions were not detected in the field blanks above the MDLs, with the following exceptions.

Chloride and sulfate were detected above the RL in FB-03. Therefore, the concentrations of chloride and sulfate in the associated samples that were less than five times the field blank concentrations were U* qualified as not detected at the reported concentration.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
MW-201	Chloride	110	NA	110	U*	BF
MW-101	Chloride	5.2	NA	5.2	U*	BF
MW-102	Chloride	5.2	NA	5.2	U*	BF
MW-103	Chloride	7.7	NA	7.7	U*	BF
MW-104	Chloride	160	NA	160	U*	BF
MW-105	Chloride	45	NA	45	U*	BF
MW-106	Chloride	3.7	NA	3.7	U*	BF
MW-109	Chloride	6.9	V	6.9	U*	BF
DUP-03	Chloride	1.3	I V	1.3	U*	BF
EB-03	Chloride	1.3	I V	1.3	U*	BF
MW-110	Chloride	140	NA	140	U*	BF
MW-103	Sulfate	38	NA	38	U*	BF
MW-105	Sulfate	22	NA	22	U*	BF
MW-109	Sulfate	9.7	NA	9.7	U*	BF

mg/L- milligram per liter
NA- not applicable
V-indicates that the analyte was detected at or above the MDL in both the sample and the associated method blank
I-the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit

3.8 Field Duplicate

Three field duplicate samples were collected with the sample sets, DUP-01, DUP-02 and DUP-03. Acceptable precision [(RPD < 20% or the difference between the concentrations < reporting limit (RL)] was demonstrated between the field duplicates and original samples MW-307, MW-200 and MW-105, respectively, with the following exceptions.

The concentrations of chloride and sulfate in sample DUP-03 and the concentration of sulfate in sample MW-105 were less than 5 times the reporting limit and the difference between the concentrations of chloride and sulfate in the field duplicate pair using samples DUP-03 and MW-105 were greater than the RLs. Therefore the concentrations of chloride in sample DUP-03 and chloride and sulfate in sample MW-105 were J qualified as estimated and the non-detect result of sulfate in sample DUP-03 was UJ qualified as estimated less than the MDL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	RPD	Validation Result (mg/L)	Validation Qualifier	Reason Code
DUP-03	Chloride	1.3	I V	NC	1.3	J	FD
MW-105	Chloride	45	NA		45	J	FD
DUP-03	Sulfate	1.4	U	NC	1.4	UJ	FD
MW-105	Sulfate	22	NA		22	J	FD

mg/L- milligram per liter
NC-not calculable
V-indicates that the analyte was detected at or above the MDL in both the sample and the associated method blank
I-the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit

3.9 Sensitivity

The samples were reported to the MDL. No elevated non-detect results were reported.

3.10 Electronic Data Deliverables Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II reports and the EDDs.

4.0 TOTAL DISSOLVED SOLIDS

The samples were analyzed for total dissolved solids (TDS) by SM 2540C.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate

- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ⊗ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

4.1 Overall Assessment

The TDS data reported in these packages are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this sample set is 100%.

4.2 Holding Times

The holding time for TDS analyses of a water sample is 7 days from sample collection to analysis. The holding times were met for the sample analyses.

4.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported (batches 390294, 390489, 390490 and 390491). TDS was not detected in the method blanks above the MDL.

4.4 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four LCSs were reported. The recovery results were within the laboratory and SOP specified acceptance criteria.

4.5 Laboratory Duplicate

Three sample set specific laboratory duplicates were reported, using samples MW-100, MW-106 and MW-205. The RPD results were within the laboratory specified acceptance criteria.

In addition, one batch laboratory duplicate was reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

4.6 Equipment Blank

Three equipment blanks were collected with the sample sets, EB-01, EB-02 and EB-03. TDS was not detected in the equipment blanks above the MDL.

4.7 Field Blank

Three field blanks were collected with the sample sets, FB-01, FB-02 and FB-03. TDS was not detected in the field blanks above the MDLs, with the following exceptions.

TDS was detected above the RL in field blanks FB-02 and FB-03. Therefore, the concentrations of TDS in the associated samples that were less than the five times the field blank concentrations were U* qualified as not detected at the reported concentration.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
MW-300	Total Dissolved Solids	26	NA	26	U*	BF
MW-305	Total Dissolved Solids	12	NA	12	U*	BF
MW-101	Total Dissolved Solids	8	NA	8	U*	BF
MW-102	Total Dissolved Solids	14	NA	14	U*	BF
DUP-03	Total Dissolved Solids	4	I	4	U*	BF
MW-109	Total Dissolved Solids	12	NA	12	U*	BF

mg/L- milligram per liter
NA-not applicable
I-the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit

4.8 Field Duplicate

Three field duplicate samples were collected with the sample sets, DUP-01, DUP-02 and DUP-03. Acceptable precision [(RPD < 20% or the difference between the concentrations < reporting limit (RL)] was demonstrated between the field duplicates and original samples MW-307, MW-200 and MW-105, respectively.

4.9 Sensitivity

The samples were reported to the MDL. No elevated non-detect results were reported.

4.10 Electronic Data Deliverables Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II reports and the EDDs

5.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by EPA method 9315, radium-228 by EPA method 9320 and combine radium 226+228 by calculation.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment
✓ Holding Times
⊗ Method Blank
✓ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Laboratory Duplicate
✓ Tracers and Carriers
✓ Equipment Blank
⊗ Field Blank
✓ Field Duplicate
✓ Sensitivity
✓ Electronic Data Deliverables Review

5.1 Overall Assessment

The radium-226 and radium-228 data reported in these packages are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this sample set is 100%.

5.2 Holding Times

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

5.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported for the radium-226 data (batches 356125, 356315, 356422). Three method blanks were reported for the radium-228 data (batches 356132, 356321 and 356424). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs), with the following exception.

Radium-228 was detected above the MDC in the method blank in batch 356132. Therefore, the radium-228 concentrations greater than the MDCs but less than the method blank concentration and the radium-228 concentrations greater than the method blank concentration but with a normalized absolute difference (NAD) less than 2.58 were U* qualified as not detected at the reported concentration. In addition, the combined radium 226+228 concentrations in these samples were J qualified as estimated since the concentration of radium-228 in the samples were U* qualified as not detected at the reported concentration and the concentration of radium-226 in the samples were greater than the MDC.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
DUP-01	Radium-228	0.566	NA	0.566	U*	BL
MW-100	Radium-228	0.563	NA	0.563	U*	BL
MW-107	Radium-228	0.65	NA	0.65	U*	BL
MW-108	Radium-228	1.53	NA	1.53	U*	BL
MW-306	Radium-228	0.563	NA	0.563	U*	BL
MW-307	Radium-228	0.654	NA	0.654	U*	BL
MW-305	Radium-228	0.749	NA	0.749	U*	BL
DUP-01	Combined Radium 226 + 228	0.769	NA	0.769	J	BL
MW-100	Combined Radium 226 + 228	0.933	NA	0.933	J	BL
MW-107	Combined Radium 226 + 228	1.09	NA	1.09	J	BL
MW-108	Combined Radium 226 + 228	1.97	NA	1.97	J	BL
MW-306	Combined Radium 226 +	0.783	NA	0.783	J	BL

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
	228					
MW-307	Combined Radium 226 + 228	0.848	NA	0.848	J	BL
MW-305	Combined Radium 226 + 228	1.29	NA	1.29	J	BL

pCi/L- picocuries per liter
NA- not applicable

5.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

5.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three LCS/LCS duplicate (LCSD) pairs were reported for radium-226 and three LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [2 sigma (2σ)] results were within the laboratory and SOP specified acceptance criteria.

5.6 Laboratory Duplicate

Laboratory duplicates were not reported.

5.7 Tracers and Carriers

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory and SOP specified acceptance criteria.

5.8 Equipment Blank

Three equipment blanks were collected with the sample sets, EB-01, EB-02 and EB-03. Radium was not detected in the equipment blanks above the MDCs.

5.9 Field Blank

Three field blanks were collected with the sample sets, FB-01, FB-02 and FB-03. Radium was not detected in the field blanks above the MDCs, with the following exceptions.

Radium-228 was detected above the MDC in FB-03. Therefore, the radium-228 concentrations greater than the MDCs but less than the FB-03 concentrations and the radium-228 concentrations greater than the FB-03 concentrations but with a normalized absolute difference (NAD) less than 2.58 were U* qualified as not detected at the reported concentration in the associated samples. In addition, the combined radium 226+228 concentrations in these samples were J qualified as estimated since the concentration of radium-228 in the samples were U* qualified as not detected at the reported concentration and the concentration of radium-226 in the samples were greater than the MDC.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
DUP-03	Radium-228	1.81	NA	1.81	U*	BF
MW-101	Radium-228	0.337	NA	0.337	U*	BF
MW-102	Radium-228	1.24	NA	1.24	U*	BF
MW-105	Radium-228	1.86	NA	1.86	U*	BF
MW-106	Radium-228	0.543	NA	0.543	U*	BF
MW-109	Radium-228	1.38	NA	1.38	U*	BF
DUP-03	Combined Radium 226 + 228	2.8	NA	2.8	J	BF
MW-101	Combined Radium 226 + 228	0.614	NA	0.614	J	BF
MW-102	Combined Radium 226 + 228	1.64	NA	1.64	J	BF
MW-105	Combined Radium 226 + 228	2.82	NA	2.82	J	BF
MW-106	Combined Radium 226 + 228	0.789	NA	0.789	J	BF
MW-109	Combined Radium 226 + 228	1.99	NA	1.99	J	BF

pCi/L- picocuries per liter
NA- not applicable

5.10 Field Duplicate

Three field duplicate samples were collected with the sample sets, DUP-01, DUP-02 and DUP-03. Acceptable precision [(RER (2σ) ≥3] was demonstrated between the field duplicates and original samples MW-307, MW-200 and MW-105, respectively.

5.11 Sensitivity

The samples were reported to the MDCs. No elevated non-detect results were reported.

5.12 Electronic Data Deliverables Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II reports and the EDDs.

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ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team per the SOP

DATA QUALIFIER DEFINITIONS

U* This analyte should be considered "not-detected" because it was detected in an associated blank at a similar level.

UJ The analyte was analyzed for, but was not detected above the level of the reported sample reporting/method detection limit. The reported method detection limit is approximate and may be inaccurate or imprecise.

J The analyte was positively identified but the result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R The data are unusable. The sample results are rejected due to serious analytical efficiencies in the ability to analyze the sample and meet quality control criteria. The analyte may or may not be present in the sample

UR The analyte was analyzed for, but was not detected above the level of the reported sample reporting or method detection; however, the data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the staple and meet quality control criteria. The analyte may or may not be present in the sample.

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ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team per the SOP

Reason Code	Explanation
BE	Equipment blank contamination. The result should be considered "not-detected."
BF	Field blank contamination. The result should be considered "not-detected."
BL	Laboratory blank contamination. The result should be considered "not-detected."
FD	Field duplicate imprecision.
M+	MS and/or MSD recoveries outside of acceptance limits. The result may be biased high.
M-	MS and/or MSD recoveries outside of acceptance limits. The result may be biased low.

Product Name: Low-Flow System

Date: 2018-06-08 12:06:00

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	PP
Company Name	RDH	Tubing Type	PE
Project Name	Gypsum	Tubing Diameter	.17 in
Site Name	Plant Crist CCR Gypsum	Tubing Length	36 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	383005		
Turbidity Make/Model	Hach	Pump placement from TOC	29 ft

Well Information:		Pumping Information:	
Well ID	MW-200	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.2506832 L
Well Total Depth	34 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.04 in
Depth to Water	19.82 ft	Total Volume Pumped	22 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:44:23	2100.02	23.15	5.05	2684.50	1.07	19.86	0.61	166.25
Last 5	11:49:23	2400.02	23.06	5.05	2632.31	1.01	19.86	0.60	158.23
Last 5	11:54:23	2700.02	23.15	5.05	2667.57	0.87	19.86	0.61	152.52
Last 5	11:59:23	3000.03	23.24	5.05	2652.92	0.69	19.86	0.60	147.81
Last 5	12:04:23	3300.02	23.11	5.05	2640.68	0.77	19.86	0.59	143.95
Variance 0			0.09	-0.00	35.26			0.01	-5.72
Variance 1			0.09	0.00	-14.64			-0.01	-4.71
Variance 2			-0.13	0.00	-12.25			-0.01	-3.86

Notes

Sample@1205, DUP-02@1105, Sunny 88

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-09 10:18:38

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	PP
Company Name	RDH	Tubing Type	PE
Project Name	Gypsum	Tubing Diameter	.17 in
Site Name	Plant Crist CCR Gypsum	Tubing Length	62 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	383005		
Turbidity Make/Model	Hach	Pump placement from TOC	55 ft

Well Information:		Pumping Information:	
Well ID	MW-201	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.3667322 L
Well Total Depth	60 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.01 in
Depth to Water	49.89 ft	Total Volume Pumped	26 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:57:12	2700.03	23.99	4.83	800.00	4.88	49.90	0.88	126.24
Last 5	10:02:12	3000.02	24.31	4.82	805.27	3.79	49.90	0.87	125.31
Last 5	10:07:12	3300.02	24.08	4.83	801.48	3.64	49.90	0.86	123.81
Last 5	10:12:12	3600.03	24.14	4.82	801.27	3.46	49.80	0.85	122.75
Last 5	10:17:12	3900.02	24.03	4.81	811.84	3.31	49.90	0.84	121.68
Variance 0			-0.23	0.01	-3.78			-0.01	-1.50
Variance 1			0.06	-0.00	-0.21			-0.01	-1.06
Variance 2			-0.11	-0.01	10.57			-0.01	-1.07

Notes

Sample@1018, Sunny 87

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-09 12:00:34

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	BP
Company Name	RDH	Tubing Type	PE
Project Name	Gypsum	Tubing Diameter	.17 in
Site Name	Plant Crist CCR Gypsum	Tubing Length	62 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	383005		
Turbidity Make/Model	Hach	Pump placement from TOC	55 ft

Well Information:		Pumping Information:	
Well ID	MW-202	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.4967322 L
Well Total Depth	60 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.06 in
Depth to Water	52.04 ft	Total Volume Pumped	26 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:38:14	2700.02	23.47	4.56	135.19	3.46	52.06	1.32	197.05
Last 5	11:43:14	3000.02	23.46	4.56	135.49	2.80	52.06	1.33	207.25
Last 5	11:48:14	3300.02	23.51	4.58	130.13	2.31	52.06	1.49	209.81
Last 5	11:53:14	3600.03	23.45	4.58	134.07	2.28	52.06	1.54	214.15
Last 5	11:58:14	3900.02	23.52	4.58	129.74	2.17	52.06	1.62	214.86
Variance 0			0.05	0.02	-5.36			0.15	2.57
Variance 1			-0.07	-0.00	3.94			0.05	4.33
Variance 2			0.07	0.01	-4.33			0.08	0.72

Notes

Sample@1159, Sunny 88 DUP-03@1059

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-08 07:20:37

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	PP
Company Name	RDH	Tubing Type	PE
Project Name	Gypsum	Tubing Diameter	.17 in
Site Name	Plant Crist CCR Gypsum	Tubing Length	65 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	383005		
Turbidity Make/Model	Hach	Pump placement from TOC	58 ft

Well Information:		Pumping Information:	
Well ID	MW-203	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.3801225 L
Well Total Depth	63 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	45.92 ft	Total Volume Pumped	20 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	06:59:32	1800.02	21.97	4.63	319.30	11.30	45.92	0.61	154.59
Last 5	07:04:32	2100.02	22.03	4.63	321.73	8.90	45.92	0.62	151.02
Last 5	07:09:32	2400.03	22.07	4.64	319.71	7.12	45.92	0.61	147.88
Last 5	07:14:32	2700.02	22.08	4.63	323.57	5.68	45.92	0.62	145.49
Last 5	07:19:32	3000.03	22.21	4.63	325.42	4.13	45.92	0.64	143.81
Variance 0			0.04	0.00	-2.02			-0.00	-3.14
Variance 1			0.01	-0.00	3.86			0.01	-2.39
Variance 2			0.13	0.00	1.85			0.01	-1.68

Notes

Sample@0720, Sunny 75

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-08 08:38:46

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	PP
Company Name	RDH	Tubing Type	PE
Project Name	Gypsum	Tubing Diameter	.17 in
Site Name	Plant Crist CCR Gypsum	Tubing Length	35 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	383005		
Turbidity Make/Model	Hach	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	MW-204	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.2462198 L
Well Total Depth	33 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	20 in
Depth to Water	14.22 ft	Total Volume Pumped	14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	08:17:26	900.04	21.47	4.29	1213.11	0.94	16.00	0.09	176.26
Last 5	08:22:26	1200.03	21.60	4.29	1206.60	0.80	16.00	0.09	165.44
Last 5	08:27:26	1500.02	21.65	4.29	1202.00	0.76	16.00	0.09	158.87
Last 5	08:32:26	1800.02	21.68	4.29	1193.76	0.74	16.00	0.09	152.96
Last 5	08:37:26	2100.03	21.54	4.29	1190.31	0.56	16.00	0.10	149.10
Variance 0			0.05	-0.01	-4.60			0.00	-6.57
Variance 1			0.03	0.01	-8.25			-0.00	-5.91
Variance 2			-0.13	-0.00	-3.44			0.02	-3.86

Notes

Sample@0838, Sunny 83

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-08 10:35:14

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	PP
Company Name	RDH	Tubing Type	PE
Project Name	Gypsum	Tubing Diameter	.17 in
Site Name	Plant Crist CCR Gypsum	Tubing Length	35 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	383005		
Turbidity Make/Model	Hach	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	MW-205	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.2462198 L
Well Total Depth	33 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.04 in
Depth to Water	17.16 ft	Total Volume Pumped	26 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:11:02	2700.02	23.41	4.89	568.43	0.15	17.20	0.97	309.38
Last 5	10:16:02	3000.02	23.49	4.88	562.43	0.24	17.20	0.98	328.18
Last 5	10:21:02	3300.02	23.42	4.89	567.66	0.29	17.20	0.97	348.81
Last 5	10:26:02	3600.02	23.39	4.89	567.69	0.19	17.20	0.99	364.95
Last 5	10:31:02	3900.02	23.47	4.89	571.17	0.11	17.20	0.98	378.10
Variance 0			-0.07	0.00	5.23			-0.01	20.63
Variance 1			-0.03	0.00	0.04			0.01	16.14
Variance 2			0.08	0.00	3.48			-0.01	13.15

Notes

Sample@1034, Sunny 88

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-08 13:12:15

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	PP
Company Name	RDH	Tubing Type	PE
Project Name	Gypsum	Tubing Diameter	.17 in
Site Name	Plant Crist CCR Gypsum	Tubing Length	40 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	383005		
Turbidity Make/Model	Hach	Pump placement from TOC	33 ft

Well Information:		Pumping Information:	
Well ID	MW-206	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.2685369 L
Well Total Depth	38 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.07 in
Depth to Water	28.18 ft	Total Volume Pumped	6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:58:48	300.02	24.33	4.30	6600.69	1.99	28.15	0.11	137.24
Last 5	13:03:48	600.02	24.32	4.30	6453.30	1.58	28.17	0.08	130.65
Last 5	13:08:48	900.02	24.34	4.31	6335.36	1.31	28.19	0.07	128.56
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.01	0.01	-147.39			-0.02	-6.59
Variance 2			0.02	0.00	-117.94			-0.01	-2.08

Notes

Sample@1311, EB-02 1320 partly cloudy 87

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-05 09:45:14

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	QED
Company Name	RDH	Tubing Type	PE
Project Name	Crist CCR	Tubing Diameter	.17 in
Site Name	Crist plant CCR	Tubing Length	121 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	383005		
Turbidity Make/Model	HACH	Pump placement from TOC	104 ft

Well Information:		Pumping Information:	
Well ID	MW-100	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	1.020074 L
Well Total Depth	119 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.02 in
Depth to Water	90.61 ft	Total Volume Pumped	14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:24:13	900.02	20.91	4.93	43.58	0.85	90.63	7.93	149.05
Last 5	09:29:13	1200.02	20.78	4.93	43.49	0.69	90.63	8.16	149.80
Last 5	09:34:13	1500.02	20.73	4.93	43.39	0.55	90.63	8.30	149.79
Last 5	09:39:13	1800.02	20.74	4.93	43.38	0.51	90.63	8.42	150.30
Last 5	09:44:13	2100.05	20.70	4.92	43.32	0.44	90.63	8.49	150.71
Variance 0			-0.05	0.01	-0.10			0.14	-0.01
Variance 1			0.01	-0.00	-0.01			0.12	0.51
Variance 2			-0.04	-0.01	-0.06			0.06	0.42

Notes

Sample @0944, rain 67

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-10 06:49:50

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	QED
Company Name	RDH	Tubing Type	PE
Project Name	LF-1	Tubing Diameter	.17 in
Site Name	Crist LF1	Tubing Length	120 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	383005		
Turbidity Make/Model	HACH	Pump placement from TOC	113 ft

Well Information:		Pumping Information:	
Well ID	MW-101	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.7556108 L
Well Total Depth	118 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	96.77 ft	Total Volume Pumped	12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	06:28:25	600.02	21.02	5.58	31.88	15.20	96.77	9.25	173.08
Last 5	06:33:25	900.02	21.04	5.42	31.84	11.80	96.77	9.24	173.65
Last 5	06:38:25	1200.02	20.99	5.31	31.93	4.48	96.77	9.18	171.31
Last 5	06:43:25	1500.04	21.08	5.21	32.01	2.65	96.77	9.14	171.14
Last 5	06:48:25	1800.03	21.10	5.12	31.98	2.22	96.77	9.13	171.42
Variance 0			-0.06	-0.11	0.09			-0.05	-2.34
Variance 1			0.09	-0.10	0.09			-0.04	-0.16
Variance 2			0.02	-0.09	-0.03			-0.01	0.27

Notes

Sample@0649, partly cloudy 72

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-05 08:20:58

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	QED
Company Name	RDH	Tubing Type	PE
Project Name	Crist CCR	Tubing Diameter	.17 in
Site Name	Crist plant CCR	Tubing Length	126 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	383005		
Turbidity Make/Model	HACH	Pump placement from TOC	119 ft

Well Information:		Pumping Information:	
Well ID	MW-107	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	1.042391 L
Well Total Depth	124 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.01 in
Depth to Water	102.01 ft	Total Volume Pumped	6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	08:02:21	300.02	21.19	5.10	32.28	0.72	102.02	8.95	151.85
Last 5	08:09:49	300.02	21.05	5.14	32.17	0.72	102.02	9.10	147.07
Last 5	08:14:49	600.02	21.01	5.10	32.16	0.80	102.02	9.11	147.44
Last 5	08:19:49	900.02	21.01	5.04	32.44	0.67	102.02	9.11	148.81
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.04	-0.03	-0.01			0.01	0.37
Variance 2			0.00	-0.06	0.29			-0.00	1.36

Notes

Sample @0820, cloudy72

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-05 07:11:24

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	QED
Company Name	RDH	Tubing Type	PE
Project Name	Crist CCR	Tubing Diameter	.17 in
Site Name	Crist plant CCR	Tubing Length	100 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	383005		
Turbidity Make/Model	HACH	Pump placement from TOC	93 ft

Well Information:		Pumping Information:	
Well ID	MW-108	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.9263423 L
Well Total Depth	98 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	70.20 ft	Total Volume Pumped	12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	06:50:12	600.02	21.23	5.28	41.62	12.70	70.20	8.64	163.96
Last 5	06:55:12	900.02	21.24	5.11	41.57	7.02	70.20	8.65	164.86
Last 5	07:00:12	1200.03	21.28	4.99	41.52	6.01	70.20	8.66	164.94
Last 5	07:05:12	1500.02	21.32	4.93	41.47	5.22	70.20	8.64	164.70
Last 5	07:10:12	1800.02	21.32	4.90	41.47	3.02	70.20	8.66	163.49
Variance 0			0.04	-0.12	-0.05			0.01	0.09
Variance 1			0.05	-0.07	-0.05			-0.02	-0.24
Variance 2			-0.01	-0.03	0.00			0.02	-1.21

Notes

Sample@0710, Cloudy 68

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-06 08:14:17

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	QED
Company Name	RDH	Tubing Type	PE
Project Name	Crist CCR	Tubing Diameter	.17 in
Site Name	Crist plant CCR	Tubing Length	95 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	383005		
Turbidity Make/Model	HACH	Pump placement from TOC	88 ft

Well Information:		Pumping Information:	
Well ID	NW-306	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.9040251 L
Well Total Depth	93 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.01 in
Depth to Water	56.06 ft	Total Volume Pumped	10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	07:52:53	300.09	21.13	5.75	37.38	8.08	56.10	8.57	150.62
Last 5	07:57:53	600.03	21.10	5.47	37.13	7.66	56.01	8.55	163.55
Last 5	08:02:53	900.03	21.17	5.29	36.64	6.44	56.01	8.52	165.83
Last 5	08:07:53	1200.02	21.23	5.17	36.36	5.84	56.01	8.50	164.60
Last 5	08:12:53	1500.02	21.29	5.09	36.22	4.36	56.01	8.48	163.81
Variance 0			0.07	-0.18	-0.48			-0.03	2.28
Variance 1			0.06	-0.12	-0.28			-0.02	-1.23
Variance 2			0.06	-0.08	-0.14			-0.01	-0.79

Notes

Sample @0813, sunny 75

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-06 09:59:41

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	QED
Company Name	RDH	Tubing Type	PE
Project Name	Crist CCR	Tubing Diameter	.17 in
Site Name	Crist plant CCR	Tubing Length	125 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	383005		
Turbidity Make/Model	HACH	Pump placement from TOC	118 ft

Well Information:		Pumping Information:	
Well ID	MW-307	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	1.037928 L
Well Total Depth	123 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.5 in
Depth to Water	90.62 ft	Total Volume Pumped	22 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:38:21	2100.03	22.62	5.59	38.47	2.17	91.05	1.31	49.18
Last 5	09:43:21	2400.02	22.38	5.58	38.27	2.01	91.05	1.36	49.18
Last 5	09:48:21	2700.02	22.71	5.58	38.03	1.75	91.05	1.43	47.59
Last 5	09:53:21	3000.03	22.80	5.58	37.69	1.62	91.05	1.50	47.51
Last 5	09:58:21	3300.02	22.81	5.58	37.36	--	--	1.58	48.53
Variance 0			0.32	-0.00	-0.23			0.07	-1.59
Variance 1			0.09	0.00	-0.34			0.07	-0.08
Variance 2			0.01	0.01	-0.33			0.09	1.02

Notes

Sample@0959, Sunny 80

Grab Samples

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

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

TestAmerica Job ID: 400-154742-1
TestAmerica Sample Delivery Group: Background
Client Project/Site: CCR Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Cheyenne Whitmire

Authorized for release by:
7/16/2018 4:41:56 PM

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LINKS

Review your project results through TotalAccess

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-154742-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-154742-1

RAD
Method(s) 903.0, 9315: Radium-226 Prep Batch 160-370240: The method blank (MB) exhibited a negative result greater in magnitude than the 3 sigma TPU: (MB 160-370240/21-A). This occurrence was evaluated and determined to be random in nature. Sporadic occurrences such as this are statistically expected. No further action is required.

Method(s) PrecSep_0: Radium 228 Prep Batch 160-370246: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: MW-100 (400-154742-1), MW-107 (400-154742-2), MW-108 (400-154742-3), MW-306 (400-154742-4) and MW-307 (400-154742-5). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-370240: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: MW-100 (400-154742-1), MW-107 (400-154742-2), MW-108 (400-154742-3), MW-306 (400-154742-4) and MW-307 (400-154742-5). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Metals
Method(s) 6020: The method blank for preparation batch 401913 and analytical batch 402069 contained Selenium 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(s) 7470A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 401749 and analytical batch 402434 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.

General Chemistry
Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 402914 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) SM 4500 SO4 E: Due to the high concentration of sulfates the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 402914 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Detection Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154742-1
SDG: Background

Client Sample ID: MW-100 — Lab Sample ID: 400-154742-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.018		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.90		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00051	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Selenium	0.00049	I V	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	10		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.3		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.92				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-107 — Lab Sample ID: 400-154742-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.014		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.49		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00052	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0012	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.00088	I	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00098	I V	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Chloride	5.5		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	5.04				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-108 — Lab Sample ID: 400-154742-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.011		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Selenium	0.00065	I V	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	14		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	6.5		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	2.6	I	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	4.9				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-306 — Lab Sample ID: 400-154742-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.014		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.59		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00040	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Selenium	0.00025	I V	0.0013	0.00024	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154742-1
SDG: Background

Client Sample ID: MW-306 (Continued) — Lab Sample ID: 400-154742-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	20		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.6		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	5.09				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-307 — Lab Sample ID: 400-154742-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.017		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.68		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00048	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0021	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00026	I V	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	16		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	4.1		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	5.58				SU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154742-1
SDG: Background

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
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
Field Sampling	Field Sampling	EPA	TAL PEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

EPA = US Environmental Protection Agency
None = None
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.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154742-1
SDG: Background

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-154742-1	MW-100	Water	06/05/18 09:44	06/07/18 08:25
400-154742-2	MW-107	Water	06/05/18 08:20	06/07/18 08:25
400-154742-3	MW-108	Water	06/05/18 07:10	06/07/18 08:25
400-154742-4	MW-306	Water	06/06/18 08:13	06/07/18 08:25
400-154742-5	MW-307	Water	06/06/18 09:59	06/07/18 08:25

Client Sample ID: MW-100

Date Collected: 06/05/18 09:44
Date Received: 06/07/18 08:25

Lab Sample ID: 400-154742-1

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/21/18 09:12	06/21/18 14:29	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		06/21/18 09:12	06/21/18 14:29	5
Barium	**0.018**		0.0025	0.00049	mg/L		06/21/18 09:12	06/21/18 14:29	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 14:29	5
Boron	0.021	U	0.050	0.021	mg/L		06/21/18 09:12	06/21/18 14:29	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 14:29	5
Calcium	**0.90**		0.25	0.13	mg/L		06/21/18 09:12	06/21/18 14:29	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/21/18 09:12	06/21/18 14:29	5
Cobalt	**0.00051**	**I**	0.0025	0.00040	mg/L		06/21/18 09:12	06/21/18 14:29	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/21/18 09:12	06/21/18 14:29	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/21/18 09:12	06/21/18 14:29	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/21/18 09:12	06/21/18 14:29	5
Selenium	**0.00049**	**I V**	0.0013	0.00024	mg/L		06/21/18 09:12	06/21/18 14:29	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		06/21/18 09:12	06/21/18 14:29	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		06/23/18 14:33	06/25/18 10:14	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**10**		5.0	3.4	mg/L			06/11/18 17:02	1
Chloride	**5.3**		2.0	0.60	mg/L			06/29/18 11:00	1
Fluoride	0.032	U	0.10	0.032	mg/L			06/13/18 14:47	1
Sulfate	1.4	U	5.0	1.4	mg/L			06/28/18 13:45	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.292**		0.200	0.202	1.00	0.266	pCi/L	06/13/18 08:51	07/06/18 19:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.6*		*40 - 110*	*06/13/18 08:51*	*07/06/18 19:44*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.420**		0.222	0.225	1.00	0.320	pCi/L	06/13/18 09:16	07/06/18 11:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.6*		*40 - 110*	*06/13/18 09:16*	*07/06/18 11:53*	*1*
Y Carrier	*88.6*		*40 - 110*	*06/13/18 09:16*	*07/06/18 11:53*	*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	**0.713**		0.299	0.302	5.00	0.320	pCi/L		07/08/18 16:53	1

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154742-1
SDG: Background

Client Sample ID: MW-100
Date Collected: 06/05/18 09:44
Date Received: 06/07/18 08:25

Lab Sample ID: 400-154742-1
Matrix: Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.92				SU			06/05/18 09:44	1

Client Sample ID: MW-107

Date Collected: 06/05/18 08:20
Date Received: 06/07/18 08:25

Lab Sample ID: 400-154742-2

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/21/18 09:12	06/21/18 14:55	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		06/21/18 09:12	06/21/18 14:55	5
Barium	**0.014**		0.0025	0.00049	mg/L		06/21/18 09:12	06/21/18 14:55	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 14:55	5
Boron	0.021	U	0.050	0.021	mg/L		06/21/18 09:12	06/21/18 14:55	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 14:55	5
Calcium	**0.49**		0.25	0.13	mg/L		06/21/18 09:12	06/21/18 14:55	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/21/18 09:12	06/21/18 14:55	5
Cobalt	**0.00052**	**I**	0.0025	0.00040	mg/L		06/21/18 09:12	06/21/18 14:55	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/21/18 09:12	06/21/18 14:55	5
Lithium	**0.0012**	**I**	0.0050	0.0011	mg/L		06/21/18 09:12	06/21/18 14:55	5
Molybdenum	**0.00088**	**I**	0.015	0.00085	mg/L		06/21/18 09:12	06/21/18 14:55	5
Selenium	**0.00098**	**I V**	0.0013	0.00024	mg/L		06/21/18 09:12	06/21/18 14:55	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		06/21/18 09:12	06/21/18 14:55	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		06/23/18 14:33	06/25/18 10:27	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			06/11/18 17:02	1
Chloride	**5.5**		2.0	0.60	mg/L			06/29/18 11:00	1
Fluoride	0.032	U	0.10	0.032	mg/L			06/13/18 14:50	1
Sulfate	1.4	U	5.0	1.4	mg/L			06/28/18 13:45	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.445**		0.235	0.238	1.00	0.278	pCi/L	06/13/18 08:51	07/06/18 19:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.9*		*40 - 110*	*06/13/18 08:51*	*07/06/18 19:44*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.482**		0.260	0.264	1.00	0.381	pCi/L	06/13/18 09:16	07/06/18 11:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.9*		*40 - 110*	*06/13/18 09:16*	*07/06/18 11:53*	*1*
Y Carrier	*83.7*		*40 - 110*	*06/13/18 09:16*	*07/06/18 11:53*	*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	**0.927**		0.350	0.355	5.00	0.381	pCi/L		07/08/18 16:53	1

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154742-1
SDG: Background

Client Sample ID: MW-107
Date Collected: 06/05/18 08:20
Date Received: 06/07/18 08:25

Lab Sample ID: 400-154742-2
Matrix: Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.04				SU			06/05/18 08:20	1

Client Sample ID: MW-108
Date Collected: 06/05/18 07:10
Date Received: 06/07/18 08:25

Lab Sample ID: 400-154742-3
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/21/18 09:12	06/21/18 14:59	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		06/21/18 09:12	06/21/18 14:59	5
Barium	**0.011**		0.0025	0.00049	mg/L		06/21/18 09:12	06/21/18 14:59	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 14:59	5
Boron	0.021	U	0.050	0.021	mg/L		06/21/18 09:12	06/21/18 14:59	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 14:59	5
Calcium	**1.2**		0.25	0.13	mg/L		06/21/18 09:12	06/21/18 14:59	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/21/18 09:12	06/21/18 14:59	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		06/21/18 09:12	06/21/18 14:59	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/21/18 09:12	06/21/18 14:59	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/21/18 09:12	06/21/18 14:59	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/21/18 09:12	06/21/18 14:59	5
Selenium	**0.00065**	**I V**	0.0013	0.00024	mg/L		06/21/18 09:12	06/21/18 14:59	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		06/21/18 09:12	06/21/18 14:59	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		06/23/18 14:33	06/25/18 10:29	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**14**		5.0	3.4	mg/L			06/11/18 17:02	1
Chloride	**6.5**		2.0	0.60	mg/L			06/29/18 11:00	1
Fluoride	0.032	U	0.10	0.032	mg/L			06/13/18 14:53	1
Sulfate	**2.6**	**I**	5.0	1.4	mg/L			06/28/18 13:45	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.777**		0.293	0.301	1.00	0.266	pCi/L	06/13/18 08:51	07/06/18 19:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.5*		*40 - 110*	*06/13/18 08:51*	*07/06/18 19:45*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.39**		0.344	0.368	1.00	0.423	pCi/L	06/13/18 09:16	07/06/18 11:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.5*		*40 - 110*	*06/13/18 09:16*	*07/06/18 11:55*	*1*
Y Carrier	*89.7*		*40 - 110*	*06/13/18 09:16*	*07/06/18 11:55*	*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	**2.17**		0.452	0.475	5.00	0.423	pCi/L		07/08/18 16:53	1

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154742-1
SDG: Background

Client Sample ID: MW-108
Date Collected: 06/05/18 07:10
Date Received: 06/07/18 08:25

Lab Sample ID: 400-154742-3
Matrix: Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.9				SU			06/05/18 07:10	1

Client Sample ID: MW-306

Date Collected: 06/06/18 08:13
Date Received: 06/07/18 08:25

Lab Sample ID: 400-154742-4

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/21/18 09:12	06/21/18 15:04	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		06/21/18 09:12	06/21/18 15:04	5
Barium	**0.014**		0.0025	0.00049	mg/L		06/21/18 09:12	06/21/18 15:04	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 15:04	5
Boron	0.021	U	0.050	0.021	mg/L		06/21/18 09:12	06/21/18 15:04	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 15:04	5
Calcium	**0.59**		0.25	0.13	mg/L		06/21/18 09:12	06/21/18 15:04	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/21/18 09:12	06/21/18 15:04	5
Cobalt	**0.00040**	**I**	0.0025	0.00040	mg/L		06/21/18 09:12	06/21/18 15:04	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/21/18 09:12	06/21/18 15:04	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/21/18 09:12	06/21/18 15:04	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/21/18 09:12	06/21/18 15:04	5
Selenium	**0.00025**	**I V**	0.0013	0.00024	mg/L		06/21/18 09:12	06/21/18 15:04	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		06/21/18 09:12	06/21/18 15:04	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		06/23/18 14:33	06/25/18 10:31	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**20**		5.0	3.4	mg/L			06/12/18 13:11	1
Chloride	**5.6**		2.0	0.60	mg/L			06/29/18 11:00	1
Fluoride	0.032	U	0.10	0.032	mg/L			07/02/18 10:26	1
Sulfate	1.4	U	5.0	1.4	mg/L			07/01/18 08:50	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.432**		0.243	0.246	1.00	0.306	pCi/L	06/13/18 08:51	07/06/18 19:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.1*		*40 - 110*	*06/13/18 08:51*	*07/06/18 19:45*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.648**		0.266	0.273	1.00	0.371	pCi/L	06/13/18 09:16	07/06/18 11:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.1*		*40 - 110*	*06/13/18 09:16*	*07/06/18 11:55*	*1*
Y Carrier	*90.1*		*40 - 110*	*06/13/18 09:16*	*07/06/18 11:55*	*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	**1.08**		0.360	0.367	5.00	0.371	pCi/L		07/08/18 16:53	1

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154742-1
SDG: Background

Client Sample ID: MW-306
Date Collected: 06/06/18 08:13
Date Received: 06/07/18 08:25

Lab Sample ID: 400-154742-4
Matrix: Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.09				SU			06/06/18 08:13	1

Client Sample ID: MW-307

Date Collected: 06/06/18 09:59
Date Received: 06/07/18 08:25

Lab Sample ID: 400-154742-5

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/21/18 09:12	06/21/18 15:31	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		06/21/18 09:12	06/21/18 15:31	5
Barium	**0.017**		0.0025	0.00049	mg/L		06/21/18 09:12	06/21/18 15:31	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 15:31	5
Boron	0.021	U	0.050	0.021	mg/L		06/21/18 09:12	06/21/18 15:31	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 15:31	5
Calcium	**0.68**		0.25	0.13	mg/L		06/21/18 09:12	06/21/18 15:31	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/21/18 09:12	06/21/18 15:31	5
Cobalt	**0.00048**	**I**	0.0025	0.00040	mg/L		06/21/18 09:12	06/21/18 15:31	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/21/18 09:12	06/21/18 15:31	5
Lithium	**0.0021**	**I**	0.0050	0.0011	mg/L		06/21/18 09:12	06/21/18 15:31	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/21/18 09:12	06/21/18 15:31	5
Selenium	**0.00026**	**I V**	0.0013	0.00024	mg/L		06/21/18 09:12	06/21/18 15:31	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		06/21/18 09:12	06/21/18 15:31	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		06/23/18 14:33	06/25/18 10:32	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**16**		5.0	3.4	mg/L			06/12/18 13:11	1
Chloride	**4.1**		2.0	0.60	mg/L			06/29/18 11:00	1
Fluoride	0.032	U	0.10	0.032	mg/L			07/02/18 10:35	1
Sulfate	1.4	U	5.0	1.4	mg/L			07/01/18 08:50	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.338**		0.215	0.217	1.00	0.277	pCi/L	06/13/18 08:51	07/06/18 19:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.9*		*40 - 110*	*06/13/18 08:51*	*07/06/18 19:45*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.443**		0.279	0.282	1.00	0.427	pCi/L	06/13/18 09:16	07/06/18 11:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.9*		*40 - 110*	*06/13/18 09:16*	*07/06/18 11:55*	*1*
Y Carrier	*81.1*		*40 - 110*	*06/13/18 09:16*	*07/06/18 11:55*	*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	**0.780**		0.352	0.356	5.00	0.427	pCi/L		07/08/18 16:53	1

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154742-1
SDG: Background

Client Sample ID: MW-307
Date Collected: 06/06/18 09:59
Date Received: 06/07/18 08:25

Lab Sample ID: 400-154742-5
Matrix: Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.58				SU			06/06/18 09:59	1

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
V	Indicates that the analyte was detected at or above the method detection limit in both the sample and the associated method blank and the value of 10 times the blank value was equal to or greater than the associated sample value.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.

General Chemistry

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.

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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154742-1
SDG: Background

Client Sample ID: MW-100
Date Collected: 06/05/18 09:44
Date Received: 06/07/18 08:25

Lab Sample ID: 400-154742-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401913	06/21/18 09:12	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402069	06/21/18 14:29	DRE	TAL PEN
Total/NA	Prep	7470A			401749	06/23/18 14:33	DN1	TAL PEN
Total/NA	Analysis	7470A		1	402434	06/25/18 10:14	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	400731	06/11/18 17:02	RRC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	403017	06/29/18 11:00	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	400986	06/13/18 14:47	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	402914	06/28/18 13:45	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370240	06/13/18 08:51	JLC	TAL SL
Total/NA	Analysis	9315		1	374245	07/06/18 19:44	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370246	06/13/18 09:16	JLC	TAL SL
Total/NA	Analysis	9320		1	374350	07/06/18 11:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	374406	07/08/18 16:53	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404432	06/05/18 09:44	CDH	TAL PEN

Client Sample ID: MW-107
Date Collected: 06/05/18 08:20
Date Received: 06/07/18 08:25

Lab Sample ID: 400-154742-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401913	06/21/18 09:12	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402069	06/21/18 14:55	DRE	TAL PEN
Total/NA	Prep	7470A			401749	06/23/18 14:33	DN1	TAL PEN
Total/NA	Analysis	7470A		1	402434	06/25/18 10:27	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	400731	06/11/18 17:02	RRC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	403017	06/29/18 11:00	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	400986	06/13/18 14:50	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	402914	06/28/18 13:45	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370240	06/13/18 08:51	JLC	TAL SL
Total/NA	Analysis	9315		1	374245	07/06/18 19:44	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370246	06/13/18 09:16	JLC	TAL SL
Total/NA	Analysis	9320		1	374350	07/06/18 11:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	374406	07/08/18 16:53	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404432	06/05/18 08:20	CDH	TAL PEN

Client Sample ID: MW-108
Date Collected: 06/05/18 07:10
Date Received: 06/07/18 08:25

Lab Sample ID: 400-154742-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401913	06/21/18 09:12	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402069	06/21/18 14:59	DRE	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154742-1
SDG: Background

Client Sample ID: MW-108
Date Collected: 06/05/18 07:10
Date Received: 06/07/18 08:25

Lab Sample ID: 400-154742-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			401749	06/23/18 14:33	DN1	TAL PEN
Total/NA	Analysis	7470A		1	402434	06/25/18 10:29	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	400731	06/11/18 17:02	RRC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	403017	06/29/18 11:00	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	400986	06/13/18 14:53	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	402914	06/28/18 13:45	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370240	06/13/18 08:51	JLC	TAL SL
Total/NA	Analysis	9315		1	374245	07/06/18 19:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370246	06/13/18 09:16	JLC	TAL SL
Total/NA	Analysis	9320		1	374349	07/06/18 11:55	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	374406	07/08/18 16:53	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404432	06/05/18 07:10	CDH	TAL PEN

Client Sample ID: MW-306
Date Collected: 06/06/18 08:13
Date Received: 06/07/18 08:25

Lab Sample ID: 400-154742-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401913	06/21/18 09:12	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402069	06/21/18 15:04	DRE	TAL PEN
Total/NA	Prep	7470A			401749	06/23/18 14:33	DN1	TAL PEN
Total/NA	Analysis	7470A		1	402434	06/25/18 10:31	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	400737	06/12/18 13:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	403017	06/29/18 11:00	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403221	07/02/18 10:26	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	403143	07/01/18 08:50	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370240	06/13/18 08:51	JLC	TAL SL
Total/NA	Analysis	9315		1	374245	07/06/18 19:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370246	06/13/18 09:16	JLC	TAL SL
Total/NA	Analysis	9320		1	374349	07/06/18 11:55	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	374406	07/08/18 16:53	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404432	06/06/18 08:13	CDH	TAL PEN

Client Sample ID: MW-307
Date Collected: 06/06/18 09:59
Date Received: 06/07/18 08:25

Lab Sample ID: 400-154742-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401913	06/21/18 09:12	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402069	06/21/18 15:31	DRE	TAL PEN
Total/NA	Prep	7470A			401749	06/23/18 14:33	DN1	TAL PEN
Total/NA	Analysis	7470A		1	402434	06/25/18 10:32	JAP	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154742-1
SDG: Background

Client Sample ID: MW-307

Date Collected: 06/06/18 09:59
Date Received: 06/07/18 08:25

Lab Sample ID: 400-154742-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	400737	06/12/18 13:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	403017	06/29/18 11:00	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403221	07/02/18 10:35	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	403143	07/01/18 08:50	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370240	06/13/18 08:51	JLC	TAL SL
Total/NA	Analysis	9315		1	374245	07/06/18 19:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370246	06/13/18 09:16	JLC	TAL SL
Total/NA	Analysis	9320		1	374349	07/06/18 11:55	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	374406	07/08/18 16:53	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404432	06/06/18 09:59	CDH	TAL PEN

Laboratory References:

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

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

Metals

Prep Batch: 401749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154742-1	MW-100	Total/NA	Water	7470A	
400-154742-2	MW-107	Total/NA	Water	7470A	
400-154742-3	MW-108	Total/NA	Water	7470A	
400-154742-4	MW-306	Total/NA	Water	7470A	
400-154742-5	MW-307	Total/NA	Water	7470A	
MB 400-401749/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-401749/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-155153-B-1-B MS	Matrix Spike	Total/NA	Water	7470A	
400-155153-B-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 401913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154742-1	MW-100	Total Recoverable	Water	3005A	
400-154742-2	MW-107	Total Recoverable	Water	3005A	
400-154742-3	MW-108	Total Recoverable	Water	3005A	
400-154742-4	MW-306	Total Recoverable	Water	3005A	
400-154742-5	MW-307	Total Recoverable	Water	3005A	
MB 400-401913/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-401913/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-154742-1 MS	MW-100	Total Recoverable	Water	3005A	
400-154742-1 MSD	MW-100	Total Recoverable	Water	3005A	

Analysis Batch: 402069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154742-1	MW-100	Total Recoverable	Water	6020	401913
400-154742-2	MW-107	Total Recoverable	Water	6020	401913
400-154742-3	MW-108	Total Recoverable	Water	6020	401913
400-154742-4	MW-306	Total Recoverable	Water	6020	401913
400-154742-5	MW-307	Total Recoverable	Water	6020	401913
MB 400-401913/1-A ^5	Method Blank	Total Recoverable	Water	6020	401913
LCS 400-401913/2-A	Lab Control Sample	Total Recoverable	Water	6020	401913
400-154742-1 MS	MW-100	Total Recoverable	Water	6020	401913
400-154742-1 MSD	MW-100	Total Recoverable	Water	6020	401913

Analysis Batch: 402434

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154742-1	MW-100	Total/NA	Water	7470A	401749
400-154742-2	MW-107	Total/NA	Water	7470A	401749
400-154742-3	MW-108	Total/NA	Water	7470A	401749
400-154742-4	MW-306	Total/NA	Water	7470A	401749
400-154742-5	MW-307	Total/NA	Water	7470A	401749
MB 400-401749/14-A	Method Blank	Total/NA	Water	7470A	401749
LCS 400-401749/15-A	Lab Control Sample	Total/NA	Water	7470A	401749
400-155153-B-1-B MS	Matrix Spike	Total/NA	Water	7470A	401749
400-155153-B-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	401749

General Chemistry

Analysis Batch: 400731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154742-1	MW-100	Total/NA	Water	SM 2540C	
400-154742-2	MW-107	Total/NA	Water	SM 2540C	
400-154742-3	MW-108	Total/NA	Water	SM 2540C	
MB 400-400731/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-400731/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-154742-1 DU	MW-100	Total/NA	Water	SM 2540C	

Analysis Batch: 400737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154742-4	MW-306	Total/NA	Water	SM 2540C	
400-154742-5	MW-307	Total/NA	Water	SM 2540C	
MB 400-400737/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-400737/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-154780-C-3 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 400986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154742-1	MW-100	Total/NA	Water	SM 4500 F C	
400-154742-2	MW-107	Total/NA	Water	SM 4500 F C	
400-154742-3	MW-108	Total/NA	Water	SM 4500 F C	
MB 400-400986/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-400986/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-154790-A-25 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-154790-A-25 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-154790-A-33 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 402914

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154742-1	MW-100	Total/NA	Water	SM 4500 SO4 E	
400-154742-2	MW-107	Total/NA	Water	SM 4500 SO4 E	
400-154742-3	MW-108	Total/NA	Water	SM 4500 SO4 E	
MB 400-402914/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-402914/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-402914/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-155251-G-9 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-155251-G-9 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 403017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154742-1	MW-100	Total/NA	Water	SM 4500 Cl- E	
400-154742-2	MW-107	Total/NA	Water	SM 4500 Cl- E	
400-154742-3	MW-108	Total/NA	Water	SM 4500 Cl- E	
400-154742-4	MW-306	Total/NA	Water	SM 4500 Cl- E	
400-154742-5	MW-307	Total/NA	Water	SM 4500 Cl- E	
MB 400-403017/56	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-403017/57	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-403017/53	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-154742-4 MS	MW-306	Total/NA	Water	SM 4500 Cl- E	
400-154742-4 MSD	MW-306	Total/NA	Water	SM 4500 Cl- E	

General Chemistry (Continued)

Analysis Batch: 403143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154742-4	MW-306	Total/NA	Water	SM 4500 SO4 E	
400-154742-5	MW-307	Total/NA	Water	SM 4500 SO4 E	
MB 400-403143/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-403143/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-403143/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-154816-A-4 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-154816-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 403221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154742-4	MW-306	Total/NA	Water	SM 4500 F C	
400-154742-5	MW-307	Total/NA	Water	SM 4500 F C	
MB 400-403221/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-403221/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-154742-4 MS	MW-306	Total/NA	Water	SM 4500 F C	
400-154742-4 MSD	MW-306	Total/NA	Water	SM 4500 F C	
400-154881-A-7 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Rad

Prep Batch: 370240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154742-1	MW-100	Total/NA	Water	PrecSep-21	
400-154742-2	MW-107	Total/NA	Water	PrecSep-21	
400-154742-3	MW-108	Total/NA	Water	PrecSep-21	
400-154742-4	MW-306	Total/NA	Water	PrecSep-21	
400-154742-5	MW-307	Total/NA	Water	PrecSep-21	
MB 160-370240/21-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-370240/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-370240/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 370246

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154742-1	MW-100	Total/NA	Water	PrecSep_0	
400-154742-2	MW-107	Total/NA	Water	PrecSep_0	
400-154742-3	MW-108	Total/NA	Water	PrecSep_0	
400-154742-4	MW-306	Total/NA	Water	PrecSep_0	
400-154742-5	MW-307	Total/NA	Water	PrecSep_0	
MB 160-370246/21-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-370246/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-370246/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Field Service / Mobile Lab

Analysis Batch: 404432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154742-1	MW-100	Total/NA	Water	Field Sampling	
400-154742-2	MW-107	Total/NA	Water	Field Sampling	
400-154742-3	MW-108	Total/NA	Water	Field Sampling	
400-154742-4	MW-306	Total/NA	Water	Field Sampling	

Field Service / Mobile Lab (Continued)

Analysis Batch: 404432 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154742-5	MW-307	Total/NA	Water	Field Sampling	

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-401913/1-A ^5
Matrix: Water
Analysis Batch: 402069

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 401913

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/21/18 09:12	06/21/18 14:14	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		06/21/18 09:12	06/21/18 14:14	5
Barium	0.00049	U	0.0025	0.00049	mg/L		06/21/18 09:12	06/21/18 14:14	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 14:14	5
Boron	0.021	U	0.050	0.021	mg/L		06/21/18 09:12	06/21/18 14:14	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 14:14	5
Calcium	0.13	U	0.25	0.13	mg/L		06/21/18 09:12	06/21/18 14:14	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/21/18 09:12	06/21/18 14:14	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		06/21/18 09:12	06/21/18 14:14	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/21/18 09:12	06/21/18 14:14	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/21/18 09:12	06/21/18 14:14	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/21/18 09:12	06/21/18 14:14	5
Selenium	0.000250	I	0.0013	0.00024	mg/L		06/21/18 09:12	06/21/18 14:14	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		06/21/18 09:12	06/21/18 14:14	5

Lab Sample ID: LCS 400-401913/2-A
Matrix: Water
Analysis Batch: 402069

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 401913

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0541		mg/L		108	80 - 120
Arsenic	0.0500	0.0511		mg/L		102	80 - 120
Barium	0.0500	0.0515		mg/L		103	80 - 120
Beryllium	0.0500	0.0500		mg/L		100	80 - 120
Boron	0.100	0.102		mg/L		102	80 - 120
Cadmium	0.0500	0.0521		mg/L		104	80 - 120
Calcium	5.00	4.96		mg/L		99	80 - 120
Chromium	0.0500	0.0500		mg/L		100	80 - 120
Cobalt	0.0500	0.0510		mg/L		102	80 - 120
Lead	0.0500	0.0497		mg/L		99	80 - 120
Lithium	0.0500	0.0532		mg/L		106	80 - 120
Molybdenum	0.0500	0.0485		mg/L		97	80 - 120
Selenium	0.0500	0.0528		mg/L		106	80 - 120
Thallium	0.0100	0.0101		mg/L		101	80 - 120

Lab Sample ID: 400-154742-1 MS
Matrix: Water
Analysis Batch: 402069

Client Sample ID: MW-100
Prep Type: Total Recoverable
Prep Batch: 401913

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0010	U	0.0500	0.0574		mg/L		115	75 - 125
Arsenic	0.00046	U	0.0500	0.0523		mg/L		105	75 - 125
Barium	0.018		0.0500	0.0704		mg/L		105	75 - 125
Beryllium	0.00034	U	0.0500	0.0524		mg/L		105	75 - 125
Boron	0.021	U	0.100	0.116		mg/L		116	75 - 125
Cadmium	0.00034	U	0.0500	0.0533		mg/L		107	75 - 125
Calcium	0.90		5.00	5.85		mg/L		99	75 - 125
Chromium	0.0011	U	0.0500	0.0508		mg/L		102	75 - 125

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

Lab Sample ID: 400-154742-1 MS
Matrix: Water
Analysis Batch: 402069

Client Sample ID: MW-100
Prep Type: Total Recoverable
Prep Batch: 401913

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.00051	I	0.0500	0.0524		mg/L		104	75 - 125
Lead	0.00035	U	0.0500	0.0471		mg/L		94	75 - 125
Lithium	0.0011	U	0.0500	0.0480		mg/L		96	75 - 125
Molybdenum	0.00085	U	0.0500	0.0492		mg/L		98	75 - 125
Selenium	0.00049	I V	0.0500	0.0580		mg/L		115	75 - 125
Thallium	0.000085	U	0.0100	0.0102		mg/L		102	75 - 125

Lab Sample ID: 400-154742-1 MSD
Matrix: Water
Analysis Batch: 402069

Client Sample ID: MW-100
Prep Type: Total Recoverable
Prep Batch: 401913

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.0010	U	0.0500	0.0562		mg/L		112	75 - 125	2	20
Arsenic	0.00046	U	0.0500	0.0517		mg/L		103	75 - 125	1	20
Barium	0.018		0.0500	0.0708		mg/L		106	75 - 125	1	20
Beryllium	0.00034	U	0.0500	0.0529		mg/L		106	75 - 125	1	20
Boron	0.021	U	0.100	0.115		mg/L		115	75 - 125	1	20
Cadmium	0.00034	U	0.0500	0.0532		mg/L		106	75 - 125	0	20
Calcium	0.90		5.00	5.94		mg/L		101	75 - 125	2	20
Chromium	0.0011	U	0.0500	0.0512		mg/L		102	75 - 125	1	20
Cobalt	0.00051	I	0.0500	0.0527		mg/L		104	75 - 125	1	20
Lead	0.00035	U	0.0500	0.0482		mg/L		96	75 - 125	2	20
Lithium	0.0011	U	0.0500	0.0496		mg/L		99	75 - 125	3	20
Molybdenum	0.00085	U	0.0500	0.0492		mg/L		98	75 - 125	0	20
Selenium	0.00049	I V	0.0500	0.0556		mg/L		110	75 - 125	4	20
Thallium	0.000085	U	0.0100	0.0103		mg/L		103	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-401749/14-A
Matrix: Water
Analysis Batch: 402434

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 401749

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		06/23/18 14:33	06/25/18 09:22	1

Lab Sample ID: LCS 400-401749/15-A
Matrix: Water
Analysis Batch: 402434

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 401749

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.000964		mg/L		96	80 - 120

Lab Sample ID: 400-155153-B-1-B MS
Matrix: Water
Analysis Batch: 402434

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 401749

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.000070	U	0.00201	0.00144	J3	mg/L		72	80 - 120

Lab Sample ID: 400-155153-B-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 402434 — **Prep Batch: 401749**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.000070	U	0.00201	0.00131	J3	mg/L		65	80 - 120	10	20

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

Lab Sample ID: MB 400-400731/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 400731

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			06/11/18 17:02	1

Lab Sample ID: LCS 400-400731/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 400731

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: 400-154742-1 DU — **Client Sample ID: MW-100**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 400731

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	10		10.0		mg/L		0	5

Lab Sample ID: MB 400-400737/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 400737

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			06/12/18 13:11	1

Lab Sample ID: LCS 400-400737/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 400737

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	290		mg/L		99	78 - 122

Lab Sample ID: 400-154780-C-3 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 400737

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	370		368		mg/L		0	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-403017/56
Matrix: Water
Analysis Batch: 403017

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.60	U	2.0	0.60	mg/L			06/29/18 11:00	1

Lab Sample ID: LCS 400-403017/57
Matrix: Water
Analysis Batch: 403017

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	31.0		mg/L		103	90 - 110

Lab Sample ID: MRL 400-403017/53
Matrix: Water
Analysis Batch: 403017

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	1.72	I	mg/L		86	50 - 150

Lab Sample ID: 400-154742-4 MS
Matrix: Water
Analysis Batch: 403017

Client Sample ID: MW-306
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.6		10.0	16.4		mg/L		107	73 - 120

Lab Sample ID: 400-154742-4 MSD
Matrix: Water
Analysis Batch: 403017

Client Sample ID: MW-306
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	5.6		10.0	16.1		mg/L		104	73 - 120	2	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-400986/3
Matrix: Water
Analysis Batch: 400986

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.032	U	0.10	0.032	mg/L			06/13/18 13:46	1

Lab Sample ID: LCS 400-400986/4
Matrix: Water
Analysis Batch: 400986

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	3.79		mg/L		95	90 - 110

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 400-154790-A-25 MS
Matrix: Water
Analysis Batch: 400986

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	0.032	U	1.00	1.00		mg/L		100	75 - 125

Lab Sample ID: 400-154790-A-25 MSD
Matrix: Water
Analysis Batch: 400986

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	0.032	U	1.00	1.00		mg/L		100	75 - 125	0	4

Lab Sample ID: 400-154790-A-33 DU
Matrix: Water
Analysis Batch: 400986

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.15		0.150		mg/L		0	4

Lab Sample ID: MB 400-403221/3
Matrix: Water
Analysis Batch: 403221

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.032	U	0.10	0.032	mg/L			07/02/18 10:13	1

Lab Sample ID: LCS 400-403221/4
Matrix: Water
Analysis Batch: 403221

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	3.94		mg/L		99	90 - 110

Lab Sample ID: 400-154742-4 MS
Matrix: Water
Analysis Batch: 403221

Client Sample ID: MW-306
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.032	U	1.00	1.04		mg/L		104	75 - 125

Lab Sample ID: 400-154742-4 MSD
Matrix: Water
Analysis Batch: 403221

Client Sample ID: MW-306
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.032	U	1.00	1.04		mg/L		104	75 - 125	0	4

Lab Sample ID: 400-154881-A-7 DU
Matrix: Water
Analysis Batch: 403221

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.19		0.190		mg/L		0	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-402914/6
Matrix: Water
Analysis Batch: 402914

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.4	U	5.0	1.4	mg/L			06/28/18 13:34	1

Lab Sample ID: LCS 400-402914/7
Matrix: Water
Analysis Batch: 402914

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	15.2		mg/L		101	90 - 110

Lab Sample ID: MRL 400-402914/3
Matrix: Water
Analysis Batch: 402914

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	5.74		mg/L		115	50 - 150

Lab Sample ID: 400-155251-G-9 MS
Matrix: Water
Analysis Batch: 402914

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	30		10.0	36.3	J3	mg/L		66	77 - 128

Lab Sample ID: 400-155251-G-9 MSD
Matrix: Water
Analysis Batch: 402914

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	30		10.0	36.7	J3	mg/L		70	77 - 128	1	5

Lab Sample ID: MB 400-403143/6
Matrix: Water
Analysis Batch: 403143

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.4	U	5.0	1.4	mg/L			07/01/18 08:50	1

Lab Sample ID: LCS 400-403143/7
Matrix: Water
Analysis Batch: 403143

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	15.1		mg/L		101	90 - 110

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: MRL 400-403143/3
Matrix: Water
Analysis Batch: 403143

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	5.77		mg/L		115	50 - 150

Lab Sample ID: 400-154816-A-4 MS
Matrix: Water
Analysis Batch: 403143

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	1.4	U	10.0	11.5		mg/L		115	77 - 128

Lab Sample ID: 400-154816-A-4 MSD
Matrix: Water
Analysis Batch: 403143

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	1.4	U	10.0	11.5		mg/L		115	77 - 128	0	5

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-370240/21-A
Matrix: Water
Analysis Batch: 374245

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 370240

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.1310	U	0.0817	0.0825	1.00	0.305	pCi/L	06/13/18 08:51	07/06/18 19:46	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.8*		*40 - 110*	*06/13/18 08:51*	*07/06/18 19:46*	*1*

Lab Sample ID: LCS 160-370240/1-A
Matrix: Water
Analysis Batch: 374218

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 370240

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.8	11.13		1.36	1.00	0.267	pCi/L	94	68 - 137

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*97.6*		*40 - 110*

Lab Sample ID: LCSD 160-370240/2-A
Matrix: Water
Analysis Batch: 374218

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 370240

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.8	10.48		1.31	1.00	0.236	pCi/L	89	68 - 137	0.24	1

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCSD 160-370240/2-A
Matrix: Water
Analysis Batch: 374218

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 370240

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	101		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-370246/21-A
Matrix: Water
Analysis Batch: 374349

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 370246

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1866	U	0.273	0.273	1.00	0.457	pCi/L	06/13/18 09:16	07/06/18 11:56	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	80.8		40 - 110	06/13/18 09:16	07/06/18 11:56	1
Y Carrier	89.7		40 - 110	06/13/18 09:16	07/06/18 11:56	1

Lab Sample ID: LCS 160-370246/1-A
Matrix: Water
Analysis Batch: 374350

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 370246

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			8.17	9.015		1.06	1.00	0.363	pCi/L	110	56 - 140		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	97.6		40 - 110
Y Carrier	86.4		40 - 110

Lab Sample ID: LCSD 160-370246/2-A
Matrix: Water
Analysis Batch: 374350

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 370246

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			8.17	8.487		1.01	1.00	0.369	pCi/L	104	56 - 140	0.25	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	101		40 - 110
Y Carrier	89.0		40 - 110

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154742-1
SDG: Background

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

Lab Sample ID: 180-78507-A-4 DU
Matrix: Water
Analysis Batch: 374406

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Combined Radium 226 + 228	-0.0470	U		0.1799	U	0.198	5.00	0.319	pCi/L			0.57	

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brett Sules	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No:
Client Contact: Kristi Mitchell	Phone: 850 380 3458	E-Mail: cheyenne.whitmire@testamericainc.com		Page: 1 - 1
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days):			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: CCR Plant Crist	Project #: 40005424			
Site: Background	SSOW#:			

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:

400-154742 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)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	SM4500_Cl_E - Chloride, SM4500_SO4_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C - Fluoride	6020 - Sb,As,Ba,B,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, 7470A - Mercury	FieldSampling - Field Sampling Parameters	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
MW-100	6/5/18	0944	G	Water			X	X	X	X		
MW-107	6/5/18	0820	G	Water			X	X	X	X		
MW-108	6/5/18	0710	G	Water			X	X	X	X		
MW-306	6/6/18	0813	G	Water			X	X	X	X		
MW-307	6/6/18	0959	G	Water			X	X	X	X		

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)

Special Instructions/QC Requirements:

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

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	6/6/18 1418	KBR		6.6.18 1418	TA Pen
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	6/7/18 825	TA-PEN

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.0°C IR 7

7/16/2018

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-154742-1
SDG Number: Background

Login Number: 154742
List Number: 1
Creator: Conrady, Hank W

List Source: 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	0.0°C IR-7
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: Gulf Power Company

Job Number: 400-154742-1
SDG Number: Background

Login Number: 154742
List Number: 2
Creator: Press, Nicholas B

List Source: TestAmerica St. Louis
List Creation: 06/12/18 05:38 PM

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.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18
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?	False	
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154742-1
SDG: Background

Laboratory: 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	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
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	10-09-18
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
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	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18 *
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-14	09-30-18
US Fish & Wildlife	Federal		LE058448-0	07-31-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

Laboratory: 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
Alaska	State Program	10	MO00054	06-30-19
ANAB	DoD ELAP		L2305	04-06-19
Arizona	State Program	9	AZ0813	12-08-18
California	State Program	9	2886	06-30-19
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-19
Illinois	NELAP	5	200023	11-30-18
Iowa	State Program	7	373	12-01-18
Kansas	NELAP	7	E-10236	10-31-18
Kentucky (DW)	State Program	4	90125	12-31-18
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA180017	12-31-18
Maryland	State Program	3	310	09-30-18
Michigan	State Program	5	9005	06-30-18 *
Missouri	State Program	7	780	06-30-18 *

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

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154742-1
SDG: Background

Laboratory: TestAmerica St. Louis (Continued)

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
Nevada	State Program	9	MO000542018-1	07-31-18 *
New Jersey	NELAP	2	MO002	06-30-19
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-18 *
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-18 *
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-18 *
Texas	NELAP	6	T104704193-17-11	07-31-18 *
US Fish & Wildlife	Federal		058448	07-31-18
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-18 *
Virginia	NELAP	3	460230	06-14-19
Washington	State Program	10	C592	08-30-18
West Virginia DEP	State Program	3	381	08-31-18 *

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

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TestAmerica Job ID: 400-154880-1
TestAmerica Sample Delivery Group: Gypsum Storage Area
Client Project/Site: CCR Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

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Authorized for release by:
7/16/2018 5:07:39 PM

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-154880-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-154880-1

RAD
Method(s) 903.0, 9315: Radium-226 Prep Batch 160-370240: The method blank (MB) exhibited a negative result greater in magnitude than the 3 sigma TPU: (MB 160-370240/21-A). This occurrence was evaluated and determined to be random in nature. Sporadic occurrences such as this are statistically expected. No further action is required.

Method(s) PrecSep_0: Radium 228 Prep Batch 160-370246: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: MW-204 (400-154880-3), MW-205 (400-154880-4), MW-206 (400-154880-5) and DUP-02 (400-154880-6). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep_0: Radium 228 Prep Batch 160-370639: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: MW-200 (400-154880-1), MW-203 (400-154880-2) and EB-02 (400-154880-7). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-370240: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: MW-204 (400-154880-3), MW-205 (400-154880-4), MW-206 (400-154880-5) and DUP-02 (400-154880-6). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-370636: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: MW-200 (400-154880-1), MW-203 (400-154880-2) and EB-02 (400-154880-7). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Metals
Method(s) 6020: The method blank for preparation batch 401913 and analytical batch 402069 contained Selenium 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(s) 6020: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-200 (400-154880-1), MW-204 (400-154880-3), MW-205 (400-154880-4), MW-206 (400-154880-5) and DUP-02 (400-154880-6). Elevated reporting limits (RLs) are provided.

General Chemistry
Method(s) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 403212 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) SM 4500 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-200 (400-154880-1), MW-204 (400-154880-3), MW-206 (400-154880-5) and DUP-02 (400-154880-6). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 403304 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) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-200 (400-154880-1), MW-203 (400-154880-2), MW-204 (400-154880-3), MW-205 (400-154880-4), MW-206 (400-154880-5), DUP-02 (400-154880-6), (400-154880-B-2 MS), (400-154880-B-2 MSD), (400-154880-B-3 MS) and (400-154880-B-3 MSD). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 F C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 403517 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS)

Job ID: 400-154880-1 (Continued)

Laboratory: TestAmerica Pensacola (Continued)

recovery was within acceptance limits.

Detection Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154880-1
SDG: Gypsum Storage Area

Client Sample ID: MW-200 — Lab Sample ID: 400-154880-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0018		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.057		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cobalt	0.0028		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0013		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Selenium	0.0076		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00018	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	12		2.0	0.84	mg/L	200		6020	Total Recoverable
Calcium - DL	320		10	5.0	mg/L	200		6020	Total Recoverable
Mercury	0.0018		0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	2000		25	17	mg/L	1		SM 2540C	Total/NA
Chloride	680		40	12	mg/L	20		SM 4500 Cl- E	Total/NA
Fluoride	0.13		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	160		50	14	mg/L	10		SM 4500 SO4 E	Total/NA
Field pH	5.05				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-203 — Lab Sample ID: 400-154880-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00053	I	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.043		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.99		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	28		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0026		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Selenium	0.0022	V	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.000085	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	98		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	15		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.060	I	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	100		25	7.0	mg/L	5		SM 4500 SO4 E	Total/NA
Field pH	4.63				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-204 — Lab Sample ID: 400-154880-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0029		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.027		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00059	I	0.0025	0.00034	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-204 (Continued) — Lab Sample ID: 400-154880-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	77		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.016		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0020		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.0020	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0048		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00034	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	5.7		0.50	0.21	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	700		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	82		4.0	1.2	mg/L	2		SM 4500 Cl- E	Total/NA
Fluoride	0.28		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	390		150	42	mg/L	30		SM 4500 SO4 E	Total/NA
Field pH	4.29				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-205 — Lab Sample ID: 400-154880-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0018		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.057		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	44		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0026		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00097	I	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Selenium	0.0034		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00012	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	2.0		0.25	0.11	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	320		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	43		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.10		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	180		50	14	mg/L	10		SM 4500 SO4 E	Total/NA
Field pH	4.89				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-206 — Lab Sample ID: 400-154880-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0030		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.070		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.0014	I	0.0025	0.00034	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-206 (Continued) — Lab Sample ID: 400-154880-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.0029		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0034		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.0012	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.018		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00048	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	40		5.0	2.1	mg/L	500		6020	Total Recoverable
Calcium - DL	800		25	13	mg/L	500		6020	Total Recoverable
Mercury	0.00016	I	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	5200		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	1800		120	36	mg/L	60		SM 4500 Cl- E	Total/NA
Fluoride	0.10		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	440		150	42	mg/L	30		SM 4500 SO4 E	Total/NA
Field pH	4.31				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-02 — Lab Sample ID: 400-154880-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0019		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.059		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cobalt	0.0028		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0014		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.0012	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0079		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00018	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	13		2.0	0.84	mg/L	200		6020	Total Recoverable
Calcium - DL	320		10	5.0	mg/L	200		6020	Total Recoverable
Mercury	0.0017		0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	2200		25	17	mg/L	1		SM 2540C	Total/NA
Chloride	690		40	12	mg/L	20		SM 4500 Cl- E	Total/NA
Fluoride	0.14		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	190		50	14	mg/L	10		SM 4500 SO4 E	Total/NA

Client Sample ID: EB-02 — Lab Sample ID: 400-154880-7

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154880-1
SDG: Gypsum Storage Area

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
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
Field Sampling	Field Sampling	EPA	TAL PEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

EPA = US Environmental Protection Agency
None = None
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.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154880-1
SDG: Gypsum Storage Area

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-154880-1	MW-200	Water	06/08/18 12:05	06/08/18 14:43
400-154880-2	MW-203	Water	06/08/18 07:20	06/08/18 14:43
400-154880-3	MW-204	Water	06/08/18 08:38	06/08/18 14:43
400-154880-4	MW-205	Water	06/08/18 10:34	06/08/18 14:43
400-154880-5	MW-206	Water	06/08/18 13:11	06/08/18 14:43
400-154880-6	DUP-02	Water	06/08/18 11:05	06/08/18 14:43
400-154880-7	EB-02	Water	06/08/18 13:20	06/08/18 14:43

Client Sample ID: MW-200

Date Collected: 06/08/18 12:05
Date Received: 06/08/18 14:43

Lab Sample ID: 400-154880-1

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/21/18 09:12	06/21/18 17:33	5
Arsenic	**0.0018**		0.0013	0.00046	mg/L		06/21/18 09:12	06/21/18 17:33	5
Barium	**0.057**		0.0025	0.00049	mg/L		06/21/18 09:12	06/21/18 17:33	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 17:33	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 17:33	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/21/18 09:12	06/21/18 17:33	5
Cobalt	**0.0028**		0.0025	0.00040	mg/L		06/21/18 09:12	06/21/18 17:33	5
Lead	**0.0013**		0.0013	0.00035	mg/L		06/21/18 09:12	06/21/18 17:33	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/21/18 09:12	06/21/18 17:33	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/21/18 09:12	06/21/18 17:33	5
Selenium	**0.0076**		0.0013	0.00024	mg/L		06/21/18 09:12	06/21/18 17:33	5
Thallium	**0.00018**	**I**	0.00050	0.000085	mg/L		06/21/18 09:12	06/21/18 17:33	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**12**		2.0	0.84	mg/L		06/21/18 09:12	06/22/18 13:51	200
Calcium	**320**		10	5.0	mg/L		06/21/18 09:12	06/22/18 13:51	200

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.0018**		0.00020	0.000070	mg/L		06/25/18 13:47	06/27/18 14:29	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**2000**		25	17	mg/L			06/13/18 18:25	1
Chloride	**680**		40	12	mg/L			07/02/18 10:47	20
Fluoride	**0.13**		0.10	0.032	mg/L			07/02/18 18:11	1
Sulfate	**160**		50	14	mg/L			07/02/18 15:29	10

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**5.08**		0.539	0.707	1.00	0.155	pCi/L	06/15/18 10:05	07/10/18 08:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*06/15/18 10:05*	*07/10/18 08:34*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**5.52**		0.514	0.722	1.00	0.340	pCi/L	06/15/18 11:02	07/09/18 09:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*06/15/18 11:02*	*07/09/18 09:34*	*1*
Y Carrier	*83.4*		*40 - 110*	*06/15/18 11:02*	*07/09/18 09:34*	*1*

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154880-1
SDG: Gypsum Storage Area

Client Sample ID: MW-200
Date Collected: 06/08/18 12:05
Date Received: 06/08/18 14:43

Lab Sample ID: 400-154880-1
Matrix: Water

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	10.6		0.745	1.01	5.00	0.340	pCi/L		07/11/18 17:35	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.05				SU			06/08/18 12:05	1

Client Sample ID: MW-203

Date Collected: 06/08/18 07:20
Date Received: 06/08/18 14:43

Lab Sample ID: 400-154880-2

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/21/18 09:12	06/21/18 16:48	5
Arsenic	**0.00053**	**I**	0.0013	0.00046	mg/L		06/21/18 09:12	06/21/18 16:48	5
Barium	**0.043**		0.0025	0.00049	mg/L		06/21/18 09:12	06/21/18 16:48	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 16:48	5
Boron	**0.99**		0.050	0.021	mg/L		06/21/18 09:12	06/21/18 16:48	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 16:48	5
Calcium	**28**		0.25	0.13	mg/L		06/21/18 09:12	06/21/18 16:48	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/21/18 09:12	06/21/18 16:48	5
Cobalt	**0.0026**		0.0025	0.00040	mg/L		06/21/18 09:12	06/21/18 16:48	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/21/18 09:12	06/21/18 16:48	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/21/18 09:12	06/21/18 16:48	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/21/18 09:12	06/21/18 16:48	5
Selenium	**0.0022**	**V**	0.0013	0.00024	mg/L		06/21/18 09:12	06/21/18 16:48	5
Thallium	**0.000085**	**I**	0.00050	0.000085	mg/L		06/21/18 09:12	06/21/18 16:48	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		06/25/18 13:47	06/27/18 14:31	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**98**		5.0	3.4	mg/L			06/13/18 18:25	1
Chloride	**15**		2.0	0.60	mg/L			07/02/18 08:55	1
Fluoride	**0.060**	**I**	0.10	0.032	mg/L			07/02/18 18:15	1
Sulfate	**100**		25	7.0	mg/L			07/02/18 15:16	5

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**2.27**		0.367	0.420	1.00	0.134	pCi/L	06/15/18 10:05	07/10/18 08:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*108*		*40 - 110*	*06/15/18 10:05*	*07/10/18 08:34*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**4.80**		0.445	0.627	1.00	0.266	pCi/L	06/15/18 11:02	07/09/18 09:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*108*		*40 - 110*	*06/15/18 11:02*	*07/09/18 09:30*	*1*
Y Carrier	*90.5*		*40 - 110*	*06/15/18 11:02*	*07/09/18 09:30*	*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	**7.07**		0.577	0.755	5.00	0.266	pCi/L		07/11/18 17:35	1

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154880-1
SDG: Gypsum Storage Area

Client Sample ID: MW-203
Date Collected: 06/08/18 07:20
Date Received: 06/08/18 14:43

Lab Sample ID: 400-154880-2
Matrix: Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.63				SU			06/08/18 07:20	1

Client Sample ID: MW-204

Date Collected: 06/08/18 08:38
Date Received: 06/08/18 14:43

Lab Sample ID: 400-154880-3

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/21/18 09:12	06/21/18 17:24	5
Arsenic	**0.0029**		0.0013	0.00046	mg/L		06/21/18 09:12	06/21/18 17:24	5
Barium	**0.027**		0.0025	0.00049	mg/L		06/21/18 09:12	06/21/18 17:24	5
Beryllium	**0.00059**	**I**	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 17:24	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 17:24	5
Calcium	**77**		0.25	0.13	mg/L		06/21/18 09:12	06/21/18 17:24	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/21/18 09:12	06/21/18 17:24	5
Cobalt	**0.016**		0.0025	0.00040	mg/L		06/21/18 09:12	06/21/18 17:24	5
Lead	**0.0020**		0.0013	0.00035	mg/L		06/21/18 09:12	06/21/18 17:24	5
Lithium	**0.0020**	**I**	0.0050	0.0011	mg/L		06/21/18 09:12	06/21/18 17:24	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/21/18 09:12	06/21/18 17:24	5
Selenium	**0.0048**		0.0013	0.00024	mg/L		06/21/18 09:12	06/21/18 17:24	5
Thallium	**0.00034**	**I**	0.00050	0.000085	mg/L		06/21/18 09:12	06/21/18 17:24	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**5.7**		0.50	0.21	mg/L		06/21/18 09:12	06/22/18 13:55	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		06/25/18 13:47	06/27/18 14:33	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**700**		5.0	3.4	mg/L			06/13/18 18:25	1
Chloride	**82**		4.0	1.2	mg/L			07/02/18 09:54	2
Fluoride	**0.28**		0.10	0.032	mg/L			07/02/18 18:19	1
Sulfate	**390**		150	42	mg/L			07/02/18 15:29	30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.83**		0.415	0.447	1.00	0.250	pCi/L	06/13/18 08:51	07/06/18 19:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.0*		*40 - 110*	*06/13/18 08:51*	*07/06/18 19:45*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**10.4**		0.751	1.22	1.00	0.512	pCi/L	06/13/18 09:16	07/06/18 11:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.0*		*40 - 110*	*06/13/18 09:16*	*07/06/18 11:55*	*1*
Y Carrier	*87.5*		*40 - 110*	*06/13/18 09:16*	*07/06/18 11:55*	*1*

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154880-1
SDG: Gypsum Storage Area

Client Sample ID: MW-204
Date Collected: 06/08/18 08:38
Date Received: 06/08/18 14:43

Lab Sample ID: 400-154880-3
Matrix: Water

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	12.3		0.858	1.30	5.00	0.512	pCi/L		07/11/18 17:35	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.29				SU			06/08/18 08:38	1

Client Sample ID: MW-205

Date Collected: 06/08/18 10:34
Date Received: 06/08/18 14:43

Lab Sample ID: 400-154880-4

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/21/18 09:12	06/21/18 16:57	5
Arsenic	**0.0018**		0.0013	0.00046	mg/L		06/21/18 09:12	06/21/18 16:57	5
Barium	**0.057**		0.0025	0.00049	mg/L		06/21/18 09:12	06/21/18 16:57	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 16:57	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 16:57	5
Calcium	**44**		0.25	0.13	mg/L		06/21/18 09:12	06/21/18 16:57	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/21/18 09:12	06/21/18 16:57	5
Cobalt	**0.0026**		0.0025	0.00040	mg/L		06/21/18 09:12	06/21/18 16:57	5
Lead	**0.00097**	**I**	0.0013	0.00035	mg/L		06/21/18 09:12	06/21/18 16:57	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/21/18 09:12	06/21/18 16:57	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/21/18 09:12	06/21/18 16:57	5
Selenium	**0.0034**		0.0013	0.00024	mg/L		06/21/18 09:12	06/21/18 16:57	5
Thallium	**0.00012**	**I**	0.00050	0.000085	mg/L		06/21/18 09:12	06/21/18 16:57	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.0**		0.25	0.11	mg/L		06/21/18 09:12	06/22/18 14:00	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		06/25/18 13:47	06/27/18 14:35	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**320**		5.0	3.4	mg/L			06/13/18 18:25	1
Chloride	**43**		2.0	0.60	mg/L			07/02/18 08:58	1
Fluoride	**0.10**		0.10	0.032	mg/L			07/05/18 12:01	1
Sulfate	**180**		50	14	mg/L			07/02/18 15:33	10

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**4.40**		0.614	0.731	1.00	0.262	pCi/L	06/13/18 08:51	07/06/18 19:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.6*		*40 - 110*	*06/13/18 08:51*	*07/06/18 19:45*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**3.25**		0.433	0.526	1.00	0.385	pCi/L	06/13/18 09:16	07/06/18 11:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.6*		*40 - 110*	*06/13/18 09:16*	*07/06/18 11:55*	*1*
Y Carrier	*91.6*		*40 - 110*	*06/13/18 09:16*	*07/06/18 11:55*	*1*

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154880-1
SDG: Gypsum Storage Area

Client Sample ID: MW-205
Date Collected: 06/08/18 10:34
Date Received: 06/08/18 14:43

Lab Sample ID: 400-154880-4
Matrix: Water

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	7.65		0.751	0.901	5.00	0.385	pCi/L		07/11/18 17:35	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.89				SU			06/08/18 10:34	1

Client Sample ID: MW-206

Date Collected: 06/08/18 13:11
Date Received: 06/08/18 14:43

Lab Sample ID: 400-154880-5

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/21/18 09:12	06/21/18 17:37	5
Arsenic	**0.0030**		0.0013	0.00046	mg/L		06/21/18 09:12	06/21/18 17:37	5
Barium	**0.070**		0.0025	0.00049	mg/L		06/21/18 09:12	06/21/18 17:37	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 17:37	5
Cadmium	**0.0014**	**I**	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 17:37	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/21/18 09:12	06/21/18 17:37	5
Cobalt	**0.0029**		0.0025	0.00040	mg/L		06/21/18 09:12	06/21/18 17:37	5
Lead	**0.0034**		0.0013	0.00035	mg/L		06/21/18 09:12	06/21/18 17:37	5
Lithium	**0.0012**	**I**	0.0050	0.0011	mg/L		06/21/18 09:12	06/21/18 17:37	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/21/18 09:12	06/21/18 17:37	5
Selenium	**0.018**		0.0013	0.00024	mg/L		06/21/18 09:12	06/21/18 17:37	5
Thallium	**0.00048**	**I**	0.00050	0.000085	mg/L		06/21/18 09:12	06/21/18 17:37	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**40**		5.0	2.1	mg/L		06/21/18 09:12	06/22/18 14:04	500
Calcium	**800**		25	13	mg/L		06/21/18 09:12	06/22/18 14:04	500

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00016**	**I**	0.00020	0.000070	mg/L		06/25/18 13:47	06/27/18 14:37	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**5200**		50	34	mg/L			06/15/18 15:50	1
Chloride	**1800**		120	36	mg/L			07/02/18 09:54	60
Fluoride	**0.10**		0.10	0.032	mg/L			07/05/18 11:49	1
Sulfate	**440**		150	42	mg/L			07/02/18 15:33	30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**7.07**		0.787	1.01	1.00	0.253	pCi/L	06/13/18 08:51	07/06/18 19:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.4*		*40 - 110*	*06/13/18 08:51*	*07/06/18 19:45*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**8.24**		0.654	1.00	1.00	0.436	pCi/L	06/13/18 09:16	07/06/18 11:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.4*		*40 - 110*	*06/13/18 09:16*	*07/06/18 11:56*	*1*
Y Carrier	*90.1*		*40 - 110*	*06/13/18 09:16*	*07/06/18 11:56*	*1*

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154880-1
SDG: Gypsum Storage Area

Client Sample ID: MW-206
Date Collected: 06/08/18 13:11
Date Received: 06/08/18 14:43

Lab Sample ID: 400-154880-5
Matrix: Water

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	15.3		1.02	1.42	5.00	0.436	pCi/L		07/11/18 17:35	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.31				SU			06/08/18 13:11	1

Client Sample ID: DUP-02

Date Collected: 06/08/18 11:05
Date Received: 06/08/18 14:43

Lab Sample ID: 400-154880-6

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/21/18 09:12	06/21/18 17:28	5
Arsenic	**0.0019**		0.0013	0.00046	mg/L		06/21/18 09:12	06/21/18 17:28	5
Barium	**0.059**		0.0025	0.00049	mg/L		06/21/18 09:12	06/21/18 17:28	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 17:28	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 17:28	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/21/18 09:12	06/21/18 17:28	5
Cobalt	**0.0028**		0.0025	0.00040	mg/L		06/21/18 09:12	06/21/18 17:28	5
Lead	**0.0014**		0.0013	0.00035	mg/L		06/21/18 09:12	06/21/18 17:28	5
Lithium	**0.0012**	**I**	0.0050	0.0011	mg/L		06/21/18 09:12	06/21/18 17:28	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/21/18 09:12	06/21/18 17:28	5
Selenium	**0.0079**		0.0013	0.00024	mg/L		06/21/18 09:12	06/21/18 17:28	5
Thallium	**0.00018**	**I**	0.00050	0.000085	mg/L		06/21/18 09:12	06/21/18 17:28	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**13**		2.0	0.84	mg/L		06/21/18 09:12	06/22/18 14:09	200
Calcium	**320**		10	5.0	mg/L		06/21/18 09:12	06/22/18 14:09	200

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.0017**		0.00020	0.000070	mg/L		06/25/18 13:47	06/27/18 14:39	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**2200**		25	17	mg/L			06/15/18 15:50	1
Chloride	**690**		40	12	mg/L			07/02/18 10:47	20
Fluoride	**0.14**		0.10	0.032	mg/L			07/05/18 12:05	1
Sulfate	**190**		50	14	mg/L			07/02/18 15:36	10

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**6.24**		0.731	0.921	1.00	0.262	pCi/L	06/13/18 08:51	07/06/18 19:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.1*		*40 - 110*	*06/13/18 08:51*	*07/06/18 19:45*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**5.43**		0.553	0.745	1.00	0.455	pCi/L	06/13/18 09:16	07/06/18 11:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.1*		*40 - 110*	*06/13/18 09:16*	*07/06/18 11:56*	*1*
Y Carrier	*87.9*		*40 - 110*	*06/13/18 09:16*	*07/06/18 11:56*	*1*

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154880-1
SDG: Gypsum Storage Area

Client Sample ID: DUP-02
Date Collected: 06/08/18 11:05
Date Received: 06/08/18 14:43

Lab Sample ID: 400-154880-6
Matrix: Water

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	11.7		0.917	1.18	5.00	0.455	pCi/L		07/11/18 17:35	1

Client Sample ID: EB-02

Date Collected: 06/08/18 13:20
Date Received: 06/08/18 14:43

Lab Sample ID: 400-154880-7

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/21/18 09:12	06/21/18 16:52	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		06/21/18 09:12	06/21/18 16:52	5
Barium	0.00049	U	0.0025	0.00049	mg/L		06/21/18 09:12	06/21/18 16:52	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 16:52	5
Boron	0.021	U	0.050	0.021	mg/L		06/21/18 09:12	06/21/18 16:52	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 16:52	5
Calcium	0.13	U	0.25	0.13	mg/L		06/21/18 09:12	06/21/18 16:52	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/21/18 09:12	06/21/18 16:52	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		06/21/18 09:12	06/21/18 16:52	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/21/18 09:12	06/21/18 16:52	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/21/18 09:12	06/21/18 16:52	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/21/18 09:12	06/21/18 16:52	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		06/21/18 09:12	06/21/18 16:52	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		06/21/18 09:12	06/21/18 16:52	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		06/25/18 13:47	06/27/18 14:47	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			06/15/18 15:50	1
Chloride	0.60	U	2.0	0.60	mg/L			07/02/18 09:05	1
Fluoride	0.032	U	0.10	0.032	mg/L			07/05/18 12:09	1
Sulfate	1.4	U	5.0	1.4	mg/L			07/02/18 14:58	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0990	U	0.141	0.141	1.00	0.239	pCi/L	06/15/18 10:05	07/10/18 06:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*107*		*40 - 110*	*06/15/18 10:05*	*07/10/18 06:02*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.170	U	0.187	0.188	1.00	0.306	pCi/L	06/15/18 11:02	07/09/18 09:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*107*		*40 - 110*	*06/15/18 11:02*	*07/09/18 09:34*	*1*
Y Carrier	*87.5*		*40 - 110*	*06/15/18 11:02*	*07/09/18 09:34*	*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	0.269	U	0.234	0.235	5.00	0.306	pCi/L		07/11/18 17:35	1

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
V	Indicates that the analyte was detected at or above the method detection limit in both the sample and the associated method blank and the value of 10 times the blank value was equal to or greater than the associated sample value.

General Chemistry

Qualifier	Qualifier Description
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
U	Indicates that the compound was analyzed for but not detected.

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)

Client Sample ID: MW-200

Lab Sample ID: 400-154880-1

Date Collected: 06/08/18 12:05

Matrix: Water

Date Received: 06/08/18 14:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401913	06/21/18 09:12	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402069	06/21/18 17:33	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		401913	06/21/18 09:12	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	200	402344	06/22/18 13:51	DRE	TAL PEN
Total/NA	Prep	7470A			402415	06/25/18 13:47	JAP	TAL PEN
Total/NA	Analysis	7470A		1	402757	06/27/18 14:29	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	400948	06/13/18 18:25	RRC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		20	403212	07/02/18 10:47	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403294	07/02/18 18:11	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	403304	07/02/18 15:29	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370636	06/15/18 10:05	JLC	TAL SL
Total/NA	Analysis	9315		1	374666	07/10/18 08:34	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370639	06/15/18 11:02	JLC	TAL SL
Total/NA	Analysis	9320		1	374440	07/09/18 09:34	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375032	07/11/18 17:35	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404432	06/08/18 12:05	CDH	TAL PEN

Client Sample ID: MW-203

Lab Sample ID: 400-154880-2

Date Collected: 06/08/18 07:20

Matrix: Water

Date Received: 06/08/18 14:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401913	06/21/18 09:12	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402069	06/21/18 16:48	DRE	TAL PEN
Total/NA	Prep	7470A			402415	06/25/18 13:47	JAP	TAL PEN
Total/NA	Analysis	7470A		1	402757	06/27/18 14:31	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	400948	06/13/18 18:25	RRC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	403212	07/02/18 08:55	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403294	07/02/18 18:15	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		5	403304	07/02/18 15:16	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370636	06/15/18 10:05	JLC	TAL SL
Total/NA	Analysis	9315		1	374666	07/10/18 08:34	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370639	06/15/18 11:02	JLC	TAL SL
Total/NA	Analysis	9320		1	374497	07/09/18 09:30	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375032	07/11/18 17:35	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404432	06/08/18 07:20	CDH	TAL PEN

Client Sample ID: MW-204

Date Collected: 06/08/18 08:38
Date Received: 06/08/18 14:43

Lab Sample ID: 400-154880-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401913	06/21/18 09:12	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402069	06/21/18 17:24	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		401913	06/21/18 09:12	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	402344	06/22/18 13:55	DRE	TAL PEN
Total/NA	Prep	7470A			402415	06/25/18 13:47	JAP	TAL PEN
Total/NA	Analysis	7470A		1	402757	06/27/18 14:33	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	400948	06/13/18 18:25	RRC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		2	403212	07/02/18 09:54	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403294	07/02/18 18:19	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	403304	07/02/18 15:29	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370240	06/13/18 08:51	JLC	TAL SL
Total/NA	Analysis	9315		1	374245	07/06/18 19:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370246	06/13/18 09:16	JLC	TAL SL
Total/NA	Analysis	9320		1	374349	07/06/18 11:55	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375032	07/11/18 17:35	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404432	06/08/18 08:38	CDH	TAL PEN

Client Sample ID: MW-205

Date Collected: 06/08/18 10:34
Date Received: 06/08/18 14:43

Lab Sample ID: 400-154880-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401913	06/21/18 09:12	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402069	06/21/18 16:57	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		401913	06/21/18 09:12	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	402344	06/22/18 14:00	DRE	TAL PEN
Total/NA	Prep	7470A			402415	06/25/18 13:47	JAP	TAL PEN
Total/NA	Analysis	7470A		1	402757	06/27/18 14:35	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	400948	06/13/18 18:25	RRC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	403212	07/02/18 08:58	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403517	07/05/18 12:01	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	403304	07/02/18 15:33	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370240	06/13/18 08:51	JLC	TAL SL
Total/NA	Analysis	9315		1	374245	07/06/18 19:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370246	06/13/18 09:16	JLC	TAL SL
Total/NA	Analysis	9320		1	374349	07/06/18 11:55	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375032	07/11/18 17:35	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404432	06/08/18 10:34	CDH	TAL PEN

Client Sample ID: MW-206

Date Collected: 06/08/18 13:11
Date Received: 06/08/18 14:43

Lab Sample ID: 400-154880-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401913	06/21/18 09:12	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402069	06/21/18 17:37	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		401913	06/21/18 09:12	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	500	402344	06/22/18 14:04	DRE	TAL PEN
Total/NA	Prep	7470A			402415	06/25/18 13:47	JAP	TAL PEN
Total/NA	Analysis	7470A		1	402757	06/27/18 14:37	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401134	06/15/18 15:50	VLS	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		60	403212	07/02/18 09:54	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403517	07/05/18 11:49	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	403304	07/02/18 15:33	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370240	06/13/18 08:51	JLC	TAL SL
Total/NA	Analysis	9315		1	374245	07/06/18 19:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370246	06/13/18 09:16	JLC	TAL SL
Total/NA	Analysis	9320		1	374349	07/06/18 11:56	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375032	07/11/18 17:35	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404432	06/08/18 13:11	CDH	TAL PEN

Client Sample ID: DUP-02

Date Collected: 06/08/18 11:05
Date Received: 06/08/18 14:43

Lab Sample ID: 400-154880-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401913	06/21/18 09:12	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402069	06/21/18 17:28	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		401913	06/21/18 09:12	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	200	402344	06/22/18 14:09	DRE	TAL PEN
Total/NA	Prep	7470A			402415	06/25/18 13:47	JAP	TAL PEN
Total/NA	Analysis	7470A		1	402757	06/27/18 14:39	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401134	06/15/18 15:50	VLS	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		20	403212	07/02/18 10:47	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403517	07/05/18 12:05	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	403304	07/02/18 15:36	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370240	06/13/18 08:51	JLC	TAL SL
Total/NA	Analysis	9315		1	374245	07/06/18 19:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370246	06/13/18 09:16	JLC	TAL SL
Total/NA	Analysis	9320		1	374349	07/06/18 11:56	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375032	07/11/18 17:35	RTM	TAL SL

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154880-1
SDG: Gypsum Storage Area

Client Sample ID: EB-02

Date Collected: 06/08/18 13:20
Date Received: 06/08/18 14:43

Lab Sample ID: 400-154880-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401913	06/21/18 09:12	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402069	06/21/18 16:52	DRE	TAL PEN
Total/NA	Prep	7470A			402415	06/25/18 13:47	JAP	TAL PEN
Total/NA	Analysis	7470A		1	402757	06/27/18 14:47	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401134	06/15/18 15:50	VLS	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	403212	07/02/18 09:05	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403517	07/05/18 12:09	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	403304	07/02/18 14:58	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370636	06/15/18 10:05	JLC	TAL SL
Total/NA	Analysis	9315		1	374667	07/10/18 06:02	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370639	06/15/18 11:02	JLC	TAL SL
Total/NA	Analysis	9320		1	374440	07/09/18 09:34	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375032	07/11/18 17:35	RTM	TAL SL

Laboratory References:

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

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

Metals

Prep Batch: 401913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154880-1	MW-200	Total Recoverable	Water	3005A	
400-154880-1 - DL	MW-200	Total Recoverable	Water	3005A	
400-154880-2	MW-203	Total Recoverable	Water	3005A	
400-154880-3	MW-204	Total Recoverable	Water	3005A	
400-154880-3 - DL	MW-204	Total Recoverable	Water	3005A	
400-154880-4	MW-205	Total Recoverable	Water	3005A	
400-154880-4 - DL	MW-205	Total Recoverable	Water	3005A	
400-154880-5 - DL	MW-206	Total Recoverable	Water	3005A	
400-154880-5	MW-206	Total Recoverable	Water	3005A	
400-154880-6	DUP-02	Total Recoverable	Water	3005A	
400-154880-6 - DL	DUP-02	Total Recoverable	Water	3005A	
400-154880-7	EB-02	Total Recoverable	Water	3005A	
MB 400-401913/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-401913/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-154742-C-1-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-154742-C-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 402069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154880-1	MW-200	Total Recoverable	Water	6020	401913
400-154880-2	MW-203	Total Recoverable	Water	6020	401913
400-154880-3	MW-204	Total Recoverable	Water	6020	401913
400-154880-4	MW-205	Total Recoverable	Water	6020	401913
400-154880-5	MW-206	Total Recoverable	Water	6020	401913
400-154880-6	DUP-02	Total Recoverable	Water	6020	401913
400-154880-7	EB-02	Total Recoverable	Water	6020	401913
MB 400-401913/1-A ^5	Method Blank	Total Recoverable	Water	6020	401913
LCS 400-401913/2-A	Lab Control Sample	Total Recoverable	Water	6020	401913
400-154742-C-1-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	401913
400-154742-C-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	401913

Analysis Batch: 402344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154880-1 - DL	MW-200	Total Recoverable	Water	6020	401913
400-154880-3 - DL	MW-204	Total Recoverable	Water	6020	401913
400-154880-4 - DL	MW-205	Total Recoverable	Water	6020	401913
400-154880-5 - DL	MW-206	Total Recoverable	Water	6020	401913
400-154880-6 - DL	DUP-02	Total Recoverable	Water	6020	401913

Prep Batch: 402415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154880-1	MW-200	Total/NA	Water	7470A	
400-154880-2	MW-203	Total/NA	Water	7470A	
400-154880-3	MW-204	Total/NA	Water	7470A	
400-154880-4	MW-205	Total/NA	Water	7470A	
400-154880-5	MW-206	Total/NA	Water	7470A	
400-154880-6	DUP-02	Total/NA	Water	7470A	
400-154880-7	EB-02	Total/NA	Water	7470A	
MB 400-402415/12-A	Method Blank	Total/NA	Water	7470A	
LCS 400-402415/13-A	Lab Control Sample	Total/NA	Water	7470A	
190-16664-O-2-D MS	Matrix Spike	Total/NA	Water	7470A	

Metals (Continued)

Prep Batch: 402415 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-16664-O-2-E MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 402757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154880-1	MW-200	Total/NA	Water	7470A	402415
400-154880-2	MW-203	Total/NA	Water	7470A	402415
400-154880-3	MW-204	Total/NA	Water	7470A	402415
400-154880-4	MW-205	Total/NA	Water	7470A	402415
400-154880-5	MW-206	Total/NA	Water	7470A	402415
400-154880-6	DUP-02	Total/NA	Water	7470A	402415
400-154880-7	EB-02	Total/NA	Water	7470A	402415
MB 400-402415/12-A	Method Blank	Total/NA	Water	7470A	402415
LCS 400-402415/13-A	Lab Control Sample	Total/NA	Water	7470A	402415
190-16664-O-2-D MS	Matrix Spike	Total/NA	Water	7470A	402415
190-16664-O-2-E MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	402415

General Chemistry

Analysis Batch: 400948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154880-1	MW-200	Total/NA	Water	SM 2540C	
400-154880-2	MW-203	Total/NA	Water	SM 2540C	
400-154880-3	MW-204	Total/NA	Water	SM 2540C	
400-154880-4	MW-205	Total/NA	Water	SM 2540C	
MB 400-400948/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-400948/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-154880-3 DU	MW-204	Total/NA	Water	SM 2540C	

Analysis Batch: 401134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154880-5	MW-206	Total/NA	Water	SM 2540C	
400-154880-6	DUP-02	Total/NA	Water	SM 2540C	
400-154880-7	EB-02	Total/NA	Water	SM 2540C	
MB 400-401134/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-401134/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-154909-A-5 DU	Duplicate	Total/NA	Water	SM 2540C	
400-154975-A-7 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 403212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154880-1	MW-200	Total/NA	Water	SM 4500 Cl- E	
400-154880-2	MW-203	Total/NA	Water	SM 4500 Cl- E	
400-154880-3	MW-204	Total/NA	Water	SM 4500 Cl- E	
400-154880-4	MW-205	Total/NA	Water	SM 4500 Cl- E	
400-154880-5	MW-206	Total/NA	Water	SM 4500 Cl- E	
400-154880-6	DUP-02	Total/NA	Water	SM 4500 Cl- E	
400-154880-7	EB-02	Total/NA	Water	SM 4500 Cl- E	
MB 400-403212/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-403212/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-403212/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	

General Chemistry (Continued)

Analysis Batch: 403212 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154880-2 MS	MW-203	Total/NA	Water	SM 4500 Cl- E	
400-154880-2 MSD	MW-203	Total/NA	Water	SM 4500 Cl- E	
400-154880-4 MS	MW-205	Total/NA	Water	SM 4500 Cl- E	
400-154880-4 MSD	MW-205	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 403294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154880-1	MW-200	Total/NA	Water	SM 4500 F C	
400-154880-2	MW-203	Total/NA	Water	SM 4500 F C	
400-154880-3	MW-204	Total/NA	Water	SM 4500 F C	
MB 400-403294/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-403294/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-154881-A-19 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 403304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154880-1	MW-200	Total/NA	Water	SM 4500 SO4 E	
400-154880-2	MW-203	Total/NA	Water	SM 4500 SO4 E	
400-154880-3	MW-204	Total/NA	Water	SM 4500 SO4 E	
400-154880-4	MW-205	Total/NA	Water	SM 4500 SO4 E	
400-154880-5	MW-206	Total/NA	Water	SM 4500 SO4 E	
400-154880-6	DUP-02	Total/NA	Water	SM 4500 SO4 E	
400-154880-7	EB-02	Total/NA	Water	SM 4500 SO4 E	
MB 400-403304/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-403304/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-403304/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-154880-2 MS	MW-203	Total/NA	Water	SM 4500 SO4 E	
400-154880-2 MSD	MW-203	Total/NA	Water	SM 4500 SO4 E	
400-154880-3 MS	MW-204	Total/NA	Water	SM 4500 SO4 E	
400-154880-3 MSD	MW-204	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 403517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154880-4	MW-205	Total/NA	Water	SM 4500 F C	
400-154880-5	MW-206	Total/NA	Water	SM 4500 F C	
400-154880-6	DUP-02	Total/NA	Water	SM 4500 F C	
400-154880-7	EB-02	Total/NA	Water	SM 4500 F C	
MB 400-403517/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-403517/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-154880-5 MS	MW-206	Total/NA	Water	SM 4500 F C	
400-154880-5 MSD	MW-206	Total/NA	Water	SM 4500 F C	
400-154909-A-1 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Rad

Prep Batch: 370240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154880-3	MW-204	Total/NA	Water	PrecSep-21	
400-154880-4	MW-205	Total/NA	Water	PrecSep-21	
400-154880-5	MW-206	Total/NA	Water	PrecSep-21	

Rad (Continued)

Prep Batch: 370240 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154880-6	DUP-02	Total/NA	Water	PrecSep-21	
MB 160-370240/21-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-370240/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-370240/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 370246

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154880-3	MW-204	Total/NA	Water	PrecSep_0	
400-154880-4	MW-205	Total/NA	Water	PrecSep_0	
400-154880-5	MW-206	Total/NA	Water	PrecSep_0	
400-154880-6	DUP-02	Total/NA	Water	PrecSep_0	
MB 160-370246/21-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-370246/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-370246/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Prep Batch: 370636

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154880-1	MW-200	Total/NA	Water	PrecSep-21	
400-154880-2	MW-203	Total/NA	Water	PrecSep-21	
400-154880-7	EB-02	Total/NA	Water	PrecSep-21	
MB 160-370636/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-370636/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-370636/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 370639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154880-1	MW-200	Total/NA	Water	PrecSep_0	
400-154880-2	MW-203	Total/NA	Water	PrecSep_0	
400-154880-7	EB-02	Total/NA	Water	PrecSep_0	
MB 160-370639/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-370639/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-370639/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Field Service / Mobile Lab

Analysis Batch: 404432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154880-1	MW-200	Total/NA	Water	Field Sampling	
400-154880-2	MW-203	Total/NA	Water	Field Sampling	
400-154880-3	MW-204	Total/NA	Water	Field Sampling	
400-154880-4	MW-205	Total/NA	Water	Field Sampling	
400-154880-5	MW-206	Total/NA	Water	Field Sampling	

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-401913/1-A ^5
Matrix: Water
Analysis Batch: 402069

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 401913

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/21/18 09:12	06/21/18 14:14	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		06/21/18 09:12	06/21/18 14:14	5
Barium	0.00049	U	0.0025	0.00049	mg/L		06/21/18 09:12	06/21/18 14:14	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 14:14	5
Boron	0.021	U	0.050	0.021	mg/L		06/21/18 09:12	06/21/18 14:14	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/21/18 09:12	06/21/18 14:14	5
Calcium	0.13	U	0.25	0.13	mg/L		06/21/18 09:12	06/21/18 14:14	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/21/18 09:12	06/21/18 14:14	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		06/21/18 09:12	06/21/18 14:14	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/21/18 09:12	06/21/18 14:14	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/21/18 09:12	06/21/18 14:14	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/21/18 09:12	06/21/18 14:14	5
Selenium	0.000250	I	0.0013	0.00024	mg/L		06/21/18 09:12	06/21/18 14:14	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		06/21/18 09:12	06/21/18 14:14	5

Lab Sample ID: LCS 400-401913/2-A
Matrix: Water
Analysis Batch: 402069

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 401913

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0541		mg/L		108	80 - 120
Arsenic	0.0500	0.0511		mg/L		102	80 - 120
Barium	0.0500	0.0515		mg/L		103	80 - 120
Beryllium	0.0500	0.0500		mg/L		100	80 - 120
Boron	0.100	0.102		mg/L		102	80 - 120
Cadmium	0.0500	0.0521		mg/L		104	80 - 120
Calcium	5.00	4.96		mg/L		99	80 - 120
Chromium	0.0500	0.0500		mg/L		100	80 - 120
Cobalt	0.0500	0.0510		mg/L		102	80 - 120
Lead	0.0500	0.0497		mg/L		99	80 - 120
Lithium	0.0500	0.0532		mg/L		106	80 - 120
Molybdenum	0.0500	0.0485		mg/L		97	80 - 120
Selenium	0.0500	0.0528		mg/L		106	80 - 120
Thallium	0.0100	0.0101		mg/L		101	80 - 120

Lab Sample ID: 400-154742-C-1-B MS ^5
Matrix: Water
Analysis Batch: 402069

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 401913

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0010	U	0.0500	0.0574		mg/L		115	75 - 125
Arsenic	0.00046	U	0.0500	0.0523		mg/L		105	75 - 125
Barium	0.018		0.0500	0.0704		mg/L		105	75 - 125
Beryllium	0.00034	U	0.0500	0.0524		mg/L		105	75 - 125
Boron	0.021	U	0.100	0.116		mg/L		116	75 - 125
Cadmium	0.00034	U	0.0500	0.0533		mg/L		107	75 - 125
Calcium	0.90		5.00	5.85		mg/L		99	75 - 125
Chromium	0.0011	U	0.0500	0.0508		mg/L		102	75 - 125

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

Lab Sample ID: 400-154742-C-1-B MS ^5
Matrix: Water
Analysis Batch: 402069

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 401913

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.00051	I	0.0500	0.0524		mg/L		104	75 - 125
Lead	0.00035	U	0.0500	0.0471		mg/L		94	75 - 125
Lithium	0.0011	U	0.0500	0.0480		mg/L		96	75 - 125
Molybdenum	0.00085	U	0.0500	0.0492		mg/L		98	75 - 125
Selenium	0.00049	I V	0.0500	0.0580		mg/L		115	75 - 125
Thallium	0.000085	U	0.0100	0.0102		mg/L		102	75 - 125

Lab Sample ID: 400-154742-C-1-C MSD ^5
Matrix: Water
Analysis Batch: 402069

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 401913

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.0010	U	0.0500	0.0562		mg/L		112	75 - 125	2	20
Arsenic	0.00046	U	0.0500	0.0517		mg/L		103	75 - 125	1	20
Barium	0.018		0.0500	0.0708		mg/L		106	75 - 125	1	20
Beryllium	0.00034	U	0.0500	0.0529		mg/L		106	75 - 125	1	20
Boron	0.021	U	0.100	0.115		mg/L		115	75 - 125	1	20
Cadmium	0.00034	U	0.0500	0.0532		mg/L		106	75 - 125	0	20
Calcium	0.90		5.00	5.94		mg/L		101	75 - 125	2	20
Chromium	0.0011	U	0.0500	0.0512		mg/L		102	75 - 125	1	20
Cobalt	0.00051	I	0.0500	0.0527		mg/L		104	75 - 125	1	20
Lead	0.00035	U	0.0500	0.0482		mg/L		96	75 - 125	2	20
Lithium	0.0011	U	0.0500	0.0496		mg/L		99	75 - 125	3	20
Molybdenum	0.00085	U	0.0500	0.0492		mg/L		98	75 - 125	0	20
Selenium	0.00049	I V	0.0500	0.0556		mg/L		110	75 - 125	4	20
Thallium	0.000085	U	0.0100	0.0103		mg/L		103	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-402415/12-A
Matrix: Water
Analysis Batch: 402757

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 402415

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		06/25/18 13:36	06/27/18 13:18	1

Lab Sample ID: LCS 400-402415/13-A
Matrix: Water
Analysis Batch: 402757

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 402415

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.000964		mg/L		96	80 - 120

Lab Sample ID: 190-16664-O-2-D MS
Matrix: Water
Analysis Batch: 402757

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 402415

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.000070	U	0.00201	0.00191		mg/L		95	80 - 120

Lab Sample ID: 190-16664-O-2-E MSD
Matrix: Water
Analysis Batch: 402757

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 402415

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.000070	U	0.00201	0.00195		mg/L		97	80 - 120	2	20

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

Lab Sample ID: MB 400-400948/1
Matrix: Water
Analysis Batch: 400948

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			06/13/18 18:25	1

Lab Sample ID: LCS 400-400948/2
Matrix: Water
Analysis Batch: 400948

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	266		mg/L		91	78 - 122

Lab Sample ID: 400-154880-3 DU
Matrix: Water
Analysis Batch: 400948

Client Sample ID: MW-204
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	700		696		mg/L		0	5

Lab Sample ID: MB 400-401134/1
Matrix: Water
Analysis Batch: 401134

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			06/15/18 15:50	1

Lab Sample ID: LCS 400-401134/2
Matrix: Water
Analysis Batch: 401134

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	254		mg/L		87	78 - 122

Lab Sample ID: 400-154909-A-5 DU
Matrix: Water
Analysis Batch: 401134

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	560		556		mg/L		0	5

Lab Sample ID: 400-154975-A-7 DU
Matrix: Water
Analysis Batch: 401134

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	58		58.0		mg/L		0	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-403212/6
Matrix: Water
Analysis Batch: 403212

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.60	U	2.0	0.60	mg/L			07/02/18 08:55	1

Lab Sample ID: LCS 400-403212/7
Matrix: Water
Analysis Batch: 403212

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	31.5		mg/L		105	90 - 110

Lab Sample ID: MRL 400-403212/3
Matrix: Water
Analysis Batch: 403212

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	1.72	I	mg/L		86	50 - 150

Lab Sample ID: 400-154880-2 MS
Matrix: Water
Analysis Batch: 403212

Client Sample ID: MW-203
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	15		10.0	25.1		mg/L		101	73 - 120

Lab Sample ID: 400-154880-2 MSD
Matrix: Water
Analysis Batch: 403212

Client Sample ID: MW-203
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	15		10.0	25.2		mg/L		102	73 - 120	1	8

Lab Sample ID: 400-154880-4 MS
Matrix: Water
Analysis Batch: 403212

Client Sample ID: MW-205
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	43		10.0	49.8	J3	mg/L		71	73 - 120

Lab Sample ID: 400-154880-4 MSD
Matrix: Water
Analysis Batch: 403212

Client Sample ID: MW-205
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	43		10.0	49.5	J3	mg/L		67	73 - 120	1	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-403294/3
Matrix: Water
Analysis Batch: 403294

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.032	U	0.10	0.032	mg/L			07/02/18 16:54	1

Lab Sample ID: LCS 400-403294/4
Matrix: Water
Analysis Batch: 403294

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	3.87		mg/L		97	90 - 110		

Lab Sample ID: 400-154881-A-19 DU
Matrix: Water
Analysis Batch: 403294

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Fluoride	0.032	U		0.032	U	mg/L				NC	4

Lab Sample ID: MB 400-403517/3
Matrix: Water
Analysis Batch: 403517

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.032	U	0.10	0.032	mg/L			07/05/18 11:36	1

Lab Sample ID: LCS 400-403517/4
Matrix: Water
Analysis Batch: 403517

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	3.87		mg/L		97	90 - 110		

Lab Sample ID: 400-154880-5 MS
Matrix: Water
Analysis Batch: 403517

Client Sample ID: MW-206
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Fluoride	0.10		1.00	0.700	J3	mg/L		60	75 - 125		

Lab Sample ID: 400-154880-5 MSD
Matrix: Water
Analysis Batch: 403517

Client Sample ID: MW-206
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.10		1.00	0.700	J3	mg/L		60	75 - 125	0	4

Lab Sample ID: 400-154909-A-1 DU
Matrix: Water
Analysis Batch: 403517

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Fluoride	0.032	U		0.032	U	mg/L				NC	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-403304/6
Matrix: Water
Analysis Batch: 403304

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.4	U	5.0	1.4	mg/L			07/02/18 14:47	1

Lab Sample ID: LCS 400-403304/7
Matrix: Water
Analysis Batch: 403304

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	16.0		mg/L		107	90 - 110

Lab Sample ID: MRL 400-403304/3
Matrix: Water
Analysis Batch: 403304

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	5.56		mg/L		111	50 - 150

Lab Sample ID: 400-154880-2 MS
Matrix: Water
Analysis Batch: 403304

Client Sample ID: MW-203
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	100		50.0	105	J3	mg/L		11	77 - 128

Lab Sample ID: 400-154880-2 MSD
Matrix: Water
Analysis Batch: 403304

Client Sample ID: MW-203
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	100		50.0	105	J3	mg/L		11	77 - 128	0	5

Lab Sample ID: 400-154880-3 MS
Matrix: Water
Analysis Batch: 403304

Client Sample ID: MW-204
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	390		300	385	J3	mg/L		-2	77 - 128

Lab Sample ID: 400-154880-3 MSD
Matrix: Water
Analysis Batch: 403304

Client Sample ID: MW-204
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	390		300	386	J3	mg/L		-1	77 - 128	0	5

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-370240/21-A
Matrix: Water
Analysis Batch: 374245

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 370240

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.1310	U	0.0817	0.0825	1.00	0.305	pCi/L	06/13/18 08:51	07/06/18 19:46	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.8*		*40 - 110*	*06/13/18 08:51*	*07/06/18 19:46*	*1*

Lab Sample ID: LCS 160-370240/1-A
Matrix: Water
Analysis Batch: 374218

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 370240

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.8	11.13		1.36	1.00	0.267	pCi/L	94	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*97.6*		*40 - 110*

Lab Sample ID: LCSD 160-370240/2-A
Matrix: Water
Analysis Batch: 374218

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 370240

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.8	10.48		1.31	1.00	0.236	pCi/L	89	68 - 137	0.24	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*101*		*40 - 110*

Lab Sample ID: MB 160-370636/23-A
Matrix: Water
Analysis Batch: 374666

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 370636

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.08653	U	0.0978	0.0981	1.00	0.155	pCi/L	06/15/18 10:05	07/10/18 08:35	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*06/15/18 10:05*	*07/10/18 08:35*	*1*

Lab Sample ID: LCS 160-370636/1-A
Matrix: Water
Analysis Batch: 374666

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 370636

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.8	10.09		1.18	1.00	0.170	pCi/L	85	68 - 137		

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCS 160-370636/1-A
Matrix: Water
Analysis Batch: 374666

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 370636

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	108		40 - 110

Lab Sample ID: LCSD 160-370636/2-A
Matrix: Water
Analysis Batch: 374666

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 370636

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.8	10.35		1.21	1.00	0.161	pCi/L	88	68 - 137	0.11	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	109		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-370246/21-A
Matrix: Water
Analysis Batch: 374349

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 370246

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1866	U	0.273	0.273	1.00	0.457	pCi/L	06/13/18 09:16	07/06/18 11:56	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	80.8		40 - 110	06/13/18 09:16	07/06/18 11:56	1
Y Carrier	89.7		40 - 110	06/13/18 09:16	07/06/18 11:56	1

Lab Sample ID: LCS 160-370246/1-A
Matrix: Water
Analysis Batch: 374350

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 370246

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			8.17	9.015		1.06	1.00	0.363	pCi/L	110	56 - 140		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	97.6		40 - 110
Y Carrier	86.4		40 - 110

Lab Sample ID: LCSD 160-370246/2-A
Matrix: Water
Analysis Batch: 374350

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 370246

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			8.17	8.487		1.01	1.00	0.369	pCi/L	104	56 - 140	0.25	1

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

Lab Sample ID: LCSD 160-370246/2-A
Matrix: Water
Analysis Batch: 374350

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 370246

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*101*		*40 - 110*
Y Carrier	*89.0*		*40 - 110*

Lab Sample ID: MB 160-370639/23-A
Matrix: Water
Analysis Batch: 374497

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 370639

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.05544	U	0.180	0.180	1.00	0.336	pCi/L	06/15/18 11:02	07/09/18 09:30	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*06/15/18 11:02*	*07/09/18 09:30*	*1*
Y Carrier	*82.6*		*40 - 110*	*06/15/18 11:02*	*07/09/18 09:30*	*1*

Lab Sample ID: LCS 160-370639/1-A
Matrix: Water
Analysis Batch: 374440

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 370639

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			8.16	9.040		1.04	1.00	0.356	pCi/L	111	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*108*		*40 - 110*
Y Carrier	*83.4*		*40 - 110*

Lab Sample ID: LCSD 160-370639/2-A
Matrix: Water
Analysis Batch: 374440

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 370639

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			8.16	9.007		1.04	1.00	0.378	pCi/L	110	56 - 140	0.02	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*109*		*40 - 110*
Y Carrier	*84.1*		*40 - 110*

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154880-1
SDG: Gypsum Storage Area

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

Lab Sample ID: 400-154790-A-19 DU
Matrix: Water
Analysis Batch: 375032

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Combined Radium 226 + 228	-0.0560	U		-0.00391 8	U	0.214	5.00	0.326	pCi/L			0.11	

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

Chain of Custody Record

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Client Information	Sampler: Brett Sykes	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No:
Client Contact: Kristi Mitchell	Phone: 380 3458	E-Mail: cheyenne.whitmire@testamericainc.com		Page: 1
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days):			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: CCR Plant Crist	Project #: 40005424			
Site: Gypsum Storage Area	SSOW#:			

Analysis Requested

400-154880 COC

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)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	SM4500_Cl_E - Chloride, SM4500_SO4_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C - Fluoride	6020 - Sb,As,Ba,B,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, 7470A - Mercury	FieldSampling - Field Sampling Parameters	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
MW-200	6/8/18	1205	G	Water			X	X	X	X		
~~MW-201~~ NO Sample				Water								
~~MW-202~~ NO Sample				Water								
MW-203	6/8/18	0720		Water								
MW-204	6/8/18	0838		Water								
MW-205	6/8/18	1034		Water								
MW-206	6/8/18	1310		Water								
DUP-02	6/8/18	1105		W								
EB-02	6/8/18	1320		W			X	X	X	X		
~~FB-02~~ NO Sample							X	X	X	X		

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)

Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		6/8/18 1443	TAP		6/8/18 1443	TAP
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 0.1°C, 3.0°C IR8

7/16/2018

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-154880-1
SDG Number: Gypsum Storage Area

Login Number: 154880
List Number: 1
Creator: Perez, Trina M

List Source: 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 3.0°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: Gulf Power Company

Job Number: 400-154880-1
SDG Number: Gypsum Storage Area

Login Number: 154880
List Number: 3
Creator: Press, Nicholas B

List Source: TestAmerica St. Louis
List Creation: 06/13/18 08:55 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.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18
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?	False	
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154880-1
SDG: Gypsum Storage Area

Laboratory: 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	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
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	10-09-18
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
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	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18 *
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-14	09-30-18
US Fish & Wildlife	Federal		LE058448-0	07-31-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

Laboratory: 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
Alaska	State Program	10	MO00054	06-30-19
ANAB	DoD ELAP		L2305	04-06-19
Arizona	State Program	9	AZ0813	12-08-18
California	State Program	9	2886	06-30-19
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-19
Illinois	NELAP	5	200023	11-30-18
Iowa	State Program	7	373	12-01-18
Kansas	NELAP	7	E-10236	10-31-18
Kentucky (DW)	State Program	4	90125	12-31-18
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA180017	12-31-18
Maryland	State Program	3	310	09-30-18
Michigan	State Program	5	9005	06-30-18 *
Missouri	State Program	7	780	06-30-18 *

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

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154880-1
SDG: Gypsum Storage Area

Laboratory: TestAmerica St. Louis (Continued)

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
Nevada	State Program	9	MO000542018-1	07-31-18 *
New Jersey	NELAP	2	MO002	06-30-19
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-18 *
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-18 *
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-18 *
Texas	NELAP	6	T104704193-17-11	07-31-18 *
US Fish & Wildlife	Federal		058448	07-31-18
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-18 *
Virginia	NELAP	3	460230	06-14-19
Washington	State Program	10	C592	08-30-18
West Virginia DEP	State Program	3	381	08-31-18 *

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

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ANALYTICAL REPORT

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

TestAmerica Job ID: 400-154909-1
TestAmerica Sample Delivery Group: Landfill 1
Client Project/Site: CCR Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Authorized for release by:
7/16/2018 5:16:05 PM

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

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-154909-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-154909-1

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-370793: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: MW-101 (400-154909-1), MW-102 (400-154909-2), MW-103 (400-154909-3), MW-104 (400-154909-4), MW-105 (400-154909-5), MW-106 (400-154909-6), MW-109 (400-154909-7), MW-110 (400-154909-8), EB-03 (400-154909-9), FB-03 (400-154909-10), DUP-04 (400-154909-11), MW-201 (400-154909-12), MW-202 (400-154909-13), DUP-03 (400-154909-14) and FB-03 (400-154909-15). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-370790: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: MW-101 (400-154909-1), MW-102 (400-154909-2), MW-103 (400-154909-3), MW-104 (400-154909-4), MW-105 (400-154909-5), MW-106 (400-154909-6), MW-109 (400-154909-7), MW-110 (400-154909-8), EB-03 (400-154909-9), FB-03 (400-154909-10), DUP-04 (400-154909-11), MW-201 (400-154909-12), MW-202 (400-154909-13), DUP-03 (400-154909-14) and FB-03 (400-154909-15). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Metals

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 402096 and analytical batch 402344 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 samples were diluted to bring the concentration of target analytes within the calibration range: MW-104 (400-154909-4), MW-105 (400-154909-5), MW-110 (400-154909-8), DUP-04 (400-154909-11) and MW-201 (400-154909-12). Elevated reporting limits (RLs) are provided.

General Chemistry

Method(s) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 403252 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) SM 4500 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-104 (400-154909-4), MW-105 (400-154909-5), MW-110 (400-154909-8), DUP-04 (400-154909-11), MW-201 (400-154909-12), (400-154909-A-12 MS) and (400-154909-A-12 MSD). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 403365 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) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-104 (400-154909-4), MW-105 (400-154909-5), MW-110 (400-154909-8), DUP-04 (400-154909-11), MW-201 (400-154909-12), (400-155392-G-1), (400-155392-G-1 MS) and (400-155392-G-1 MSD). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 F C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 403517 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.

Detection Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154909-1
SDG: Landfill 1

Client Sample ID: MW-101 — Lab Sample ID: 400-154909-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00046	I	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.0092		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.39		0.25	0.13	mg/L	5		6020	Total Recoverable
Selenium	0.00028	I	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	8.0		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.2		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1.5	I	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	5.12				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-102 — Lab Sample ID: 400-154909-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0089		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.55		0.25	0.13	mg/L	5		6020	Total Recoverable
Selenium	0.00028	I	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	8.0		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	4.9		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1.7	I	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	4.81				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-103 — Lab Sample ID: 400-154909-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.053		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.26		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	3.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0015	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0030		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	96		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	8.0		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	34		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	5.02				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-104 — Lab Sample ID: 400-154909-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0047		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.025		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.0011	I	0.0025	0.00034	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-104 (Continued) — Lab Sample ID: 400-154909-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.00049	I	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	67		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0022	I	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.029		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0024		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.019		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.015		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00033	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	12		1.0	0.42	mg/L	100		6020	Total Recoverable
Mercury	0.0014		0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	1500		25	17	mg/L	1		SM 2540C	Total/NA
Chloride	190		10	3.0	mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.38		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	760		150	42	mg/L	30		SM 4500 SO4 E	Total/NA
Field pH	3.97				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-105 — Lab Sample ID: 400-154909-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0034		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.055		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	86		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0020	I	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0035	I	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00043	I	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	2.4		0.25	0.11	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	560		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	140		10	3.0	mg/L	5		SM 4500 Cl- E	Total/NA
Sulfate	96		25	7.0	mg/L	5		SM 4500 SO4 E	Total/NA
Field pH	5.96				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-106 — Lab Sample ID: 400-154909-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0089		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.066		0.050	0.021	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-106 (Continued) — Lab Sample ID: 400-154909-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	0.39		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00040	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	6.0		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	3.6		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1.4	I	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	4.99				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-109 — Lab Sample ID: 400-154909-7

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.016		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.11		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	2.6		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0044		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0042	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	26		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	6.0		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	10		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	4.78				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-110 — Lab Sample ID: 400-154909-8

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00050	I	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.036		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	30		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0096		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0090		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0037		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00029	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	4.2		0.25	0.11	mg/L	25		6020	Total Recoverable
Mercury	0.0042		0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	670		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	140		10	3.0	mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.040	I	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	270		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	4.77				SU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154909-1
SDG: Landfill 1

Client Sample ID: EB-03 — Lab Sample ID: 400-154909-9

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.040	I	0.050	0.021	mg/L	5		6020	Total Recoverable

Client Sample ID: FB-03 — Lab Sample ID: 400-154909-10

No Detections.

Client Sample ID: DUP-04 — Lab Sample ID: 400-154909-11

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0036		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.054		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	86		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0020	I	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0031	I	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00026	I	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	2.4		0.25	0.11	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	540		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	140		10	3.0	mg/L	5		SM 4500 Cl- E	Total/NA
Sulfate	96		25	7.0	mg/L	5		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-201 — Lab Sample ID: 400-154909-12

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00063	I	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.029		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.0029		0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	64		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0016	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0044	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0047		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00023	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	4.1		0.25	0.11	mg/L	25		6020	Total Recoverable
Mercury	0.00032		0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	430		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	86		4.0	1.2	mg/L	2		SM 4500 Cl- E	Total/NA
Fluoride	0.78		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	170		25	7.0	mg/L	5		SM 4500 SO4 E	Total/NA
Field pH	4.81				SU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154909-1
SDG: Landfill 1

Client Sample ID: MW-202 — Lab Sample ID: 400-154909-13

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.072		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.11		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	5.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0019	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00037	I	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.0013	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00049	I	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Mercury	0.00070		0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	72		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	24		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.070	I	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	18		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	4.58				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-03 — Lab Sample ID: 400-154909-14

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.071		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.085		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	5.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0019	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0011	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00047	I	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Mercury	0.00064		0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	16		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	24		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.070	I	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	18		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA

Client Sample ID: FB-03 — Lab Sample ID: 400-154909-15

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154909-1
SDG: Landfill 1

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
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
Field Sampling	Field Sampling	EPA	TAL PEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

EPA = US Environmental Protection Agency
None = None
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.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154909-1
SDG: Landfill 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-154909-1	MW-101	Water	06/10/18 06:49	06/11/18 14:02
400-154909-2	MW-102	Water	06/11/18 12:46	06/11/18 14:02
400-154909-3	MW-103	Water	06/11/18 08:19	06/11/18 14:02
400-154909-4	MW-104	Water	06/10/18 10:27	06/11/18 14:02
400-154909-5	MW-105	Water	06/10/18 08:57	06/11/18 14:02
400-154909-6	MW-106	Water	06/10/18 07:59	06/11/18 14:02
400-154909-7	MW-109	Water	06/11/18 11:31	06/11/18 14:02
400-154909-8	MW-110	Water	06/11/18 10:12	06/11/18 14:02
400-154909-9	EB-03	Water	06/10/18 10:50	06/11/18 14:02
400-154909-10	FB-03	Water	06/11/18 09:00	06/11/18 14:02
400-154909-11	DUP-04	Water	06/10/18 07:57	06/11/18 14:02
400-154909-12	MW-201	Water	06/09/18 10:18	06/11/18 14:02
400-154909-13	MW-202	Water	06/09/18 11:59	06/11/18 14:02
400-154909-14	DUP-03	Water	06/09/18 10:59	06/11/18 14:02
400-154909-15	FB-03	Water	06/09/18 10:00	06/11/18 14:02

Client Sample ID: MW-101

Date Collected: 06/10/18 06:49
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-1

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/22/18 09:44	06/22/18 18:36	5
Arsenic	**0.00046**	**I**	0.0013	0.00046	mg/L		06/22/18 09:44	06/22/18 18:36	5
Barium	**0.0092**		0.0025	0.00049	mg/L		06/22/18 09:44	06/22/18 18:36	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 18:36	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 18:36	5
Calcium	**0.39**		0.25	0.13	mg/L		06/22/18 09:44	06/22/18 18:36	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/22/18 09:44	06/22/18 18:36	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		06/22/18 09:44	06/22/18 18:36	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/22/18 09:44	06/22/18 18:36	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/22/18 09:44	06/22/18 18:36	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/22/18 09:44	06/22/18 18:36	5
Selenium	**0.00028**	**I**	0.0013	0.00024	mg/L		06/22/18 09:44	06/22/18 18:36	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		06/22/18 09:44	06/22/18 18:36	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.021	U	0.050	0.021	mg/L		06/22/18 09:44	06/25/18 12:55	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		06/25/18 16:38	06/27/18 12:34	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**8.0**		5.0	3.4	mg/L			06/15/18 15:50	1
Chloride	**5.2**		2.0	0.60	mg/L			07/02/18 13:10	1
Fluoride	0.032	U	0.10	0.032	mg/L			07/05/18 12:32	1
Sulfate	**1.5**	**I**	5.0	1.4	mg/L			07/03/18 09:02	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.365**		0.172	0.175	1.00	0.186	pCi/L	06/16/18 12:16	07/11/18 05:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*107*		*40 - 110*	*06/16/18 12:16*	*07/11/18 05:45*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.594**		0.221	0.228	1.00	0.294	pCi/L	06/16/18 13:10	07/10/18 14:40	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*107*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:40*	*1*
Y Carrier	*88.6*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:40*	*1*

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154909-1
SDG: Landfill 1

Client Sample ID: MW-101
Date Collected: 06/10/18 06:49
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-1
Matrix: Water

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	0.959		0.280	0.287	5.00	0.294	pCi/L		07/12/18 17:53	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.12				SU			06/10/18 06:49	1

Client Sample ID: MW-102
Date Collected: 06/11/18 12:46
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-2
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/22/18 09:44	06/22/18 19:03	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		06/22/18 09:44	06/22/18 19:03	5
Barium	**0.0089**		0.0025	0.00049	mg/L		06/22/18 09:44	06/22/18 19:03	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 19:03	5
Boron	0.021	U	0.050	0.021	mg/L		06/22/18 09:44	06/22/18 19:03	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 19:03	5
Calcium	**0.55**		0.25	0.13	mg/L		06/22/18 09:44	06/22/18 19:03	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/22/18 09:44	06/22/18 19:03	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		06/22/18 09:44	06/22/18 19:03	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/22/18 09:44	06/22/18 19:03	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/22/18 09:44	06/22/18 19:03	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/22/18 09:44	06/22/18 19:03	5
Selenium	**0.00028**	**I**	0.0013	0.00024	mg/L		06/22/18 09:44	06/22/18 19:03	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		06/22/18 09:44	06/22/18 19:03	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		06/25/18 16:38	06/27/18 12:36	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**8.0**		5.0	3.4	mg/L			06/15/18 15:50	1
Chloride	**4.9**		2.0	0.60	mg/L			07/02/18 13:17	1
Fluoride	0.032	U	0.10	0.032	mg/L			07/05/18 12:39	1
Sulfate	**1.7**	**I**	5.0	1.4	mg/L			07/03/18 09:06	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.427**		0.193	0.197	1.00	0.211	pCi/L	06/16/18 12:16	07/11/18 05:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*06/16/18 12:16*	*07/11/18 05:45*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.09**		0.281	0.298	1.00	0.336	pCi/L	06/16/18 13:10	07/10/18 14:40	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:40*	*1*
Y Carrier	*88.6*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:40*	*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	**1.51**		0.341	0.357	5.00	0.336	pCi/L		07/12/18 17:53	1

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154909-1
SDG: Landfill 1

Client Sample ID: MW-102
Date Collected: 06/11/18 12:46
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-2
Matrix: Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.81				SU			06/11/18 12:40	1

Client Sample ID: MW-103

Date Collected: 06/11/18 08:19
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-3

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/22/18 09:44	06/22/18 19:07	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		06/22/18 09:44	06/22/18 19:07	5
Barium	**0.053**		0.0025	0.00049	mg/L		06/22/18 09:44	06/22/18 19:07	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 19:07	5
Boron	**0.26**		0.050	0.021	mg/L		06/22/18 09:44	06/22/18 19:07	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 19:07	5
Calcium	**3.5**		0.25	0.13	mg/L		06/22/18 09:44	06/22/18 19:07	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/22/18 09:44	06/22/18 19:07	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		06/22/18 09:44	06/22/18 19:07	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/22/18 09:44	06/22/18 19:07	5
Lithium	**0.0015**	**I**	0.0050	0.0011	mg/L		06/22/18 09:44	06/22/18 19:07	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/22/18 09:44	06/22/18 19:07	5
Selenium	**0.0030**		0.0013	0.00024	mg/L		06/22/18 09:44	06/22/18 19:07	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		06/22/18 09:44	06/22/18 19:07	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		06/25/18 16:38	06/27/18 12:38	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**96**		5.0	3.4	mg/L			06/18/18 12:59	1
Chloride	**8.0**		2.0	0.60	mg/L			07/02/18 13:17	1
Fluoride	0.032	U	0.10	0.032	mg/L			07/05/18 12:43	1
Sulfate	**34**		5.0	1.4	mg/L			07/03/18 09:06	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.86**		0.358	0.395	1.00	0.199	pCi/L	06/16/18 12:16	07/11/18 05:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*06/16/18 12:16*	*07/11/18 05:45*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**3.68**		0.447	0.561	1.00	0.383	pCi/L	06/16/18 13:10	07/10/18 14:40	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:40*	*1*
Y Carrier	*85.6*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:40*	*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	**5.54**		0.573	0.686	5.00	0.383	pCi/L		07/12/18 17:53	1

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154909-1
SDG: Landfill 1

Client Sample ID: MW-103
Date Collected: 06/11/18 08:19
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-3
Matrix: Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.02				SU			06/11/18 08:19	1

Client Sample ID: MW-104

Date Collected: 06/10/18 10:27
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-4

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/22/18 09:44	06/22/18 19:12	5
Arsenic	**0.0047**		0.0013	0.00046	mg/L		06/22/18 09:44	06/22/18 19:12	5
Barium	**0.025**		0.0025	0.00049	mg/L		06/22/18 09:44	06/22/18 19:12	5
Beryllium	**0.0011**	**I**	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 19:12	5
Cadmium	**0.00049**	**I**	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 19:12	5
Calcium	**67**		0.25	0.13	mg/L		06/22/18 09:44	06/22/18 19:12	5
Chromium	**0.0022**	**I**	0.0025	0.0011	mg/L		06/22/18 09:44	06/22/18 19:12	5
Cobalt	**0.029**		0.0025	0.00040	mg/L		06/22/18 09:44	06/22/18 19:12	5
Lead	**0.0024**		0.0013	0.00035	mg/L		06/22/18 09:44	06/22/18 19:12	5
Lithium	**0.019**		0.0050	0.0011	mg/L		06/22/18 09:44	06/22/18 19:12	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/22/18 09:44	06/22/18 19:12	5
Selenium	**0.015**		0.0013	0.00024	mg/L		06/22/18 09:44	06/22/18 19:12	5
Thallium	**0.00033**	**I**	0.00050	0.000085	mg/L		06/22/18 09:44	06/22/18 19:12	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**12**		1.0	0.42	mg/L		06/22/18 09:44	06/26/18 14:52	100

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.0014**		0.00020	0.000070	mg/L		06/25/18 16:38	06/27/18 12:40	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1500**		25	17	mg/L			06/15/18 15:50	1
Chloride	**190**		10	3.0	mg/L			07/02/18 14:12	5
Fluoride	**0.38**		0.10	0.032	mg/L			07/05/18 12:47	1
Sulfate	**760**		150	42	mg/L			07/03/18 11:04	30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**4.59**		0.528	0.670	1.00	0.210	pCi/L	06/16/18 12:16	07/11/18 05:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*06/16/18 12:16*	*07/11/18 05:45*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**14.6**		0.779	1.55	1.00	0.324	pCi/L	06/16/18 13:10	07/10/18 14:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:41*	*1*
Y Carrier	*92.3*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:41*	*1*

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154909-1
SDG: Landfill 1

Client Sample ID: MW-104
Date Collected: 06/10/18 10:27
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-4
Matrix: Water

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	19.1		0.941	1.69	5.00	0.324	pCi/L		07/12/18 17:53	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	3.97				SU			06/10/18 10:27	1

Client Sample ID: MW-105

Date Collected: 06/10/18 08:57
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-5

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/22/18 09:44	06/22/18 19:16	5
Arsenic	**0.0034**		0.0013	0.00046	mg/L		06/22/18 09:44	06/22/18 19:16	5
Barium	**0.055**		0.0025	0.00049	mg/L		06/22/18 09:44	06/22/18 19:16	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 19:16	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 19:16	5
Calcium	**86**		0.25	0.13	mg/L		06/22/18 09:44	06/22/18 19:16	5
Chromium	**0.0020**	**I**	0.0025	0.0011	mg/L		06/22/18 09:44	06/22/18 19:16	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		06/22/18 09:44	06/22/18 19:16	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/22/18 09:44	06/22/18 19:16	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/22/18 09:44	06/22/18 19:16	5
Molybdenum	**0.0035**	**I**	0.015	0.00085	mg/L		06/22/18 09:44	06/22/18 19:16	5
Selenium	**0.00043**	**I**	0.0013	0.00024	mg/L		06/22/18 09:44	06/22/18 19:16	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		06/22/18 09:44	06/22/18 19:16	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.4**		0.25	0.11	mg/L		06/22/18 09:44	06/26/18 14:56	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		06/25/18 16:38	06/27/18 12:41	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**560**		5.0	3.4	mg/L			06/15/18 15:50	1
Chloride	**140**		10	3.0	mg/L			07/02/18 14:12	5
Fluoride	0.032	U	0.10	0.032	mg/L			07/05/18 12:50	1
Sulfate	**96**		25	7.0	mg/L			07/03/18 09:50	5

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.93**		0.363	0.402	1.00	0.194	pCi/L	06/16/18 12:16	07/11/18 05:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*06/16/18 12:16*	*07/11/18 05:45*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**4.28**		0.464	0.608	1.00	0.342	pCi/L	06/16/18 13:10	07/10/18 14:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:42*	*1*
Y Carrier	*85.6*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:42*	*1*

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154909-1
SDG: Landfill 1

Client Sample ID: MW-105
Date Collected: 06/10/18 08:57
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-5
Matrix: Water

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	6.20		0.589	0.729	5.00	0.342	pCi/L		07/12/18 17:53	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.96				SU			06/10/18 08:57	1

Client Sample ID: MW-106

Date Collected: 06/10/18 07:59
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-6

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/22/18 09:44	06/22/18 19:21	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		06/22/18 09:44	06/22/18 19:21	5
Barium	**0.0089**		0.0025	0.00049	mg/L		06/22/18 09:44	06/22/18 19:21	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 19:21	5
Boron	**0.066**		0.050	0.021	mg/L		06/22/18 09:44	06/22/18 19:21	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 19:21	5
Calcium	**0.39**		0.25	0.13	mg/L		06/22/18 09:44	06/22/18 19:21	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/22/18 09:44	06/22/18 19:21	5
Cobalt	**0.00040**	**I**	0.0025	0.00040	mg/L		06/22/18 09:44	06/22/18 19:21	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/22/18 09:44	06/22/18 19:21	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/22/18 09:44	06/22/18 19:21	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/22/18 09:44	06/22/18 19:21	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		06/22/18 09:44	06/22/18 19:21	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		06/22/18 09:44	06/22/18 19:21	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		06/25/18 16:38	06/27/18 12:43	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**6.0**		5.0	3.4	mg/L			06/15/18 15:50	1
Chloride	**3.6**		2.0	0.60	mg/L			07/02/18 13:17	1
Fluoride	0.032	U	0.10	0.032	mg/L			07/05/18 12:52	1
Sulfate	**1.4**	**I**	5.0	1.4	mg/L			07/03/18 09:06	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.286**		0.158	0.161	1.00	0.187	pCi/L	06/16/18 12:16	07/11/18 05:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*06/16/18 12:16*	*07/11/18 05:45*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.566**		0.245	0.251	1.00	0.348	pCi/L	06/16/18 13:10	07/10/18 14:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:42*	*1*
Y Carrier	*89.7*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:42*	*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	**0.852**		0.292	0.298	5.00	0.348	pCi/L		07/12/18 17:53	1

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154909-1
SDG: Landfill 1

Client Sample ID: MW-106
Date Collected: 06/10/18 07:59
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-6
Matrix: Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.99				SU			06/10/18 07:59	1

Client Sample ID: MW-109

Date Collected: 06/11/18 11:31
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-7

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/22/18 09:44	06/22/18 19:25	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		06/22/18 09:44	06/22/18 19:25	5
Barium	**0.016**		0.0025	0.00049	mg/L		06/22/18 09:44	06/22/18 19:25	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 19:25	5
Boron	**0.11**		0.050	0.021	mg/L		06/22/18 09:44	06/22/18 19:25	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 19:25	5
Calcium	**2.6**		0.25	0.13	mg/L		06/22/18 09:44	06/22/18 19:25	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/22/18 09:44	06/22/18 19:25	5
Cobalt	**0.0044**		0.0025	0.00040	mg/L		06/22/18 09:44	06/22/18 19:25	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/22/18 09:44	06/22/18 19:25	5
Lithium	**0.0042**	**I**	0.0050	0.0011	mg/L		06/22/18 09:44	06/22/18 19:25	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/22/18 09:44	06/22/18 19:25	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		06/22/18 09:44	06/22/18 19:25	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		06/22/18 09:44	06/22/18 19:25	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		06/25/18 16:38	06/27/18 12:45	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**26**		5.0	3.4	mg/L			06/18/18 12:59	1
Chloride	**6.0**		2.0	0.60	mg/L			07/02/18 13:17	1
Fluoride	0.032	U	0.10	0.032	mg/L			07/05/18 12:56	1
Sulfate	**10**		5.0	1.4	mg/L			07/03/18 09:06	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.492**		0.196	0.201	1.00	0.185	pCi/L	06/16/18 12:16	07/11/18 05:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*106*		*40 - 110*	*06/16/18 12:16*	*07/11/18 05:46*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.10**		0.280	0.298	1.00	0.337	pCi/L	06/16/18 13:10	07/10/18 14:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*106*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:43*	*1*
Y Carrier	*89.3*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:43*	*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	**1.59**		0.342	0.359	5.00	0.337	pCi/L		07/12/18 17:53	1

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154909-1
SDG: Landfill 1

Client Sample ID: MW-109
Date Collected: 06/11/18 11:31
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-7
Matrix: Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.78				SU			06/11/18 11:31	1

Client Sample ID: MW-110

Date Collected: 06/11/18 10:12
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-8

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/22/18 09:44	06/22/18 19:30	5
Arsenic	**0.00050**	**I**	0.0013	0.00046	mg/L		06/22/18 09:44	06/22/18 19:30	5
Barium	**0.036**		0.0025	0.00049	mg/L		06/22/18 09:44	06/22/18 19:30	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 19:30	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 19:30	5
Calcium	**30**		0.25	0.13	mg/L		06/22/18 09:44	06/22/18 19:30	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/22/18 09:44	06/22/18 19:30	5
Cobalt	**0.0096**		0.0025	0.00040	mg/L		06/22/18 09:44	06/22/18 19:30	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/22/18 09:44	06/22/18 19:30	5
Lithium	**0.0090**		0.0050	0.0011	mg/L		06/22/18 09:44	06/22/18 19:30	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/22/18 09:44	06/22/18 19:30	5
Selenium	**0.0037**		0.0013	0.00024	mg/L		06/22/18 09:44	06/22/18 19:30	5
Thallium	**0.00029**	**I**	0.00050	0.000085	mg/L		06/22/18 09:44	06/22/18 19:30	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**4.2**		0.25	0.11	mg/L		06/22/18 09:44	06/25/18 13:09	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.0042**		0.00020	0.000070	mg/L		06/25/18 16:38	06/27/18 12:47	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**670**		5.0	3.4	mg/L			06/18/18 12:59	1
Chloride	**140**		10	3.0	mg/L			07/02/18 14:14	5
Fluoride	**0.040**	**I**	0.10	0.032	mg/L			07/05/18 13:00	1
Sulfate	**270**		100	28	mg/L			07/03/18 09:53	20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**2.34**		0.396	0.448	1.00	0.189	pCi/L	06/16/18 12:16	07/11/18 05:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*106*		*40 - 110*	*06/16/18 12:16*	*07/11/18 05:46*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**4.72**		0.464	0.636	1.00	0.335	pCi/L	06/16/18 13:10	07/10/18 14:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*106*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:43*	*1*
Y Carrier	*91.2*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:43*	*1*

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154909-1
SDG: Landfill 1

Client Sample ID: MW-110
Date Collected: 06/11/18 10:12
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-8
Matrix: Water

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	7.06		0.610	0.778	5.00	0.335	pCi/L		07/12/18 17:53	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.77				SU			06/11/18 10:12	1

Client Sample ID: EB-03
Date Collected: 06/10/18 10:50
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-9
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/22/18 09:44	06/22/18 19:34	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		06/22/18 09:44	06/22/18 19:34	5
Barium	0.00049	U	0.0025	0.00049	mg/L		06/22/18 09:44	06/22/18 19:34	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 19:34	5
Boron	**0.040**	**I**	0.050	0.021	mg/L		06/22/18 09:44	06/22/18 19:34	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 19:34	5
Calcium	0.13	U	0.25	0.13	mg/L		06/22/18 09:44	06/22/18 19:34	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/22/18 09:44	06/22/18 19:34	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		06/22/18 09:44	06/22/18 19:34	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/22/18 09:44	06/22/18 19:34	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/22/18 09:44	06/22/18 19:34	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/22/18 09:44	06/22/18 19:34	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		06/22/18 09:44	06/22/18 19:34	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		06/22/18 09:44	06/22/18 19:34	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		06/25/18 16:38	06/27/18 13:05	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			06/15/18 15:50	1
Chloride	0.60	U	2.0	0.60	mg/L			07/02/18 13:17	1
Fluoride	0.032	U	0.10	0.032	mg/L			07/05/18 13:03	1
Sulfate	1.4	U	5.0	1.4	mg/L			07/03/18 09:06	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00958	U	0.0883	0.0883	1.00	0.187	pCi/L	06/16/18 12:16	07/11/18 05:47	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*106*		*40 - 110*	*06/16/18 12:16*	*07/11/18 05:47*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0360	U	0.174	0.174	1.00	0.310	pCi/L	06/16/18 13:10	07/10/18 14:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*106*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:43*	*1*
Y Carrier	*90.1*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:43*	*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	0.0456	U	0.195	0.195	5.00	0.310	pCi/L		07/12/18 17:53	1

Client Sample ID: FB-03

Date Collected: 06/11/18 09:00
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-10

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/22/18 09:44	06/22/18 19:39	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		06/22/18 09:44	06/22/18 19:39	5
Barium	0.00049	U	0.0025	0.00049	mg/L		06/22/18 09:44	06/22/18 19:39	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 19:39	5
Boron	0.021	U	0.050	0.021	mg/L		06/22/18 09:44	06/22/18 19:39	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 19:39	5
Calcium	0.13	U	0.25	0.13	mg/L		06/22/18 09:44	06/22/18 19:39	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/22/18 09:44	06/22/18 19:39	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		06/22/18 09:44	06/22/18 19:39	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/22/18 09:44	06/22/18 19:39	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/22/18 09:44	06/22/18 19:39	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/22/18 09:44	06/22/18 19:39	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		06/22/18 09:44	06/22/18 19:39	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		06/22/18 09:44	06/22/18 19:39	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		06/25/18 16:38	06/27/18 13:07	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			06/18/18 12:59	1
Chloride	0.60	U	2.0	0.60	mg/L			07/02/18 13:17	1
Fluoride	0.032	U	0.10	0.032	mg/L			07/05/18 13:54	1
Sulfate	1.4	U	5.0	1.4	mg/L			07/03/18 09:06	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0791	U	0.0990	0.0993	1.00	0.161	pCi/L	06/16/18 12:16	07/11/18 05:47	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*06/16/18 12:16*	*07/11/18 05:47*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0979	U	0.187	0.188	1.00	0.321	pCi/L	06/16/18 13:10	07/10/18 14:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:43*	*1*
Y Carrier	*86.7*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:43*	*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	0.177	U	0.212	0.213	5.00	0.321	pCi/L		07/12/18 17:53	1

Client Sample ID: DUP-04

Date Collected: 06/10/18 07:57
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-11

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/22/18 09:44	06/22/18 19:43	5
Arsenic	**0.0036**		0.0013	0.00046	mg/L		06/22/18 09:44	06/22/18 19:43	5
Barium	**0.054**		0.0025	0.00049	mg/L		06/22/18 09:44	06/22/18 19:43	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 19:43	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 19:43	5
Calcium	**86**		0.25	0.13	mg/L		06/22/18 09:44	06/22/18 19:43	5
Chromium	**0.0020**	**I**	0.0025	0.0011	mg/L		06/22/18 09:44	06/22/18 19:43	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		06/22/18 09:44	06/22/18 19:43	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/22/18 09:44	06/22/18 19:43	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/22/18 09:44	06/22/18 19:43	5
Molybdenum	**0.0031**	**I**	0.015	0.00085	mg/L		06/22/18 09:44	06/22/18 19:43	5
Selenium	**0.00026**	**I**	0.0013	0.00024	mg/L		06/22/18 09:44	06/22/18 19:43	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		06/22/18 09:44	06/22/18 19:43	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.4**		0.25	0.11	mg/L		06/22/18 09:44	06/25/18 13:13	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		06/25/18 16:38	06/27/18 13:08	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**540**		5.0	3.4	mg/L			06/15/18 15:50	1
Chloride	**140**		10	3.0	mg/L			07/02/18 14:14	5
Fluoride	0.032	U	0.10	0.032	mg/L			07/05/18 13:45	1
Sulfate	**96**		25	7.0	mg/L			07/03/18 09:50	5

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.64**		0.357	0.387	1.00	0.213	pCi/L	06/16/18 12:16	07/11/18 05:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*06/16/18 12:16*	*07/11/18 05:49*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**3.89**		0.450	0.575	1.00	0.360	pCi/L	06/16/18 13:10	07/10/18 14:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:43*	*1*
Y Carrier	*86.7*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:43*	*1*

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154909-1
SDG: Landfill 1

Client Sample ID: DUP-04
Date Collected: 06/10/18 07:57
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-11
Matrix: Water

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	5.53		0.574	0.693	5.00	0.360	pCi/L		07/12/18 17:53	1

Client Sample ID: MW-201

Date Collected: 06/09/18 10:18
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-12

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/22/18 09:44	06/22/18 20:10	5
Arsenic	**0.00063**	**I**	0.0013	0.00046	mg/L		06/22/18 09:44	06/22/18 20:10	5
Barium	**0.029**		0.0025	0.00049	mg/L		06/22/18 09:44	06/22/18 20:10	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 20:10	5
Cadmium	**0.0029**		0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 20:10	5
Calcium	**64**		0.25	0.13	mg/L		06/22/18 09:44	06/22/18 20:10	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/22/18 09:44	06/22/18 20:10	5
Cobalt	**0.0016**	**I**	0.0025	0.00040	mg/L		06/22/18 09:44	06/22/18 20:10	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/22/18 09:44	06/22/18 20:10	5
Lithium	**0.0044**	**I**	0.0050	0.0011	mg/L		06/22/18 09:44	06/22/18 20:10	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/22/18 09:44	06/22/18 20:10	5
Selenium	**0.0047**		0.0013	0.00024	mg/L		06/22/18 09:44	06/22/18 20:10	5
Thallium	**0.00023**	**I**	0.00050	0.000085	mg/L		06/22/18 09:44	06/22/18 20:10	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**4.1**		0.25	0.11	mg/L		06/22/18 09:44	06/25/18 13:18	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00032**		0.00020	0.000070	mg/L		06/25/18 16:38	06/27/18 13:10	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**430**		5.0	3.4	mg/L			06/15/18 15:50	1
Chloride	**86**		4.0	1.2	mg/L			07/02/18 14:12	2
Fluoride	**0.78**		0.10	0.032	mg/L			07/05/18 12:13	1
Sulfate	**170**		25	7.0	mg/L			07/03/18 09:50	5

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**2.98**		0.474	0.545	1.00	0.223	pCi/L	06/16/18 12:16	07/11/18 05:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*06/16/18 12:16*	*07/11/18 05:49*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**3.54**		0.433	0.541	1.00	0.348	pCi/L	06/16/18 13:10	07/10/18 14:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:43*	*1*
Y Carrier	*85.2*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:43*	*1*

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154909-1
SDG: Landfill 1

Client Sample ID: MW-201
Date Collected: 06/09/18 10:18
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-12
Matrix: Water

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	6.52		0.642	0.768	5.00	0.348	pCi/L		07/12/18 17:53	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.81				SU			06/09/18 10:18	1

Client Sample ID: MW-202

Date Collected: 06/09/18 11:59
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-13

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/22/18 09:44	06/22/18 20:15	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		06/22/18 09:44	06/22/18 20:15	5
Barium	**0.072**		0.0025	0.00049	mg/L		06/22/18 09:44	06/22/18 20:15	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 20:15	5
Boron	**0.11**		0.050	0.021	mg/L		06/22/18 09:44	06/22/18 20:15	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 20:15	5
Calcium	**5.8**		0.25	0.13	mg/L		06/22/18 09:44	06/22/18 20:15	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/22/18 09:44	06/22/18 20:15	5
Cobalt	**0.0019**	**I**	0.0025	0.00040	mg/L		06/22/18 09:44	06/22/18 20:15	5
Lead	**0.00037**	**I**	0.0013	0.00035	mg/L		06/22/18 09:44	06/22/18 20:15	5
Lithium	**0.0013**	**I**	0.0050	0.0011	mg/L		06/22/18 09:44	06/22/18 20:15	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/22/18 09:44	06/22/18 20:15	5
Selenium	**0.00049**	**I**	0.0013	0.00024	mg/L		06/22/18 09:44	06/22/18 20:15	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		06/22/18 09:44	06/22/18 20:15	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00070**		0.00020	0.000070	mg/L		06/25/18 16:38	06/27/18 13:12	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**72**		5.0	3.4	mg/L			06/15/18 15:50	1
Chloride	**24**		2.0	0.60	mg/L			07/02/18 13:10	1
Fluoride	**0.070**	**I**	0.10	0.032	mg/L			07/05/18 12:16	1
Sulfate	**18**		5.0	1.4	mg/L			07/03/18 09:02	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.85**		0.376	0.411	1.00	0.227	pCi/L	06/16/18 12:16	07/11/18 05:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*06/16/18 12:16*	*07/11/18 05:49*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.51**		0.297	0.327	1.00	0.312	pCi/L	06/16/18 13:10	07/10/18 14:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:43*	*1*
Y Carrier	*90.8*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:43*	*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	**3.36**		0.479	0.525	5.00	0.312	pCi/L		07/12/18 17:53	1

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154909-1
SDG: Landfill 1

Client Sample ID: MW-202
Date Collected: 06/09/18 11:59
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-13
Matrix: Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.58				SU			06/09/18 11:59	1

Client Sample ID: DUP-03

Date Collected: 06/09/18 10:59
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-14

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/22/18 09:44	06/22/18 20:19	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		06/22/18 09:44	06/22/18 20:19	5
Barium	**0.071**		0.0025	0.00049	mg/L		06/22/18 09:44	06/22/18 20:19	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 20:19	5
Boron	**0.085**		0.050	0.021	mg/L		06/22/18 09:44	06/22/18 20:19	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 20:19	5
Calcium	**5.7**		0.25	0.13	mg/L		06/22/18 09:44	06/22/18 20:19	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/22/18 09:44	06/22/18 20:19	5
Cobalt	**0.0019**	**I**	0.0025	0.00040	mg/L		06/22/18 09:44	06/22/18 20:19	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/22/18 09:44	06/22/18 20:19	5
Lithium	**0.0011**	**I**	0.0050	0.0011	mg/L		06/22/18 09:44	06/22/18 20:19	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/22/18 09:44	06/22/18 20:19	5
Selenium	**0.00047**	**I**	0.0013	0.00024	mg/L		06/22/18 09:44	06/22/18 20:19	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		06/22/18 09:44	06/22/18 20:19	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00064**		0.00020	0.000070	mg/L		06/25/18 16:38	06/27/18 13:14	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**16**		5.0	3.4	mg/L			06/15/18 15:50	1
Chloride	**24**		2.0	0.60	mg/L			07/02/18 13:10	1
Fluoride	**0.070**	**I**	0.10	0.032	mg/L			07/05/18 12:20	1
Sulfate	**18**		5.0	1.4	mg/L			07/03/18 09:02	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.98**		0.406	0.443	1.00	0.254	pCi/L	06/16/18 12:16	07/11/18 05:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.6*		*40 - 110*	*06/16/18 12:16*	*07/11/18 05:49*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.95**		0.347	0.391	1.00	0.338	pCi/L	06/16/18 13:10	07/10/18 14:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.6*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:43*	*1*
Y Carrier	*88.6*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:43*	*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	**3.94**		0.534	0.591	5.00	0.338	pCi/L		07/12/18 17:53	1

Client Sample ID: FB-03

Date Collected: 06/09/18 10:00
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-15

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/22/18 09:44	06/22/18 20:24	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		06/22/18 09:44	06/22/18 20:24	5
Barium	0.00049	U	0.0025	0.00049	mg/L		06/22/18 09:44	06/22/18 20:24	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 20:24	5
Boron	0.021	U	0.050	0.021	mg/L		06/22/18 09:44	06/22/18 20:24	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 20:24	5
Calcium	0.13	U	0.25	0.13	mg/L		06/22/18 09:44	06/22/18 20:24	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/22/18 09:44	06/22/18 20:24	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		06/22/18 09:44	06/22/18 20:24	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/22/18 09:44	06/22/18 20:24	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/22/18 09:44	06/22/18 20:24	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/22/18 09:44	06/22/18 20:24	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		06/22/18 09:44	06/22/18 20:24	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		06/22/18 09:44	06/22/18 20:24	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		06/25/18 16:38	06/27/18 13:16	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			06/15/18 15:50	1
Chloride	0.60	U	2.0	0.60	mg/L			07/02/18 13:10	1
Fluoride	0.032	U	0.10	0.032	mg/L			07/05/18 12:24	1
Sulfate	1.4	U	5.0	1.4	mg/L			07/03/18 09:02	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0879	U	0.147	0.147	1.00	0.257	pCi/L	06/16/18 12:16	07/11/18 05:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*106*		*40 - 110*	*06/16/18 12:16*	*07/11/18 05:49*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.115	U	0.167	0.168	1.00	0.281	pCi/L	06/16/18 13:10	07/10/18 14:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*106*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:43*	*1*
Y Carrier	*89.3*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:43*	*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	0.203	U	0.222	0.223	5.00	0.281	pCi/L		07/12/18 17:53	1

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.

General Chemistry

Qualifier	Qualifier Description
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Indicates that the compound was analyzed for but not detected.

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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154909-1
SDG: Landfill 1

Client Sample ID: MW-101

Date Collected: 06/10/18 06:49
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			402096	06/22/18 09:44	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402344	06/22/18 18:36	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		402096	06/22/18 09:44	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	402495	06/25/18 12:55	DRE	TAL PEN
Total/NA	Prep	7470A			402447	06/25/18 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	402757	06/27/18 12:34	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401134	06/15/18 15:50	VLS	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	403252	07/02/18 13:10	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403517	07/05/18 12:32	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	403365	07/03/18 09:02	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370790	06/16/18 12:16	JLC	TAL SL
Total/NA	Analysis	9315		1	374836	07/11/18 05:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370793	06/16/18 13:10	JLC	TAL SL
Total/NA	Analysis	9320		1	374666	07/10/18 14:40	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404432	06/10/18 06:49	CDH	TAL PEN

Client Sample ID: MW-102

Date Collected: 06/11/18 12:46
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			402096	06/22/18 09:44	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402344	06/22/18 19:03	DRE	TAL PEN
Total/NA	Prep	7470A			402447	06/25/18 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	402757	06/27/18 12:36	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401134	06/15/18 15:50	VLS	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	403252	07/02/18 13:17	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403517	07/05/18 12:39	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	403365	07/03/18 09:06	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370790	06/16/18 12:16	JLC	TAL SL
Total/NA	Analysis	9315		1	374836	07/11/18 05:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370793	06/16/18 13:10	JLC	TAL SL
Total/NA	Analysis	9320		1	374666	07/10/18 14:40	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404432	06/11/18 12:40	CDH	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154909-1
SDG: Landfill 1

Client Sample ID: MW-103

Date Collected: 06/11/18 08:19
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			402096	06/22/18 09:44	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402344	06/22/18 19:07	DRE	TAL PEN
Total/NA	Prep	7470A			402447	06/25/18 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	402757	06/27/18 12:38	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401473	06/18/18 12:59	RRC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	403252	07/02/18 13:17	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403517	07/05/18 12:43	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	403365	07/03/18 09:06	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370790	06/16/18 12:16	JLC	TAL SL
Total/NA	Analysis	9315		1	374836	07/11/18 05:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370793	06/16/18 13:10	JLC	TAL SL
Total/NA	Analysis	9320		1	374666	07/10/18 14:40	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404432	06/11/18 08:19	CDH	TAL PEN

Client Sample ID: MW-104

Date Collected: 06/10/18 10:27
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			402096	06/22/18 09:44	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402344	06/22/18 19:12	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		402096	06/22/18 09:44	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100	402689	06/26/18 14:52	DRE	TAL PEN
Total/NA	Prep	7470A			402447	06/25/18 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	402757	06/27/18 12:40	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401134	06/15/18 15:50	VLS	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		5	403252	07/02/18 14:12	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403517	07/05/18 12:47	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	403365	07/03/18 11:04	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370790	06/16/18 12:16	JLC	TAL SL
Total/NA	Analysis	9315		1	374836	07/11/18 05:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370793	06/16/18 13:10	JLC	TAL SL
Total/NA	Analysis	9320		1	374666	07/10/18 14:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404432	06/10/18 10:27	CDH	TAL PEN

Client Sample ID: MW-105

Date Collected: 06/10/18 08:57
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			402096	06/22/18 09:44	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402344	06/22/18 19:16	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		402096	06/22/18 09:44	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	402689	06/26/18 14:56	DRE	TAL PEN
Total/NA	Prep	7470A			402447	06/25/18 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	402757	06/27/18 12:41	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401134	06/15/18 15:50	VLS	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		5	403252	07/02/18 14:12	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403517	07/05/18 12:50	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		5	403365	07/03/18 09:50	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370790	06/16/18 12:16	JLC	TAL SL
Total/NA	Analysis	9315		1	374836	07/11/18 05:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370793	06/16/18 13:10	JLC	TAL SL
Total/NA	Analysis	9320		1	374561	07/10/18 14:42	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404432	06/10/18 08:57	CDH	TAL PEN

Client Sample ID: MW-106

Date Collected: 06/10/18 07:59
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			402096	06/22/18 09:44	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402344	06/22/18 19:21	DRE	TAL PEN
Total/NA	Prep	7470A			402447	06/25/18 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	402757	06/27/18 12:43	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401134	06/15/18 15:50	VLS	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	403252	07/02/18 13:17	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403517	07/05/18 12:52	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	403365	07/03/18 09:06	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370790	06/16/18 12:16	JLC	TAL SL
Total/NA	Analysis	9315		1	374836	07/11/18 05:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370793	06/16/18 13:10	JLC	TAL SL
Total/NA	Analysis	9320		1	374561	07/10/18 14:42	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404432	06/10/18 07:59	CDH	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154909-1
SDG: Landfill 1

Client Sample ID: MW-109

Date Collected: 06/11/18 11:31
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			402096	06/22/18 09:44	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402344	06/22/18 19:25	DRE	TAL PEN
Total/NA	Prep	7470A			402447	06/25/18 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	402757	06/27/18 12:45	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401473	06/18/18 12:59	RRC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	403252	07/02/18 13:17	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403517	07/05/18 12:56	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	403365	07/03/18 09:06	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370790	06/16/18 12:16	JLC	TAL SL
Total/NA	Analysis	9315		1	374836	07/11/18 05:46	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370793	06/16/18 13:10	JLC	TAL SL
Total/NA	Analysis	9320		1	374561	07/10/18 14:43	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404432	06/11/18 11:31	CDH	TAL PEN

Client Sample ID: MW-110

Date Collected: 06/11/18 10:12
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			402096	06/22/18 09:44	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402344	06/22/18 19:30	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		402096	06/22/18 09:44	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	402495	06/25/18 13:09	DRE	TAL PEN
Total/NA	Prep	7470A			402447	06/25/18 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	402757	06/27/18 12:47	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401473	06/18/18 12:59	RRC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		5	403252	07/02/18 14:14	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403517	07/05/18 13:00	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	403365	07/03/18 09:53	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370790	06/16/18 12:16	JLC	TAL SL
Total/NA	Analysis	9315		1	374836	07/11/18 05:46	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370793	06/16/18 13:10	JLC	TAL SL
Total/NA	Analysis	9320		1	374561	07/10/18 14:43	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404432	06/11/18 10:12	CDH	TAL PEN

Client Sample ID: EB-03

Date Collected: 06/10/18 10:50
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			402096	06/22/18 09:44	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402344	06/22/18 19:34	DRE	TAL PEN
Total/NA	Prep	7470A			402447	06/25/18 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	402757	06/27/18 13:05	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401134	06/15/18 15:50	VLS	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	403252	07/02/18 13:17	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403517	07/05/18 13:03	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	403365	07/03/18 09:06	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370790	06/16/18 12:16	JLC	TAL SL
Total/NA	Analysis	9315		1	374835	07/11/18 05:47	CDR	TAL SL
Total/NA	Prep	PrecSep_0			370793	06/16/18 13:10	JLC	TAL SL
Total/NA	Analysis	9320		1	374561	07/10/18 14:43	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL

Client Sample ID: FB-03

Date Collected: 06/11/18 09:00
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			402096	06/22/18 09:44	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402344	06/22/18 19:39	DRE	TAL PEN
Total/NA	Prep	7470A			402447	06/25/18 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	402757	06/27/18 13:07	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401473	06/18/18 12:59	RRC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	403252	07/02/18 13:17	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403537	07/05/18 13:54	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	403365	07/03/18 09:06	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370790	06/16/18 12:16	JLC	TAL SL
Total/NA	Analysis	9315		1	374835	07/11/18 05:47	CDR	TAL SL
Total/NA	Prep	PrecSep_0			370793	06/16/18 13:10	JLC	TAL SL
Total/NA	Analysis	9320		1	374561	07/10/18 14:43	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL

Client Sample ID: DUP-04

Date Collected: 06/10/18 07:57
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			402096	06/22/18 09:44	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402344	06/22/18 19:43	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		402096	06/22/18 09:44	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	402495	06/25/18 13:13	DRE	TAL PEN

Client Sample ID: DUP-04

Lab Sample ID: 400-154909-11

Date Collected: 06/10/18 07:57

Matrix: Water

Date Received: 06/11/18 14:02

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			402447	06/25/18 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	402757	06/27/18 13:08	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401134	06/15/18 15:50	VLS	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		5	403252	07/02/18 14:14	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403537	07/05/18 13:45	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		5	403365	07/03/18 09:50	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370790	06/16/18 12:16	JLC	TAL SL
Total/NA	Analysis	9315		1	374837	07/11/18 05:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370793	06/16/18 13:10	JLC	TAL SL
Total/NA	Analysis	9320		1	374561	07/10/18 14:43	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL

Client Sample ID: MW-201

Lab Sample ID: 400-154909-12

Date Collected: 06/09/18 10:18

Matrix: Water

Date Received: 06/11/18 14:02

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			402096	06/22/18 09:44	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402344	06/22/18 20:10	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		402096	06/22/18 09:44	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	402495	06/25/18 13:18	DRE	TAL PEN
Total/NA	Prep	7470A			402447	06/25/18 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	402757	06/27/18 13:10	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401134	06/15/18 15:50	VLS	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		2	403252	07/02/18 14:12	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403517	07/05/18 12:13	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		5	403365	07/03/18 09:50	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370790	06/16/18 12:16	JLC	TAL SL
Total/NA	Analysis	9315		1	374837	07/11/18 05:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370793	06/16/18 13:10	JLC	TAL SL
Total/NA	Analysis	9320		1	374561	07/10/18 14:43	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404432	06/09/18 10:18	CDH	TAL PEN

Client Sample ID: MW-202

Lab Sample ID: 400-154909-13

Date Collected: 06/09/18 11:59

Matrix: Water

Date Received: 06/11/18 14:02

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			402096	06/22/18 09:44	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402344	06/22/18 20:15	DRE	TAL PEN
Total/NA	Prep	7470A			402447	06/25/18 16:38	JAP	TAL PEN

Client Sample ID: MW-202

Date Collected: 06/09/18 11:59
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7470A		1	402757	06/27/18 13:12	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401134	06/15/18 15:50	VLS	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	403252	07/02/18 13:10	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403517	07/05/18 12:16	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	403365	07/03/18 09:02	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370790	06/16/18 12:16	JLC	TAL SL
Total/NA	Analysis	9315		1	374837	07/11/18 05:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370793	06/16/18 13:10	JLC	TAL SL
Total/NA	Analysis	9320		1	374561	07/10/18 14:43	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404432	06/09/18 11:59	CDH	TAL PEN

Client Sample ID: DUP-03

Date Collected: 06/09/18 10:59
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			402096	06/22/18 09:44	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402344	06/22/18 20:19	DRE	TAL PEN
Total/NA	Prep	7470A			402447	06/25/18 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	402757	06/27/18 13:14	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401134	06/15/18 15:50	VLS	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	403252	07/02/18 13:10	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403517	07/05/18 12:20	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	403365	07/03/18 09:02	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370790	06/16/18 12:16	JLC	TAL SL
Total/NA	Analysis	9315		1	374837	07/11/18 05:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370793	06/16/18 13:10	JLC	TAL SL
Total/NA	Analysis	9320		1	374561	07/10/18 14:43	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL

Client Sample ID: FB-03

Date Collected: 06/09/18 10:00
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			402096	06/22/18 09:44	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402344	06/22/18 20:24	DRE	TAL PEN
Total/NA	Prep	7470A			402447	06/25/18 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	402757	06/27/18 13:16	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401134	06/15/18 15:50	VLS	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	403252	07/02/18 13:10	RRC	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154909-1
SDG: Landfill 1

Client Sample ID: FB-03

Date Collected: 06/09/18 10:00
Date Received: 06/11/18 14:02

Lab Sample ID: 400-154909-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	403517	07/05/18 12:24	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	403365	07/03/18 09:02	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370790	06/16/18 12:16	JLC	TAL SL
Total/NA	Analysis	9315		1	374837	07/11/18 05:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370793	06/16/18 13:10	JLC	TAL SL
Total/NA	Analysis	9320		1	374561	07/10/18 14:43	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL

Laboratory References:

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

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

Metals

Prep Batch: 402096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154909-1	MW-101	Total Recoverable	Water	3005A	
400-154909-1 - RA	MW-101	Total Recoverable	Water	3005A	
400-154909-2	MW-102	Total Recoverable	Water	3005A	
400-154909-3	MW-103	Total Recoverable	Water	3005A	
400-154909-4	MW-104	Total Recoverable	Water	3005A	
400-154909-4 - DL	MW-104	Total Recoverable	Water	3005A	
400-154909-5 - DL	MW-105	Total Recoverable	Water	3005A	
400-154909-5	MW-105	Total Recoverable	Water	3005A	
400-154909-6	MW-106	Total Recoverable	Water	3005A	
400-154909-7	MW-109	Total Recoverable	Water	3005A	
400-154909-8 - DL	MW-110	Total Recoverable	Water	3005A	
400-154909-8	MW-110	Total Recoverable	Water	3005A	
400-154909-9	EB-03	Total Recoverable	Water	3005A	
400-154909-10	FB-03	Total Recoverable	Water	3005A	
400-154909-11	DUP-04	Total Recoverable	Water	3005A	
400-154909-11 - DL	DUP-04	Total Recoverable	Water	3005A	
400-154909-12	MW-201	Total Recoverable	Water	3005A	
400-154909-12 - DL	MW-201	Total Recoverable	Water	3005A	
400-154909-13	MW-202	Total Recoverable	Water	3005A	
400-154909-14	DUP-03	Total Recoverable	Water	3005A	
400-154909-15	FB-03	Total Recoverable	Water	3005A	
MB 400-402096/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-402096/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-155370-A-1-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-155370-A-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 402344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154909-1	MW-101	Total Recoverable	Water	6020	402096
400-154909-2	MW-102	Total Recoverable	Water	6020	402096
400-154909-3	MW-103	Total Recoverable	Water	6020	402096
400-154909-4	MW-104	Total Recoverable	Water	6020	402096
400-154909-5	MW-105	Total Recoverable	Water	6020	402096
400-154909-6	MW-106	Total Recoverable	Water	6020	402096
400-154909-7	MW-109	Total Recoverable	Water	6020	402096
400-154909-8	MW-110	Total Recoverable	Water	6020	402096
400-154909-9	EB-03	Total Recoverable	Water	6020	402096
400-154909-10	FB-03	Total Recoverable	Water	6020	402096
400-154909-11	DUP-04	Total Recoverable	Water	6020	402096
400-154909-12	MW-201	Total Recoverable	Water	6020	402096
400-154909-13	MW-202	Total Recoverable	Water	6020	402096
400-154909-14	DUP-03	Total Recoverable	Water	6020	402096
400-154909-15	FB-03	Total Recoverable	Water	6020	402096
MB 400-402096/1-A ^5	Method Blank	Total Recoverable	Water	6020	402096
LCS 400-402096/2-A	Lab Control Sample	Total Recoverable	Water	6020	402096
400-155370-A-1-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	402096
400-155370-A-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	402096

Prep Batch: 402447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154909-1	MW-101	Total/NA	Water	7470A	

Metals (Continued)

Prep Batch: 402447 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154909-2	MW-102	Total/NA	Water	7470A	
400-154909-3	MW-103	Total/NA	Water	7470A	
400-154909-4	MW-104	Total/NA	Water	7470A	
400-154909-5	MW-105	Total/NA	Water	7470A	
400-154909-6	MW-106	Total/NA	Water	7470A	
400-154909-7	MW-109	Total/NA	Water	7470A	
400-154909-8	MW-110	Total/NA	Water	7470A	
400-154909-9	EB-03	Total/NA	Water	7470A	
400-154909-10	FB-03	Total/NA	Water	7470A	
400-154909-11	DUP-04	Total/NA	Water	7470A	
400-154909-12	MW-201	Total/NA	Water	7470A	
400-154909-13	MW-202	Total/NA	Water	7470A	
400-154909-14	DUP-03	Total/NA	Water	7470A	
400-154909-15	FB-03	Total/NA	Water	7470A	
MB 400-402447/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-402447/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-155379-B-1-F MS	Matrix Spike	Total/NA	Water	7470A	
400-155379-B-1-G MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 402495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154909-1 - RA	MW-101	Total Recoverable	Water	6020	402096
400-154909-8 - DL	MW-110	Total Recoverable	Water	6020	402096
400-154909-11 - DL	DUP-04	Total Recoverable	Water	6020	402096
400-154909-12 - DL	MW-201	Total Recoverable	Water	6020	402096

Analysis Batch: 402689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154909-4 - DL	MW-104	Total Recoverable	Water	6020	402096
400-154909-5 - DL	MW-105	Total Recoverable	Water	6020	402096

Analysis Batch: 402757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154909-1	MW-101	Total/NA	Water	7470A	402447
400-154909-2	MW-102	Total/NA	Water	7470A	402447
400-154909-3	MW-103	Total/NA	Water	7470A	402447
400-154909-4	MW-104	Total/NA	Water	7470A	402447
400-154909-5	MW-105	Total/NA	Water	7470A	402447
400-154909-6	MW-106	Total/NA	Water	7470A	402447
400-154909-7	MW-109	Total/NA	Water	7470A	402447
400-154909-8	MW-110	Total/NA	Water	7470A	402447
400-154909-9	EB-03	Total/NA	Water	7470A	402447
400-154909-10	FB-03	Total/NA	Water	7470A	402447
400-154909-11	DUP-04	Total/NA	Water	7470A	402447
400-154909-12	MW-201	Total/NA	Water	7470A	402447
400-154909-13	MW-202	Total/NA	Water	7470A	402447
400-154909-14	DUP-03	Total/NA	Water	7470A	402447
400-154909-15	FB-03	Total/NA	Water	7470A	402447
MB 400-402447/14-A	Method Blank	Total/NA	Water	7470A	402447
LCS 400-402447/15-A	Lab Control Sample	Total/NA	Water	7470A	402447
400-155379-B-1-F MS	Matrix Spike	Total/NA	Water	7470A	402447

Metals (Continued)

Analysis Batch: 402757 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-155379-B-1-G MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	402447

General Chemistry

Analysis Batch: 401134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154909-1	MW-101	Total/NA	Water	SM 2540C	
400-154909-2	MW-102	Total/NA	Water	SM 2540C	
400-154909-4	MW-104	Total/NA	Water	SM 2540C	
400-154909-5	MW-105	Total/NA	Water	SM 2540C	
400-154909-6	MW-106	Total/NA	Water	SM 2540C	
400-154909-9	EB-03	Total/NA	Water	SM 2540C	
400-154909-11	DUP-04	Total/NA	Water	SM 2540C	
400-154909-12	MW-201	Total/NA	Water	SM 2540C	
400-154909-13	MW-202	Total/NA	Water	SM 2540C	
400-154909-14	DUP-03	Total/NA	Water	SM 2540C	
400-154909-15	FB-03	Total/NA	Water	SM 2540C	
MB 400-401134/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-401134/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-154909-5 DU	MW-105	Total/NA	Water	SM 2540C	

Analysis Batch: 401473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154909-3	MW-103	Total/NA	Water	SM 2540C	
400-154909-7	MW-109	Total/NA	Water	SM 2540C	
400-154909-8	MW-110	Total/NA	Water	SM 2540C	
400-154909-10	FB-03	Total/NA	Water	SM 2540C	
MB 400-401473/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-401473/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-154909-3 DU	MW-103	Total/NA	Water	SM 2540C	
400-154909-7 DU	MW-109	Total/NA	Water	SM 2540C	

Analysis Batch: 403252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154909-1	MW-101	Total/NA	Water	SM 4500 Cl- E	
400-154909-2	MW-102	Total/NA	Water	SM 4500 Cl- E	
400-154909-3	MW-103	Total/NA	Water	SM 4500 Cl- E	
400-154909-4	MW-104	Total/NA	Water	SM 4500 Cl- E	
400-154909-5	MW-105	Total/NA	Water	SM 4500 Cl- E	
400-154909-6	MW-106	Total/NA	Water	SM 4500 Cl- E	
400-154909-7	MW-109	Total/NA	Water	SM 4500 Cl- E	
400-154909-8	MW-110	Total/NA	Water	SM 4500 Cl- E	
400-154909-9	EB-03	Total/NA	Water	SM 4500 Cl- E	
400-154909-10	FB-03	Total/NA	Water	SM 4500 Cl- E	
400-154909-11	DUP-04	Total/NA	Water	SM 4500 Cl- E	
400-154909-12	MW-201	Total/NA	Water	SM 4500 Cl- E	
400-154909-13	MW-202	Total/NA	Water	SM 4500 Cl- E	
400-154909-14	DUP-03	Total/NA	Water	SM 4500 Cl- E	
400-154909-15	FB-03	Total/NA	Water	SM 4500 Cl- E	
MB 400-403252/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	

General Chemistry (Continued)

Analysis Batch: 403252 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-403252/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-403252/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-154909-12 MS	MW-201	Total/NA	Water	SM 4500 Cl- E	
400-154909-12 MSD	MW-201	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 403365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154909-1	MW-101	Total/NA	Water	SM 4500 SO4 E	
400-154909-2	MW-102	Total/NA	Water	SM 4500 SO4 E	
400-154909-3	MW-103	Total/NA	Water	SM 4500 SO4 E	
400-154909-4	MW-104	Total/NA	Water	SM 4500 SO4 E	
400-154909-5	MW-105	Total/NA	Water	SM 4500 SO4 E	
400-154909-6	MW-106	Total/NA	Water	SM 4500 SO4 E	
400-154909-7	MW-109	Total/NA	Water	SM 4500 SO4 E	
400-154909-8	MW-110	Total/NA	Water	SM 4500 SO4 E	
400-154909-9	EB-03	Total/NA	Water	SM 4500 SO4 E	
400-154909-10	FB-03	Total/NA	Water	SM 4500 SO4 E	
400-154909-11	DUP-04	Total/NA	Water	SM 4500 SO4 E	
400-154909-12	MW-201	Total/NA	Water	SM 4500 SO4 E	
400-154909-13	MW-202	Total/NA	Water	SM 4500 SO4 E	
400-154909-14	DUP-03	Total/NA	Water	SM 4500 SO4 E	
400-154909-15	FB-03	Total/NA	Water	SM 4500 SO4 E	
MB 400-403365/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-403365/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-403365/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-154909-1 MS	MW-101	Total/NA	Water	SM 4500 SO4 E	
400-154909-1 MSD	MW-101	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 403517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154909-1	MW-101	Total/NA	Water	SM 4500 F C	
400-154909-2	MW-102	Total/NA	Water	SM 4500 F C	
400-154909-3	MW-103	Total/NA	Water	SM 4500 F C	
400-154909-4	MW-104	Total/NA	Water	SM 4500 F C	
400-154909-5	MW-105	Total/NA	Water	SM 4500 F C	
400-154909-6	MW-106	Total/NA	Water	SM 4500 F C	
400-154909-7	MW-109	Total/NA	Water	SM 4500 F C	
400-154909-8	MW-110	Total/NA	Water	SM 4500 F C	
400-154909-9	EB-03	Total/NA	Water	SM 4500 F C	
400-154909-12	MW-201	Total/NA	Water	SM 4500 F C	
400-154909-13	MW-202	Total/NA	Water	SM 4500 F C	
400-154909-14	DUP-03	Total/NA	Water	SM 4500 F C	
400-154909-15	FB-03	Total/NA	Water	SM 4500 F C	
MB 400-403517/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-403517/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-154880-B-5 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-154880-B-5 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-154909-1 DU	MW-101	Total/NA	Water	SM 4500 F C	

General Chemistry (Continued)

Analysis Batch: 403537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154909-10	FB-03	Total/NA	Water	SM 4500 F C	
400-154909-11	DUP-04	Total/NA	Water	SM 4500 F C	
MB 400-403537/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-403537/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-154909-11 MS	DUP-04	Total/NA	Water	SM 4500 F C	
400-154909-11 MSD	DUP-04	Total/NA	Water	SM 4500 F C	
400-155356-B-7 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Rad

Prep Batch: 370790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154909-1	MW-101	Total/NA	Water	PrecSep-21	
400-154909-2	MW-102	Total/NA	Water	PrecSep-21	
400-154909-3	MW-103	Total/NA	Water	PrecSep-21	
400-154909-4	MW-104	Total/NA	Water	PrecSep-21	
400-154909-5	MW-105	Total/NA	Water	PrecSep-21	
400-154909-6	MW-106	Total/NA	Water	PrecSep-21	
400-154909-7	MW-109	Total/NA	Water	PrecSep-21	
400-154909-8	MW-110	Total/NA	Water	PrecSep-21	
400-154909-9	EB-03	Total/NA	Water	PrecSep-21	
400-154909-10	FB-03	Total/NA	Water	PrecSep-21	
400-154909-11	DUP-04	Total/NA	Water	PrecSep-21	
400-154909-12	MW-201	Total/NA	Water	PrecSep-21	
400-154909-13	MW-202	Total/NA	Water	PrecSep-21	
400-154909-14	DUP-03	Total/NA	Water	PrecSep-21	
400-154909-15	FB-03	Total/NA	Water	PrecSep-21	
MB 160-370790/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-370790/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-370790/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 370793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154909-1	MW-101	Total/NA	Water	PrecSep_0	
400-154909-2	MW-102	Total/NA	Water	PrecSep_0	
400-154909-3	MW-103	Total/NA	Water	PrecSep_0	
400-154909-4	MW-104	Total/NA	Water	PrecSep_0	
400-154909-5	MW-105	Total/NA	Water	PrecSep_0	
400-154909-6	MW-106	Total/NA	Water	PrecSep_0	
400-154909-7	MW-109	Total/NA	Water	PrecSep_0	
400-154909-8	MW-110	Total/NA	Water	PrecSep_0	
400-154909-9	EB-03	Total/NA	Water	PrecSep_0	
400-154909-10	FB-03	Total/NA	Water	PrecSep_0	
400-154909-11	DUP-04	Total/NA	Water	PrecSep_0	
400-154909-12	MW-201	Total/NA	Water	PrecSep_0	
400-154909-13	MW-202	Total/NA	Water	PrecSep_0	
400-154909-14	DUP-03	Total/NA	Water	PrecSep_0	
400-154909-15	FB-03	Total/NA	Water	PrecSep_0	
MB 160-370793/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-370793/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Rad (Continued)

Prep Batch: 370793 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 160-370793/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Field Service / Mobile Lab

Analysis Batch: 404432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154909-1	MW-101	Total/NA	Water	Field Sampling	
400-154909-2	MW-102	Total/NA	Water	Field Sampling	
400-154909-3	MW-103	Total/NA	Water	Field Sampling	
400-154909-4	MW-104	Total/NA	Water	Field Sampling	
400-154909-5	MW-105	Total/NA	Water	Field Sampling	
400-154909-6	MW-106	Total/NA	Water	Field Sampling	
400-154909-7	MW-109	Total/NA	Water	Field Sampling	
400-154909-8	MW-110	Total/NA	Water	Field Sampling	
400-154909-12	MW-201	Total/NA	Water	Field Sampling	
400-154909-13	MW-202	Total/NA	Water	Field Sampling	

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-402096/1-A ^5
Matrix: Water
Analysis Batch: 402344

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 402096

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		06/22/18 09:44	06/22/18 17:51	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		06/22/18 09:44	06/22/18 17:51	5
Barium	0.00049	U	0.0025	0.00049	mg/L		06/22/18 09:44	06/22/18 17:51	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 17:51	5
Boron	0.021	U	0.050	0.021	mg/L		06/22/18 09:44	06/22/18 17:51	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 09:44	06/22/18 17:51	5
Calcium	0.13	U	0.25	0.13	mg/L		06/22/18 09:44	06/22/18 17:51	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/22/18 09:44	06/22/18 17:51	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		06/22/18 09:44	06/22/18 17:51	5
Lead	0.00035	U	0.0013	0.00035	mg/L		06/22/18 09:44	06/22/18 17:51	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/22/18 09:44	06/22/18 17:51	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/22/18 09:44	06/22/18 17:51	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		06/22/18 09:44	06/22/18 17:51	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		06/22/18 09:44	06/22/18 17:51	5

Lab Sample ID: LCS 400-402096/2-A
Matrix: Water
Analysis Batch: 402344

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 402096

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0527		mg/L		105	80 - 120
Arsenic	0.0500	0.0480		mg/L		96	80 - 120
Barium	0.0500	0.0498		mg/L		100	80 - 120
Beryllium	0.0500	0.0499		mg/L		100	80 - 120
Boron	0.100	0.0899		mg/L		90	80 - 120
Cadmium	0.0500	0.0504		mg/L		101	80 - 120
Calcium	5.00	4.84		mg/L		97	80 - 120
Chromium	0.0500	0.0481		mg/L		96	80 - 120
Cobalt	0.0500	0.0499		mg/L		100	80 - 120
Lead	0.0500	0.0496		mg/L		99	80 - 120
Lithium	0.0500	0.0512		mg/L		102	80 - 120
Molybdenum	0.0500	0.0517		mg/L		103	80 - 120
Selenium	0.0500	0.0530		mg/L		106	80 - 120
Thallium	0.0100	0.0101		mg/L		101	80 - 120

Lab Sample ID: 400-155370-A-1-B MS ^5
Matrix: Water
Analysis Batch: 402344

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 402096

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0010	U	0.0500	0.0559		mg/L		112	75 - 125
Arsenic	0.059		0.0500	0.108		mg/L		99	75 - 125
Barium	0.0064		0.0500	0.0569		mg/L		101	75 - 125
Beryllium	0.00034	U	0.0500	0.0531		mg/L		106	75 - 125
Boron	0.021	U	0.100	0.0634	J3	mg/L		63	75 - 125
Cadmium	0.00034	U	0.0500	0.0510		mg/L		102	75 - 125
Calcium	10		5.00	15.3		mg/L		99	75 - 125
Chromium	0.0011	U	0.0500	0.0489		mg/L		98	75 - 125

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

Lab Sample ID: 400-155370-A-1-B MS ^5
Matrix: Water
Analysis Batch: 402344

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 402096

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.00040	U	0.0500	0.0507		mg/L		101	75 - 125
Lead	0.00035	U	0.0500	0.0477		mg/L		95	75 - 125
Lithium	0.0011	U	0.0500	0.0469		mg/L		94	75 - 125
Molybdenum	0.0019	I	0.0500	0.0550		mg/L		106	75 - 125
Selenium	0.00092	I	0.0500	0.0563		mg/L		111	75 - 125
Thallium	0.000085	U	0.0100	0.0101		mg/L		101	75 - 125

Lab Sample ID: 400-155370-A-1-C MSD ^5
Matrix: Water
Analysis Batch: 402344

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 402096

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.0010	U	0.0500	0.0556		mg/L		111	75 - 125	1	20
Arsenic	0.059		0.0500	0.108		mg/L		99	75 - 125	0	20
Barium	0.0064		0.0500	0.0580		mg/L		103	75 - 125	2	20
Beryllium	0.00034	U	0.0500	0.0544		mg/L		109	75 - 125	2	20
Boron	0.021	U	0.100	0.0534	J3	mg/L		53	75 - 125	17	20
Cadmium	0.00034	U	0.0500	0.0516		mg/L		103	75 - 125	1	20
Calcium	10		5.00	15.4		mg/L		100	75 - 125	0	20
Chromium	0.0011	U	0.0500	0.0488		mg/L		98	75 - 125	0	20
Cobalt	0.00040	U	0.0500	0.0512		mg/L		102	75 - 125	1	20
Lead	0.00035	U	0.0500	0.0478		mg/L		96	75 - 125	0	20
Lithium	0.0011	U	0.0500	0.0467		mg/L		93	75 - 125	0	20
Molybdenum	0.0019	I	0.0500	0.0533		mg/L		103	75 - 125	3	20
Selenium	0.00092	I	0.0500	0.0558		mg/L		110	75 - 125	1	20
Thallium	0.000085	U	0.0100	0.0100		mg/L		100	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-402447/14-A
Matrix: Water
Analysis Batch: 402757

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 402447

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		06/25/18 16:26	06/27/18 11:35	1

Lab Sample ID: LCS 400-402447/15-A
Matrix: Water
Analysis Batch: 402757

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 402447

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.000944		mg/L		94	80 - 120

Lab Sample ID: 400-155379-B-1-F MS
Matrix: Water
Analysis Batch: 402757

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 402447

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.000070	U	0.00201	0.00188		mg/L		93	80 - 120

Lab Sample ID: 400-155379-B-1-G MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 402757 — **Prep Batch: 402447**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.000070	U	0.00201	0.00183		mg/L		91	80 - 120	3	20

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

Lab Sample ID: MB 400-401134/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 401134

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			06/15/18 15:50	1

Lab Sample ID: LCS 400-401134/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 401134

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	254		mg/L		87	78 - 122

Lab Sample ID: 400-154909-5 DU — **Client Sample ID: MW-105**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 401134

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	560		556		mg/L		0	5

Lab Sample ID: MB 400-401473/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 401473

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			06/18/18 12:59	1

Lab Sample ID: LCS 400-401473/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 401473

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	260		mg/L		89	78 - 122

Lab Sample ID: 400-154909-3 DU — **Client Sample ID: MW-103**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 401473

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	96		96.0		mg/L		0	5

Lab Sample ID: 400-154909-7 DU — **Client Sample ID: MW-109**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 401473

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	26		26.0		mg/L		0	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-403252/6
Matrix: Water
Analysis Batch: 403252

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.60	U	2.0	0.60	mg/L			07/02/18 13:07	1

Lab Sample ID: LCS 400-403252/7
Matrix: Water
Analysis Batch: 403252

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	32.9		mg/L		110	90 - 110

Lab Sample ID: MRL 400-403252/3
Matrix: Water
Analysis Batch: 403252

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	I	mg/L		94	50 - 150

Lab Sample ID: 400-154909-12 MS
Matrix: Water
Analysis Batch: 403252

Client Sample ID: MW-201
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	86		20.0	90.8	J3	mg/L		24	73 - 120

Lab Sample ID: 400-154909-12 MSD
Matrix: Water
Analysis Batch: 403252

Client Sample ID: MW-201
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	86		20.0	91.3	J3	mg/L		27	73 - 120	1	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-403517/3
Matrix: Water
Analysis Batch: 403517

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.032	U	0.10	0.032	mg/L			07/05/18 11:36	1

Lab Sample ID: LCS 400-403517/4
Matrix: Water
Analysis Batch: 403517

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	3.87		mg/L		97	90 - 110

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 400-154880-B-5 MS
Matrix: Water
Analysis Batch: 403517

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	0.10		1.00	0.700	J3	mg/L		60	75 - 125

Lab Sample ID: 400-154880-B-5 MSD
Matrix: Water
Analysis Batch: 403517

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	0.10		1.00	0.700	J3	mg/L		60	75 - 125	0	4

Lab Sample ID: 400-154909-1 DU
Matrix: Water
Analysis Batch: 403517

Client Sample ID: MW-101
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.032	U	0.032	U	mg/L		NC	4

Lab Sample ID: MB 400-403537/3
Matrix: Water
Analysis Batch: 403537

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.032	U	0.10	0.032	mg/L			07/05/18 13:33	1

Lab Sample ID: LCS 400-403537/4
Matrix: Water
Analysis Batch: 403537

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	3.87		mg/L		97	90 - 110

Lab Sample ID: 400-154909-11 MS
Matrix: Water
Analysis Batch: 403537

Client Sample ID: DUP-04
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.032	U	1.00	1.04		mg/L		104	75 - 125

Lab Sample ID: 400-154909-11 MSD
Matrix: Water
Analysis Batch: 403537

Client Sample ID: DUP-04
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.032	U	1.00	1.04		mg/L		104	75 - 125	0	4

Lab Sample ID: 400-155356-B-7 DU
Matrix: Water
Analysis Batch: 403537

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.090	I	0.0900	I	mg/L		0	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-403365/6
Matrix: Water
Analysis Batch: 403365

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.4	U	5.0	1.4	mg/L			07/03/18 08:55	1

Lab Sample ID: LCS 400-403365/7
Matrix: Water
Analysis Batch: 403365

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	15.0		mg/L		100	90 - 110

Lab Sample ID: MRL 400-403365/3
Matrix: Water
Analysis Batch: 403365

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	5.34		mg/L		107	50 - 150

Lab Sample ID: 400-154909-1 MS
Matrix: Water
Analysis Batch: 403365

Client Sample ID: MW-101
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	1.5	I	10.0	10.9		mg/L		94	77 - 128

Lab Sample ID: 400-154909-1 MSD
Matrix: Water
Analysis Batch: 403365

Client Sample ID: MW-101
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	1.5	I	10.0	10.5		mg/L		90	77 - 128	3	5

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-370790/23-A
Matrix: Water
Analysis Batch: 374837

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 370790

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1626	U	0.143	0.143	1.00	0.207	pCi/L	06/16/18 12:16	07/11/18 05:50	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*06/16/18 12:16*	*07/11/18 05:50*	*1*

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCS 160-370790/1-A
Matrix: Water
Analysis Batch: 374834

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 370790

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.8	10.78		1.31	1.00	0.170	pCi/L	91	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*103*		*40 - 110*

Lab Sample ID: LCSD 160-370790/2-A
Matrix: Water
Analysis Batch: 374834

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 370790

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.8	10.52		1.26	1.00	0.174	pCi/L	89	68 - 137	0.10	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*106*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-370793/23-A
Matrix: Water
Analysis Batch: 374561

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 370793

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2117	U	0.207	0.208	1.00	0.336	pCi/L	06/16/18 13:10	07/10/18 14:44	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:44*	*1*
Y Carrier	*88.2*		*40 - 110*	*06/16/18 13:10*	*07/10/18 14:44*	*1*

Lab Sample ID: LCS 160-370793/1-A
Matrix: Water
Analysis Batch: 374666

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 370793

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			8.16	8.143		0.955	1.00	0.347	pCi/L	100	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*103*		*40 - 110*
Y Carrier	*93.5*		*40 - 110*

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

Lab Sample ID: LCSD 160-370793/2-A
Matrix: Water
Analysis Batch: 374666

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 370793

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			8.16	8.321		0.965	1.00	0.310	pCi/L	102	56 - 140	0.09	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*106*		*40 - 110*
Y Carrier	*91.6*		*40 - 110*

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

Lab Sample ID: 180-78700-A-6 DU
Matrix: Water
Analysis Batch: 375258

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Combined Radium 226 + 228	0.210	U		0.5506		0.223	5.00	0.307	pCi/L			0.80	

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brett Surles	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No:
Client Contact: Kristi Mitchell	Phone: 850 380 3458	E-Mail: cheyenne.whitmire@testamericainc.com		Page: 1 - 1
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days):			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: CCR Plant Crist	Project #: 40005424			
Site: Landfill 1	SSOW#:			

Analysis Requested

400-154909 COC

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)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	SM4500_Cl_E - Chloride, SM4500_SO4_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C - Fluoride	6020 - Sb,As,Ba,B,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, 7470A - Mercury	FieldSampling - Field Sampling Parameters	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
MW-101	6/10/18	0949	G	Water			X	X	X	X		
MW-102	6/11/18	1240	G	Water								
MW-103	6/11/18	0819	G	Water								
MW-104	6/10/18	1027	G	Water								
MW-105	6/10/18	0857	G	Water								
MW-106	6/10/18	0759	G	Water								
MW-109	6/11/18	1131	G	Water								
MW-110	6/11/18	1012	G	Water								
EB-03	6/10/18	1050	G	W								
FB-03	6/11/18	0900	G	W								
DUP-04	6/10/18	0757	G	W			X	X	X	X		

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)

Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		6/14/18 1402	RDH		6.11.18 1402	TA. Pen
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 0.1°C, 0.8°C, 0.5°C IR8

7/16/2018

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brett Sorles	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No:
Client Contact: Kristi Mitchell	Phone: 850 380 3458	E-Mail: cheyenne.whitmire@testamericainc.com		Page: 1-1
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days):			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: CCR Plant Crist	Project #: 40005424			
Site: Gypsum Storage Area	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)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	SM4500_Cl_E - Chloride, SM4500_SO4_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C - Fluoride	6020 - Sb,As,Ba,B,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, 7470A - Mercury	FieldSampling - Field Sampling Parameters	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
~~MW-200~~				Water								
MW-201	6/9/18	1018	G	Water			X	X	X	X		
MW-202	6/9/18	1159	G	Water			X	X	X	X		
~~MW-203~~ DUP-03	6/9/18	1059	G	Water			X	X	X	X		
~~MW-204~~ FB-03	6/9/18	1000	G	Water			X	X	X	X		
~~MW-205~~				Water								
~~MW-206~~				Water								

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)

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	6/11/18 1402	KDT		6.11.18 1402	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: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
		0.1°C, 0.8°C, 0.5°C IR8

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7/16/2018

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-154909-1
SDG Number: Landfill 1

Login Number: 154909
List Number: 1
Creator: Ott, Tina M

List Source: 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, 0.8°C, 0.5°C IR8
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: Gulf Power Company

Job Number: 400-154909-1
SDG Number: Landfill 1

Login Number: 154909
List Number: 2
Creator: Press, Nicholas B

List Source: TestAmerica St. Louis
List Creation: 06/13/18 03:32 PM

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.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18
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?	False	
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154909-1
SDG: Landfill 1

Laboratory: 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	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
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	10-09-18
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
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	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18 *
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-14	09-30-18
US Fish & Wildlife	Federal		LE058448-0	07-31-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

Laboratory: 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
Alaska	State Program	10	MO00054	06-30-19
ANAB	DoD ELAP		L2305	04-06-19
Arizona	State Program	9	AZ0813	12-08-18
California	State Program	9	2886	06-30-19
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-19
Illinois	NELAP	5	200023	11-30-18
Iowa	State Program	7	373	12-01-18
Kansas	NELAP	7	E-10236	10-31-18
Kentucky (DW)	State Program	4	90125	12-31-18
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA180017	12-31-18
Maryland	State Program	3	310	09-30-18
Michigan	State Program	5	9005	06-30-18 *
Missouri	State Program	7	780	06-30-18 *

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

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-154909-1
SDG: Landfill 1

Laboratory: TestAmerica St. Louis (Continued)

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
Nevada	State Program	9	MO000542018-1	07-31-18 *
New Jersey	NELAP	2	MO002	06-30-19
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-18 *
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-18 *
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-18 *
Texas	NELAP	6	T104704193-17-11	07-31-18 *
US Fish & Wildlife	Federal		058448	07-31-18
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-18 *
Virginia	NELAP	3	460230	06-14-19
Washington	State Program	10	C592	08-30-18
West Virginia DEP	State Program	3	381	08-31-18 *

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

Geosyntec consultants

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Knoxville, TN 37922
PH 865.330.0037
www.geosyntec.com

Memorandum

Date:	August 21, 2018
To:	Carl Eldred
From:	Chris Pracheil
CC:	H. Parthasarathy and J. Caprio
Subject:	**Stage 2A Data Validations - Level II Data Deliverables – TestAmerica Laboratories, Inc. Job Numbers 400-154742-1, 440-154816-1, 400-154880-1 and 440-154909-1**

SITE: Plant Crist

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of twenty-five aqueous samples, four field duplicate samples, three field blanks and three equipment blanks collected from June 05 to June 11, 2018, as part of the Plant Crist CCR sampling event.

The samples were analyzed at TestAmerica Pensacola (TA Pensacola), Pensacola, Florida for the following analytical tests:

- Metals by EPA Methods 3005A/6020
- Mercury by EPA Method 7470A
- Chloride by Standard Methods (SM) 4500 Cl
- Fluoride by SM 4500 F
- Sulfate by SM 4500 SO_4
- Total Dissolved Solids by SM 2540 C

The samples were analyzed at TestAmerica St. Louis (TA St. Louis), Earth City, MO for the following analytical tests:

- Radium-226 by EPA Method 9315
- Radium-228 by EPA Method 9320
- Combined Radium 226 + 228 by Calculation

EXECUTIVE SUMMARY

The samples were handled, prepared and measured in the same manner under similar prescribed conditions.

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below, the data as qualified are usable for meeting project objectives. The qualified data should be used within the limitations of the qualification.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment and the following documents:

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- National Functional Guidelines for Inorganic Superfund Data Review, August 2014 (OSWER 9355.0-131, EPA 540-R-013-001);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017 (EPA 540-R-2017-001);
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012); and,
- Southern Company Services, Inc., Standard Operating Procedure (hereafter referred to as the SOP) for Level 2A Verification of Coal Combustion Residuals Data, Environmental Testing Laboratory Program, Draft, November 21, 2017, Revision 0, Prepared by Environmental Standards, Inc., Valley Forge, Pennsylvania.

The following samples were analyzed and reported in the laboratory reports:

Laboratory ID	Client ID
400-154742-1	MW-100
400-154742-2	MW-107
400-154742-3	MW-108
400-154742-4	MW-306
400-154742-5	MW-307
400-154816-1	MW-300
400-154816-2	MW-303
400-154816-3	MW-304
400-154816-4	MW-305
400-154816-5	MW-308
400-154816-6	DUP-01
400-154816-7	EQ-01
400-154816-8	FB-01

Laboratory ID	Client ID
400-154880-1	MW-200
400-154880-2	MW-203
400-154880-3	MW-204
400-154880-4	MW-205
400-154880-5	MW-206
400-154880-6	DUP-02
400-154880-7	EB-02
400-154909-1	MW-101
400-154909-2	MW-102
400-154909-3	MW-103
400-154909-4	MW-104
400-154909-5	MW-105
400-154909-6	MW-106

Laboratory ID	Client ID
400-154909-7	MW-109
400-154909-8	MW-110
400-154909-9	EB-03
400-154909-10	FB-03
400-154909-11	DUP-04

Laboratory ID	Client ID
400-154909-12	MW-201
400-154909-13	MW-202
400-154909-14	DUP-03
400-154909-15	FB-03

The samples were received within 0-6ºC, with the following exceptions. The samples that were sent to TA St. Louis were received at 18.0˚C, since these samples were being analyzed for radium-226 and radium-228 and did not require cooling, no qualifications were applied to the data.

No sample preservation issues were noted by the laboratory.

The following issue was noted with the chain of custody (COC) forms:

- The COC for report 400-50790-1 has two *received by* signatures but only one *relinquished by* signature. This is did not result in any sample qualifications.

1.0 METALS

The samples were analyzed by EPA methods 3005A/6020 (Mercury evaluated separately in Section 2.0, below).

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment
✓ Holding Time
⊗ Method Blank
✓ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
⊗ Equipment Blank
✓ Field Blank
⊗ Field Duplicate
✓ Sensitivity
✓ Electronic Data Deliverables Review

1.1 Overall Assessment

The metals data reported in these packages are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for the sample set is 100%.

1.2 Holding Time

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (batches 401913 and 402096). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exception.

Selenium was detected at an estimated concentration, greater than the MDL and less the RL in the method blank for batch 401913. Therefore, the concentrations of selenium in the associated samples that were less than five times the method blank concentration were U* qualified as not detected at the reported value.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
MW-100	Selenium	0.00049	I V	0.00049	U*	BL
MW-107	Selenium	0.00098	I V	0.00098	U*	BL
MW-108	Selenium	0.00065	I V	0.00065	U*	BL
MW-306	Selenium	0.00025	I V	0.00025	U*	BL
MW-307	Selenium	0.00026	I V	0.00026	U*	BL

mg/L- milligram per liter
I-the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
V-indicates that the analyte was detected at or above the MDL in both the sample and the associated method blank
* Validation qualifiers are defined in Attachment 1 at the end of this report
**Reason codes are defined in Attachment 2 at the end of this report

1.4 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported using sample MW-100. The recovery and relative percent difference (RPD) results were within the laboratory and SOP specified acceptance criteria.

One batch MS/MSD pair was also reported for the metals data. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCSs were reported. The recovery results were within the laboratory and SOP specified acceptance criteria.

1.6 Equipment Blank

Three equipment blanks were collected with the sample sets, EQ-01, EB-02 and EB-03. Metals were not detected in the equipment blanks above the MDLs, with the following exceptions.

Boron was detected at an estimated concentration, greater than the MDL and less the RL in EB-03. Therefore, the concentration of boron in the associated sample that was less than five times the equipment blank concentration was U* qualified as not detected at the reported concentration.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
MW-106	Boron	0.066	NA	0.066	U*	BE
MW-109	Boron	0.11	NA	0.11	U*	BE

mg/L- milligram per liter
NA-not applicable

1.7 Field Blank

Three field blanks were collected with the sample sets, FB-01, FB-03 (collected 6/09/18) and FB-03 (collected 6/11/18). Metals were not detected in the field blanks above the MDLs.

1.8 Field Duplicate

Four field duplicate samples were collected with the sample sets, DUP-01, DUP-02, DUP-03 and DUP-04. Acceptable precision [(RPD $\leq$ 20% or the difference between the concentrations < reporting limit (RL)] was demonstrated between the field duplicates and original samples MW-300, MW-200, MW-202 and MW-105, respectively, with the following exception.

The concentrations of boron were less than 5 times the reporting limit for both DUP-01 and MW-300 and the difference between the concentrations of boron in the field duplicate pair using samples DUP-01 and MW-300 was greater than the RL. Therefore, the concentrations of boron in samples DUP-01 and MW-300 were J qualified as estimated.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	RPD	Validation Result (mg/L)	Validation Qualifier	Reason Code
DUP-01	Boron	0.11	NA	128	0.0049	J	FD
MW-300	Boron	0.024	I		0.0064	J	FD

mg/L- milligram per liter
Na-not applicable
I- the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit

Sensitivity

The samples were reported to the MDLs. Elevated non-detect results were reported due to the dilutions analyzed.

1.9 Electronic Data Deliverables (EDDs) Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II reports and the EDDs.

2.0 MERCURY

The samples were analyzed for mercury by EPA method 7470A.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

2.1 Overall Assessment

The mercury data reported in these packages are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this sample set is 100%.

2.2 Holding Time

The holding time for mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported (batches 401749, 402415 and 402447). Mercury was not detected in the method blanks above the MDL.

2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three batch MS/MSD pairs were reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

2.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three LCSs were reported. The recovery results were within the laboratory and SOP specified acceptance criteria.

2.6 Equipment Blank

Three equipment blanks were collected with the sample sets, EQ-01, EB-02 and EB-03. Mercury was not detected in the equipment blanks above the MDL.

2.7 Field Blank

Three field blanks were collected with the sample sets, FB-01, FB-03 (collected 6/09/18) and FB-03 (collected 6/11/18). Mercury was not detected in the field blanks above the MDLs.

2.8 Field Duplicate

Four field duplicate samples were collected with the sample sets, DUP-01, DUP-02, DUP-03 and DUP-04. Acceptable precision [(RPD < 20% or the difference between the concentrations < reporting limit (RL)] was demonstrated between the field duplicates and original samples MW-300, MW-200, MW-202 and MW-105, respectively.

2.9 Sensitivity

The samples were reported to the MDLs. No elevated non-detect results were reported.

2.10 Electronic Data Deliverables Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II reports and the EDDs.

3.0 ANIONS

The samples were analyzed for chloride by SM 4500 Cl, fluoride by SM 4500 F and sulfate by SM 4500 SO_4.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues

were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ⊗ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

3.1 Overall Assessment

The anion data reported in these packages are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this sample set is 100%.

3.2 Holding Times

The holding time for anion analyses of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Fourteen method blanks were reported (chloride batches 403017, 402992; 403169, 403212 and 403252; fluoride batches 400986, 403221, 403294, 403517 and 403537; sulfate batches 402914, 403143, 403304 and 403365). Anions were not detected in the method blanks above the MDLs.

3.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Eleven sample set specific MS/MSD pairs were reported, using samples MW-306, MW-203, MW-205 and MW-201 for the chloride data; samples MW-306, MW-

206 and DUP-04 for the fluoride data; and samples MW-305, MW-203, MW-204 and MW-101 for the sulfate data. The recovery and RPD results were within the laboratory and SOP specified acceptance criteria, with the following exceptions.

Both recoveries of chloride were low and outside the laboratory and SOP specified acceptance criteria in the MS/MSD pairs using samples MW-201 and MW-205. Therefore, the concentrations of chloride in the associated samples were J qualified as estimated and the non-detect results of chloride were UJ qualified as estimated less than the MDL. Both recoveries of fluoride were low and outside the laboratory and SOP specified acceptance criteria in the MS/MSD pair using sample MW-206. Therefore, the concentrations of fluoride in the associated samples were J qualified as estimated and the non-detect results of fluoride were UJ qualified as estimated less than the MDL. Both recoveries of sulfate were low and outside the laboratory and SOP specified acceptance criteria in the MS/MSD pairs using samples MW-203 and MW-204. Therefore, the concentrations of sulfate in the associated samples were J qualified as estimated and the non-detect results of sulfate were UJ qualified as estimated less than the MDL

In addition, two batch MS/MSD pairs were reported for the chloride data, two batch MS/MSD pairs were reported for the fluoride data and two batch MS/MSD pairs were reported for the sulfate data. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
MW-101	Chloride	5.2	NA	5.2	J	M-
DUP-03	Chloride	24	NA	24	J	M-
MW-102	Chloride	4.9	NA	4.9	J	M-
MW-103	Chloride	8	NA	8	J	M-
MW-104	Chloride	190	NA	190	J	M-
MW-202	Chloride	24	NA	24	J	M-
EB-03	Chloride	0.6	U	0.6	UJ	M-
FB-03	Chloride	0.6	U	0.6	UJ	M-
FB-03	Chloride	0.6	U	0.6	UJ	M-
MW-105	Chloride	140	NA	140	J	M-
MW-106	Chloride	3.6	NA	3.6	J	M-
MW-109	Chloride	6	NA	6	J	M-
MW-110	Chloride	140	NA	140	J	M-
MW-201	Chloride	86	NA	86	J	M-
MW-200	Chloride	680	NA	680	J	M-
MW-203	Chloride	15	NA	15	J	M-
MW-204	Chloride	82	NA	82	J	M-

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
MW-205	Chloride	43	NA	43	J	M-
MW-206	Chloride	1800	NA	1800	J	M-
DUP-02	Chloride	690	NA	690	J	M-
EB-02	Chloride	0.6	U	0.6	UJ	M-
MW-205	Fluoride	0.1	NA	0.1	J	M-
MW-206	Fluoride	0.1	NA	0.1	J	M-
DUP-02	Fluoride	0.14	NA	0.14	J	M-
EB-02	Fluoride	0.032	U	0.032	UJ	M-
MW-200	Sulfate	160	NA	160	J	M-
MW-203	Sulfate	100	NA	100	J	M-
MW-204	Sulfate	390	NA	390	J	M-
MW-205	Sulfate	180	NA	180	J	M-
MW-206	Sulfate	440	NA	440	J	M-
DUP-02	Sulfate	190	NA	190	J	M-
EB-02	Sulfate	1.4	U	1.4	UJ	M-

mg/L- milligram per liter
NA- not applicable
U-not detected at the MDL
I-the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit

3.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Fourteen LCSs were reported. The recovery results were within the laboratory and SOP specified acceptance criteria.

3.6 Equipment Blank

Three equipment blanks were collected with the sample sets, EQ-01, EB-02 and EB-03. Anions were not detected in the equipment blanks above the MDLs.

3.7 Field Blank

Three field blanks were collected with the sample sets, FB-01, FB-03 (collected 6/09/18) and FB-03 (collected 6/11/18). Anions were not detected in the field blanks above the MDLs.

3.8 Field Duplicate

Four field duplicate samples were collected with the sample sets, DUP-01, DUP-02, DUP-03 and DUP-04. Acceptable precision [(RPD $\leq$ 20% or the difference between the concentrations <

reporting limit (RL)] was demonstrated between the field duplicates and original samples MW-300, MW-200, MW-202 and MW-105, respectively.

3.9 Sensitivity

The samples were reported to the MDLs. No elevated non-detect results were reported.

3.10 Electronic Data Deliverables Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II reports and the EDDs.

4.0 TOTAL DISSOLVED SOLIDS

The samples were analyzed for total dissolved solids (TDS) by SM 2540C.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ⊗ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

4.1 Overall Assessment

The TDS data reported in these packages are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this sample set is 100%.

4.2 Holding Times

The holding time for TDS analyses of a water sample is 7 days from sample collection to analysis. The holding times were met for the sample analyses.

4.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Seven method blanks were reported (batches 400731, 400737, 400826, 400948, 400955, 401134 and 401473). TDS was not detected in the method blanks above the MDL.

4.4 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Seven LCSs were reported. The recovery results were within the laboratory and SOP specified acceptance criteria.

4.5 Laboratory Duplicate

Three sample set specific laboratory duplicates were reported, using samples MW-100, MW-103, MW-105, MW-109, MW-204 and MW-308. The RPD results were within the laboratory specified acceptance criteria.

In addition, two batch laboratory duplicates were reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

4.6 Equipment Blank

Three equipment blanks were collected with the sample sets, EQ-01, EB-02 and EB-03. TDS was not detected in the equipment blanks above the MDLs.

4.7 Field Blank

Three field blanks were collected with the sample sets, FB-01, FB-03 (collected 6/09/18) and FB-03 (collected 6/11/18). TDS was not detected in the field blanks above the MDLs.

4.8 Field Duplicate

Four field duplicate samples were collected with the sample sets, DUP-01, DUP-02, DUP-03 and DUP-04. Acceptable precision [(RPD < 20% or the difference between the concentrations <

reporting limit (RL)] was demonstrated between the field duplicates and original samples MW-300, MW-200, MW-202 and MW-105, respectively, with the following exception.

The concentration of TDS was less than 5 times the reporting limit for sample DUP-03 and the difference between the concentrations of TDS in the field duplicate pair using samples DUP-03 and MW-202 was greater than the RL. Therefore the concentrations of TDS in samples DUP-03 and MW-202 were J qualified as estimated.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	RPD	Validation Result (mg/L)	Validation Qualifier	Reason Code
DUP-03	Total Dissolved Solids	16	NA	127	16	J	FD
MW-202	Total Dissolved Solids	72	NA		72	J	FD

mg/L- milligram per liter
NA-not applicable

4.9 Sensitivity

The samples were reported to the MDL. No elevated non-detect results were reported.

4.10 Electronic Data Deliverables Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II reports and the EDDs

5.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by EPA method 9315, radium-228 by EPA method 9320 and combine radium 226+228 by calculation.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate

- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Tracers and Carriers
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

5.1 Overall Assessment

The radium-226 and radium-228 data reported in these packages are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this sample set is 100%.

5.2 Holding Times

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

5.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported for the radium-226 data (batches 370240, 370636, 369971 and 370790). Four method blanks were reported for the radium-228 data (batches 370246, 370639, 369991 and 370793). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs).

5.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

5.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four LCS/LCS duplicate (LCSD) pairs were reported for radium-226 and four LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [2 sigma (2σ)] results were within the laboratory and SOP specified acceptance criteria.

5.6 Laboratory Duplicate

Four batch laboratory duplicates were reported for the combined radium 226+228 data. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

5.7 Tracers and Carriers

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory and SOP specified acceptance criteria.

5.8 Equipment Blank

Three equipment blanks were collected with the sample sets, EQ-01, EB-02 and EB-03. Radium was not detected in the equipment blanks above the MDCs.

5.9 Field Blank

Three field blanks were collected with the sample sets, FB-01, FB-03 (collected 6/09/18) and FB-03 (collected 6/11/18). Radium was not detected in the field blanks above the MDCs.

5.10 Field Duplicate

Four field duplicate samples were collected with the sample sets, DUP-01, DUP-02, DUP-03 and DUP-04. Acceptable precision [(RER (2σ) ≥ 3] was demonstrated between the field duplicates and original samples MW-300, MW-200, MW-202 and MW-105, respectively.

5.11 Sensitivity

The samples were reported to the MDCs. No elevated non-detect results were reported.

5.12 Electronic Data Deliverables Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II reports and the EDDs.

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ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team per the SOP

DATA QUALIFIER DEFINITIONS

U* This analyte should be considered "not-detected" because it was detected in an associated blank at a similar level.

UJ The analyte was analyzed for, but was not detected above the level of the reported sample reporting/method detection limit. The reported method detection limit is approximate and may be inaccurate or imprecise.

J The analyte was positively identified but the result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R The data are unusable. The sample results are rejected due to serious analytical efficiencies in the ability to analyze the sample and meet quality control criteria. The analyte may or may not be present in the sample

UR The analyte was analyzed for, but was not detected above the level of the reported sample reporting or method detection; however, the data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the staple and meet quality control criteria. The analyte may or may not be present in the sample.

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ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team per the SOP

Reason Code	Explanation
BE	Equipment blank contamination. The result should be considered "not-detected."
BF	Field blank contamination. The result should be considered "not-detected."
BL	Laboratory blank contamination. The result should be considered "not-detected."
FD	Field duplicate imprecision.
M+	MS and/or MSD recoveries outside of acceptance limits. The result may be biased high.
M-	MS and/or MSD recoveries outside of acceptance limits. The result may be biased low.

Product Name: Low-Flow System

Date: 2018-11-13 15:28:22

Project Information:		Pump Information:	
Operator Name	Rick Hagendorfer	Pump Model/Type	PP
Company Name	RDH Env	Tubing Type	PE
Project Name	Crist CCR GYPSUM	Tubing Diameter	.17 in
Site Name	Crist plant	Tubing Length	35 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	424893		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	29 ft

Well Information:		Pumping Information:	
Well ID	MW-200	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.2462198 L
Well Total Depth	34 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.04 in
Depth to Water	18.64 ft	Total Volume Pumped	14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	15:05:17	900.02	21.47	5.13	1952.21	7.67	18.68	1.23	175.22
Last 5	15:10:17	1200.02	21.50	5.12	1864.85	7.06	18.68	1.17	174.51
Last 5	15:15:17	1499.91	21.54	5.12	1804.68	5.94	18.68	1.12	173.72
Last 5	15:20:17	1799.91	21.66	5.11	1773.88	3.12	18.68	1.08	173.40
Last 5	15:25:17	2099.91	21.58	5.11	1726.08	2.29	18.68	1.04	173.31
Variance 0			0.04	-0.00	-60.16			-0.04	-0.79
Variance 1			0.12	-0.01	-30.80			-0.04	-0.32
Variance 2			-0.08	-0.01	-47.81			-0.04	-0.09

Notes

Sample time 1528. Cloudy 54

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-14 08:46:49

Project Information:		Pump Information:	
Operator Name	Rick Hagendorfer	Pump Model/Type	QED
Company Name	RDH Env	Tubing Type	PE
Project Name	Crist CCR GYPSUM	Tubing Diameter	.17 in
Site Name	Crist plant	Tubing Length	65 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	424893		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	55 ft

Well Information:		Pumping Information:	
Well ID	MW-201	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.5101225 L
Well Total Depth	60 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	48.84 ft	Total Volume Pumped	16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	08:21:30	300.08	19.14	4.76	437.90	5.24	48.84	1.97	131.65
Last 5	08:26:30	600.02	19.77	4.81	420.11	4.87	48.84	2.44	132.66
Last 5	08:31:30	900.02	20.21	4.83	415.87	3.89	48.84	2.55	133.60
Last 5	08:36:30	1200.02	20.06	4.84	411.85	3.17	48.84	2.57	134.48
Last 5	08:41:30	1500.02	20.22	4.85	409.02	2.07	48.84	2.65	135.12
Variance 0			0.44	0.02	-4.24			0.11	0.93
Variance 1			-0.16	0.02	-4.03			0.02	0.88
Variance 2			0.17	0.01	-2.82			0.08	0.64

Notes

Rain 44 sample time 0850. Dup-06 fake sample time 0750

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-14 13:54:57

Project Information:		Pump Information:	
Operator Name	Rick Hagendorfer	Pump Model/Type	QED
Company Name	RDH Env	Tubing Type	PE
Project Name	Crist CCR GYPSUM	Tubing Diameter	.17 in
Site Name	Crist plant	Tubing Length	70 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	424893		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	55 ft

Well Information:		Pumping Information:	
Well ID	MW-202	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.5324396 L
Well Total Depth	60 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.1 in
Depth to Water	51.54 ft	Total Volume Pumped	98 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:22:52	13512.88	19.67	6.80	450.22	12.40	51.64	4.71	73.85
Last 5	13:27:52	13812.84	19.41	6.80	451.77	10.00	51.64	4.63	73.87
Last 5	13:32:52	14112.84	19.19	6.80	448.12	8.23	51.64	4.76	73.96
Last 5	13:37:52	14412.84	19.05	6.79	452.97	6.97	51.64	4.66	74.23
Last 5	13:42:52	14712.84	19.23	6.79	449.30	6.87	51.64	4.84	73.97
Variance 0			-0.22	0.01	-3.65			0.13	0.09
Variance 1			-0.14	-0.01	4.84			-0.10	0.27
Variance 2			0.18	-0.00	-3.67			0.18	-0.27

Notes

Sample time 1353. EB-03 sample time 1030. FB-03 sample time 1043. Rain 47.

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-13 13:43:15

Project Information:		Pump Information:	
Operator Name	Rick Hagendorfer	Pump Model/Type	QED
Company Name	RDH Env	Tubing Type	PE
Project Name	Crist CCR GYPSUM	Tubing Diameter	.17 in
Site Name	Crist plant	Tubing Length	60 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	424893		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	58 ft

Well Information:		Pumping Information:	
Well ID	MW-203	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.4878054 L
Well Total Depth	63 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	45.36 ft	Total Volume Pumped	42 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:17:48	5102.99	20.60	4.83	291.75	6.43	45.36	3.86	144.75
Last 5	13:22:47	5402.95	20.54	4.83	292.84	7.06	45.36	3.75	145.53
Last 5	13:27:47	5702.95	20.63	4.83	293.90	6.44	45.36	3.81	146.35
Last 5	13:32:47	6002.95	20.61	4.83	294.84	5.01	45.36	3.87	147.23
Last 5	13:37:47	6302.95	20.66	4.83	295.55	4.88	45.36	3.84	148.28
Variance 0			0.09	0.00	1.06			0.06	0.81
Variance 1			-0.02	-0.00	0.94			0.06	0.89
Variance 2			0.04	0.00	0.71			-0.03	1.04

Notes

Rainy 54. Sample time 1340. Dup-05 fake sample time 1240

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-19 08:16:44

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	QED
Company Name	RDH	Tubing Type	PE
Project Name	Crist CCR GYP	Tubing Diameter	.17 in
Site Name	Crist plant CCR	Tubing Length	35 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	597516		
Turbidity Make/Model	HACH	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	MW-204	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.3762198 L
Well Total Depth	33 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	24 in
Depth to Water	13.50 ft	Total Volume Pumped	12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	07:54:54	600.02	21.58	4.30	1179.06	0.34	15.60	0.19	128.98
Last 5	07:59:54	900.03	21.55	4.29	1197.58	0.39	15.60	0.18	117.97
Last 5	08:04:54	1200.02	21.58	4.29	1199.91	0.45	15.60	0.18	103.12
Last 5	08:09:54	1500.02	21.58	4.30	1192.74	0.31	15.60	0.20	97.65
Last 5	08:14:54	1800.02	21.65	4.30	1186.83	0.25	15.60	0.20	100.20
Variance 0			0.04	-0.00	2.33			-0.00	-14.84
Variance 1			0.00	0.00	-7.17			0.02	-5.48
Variance 2			0.07	0.00	-5.91			-0.00	2.56

Notes

Sample@0816, Partly cloudy 71

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-19 07:08:44

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	QED
Company Name	RDH	Tubing Type	PE
Project Name	Crist CCR GYP	Tubing Diameter	.17 in
Site Name	Crist plant CCR	Tubing Length	35 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	597516		
Turbidity Make/Model	HACH	Pump placement from TOC	27.8 ft

Well Information:		Pumping Information:	
Well ID	MW-205	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.3762198 L
Well Total Depth	32.8 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.01 in
Depth to Water	16.35 ft	Total Volume Pumped	8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	06:51:06	300.06	21.77	4.82	582.25	0.35	16.36	2.53	110.30
Last 5	06:56:06	600.02	21.77	4.82	580.39	0.56	16.36	2.54	110.14
Last 5	07:01:06	900.02	21.83	4.81	583.21	0.26	16.36	2.56	110.17
Last 5	07:06:06	1200.02	21.81	4.81	583.61	0.18	16.36	2.54	109.93
Last 5									
Variance 0			0.01	-0.00	-1.86			0.01	-0.16
Variance 1			0.06	-0.01	2.82			0.02	0.03
Variance 2			-0.02	0.00	0.40			-0.02	-0.24

Notes

Sample@0707,DUP-04@0607, clear 67

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-17 12:54:50

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	PP
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Crist plant CCR	Tubing Diameter	.17 in
Site Name	Crist Plant	Tubing Length	30 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	33 ft

Well Information:		Pumping Information:	
Well ID	MW-206	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.2239027 L
Well Total Depth	38.0 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.02 in
Depth to Water	26.9 ft	Total Volume Pumped	8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:37:11	300.07	26.32	4.35	3789.53	0.70	26.92	0.13	144.24
Last 5	12:42:11	600.05	26.10	4.37	3722.97	0.66	26.92	0.10	140.88
Last 5	12:47:11	900.04	26.29	4.40	3651.39	0.68	26.92	0.09	138.07
Last 5	12:52:11	1200.05	26.17	4.41	3647.92	0.65	26.92	0.08	136.19
Last 5									
Variance 0			-0.22	0.02	-66.55			-0.02	-3.35
Variance 1			0.20	0.03	-71.59			-0.01	-2.81
Variance 2			-0.13	0.01	-3.47			-0.00	-1.88

Notes

Sample time @ 1255. PC 80.

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-16 12:57:05

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	BP
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Crist plant CCR	Tubing Diameter	.17 in
Site Name	Crist Plant	Tubing Length	125 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	113.8 ft

Well Information:		Pumping Information:	
Well ID	MW-100	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.7779279 L
Well Total Depth	118.8 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.05 in
Depth to Water	91.45 ft	Total Volume Pumped	10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:34:06	300.04	25.83	4.93	35.48	5.01	91.50	7.72	145.36
Last 5	12:39:06	600.04	25.69	4.92	35.91	3.91	91.50	7.73	136.10
Last 5	12:44:06	900.05	25.50	4.92	35.96	3.50	91.50	7.69	130.60
Last 5	12:49:06	1200.04	25.60	4.93	35.89	1.90	91.50	7.57	125.99
Last 5	12:54:06	1500.04	25.47	4.93	35.86	1.33	91.50	7.59	122.08
Variance 0			-0.19	0.00	0.05			-0.03	-5.51
Variance 1			0.10	0.00	-0.07			-0.12	-4.61
Variance 2			-0.13	-0.00	-0.03			0.02	-3.91

Notes

Sample time @1300. Sunny 85.

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-18 07:07:33

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	QED
Company Name	RDH	Tubing Type	PE
Project Name	Crist CCR LF-1	Tubing Diameter	.17 in
Site Name	Crist plant CCR	Tubing Length	120 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	597516		
Turbidity Make/Model	HACH	Pump placement from TOC	113.1 ft

Well Information:		Pumping Information:	
Well ID	MW-101	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.7556108 L
Well Total Depth	118.1 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	97.79 ft	Total Volume Pumped	6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	06:55:55	300.02	20.03	5.00	25.27	3.17	97.78	9.34	102.56
Last 5	07:00:55	600.02	20.12	4.98	25.22	1.87	97.79	9.29	98.20
Last 5	07:05:55	900.02	20.11	4.97	25.30	1.46	97.79	9.27	96.19
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.09	-0.02	-0.06			-0.06	-4.36
Variance 2			-0.01	-0.01	0.09			-0.02	-2.02

Notes

Sample@0706 , clear 64

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-16 11:23:44

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	BP
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Crist plant CCR	Tubing Diameter	.17 in
Site Name	Crist Plant	Tubing Length	125 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	118.7 ft

Well Information:		Pumping Information:	
Well ID	MW-107	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.7779279 L
Well Total Depth	123.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.01 in
Depth to Water	103.30 ft	Total Volume Pumped	14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:01:05	900.04	25.52	4.99	24.19	0.53	103.31	8.47	146.82
Last 5	11:06:05	1200.04	25.73	5.00	24.41	0.50	103.31	8.49	140.26
Last 5	11:11:06	1501.04	25.60	4.98	24.52	0.55	103.31	8.53	134.48
Last 5	11:16:06	1801.04	25.63	4.98	24.49	0.43	103.31	8.59	129.97
Last 5	11:21:06	2101.04	25.52	4.98	24.57	0.40	103.31	8.55	126.05
Variance 0			-0.13	-0.01	0.11			0.04	-5.79
Variance 1			0.03	-0.00	-0.03			0.06	-4.50
Variance 2			-0.11	-0.00	0.07			-0.04	-3.93

Notes

Sample time @1125. PC 85. Dup-01 sample time @ 1025.

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-16 09:41:41

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	BP
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Crist plant CCR	Tubing Diameter	.17 in
Site Name	Crist Plant	Tubing Length	105 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	92.9 ft

Well Information:		Pumping Information:	
Well ID	MW-108	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.6886594 L
Well Total Depth	97.9 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.04 in
Depth to Water	71.65 ft	Total Volume Pumped	6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:27:43	300.04	23.25	4.84	37.88	0.64	71.69	8.27	117.28
Last 5	09:32:43	600.04	23.24	4.80	36.69	0.55	71.69	8.44	118.16
Last 5	09:37:43	900.04	23.12	4.81	36.46	0.40	71.69	8.45	117.51
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.01	-0.05	-1.19			0.18	0.87
Variance 2			-0.12	0.02	-0.23			0.01	-0.64

Notes

Sample time @ 0940. PC 80.

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-17 08:50:51

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	BP
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Crist plant CCR	Tubing Diameter	.17 in
Site Name	Crist Plant	Tubing Length	95 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	88.2 ft

Well Information:		Pumping Information:	
Well ID	MW-306	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.6440251 L
Well Total Depth	93.2 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.05 in
Depth to Water	56.50 ft	Total Volume Pumped	22 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	08:27:51	2100.05	23.68	4.98	28.67	2.26	56.55	7.71	117.33
Last 5	08:32:51	2400.05	23.52	4.99	28.63	2.08	56.55	7.73	116.14
Last 5	08:37:51	2700.04	23.72	4.99	28.46	1.91	56.55	7.67	115.01
Last 5	08:42:51	3000.04	23.61	4.99	28.50	1.79	56.55	7.72	114.52
Last 5	08:47:51	3300.04	23.75	4.99	28.41	1.50	56.55	7.68	113.63
Variance 0			0.20	-0.00	-0.18			-0.06	-1.14
Variance 1			-0.11	0.00	0.04			0.05	-0.49
Variance 2			0.14	0.01	-0.09			-0.04	-0.89

Notes

Sample time @0850. Cloudy 80.

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-17 11:27:24

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	BP
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Crist plant CCR	Tubing Diameter	.17 in
Site Name	Crist Plant	Tubing Length	125 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	118.2 ft

Well Information:		Pumping Information:	
Well ID	MW-307	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.7779279 L
Well Total Depth	123.2 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	12 in
Depth to Water	91.45 ft	Total Volume Pumped	42 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:05:16	5102.04	24.34	5.58	24.20	0.84	92.45	4.97	86.99
Last 5	11:10:16	5402.04	24.30	5.55	25.86	0.92	92.45	5.21	92.39
Last 5	11:15:16	5702.04	24.47	5.55	25.60	0.85	92.45	5.26	96.84
Last 5	11:20:16	6002.04	24.63	5.55	25.45	0.80	92.45	5.26	100.32
Last 5	11:25:17	6303.04	24.64	5.54	25.28	0.76	92.45	5.30	103.19
Variance 0			0.17	-0.01	-0.27			0.05	4.45
Variance 1			0.16	0.00	-0.14			-0.00	3.48
Variance 2			0.01	-0.01	-0.17			0.04	2.86

Notes

Sample time @1130. PC 80.

Grab Samples

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

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

TestAmerica Job ID: 400-160790-1
TestAmerica Sample Delivery Group: Background
Client Project/Site: CCR Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Cheyenne Whitmire

Authorized for release by:
11/12/2018 3:29:04 PM

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

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-160790-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-160790-1

Metals
Method(s) 6020: The method blank for preparation batch 416486 and analytical batch 416741 contained Lead 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.

Detection Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160790-1
SDG: Background

Client Sample ID: MW-100 — Lab Sample ID: 400-160790-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.017		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.86		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00058	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	32		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.5		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.93				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-107 — Lab Sample ID: 400-160790-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.011		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.42		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00045	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0015	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	12		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.1		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.98				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-108 — Lab Sample ID: 400-160790-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.011		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0013	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	6.0		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.9		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	2.8	I	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	4.81				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-306 — Lab Sample ID: 400-160790-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.012		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.54		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	44		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.5		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.99				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-307 — Lab Sample ID: 400-160790-5

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160790-1
SDG: Background

Client Sample ID: MW-307 (Continued) — Lab Sample ID: 400-160790-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.016		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.66		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00043	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0012	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	44		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	3.7		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	5.54				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-01 — Lab Sample ID: 400-160790-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.011		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.38		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00044	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	10		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.3		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160790-1
SDG: Background

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

Sample Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160790-1
SDG: Background

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-160790-1	MW-100	Water	10/16/18 13:00	10/17/18 14:15
400-160790-2	MW-107	Water	10/16/18 11:25	10/17/18 14:15
400-160790-3	MW-108	Water	10/16/18 09:40	10/17/18 14:15
400-160790-4	MW-306	Water	10/17/18 08:50	10/17/18 14:15
400-160790-5	MW-307	Water	10/17/18 11:30	10/17/18 14:15
400-160790-6	DUP-01	Water	10/16/18 10:25	10/17/18 14:15

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160790-1
SDG: Background

Client Sample ID: MW-100
Date Collected: 10/16/18 13:00
Date Received: 10/17/18 14:15

Lab Sample ID: 400-160790-1
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		10/22/18 16:59	10/23/18 17:53	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		10/22/18 16:59	10/23/18 17:53	5
Barium	**0.017**		0.0025	0.00049	mg/L		10/22/18 16:59	10/23/18 17:53	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		10/22/18 16:59	10/23/18 17:53	5
Boron	0.021	U	0.050	0.021	mg/L		10/22/18 16:59	10/23/18 17:53	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		10/22/18 16:59	10/23/18 17:53	5
Calcium	**0.86**		0.25	0.13	mg/L		10/22/18 16:59	10/23/18 17:53	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		10/22/18 16:59	10/23/18 17:53	5
Cobalt	**0.00058**	**I**	0.0025	0.00040	mg/L		10/22/18 16:59	10/23/18 17:53	5
Lead	0.00035	U	0.0013	0.00035	mg/L		10/22/18 16:59	10/23/18 17:53	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		10/22/18 16:59	10/23/18 17:53	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/22/18 16:59	10/23/18 17:53	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		10/22/18 16:59	10/23/18 17:53	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		10/22/18 16:59	10/23/18 17:53	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		10/29/18 12:11	10/30/18 16:09	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**32**		5.0	3.4	mg/L			10/22/18 17:15	1
Chloride	**5.5**		2.0	1.4	mg/L			10/24/18 11:10	1
Fluoride	0.032	U	0.10	0.032	mg/L			10/25/18 15:19	1
Sulfate	1.4	U	5.0	1.4	mg/L			10/24/18 13:29	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.93**				SU			10/16/18 13:00	1

Client Sample ID: MW-107

Date Collected: 10/16/18 11:25
Date Received: 10/17/18 14:15

Lab Sample ID: 400-160790-2

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		10/22/18 16:59	10/23/18 18:16	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		10/22/18 16:59	10/23/18 18:16	5
Barium	**0.011**		0.0025	0.00049	mg/L		10/22/18 16:59	10/23/18 18:16	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		10/22/18 16:59	10/23/18 18:16	5
Boron	0.021	U	0.050	0.021	mg/L		10/22/18 16:59	10/23/18 18:16	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		10/22/18 16:59	10/23/18 18:16	5
Calcium	**0.42**		0.25	0.13	mg/L		10/22/18 16:59	10/23/18 18:16	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		10/22/18 16:59	10/23/18 18:16	5
Cobalt	**0.00045**	**I**	0.0025	0.00040	mg/L		10/22/18 16:59	10/23/18 18:16	5
Lead	0.00035	U	0.0013	0.00035	mg/L		10/22/18 16:59	10/23/18 18:16	5
Lithium	**0.0015**	**I**	0.0050	0.0011	mg/L		10/22/18 16:59	10/23/18 18:16	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/22/18 16:59	10/23/18 18:16	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		10/22/18 16:59	10/23/18 18:16	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		10/22/18 16:59	10/23/18 18:16	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		10/29/18 12:11	10/30/18 16:11	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**12**		5.0	3.4	mg/L			10/22/18 17:15	1
Chloride	**5.1**		2.0	1.4	mg/L			10/24/18 11:10	1
Fluoride	0.032	U	0.10	0.032	mg/L			10/25/18 15:21	1
Sulfate	1.4	U	5.0	1.4	mg/L			10/24/18 13:40	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.98**				SU			10/16/18 11:25	1

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160790-1
SDG: Background

Client Sample ID: MW-108
Date Collected: 10/16/18 09:40
Date Received: 10/17/18 14:15

Lab Sample ID: 400-160790-3
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		10/22/18 16:59	10/23/18 18:20	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		10/22/18 16:59	10/23/18 18:20	5
Barium	**0.011**		0.0025	0.00049	mg/L		10/22/18 16:59	10/23/18 18:20	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		10/22/18 16:59	10/23/18 18:20	5
Boron	0.021	U	0.050	0.021	mg/L		10/22/18 16:59	10/23/18 18:20	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		10/22/18 16:59	10/23/18 18:20	5
Calcium	**1.4**		0.25	0.13	mg/L		10/22/18 16:59	10/23/18 18:20	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		10/22/18 16:59	10/23/18 18:20	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		10/22/18 16:59	10/23/18 18:20	5
Lead	0.00035	U	0.0013	0.00035	mg/L		10/22/18 16:59	10/23/18 18:20	5
Lithium	**0.0013**	**I**	0.0050	0.0011	mg/L		10/22/18 16:59	10/23/18 18:20	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/22/18 16:59	10/23/18 18:20	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		10/22/18 16:59	10/23/18 18:20	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		10/22/18 16:59	10/23/18 18:20	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		10/29/18 12:11	10/30/18 16:13	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**6.0**		5.0	3.4	mg/L			10/22/18 17:15	1
Chloride	**5.9**		2.0	1.4	mg/L			10/24/18 11:10	1
Fluoride	0.032	U	0.10	0.032	mg/L			10/25/18 15:24	1
Sulfate	**2.8**	**I**	5.0	1.4	mg/L			10/24/18 13:40	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.81**				SU			10/16/18 09:40	1

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160790-1
SDG: Background

Client Sample ID: MW-306
Date Collected: 10/17/18 08:50
Date Received: 10/17/18 14:15

Lab Sample ID: 400-160790-4
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		10/22/18 16:59	10/23/18 18:24	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		10/22/18 16:59	10/23/18 18:24	5
Barium	**0.012**		0.0025	0.00049	mg/L		10/22/18 16:59	10/23/18 18:24	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		10/22/18 16:59	10/23/18 18:24	5
Boron	0.021	U	0.050	0.021	mg/L		10/22/18 16:59	10/23/18 18:24	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		10/22/18 16:59	10/23/18 18:24	5
Calcium	**0.54**		0.25	0.13	mg/L		10/22/18 16:59	10/23/18 18:24	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		10/22/18 16:59	10/23/18 18:24	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		10/22/18 16:59	10/23/18 18:24	5
Lead	0.00035	U	0.0013	0.00035	mg/L		10/22/18 16:59	10/23/18 18:24	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		10/22/18 16:59	10/23/18 18:24	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/22/18 16:59	10/23/18 18:24	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		10/22/18 16:59	10/23/18 18:24	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		10/22/18 16:59	10/23/18 18:24	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		10/29/18 12:11	10/30/18 16:14	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**44**		5.0	3.4	mg/L			10/24/18 12:23	1
Chloride	**5.5**		2.0	1.4	mg/L			10/24/18 11:10	1
Fluoride	0.032	U	0.10	0.032	mg/L			10/28/18 11:23	1
Sulfate	1.4	U	5.0	1.4	mg/L			10/24/18 13:40	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.99**				SU			10/17/18 08:50	1

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160790-1
SDG: Background

Client Sample ID: MW-307
Date Collected: 10/17/18 11:30
Date Received: 10/17/18 14:15

Lab Sample ID: 400-160790-5
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		10/22/18 16:59	10/23/18 18:30	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		10/22/18 16:59	10/23/18 18:30	5
Barium	**0.016**		0.0025	0.00049	mg/L		10/22/18 16:59	10/23/18 18:30	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		10/22/18 16:59	10/23/18 18:30	5
Boron	0.021	U	0.050	0.021	mg/L		10/22/18 16:59	10/23/18 18:30	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		10/22/18 16:59	10/23/18 18:30	5
Calcium	**0.66**		0.25	0.13	mg/L		10/22/18 16:59	10/23/18 18:30	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		10/22/18 16:59	10/23/18 18:30	5
Cobalt	**0.00043**	**I**	0.0025	0.00040	mg/L		10/22/18 16:59	10/23/18 18:30	5
Lead	0.00035	U	0.0013	0.00035	mg/L		10/22/18 16:59	10/23/18 18:30	5
Lithium	**0.0012**	**I**	0.0050	0.0011	mg/L		10/22/18 16:59	10/23/18 18:30	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/22/18 16:59	10/23/18 18:30	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		10/22/18 16:59	10/23/18 18:30	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		10/22/18 16:59	10/23/18 18:30	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		10/29/18 12:11	10/30/18 16:16	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**44**		5.0	3.4	mg/L			10/24/18 12:23	1
Chloride	**3.7**		2.0	1.4	mg/L			10/24/18 11:17	1
Fluoride	0.032	U	0.10	0.032	mg/L			10/28/18 11:26	1
Sulfate	1.4	U	5.0	1.4	mg/L			10/24/18 13:40	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**5.54**				SU			10/17/18 11:30	1

Client Sample ID: DUP-01

Date Collected: 10/16/18 10:25
Date Received: 10/17/18 14:15

Lab Sample ID: 400-160790-6

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		10/22/18 16:59	10/23/18 18:35	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		10/22/18 16:59	10/23/18 18:35	5
Barium	**0.011**		0.0025	0.00049	mg/L		10/22/18 16:59	10/23/18 18:35	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		10/22/18 16:59	10/23/18 18:35	5
Boron	0.021	U	0.050	0.021	mg/L		10/22/18 16:59	10/23/18 18:35	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		10/22/18 16:59	10/23/18 18:35	5
Calcium	**0.38**		0.25	0.13	mg/L		10/22/18 16:59	10/23/18 18:35	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		10/22/18 16:59	10/23/18 18:35	5
Cobalt	**0.00044**	**I**	0.0025	0.00040	mg/L		10/22/18 16:59	10/23/18 18:35	5
Lead	0.00035	U	0.0013	0.00035	mg/L		10/22/18 16:59	10/23/18 18:35	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		10/22/18 16:59	10/23/18 18:35	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/22/18 16:59	10/23/18 18:35	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		10/22/18 16:59	10/23/18 18:35	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		10/22/18 16:59	10/23/18 18:35	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		10/29/18 12:11	10/30/18 16:18	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**10**		5.0	3.4	mg/L			10/22/18 17:15	1
Chloride	**5.3**		2.0	1.4	mg/L			10/24/18 11:10	1
Fluoride	0.032	U	0.10	0.032	mg/L			10/25/18 15:28	1
Sulfate	1.4	U	5.0	1.4	mg/L			10/24/18 13:40	1

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

General Chemistry

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation 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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160790-1
SDG: Background

Client Sample ID: MW-100
Date Collected: 10/16/18 13:00
Date Received: 10/17/18 14:15

Lab Sample ID: 400-160790-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			416486	10/22/18 16:59	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	416741	10/23/18 17:53	DRE	TAL PEN
Total/NA	Prep	7470A			417370	10/29/18 12:11	JAP	TAL PEN
Total/NA	Analysis	7470A		1	417676	10/30/18 16:09	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	416491	10/22/18 17:15	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	416758	10/24/18 11:10	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	416990	10/25/18 15:19	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	416792	10/24/18 13:29	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	418909	10/16/18 13:00	AW	TAL PEN

Client Sample ID: MW-107
Date Collected: 10/16/18 11:25
Date Received: 10/17/18 14:15

Lab Sample ID: 400-160790-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			416486	10/22/18 16:59	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	416741	10/23/18 18:16	DRE	TAL PEN
Total/NA	Prep	7470A			417370	10/29/18 12:11	JAP	TAL PEN
Total/NA	Analysis	7470A		1	417676	10/30/18 16:11	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	416491	10/22/18 17:15	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	416758	10/24/18 11:10	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	416990	10/25/18 15:21	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	416792	10/24/18 13:40	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	418909	10/16/18 11:25	AW	TAL PEN

Client Sample ID: MW-108
Date Collected: 10/16/18 09:40
Date Received: 10/17/18 14:15

Lab Sample ID: 400-160790-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			416486	10/22/18 16:59	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	416741	10/23/18 18:20	DRE	TAL PEN
Total/NA	Prep	7470A			417370	10/29/18 12:11	JAP	TAL PEN
Total/NA	Analysis	7470A		1	417676	10/30/18 16:13	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	416491	10/22/18 17:15	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	416758	10/24/18 11:10	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	416990	10/25/18 15:24	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	416792	10/24/18 13:40	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	418909	10/16/18 09:40	AW	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160790-1
SDG: Background

Client Sample ID: MW-306
Date Collected: 10/17/18 08:50
Date Received: 10/17/18 14:15

Lab Sample ID: 400-160790-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			416486	10/22/18 16:59	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	416741	10/23/18 18:24	DRE	TAL PEN
Total/NA	Prep	7470A			417370	10/29/18 12:11	JAP	TAL PEN
Total/NA	Analysis	7470A		1	417676	10/30/18 16:14	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	416766	10/24/18 12:23	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	416758	10/24/18 11:10	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	417309	10/28/18 11:23	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	416792	10/24/18 13:40	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	418909	10/17/18 08:50	AW	TAL PEN

Client Sample ID: MW-307
Date Collected: 10/17/18 11:30
Date Received: 10/17/18 14:15

Lab Sample ID: 400-160790-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			416486	10/22/18 16:59	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	416741	10/23/18 18:30	DRE	TAL PEN
Total/NA	Prep	7470A			417370	10/29/18 12:11	JAP	TAL PEN
Total/NA	Analysis	7470A		1	417676	10/30/18 16:16	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	416766	10/24/18 12:23	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	416758	10/24/18 11:17	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	417309	10/28/18 11:26	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	416792	10/24/18 13:40	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	418909	10/17/18 11:30	AW	TAL PEN

Client Sample ID: DUP-01
Date Collected: 10/16/18 10:25
Date Received: 10/17/18 14:15

Lab Sample ID: 400-160790-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			416486	10/22/18 16:59	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	416741	10/23/18 18:35	DRE	TAL PEN
Total/NA	Prep	7470A			417370	10/29/18 12:11	JAP	TAL PEN
Total/NA	Analysis	7470A		1	417676	10/30/18 16:18	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	416491	10/22/18 17:15	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	416758	10/24/18 11:10	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	416990	10/25/18 15:28	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	416792	10/24/18 13:40	RRC	TAL PEN

Laboratory References:

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

Metals

Prep Batch: 416486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160790-1	MW-100	Total Recoverable	Water	3005A	
400-160790-2	MW-107	Total Recoverable	Water	3005A	
400-160790-3	MW-108	Total Recoverable	Water	3005A	
400-160790-4	MW-306	Total Recoverable	Water	3005A	
400-160790-5	MW-307	Total Recoverable	Water	3005A	
400-160790-6	DUP-01	Total Recoverable	Water	3005A	
MB 400-416486/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-416486/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-160175-B-20-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-160175-B-20-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 416741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160790-1	MW-100	Total Recoverable	Water	6020	416486
400-160790-2	MW-107	Total Recoverable	Water	6020	416486
400-160790-3	MW-108	Total Recoverable	Water	6020	416486
400-160790-4	MW-306	Total Recoverable	Water	6020	416486
400-160790-5	MW-307	Total Recoverable	Water	6020	416486
400-160790-6	DUP-01	Total Recoverable	Water	6020	416486
MB 400-416486/1-A ^5	Method Blank	Total Recoverable	Water	6020	416486
LCS 400-416486/2-A	Lab Control Sample	Total Recoverable	Water	6020	416486
400-160175-B-20-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	416486
400-160175-B-20-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	416486

Prep Batch: 417370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160790-1	MW-100	Total/NA	Water	7470A	
400-160790-2	MW-107	Total/NA	Water	7470A	
400-160790-3	MW-108	Total/NA	Water	7470A	
400-160790-4	MW-306	Total/NA	Water	7470A	
400-160790-5	MW-307	Total/NA	Water	7470A	
400-160790-6	DUP-01	Total/NA	Water	7470A	
MB 400-417370/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-417370/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-160582-B-11-B MS	Matrix Spike	Total/NA	Water	7470A	
400-160582-B-11-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 417676

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160790-1	MW-100	Total/NA	Water	7470A	417370
400-160790-2	MW-107	Total/NA	Water	7470A	417370
400-160790-3	MW-108	Total/NA	Water	7470A	417370
400-160790-4	MW-306	Total/NA	Water	7470A	417370
400-160790-5	MW-307	Total/NA	Water	7470A	417370
400-160790-6	DUP-01	Total/NA	Water	7470A	417370
MB 400-417370/14-A	Method Blank	Total/NA	Water	7470A	417370
LCS 400-417370/15-A	Lab Control Sample	Total/NA	Water	7470A	417370
400-160582-B-11-B MS	Matrix Spike	Total/NA	Water	7470A	417370
400-160582-B-11-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	417370

General Chemistry

Analysis Batch: 416491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160790-1	MW-100	Total/NA	Water	SM 2540C	
400-160790-2	MW-107	Total/NA	Water	SM 2540C	
400-160790-3	MW-108	Total/NA	Water	SM 2540C	
400-160790-6	DUP-01	Total/NA	Water	SM 2540C	
MB 400-416491/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-416491/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-160790-3 DU	MW-108	Total/NA	Water	SM 2540C	

Analysis Batch: 416758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160790-1	MW-100	Total/NA	Water	SM 4500 Cl- E	
400-160790-2	MW-107	Total/NA	Water	SM 4500 Cl- E	
400-160790-3	MW-108	Total/NA	Water	SM 4500 Cl- E	
400-160790-4	MW-306	Total/NA	Water	SM 4500 Cl- E	
400-160790-5	MW-307	Total/NA	Water	SM 4500 Cl- E	
400-160790-6	DUP-01	Total/NA	Water	SM 4500 Cl- E	
MB 400-416758/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-416758/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-416758/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-160790-1 MS	MW-100	Total/NA	Water	SM 4500 Cl- E	
400-160790-1 MSD	MW-100	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 416766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160790-4	MW-306	Total/NA	Water	SM 2540C	
400-160790-5	MW-307	Total/NA	Water	SM 2540C	
MB 400-416766/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-416766/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-160832-A-12 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 416792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160790-1	MW-100	Total/NA	Water	SM 4500 SO4 E	
400-160790-2	MW-107	Total/NA	Water	SM 4500 SO4 E	
400-160790-3	MW-108	Total/NA	Water	SM 4500 SO4 E	
400-160790-4	MW-306	Total/NA	Water	SM 4500 SO4 E	
400-160790-5	MW-307	Total/NA	Water	SM 4500 SO4 E	
400-160790-6	DUP-01	Total/NA	Water	SM 4500 SO4 E	
MB 400-416792/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-416792/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-416792/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-160790-1 MS	MW-100	Total/NA	Water	SM 4500 SO4 E	
400-160790-1 MSD	MW-100	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 416990

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160790-1	MW-100	Total/NA	Water	SM 4500 F C	
400-160790-2	MW-107	Total/NA	Water	SM 4500 F C	
400-160790-3	MW-108	Total/NA	Water	SM 4500 F C	
400-160790-6	DUP-01	Total/NA	Water	SM 4500 F C	
MB 400-416990/3	Method Blank	Total/NA	Water	SM 4500 F C	

General Chemistry (Continued)

Analysis Batch: 416990 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-416990/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-160630-A-18 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-160630-A-18 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-160630-A-26 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 417309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160790-4	MW-306	Total/NA	Water	SM 4500 F C	
400-160790-5	MW-307	Total/NA	Water	SM 4500 F C	
MB 400-417309/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-417309/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-160768-I-1 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-160768-I-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-160814-A-4 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Field Service / Mobile Lab

Analysis Batch: 418909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160790-1	MW-100	Total/NA	Water	Field Sampling	
400-160790-2	MW-107	Total/NA	Water	Field Sampling	
400-160790-3	MW-108	Total/NA	Water	Field Sampling	
400-160790-4	MW-306	Total/NA	Water	Field Sampling	
400-160790-5	MW-307	Total/NA	Water	Field Sampling	

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-416486/1-A ^5
Matrix: Water
Analysis Batch: 416741

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 416486

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		10/22/18 16:59	10/23/18 16:19	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		10/22/18 16:59	10/23/18 16:19	5
Barium	0.00049	U	0.0025	0.00049	mg/L		10/22/18 16:59	10/23/18 16:19	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		10/22/18 16:59	10/23/18 16:19	5
Boron	0.021	U	0.050	0.021	mg/L		10/22/18 16:59	10/23/18 16:19	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		10/22/18 16:59	10/23/18 16:19	5
Calcium	0.13	U	0.25	0.13	mg/L		10/22/18 16:59	10/23/18 16:19	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		10/22/18 16:59	10/23/18 16:19	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		10/22/18 16:59	10/23/18 16:19	5
Lead	0.000590	I	0.0013	0.00035	mg/L		10/22/18 16:59	10/23/18 16:19	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		10/22/18 16:59	10/23/18 16:19	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/22/18 16:59	10/23/18 16:19	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		10/22/18 16:59	10/23/18 16:19	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		10/22/18 16:59	10/23/18 16:19	5

Lab Sample ID: LCS 400-416486/2-A
Matrix: Water
Analysis Batch: 416741

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 416486

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0491		mg/L		98	80 - 120
Arsenic	0.0500	0.0502		mg/L		100	80 - 120
Barium	0.0500	0.0483		mg/L		97	80 - 120
Beryllium	0.0500	0.0490		mg/L		98	80 - 120
Boron	0.100	0.0952		mg/L		95	80 - 120
Cadmium	0.0500	0.0537		mg/L		107	80 - 120
Calcium	5.00	4.96		mg/L		99	80 - 120
Chromium	0.0500	0.0507		mg/L		101	80 - 120
Cobalt	0.0500	0.0510		mg/L		102	80 - 120
Lead	0.0500	0.0526		mg/L		105	80 - 120
Lithium	0.0500	0.0529		mg/L		106	80 - 120
Molybdenum	0.0500	0.0489		mg/L		98	80 - 120
Selenium	0.0500	0.0484		mg/L		97	80 - 120
Thallium	0.0100	0.0104		mg/L		104	80 - 120

Lab Sample ID: 400-160175-B-20-B MS ^5
Matrix: Water
Analysis Batch: 416741

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 416486

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0010	U	0.0500	0.0517		mg/L		103	75 - 125
Arsenic	0.00046	U	0.0500	0.0519		mg/L		104	75 - 125
Barium	0.022		0.0500	0.0720		mg/L		100	75 - 125
Beryllium	0.00034	U	0.0500	0.0510		mg/L		102	75 - 125
Boron	0.021	U	0.100	0.103		mg/L		103	75 - 125
Cadmium	0.00034	U	0.0500	0.0548		mg/L		110	75 - 125
Calcium	31		5.00	37.3		mg/L		118	75 - 125
Chromium	0.0011	U	0.0500	0.0574		mg/L		115	75 - 125

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

Lab Sample ID: 400-160175-B-20-B MS ^5
Matrix: Water
Analysis Batch: 416741

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 416486

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.0031		0.0500	0.0539		mg/L		102	75 - 125
Lead	0.00035	U	0.0500	0.0506		mg/L		101	75 - 125
Lithium	0.0044	I	0.0500	0.0590		mg/L		109	75 - 125
Molybdenum	0.0020	U	0.0500	0.0504		mg/L		101	75 - 125
Selenium	0.00080	I	0.0500	0.0510		mg/L		100	75 - 125
Thallium	0.000085	U	0.0100	0.0107		mg/L		107	75 - 125

Lab Sample ID: 400-160175-B-20-C MSD ^5
Matrix: Water
Analysis Batch: 416741

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 416486

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.0010	U	0.0500	0.0512		mg/L		102	75 - 125	1	20
Arsenic	0.00046	U	0.0500	0.0517		mg/L		103	75 - 125	0	20
Barium	0.022		0.0500	0.0721		mg/L		101	75 - 125	0	20
Beryllium	0.00034	U	0.0500	0.0505		mg/L		101	75 - 125	1	20
Boron	0.021	U	0.100	0.0981		mg/L		98	75 - 125	5	20
Cadmium	0.00034	U	0.0500	0.0543		mg/L		109	75 - 125	1	20
Calcium	31		5.00	36.6		mg/L		104	75 - 125	2	20
Chromium	0.0011	U	0.0500	0.0568		mg/L		114	75 - 125	1	20
Cobalt	0.0031		0.0500	0.0544		mg/L		103	75 - 125	1	20
Lead	0.00035	U	0.0500	0.0503		mg/L		101	75 - 125	1	20
Lithium	0.0044	I	0.0500	0.0572		mg/L		106	75 - 125	3	20
Molybdenum	0.0020	U	0.0500	0.0508		mg/L		102	75 - 125	1	20
Selenium	0.00080	I	0.0500	0.0497		mg/L		98	75 - 125	3	20
Thallium	0.000085	U	0.0100	0.0107		mg/L		107	75 - 125	0	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-417370/14-A
Matrix: Water
Analysis Batch: 417676

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 417370

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		10/29/18 11:05	10/30/18 15:07	1

Lab Sample ID: LCS 400-417370/15-A
Matrix: Water
Analysis Batch: 417676

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 417370

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.000979		mg/L		97	80 - 120

Lab Sample ID: 400-160582-B-11-B MS
Matrix: Water
Analysis Batch: 417676

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 417370

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.000070	U	0.00201	0.00230		mg/L		114	80 - 120

Lab Sample ID: 400-160582-B-11-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 417676 — **Prep Batch: 417370**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.000070	U	0.00201	0.00237		mg/L		118	80 - 120	3	20

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

Lab Sample ID: MB 400-416491/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 416491

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			10/22/18 17:15	1

Lab Sample ID: LCS 400-416491/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 416491

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: 400-160790-3 DU — **Client Sample ID: MW-108**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 416491

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	6.0		6.00		mg/L		0	5

Lab Sample ID: MB 400-416766/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 416766

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			10/24/18 12:23	1

Lab Sample ID: LCS 400-416766/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 416766

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	280		mg/L		96	78 - 122

Lab Sample ID: 400-160832-A-12 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 416766

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	140		148		mg/L		4	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-416758/6
Matrix: Water
Analysis Batch: 416758

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4	U	2.0	1.4	mg/L			10/24/18 11:07	1

Lab Sample ID: LCS 400-416758/7
Matrix: Water
Analysis Batch: 416758

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	32.5		mg/L		108	90 - 110

Lab Sample ID: MRL 400-416758/3
Matrix: Water
Analysis Batch: 416758

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	I	mg/L		94	50 - 150

Lab Sample ID: 400-160790-1 MS
Matrix: Water
Analysis Batch: 416758

Client Sample ID: MW-100
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.5		10.0	16.6		mg/L		111	73 - 120

Lab Sample ID: 400-160790-1 MSD
Matrix: Water
Analysis Batch: 416758

Client Sample ID: MW-100
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	5.5		10.0	16.3		mg/L		108	73 - 120	2	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-416990/3
Matrix: Water
Analysis Batch: 416990

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.032	U	0.10	0.032	mg/L			10/25/18 13:53	1

Lab Sample ID: LCS 400-416990/4
Matrix: Water
Analysis Batch: 416990

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	4.26		mg/L		107	90 - 110

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 400-160630-A-18 MS
Matrix: Water
Analysis Batch: 416990

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	0.85		1.00	1.93		mg/L		108	75 - 125

Lab Sample ID: 400-160630-A-18 MSD
Matrix: Water
Analysis Batch: 416990

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	0.85		1.00	1.93		mg/L		108	75 - 125	0	4

Lab Sample ID: 400-160630-A-26 DU
Matrix: Water
Analysis Batch: 416990

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.42		0.420		mg/L		0	4

Lab Sample ID: MB 400-417309/3
Matrix: Water
Analysis Batch: 417309

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.032	U	0.10	0.032	mg/L			10/28/18 11:00	1

Lab Sample ID: LCS 400-417309/4
Matrix: Water
Analysis Batch: 417309

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	4.26		mg/L		107	90 - 110

Lab Sample ID: 400-160768-I-1 MS
Matrix: Water
Analysis Batch: 417309

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	0.52		1.00	1.63		mg/L		111	75 - 125

Lab Sample ID: 400-160768-I-1 MSD
Matrix: Water
Analysis Batch: 417309

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	0.52		1.00	1.63		mg/L		111	75 - 125	0	4

Lab Sample ID: 400-160814-A-4 DU
Matrix: Water
Analysis Batch: 417309

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.032	U	0.032	U	mg/L		NC	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-416792/6
Matrix: Water
Analysis Batch: 416792

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.4	U	5.0	1.4	mg/L			10/24/18 13:29	1

Lab Sample ID: LCS 400-416792/7
Matrix: Water
Analysis Batch: 416792

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	13.8		mg/L		92	90 - 110		

Lab Sample ID: MRL 400-416792/3
Matrix: Water
Analysis Batch: 416792

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	4.38	I	mg/L		88	50 - 150		

Lab Sample ID: 400-160790-1 MS
Matrix: Water
Analysis Batch: 416792

Client Sample ID: MW-100
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate	1.4	U	10.0	9.53		mg/L		95	77 - 128		

Lab Sample ID: 400-160790-1 MSD
Matrix: Water
Analysis Batch: 416792

Client Sample ID: MW-100
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	1.4	U	10.0	9.52		mg/L		95	77 - 128	0	5

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

Chain of Custody Record

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Client Information	Sampler: Philip Evans	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No:
Client Contact: Kristi Mitchell	Phone: 850-336-0192	E-Mail: cheyenne.whitmire@testamericainc.com		Page:
Company: Gulf Power Company		Analysis Requested		Job #: 160790
Address: BIN 731 One Energy Place	Due Date Requested:			Preservation Codes:
City: Pensacola	TAT Requested (days):			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)
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			Other:
Email: krmitche@southernco.com	WO #:			
Project Name: CCR Plant Crist	Project #: 40006609			
Site: Background	SSOW#:			

400-160790 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)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	SM4500_Cl_E - Chloride, SM4500_SO4_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C - Fluoride	6020 - SbAsBaBeCaCdCrCoPbLiMoSeTl; 7470A - Mercury	FieldSampling - Field Sampling Parameters	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
MW-100	10/16/18	1300	G	Water			X	X	X	X		
~~MW-101~~ PE				Water								
MW-107	10/16/18	1125		Water			X	X	X	X		
MW-108	10/16/18	0940		Water			X	X	X	X		
MW-306	10/17/18	0850		Water			X	X	X	X		
MW-307	10/17/18	1130	↓	Water			X	X	X	X	X	
Dup-01	10/16/18	1025	G	Water			X	X	X	X	PE	

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	10/17/18 1415	RDH			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 10-17-18 1415	Company TA-PEN

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.4°C IR8

11/12/2018

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-160790-1
SDG Number: Background

Login Number: 160790
List Number: 1
Creator: Whitmire, Cheyenne R

List Source: 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.	N/A	Not present
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	0.4°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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160790-1
SDG: Background

Laboratory: 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	01-12-19
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	10-31-18 *
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA180023	12-31-18
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	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-16	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	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

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

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ANALYTICAL REPORT

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

TestAmerica Job ID: 400-160790-2
TestAmerica Sample Delivery Group: Background
Client Project/Site: CCR Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Cheyenne Whitmire

Authorized for release by:
11/15/2018 5:39:19 PM

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

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-160790-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-160790-2

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-396383: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: MW-100 (400-160790-1), MW-107 (400-160790-2), MW-108 (400-160790-3), MW-306 (400-160790-4), MW-307 (400-160790-5) and DUP-01 (400-160790-6). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-396361: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: MW-100 (400-160790-1), MW-107 (400-160790-2), MW-108 (400-160790-3), MW-306 (400-160790-4), MW-307 (400-160790-5) and DUP-01 (400-160790-6). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160790-2
SDG: Background

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

Sample Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160790-2
SDG: Background

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-160790-1	MW-100	Water	10/16/18 13:00	10/17/18 14:15
400-160790-2	MW-107	Water	10/16/18 11:25	10/17/18 14:15
400-160790-3	MW-108	Water	10/16/18 09:40	10/17/18 14:15
400-160790-4	MW-306	Water	10/17/18 08:50	10/17/18 14:15
400-160790-5	MW-307	Water	10/17/18 11:30	10/17/18 14:15
400-160790-6	DUP-01	Water	10/16/18 10:25	10/17/18 14:15

Client Sample ID: MW-100

Date Collected: 10/16/18 13:00
Date Received: 10/17/18 14:15

Lab Sample ID: 400-160790-1

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	0.564		0.126	0.135	1.00	0.0923	pCi/L	10/22/18 09:49	11/13/18 05:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*10/22/18 09:49*	*11/13/18 05:51*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.58		0.292	0.326	1.00	0.297	pCi/L	10/22/18 11:44	10/26/18 10:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*10/22/18 11:44*	*10/26/18 10:21*	*1*
Y Carrier	*80.0*		*40 - 110*	*10/22/18 11:44*	*10/26/18 10:21*	*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	2.14		0.318	0.353	5.00	0.297	pCi/L		11/15/18 17:00	1

Client Sample ID: MW-107
Date Collected: 10/16/18 11:25
Date Received: 10/17/18 14:15

Lab Sample ID: 400-160790-2
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	0.308		0.0997	0.103	1.00	0.0842	pCi/L	10/22/18 09:49	11/13/18 05:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*10/22/18 09:49*	*11/13/18 05:51*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.767		0.254	0.263	1.00	0.335	pCi/L	10/22/18 11:44	10/26/18 10:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*10/22/18 11:44*	*10/26/18 10:21*	*1*
Y Carrier	*80.7*		*40 - 110*	*10/22/18 11:44*	*10/26/18 10:21*	*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	1.07		0.273	0.282	5.00	0.335	pCi/L		11/15/18 17:00	1

Client Sample ID: MW-108
Date Collected: 10/16/18 09:40
Date Received: 10/17/18 14:15

Lab Sample ID: 400-160790-3
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	0.510		0.123	0.131	1.00	0.0895	pCi/L	10/22/18 09:49	11/13/18 05:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*10/22/18 09:49*	*11/13/18 05:51*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.69		0.340	0.373	1.00	0.399	pCi/L	10/22/18 11:44	10/26/18 10:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*10/22/18 11:44*	*10/26/18 10:21*	*1*
Y Carrier	*79.3*		*40 - 110*	*10/22/18 11:44*	*10/26/18 10:21*	*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	2.20		0.362	0.395	5.00	0.399	pCi/L		11/15/18 17:00	1

Client Sample ID: MW-306
Date Collected: 10/17/18 08:50
Date Received: 10/17/18 14:15

Lab Sample ID: 400-160790-4
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	0.394		0.113	0.119	1.00	0.0989	pCi/L	10/22/18 09:49	11/13/18 05:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*10/22/18 09:49*	*11/13/18 05:51*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.800		0.263	0.273	1.00	0.352	pCi/L	10/22/18 11:44	10/26/18 10:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*10/22/18 11:44*	*10/26/18 10:21*	*1*
Y Carrier	*79.3*		*40 - 110*	*10/22/18 11:44*	*10/26/18 10:21*	*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	1.19		0.286	0.298	5.00	0.352	pCi/L		11/15/18 17:00	1

Client Sample ID: MW-307
Date Collected: 10/17/18 11:30
Date Received: 10/17/18 14:15

Lab Sample ID: 400-160790-5
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	0.331		0.0989	0.103	1.00	0.0734	pCi/L	10/22/18 09:49	11/13/18 05:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*10/22/18 09:49*	*11/13/18 05:51*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.549		0.237	0.242	1.00	0.336	pCi/L	10/22/18 11:44	10/26/18 10:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*10/22/18 11:44*	*10/26/18 10:21*	*1*
Y Carrier	*81.9*		*40 - 110*	*10/22/18 11:44*	*10/26/18 10:21*	*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	0.880		0.257	0.263	5.00	0.336	pCi/L		11/15/18 17:00	1

Client Sample ID: DUP-01
Date Collected: 10/16/18 10:25
Date Received: 10/17/18 14:15

Lab Sample ID: 400-160790-6
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	0.432		0.109	0.116	1.00	0.0738	pCi/L	10/22/18 09:49	11/13/18 05:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*10/22/18 09:49*	*11/13/18 05:51*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.10		0.290	0.307	1.00	0.363	pCi/L	10/22/18 11:44	10/26/18 10:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*10/22/18 11:44*	*10/26/18 10:21*	*1*
Y Carrier	*77.4*		*40 - 110*	*10/22/18 11:44*	*10/26/18 10:21*	*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	1.53		0.310	0.328	5.00	0.363	pCi/L		11/15/18 17:00	1

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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160790-2
SDG: Background

Client Sample ID: MW-100
Date Collected: 10/16/18 13:00
Date Received: 10/17/18 14:15

Lab Sample ID: 400-160790-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			396361	10/22/18 09:49	JLC	TAL SL
Total/NA	Analysis	9315		1	400714	11/13/18 05:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			396383	10/22/18 11:44	JLC	TAL SL
Total/NA	Analysis	9320		1	397454	10/26/18 10:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	401115	11/15/18 17:00	RTM	TAL SL

Client Sample ID: MW-107
Date Collected: 10/16/18 11:25
Date Received: 10/17/18 14:15

Lab Sample ID: 400-160790-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			396361	10/22/18 09:49	JLC	TAL SL
Total/NA	Analysis	9315		1	400714	11/13/18 05:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			396383	10/22/18 11:44	JLC	TAL SL
Total/NA	Analysis	9320		1	397454	10/26/18 10:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	401115	11/15/18 17:00	RTM	TAL SL

Client Sample ID: MW-108
Date Collected: 10/16/18 09:40
Date Received: 10/17/18 14:15

Lab Sample ID: 400-160790-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			396361	10/22/18 09:49	JLC	TAL SL
Total/NA	Analysis	9315		1	400714	11/13/18 05:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			396383	10/22/18 11:44	JLC	TAL SL
Total/NA	Analysis	9320		1	397454	10/26/18 10:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	401115	11/15/18 17:00	RTM	TAL SL

Client Sample ID: MW-306
Date Collected: 10/17/18 08:50
Date Received: 10/17/18 14:15

Lab Sample ID: 400-160790-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			396361	10/22/18 09:49	JLC	TAL SL
Total/NA	Analysis	9315		1	400714	11/13/18 05:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			396383	10/22/18 11:44	JLC	TAL SL
Total/NA	Analysis	9320		1	397454	10/26/18 10:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	401115	11/15/18 17:00	RTM	TAL SL

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160790-2
SDG: Background

Client Sample ID: MW-307

Lab Sample ID: 400-160790-5

Date Collected: 10/17/18 11:30
Date Received: 10/17/18 14:15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			396361	10/22/18 09:49	JLC	TAL SL
Total/NA	Analysis	9315		1	400714	11/13/18 05:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			396383	10/22/18 11:44	JLC	TAL SL
Total/NA	Analysis	9320		1	397454	10/26/18 10:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	401115	11/15/18 17:00	RTM	TAL SL

Client Sample ID: DUP-01

Lab Sample ID: 400-160790-6

Date Collected: 10/16/18 10:25
Date Received: 10/17/18 14:15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			396361	10/22/18 09:49	JLC	TAL SL
Total/NA	Analysis	9315		1	400714	11/13/18 05:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			396383	10/22/18 11:44	JLC	TAL SL
Total/NA	Analysis	9320		1	397454	10/26/18 10:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	401115	11/15/18 17:00	RTM	TAL SL

Laboratory References:

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

Rad

Prep Batch: 396361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160790-1	MW-100	Total/NA	Water	PrecSep-21	
400-160790-2	MW-107	Total/NA	Water	PrecSep-21	
400-160790-3	MW-108	Total/NA	Water	PrecSep-21	
400-160790-4	MW-306	Total/NA	Water	PrecSep-21	
400-160790-5	MW-307	Total/NA	Water	PrecSep-21	
400-160790-6	DUP-01	Total/NA	Water	PrecSep-21	
MB 160-396361/22-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-396361/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-396361/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 396383

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160790-1	MW-100	Total/NA	Water	PrecSep_0	
400-160790-2	MW-107	Total/NA	Water	PrecSep_0	
400-160790-3	MW-108	Total/NA	Water	PrecSep_0	
400-160790-4	MW-306	Total/NA	Water	PrecSep_0	
400-160790-5	MW-307	Total/NA	Water	PrecSep_0	
400-160790-6	DUP-01	Total/NA	Water	PrecSep_0	
MB 160-396383/22-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-396383/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-396383/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-396361/22-A
Matrix: Water
Analysis Batch: 400714

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 396361

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1303		0.0627	0.0637	1.00	0.0633	pCi/L	10/22/18 09:49	11/13/18 05:51	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*107*		*40 - 110*	*10/22/18 09:49*	*11/13/18 05:51*	*1*

Lab Sample ID: LCS 160-396361/1-A
Matrix: Water
Analysis Batch: 400704

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 396361

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.4	9.693		0.995	1.00	0.0676	pCi/L	85	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*96.5*		*40 - 110*

Lab Sample ID: LCSD 160-396361/2-A
Matrix: Water
Analysis Batch: 400704

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 396361

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.4	10.23		1.03	1.00	0.0769	pCi/L	90	68 - 137	0.27	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*101*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-396383/22-A
Matrix: Water
Analysis Batch: 397458

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 396383

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1434	U	0.201	0.201	1.00	0.335	pCi/L	10/22/18 11:44	10/26/18 10:22	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*107*		*40 - 110*	*10/22/18 11:44*	*10/26/18 10:22*	*1*
Y Carrier	*81.9*		*40 - 110*	*10/22/18 11:44*	*10/26/18 10:22*	*1*

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

Lab Sample ID: LCS 160-396383/1-A
Matrix: Water
Analysis Batch: 397457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 396383

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			9.28	10.28		1.17	1.00	0.363	pCi/L	111	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*96.5*		*40 - 110*
Y Carrier	*78.5*		*40 - 110*

Lab Sample ID: LCSD 160-396383/2-A
Matrix: Water
Analysis Batch: 397457

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 396383

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			9.28	9.376		1.08	1.00	0.332	pCi/L	101	56 - 140	0.40	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*101*		*40 - 110*
Y Carrier	*79.3*		*40 - 110*

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

Lab Sample ID: 400-160630-A-17 DU
Matrix: Water
Analysis Batch: 401115

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Combined Radium 226 + 228	0.612			0.3910	U	0.298	5.00	0.450	pCi/L			0.36	

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Philip Evans	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No:
Client Contact: Kristi Mitchell	Phone: 850-336-0192	E-Mail: cheyenne.whitmire@testamericainc.com		Page:

Company: Gulf Power Company
Address: BIN 731 One Energy Place
City: Pensacola
State, Zip: FL, 32520
Phone: 850-444-6427(Tel)
Email: krmitche@southernco.com
Project Name: CCR Plant Crist
Site: Background

Due Date Requested:
TAT Requested (days):
PO #: Purchase Order not required
WO #:
Project #: 40006609
SSOW#:

Job #: 160790

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:

400-160790 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)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	SM4500_Cl_E - Chloride, SM4500_SO4_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C - Fluoride	6020 - SbAsBaBeCaCdCrCoPbLiMoSeTl) 7470A - Mercury	FieldSampling - Field Sampling Parameters	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
MW-100	10/16/18	1300	G	Water			X	X	X	X		
~~MW-101~~ PE				Water								
MW-107	10/16/18	1125		Water			X	X	X	X		
MW-108	10/16/18	0940		Water			X	X	X	X		
MW-306	10/17/18	0850		Water			X	X	X	X		
MW-307	10/17/18	1130	↓	Water			X	X	X	X	X	
Dup-01	10/16/18	1025	G	Water			X	X	X	X	PE	

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)
Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	10/17/18 1415	ROH			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 10-17-18 1415	Company TA-PEN

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

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-160790-2
SDG Number: Background

Login Number: 160790
List Number: 1
Creator: Whitmire, Cheyenne R

List Source: 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.	N/A	Not present
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	0.4°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: Gulf Power Company

Job Number: 400-160790-2
SDG Number: Background

Login Number: 160790
List Number: 2
Creator: Hellm, Michael

List Source: TestAmerica St. Louis
List Creation: 10/19/18 03:20 PM

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.	False	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18.0
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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160790-2
SDG: Background

Laboratory: 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	01-12-19
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	10-31-18 *
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA180023	12-31-18
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	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-16	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	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

Laboratory: 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
Alaska	State Program	10	MO00054	06-30-19
ANAB	DoD ELAP		L2305	04-06-19
Arizona	State Program	9	AZ0813	12-08-18 *
California	State Program	9	2886	06-30-19
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-19
Illinois	NELAP	5	200023	11-30-18 *
Iowa	State Program	7	373	12-01-18 *
Kansas	NELAP	7	E-10236	10-31-18 *
Kentucky (DW)	State Program	4	90125	12-31-18
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA180017	12-31-18 *
Maryland	State Program	3	310	09-30-19
Michigan	State Program	5	9005	06-30-18 *
Missouri	State Program	7	780	06-30-19

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

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160790-2
SDG: Background

Laboratory: TestAmerica St. Louis (Continued)

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
Nevada	State Program	9	MO000542018-1	07-31-19
New Jersey	NELAP	2	MO002	06-30-19
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-19
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-19
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-19
Texas	NELAP	6	T104704193-18-12	07-31-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19
Virginia	NELAP	3	460230	06-14-19
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

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

TestAmerica Job ID: 400-160850-1
TestAmerica Sample Delivery Group: Landfill 1
Client Project/Site: CCR Plant Crist
Revision: 1

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Cheyenne Whitmire

Authorized for release by:
12/5/2018 1:35:54 PM

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

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Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-160850-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-160850-1

Metals

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 417030 and analytical batch 417354 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 samples were diluted to bring the concentration of target analytes within the calibration range: MW-104 (400-160850-3), MW-110 (400-160850-7) and DUP-03 (400-160850-9). Elevated reporting limits (RLs) are provided.

Method(s) 7470A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 417773 and analytical batch 418016 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.

General Chemistry

Method(s) SM 4500 Cl- E: The following samples were diluted due to the nature of the sample matrix: MW-104 (400-160850-3), MW-110 (400-160850-7) and DUP-03 (400-160850-9). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: Due to the concentration of sulfates in the parent sample the MS/MSD were diluted after the spike. The spike amounts were adjusted by the dilution factor. (460-167172-E-1 MS) and (460-167172-E-1 MSD)

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-104 (400-160850-3), MW-110 (400-160850-7), DUP-03 (400-160850-9), (460-167172-E-1), (460-167172-E-1 MS) and (460-167172-E-1 MSD). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 417368 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.

Detection Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160850-1
SDG: Landfill 1

Client Sample ID: MW-102 — Lab Sample ID: 400-160850-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0085		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.34		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	0.37		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0012	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Mercury	0.000094	I	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	54		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	6.7		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	3.4	I	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	5.15				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-103 — Lab Sample ID: 400-160850-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.052		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.25		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	3.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0017	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0016		0.0013	0.00071	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	64		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	12		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	31		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	4.93				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-104 — Lab Sample ID: 400-160850-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0019		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.021		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00084	I	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cadmium	0.00044	I	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	52		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0016	I	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.016		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0020		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.022		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0049		0.0013	0.00071	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160850-1
SDG: Landfill 1

Client Sample ID: MW-104 (Continued) — Lab Sample ID: 400-160850-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Thallium	0.00021	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	9.6		1.0	0.42	mg/L	100		6020	Total Recoverable
Mercury	0.00087		0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	860		10	6.8	mg/L	1		SM 2540C	Total/NA
Chloride	100		10	7.0	mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.26		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	460		150	42	mg/L	30		SM 4500 SO4 E	Total/NA
Field pH	4.12				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-105 — Lab Sample ID: 400-160850-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0044		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.035		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.43		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	63		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0029		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0032	I	0.015	0.0020	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	250		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	32		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.040	I	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	6.6		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.19				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-106 — Lab Sample ID: 400-160850-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0096		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.067		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	0.47		0.25	0.13	mg/L	5		6020	Total Recoverable
Lead	0.00039	I	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.0012	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	68		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
Field pH	5.07				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-109 — Lab Sample ID: 400-160850-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.019		0.0025	0.00049	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160850-1
SDG: Landfill 1

Client Sample ID: MW-109 (Continued) — Lab Sample ID: 400-160850-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.15		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	2.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0036		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0062		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	34		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	7.5		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	8.1		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	4.76				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-110 — Lab Sample ID: 400-160850-7

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.035		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	38		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.025		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.011		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0033		0.0013	0.00071	mg/L	5		6020	Total Recoverable
Thallium	0.00031	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	4.3		0.50	0.21	mg/L	50		6020	Total Recoverable
Mercury	0.0034		0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	750		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	160		20	14	mg/L	10		SM 4500 Cl- E	Total/NA
Fluoride	0.040	I	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	280		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	4.73				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-101 — Lab Sample ID: 400-160850-8

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0089		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.081		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	0.41		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0013	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	28		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.2		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.97				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-03 — Lab Sample ID: 400-160850-9

This Detection Summary does not include radiochemical test results.

Client Sample ID: DUP-03 (Continued) — Lab Sample ID: 400-160850-9

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.036		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	37		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.025		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.011		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0034		0.0013	0.00071	mg/L	5		6020	Total Recoverable
Thallium	0.00031	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	4.4		0.50	0.21	mg/L	50		6020	Total Recoverable
Mercury	0.0034		0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	690		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	160		20	14	mg/L	10		SM 4500 Cl- E	Total/NA
Fluoride	0.040	I	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	280		100	28	mg/L	20		SM 4500 SO4 E	Total/NA

Client Sample ID: FB-02 — Lab Sample ID: 400-160850-10

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.080		0.050	0.021	mg/L	5		6020	Total Recoverable

Client Sample ID: EB-02 — Lab Sample ID: 400-160850-11

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160850-1
SDG: Landfill 1

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

Sample Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160850-1
SDG: Landfill 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-160850-1	MW-102	Water	10/19/18 13:25	10/19/18 14:10
400-160850-2	MW-103	Water	10/18/18 14:20	10/19/18 14:10
400-160850-3	MW-104	Water	10/18/18 11:06	10/19/18 14:10
400-160850-4	MW-105	Water	10/18/18 09:30	10/19/18 14:10
400-160850-5	MW-106	Water	10/18/18 08:15	10/19/18 14:10
400-160850-6	MW-109	Water	10/18/18 11:00	10/19/18 14:10
400-160850-7	MW-110	Water	10/18/18 09:55	10/19/18 14:10
400-160850-8	MW-101	Water	10/18/18 07:06	10/19/18 14:10
400-160850-9	DUP-03	Water	10/18/18 08:55	10/19/18 14:10
400-160850-10	FB-02	Water	10/18/18 14:30	10/19/18 14:10
400-160850-11	EB-02	Water	10/18/18 11:05	10/19/18 14:10

Client Sample ID: MW-102

Date Collected: 10/19/18 13:25
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-1

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00046	U	0.0013	0.00046	mg/L		10/25/18 17:53	10/26/18 13:39	5
Barium	**0.0085**		0.0025	0.00049	mg/L		10/25/18 17:53	10/26/18 13:39	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 13:39	5
Boron	**0.34**		0.050	0.021	mg/L		10/25/18 17:53	10/26/18 13:39	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 13:39	5
Calcium	**0.37**		0.25	0.13	mg/L		10/25/18 17:53	10/26/18 13:39	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		10/25/18 17:53	10/26/18 13:39	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		10/25/18 17:53	10/26/18 13:39	5
Lead	0.00035	U	0.0013	0.00035	mg/L		10/25/18 17:53	10/26/18 13:39	5
Lithium	**0.0012**	**I**	0.0050	0.0011	mg/L		10/25/18 17:53	10/26/18 13:39	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/25/18 17:53	10/26/18 13:39	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		10/25/18 17:53	10/26/18 13:39	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		10/25/18 17:53	10/26/18 13:39	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.000094**	**I**	0.00020	0.000070	mg/L		10/31/18 10:01	11/01/18 14:22	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**54**		5.0	3.4	mg/L			10/25/18 17:12	1
Chloride	**6.7**		2.0	1.4	mg/L			10/30/18 13:58	1
Fluoride	0.032	U	0.10	0.032	mg/L			10/28/18 12:02	1
Sulfate	**3.4**	**I**	5.0	1.4	mg/L			10/31/18 08:36	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**5.15**				SU			10/19/18 13:25	1

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160850-1
SDG: Landfill 1

Client Sample ID: MW-103

Date Collected: 10/18/18 14:20
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-2

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00046	U	0.0013	0.00046	mg/L		10/25/18 17:53	10/26/18 13:42	5
Barium	**0.052**		0.0025	0.00049	mg/L		10/25/18 17:53	10/26/18 13:42	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 13:42	5
Boron	**0.25**		0.050	0.021	mg/L		10/25/18 17:53	10/26/18 13:42	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 13:42	5
Calcium	**3.1**		0.25	0.13	mg/L		10/25/18 17:53	10/26/18 13:42	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		10/25/18 17:53	10/26/18 13:42	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		10/25/18 17:53	10/26/18 13:42	5
Lead	0.00035	U	0.0013	0.00035	mg/L		10/25/18 17:53	10/26/18 13:42	5
Lithium	**0.0017**	**I**	0.0050	0.0011	mg/L		10/25/18 17:53	10/26/18 13:42	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/25/18 17:53	10/26/18 13:42	5
Selenium	**0.0016**		0.0013	0.00071	mg/L		10/25/18 17:53	10/26/18 13:42	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		10/25/18 17:53	10/26/18 13:42	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		10/31/18 10:01	11/01/18 14:24	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**64**		5.0	3.4	mg/L			10/25/18 17:34	1
Chloride	**12**		2.0	1.4	mg/L			10/30/18 09:43	1
Fluoride	0.032	U	0.10	0.032	mg/L			10/28/18 12:06	1
Sulfate	**31**		5.0	1.4	mg/L			10/29/18 09:44	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.93**				SU			10/18/18 14:20	1

Client Sample ID: MW-104

Date Collected: 10/18/18 11:06
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-3

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0019		0.0013	0.00046	mg/L		10/25/18 17:53	10/26/18 13:46	5
Barium	0.021		0.0025	0.00049	mg/L		10/25/18 17:53	10/26/18 13:46	5
Beryllium	0.00084	I	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 13:46	5
Cadmium	0.00044	I	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 13:46	5
Calcium	52		0.25	0.13	mg/L		10/25/18 17:53	10/26/18 13:46	5
Chromium	0.0016	I	0.0025	0.0011	mg/L		10/25/18 17:53	10/26/18 13:46	5
Cobalt	0.016		0.0025	0.00040	mg/L		10/25/18 17:53	10/26/18 13:46	5
Lead	0.0020		0.0013	0.00035	mg/L		10/25/18 17:53	10/26/18 13:46	5
Lithium	0.022		0.0050	0.0011	mg/L		10/25/18 17:53	10/26/18 13:46	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/25/18 17:53	10/26/18 13:46	5
Selenium	0.0049		0.0013	0.00071	mg/L		10/25/18 17:53	10/26/18 13:46	5
Thallium	0.00021	I	0.00050	0.000085	mg/L		10/25/18 17:53	10/26/18 13:46	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	9.6		1.0	0.42	mg/L		10/25/18 17:53	10/26/18 14:39	100

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00087		0.00020	0.000070	mg/L		10/31/18 10:01	11/01/18 14:26	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	860		10	6.8	mg/L			10/25/18 17:34	1
Chloride	100		10	7.0	mg/L			10/29/18 17:24	5
Fluoride	0.26		0.10	0.032	mg/L			10/28/18 12:10	1
Sulfate	460		150	42	mg/L			10/29/18 10:12	30

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.12				SU			10/18/18 11:06	1

Client Sample ID: MW-105

Date Collected: 10/18/18 09:30
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-4

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0044**		0.0013	0.00046	mg/L		10/25/18 17:53	10/26/18 13:50	5
Barium	**0.035**		0.0025	0.00049	mg/L		10/25/18 17:53	10/26/18 13:50	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 13:50	5
Boron	**0.43**		0.050	0.021	mg/L		10/25/18 17:53	10/26/18 13:50	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 13:50	5
Calcium	**63**		0.25	0.13	mg/L		10/25/18 17:53	10/26/18 13:50	5
Chromium	**0.0029**		0.0025	0.0011	mg/L		10/25/18 17:53	10/26/18 13:50	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		10/25/18 17:53	10/26/18 13:50	5
Lead	0.00035	U	0.0013	0.00035	mg/L		10/25/18 17:53	10/26/18 13:50	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		10/25/18 17:53	10/26/18 13:50	5
Molybdenum	**0.0032**	**I**	0.015	0.0020	mg/L		10/25/18 17:53	10/26/18 13:50	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		10/25/18 17:53	10/26/18 13:50	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		10/25/18 17:53	10/26/18 13:50	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		10/31/18 10:01	11/01/18 14:28	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**250**		5.0	3.4	mg/L			10/25/18 17:34	1
Chloride	**32**		2.0	1.4	mg/L			10/30/18 09:43	1
Fluoride	**0.040**	**I**	0.10	0.032	mg/L			10/28/18 12:12	1
Sulfate	**6.6**		5.0	1.4	mg/L			10/29/18 09:44	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**6.19**				SU			10/18/18 09:30	1

Client Sample ID: MW-106

Date Collected: 10/18/18 08:15
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-5

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00046	U	0.0013	0.00046	mg/L		10/25/18 17:53	10/26/18 13:53	5
Barium	**0.0096**		0.0025	0.00049	mg/L		10/25/18 17:53	10/26/18 13:53	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 13:53	5
Boron	**0.067**		0.050	0.021	mg/L		10/25/18 17:53	10/26/18 13:53	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 13:53	5
Calcium	**0.47**		0.25	0.13	mg/L		10/25/18 17:53	10/26/18 13:53	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		10/25/18 17:53	10/26/18 13:53	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		10/25/18 17:53	10/26/18 13:53	5
Lead	**0.00039**	**I**	0.0013	0.00035	mg/L		10/25/18 17:53	10/26/18 13:53	5
Lithium	**0.0012**	**I**	0.0050	0.0011	mg/L		10/25/18 17:53	10/26/18 13:53	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/25/18 17:53	10/26/18 13:53	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		10/25/18 17:53	10/26/18 13:53	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		10/25/18 17:53	10/26/18 13:53	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		10/31/18 10:01	11/01/18 14:29	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**68**		5.0	3.4	mg/L			10/25/18 17:34	1
Chloride	**5.0**		2.0	1.4	mg/L			10/30/18 09:43	1
Fluoride	0.032	U	0.10	0.032	mg/L			10/29/18 08:36	1
Sulfate	1.4	U	5.0	1.4	mg/L			10/29/18 09:44	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**5.07**				SU			10/18/18 08:15	1

Client Sample ID: MW-109

Date Collected: 10/18/18 11:00
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-6

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00046	U	0.0013	0.00046	mg/L		10/25/18 17:53	10/26/18 13:57	5
Barium	**0.019**		0.0025	0.00049	mg/L		10/25/18 17:53	10/26/18 13:57	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 13:57	5
Boron	**0.15**		0.050	0.021	mg/L		10/25/18 17:53	10/26/18 13:57	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 13:57	5
Calcium	**2.8**		0.25	0.13	mg/L		10/25/18 17:53	10/26/18 13:57	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		10/25/18 17:53	10/26/18 13:57	5
Cobalt	**0.0036**		0.0025	0.00040	mg/L		10/25/18 17:53	10/26/18 13:57	5
Lead	0.00035	U	0.0013	0.00035	mg/L		10/25/18 17:53	10/26/18 13:57	5
Lithium	**0.0062**		0.0050	0.0011	mg/L		10/25/18 17:53	10/26/18 13:57	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/25/18 17:53	10/26/18 13:57	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		10/25/18 17:53	10/26/18 13:57	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		10/25/18 17:53	10/26/18 13:57	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		10/31/18 10:01	11/01/18 14:31	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**34**		5.0	3.4	mg/L			10/25/18 17:34	1
Chloride	**7.5**		2.0	1.4	mg/L			10/30/18 09:43	1
Fluoride	0.032	U	0.10	0.032	mg/L			10/29/18 08:44	1
Sulfate	**8.1**		5.0	1.4	mg/L			10/29/18 09:44	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.76**				SU			10/18/18 11:00	1

Client Sample ID: MW-110

Date Collected: 10/18/18 09:55
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-7

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00046	U	0.0013	0.00046	mg/L		10/25/18 17:53	10/26/18 14:00	5
Barium	**0.035**		0.0025	0.00049	mg/L		10/25/18 17:53	10/26/18 14:00	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 14:00	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 14:00	5
Calcium	**38**		0.25	0.13	mg/L		10/25/18 17:53	10/26/18 14:00	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		10/25/18 17:53	10/26/18 14:00	5
Cobalt	**0.025**		0.0025	0.00040	mg/L		10/25/18 17:53	10/26/18 14:00	5
Lead	0.00035	U	0.0013	0.00035	mg/L		10/25/18 17:53	10/26/18 14:00	5
Lithium	**0.011**		0.0050	0.0011	mg/L		10/25/18 17:53	10/26/18 14:00	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/25/18 17:53	10/26/18 14:00	5
Selenium	**0.0033**		0.0013	0.00071	mg/L		10/25/18 17:53	10/26/18 14:00	5
Thallium	**0.00031**	**I**	0.00050	0.000085	mg/L		10/25/18 17:53	10/26/18 14:00	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**4.3**		0.50	0.21	mg/L		10/25/18 17:53	10/26/18 14:43	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.0034**		0.00020	0.000070	mg/L		10/31/18 10:01	11/01/18 14:33	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**750**		5.0	3.4	mg/L			10/25/18 17:34	1
Chloride	**160**		20	14	mg/L			10/29/18 17:25	10
Fluoride	**0.040**	**I**	0.10	0.032	mg/L			10/29/18 08:48	1
Sulfate	**280**		100	28	mg/L			10/29/18 10:12	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.73**				SU			10/18/18 09:55	1

Client Sample ID: MW-101

Date Collected: 10/18/18 07:06
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-8

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00046	U	0.0013	0.00046	mg/L		10/25/18 17:53	10/26/18 14:04	5
Barium	**0.0089**		0.0025	0.00049	mg/L		10/25/18 17:53	10/26/18 14:04	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 14:04	5
Boron	**0.081**		0.050	0.021	mg/L		10/25/18 17:53	10/26/18 14:04	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 14:04	5
Calcium	**0.41**		0.25	0.13	mg/L		10/25/18 17:53	10/26/18 14:04	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		10/25/18 17:53	10/26/18 14:04	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		10/25/18 17:53	10/26/18 14:04	5
Lead	0.00035	U	0.0013	0.00035	mg/L		10/25/18 17:53	10/26/18 14:04	5
Lithium	**0.0013**	**I**	0.0050	0.0011	mg/L		10/25/18 17:53	10/26/18 14:04	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/25/18 17:53	10/26/18 14:04	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		10/25/18 17:53	10/26/18 14:04	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		10/25/18 17:53	10/26/18 14:04	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		10/31/18 10:01	11/01/18 14:35	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**28**		5.0	3.4	mg/L			10/25/18 17:12	1
Chloride	**5.2**		2.0	1.4	mg/L			10/29/18 16:57	1
Fluoride	0.032	U	0.10	0.032	mg/L			10/29/18 08:51	1
Sulfate	1.4	U	5.0	1.4	mg/L			10/29/18 09:49	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.97**				SU			10/18/18 07:06	1

Client Sample ID: DUP-03

Date Collected: 10/18/18 08:55
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-9

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00046	U	0.0013	0.00046	mg/L		10/25/18 17:53	10/26/18 14:07	5
Barium	**0.036**		0.0025	0.00049	mg/L		10/25/18 17:53	10/26/18 14:07	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 14:07	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 14:07	5
Calcium	**37**		0.25	0.13	mg/L		10/25/18 17:53	10/26/18 14:07	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		10/25/18 17:53	10/26/18 14:07	5
Cobalt	**0.025**		0.0025	0.00040	mg/L		10/25/18 17:53	10/26/18 14:07	5
Lead	0.00035	U	0.0013	0.00035	mg/L		10/25/18 17:53	10/26/18 14:07	5
Lithium	**0.011**		0.0050	0.0011	mg/L		10/25/18 17:53	10/26/18 14:07	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/25/18 17:53	10/26/18 14:07	5
Selenium	**0.0034**		0.0013	0.00071	mg/L		10/25/18 17:53	10/26/18 14:07	5
Thallium	**0.00031**	**I**	0.00050	0.000085	mg/L		10/25/18 17:53	10/26/18 14:07	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**4.4**		0.50	0.21	mg/L		10/25/18 17:53	10/26/18 14:47	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.0034**		0.00020	0.000070	mg/L		10/31/18 10:01	11/01/18 14:37	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**690**		5.0	3.4	mg/L			10/25/18 17:34	1
Chloride	**160**		20	14	mg/L			10/29/18 17:25	10
Fluoride	**0.040**	**I**	0.10	0.032	mg/L			10/29/18 08:54	1
Sulfate	**280**		100	28	mg/L			10/29/18 10:16	20

Client Sample ID: FB-02

Date Collected: 10/18/18 14:30
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-10

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00046	U	0.0013	0.00046	mg/L		10/25/18 17:53	10/26/18 14:11	5
Barium	0.00049	U	0.0025	0.00049	mg/L		10/25/18 17:53	10/26/18 14:11	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 14:11	5
Boron	**0.080**		0.050	0.021	mg/L		10/25/18 17:53	10/26/18 14:11	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 14:11	5
Calcium	0.13	U	0.25	0.13	mg/L		10/25/18 17:53	10/26/18 14:11	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		10/25/18 17:53	10/26/18 14:11	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		10/25/18 17:53	10/26/18 14:11	5
Lead	0.00035	U	0.0013	0.00035	mg/L		10/25/18 17:53	10/26/18 14:11	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		10/25/18 17:53	10/26/18 14:11	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/25/18 17:53	10/26/18 14:11	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		10/25/18 17:53	10/26/18 14:11	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		10/25/18 17:53	10/26/18 14:11	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		10/31/18 10:01	11/01/18 14:49	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			10/25/18 17:34	1
Chloride	1.4	U	2.0	1.4	mg/L			10/30/18 09:44	1
Fluoride	0.032	U	0.10	0.032	mg/L			10/29/18 08:58	1
Sulfate	1.4	U	5.0	1.4	mg/L			10/29/18 09:49	1

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160850-1
SDG: Landfill 1

Client Sample ID: EB-02

Date Collected: 10/18/18 11:05
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-11

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00046	U	0.0013	0.00046	mg/L		10/25/18 17:53	10/26/18 14:32	5
Barium	0.00049	U	0.0025	0.00049	mg/L		10/25/18 17:53	10/26/18 14:32	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 14:32	5
Boron	0.021	U	0.050	0.021	mg/L		10/25/18 17:53	10/26/18 14:32	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 14:32	5
Calcium	0.13	U	0.25	0.13	mg/L		10/25/18 17:53	10/26/18 14:32	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		10/25/18 17:53	10/26/18 14:32	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		10/25/18 17:53	10/26/18 14:32	5
Lead	0.00035	U	0.0013	0.00035	mg/L		10/25/18 17:53	10/26/18 14:32	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		10/25/18 17:53	10/26/18 14:32	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/25/18 17:53	10/26/18 14:32	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		10/25/18 17:53	10/26/18 14:32	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		10/25/18 17:53	10/26/18 14:32	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		10/31/18 10:33	11/01/18 16:04	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			10/25/18 17:12	1
Chloride	1.4	U	2.0	1.4	mg/L			10/30/18 09:44	1
Fluoride	0.032	U	0.10	0.032	mg/L			10/29/18 09:02	1
Sulfate	1.4	U	5.0	1.4	mg/L			10/29/18 09:49	1

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
L	Off-scale high. Actual value is known to be greater than the value given.

General Chemistry

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.

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)

Client Sample ID: MW-102
Date Collected: 10/19/18 13:25
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			417030	10/25/18 17:53	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	417354	10/26/18 13:39	DRE	TAL PEN
Total/NA	Prep	7470A			417773	10/31/18 10:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	418016	11/01/18 14:22	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	417012	10/25/18 17:12	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	417638	10/30/18 13:58	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	417309	10/28/18 12:02	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	417786	10/31/18 08:36	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	418909	10/19/18 13:25	AW	TAL PEN

Client Sample ID: MW-103
Date Collected: 10/18/18 14:20
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			417030	10/25/18 17:53	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	417354	10/26/18 13:42	DRE	TAL PEN
Total/NA	Prep	7470A			417773	10/31/18 10:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	418016	11/01/18 14:24	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	417028	10/25/18 17:34	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	417589	10/30/18 09:43	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	417309	10/28/18 12:06	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	417368	10/29/18 09:44	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	418909	10/18/18 14:20	AW	TAL PEN

Client Sample ID: MW-104
Date Collected: 10/18/18 11:06
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			417030	10/25/18 17:53	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	417354	10/26/18 13:46	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		417030	10/25/18 17:53	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100	417354	10/26/18 14:39	DRE	TAL PEN
Total/NA	Prep	7470A			417773	10/31/18 10:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	418016	11/01/18 14:26	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	417028	10/25/18 17:34	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		5	417589	10/29/18 17:24	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	417309	10/28/18 12:10	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	417368	10/29/18 10:12	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	418909	10/18/18 11:06	AW	TAL PEN

Client Sample ID: MW-105

Date Collected: 10/18/18 09:30
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			417030	10/25/18 17:53	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	417354	10/26/18 13:50	DRE	TAL PEN
Total/NA	Prep	7470A			417773	10/31/18 10:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	418016	11/01/18 14:28	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	417028	10/25/18 17:34	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	417589	10/30/18 09:43	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	417309	10/28/18 12:12	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	417368	10/29/18 09:44	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	418909	10/18/18 09:30	AW	TAL PEN

Client Sample ID: MW-106

Date Collected: 10/18/18 08:15
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			417030	10/25/18 17:53	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	417354	10/26/18 13:53	DRE	TAL PEN
Total/NA	Prep	7470A			417773	10/31/18 10:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	418016	11/01/18 14:29	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	417028	10/25/18 17:34	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	417589	10/30/18 09:43	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	417361	10/29/18 08:36	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	417368	10/29/18 09:44	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	418909	10/18/18 08:15	AW	TAL PEN

Client Sample ID: MW-109

Date Collected: 10/18/18 11:00
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			417030	10/25/18 17:53	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	417354	10/26/18 13:57	DRE	TAL PEN
Total/NA	Prep	7470A			417773	10/31/18 10:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	418016	11/01/18 14:31	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	417028	10/25/18 17:34	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	417589	10/30/18 09:43	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	417361	10/29/18 08:44	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	417368	10/29/18 09:44	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	418909	10/18/18 11:00	AW	TAL PEN

Client Sample ID: MW-110

Lab Sample ID: 400-160850-7

Date Collected: 10/18/18 09:55

Matrix: Water

Date Received: 10/19/18 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			417030	10/25/18 17:53	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	417354	10/26/18 14:00	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		417030	10/25/18 17:53	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	417354	10/26/18 14:43	DRE	TAL PEN
Total/NA	Prep	7470A			417773	10/31/18 10:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	418016	11/01/18 14:33	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	417028	10/25/18 17:34	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		10	417589	10/29/18 17:25	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	417361	10/29/18 08:48	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	417368	10/29/18 10:12	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	418909	10/18/18 09:55	AW	TAL PEN

Client Sample ID: MW-101

Lab Sample ID: 400-160850-8

Date Collected: 10/18/18 07:06

Matrix: Water

Date Received: 10/19/18 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			417030	10/25/18 17:53	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	417354	10/26/18 14:04	DRE	TAL PEN
Total/NA	Prep	7470A			417773	10/31/18 10:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	418016	11/01/18 14:35	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	417012	10/25/18 17:12	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	417589	10/29/18 16:57	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	417361	10/29/18 08:51	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	417368	10/29/18 09:49	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	418909	10/18/18 07:06	AW	TAL PEN

Client Sample ID: DUP-03

Lab Sample ID: 400-160850-9

Date Collected: 10/18/18 08:55

Matrix: Water

Date Received: 10/19/18 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			417030	10/25/18 17:53	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	417354	10/26/18 14:07	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		417030	10/25/18 17:53	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	417354	10/26/18 14:47	DRE	TAL PEN
Total/NA	Prep	7470A			417773	10/31/18 10:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	418016	11/01/18 14:37	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	417028	10/25/18 17:34	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		10	417589	10/29/18 17:25	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	417361	10/29/18 08:54	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	417368	10/29/18 10:16	RRC	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160850-1
SDG: Landfill 1

Client Sample ID: FB-02

Date Collected: 10/18/18 14:30
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			417030	10/25/18 17:53	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	417354	10/26/18 14:11	DRE	TAL PEN
Total/NA	Prep	7470A			417773	10/31/18 10:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	418016	11/01/18 14:49	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	417028	10/25/18 17:34	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	417589	10/30/18 09:44	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	417361	10/29/18 08:58	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	417368	10/29/18 09:49	RRC	TAL PEN

Client Sample ID: EB-02

Date Collected: 10/18/18 11:05
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			417030	10/25/18 17:53	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	417354	10/26/18 14:32	DRE	TAL PEN
Total/NA	Prep	7470A			417787	10/31/18 10:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	418016	11/01/18 16:04	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	417012	10/25/18 17:12	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	417589	10/30/18 09:44	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	417361	10/29/18 09:02	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	417368	10/29/18 09:49	RRC	TAL PEN

Laboratory References:

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

Metals

Prep Batch: 417030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160850-1	MW-102	Total Recoverable	Water	3005A	
400-160850-2	MW-103	Total Recoverable	Water	3005A	
400-160850-3	MW-104	Total Recoverable	Water	3005A	
400-160850-3 - DL	MW-104	Total Recoverable	Water	3005A	
400-160850-4	MW-105	Total Recoverable	Water	3005A	
400-160850-5	MW-106	Total Recoverable	Water	3005A	
400-160850-6	MW-109	Total Recoverable	Water	3005A	
400-160850-7	MW-110	Total Recoverable	Water	3005A	
400-160850-7 - DL	MW-110	Total Recoverable	Water	3005A	
400-160850-8	MW-101	Total Recoverable	Water	3005A	
400-160850-9 - DL	DUP-03	Total Recoverable	Water	3005A	
400-160850-9	DUP-03	Total Recoverable	Water	3005A	
400-160850-10	FB-02	Total Recoverable	Water	3005A	
400-160850-11	EB-02	Total Recoverable	Water	3005A	
MB 400-417030/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-417030/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
490-161779-A-14-B MS ^5	Matrix Spike	Dissolved	Water	3005A	
490-161779-A-14-C MSD ^5	Matrix Spike Duplicate	Dissolved	Water	3005A	

Analysis Batch: 417354

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160850-1	MW-102	Total Recoverable	Water	6020	417030
400-160850-2	MW-103	Total Recoverable	Water	6020	417030
400-160850-3	MW-104	Total Recoverable	Water	6020	417030
400-160850-3 - DL	MW-104	Total Recoverable	Water	6020	417030
400-160850-4	MW-105	Total Recoverable	Water	6020	417030
400-160850-5	MW-106	Total Recoverable	Water	6020	417030
400-160850-6	MW-109	Total Recoverable	Water	6020	417030
400-160850-7	MW-110	Total Recoverable	Water	6020	417030
400-160850-7 - DL	MW-110	Total Recoverable	Water	6020	417030
400-160850-8	MW-101	Total Recoverable	Water	6020	417030
400-160850-9	DUP-03	Total Recoverable	Water	6020	417030
400-160850-9 - DL	DUP-03	Total Recoverable	Water	6020	417030
400-160850-10	FB-02	Total Recoverable	Water	6020	417030
400-160850-11	EB-02	Total Recoverable	Water	6020	417030
MB 400-417030/1-A ^5	Method Blank	Total Recoverable	Water	6020	417030
LCS 400-417030/2-A	Lab Control Sample	Total Recoverable	Water	6020	417030
490-161779-A-14-B MS ^5	Matrix Spike	Dissolved	Water	6020	417030
490-161779-A-14-C MSD ^5	Matrix Spike Duplicate	Dissolved	Water	6020	417030

Prep Batch: 417773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160850-1	MW-102	Total/NA	Water	7470A	
400-160850-2	MW-103	Total/NA	Water	7470A	
400-160850-3	MW-104	Total/NA	Water	7470A	
400-160850-4	MW-105	Total/NA	Water	7470A	
400-160850-5	MW-106	Total/NA	Water	7470A	
400-160850-6	MW-109	Total/NA	Water	7470A	
400-160850-7	MW-110	Total/NA	Water	7470A	
400-160850-8	MW-101	Total/NA	Water	7470A	
400-160850-9	DUP-03	Total/NA	Water	7470A	

Metals (Continued)

Prep Batch: 417773 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160850-10	FB-02	Total/NA	Water	7470A	
MB 400-417773/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-417773/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-161164-E-1-C MS	Matrix Spike	Total/NA	Water	7470A	
400-161164-E-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 417787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160850-11	EB-02	Total/NA	Water	7470A	
MB 400-417787/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-417787/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-160832-B-2-C MS	Matrix Spike	Total/NA	Water	7470A	
400-160832-B-2-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 418016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160850-1	MW-102	Total/NA	Water	7470A	417773
400-160850-2	MW-103	Total/NA	Water	7470A	417773
400-160850-3	MW-104	Total/NA	Water	7470A	417773
400-160850-4	MW-105	Total/NA	Water	7470A	417773
400-160850-5	MW-106	Total/NA	Water	7470A	417773
400-160850-6	MW-109	Total/NA	Water	7470A	417773
400-160850-7	MW-110	Total/NA	Water	7470A	417773
400-160850-8	MW-101	Total/NA	Water	7470A	417773
400-160850-9	DUP-03	Total/NA	Water	7470A	417773
400-160850-10	FB-02	Total/NA	Water	7470A	417773
400-160850-11	EB-02	Total/NA	Water	7470A	417787
MB 400-417773/14-A	Method Blank	Total/NA	Water	7470A	417773
MB 400-417787/14-A	Method Blank	Total/NA	Water	7470A	417787
LCS 400-417773/15-A	Lab Control Sample	Total/NA	Water	7470A	417773
LCS 400-417787/15-A	Lab Control Sample	Total/NA	Water	7470A	417787
400-160832-B-2-C MS	Matrix Spike	Total/NA	Water	7470A	417787
400-160832-B-2-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	417787
400-161164-E-1-C MS	Matrix Spike	Total/NA	Water	7470A	417773
400-161164-E-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	417773

General Chemistry

Analysis Batch: 417012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160850-1	MW-102	Total/NA	Water	SM 2540C	
400-160850-8	MW-101	Total/NA	Water	SM 2540C	
400-160850-11	EB-02	Total/NA	Water	SM 2540C	
MB 400-417012/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-417012/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-160944-C-1 DU	Duplicate	Total/NA	Water	SM 2540C	
400-161031-E-5 DU	Duplicate	Total/NA	Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 417028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160850-2	MW-103	Total/NA	Water	SM 2540C	
400-160850-3	MW-104	Total/NA	Water	SM 2540C	
400-160850-4	MW-105	Total/NA	Water	SM 2540C	
400-160850-5	MW-106	Total/NA	Water	SM 2540C	
400-160850-6	MW-109	Total/NA	Water	SM 2540C	
400-160850-7	MW-110	Total/NA	Water	SM 2540C	
400-160850-9	DUP-03	Total/NA	Water	SM 2540C	
400-160850-10	FB-02	Total/NA	Water	SM 2540C	
MB 400-417028/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-417028/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-160850-4 DU	MW-105	Total/NA	Water	SM 2540C	
400-160850-9 DU	DUP-03	Total/NA	Water	SM 2540C	

Analysis Batch: 417309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160850-1	MW-102	Total/NA	Water	SM 4500 F C	
400-160850-2	MW-103	Total/NA	Water	SM 4500 F C	
400-160850-3	MW-104	Total/NA	Water	SM 4500 F C	
400-160850-4	MW-105	Total/NA	Water	SM 4500 F C	
MB 400-417309/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-417309/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-160768-I-1 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-160768-I-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-160814-A-4 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 417361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160850-5	MW-106	Total/NA	Water	SM 4500 F C	
400-160850-6	MW-109	Total/NA	Water	SM 4500 F C	
400-160850-7	MW-110	Total/NA	Water	SM 4500 F C	
400-160850-8	MW-101	Total/NA	Water	SM 4500 F C	
400-160850-9	DUP-03	Total/NA	Water	SM 4500 F C	
400-160850-10	FB-02	Total/NA	Water	SM 4500 F C	
400-160850-11	EB-02	Total/NA	Water	SM 4500 F C	
MB 400-417361/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-417361/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-160850-5 MS	MW-106	Total/NA	Water	SM 4500 F C	
400-160850-5 MSD	MW-106	Total/NA	Water	SM 4500 F C	
400-160930-C-2 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 417368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160850-2	MW-103	Total/NA	Water	SM 4500 SO4 E	
400-160850-3	MW-104	Total/NA	Water	SM 4500 SO4 E	
400-160850-4	MW-105	Total/NA	Water	SM 4500 SO4 E	
400-160850-5	MW-106	Total/NA	Water	SM 4500 SO4 E	
400-160850-6	MW-109	Total/NA	Water	SM 4500 SO4 E	
400-160850-7	MW-110	Total/NA	Water	SM 4500 SO4 E	
400-160850-8	MW-101	Total/NA	Water	SM 4500 SO4 E	
400-160850-9	DUP-03	Total/NA	Water	SM 4500 SO4 E	
400-160850-10	FB-02	Total/NA	Water	SM 4500 SO4 E	

General Chemistry (Continued)

Analysis Batch: 417368 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160850-11	EB-02	Total/NA	Water	SM 4500 SO4 E	
MB 400-417368/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-417368/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-417368/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-160861-O-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-160861-O-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	
460-167172-E-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
460-167172-E-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 417589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160850-2	MW-103	Total/NA	Water	SM 4500 Cl- E	
400-160850-3	MW-104	Total/NA	Water	SM 4500 Cl- E	
400-160850-4	MW-105	Total/NA	Water	SM 4500 Cl- E	
400-160850-5	MW-106	Total/NA	Water	SM 4500 Cl- E	
400-160850-6	MW-109	Total/NA	Water	SM 4500 Cl- E	
400-160850-7	MW-110	Total/NA	Water	SM 4500 Cl- E	
400-160850-8	MW-101	Total/NA	Water	SM 4500 Cl- E	
400-160850-9	DUP-03	Total/NA	Water	SM 4500 Cl- E	
400-160850-10	FB-02	Total/NA	Water	SM 4500 Cl- E	
400-160850-11	EB-02	Total/NA	Water	SM 4500 Cl- E	
MB 400-417589/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-417589/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-417589/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-160850-8 MS	MW-101	Total/NA	Water	SM 4500 Cl- E	
400-160850-8 MSD	MW-101	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 417638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160850-1	MW-102	Total/NA	Water	SM 4500 Cl- E	
MB 400-417638/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-417638/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-417638/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-161104-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-161104-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 417786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160850-1	MW-102	Total/NA	Water	SM 4500 SO4 E	
MB 400-417786/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-417786/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-417786/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-160968-B-9 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-160968-B-9 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Field Service / Mobile Lab

Analysis Batch: 418909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160850-1	MW-102	Total/NA	Water	Field Sampling	

Field Service / Mobile Lab (Continued)

Analysis Batch: 418909 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160850-2	MW-103	Total/NA	Water	Field Sampling	
400-160850-3	MW-104	Total/NA	Water	Field Sampling	
400-160850-4	MW-105	Total/NA	Water	Field Sampling	
400-160850-5	MW-106	Total/NA	Water	Field Sampling	
400-160850-6	MW-109	Total/NA	Water	Field Sampling	
400-160850-7	MW-110	Total/NA	Water	Field Sampling	
400-160850-8	MW-101	Total/NA	Water	Field Sampling	

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-417030/1-A ^5
Matrix: Water
Analysis Batch: 417354

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 417030

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00046	U	0.0013	0.00046	mg/L		10/25/18 17:53	10/26/18 13:14	5
Barium	0.00049	U	0.0025	0.00049	mg/L		10/25/18 17:53	10/26/18 13:14	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 13:14	5
Boron	0.021	U	0.050	0.021	mg/L		10/25/18 17:53	10/26/18 13:14	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		10/25/18 17:53	10/26/18 13:14	5
Calcium	0.13	U	0.25	0.13	mg/L		10/25/18 17:53	10/26/18 13:14	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		10/25/18 17:53	10/26/18 13:14	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		10/25/18 17:53	10/26/18 13:14	5
Lead	0.00035	U	0.0013	0.00035	mg/L		10/25/18 17:53	10/26/18 13:14	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		10/25/18 17:53	10/26/18 13:14	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/25/18 17:53	10/26/18 13:14	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		10/25/18 17:53	10/26/18 13:14	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		10/25/18 17:53	10/26/18 13:14	5

Lab Sample ID: LCS 400-417030/2-A
Matrix: Water
Analysis Batch: 417354

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 417030

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0500	0.0501		mg/L		100	80 - 120
Barium	0.0500	0.0481		mg/L		96	80 - 120
Beryllium	0.0500	0.0493		mg/L		99	80 - 120
Boron	0.100	0.0974		mg/L		97	80 - 120
Cadmium	0.0500	0.0511		mg/L		102	80 - 120
Calcium	5.00	4.80		mg/L		96	80 - 120
Chromium	0.0500	0.0498		mg/L		100	80 - 120
Cobalt	0.0500	0.0518		mg/L		104	80 - 120
Lead	0.0500	0.0502		mg/L		100	80 - 120
Lithium	0.0500	0.0520		mg/L		104	80 - 120
Molybdenum	0.0500	0.0498		mg/L		100	80 - 120
Selenium	0.0500	0.0488		mg/L		98	80 - 120
Thallium	0.0100	0.00913		mg/L		91	80 - 120

Lab Sample ID: 490-161779-A-14-B MS ^5
Matrix: Water
Analysis Batch: 417354

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 417030

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0046		0.0500	0.0523		mg/L		96	75 - 125
Barium	0.012		0.0500	0.0569		mg/L		90	75 - 125
Beryllium	0.024		0.0500	0.0768		mg/L		106	75 - 125
Boron	0.14		0.100	0.262		mg/L		120	75 - 125
Cadmium	0.00034	I	0.0500	0.0495		mg/L		98	75 - 125
Calcium	200	L	5.00	229	L J3	mg/L		514	75 - 125
Chromium	0.014		0.0500	0.0596		mg/L		92	75 - 125
Cobalt	0.12		0.0500	0.165		mg/L		88	75 - 125
Lead	0.0061		0.0500	0.0566		mg/L		101	75 - 125
Lithium	0.054		0.0500	0.107		mg/L		106	75 - 125

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

Lab Sample ID: 490-161779-A-14-B MS ^5
Matrix: Water
Analysis Batch: 417354

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 417030

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	0.0020	U	0.0500	0.0477		mg/L		95	75 - 125
Selenium	0.0032		0.0500	0.0554		mg/L		104	75 - 125
Thallium	0.000085	U	0.0100	0.00958		mg/L		96	75 - 125

Lab Sample ID: 490-161779-A-14-C MSD ^5
Matrix: Water
Analysis Batch: 417354

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 417030

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0046		0.0500	0.0518		mg/L		95	75 - 125	1	20
Barium	0.012		0.0500	0.0568		mg/L		90	75 - 125	0	20
Beryllium	0.024		0.0500	0.0770		mg/L		106	75 - 125	0	20
Boron	0.14		0.100	0.256		mg/L		114	75 - 125	2	20
Cadmium	0.00034	I	0.0500	0.0489		mg/L		97	75 - 125	1	20
Calcium	200	L	5.00	232	L J3	mg/L		578	75 - 125	1	20
Chromium	0.014		0.0500	0.0593		mg/L		91	75 - 125	1	20
Cobalt	0.12		0.0500	0.166		mg/L		89	75 - 125	0	20
Lead	0.0061		0.0500	0.0569		mg/L		102	75 - 125	1	20
Lithium	0.054		0.0500	0.108		mg/L		108	75 - 125	1	20
Molybdenum	0.0020	U	0.0500	0.0478		mg/L		96	75 - 125	0	20
Selenium	0.0032		0.0500	0.0551		mg/L		104	75 - 125	1	20
Thallium	0.000085	U	0.0100	0.00977		mg/L		98	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-417773/14-A
Matrix: Water
Analysis Batch: 418016

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 417773

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		10/31/18 09:42	11/01/18 13:33	1

Lab Sample ID: LCS 400-417773/15-A
Matrix: Water
Analysis Batch: 418016

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 417773

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.00102		mg/L		101	80 - 120

Lab Sample ID: 400-161164-E-1-C MS
Matrix: Water
Analysis Batch: 418016

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 417773

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.000070	U	0.00201	0.00151	J3	mg/L		75	80 - 120

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

Lab Sample ID: 400-161164-E-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 418016 — **Prep Batch: 417773**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.000070	U	0.00201	0.00141	J3	mg/L		70	80 - 120	7	20

Lab Sample ID: MB 400-417787/14-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 418016 — **Prep Batch: 417787**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		10/31/18 10:32	11/01/18 14:51	1

Lab Sample ID: LCS 400-417787/15-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 418016 — **Prep Batch: 417787**

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: 400-160832-B-2-C MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 418016 — **Prep Batch: 417787**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.000070	U	0.00201	0.00208		mg/L		103	80 - 120

Lab Sample ID: 400-160832-B-2-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 418016 — **Prep Batch: 417787**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.000070	U	0.00201	0.00208		mg/L		103	80 - 120	0	20

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

Lab Sample ID: MB 400-417012/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 417012

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			10/25/18 17:12	1

Lab Sample ID: LCS 400-417012/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 417012

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	300		mg/L		102	78 - 122

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

Lab Sample ID: 400-160944-C-1 DU
Matrix: Water
Analysis Batch: 417012

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	68			66.0		mg/L				3	5

Lab Sample ID: 400-161031-E-5 DU
Matrix: Water
Analysis Batch: 417012

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	230			232		mg/L				0.9	5

Lab Sample ID: MB 400-417028/1
Matrix: Water
Analysis Batch: 417028

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			10/25/18 17:34	1

Lab Sample ID: LCS 400-417028/2
Matrix: Water
Analysis Batch: 417028

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	290		mg/L		99	78 - 122		

Lab Sample ID: 400-160850-4 DU
Matrix: Water
Analysis Batch: 417028

Client Sample ID: MW-105
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	250			250		mg/L				0	5

Lab Sample ID: 400-160850-9 DU
Matrix: Water
Analysis Batch: 417028

Client Sample ID: DUP-03
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	690			692		mg/L				0.3	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-417589/6
Matrix: Water
Analysis Batch: 417589

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4	U	2.0	1.4	mg/L			10/29/18 16:54	1

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

Lab Sample ID: LCS 400-417589/7
Matrix: Water
Analysis Batch: 417589

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	32.4		mg/L		108	90 - 110

Lab Sample ID: MRL 400-417589/3
Matrix: Water
Analysis Batch: 417589

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	2.12		mg/L		106	50 - 150

Lab Sample ID: 400-160850-8 MS
Matrix: Water
Analysis Batch: 417589

Client Sample ID: MW-101
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.2		10.0	16.3		mg/L		111	73 - 120

Lab Sample ID: 400-160850-8 MSD
Matrix: Water
Analysis Batch: 417589

Client Sample ID: MW-101
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	5.2		10.0	16.1		mg/L		109	73 - 120	1	8

Lab Sample ID: MB 400-417638/6
Matrix: Water
Analysis Batch: 417638

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4	U	2.0	1.4	mg/L			10/30/18 13:58	1

Lab Sample ID: LCS 400-417638/7
Matrix: Water
Analysis Batch: 417638

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	31.5		mg/L		105	90 - 110

Lab Sample ID: MRL 400-417638/3
Matrix: Water
Analysis Batch: 417638

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	1.82	I	mg/L		91	50 - 150

Lab Sample ID: 400-161104-A-1 MS
Matrix: Water
Analysis Batch: 417638

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	4.3		10.0	16.2		mg/L		118	73 - 120

Lab Sample ID: 400-161104-A-1 MSD
Matrix: Water
Analysis Batch: 417638

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	4.3		10.0	16.2		mg/L		119	73 - 120	0	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-417309/3
Matrix: Water
Analysis Batch: 417309

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.032	U	0.10	0.032	mg/L			10/28/18 11:00	1

Lab Sample ID: LCS 400-417309/4
Matrix: Water
Analysis Batch: 417309

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	4.26		mg/L		107	90 - 110		

Lab Sample ID: 400-160768-I-1 MS
Matrix: Water
Analysis Batch: 417309

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	0.52		1.00	1.63		mg/L		111	75 - 125		

Lab Sample ID: 400-160768-I-1 MSD
Matrix: Water
Analysis Batch: 417309

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	0.52		1.00	1.63		mg/L		111	75 - 125	0	4

Lab Sample ID: 400-160814-A-4 DU
Matrix: Water
Analysis Batch: 417309

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Fluoride	0.032	U		0.032	U	mg/L				NC	4

Lab Sample ID: MB 400-417361/3
Matrix: Water
Analysis Batch: 417361

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.032	U	0.10	0.032	mg/L			10/29/18 08:24	1

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: LCS 400-417361/4
Matrix: Water
Analysis Batch: 417361

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	4.26		mg/L		107	90 - 110		

Lab Sample ID: 400-160850-5 MS
Matrix: Water
Analysis Batch: 417361

Client Sample ID: MW-106
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Fluoride	0.032	U	1.00	1.14		mg/L		114	75 - 125		

Lab Sample ID: 400-160850-5 MSD
Matrix: Water
Analysis Batch: 417361

Client Sample ID: MW-106
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.032	U	1.00	1.14		mg/L		114	75 - 125	0	4

Lab Sample ID: 400-160930-C-2 DU
Matrix: Water
Analysis Batch: 417361

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Fluoride	0.78			0.770		mg/L				1	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-417368/6
Matrix: Water
Analysis Batch: 417368

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.4	U	5.0	1.4	mg/L			10/29/18 09:38	1

Lab Sample ID: LCS 400-417368/7
Matrix: Water
Analysis Batch: 417368

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	13.9		mg/L		93	90 - 110		

Lab Sample ID: MRL 400-417368/3
Matrix: Water
Analysis Batch: 417368

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	4.11	I	mg/L		82	50 - 150		

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: 400-160861-O-1 MS
Matrix: Water
Analysis Batch: 417368

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	1.4	U	10.0	1.4	U J3	mg/L		0	77 - 128

Lab Sample ID: 400-160861-O-1 MSD
Matrix: Water
Analysis Batch: 417368

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	1.4	U	10.0	1.4	U J3	mg/L		0	77 - 128	NC	5

Lab Sample ID: 460-167172-E-1 MS
Matrix: Water
Analysis Batch: 417368

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	38		10.0	43.1	J3	mg/L		48	77 - 128

Lab Sample ID: 460-167172-E-1 MSD
Matrix: Water
Analysis Batch: 417368

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	38		10.0	43.7	J3	mg/L		54	77 - 128	1	5

Lab Sample ID: MB 400-417786/6
Matrix: Water
Analysis Batch: 417786

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.4	U	5.0	1.4	mg/L			10/31/18 08:36	1

Lab Sample ID: LCS 400-417786/7
Matrix: Water
Analysis Batch: 417786

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	14.8		mg/L		98	90 - 110

Lab Sample ID: MRL 400-417786/3
Matrix: Water
Analysis Batch: 417786

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	4.11	I	mg/L		82	50 - 150

Lab Sample ID: 400-160968-B-9 MS
Matrix: Water
Analysis Batch: 417786

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	13		10.0	20.6		mg/L		79	77 - 128

Lab Sample ID: 400-160968-B-9 MSD
Matrix: Water
Analysis Batch: 417786

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	13		10.0	20.9		mg/L		82	77 - 128	2	5

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

Chain of Custody Record

TestAmerica
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Client Information	Sampler: Brett Sides	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No:
Client Contact: Kristi Mitchell	Phone: 850 380 3458	E-Mail: cheyenne.whitmire@testamericainc.com		Page: 1-2
Company: Gulf Power Company		Analysis Requested		Job #: 1601850
Address: BIN 731 One Energy Place	Due Date 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)
City: Pensacola	TAT Requested (days):			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: CCR Plant Crist	Project #: 40006609			
Site: Landfill 1	SSOW#:			Other:

400-160850 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)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	SM4500_Cl_E - Chloride, SM4500_SO4_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C - Fluoride	6020 - Sb,As,Ba,B,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, 7470A - Mercury	FieldSampling - Field Sampling Parameters	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
MW-102	10/19/18	1325	G	Water			X	X	X	X		
MW-103	10/18/18	1420		Water								
MW-104	10/18/18	1106		Water								
MW-105	10/18/18	0930		Water								
MW-106	10/18/18	0815		Water								
MW-109	10/18/18	1100		Water								
MW-110	10/18/18	0955		Water								
MW-101	10/18/18	0704		Water								
Dup-03	10/18/18	0855		Water								
FB-02	10/18/18	1430		Water								
EB-02	10/18/18	1105	G	Water			X	X	X	X	8	

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)

Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		10/19/18 1410	RDH		10/19/18 1410	TAL Pens.
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 1.2°C, 1.5°C, 0.9°C IR-7

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-160850-1
SDG Number: Landfill 1

Login Number: 160850
List Number: 1
Creator: Whitmire, Cheyenne R

List Source: 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	1.2°C 1.5°C 0.9°C IR-7
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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160850-1
SDG: Landfill 1

Laboratory: 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	12-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA180023	12-31-18
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	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
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	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

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ANALYTICAL REPORT

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

TestAmerica Job ID: 400-160850-2
TestAmerica Sample Delivery Group: Landfill 1
Client Project/Site: CCR Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Authorized for release by:
11/19/2018 5:52:07 PM

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

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Method Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160850-2
SDG: Landfill 1

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

Sample Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160850-2
SDG: Landfill 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-160850-1	MW-102	Water	10/19/18 13:25	10/19/18 14:10
400-160850-2	MW-103	Water	10/18/18 14:20	10/19/18 14:10
400-160850-3	MW-104	Water	10/18/18 11:06	10/19/18 14:10
400-160850-4	MW-105	Water	10/18/18 09:30	10/19/18 14:10
400-160850-5	MW-106	Water	10/18/18 08:15	10/19/18 14:10
400-160850-6	MW-109	Water	10/18/18 11:00	10/19/18 14:10
400-160850-7	MW-110	Water	10/18/18 09:55	10/19/18 14:10
400-160850-8	MW-101	Water	10/18/18 07:06	10/19/18 14:10
400-160850-9	DUP-03	Water	10/18/18 08:55	10/19/18 14:10
400-160850-10	FB-02	Water	10/18/18 14:30	10/19/18 14:10
400-160850-11	EB-02	Water	10/18/18 11:05	10/19/18 14:10

Client Sample ID: MW-102

Date Collected: 10/19/18 13:25
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-1

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	0.519		0.192	0.197	1.00	0.201	pCi/L	10/24/18 13:38	11/15/18 13:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.9*		*40 - 110*	*10/24/18 13:38*	*11/15/18 13:09*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.483		0.233	0.237	1.00	0.331	pCi/L	10/24/18 14:00	11/13/18 16:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.9*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:52*	*1*
Y Carrier	*80.7*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:52*	*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	1.00		0.302	0.308	5.00	0.331	pCi/L		11/19/18 16:49	1

Client Sample ID: MW-103

Date Collected: 10/18/18 14:20
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-2

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	1.97		0.341	0.384	1.00	0.179	pCi/L	10/24/18 13:38	11/15/18 13:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.4*		*40 - 110*	*10/24/18 13:38*	*11/15/18 13:09*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.62		0.492	0.594	1.00	0.445	pCi/L	10/24/18 14:00	11/13/18 16:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.4*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:52*	*1*
Y Carrier	*79.6*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:52*	*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	5.59		0.599	0.707	5.00	0.445	pCi/L		11/19/18 16:49	1

Client Sample ID: MW-104

Date Collected: 10/18/18 11:06
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-3

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	2.24		0.357	0.410	1.00	0.177	pCi/L	10/24/18 13:38	11/15/18 13:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.0*		*40 - 110*	*10/24/18 13:38*	*11/15/18 13:09*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	9.82		0.744	1.17	1.00	0.408	pCi/L	10/24/18 14:00	11/13/18 16:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.0*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:52*	*1*
Y Carrier	*75.1*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:52*	*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	12.1		0.825	1.24	5.00	0.408	pCi/L		11/19/18 16:49	1

Client Sample ID: MW-105

Date Collected: 10/18/18 09:30
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-4

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	1.13		0.304	0.320	1.00	0.244	pCi/L	10/24/18 13:38	11/15/18 13:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.4*		*40 - 110*	*10/24/18 13:38*	*11/15/18 13:09*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.76		0.471	0.498	1.00	0.589	pCi/L	10/24/18 14:00	11/13/18 16:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.4*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:52*	*1*
Y Carrier	*78.9*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:52*	*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	2.89		0.561	0.592	5.00	0.589	pCi/L		11/19/18 16:49	1

Client Sample ID: MW-106

Date Collected: 10/18/18 08:15
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-5

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	0.305		0.146	0.148	1.00	0.162	pCi/L	10/24/18 13:38	11/15/18 13:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.2*		*40 - 110*	*10/24/18 13:38*	*11/15/18 13:09*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.741		0.278	0.286	1.00	0.375	pCi/L	10/24/18 14:00	11/13/18 16:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.2*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:52*	*1*
Y Carrier	*77.0*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:52*	*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	1.05		0.314	0.322	5.00	0.375	pCi/L		11/19/18 16:49	1

Client Sample ID: MW-109

Date Collected: 10/18/18 11:00
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-6

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	0.886		0.227	0.241	1.00	0.163	pCi/L	10/24/18 13:38	11/15/18 13:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.0*		*40 - 110*	*10/24/18 13:38*	*11/15/18 13:09*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.882		0.299	0.309	1.00	0.393	pCi/L	10/24/18 14:00	11/13/18 16:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.0*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:52*	*1*
Y Carrier	*78.9*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:52*	*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	1.77		0.375	0.392	5.00	0.393	pCi/L		11/19/18 16:49	1

Client Sample ID: MW-110

Date Collected: 10/18/18 09:55
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-7

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	2.72		0.384	0.455	1.00	0.176	pCi/L	10/24/18 13:38	11/15/18 13:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.2*		*40 - 110*	*10/24/18 13:38*	*11/15/18 13:09*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.50		0.537	0.678	1.00	0.454	pCi/L	10/24/18 14:00	11/13/18 16:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.2*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:52*	*1*
Y Carrier	*75.5*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:52*	*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	7.22		0.660	0.817	5.00	0.454	pCi/L		11/19/18 16:49	1

Client Sample ID: MW-101

Date Collected: 10/18/18 07:06
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-8

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	**0.602**		0.195	0.202	1.00	0.166	pCi/L	10/24/18 13:38	11/15/18 13:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.1*		*40 - 110*	*10/24/18 13:38*	*11/15/18 13:09*	*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	0.271	0.273	1.00	0.429	pCi/L	10/24/18 14:00	11/13/18 16:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.1*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:52*	*1*
Y Carrier	*78.1*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:52*	*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	**0.944**		0.334	0.340	5.00	0.429	pCi/L		11/19/18 16:51	1

Client Sample ID: DUP-03

Date Collected: 10/18/18 08:55
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-9

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	2.35		0.357	0.415	1.00	0.193	pCi/L	10/24/18 13:38	11/15/18 13:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.2*		*40 - 110*	*10/24/18 13:38*	*11/15/18 13:12*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.27		0.506	0.641	1.00	0.372	pCi/L	10/24/18 14:00	11/13/18 16:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.2*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:52*	*1*
Y Carrier	*82.2*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:52*	*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	6.63		0.619	0.764	5.00	0.372	pCi/L		11/19/18 16:51	1

Client Sample ID: FB-02

Date Collected: 10/18/18 14:30
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-10

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	0.140	U	0.115	0.116	1.00	0.168	pCi/L	10/24/18 13:38	11/15/18 13:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.0*		*40 - 110*	*10/24/18 13:38*	*11/15/18 13:12*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0175	U	0.226	0.226	1.00	0.412	pCi/L	10/24/18 14:00	11/13/18 16:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.0*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:53*	*1*
Y Carrier	*80.4*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:53*	*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	0.123	U	0.254	0.254	5.00	0.412	pCi/L		11/19/18 16:51	1

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160850-2
SDG: Landfill 1

Client Sample ID: EB-02

Date Collected: 10/18/18 11:05
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-11

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	0.203		0.115	0.117	1.00	0.130	pCi/L	10/24/18 13:38	11/15/18 13:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.9*		*40 - 110*	*10/24/18 13:38*	*11/15/18 13:12*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.244	U	0.233	0.234	1.00	0.457	pCi/L	10/24/18 14:00	11/13/18 16:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.9*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:53*	*1*
Y Carrier	*78.9*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:53*	*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	-0.0412	U	0.260	0.262	5.00	0.457	pCi/L		11/19/18 16:51	1

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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160850-2
SDG: Landfill 1

Client Sample ID: MW-102
Date Collected: 10/19/18 13:25
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			397076	10/24/18 13:38	JLC	TAL SL
Total/NA	Analysis	9315		1	401090	11/15/18 13:09	CDR	TAL SL
Total/NA	Prep	PrecSep_0			397125	10/24/18 14:00	JLC	TAL SL
Total/NA	Analysis	9320		1	400704	11/13/18 16:52	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	401672	11/19/18 16:49	RTM	TAL SL

Client Sample ID: MW-103
Date Collected: 10/18/18 14:20
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			397076	10/24/18 13:38	JLC	TAL SL
Total/NA	Analysis	9315		1	401090	11/15/18 13:09	CDR	TAL SL
Total/NA	Prep	PrecSep_0			397125	10/24/18 14:00	JLC	TAL SL
Total/NA	Analysis	9320		1	400704	11/13/18 16:52	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	401672	11/19/18 16:49	RTM	TAL SL

Client Sample ID: MW-104
Date Collected: 10/18/18 11:06
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			397076	10/24/18 13:38	JLC	TAL SL
Total/NA	Analysis	9315		1	401090	11/15/18 13:09	CDR	TAL SL
Total/NA	Prep	PrecSep_0			397125	10/24/18 14:00	JLC	TAL SL
Total/NA	Analysis	9320		1	400704	11/13/18 16:52	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	401672	11/19/18 16:49	RTM	TAL SL

Client Sample ID: MW-105
Date Collected: 10/18/18 09:30
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			397076	10/24/18 13:38	JLC	TAL SL
Total/NA	Analysis	9315		1	401090	11/15/18 13:09	CDR	TAL SL
Total/NA	Prep	PrecSep_0			397125	10/24/18 14:00	JLC	TAL SL
Total/NA	Analysis	9320		1	400704	11/13/18 16:52	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	401672	11/19/18 16:49	RTM	TAL SL

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160850-2
SDG: Landfill 1

Client Sample ID: MW-106
Date Collected: 10/18/18 08:15
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			397076	10/24/18 13:38	JLC	TAL SL
Total/NA	Analysis	9315		1	401090	11/15/18 13:09	CDR	TAL SL
Total/NA	Prep	PrecSep_0			397125	10/24/18 14:00	JLC	TAL SL
Total/NA	Analysis	9320		1	400704	11/13/18 16:52	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	401672	11/19/18 16:49	RTM	TAL SL

Client Sample ID: MW-109
Date Collected: 10/18/18 11:00
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			397076	10/24/18 13:38	JLC	TAL SL
Total/NA	Analysis	9315		1	401090	11/15/18 13:09	CDR	TAL SL
Total/NA	Prep	PrecSep_0			397125	10/24/18 14:00	JLC	TAL SL
Total/NA	Analysis	9320		1	400704	11/13/18 16:52	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	401672	11/19/18 16:49	RTM	TAL SL

Client Sample ID: MW-110
Date Collected: 10/18/18 09:55
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			397076	10/24/18 13:38	JLC	TAL SL
Total/NA	Analysis	9315		1	401090	11/15/18 13:09	CDR	TAL SL
Total/NA	Prep	PrecSep_0			397125	10/24/18 14:00	JLC	TAL SL
Total/NA	Analysis	9320		1	400704	11/13/18 16:52	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	401672	11/19/18 16:49	RTM	TAL SL

Client Sample ID: MW-101
Date Collected: 10/18/18 07:06
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			397076	10/24/18 13:38	JLC	TAL SL
Total/NA	Analysis	9315		1	401090	11/15/18 13:09	CDR	TAL SL
Total/NA	Prep	PrecSep_0			397125	10/24/18 14:00	JLC	TAL SL
Total/NA	Analysis	9320		1	400704	11/13/18 16:52	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	401672	11/19/18 16:51	RTM	TAL SL

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160850-2
SDG: Landfill 1

Client Sample ID: DUP-03

Date Collected: 10/18/18 08:55
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			397076	10/24/18 13:38	JLC	TAL SL
Total/NA	Analysis	9315		1	401091	11/15/18 13:12	CDR	TAL SL
Total/NA	Prep	PrecSep_0			397125	10/24/18 14:00	JLC	TAL SL
Total/NA	Analysis	9320		1	400704	11/13/18 16:52	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	401672	11/19/18 16:51	RTM	TAL SL

Client Sample ID: FB-02

Date Collected: 10/18/18 14:30
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			397076	10/24/18 13:38	JLC	TAL SL
Total/NA	Analysis	9315		1	401091	11/15/18 13:12	CDR	TAL SL
Total/NA	Prep	PrecSep_0			397125	10/24/18 14:00	JLC	TAL SL
Total/NA	Analysis	9320		1	400704	11/13/18 16:53	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	401672	11/19/18 16:51	RTM	TAL SL

Client Sample ID: EB-02

Date Collected: 10/18/18 11:05
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160850-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			397076	10/24/18 13:38	JLC	TAL SL
Total/NA	Analysis	9315		1	401091	11/15/18 13:12	CDR	TAL SL
Total/NA	Prep	PrecSep_0			397125	10/24/18 14:00	JLC	TAL SL
Total/NA	Analysis	9320		1	400704	11/13/18 16:53	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	401672	11/19/18 16:51	RTM	TAL SL

Laboratory References:

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

Rad

Prep Batch: 397076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160850-1	MW-102	Total/NA	Water	PrecSep-21	
400-160850-2	MW-103	Total/NA	Water	PrecSep-21	
400-160850-3	MW-104	Total/NA	Water	PrecSep-21	
400-160850-4	MW-105	Total/NA	Water	PrecSep-21	
400-160850-5	MW-106	Total/NA	Water	PrecSep-21	
400-160850-6	MW-109	Total/NA	Water	PrecSep-21	
400-160850-7	MW-110	Total/NA	Water	PrecSep-21	
400-160850-8	MW-101	Total/NA	Water	PrecSep-21	
400-160850-9	DUP-03	Total/NA	Water	PrecSep-21	
400-160850-10	FB-02	Total/NA	Water	PrecSep-21	
400-160850-11	EB-02	Total/NA	Water	PrecSep-21	
MB 160-397076/20-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-397076/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
680-159535-C-1-A DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 397125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160850-1	MW-102	Total/NA	Water	PrecSep_0	
400-160850-2	MW-103	Total/NA	Water	PrecSep_0	
400-160850-3	MW-104	Total/NA	Water	PrecSep_0	
400-160850-4	MW-105	Total/NA	Water	PrecSep_0	
400-160850-5	MW-106	Total/NA	Water	PrecSep_0	
400-160850-6	MW-109	Total/NA	Water	PrecSep_0	
400-160850-7	MW-110	Total/NA	Water	PrecSep_0	
400-160850-8	MW-101	Total/NA	Water	PrecSep_0	
400-160850-9	DUP-03	Total/NA	Water	PrecSep_0	
400-160850-10	FB-02	Total/NA	Water	PrecSep_0	
400-160850-11	EB-02	Total/NA	Water	PrecSep_0	
MB 160-397125/20-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-397125/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
680-159535-C-1-B DU	Duplicate	Total/NA	Water	PrecSep_0	

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-397076/20-A
Matrix: Water
Analysis Batch: 401091

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 397076

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.3136		0.145	0.148	1.00	0.144	pCi/L	10/24/18 13:38	11/15/18 13:12	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.3*		*40 - 110*	*10/24/18 13:38*	*11/15/18 13:12*	*1*

Lab Sample ID: LCS 160-397076/1-A
Matrix: Water
Analysis Batch: 401090

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 397076

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.4	12.17		1.37	1.00	0.187	pCi/L	107	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*85.3*		*40 - 110*

Lab Sample ID: 680-159535-C-1-A DU
Matrix: Water
Analysis Batch: 401090

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 397076

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-226	0.591			0.3645		0.188	1.00	0.205	pCi/L			0.53	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ba Carrier	*100*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-397125/20-A
Matrix: Water
Analysis Batch: 400704

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 397125

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1165	U	0.280	0.280	1.00	0.481	pCi/L	10/24/18 14:00	11/13/18 16:53	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.3*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:53*	*1*
Y Carrier	*78.1*		*40 - 110*	*10/24/18 14:00*	*11/13/18 16:53*	*1*

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

Lab Sample ID: LCS 160-397125/1-A
Matrix: Water
Analysis Batch: 400704

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 397125

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			9.22	10.02		1.22	1.00	0.508	pCi/L	109	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*85.3*		*40 - 110*
Y Carrier	*74.4*		*40 - 110*

Lab Sample ID: 680-159535-C-1-B DU
Matrix: Water
Analysis Batch: 400704

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 397125

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-228	0.315	U		0.6021		0.348	1.00	0.517	pCi/L			0.43	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ba Carrier	*100*		*40 - 110*
Y Carrier	*80.7*		*40 - 110*

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

Lab Sample ID: 400-160352-A-16 DU
Matrix: Water
Analysis Batch: 401672

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Combined Radium 226 + 228	0.433	U		0.3324	U	0.388	5.00	0.532	pCi/L			0.14	

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

Chain of Custody Record

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Client Information	Sampler: Brett Sides	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No:
Client Contact: Kristi Mitchell	Phone: 850 380 3458	E-Mail: cheyenne.whitmire@testamericainc.com		Page: 1-2
Company: Gulf Power Company				Job #: 1601850
Address: BIN 731 One Energy Place	Due Date Requested:	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:
City: Pensacola	TAT Requested (days):			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: CCR Plant Crist	Project #: 40006609			
Site: Landfill 1	SSOW#:			

400-160850 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)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	SM4500_Cl_E - Chloride, SM4500_SO4_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C - Fluoride	6020 - Sb,As,Ba,B,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, 7470A - Mercury	FieldSampling - Field Sampling Parameters	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
MW-102	10/19/18	1325	G	Water			X	X	X	X		
MW-103	10/18/18	1420		Water								
MW-104	10/18/18	1106		Water								
MW-105	10/18/18	0930		Water								
MW-106	10/18/18	0815		Water								
MW-109	10/18/18	1100		Water								
MW-110	10/18/18	0955		Water								
MW-101	10/18/18	0704		Water								
Dup-03	10/18/18	0855		Water								
FB-02	10/18/18	1430		Water								
EB-02	10/18/18	1105	G	Water			X	X	X	X	8	

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)

Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		10/19/18 1410	RDH		10/19/18 1410	TAL Pens.
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	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: 1.2°C, 1.5°C, 0.9°C IR-7

11/19/2018

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-160850-2
SDG Number: Landfill 1

Login Number: 160850
List Number: 1
Creator: Whitmire, Cheyenne R

List Source: 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	1.2°C 1.5°C 0.9°C IR-7
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: Gulf Power Company

Job Number: 400-160850-2
SDG Number: Landfill 1

Login Number: 160850
List Number: 2
Creator: Hellm, Michael

List Source: TestAmerica St. Louis
List Creation: 10/23/18 01:30 PM

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.	False	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	23.0
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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160850-2
SDG: Landfill 1

Laboratory: 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	01-12-19
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	10-31-18 *
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA180023	12-31-18
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	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
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	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

Laboratory: 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
Alaska	State Program	10	MO00054	06-30-19
ANAB	DoD ELAP		L2305	04-06-19
Arizona	State Program	9	AZ0813	12-08-18 *
California	State Program	9	2886	06-30-19
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-19
Illinois	NELAP	5	200023	11-30-18 *
Iowa	State Program	7	373	12-01-18 *
Kansas	NELAP	7	E-10236	10-31-18 *
Kentucky (DW)	State Program	4	90125	12-31-18
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA180017	12-31-18 *
Maryland	State Program	3	310	09-30-19
Michigan	State Program	5	9005	06-30-18 *
Missouri	State Program	7	780	06-30-19

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

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160850-2
SDG: Landfill 1

Laboratory: TestAmerica St. Louis (Continued)

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
Nevada	State Program	9	MO000542018-1	07-31-19
New Jersey	NELAP	2	MO002	06-30-19
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-19
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-19
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-19
Texas	NELAP	6	T104704193-18-12	07-31-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19
Virginia	NELAP	3	460230	06-14-19
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19

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ANALYTICAL REPORT

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

TestAmerica Job ID: 400-160851-1
TestAmerica Sample Delivery Group: Gypsum Storage Area
Client Project/Site: CCR Plant Crist
Revision: 1

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Cheyenne Whitmire

Authorized for release by:
11/16/2018 11:20:56 AM

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

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-160851-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-160851-1

Metals
Method(s) 6020: The following samples were diluted to bring the concentration of target analytes within the calibration range: DUP-04 (400-160851-1), MW-204 (400-160851-2), MW-205 (400-160851-3) and MW-206 (400-160851-4). Elevated reporting limits (RLs) are provided.

General Chemistry
Method(s) SM 4500 F C: The sample duplicate precision for the following sample associated with analytical batch 417824 was outside control limits: (400-160851-A-4 DU). The associated Laboratory Control Sample(LCS) met acceptance criteria.

Method(s) SM 4500 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: DUP-04 (400-160851-1), MW-204 (400-160851-2), MW-205 (400-160851-3) and MW-206 (400-160851-4). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: Due to the concentration of sulfates in the parent sample the MS/MSD were diluted after the spike. The spike amounts were adjusted by the dilution factor. (400-160968-B-4 MS) and (400-160968-B-4 MSD)

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 418151 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) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: DUP-04 (400-160851-1), MW-204 (400-160851-2), MW-205 (400-160851-3), MW-206 (400-160851-4), (400-160968-B-4), (400-160968-B-4 MS) and (400-160968-B-4 MSD). Elevated reporting limits (RLs) are provided.

Detection Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160851-1
SDG: Gypsum Storage Area

Client Sample ID: DUP-04 — Lab Sample ID: 400-160851-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.040		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	32		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0023	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0022	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0021		0.0013	0.00071	mg/L	5		6020	Total Recoverable
Boron - DL	2.1		0.25	0.11	mg/L	25		6020	Total Recoverable
Mercury	0.000097	I	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	270		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	58		4.0	2.8	mg/L	2		SM 4500 Cl- E	Total/NA
Fluoride	0.070	I	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	120		25	7.0	mg/L	5		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-204 — Lab Sample ID: 400-160851-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0023		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.024		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00050	I	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	68		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.014		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0019		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.0022	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0035		0.0013	0.00071	mg/L	5		6020	Total Recoverable
Thallium	0.00028	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	5.0		0.50	0.21	mg/L	50		6020	Total Recoverable
Mercury	0.00013	I	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	700		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	77		4.0	2.8	mg/L	2		SM 4500 Cl- E	Total/NA
Fluoride	0.28		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	320		50	14	mg/L	10		SM 4500 SO4 E	Total/NA
Field pH	4.3				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-205 — Lab Sample ID: 400-160851-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.041		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	33		0.25	0.13	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Client Sample ID: MW-205 (Continued) — Lab Sample ID: 400-160851-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.0023	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00048	I	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.0029	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0021		0.0013	0.00071	mg/L	5		6020	Total Recoverable
Thallium	0.000090	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	2.0		0.25	0.11	mg/L	25		6020	Total Recoverable
Mercury	0.000096	I	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	310		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	58		4.0	2.8	mg/L	2		SM 4500 Cl- E	Total/NA
Fluoride	0.070	I	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	120		25	7.0	mg/L	5		SM 4500 SO4 E	Total/NA
Field pH	4.81				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-206 — Lab Sample ID: 400-160851-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0028		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.059		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00088	I	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cobalt	0.0027		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0026		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.0014	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.013		0.0013	0.00071	mg/L	5		6020	Total Recoverable
Thallium	0.00030	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	25		2.0	0.84	mg/L	200		6020	Total Recoverable
Calcium - DL	530		10	5.0	mg/L	200		6020	Total Recoverable
Mercury	0.00014	I	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	3800		25	17	mg/L	1		SM 2540C	Total/NA
Chloride	1200		180	130	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.12		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	270		50	14	mg/L	10		SM 4500 SO4 E	Total/NA
Field pH	4.41				SU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160851-1
SDG: Gypsum Storage Area

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

Sample Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160851-1
SDG: Gypsum Storage Area

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-160851-1	DUP-04	Water	10/19/18 06:07	10/19/18 14:10
400-160851-2	MW-204	Water	10/19/18 08:16	10/19/18 14:10
400-160851-3	MW-205	Water	10/19/18 07:07	10/19/18 14:10
400-160851-4	MW-206	Water	10/17/18 12:55	10/19/18 14:10

Client Sample ID: DUP-04

Date Collected: 10/19/18 06:07
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160851-1

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		10/29/18 17:23	10/30/18 15:15	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		10/29/18 17:23	10/30/18 15:15	5
Barium	**0.040**		0.0025	0.00049	mg/L		10/29/18 17:23	10/30/18 15:15	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		10/29/18 17:23	10/30/18 15:15	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		10/29/18 17:23	10/30/18 15:15	5
Calcium	**32**		0.25	0.13	mg/L		10/29/18 17:23	10/30/18 15:15	5
Cobalt	**0.0023**	**I**	0.0025	0.00040	mg/L		10/29/18 17:23	10/30/18 15:15	5
Lead	0.00035	U	0.0013	0.00035	mg/L		10/29/18 17:23	10/30/18 15:15	5
Lithium	**0.0022**	**I**	0.0050	0.0011	mg/L		10/29/18 17:23	10/30/18 15:15	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/29/18 17:23	10/30/18 15:15	5
Selenium	**0.0021**		0.0013	0.00071	mg/L		10/29/18 17:23	10/30/18 15:15	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		10/29/18 17:23	10/30/18 15:15	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.1**		0.25	0.11	mg/L		10/29/18 17:23	10/30/18 16:18	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.000097**	**I**	0.00020	0.000070	mg/L		11/01/18 12:30	11/02/18 10:06	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**270**		5.0	3.4	mg/L			10/25/18 17:12	1
Chloride	**58**		4.0	2.8	mg/L			11/01/18 13:49	2
Fluoride	**0.070**	**I**	0.10	0.032	mg/L			10/31/18 12:42	1
Sulfate	**120**		25	7.0	mg/L			11/02/18 14:36	5

Client Sample ID: MW-204

Date Collected: 10/19/18 08:16
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160851-2

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		10/29/18 17:23	10/30/18 15:36	5
Arsenic	**0.0023**		0.0013	0.00046	mg/L		10/29/18 17:23	10/30/18 15:36	5
Barium	**0.024**		0.0025	0.00049	mg/L		10/29/18 17:23	10/30/18 15:36	5
Beryllium	**0.00050**	**I**	0.0025	0.00034	mg/L		10/29/18 17:23	10/30/18 15:36	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		10/29/18 17:23	10/30/18 15:36	5
Calcium	**68**		0.25	0.13	mg/L		10/29/18 17:23	10/30/18 15:36	5
Cobalt	**0.014**		0.0025	0.00040	mg/L		10/29/18 17:23	10/30/18 15:36	5
Lead	**0.0019**		0.0013	0.00035	mg/L		10/29/18 17:23	10/30/18 15:36	5
Lithium	**0.0022**	**I**	0.0050	0.0011	mg/L		10/29/18 17:23	10/30/18 15:36	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/29/18 17:23	10/30/18 15:36	5
Selenium	**0.0035**		0.0013	0.00071	mg/L		10/29/18 17:23	10/30/18 15:36	5
Thallium	**0.00028**	**I**	0.00050	0.000085	mg/L		10/29/18 17:23	10/30/18 15:36	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**5.0**		0.50	0.21	mg/L		10/29/18 17:23	10/30/18 16:22	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00013**	**I**	0.00020	0.000070	mg/L		11/01/18 12:30	11/02/18 10:08	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**700**		5.0	3.4	mg/L			10/25/18 17:12	1
Chloride	**77**		4.0	2.8	mg/L			11/01/18 13:49	2
Fluoride	**0.28**		0.10	0.032	mg/L			10/31/18 12:46	1
Sulfate	**320**		50	14	mg/L			11/02/18 14:36	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.3**				SU			10/19/18 08:16	1

Client Sample ID: MW-205

Date Collected: 10/19/18 07:07
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160851-3

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		10/29/18 17:23	10/30/18 15:39	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		10/29/18 17:23	10/30/18 15:39	5
Barium	**0.041**		0.0025	0.00049	mg/L		10/29/18 17:23	10/30/18 15:39	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		10/29/18 17:23	10/30/18 15:39	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		10/29/18 17:23	10/30/18 15:39	5
Calcium	**33**		0.25	0.13	mg/L		10/29/18 17:23	10/30/18 15:39	5
Cobalt	**0.0023**	**I**	0.0025	0.00040	mg/L		10/29/18 17:23	10/30/18 15:39	5
Lead	**0.00048**	**I**	0.0013	0.00035	mg/L		10/29/18 17:23	10/30/18 15:39	5
Lithium	**0.0029**	**I**	0.0050	0.0011	mg/L		10/29/18 17:23	10/30/18 15:39	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/29/18 17:23	10/30/18 15:39	5
Selenium	**0.0021**		0.0013	0.00071	mg/L		10/29/18 17:23	10/30/18 15:39	5
Thallium	**0.000090**	**I**	0.00050	0.000085	mg/L		10/29/18 17:23	10/30/18 15:39	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.0**		0.25	0.11	mg/L		10/29/18 17:23	10/30/18 16:25	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.000096**	**I**	0.00020	0.000070	mg/L		11/01/18 12:30	11/02/18 10:10	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**310**		5.0	3.4	mg/L			10/25/18 17:12	1
Chloride	**58**		4.0	2.8	mg/L			11/01/18 13:49	2
Fluoride	**0.070**	**I**	0.10	0.032	mg/L			10/31/18 12:50	1
Sulfate	**120**		25	7.0	mg/L			11/02/18 14:39	5

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.81**				SU			10/19/18 07:07	1

Client Sample ID: MW-206

Date Collected: 10/17/18 12:55
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160851-4

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		10/29/18 17:23	10/30/18 15:43	5
Arsenic	**0.0028**		0.0013	0.00046	mg/L		10/29/18 17:23	10/30/18 15:43	5
Barium	**0.059**		0.0025	0.00049	mg/L		10/29/18 17:23	10/30/18 15:43	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		10/29/18 17:23	10/30/18 15:43	5
Cadmium	**0.00088**	**I**	0.0025	0.00034	mg/L		10/29/18 17:23	10/30/18 15:43	5
Cobalt	**0.0027**		0.0025	0.00040	mg/L		10/29/18 17:23	10/30/18 15:43	5
Lead	**0.0026**		0.0013	0.00035	mg/L		10/29/18 17:23	10/30/18 15:43	5
Lithium	**0.0014**	**I**	0.0050	0.0011	mg/L		10/29/18 17:23	10/30/18 15:43	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/29/18 17:23	10/30/18 15:43	5
Selenium	**0.013**		0.0013	0.00071	mg/L		10/29/18 17:23	10/30/18 15:43	5
Thallium	**0.00030**	**I**	0.00050	0.000085	mg/L		10/29/18 17:23	10/30/18 15:43	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**25**		2.0	0.84	mg/L		10/29/18 17:23	10/30/18 16:29	200
Calcium	**530**		10	5.0	mg/L		10/29/18 17:23	10/30/18 16:29	200

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00014**	**I**	0.00020	0.000070	mg/L		11/01/18 12:30	11/02/18 10:12	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**3800**		25	17	mg/L			10/24/18 12:23	1
Chloride	**1200**		180	130	mg/L			11/01/18 13:49	90
Fluoride	**0.12**		0.10	0.032	mg/L			10/31/18 13:01	1
Sulfate	**270**		50	14	mg/L			11/02/18 14:36	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.41**				SU			10/17/18 12:55	1

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

General Chemistry

Qualifier	Qualifier Description
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
U	Indicates that the compound was analyzed for but not detected.

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)

Client Sample ID: DUP-04

Date Collected: 10/19/18 06:07
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160851-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			417485	10/29/18 17:23	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	417797	10/30/18 15:15	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		417485	10/29/18 17:23	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	417797	10/30/18 16:18	DRE	TAL PEN
Total/NA	Prep	7470A			417950	11/01/18 12:30	JAP	TAL PEN
Total/NA	Analysis	7470A		1	418140	11/02/18 10:06	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	417012	10/25/18 17:12	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		2	417973	11/01/18 13:49	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	417824	10/31/18 12:42	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		5	418151	11/02/18 14:36	RRC	TAL PEN

Client Sample ID: MW-204

Date Collected: 10/19/18 08:16
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160851-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			417485	10/29/18 17:23	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	417797	10/30/18 15:36	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		417485	10/29/18 17:23	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	417797	10/30/18 16:22	DRE	TAL PEN
Total/NA	Prep	7470A			417950	11/01/18 12:30	JAP	TAL PEN
Total/NA	Analysis	7470A		1	418140	11/02/18 10:08	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	417012	10/25/18 17:12	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		2	417973	11/01/18 13:49	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	417824	10/31/18 12:46	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	418151	11/02/18 14:36	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	418909	10/19/18 08:16	AW	TAL PEN

Client Sample ID: MW-205

Date Collected: 10/19/18 07:07
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160851-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			417485	10/29/18 17:23	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	417797	10/30/18 15:39	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		417485	10/29/18 17:23	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	417797	10/30/18 16:25	DRE	TAL PEN
Total/NA	Prep	7470A			417950	11/01/18 12:30	JAP	TAL PEN
Total/NA	Analysis	7470A		1	418140	11/02/18 10:10	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	417012	10/25/18 17:12	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		2	417973	11/01/18 13:49	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	417824	10/31/18 12:50	BAB	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160851-1
SDG: Gypsum Storage Area

Client Sample ID: MW-205

Date Collected: 10/19/18 07:07
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160851-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 SO4 E		5	418151	11/02/18 14:39	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	418909	10/19/18 07:07	AW	TAL PEN

Client Sample ID: MW-206

Date Collected: 10/17/18 12:55
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160851-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			417485	10/29/18 17:23	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	417797	10/30/18 15:43	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		417485	10/29/18 17:23	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	200	417797	10/30/18 16:29	DRE	TAL PEN
Total/NA	Prep	7470A			417950	11/01/18 12:30	JAP	TAL PEN
Total/NA	Analysis	7470A		1	418140	11/02/18 10:12	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	416766	10/24/18 12:23	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		90	417973	11/01/18 13:49	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	417824	10/31/18 13:01	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	418151	11/02/18 14:36	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	418909	10/17/18 12:55	AW	TAL PEN

Laboratory References:

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

Metals

Prep Batch: 417485

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160851-1 - DL	DUP-04	Total Recoverable	Water	3005A	
400-160851-1	DUP-04	Total Recoverable	Water	3005A	
400-160851-2	MW-204	Total Recoverable	Water	3005A	
400-160851-2 - DL	MW-204	Total Recoverable	Water	3005A	
400-160851-3	MW-205	Total Recoverable	Water	3005A	
400-160851-3 - DL	MW-205	Total Recoverable	Water	3005A	
400-160851-4 - DL	MW-206	Total Recoverable	Water	3005A	
400-160851-4	MW-206	Total Recoverable	Water	3005A	
MB 400-417485/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-417485/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-160957-I-1-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-160957-I-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 417797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160851-1	DUP-04	Total Recoverable	Water	6020	417485
400-160851-1 - DL	DUP-04	Total Recoverable	Water	6020	417485
400-160851-2	MW-204	Total Recoverable	Water	6020	417485
400-160851-2 - DL	MW-204	Total Recoverable	Water	6020	417485
400-160851-3	MW-205	Total Recoverable	Water	6020	417485
400-160851-3 - DL	MW-205	Total Recoverable	Water	6020	417485
400-160851-4	MW-206	Total Recoverable	Water	6020	417485
400-160851-4 - DL	MW-206	Total Recoverable	Water	6020	417485
MB 400-417485/1-A ^5	Method Blank	Total Recoverable	Water	6020	417485
LCS 400-417485/2-A	Lab Control Sample	Total Recoverable	Water	6020	417485
400-160957-I-1-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	417485
400-160957-I-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	417485

Prep Batch: 417950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160851-1	DUP-04	Total/NA	Water	7470A	
400-160851-2	MW-204	Total/NA	Water	7470A	
400-160851-3	MW-205	Total/NA	Water	7470A	
400-160851-4	MW-206	Total/NA	Water	7470A	
MB 400-417950/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-417950/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-161018-G-6-E MS	Matrix Spike	Total/NA	Water	7470A	
400-161018-G-6-F MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 418140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160851-1	DUP-04	Total/NA	Water	7470A	417950
400-160851-2	MW-204	Total/NA	Water	7470A	417950
400-160851-3	MW-205	Total/NA	Water	7470A	417950
400-160851-4	MW-206	Total/NA	Water	7470A	417950
MB 400-417950/14-A	Method Blank	Total/NA	Water	7470A	417950
LCS 400-417950/15-A	Lab Control Sample	Total/NA	Water	7470A	417950
400-161018-G-6-E MS	Matrix Spike	Total/NA	Water	7470A	417950
400-161018-G-6-F MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	417950

General Chemistry

Analysis Batch: 416766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160851-4	MW-206	Total/NA	Water	SM 2540C	
MB 400-416766/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-416766/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-160814-A-5 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 417012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160851-1	DUP-04	Total/NA	Water	SM 2540C	
400-160851-2	MW-204	Total/NA	Water	SM 2540C	
400-160851-3	MW-205	Total/NA	Water	SM 2540C	
MB 400-417012/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-417012/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-160944-C-1 DU	Duplicate	Total/NA	Water	SM 2540C	
400-161031-E-5 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 417824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160851-1	DUP-04	Total/NA	Water	SM 4500 F C	
400-160851-2	MW-204	Total/NA	Water	SM 4500 F C	
400-160851-3	MW-205	Total/NA	Water	SM 4500 F C	
400-160851-4	MW-206	Total/NA	Water	SM 4500 F C	
MB 400-417824/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-417824/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-160968-B-21 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-160968-B-21 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-160851-4 DU	MW-206	Total/NA	Water	SM 4500 F C	

Analysis Batch: 417973

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160851-1	DUP-04	Total/NA	Water	SM 4500 Cl- E	
400-160851-2	MW-204	Total/NA	Water	SM 4500 Cl- E	
400-160851-3	MW-205	Total/NA	Water	SM 4500 Cl- E	
400-160851-4	MW-206	Total/NA	Water	SM 4500 Cl- E	
MB 400-417973/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-417973/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-417973/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-161018-F-6 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-161018-F-6 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 418151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160851-1	DUP-04	Total/NA	Water	SM 4500 SO4 E	
400-160851-2	MW-204	Total/NA	Water	SM 4500 SO4 E	
400-160851-3	MW-205	Total/NA	Water	SM 4500 SO4 E	
400-160851-4	MW-206	Total/NA	Water	SM 4500 SO4 E	
MB 400-418151/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-418151/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-418151/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-160968-B-4 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-160968-B-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Field Service / Mobile Lab

Analysis Batch: 418909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160851-2	MW-204	Total/NA	Water	Field Sampling	
400-160851-3	MW-205	Total/NA	Water	Field Sampling	
400-160851-4	MW-206	Total/NA	Water	Field Sampling	

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-417485/1-A ^5
Matrix: Water
Analysis Batch: 417797

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 417485

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		10/29/18 17:23	10/30/18 13:46	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		10/29/18 17:23	10/30/18 13:46	5
Barium	0.00049	U	0.0025	0.00049	mg/L		10/29/18 17:23	10/30/18 13:46	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		10/29/18 17:23	10/30/18 13:46	5
Boron	0.021	U	0.050	0.021	mg/L		10/29/18 17:23	10/30/18 13:46	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		10/29/18 17:23	10/30/18 13:46	5
Calcium	0.13	U	0.25	0.13	mg/L		10/29/18 17:23	10/30/18 13:46	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		10/29/18 17:23	10/30/18 13:46	5
Lead	0.00035	U	0.0013	0.00035	mg/L		10/29/18 17:23	10/30/18 13:46	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		10/29/18 17:23	10/30/18 13:46	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		10/29/18 17:23	10/30/18 13:46	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		10/29/18 17:23	10/30/18 13:46	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		10/29/18 17:23	10/30/18 13:46	5

Lab Sample ID: LCS 400-417485/2-A
Matrix: Water
Analysis Batch: 417797

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 417485

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0497		mg/L		99	80 - 120
Arsenic	0.0500	0.0494		mg/L		99	80 - 120
Barium	0.0500	0.0502		mg/L		100	80 - 120
Beryllium	0.0500	0.0508		mg/L		102	80 - 120
Boron	0.100	0.101		mg/L		101	80 - 120
Cadmium	0.0500	0.0506		mg/L		101	80 - 120
Calcium	5.00	4.98		mg/L		100	80 - 120
Cobalt	0.0500	0.0512		mg/L		102	80 - 120
Lead	0.0500	0.0501		mg/L		100	80 - 120
Lithium	0.0500	0.0521		mg/L		104	80 - 120
Molybdenum	0.0500	0.0489		mg/L		98	80 - 120
Selenium	0.0500	0.0495		mg/L		99	80 - 120
Thallium	0.0100	0.00971		mg/L		97	80 - 120

Lab Sample ID: 400-160957-I-1-B MS ^5
Matrix: Water
Analysis Batch: 417797

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 417485

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0010	U	0.0500	0.0508		mg/L		102	75 - 125
Arsenic	0.00046	U	0.0500	0.0502		mg/L		100	75 - 125
Barium	0.078		0.0500	0.129		mg/L		102	75 - 125
Beryllium	0.00034	U	0.0500	0.0516		mg/L		103	75 - 125
Boron	0.021	U	0.100	0.112		mg/L		112	75 - 125
Cadmium	0.00034	U	0.0500	0.0501		mg/L		100	75 - 125
Calcium	2.0		5.00	6.99		mg/L		100	75 - 125
Cobalt	0.0039		0.0500	0.0558		mg/L		104	75 - 125
Lead	0.00035	U	0.0500	0.0486		mg/L		97	75 - 125
Lithium	0.0016	I	0.0500	0.0566		mg/L		110	75 - 125

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

Lab Sample ID: 400-160957-I-1-B MS ^5
Matrix: Water
Analysis Batch: 417797

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 417485

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	0.0020	U	0.0500	0.0481		mg/L		96	75 - 125
Selenium	0.00071	U	0.0500	0.0496		mg/L		99	75 - 125
Thallium	0.000085	U	0.0100	0.00956		mg/L		96	75 - 125

Lab Sample ID: 400-160957-I-1-C MSD ^5
Matrix: Water
Analysis Batch: 417797

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 417485

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.0010	U	0.0500	0.0506		mg/L		101	75 - 125	0	20
Arsenic	0.00046	U	0.0500	0.0500		mg/L		100	75 - 125	0	20
Barium	0.078		0.0500	0.134		mg/L		111	75 - 125	3	20
Beryllium	0.00034	U	0.0500	0.0520		mg/L		104	75 - 125	1	20
Boron	0.021	U	0.100	0.113		mg/L		113	75 - 125	0	20
Cadmium	0.00034	U	0.0500	0.0513		mg/L		103	75 - 125	2	20
Calcium	2.0		5.00	7.17		mg/L		104	75 - 125	3	20
Cobalt	0.0039		0.0500	0.0565		mg/L		105	75 - 125	1	20
Lead	0.00035	U	0.0500	0.0492		mg/L		98	75 - 125	1	20
Lithium	0.0016	I	0.0500	0.0570		mg/L		111	75 - 125	1	20
Molybdenum	0.0020	U	0.0500	0.0477		mg/L		95	75 - 125	1	20
Selenium	0.00071	U	0.0500	0.0490		mg/L		98	75 - 125	1	20
Thallium	0.000085	U	0.0100	0.00974		mg/L		97	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-417950/14-A
Matrix: Water
Analysis Batch: 418140

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 417950

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		11/01/18 12:18	11/02/18 09:59	1

Lab Sample ID: LCS 400-417950/15-A
Matrix: Water
Analysis Batch: 418140

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 417950

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.00101		mg/L		101	80 - 120

Lab Sample ID: 400-161018-G-6-E MS
Matrix: Water
Analysis Batch: 418140

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 417950

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.000070	U	0.00201	0.00202		mg/L		100	80 - 120

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

Lab Sample ID: 400-161018-G-6-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 418140 — **Prep Batch: 417950**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.000070	U	0.00201	0.00207		mg/L		103	80 - 120	2	20

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

Lab Sample ID: MB 400-416766/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 416766

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			10/24/18 12:23	1

Lab Sample ID: LCS 400-416766/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 416766

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	280		mg/L		96	78 - 122

Lab Sample ID: 400-160814-A-5 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 416766

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	390		390		mg/L		0	5

Lab Sample ID: MB 400-417012/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 417012

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			10/25/18 17:12	1

Lab Sample ID: LCS 400-417012/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 417012

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	300		mg/L		102	78 - 122

Lab Sample ID: 400-160944-C-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 417012

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	68		66.0		mg/L		3	5

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

Lab Sample ID: 400-161031-E-5 DU
Matrix: Water
Analysis Batch: 417012

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	230		232		mg/L		0.9	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-417973/6
Matrix: Water
Analysis Batch: 417973

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4	U	2.0	1.4	mg/L			11/01/18 13:05	1

Lab Sample ID: LCS 400-417973/7
Matrix: Water
Analysis Batch: 417973

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	31.9		mg/L		106	90 - 110

Lab Sample ID: MRL 400-417973/3
Matrix: Water
Analysis Batch: 417973

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	1.00	I	mg/L		50	50 - 150

Lab Sample ID: 400-161018-F-6 MS
Matrix: Water
Analysis Batch: 417973

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	4.6		10.0	15.9		mg/L		113	73 - 120

Lab Sample ID: 400-161018-F-6 MSD
Matrix: Water
Analysis Batch: 417973

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	4.6		10.0	15.6		mg/L		111	73 - 120	1	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-417824/3
Matrix: Water
Analysis Batch: 417824

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.032	U	0.10	0.032	mg/L			10/31/18 12:10	1

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: LCS 400-417824/4
Matrix: Water
Analysis Batch: 417824

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	4.26		mg/L		107	90 - 110		

Lab Sample ID: 400-160968-B-21 MS
Matrix: Water
Analysis Batch: 417824

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	0.032	U	1.00	1.10		mg/L		110	75 - 125		

Lab Sample ID: 400-160968-B-21 MSD
Matrix: Water
Analysis Batch: 417824

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	0.032	U	1.00	1.10		mg/L		110	75 - 125	0	4

Lab Sample ID: 400-160851-4 DU
Matrix: Water
Analysis Batch: 417824

Client Sample ID: MW-206
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Fluoride	0.12			0.130	J3	mg/L				8	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-418151/6
Matrix: Water
Analysis Batch: 418151

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.4	U	5.0	1.4	mg/L			11/02/18 13:49	1

Lab Sample ID: LCS 400-418151/7
Matrix: Water
Analysis Batch: 418151

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	15.2		mg/L		101	90 - 110		

Lab Sample ID: MRL 400-418151/3
Matrix: Water
Analysis Batch: 418151

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	4.36	I	mg/L		87	50 - 150		

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: 400-160968-B-4 MS
Matrix: Water
Analysis Batch: 418151

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	130		10.0	134	J3	mg/L		24	77 - 128		

Lab Sample ID: 400-160968-B-4 MSD
Matrix: Water
Analysis Batch: 418151

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	130		10.0	134	J3	mg/L		26	77 - 128	0	5

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Philip Evans	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No:
Client Contact: Kristi Mitchell	Phone: 850-336-0192	E-Mail: cheyenne.whitmire@testamericainc.com		Page: 2-2
Company: Gulf Power Company		Analysis Requested		Job #: 160851

Address: BIN 731 One Energy Place	Due Date Requested:	
City: Pensacola	TAT Requested (days):	
State, Zip: FL, 32520		
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required	
Email: krmitche@southernco.com	WO #:	
Project Name: CCR Plant Crist	Project #: 40006609	
Site: Gypsum Storage Area	SSOW#:	

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:

400-160851 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)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	SM4500_Cl_E - Chloride, SM4500_SO4_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C - Fluoride	6020 - Sb,As,Ba,B,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, 7470A - Mercury	FieldSampling - Field Sampling Parameters	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
~~MW-203~~				Water								
~~MW-202~~				Water								
~~MW-202~~				Water								
~~MW-203~~ Dup-04	10/19/18	0607	G	Water			X	X	X	X		
MW-204	10/19/18	0816		Water			X	X	X	X		
MW-205	10/19/18	0707		Water			X	X	X	X		
MW-206	10/17/18	1255	G	Water			X	X	X	X		

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)

Special Instructions/QC Requirements:

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

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	10/19/18 1410	RDH	Carolyn Harper	10/19/18 1410	TAL Pen
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.2°C, 1.5°C IR-7

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-160851-1
SDG Number: Gypsum Storage Area

Login Number: 160851
List Number: 1
Creator: Whitmire, Cheyenne R

List Source: 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	1.2°C 1.5°C IR-7
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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160851-1
SDG: Gypsum Storage Area

Laboratory: 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	01-12-19
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	10-31-18 *
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA180023	12-31-18
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	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
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	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

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

TestAmerica Job ID: 400-160851-2
TestAmerica Sample Delivery Group: Gypsum Storage Area
Client Project/Site: CCR Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Cheyenne Whitmire

Authorized for release by:
11/19/2018 5:52:52 PM

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

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-160851-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-160851-2

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-396917: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: DUP-04 (400-160851-1), MW-204 (400-160851-2), MW-205 (400-160851-3) and MW-206 (400-160851-4). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-396907: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: DUP-04 (400-160851-1), MW-204 (400-160851-2), MW-205 (400-160851-3) and MW-206 (400-160851-4). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160851-2
SDG: Gypsum Storage Area

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

Sample Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160851-2
SDG: Gypsum Storage Area

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-160851-1	DUP-04	Water	10/19/18 06:07	10/19/18 14:10
400-160851-2	MW-204	Water	10/19/18 08:16	10/19/18 14:10
400-160851-3	MW-205	Water	10/19/18 07:07	10/19/18 14:10
400-160851-4	MW-206	Water	10/17/18 12:55	10/19/18 14:10

Client Sample ID: DUP-04

Date Collected: 10/19/18 06:07
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160851-1

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	2.54		0.267	0.351	1.00	0.0834	pCi/L	10/24/18 08:43	11/15/18 13:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.9*		*40 - 110*	*10/24/18 08:43*	*11/15/18 13:14*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.63		0.343	0.374	1.00	0.382	pCi/L	10/24/18 09:15	11/05/18 10:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.9*		*40 - 110*	*10/24/18 09:15*	*11/05/18 10:09*	*1*
Y Carrier	*80.4*		*40 - 110*	*10/24/18 09:15*	*11/05/18 10:09*	*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	4.17		0.435	0.513	5.00	0.382	pCi/L		11/19/18 16:51	1

Client Sample ID: MW-204
Date Collected: 10/19/18 08:16
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160851-2
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	1.33		0.189	0.223	1.00	0.0803	pCi/L	10/24/18 08:43	11/15/18 13:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.8*		*40 - 110*	*10/24/18 08:43*	*11/15/18 13:14*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	11.9		0.771	1.34	1.00	0.406	pCi/L	10/24/18 09:15	11/05/18 10:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.8*		*40 - 110*	*10/24/18 09:15*	*11/05/18 10:09*	*1*
Y Carrier	*76.6*		*40 - 110*	*10/24/18 09:15*	*11/05/18 10:09*	*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	13.3		0.794	1.36	5.00	0.406	pCi/L		11/19/18 16:51	1

Client Sample ID: MW-205

Date Collected: 10/19/18 07:07
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160851-3

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	2.14		0.237	0.306	1.00	0.0711	pCi/L	10/24/18 08:43	11/15/18 13:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.4*		*40 - 110*	*10/24/18 08:43*	*11/15/18 13:15*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.76		0.340	0.376	1.00	0.352	pCi/L	10/24/18 09:15	11/05/18 10:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.4*		*40 - 110*	*10/24/18 09:15*	*11/05/18 10:10*	*1*
Y Carrier	*78.5*		*40 - 110*	*10/24/18 09:15*	*11/05/18 10:10*	*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	3.90		0.414	0.485	5.00	0.352	pCi/L		11/19/18 16:51	1

Client Sample ID: MW-206

Date Collected: 10/17/18 12:55
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160851-4

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	5.06		0.365	0.584	1.00	0.0856	pCi/L	10/24/18 08:43	11/15/18 13:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.6*		*40 - 110*	*10/24/18 08:43*	*11/15/18 13:14*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	7.53		0.647	0.948	1.00	0.435	pCi/L	10/24/18 09:15	11/05/18 10:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.6*		*40 - 110*	*10/24/18 09:15*	*11/05/18 10:10*	*1*
Y Carrier	*75.1*		*40 - 110*	*10/24/18 09:15*	*11/05/18 10:10*	*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	12.6		0.743	1.11	5.00	0.435	pCi/L		11/19/18 16:51	1

Definitions/Glossary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160851-2
SDG: Gypsum Storage Area

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)

Client Sample ID: DUP-04
Date Collected: 10/19/18 06:07
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160851-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			396907	10/24/18 08:43	JLC	TAL SL
Total/NA	Analysis	9315		1	401091	11/15/18 13:14	CDR	TAL SL
Total/NA	Prep	PrecSep_0			396917	10/24/18 09:15	JLC	TAL SL
Total/NA	Analysis	9320		1	399233	11/05/18 10:09	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	401672	11/19/18 16:51	RTM	TAL SL

Client Sample ID: MW-204
Date Collected: 10/19/18 08:16
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160851-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			396907	10/24/18 08:43	JLC	TAL SL
Total/NA	Analysis	9315		1	401091	11/15/18 13:14	CDR	TAL SL
Total/NA	Prep	PrecSep_0			396917	10/24/18 09:15	JLC	TAL SL
Total/NA	Analysis	9320		1	399233	11/05/18 10:09	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	401672	11/19/18 16:51	RTM	TAL SL

Client Sample ID: MW-205
Date Collected: 10/19/18 07:07
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160851-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			396907	10/24/18 08:43	JLC	TAL SL
Total/NA	Analysis	9315		1	401091	11/15/18 13:15	CDR	TAL SL
Total/NA	Prep	PrecSep_0			396917	10/24/18 09:15	JLC	TAL SL
Total/NA	Analysis	9320		1	399233	11/05/18 10:10	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	401672	11/19/18 16:51	RTM	TAL SL

Client Sample ID: MW-206
Date Collected: 10/17/18 12:55
Date Received: 10/19/18 14:10

Lab Sample ID: 400-160851-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			396907	10/24/18 08:43	JLC	TAL SL
Total/NA	Analysis	9315		1	401091	11/15/18 13:14	CDR	TAL SL
Total/NA	Prep	PrecSep_0			396917	10/24/18 09:15	JLC	TAL SL
Total/NA	Analysis	9320		1	399233	11/05/18 10:10	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	401672	11/19/18 16:51	RTM	TAL SL

Laboratory References:

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

QC Association Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160851-2
SDG: Gypsum Storage Area

Rad

Prep Batch: 396907

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160851-1	DUP-04	Total/NA	Water	PrecSep-21	
400-160851-2	MW-204	Total/NA	Water	PrecSep-21	
400-160851-3	MW-205	Total/NA	Water	PrecSep-21	
400-160851-4	MW-206	Total/NA	Water	PrecSep-21	
MB 160-396907/18-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-396907/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-396907/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 396917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160851-1	DUP-04	Total/NA	Water	PrecSep_0	
400-160851-2	MW-204	Total/NA	Water	PrecSep_0	
400-160851-3	MW-205	Total/NA	Water	PrecSep_0	
400-160851-4	MW-206	Total/NA	Water	PrecSep_0	
MB 160-396917/18-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-396917/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-396917/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-396907/18-A
Matrix: Water
Analysis Batch: 401077

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 396907

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.2624		0.0906	0.0936	1.00	0.0764	pCi/L	10/24/18 08:43	11/15/18 13:18	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*10/24/18 08:43*	*11/15/18 13:18*	*1*

Lab Sample ID: LCS 160-396907/1-A
Matrix: Water
Analysis Batch: 401091

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 396907

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.4	12.26		1.25	1.00	0.0665	pCi/L	108	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*92.3*		*40 - 110*

Lab Sample ID: LCSD 160-396907/2-A
Matrix: Water
Analysis Batch: 401091

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 396907

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.4	10.57		1.09	1.00	0.0869	pCi/L	93	68 - 137	0.72	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*96.2*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-396917/18-A
Matrix: Water
Analysis Batch: 399233

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 396917

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1968	U	0.206	0.207	1.00	0.336	pCi/L	10/24/18 09:15	11/05/18 10:11	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*10/24/18 09:15*	*11/05/18 10:11*	*1*
Y Carrier	*81.5*		*40 - 110*	*10/24/18 09:15*	*11/05/18 10:11*	*1*

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

Lab Sample ID: LCS 160-396917/1-A
Matrix: Water
Analysis Batch: 399233

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 396917

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			9.25	10.37		1.21	1.00	0.433	pCi/L	112	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*92.3*		*40 - 110*
Y Carrier	*78.5*		*40 - 110*

Lab Sample ID: LCSD 160-396917/2-A
Matrix: Water
Analysis Batch: 399233

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 396917

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			9.25	9.738		1.15	1.00	0.426	pCi/L	105	56 - 140	0.27	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*96.2*		*40 - 110*
Y Carrier	*74.4*		*40 - 110*

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

Lab Sample ID: 400-160352-A-16 DU
Matrix: Water
Analysis Batch: 401672

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Combined Radium 226 + 228	0.433	U		0.3324	U	0.388	5.00	0.532	pCi/L			0.14	

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

Chain of Custody Record

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Client Information	Sampler: Philip Evans	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No:
Client Contact: Kristi Mitchell	Phone: 850-336-0192	E-Mail: cheyenne.whitmire@testamericainc.com		Page: 2-2
Company: Gulf Power Company		Analysis Requested		Job #: 160851

Address: BIN 731 One Energy Place	Due Date Requested:	
City: Pensacola	TAT Requested (days):	
State, Zip: FL, 32520		
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required	
Email: krmitche@southernco.com	WO #:	
Project Name: CCR Plant Crist	Project #: 40006609	
Site: Gypsum Storage Area	SSOW#:	

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:

400-160851 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)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	SM4500_Cl_E - Chloride, SM4500_SO4_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C - Fluoride	6020 - Sb,As,Ba,B,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, 7470A - Mercury	FieldSampling - Field Sampling Parameters	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
~~MW-203~~				Water								
~~MW-201~~				Water								
~~MW-202~~				Water								
~~MW-203~~ Dup-04	10/19/18	0607	G	Water			X	X	X	X		
MW-204	10/19/18	0816	↓	Water			X	X	X	X		
MW-205	10/19/18	0707	↓	Water			X	X	X	X		
MW-206	10/17/18	1255	G	Water			X	X	X	X		

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)

Special Instructions/QC Requirements:

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

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	10/19/18 1410	RDH	Carolyn Harper	10/19/18 1410	TAL Pen
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.2°C, 1.5°C IR-7

11/19/2018

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-160851-2
SDG Number: Gypsum Storage Area

Login Number: 160851
List Number: 1
Creator: Whitmire, Cheyenne R

List Source: 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	1.2°C 1.5°C IR-7
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: Gulf Power Company

Job Number: 400-160851-2
SDG Number: Gypsum Storage Area

Login Number: 160851
List Number: 2
Creator: Hellm, Michael

List Source: TestAmerica St. Louis
List Creation: 10/23/18 01:30 PM

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.	False	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	23.0
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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160851-2
SDG: Gypsum Storage Area

Laboratory: 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	01-12-19
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	10-31-18 *
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA180023	12-31-18
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	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
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	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

Laboratory: 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
Alaska	State Program	10	MO00054	06-30-19
ANAB	DoD ELAP		L2305	04-06-19
Arizona	State Program	9	AZ0813	12-08-18 *
California	State Program	9	2886	06-30-19
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-19
Illinois	NELAP	5	200023	11-30-18 *
Iowa	State Program	7	373	12-01-18 *
Kansas	NELAP	7	E-10236	10-31-18 *
Kentucky (DW)	State Program	4	90125	12-31-18
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA180017	12-31-18 *
Maryland	State Program	3	310	09-30-19
Michigan	State Program	5	9005	06-30-18 *
Missouri	State Program	7	780	06-30-19

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

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-160851-2
SDG: Gypsum Storage Area

Laboratory: TestAmerica St. Louis (Continued)

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
Nevada	State Program	9	MO000542018-1	07-31-19
New Jersey	NELAP	2	MO002	06-30-19
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-19
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-19
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-19
Texas	NELAP	6	T104704193-18-12	07-31-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19
Virginia	NELAP	3	460230	06-14-19
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

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

TestAmerica Job ID: 400-162132-1
TestAmerica Sample Delivery Group: Gypsum Storage Area
Client Project/Site: CCR Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Cheyenne Whitmire

Authorized for release by:
12/13/2018 2:07:22 PM

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

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-162132-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-162132-1

Metals

Method(s) 6020: The continuing calibration verification (CCV) associated with batch 421080 recovered above the upper control limit for Beryllium. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-200 (400-162132-1), MW-201 (400-162132-2), MW-202 (400-162132-3), MW-203 (400-162132-4), DUP-05 (400-162132-5), DUP-06 (400-162132-6), EB--03 (400-162132-7) and FB-03 (400-162132-8).

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 420865 and analytical batch 421080 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 laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 420865 and analytical batch 421080 recovered outside control limits for the following analytes: Beryllium. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 6020: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-200 (400-162132-1), MW-201 (400-162132-2) and DUP-06 (400-162132-6). Elevated reporting limits (RLs) are provided.

General Chemistry

Method(s) SM 4500 Cl- E: Due to the concentration of chlorides in the parent sample the MS/MSD were diluted after the spike. The spike amounts were adjusted by the dilution factor. (400-162020-B-32 MS) and (400-162020-B-32 MSD)

Method(s) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 421020 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) SM 4500 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-200 (400-162132-1), (400-162020-B-32), (400-162020-B-32 MS) and (400-162020-B-32 MSD). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 420988 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) SM 4500 SO4 E: The native sample, matrix spike, and matrix spike duplicate (MS/MSD) associated with analytical batch 421014 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of Sulfates in the MS/MSD was above the instrument calibration range. The data have been reported and qualified.

Method(s) SM 4500 SO4 E: Due to the concentration of sulfates in the parent sample the MS/MSD were diluted after the spike. The spike amounts were adjusted by the dilution factor. (400-162020-B-17 MS) and (400-162020-B-17 MSD)

Method(s) SM 4500 SO4 E: The matrix spike duplicate (MSD) recoveries for analytical batch 421014 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-200 (400-162132-1), MW-201 (400-162132-2), MW-203 (400-162132-4), DUP-05 (400-162132-5), DUP-06 (400-162132-6), (400-162020-B-17), (400-162020-B-17 MS) and (400-162020-B-17 MSD). Elevated reporting limits (RLs) are provided.

Detection Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-162132-1
SDG: Gypsum Storage Area

Client Sample ID: MW-200 — Lab Sample ID: 400-162132-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00072	I	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.048		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	220		2.5	1.3	mg/L	50		6020	Total Recoverable
Cobalt	0.0019	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0014		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.0024	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0062		0.0013	0.00071	mg/L	5		6020	Total Recoverable
Boron - DL	9.1		0.50	0.21	mg/L	50		6020	Total Recoverable
Mercury	0.0021		0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	1400		10	6.8	mg/L	1		SM 2540C	Total/NA
Chloride	450		20	14	mg/L	10		SM 4500 Cl- E	Total/NA
Fluoride	0.10		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	130		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	5.11				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-201 — Lab Sample ID: 400-162132-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.0010	I	0.0025	0.0010	mg/L	5		6020	Total Recoverable
Barium	0.028		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.0021	I	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	38		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0016	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0050		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0031		0.0013	0.00071	mg/L	5		6020	Total Recoverable
Thallium	0.00015	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	2.3		0.25	0.11	mg/L	25		6020	Total Recoverable
Mercury	0.000082	I	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	230		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	41		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.67		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	110		25	7.0	mg/L	5		SM 4500 SO4 E	Total/NA
Field pH	4.85				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-202 — Lab Sample ID: 400-162132-3

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-162132-1
SDG: Gypsum Storage Area

Client Sample ID: MW-202 (Continued) — Lab Sample ID: 400-162132-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.031		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.21		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	83		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00053	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0023	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00085	I	0.0013	0.00071	mg/L	5		6020	Total Recoverable
Mercury	0.00024		0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	230		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	18		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.080	I	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	21		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-203 — Lab Sample ID: 400-162132-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.037		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.1		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	30		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0022	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0019	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0022		0.0013	0.00071	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	150		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	17		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.050	I	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	100		25	7.0	mg/L	5		SM 4500 SO4 E	Total/NA
Field pH	4.83				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-05 — Lab Sample ID: 400-162132-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.043		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	32		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0025		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0016	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0025		0.0013	0.00071	mg/L	5		6020	Total Recoverable
Boron - RA	1.1		0.050	0.021	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: DUP-05 (Continued) — Lab Sample ID: 400-162132-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	170		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	17		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.050	I	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	100		25	7.0	mg/L	5		SM 4500 SO4 E	Total/NA

Client Sample ID: DUP-06 — Lab Sample ID: 400-162132-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.029		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.0026		0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	38		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0015	I	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0050		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0024		0.0013	0.00071	mg/L	5		6020	Total Recoverable
Thallium	0.00016	I	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	2.6		0.25	0.11	mg/L	25		6020	Total Recoverable
Mercury	0.000094	I	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	230		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	41		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.67		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	110		25	7.0	mg/L	5		SM 4500 SO4 E	Total/NA

Client Sample ID: EB--03 — Lab Sample ID: 400-162132-7

No Detections.

Client Sample ID: FB-03 — Lab Sample ID: 400-162132-8

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	38		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-162132-1
SDG: Gypsum Storage Area

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

Sample Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-162132-1
SDG: Gypsum Storage Area

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-162132-1	MW-200	Water	11/13/18 15:28	11/14/18 15:35
400-162132-2	MW-201	Water	11/14/18 08:50	11/14/18 15:35
400-162132-3	MW-202	Water	11/14/18 13:53	11/14/18 15:35
400-162132-4	MW-203	Water	11/13/18 13:40	11/14/18 15:35
400-162132-5	DUP-05	Water	11/13/18 12:05	11/14/18 15:35
400-162132-6	DUP-06	Water	11/14/18 07:50	11/14/18 15:35
400-162132-7	EB--03	Water	11/14/18 10:30	11/14/18 15:35
400-162132-8	FB-03	Water	11/14/18 10:43	11/14/18 15:35

Client Sample ID: MW-200

Date Collected: 11/13/18 15:28
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-1

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		11/26/18 17:25	11/27/18 13:35	5
Arsenic	**0.00072**	**I**	0.0013	0.00046	mg/L		11/26/18 17:25	11/27/18 13:35	5
Barium	**0.048**		0.0025	0.00049	mg/L		11/26/18 17:25	11/27/18 13:35	5
Beryllium	0.00034	U J3	0.0025	0.00034	mg/L		11/26/18 17:25	11/27/18 13:35	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		11/26/18 17:25	11/27/18 13:35	5
Calcium	**220**		2.5	1.3	mg/L		11/26/18 17:25	11/27/18 16:19	50
Cobalt	**0.0019**	**I**	0.0025	0.00040	mg/L		11/26/18 17:25	11/27/18 13:35	5
Lead	**0.0014**		0.0013	0.00035	mg/L		11/26/18 17:25	11/27/18 13:35	5
Lithium	**0.0024**	**I**	0.0050	0.0011	mg/L		11/26/18 17:25	11/27/18 13:35	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		11/26/18 17:25	11/27/18 13:35	5
Selenium	**0.0062**		0.0013	0.00071	mg/L		11/26/18 17:25	11/27/18 13:35	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		11/26/18 17:25	11/27/18 13:35	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**9.1**		0.50	0.21	mg/L		11/26/18 17:25	11/28/18 14:41	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.0021**		0.00020	0.000070	mg/L		11/26/18 09:49	11/28/18 13:04	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1400**		10	6.8	mg/L			11/20/18 08:50	1
Chloride	**450**		20	14	mg/L			11/27/18 15:47	10
Fluoride	**0.10**		0.10	0.032	mg/L			11/27/18 15:38	1
Sulfate	**130**		100	28	mg/L			11/27/18 07:50	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**5.11**				SU			11/13/18 15:28	1

Client Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-162132-1
SDG: Gypsum Storage Area

Client Sample ID: MW-201
Date Collected: 11/14/18 08:50
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-2
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.0010**	**I**	0.0025	0.0010	mg/L		11/26/18 17:25	11/27/18 13:53	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		11/26/18 17:25	11/27/18 13:53	5
Barium	**0.028**		0.0025	0.00049	mg/L		11/26/18 17:25	11/27/18 13:53	5
Beryllium	0.00034	U J3	0.0025	0.00034	mg/L		11/26/18 17:25	11/27/18 13:53	5
Cadmium	**0.0021**	**I**	0.0025	0.00034	mg/L		11/26/18 17:25	11/27/18 13:53	5
Calcium	**38**		0.25	0.13	mg/L		11/26/18 17:25	11/27/18 13:53	5
Cobalt	**0.0016**	**I**	0.0025	0.00040	mg/L		11/26/18 17:25	11/27/18 13:53	5
Lead	0.00035	U	0.0013	0.00035	mg/L		11/26/18 17:25	11/27/18 13:53	5
Lithium	**0.0050**		0.0050	0.0011	mg/L		11/26/18 17:25	11/27/18 13:53	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		11/26/18 17:25	11/27/18 13:53	5
Selenium	**0.0031**		0.0013	0.00071	mg/L		11/26/18 17:25	11/27/18 13:53	5
Thallium	**0.00015**	**I**	0.00050	0.000085	mg/L		11/26/18 17:25	11/27/18 13:53	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.3**		0.25	0.11	mg/L		11/26/18 17:25	11/28/18 14:45	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.000082**	**I**	0.00020	0.000070	mg/L		11/26/18 09:49	11/28/18 13:06	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**230**		5.0	3.4	mg/L			11/20/18 08:50	1
Chloride	**41**		2.0	1.4	mg/L			11/27/18 16:51	1
Fluoride	**0.67**		0.10	0.032	mg/L			11/27/18 15:50	1
Sulfate	**110**		25	7.0	mg/L			11/27/18 07:50	5

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.85**				SU			11/14/18 08:50	1

Client Sample ID: MW-202

Date Collected: 11/14/18 13:53
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-3

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		11/26/18 17:25	11/27/18 13:56	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		11/26/18 17:25	11/27/18 13:56	5
Barium	**0.031**		0.0025	0.00049	mg/L		11/26/18 17:25	11/27/18 13:56	5
Beryllium	0.00034	U J3	0.0025	0.00034	mg/L		11/26/18 17:25	11/27/18 13:56	5
Boron	**0.21**		0.050	0.021	mg/L		11/26/18 17:25	11/27/18 13:56	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		11/26/18 17:25	11/27/18 13:56	5
Calcium	**83**		0.25	0.13	mg/L		11/26/18 17:25	11/27/18 13:56	5
Cobalt	**0.00053**	**I**	0.0025	0.00040	mg/L		11/26/18 17:25	11/27/18 13:56	5
Lead	0.00035	U	0.0013	0.00035	mg/L		11/26/18 17:25	11/27/18 13:56	5
Lithium	**0.0023**	**I**	0.0050	0.0011	mg/L		11/26/18 17:25	11/27/18 13:56	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		11/26/18 17:25	11/27/18 13:56	5
Selenium	**0.00085**	**I**	0.0013	0.00071	mg/L		11/26/18 17:25	11/27/18 13:56	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		11/26/18 17:25	11/27/18 13:56	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00024**		0.00020	0.000070	mg/L		11/26/18 09:49	11/28/18 13:08	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**230**		5.0	3.4	mg/L			11/20/18 08:50	1
Chloride	**18**		2.0	1.4	mg/L			11/27/18 16:51	1
Fluoride	**0.080**	**I**	0.10	0.032	mg/L			11/27/18 15:52	1
Sulfate	**21**		5.0	1.4	mg/L			11/27/18 13:19	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**6.79**				SU			11/14/18 13:53	1

Client Sample ID: MW-203
Date Collected: 11/13/18 13:40
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-4
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		11/26/18 17:25	11/27/18 14:00	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		11/26/18 17:25	11/27/18 14:00	5
Barium	**0.037**		0.0025	0.00049	mg/L		11/26/18 17:25	11/27/18 14:00	5
Beryllium	0.00034	U J3	0.0025	0.00034	mg/L		11/26/18 17:25	11/27/18 14:00	5
Boron	**1.1**		0.050	0.021	mg/L		11/26/18 17:25	11/27/18 14:00	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		11/26/18 17:25	11/27/18 14:00	5
Calcium	**30**		0.25	0.13	mg/L		11/26/18 17:25	11/27/18 14:00	5
Cobalt	**0.0022**	**I**	0.0025	0.00040	mg/L		11/26/18 17:25	11/27/18 14:00	5
Lead	0.00035	U	0.0013	0.00035	mg/L		11/26/18 17:25	11/27/18 14:00	5
Lithium	**0.0019**	**I**	0.0050	0.0011	mg/L		11/26/18 17:25	11/27/18 14:00	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		11/26/18 17:25	11/27/18 14:00	5
Selenium	**0.0022**		0.0013	0.00071	mg/L		11/26/18 17:25	11/27/18 14:00	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		11/26/18 17:25	11/27/18 14:00	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		11/26/18 09:49	11/28/18 13:09	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**150**		5.0	3.4	mg/L			11/20/18 08:50	1
Chloride	**17**		2.0	1.4	mg/L			11/27/18 15:07	1
Fluoride	**0.050**	**I**	0.10	0.032	mg/L			11/27/18 15:46	1
Sulfate	**100**		25	7.0	mg/L			11/27/18 07:50	5

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**4.83**				SU			11/13/18 13:40	1

Client Sample ID: DUP-05

Date Collected: 11/13/18 12:05
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-5

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		11/26/18 17:25	11/27/18 14:21	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		11/26/18 17:25	11/27/18 14:21	5
Barium	**0.043**		0.0025	0.00049	mg/L		11/26/18 17:25	11/27/18 14:21	5
Beryllium	0.00034	U J3	0.0025	0.00034	mg/L		11/26/18 17:25	11/27/18 14:21	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		11/26/18 17:25	11/27/18 14:21	5
Calcium	**32**		0.25	0.13	mg/L		11/26/18 17:25	11/27/18 14:21	5
Cobalt	**0.0025**		0.0025	0.00040	mg/L		11/26/18 17:25	11/27/18 14:21	5
Lead	0.00035	U	0.0013	0.00035	mg/L		11/26/18 17:25	11/27/18 14:21	5
Lithium	**0.0016**	**I**	0.0050	0.0011	mg/L		11/26/18 17:25	11/27/18 14:21	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		11/26/18 17:25	11/27/18 14:21	5
Selenium	**0.0025**		0.0013	0.00071	mg/L		11/26/18 17:25	11/27/18 14:21	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		11/26/18 17:25	11/27/18 14:21	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1.1**		0.050	0.021	mg/L		11/26/18 17:25	11/28/18 14:48	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		11/26/18 09:49	11/28/18 13:25	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**170**		5.0	3.4	mg/L			11/20/18 08:50	1
Chloride	**17**		2.0	1.4	mg/L			11/27/18 15:07	1
Fluoride	**0.050**	**I**	0.10	0.032	mg/L			11/27/18 15:42	1
Sulfate	**100**		25	7.0	mg/L			11/27/18 07:50	5

Client Sample ID: DUP-06

Date Collected: 11/14/18 07:50
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-6

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		11/26/18 17:25	11/27/18 14:25	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		11/26/18 17:25	11/27/18 14:25	5
Barium	**0.029**		0.0025	0.00049	mg/L		11/26/18 17:25	11/27/18 14:25	5
Beryllium	0.00034	U J3	0.0025	0.00034	mg/L		11/26/18 17:25	11/27/18 14:25	5
Cadmium	**0.0026**		0.0025	0.00034	mg/L		11/26/18 17:25	11/27/18 14:25	5
Calcium	**38**		0.25	0.13	mg/L		11/26/18 17:25	11/27/18 14:25	5
Cobalt	**0.0015**	**I**	0.0025	0.00040	mg/L		11/26/18 17:25	11/27/18 14:25	5
Lead	0.00035	U	0.0013	0.00035	mg/L		11/26/18 17:25	11/27/18 14:25	5
Lithium	**0.0050**		0.0050	0.0011	mg/L		11/26/18 17:25	11/27/18 14:25	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		11/26/18 17:25	11/27/18 14:25	5
Selenium	**0.0024**		0.0013	0.00071	mg/L		11/26/18 17:25	11/27/18 14:25	5
Thallium	**0.00016**	**I**	0.00050	0.000085	mg/L		11/26/18 17:25	11/27/18 14:25	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.6**		0.25	0.11	mg/L		11/26/18 17:25	11/28/18 14:52	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.000094**	**I**	0.00020	0.000070	mg/L		11/26/18 09:49	11/28/18 13:27	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**230**		5.0	3.4	mg/L			11/20/18 08:50	1
Chloride	**41**		2.0	1.4	mg/L			11/27/18 16:51	1
Fluoride	**0.67**		0.10	0.032	mg/L			11/27/18 16:02	1
Sulfate	**110**		25	7.0	mg/L			11/27/18 13:44	5

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-162132-1
SDG: Gypsum Storage Area

Client Sample ID: EB--03
Date Collected: 11/14/18 10:30
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-7
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		11/26/18 17:25	11/27/18 14:28	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		11/26/18 17:25	11/27/18 14:28	5
Barium	0.00049	U	0.0025	0.00049	mg/L		11/26/18 17:25	11/27/18 14:28	5
Beryllium	0.00034	U J3	0.0025	0.00034	mg/L		11/26/18 17:25	11/27/18 14:28	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		11/26/18 17:25	11/27/18 14:28	5
Calcium	0.13	U	0.25	0.13	mg/L		11/26/18 17:25	11/27/18 14:28	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		11/26/18 17:25	11/27/18 14:28	5
Lead	0.00035	U	0.0013	0.00035	mg/L		11/26/18 17:25	11/27/18 14:28	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		11/26/18 17:25	11/27/18 14:28	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		11/26/18 17:25	11/27/18 14:28	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		11/26/18 17:25	11/27/18 14:28	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		11/26/18 17:25	11/27/18 14:28	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.021	U	0.050	0.021	mg/L		11/26/18 17:25	11/28/18 14:56	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		11/26/18 09:49	11/28/18 13:29	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			11/20/18 08:50	1
Chloride	1.4	U	2.0	1.4	mg/L			11/27/18 16:51	1
Fluoride	0.032	U	0.10	0.032	mg/L			11/27/18 16:10	1
Sulfate	1.4	U	5.0	1.4	mg/L			11/27/18 13:19	1

Client Sample ID: FB-03

Date Collected: 11/14/18 10:43
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-8

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		11/26/18 17:25	11/27/18 14:32	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		11/26/18 17:25	11/27/18 14:32	5
Barium	0.00049	U	0.0025	0.00049	mg/L		11/26/18 17:25	11/27/18 14:32	5
Beryllium	0.00034	U J3	0.0025	0.00034	mg/L		11/26/18 17:25	11/27/18 14:32	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		11/26/18 17:25	11/27/18 14:32	5
Calcium	0.13	U	0.25	0.13	mg/L		11/26/18 17:25	11/27/18 14:32	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		11/26/18 17:25	11/27/18 14:32	5
Lead	0.00035	U	0.0013	0.00035	mg/L		11/26/18 17:25	11/27/18 14:32	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		11/26/18 17:25	11/27/18 14:32	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		11/26/18 17:25	11/27/18 14:32	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		11/26/18 17:25	11/27/18 14:32	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		11/26/18 17:25	11/27/18 14:32	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.021	U	0.050	0.021	mg/L		11/26/18 17:25	11/28/18 14:59	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		11/26/18 09:49	11/28/18 13:31	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	38		5.0	3.4	mg/L			11/20/18 08:50	1
Chloride	1.4	U	2.0	1.4	mg/L			11/27/18 16:51	1
Fluoride	0.032	U	0.10	0.032	mg/L			11/27/18 16:14	1
Sulfate	1.4	U	5.0	1.4	mg/L			11/27/18 13:25	1

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
L	Off-scale high. Actual value is known to be greater than the value given.

General Chemistry

Qualifier	Qualifier Description
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Indicates that the compound was analyzed for but not detected.

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)

Client Sample ID: MW-200

Date Collected: 11/13/18 15:28
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			420865	11/26/18 17:25	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	421080	11/27/18 13:35	DRE	TAL PEN
Total Recoverable	Prep	3005A			420865	11/26/18 17:25	DRE	TAL PEN
Total Recoverable	Analysis	6020		50	421080	11/27/18 16:19	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		420865	11/26/18 17:25	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	421305	11/28/18 14:41	DRE	TAL PEN
Total/NA	Prep	7470A			420772	11/26/18 09:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	421169	11/28/18 13:04	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	420194	11/20/18 08:50	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		10	421020	11/27/18 15:47	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421030	11/27/18 15:38	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	421014	11/27/18 07:50	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	422564	11/13/18 15:28	AW	TAL PEN

Client Sample ID: MW-201

Date Collected: 11/14/18 08:50
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			420865	11/26/18 17:25	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	421080	11/27/18 13:53	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		420865	11/26/18 17:25	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	421305	11/28/18 14:45	DRE	TAL PEN
Total/NA	Prep	7470A			420772	11/26/18 09:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	421169	11/28/18 13:06	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	420194	11/20/18 08:50	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	421040	11/27/18 16:51	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421030	11/27/18 15:50	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		5	421014	11/27/18 07:50	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	422564	11/14/18 08:50	AW	TAL PEN

Client Sample ID: MW-202

Date Collected: 11/14/18 13:53
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			420865	11/26/18 17:25	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	421080	11/27/18 13:56	DRE	TAL PEN
Total/NA	Prep	7470A			420772	11/26/18 09:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	421169	11/28/18 13:08	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	420194	11/20/18 08:50	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	421040	11/27/18 16:51	RRC	TAL PEN

Client Sample ID: MW-202
Date Collected: 11/14/18 13:53
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	421030	11/27/18 15:52	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	420988	11/27/18 13:19	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	422564	11/14/18 13:53	AW	TAL PEN

Client Sample ID: MW-203
Date Collected: 11/13/18 13:40
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			420865	11/26/18 17:25	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	421080	11/27/18 14:00	DRE	TAL PEN
Total/NA	Prep	7470A			420772	11/26/18 09:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	421169	11/28/18 13:09	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	420194	11/20/18 08:50	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	421020	11/27/18 15:07	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421030	11/27/18 15:46	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		5	421014	11/27/18 07:50	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	422564	11/13/18 13:40	AW	TAL PEN

Client Sample ID: DUP-05
Date Collected: 11/13/18 12:05
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			420865	11/26/18 17:25	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	421080	11/27/18 14:21	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		420865	11/26/18 17:25	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	421305	11/28/18 14:48	DRE	TAL PEN
Total/NA	Prep	7470A			420772	11/26/18 09:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	421169	11/28/18 13:25	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	420194	11/20/18 08:50	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	421020	11/27/18 15:07	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421030	11/27/18 15:42	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		5	421014	11/27/18 07:50	RRC	TAL PEN

Client Sample ID: DUP-06
Date Collected: 11/14/18 07:50
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			420865	11/26/18 17:25	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	421080	11/27/18 14:25	DRE	TAL PEN

Client Sample ID: DUP-06

Date Collected: 11/14/18 07:50
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A	DL		420865	11/26/18 17:25	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	421305	11/28/18 14:52	DRE	TAL PEN
Total/NA	Prep	7470A			420772	11/26/18 09:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	421169	11/28/18 13:27	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	420194	11/20/18 08:50	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	421040	11/27/18 16:51	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421030	11/27/18 16:02	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		5	420988	11/27/18 13:44	RRC	TAL PEN

Client Sample ID: EB--03

Date Collected: 11/14/18 10:30
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			420865	11/26/18 17:25	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	421080	11/27/18 14:28	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		420865	11/26/18 17:25	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	421305	11/28/18 14:56	DRE	TAL PEN
Total/NA	Prep	7470A			420772	11/26/18 09:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	421169	11/28/18 13:29	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	420194	11/20/18 08:50	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	421040	11/27/18 16:51	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421030	11/27/18 16:10	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	420988	11/27/18 13:19	RRC	TAL PEN

Client Sample ID: FB-03

Date Collected: 11/14/18 10:43
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			420865	11/26/18 17:25	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	421080	11/27/18 14:32	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		420865	11/26/18 17:25	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	421305	11/28/18 14:59	DRE	TAL PEN
Total/NA	Prep	7470A			420772	11/26/18 09:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	421169	11/28/18 13:31	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	420194	11/20/18 08:50	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	421040	11/27/18 16:51	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421030	11/27/18 16:14	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	420988	11/27/18 13:25	RRC	TAL PEN

Laboratory References:

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

Metals

Prep Batch: 420772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162132-1	MW-200	Total/NA	Water	7470A	
400-162132-2	MW-201	Total/NA	Water	7470A	
400-162132-3	MW-202	Total/NA	Water	7470A	
400-162132-4	MW-203	Total/NA	Water	7470A	
400-162132-5	DUP-05	Total/NA	Water	7470A	
400-162132-6	DUP-06	Total/NA	Water	7470A	
400-162132-7	EB--03	Total/NA	Water	7470A	
400-162132-8	FB-03	Total/NA	Water	7470A	
MB 400-420772/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-420772/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-162079-D-1-B MS	Matrix Spike	Total/NA	Water	7470A	
400-162079-D-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 420865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162132-1	MW-200	Total Recoverable	Water	3005A	
400-162132-1 - DL	MW-200	Total Recoverable	Water	3005A	
400-162132-2	MW-201	Total Recoverable	Water	3005A	
400-162132-2 - DL	MW-201	Total Recoverable	Water	3005A	
400-162132-3	MW-202	Total Recoverable	Water	3005A	
400-162132-4	MW-203	Total Recoverable	Water	3005A	
400-162132-5 - RA	DUP-05	Total Recoverable	Water	3005A	
400-162132-5	DUP-05	Total Recoverable	Water	3005A	
400-162132-6 - DL	DUP-06	Total Recoverable	Water	3005A	
400-162132-6	DUP-06	Total Recoverable	Water	3005A	
400-162132-7	EB--03	Total Recoverable	Water	3005A	
400-162132-7 - RA	EB--03	Total Recoverable	Water	3005A	
400-162132-8	FB-03	Total Recoverable	Water	3005A	
400-162132-8 - RA	FB-03	Total Recoverable	Water	3005A	
MB 400-420865/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-420865/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-162132-1 MS	MW-200	Total Recoverable	Water	3005A	
400-162132-1 MSD	MW-200	Total Recoverable	Water	3005A	

Analysis Batch: 421080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162132-1	MW-200	Total Recoverable	Water	6020	420865
400-162132-1	MW-200	Total Recoverable	Water	6020	420865
400-162132-2	MW-201	Total Recoverable	Water	6020	420865
400-162132-3	MW-202	Total Recoverable	Water	6020	420865
400-162132-4	MW-203	Total Recoverable	Water	6020	420865
400-162132-5	DUP-05	Total Recoverable	Water	6020	420865
400-162132-6	DUP-06	Total Recoverable	Water	6020	420865
400-162132-7	EB--03	Total Recoverable	Water	6020	420865
400-162132-8	FB-03	Total Recoverable	Water	6020	420865
MB 400-420865/1-A ^5	Method Blank	Total Recoverable	Water	6020	420865
LCS 400-420865/2-A	Lab Control Sample	Total Recoverable	Water	6020	420865
400-162132-1 MS	MW-200	Total Recoverable	Water	6020	420865
400-162132-1 MSD	MW-200	Total Recoverable	Water	6020	420865

Metals (Continued)

Analysis Batch: 421169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162132-1	MW-200	Total/NA	Water	7470A	420772
400-162132-2	MW-201	Total/NA	Water	7470A	420772
400-162132-3	MW-202	Total/NA	Water	7470A	420772
400-162132-4	MW-203	Total/NA	Water	7470A	420772
400-162132-5	DUP-05	Total/NA	Water	7470A	420772
400-162132-6	DUP-06	Total/NA	Water	7470A	420772
400-162132-7	EB--03	Total/NA	Water	7470A	420772
400-162132-8	FB-03	Total/NA	Water	7470A	420772
MB 400-420772/14-A	Method Blank	Total/NA	Water	7470A	420772
LCS 400-420772/15-A	Lab Control Sample	Total/NA	Water	7470A	420772
400-162079-D-1-B MS	Matrix Spike	Total/NA	Water	7470A	420772
400-162079-D-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	420772

Analysis Batch: 421305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162132-1 - DL	MW-200	Total Recoverable	Water	6020	420865
400-162132-2 - DL	MW-201	Total Recoverable	Water	6020	420865
400-162132-5 - RA	DUP-05	Total Recoverable	Water	6020	420865
400-162132-6 - DL	DUP-06	Total Recoverable	Water	6020	420865
400-162132-7 - RA	EB--03	Total Recoverable	Water	6020	420865
400-162132-8 - RA	FB-03	Total Recoverable	Water	6020	420865

General Chemistry

Analysis Batch: 420194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162132-1	MW-200	Total/NA	Water	SM 2540C	
400-162132-2	MW-201	Total/NA	Water	SM 2540C	
400-162132-3	MW-202	Total/NA	Water	SM 2540C	
400-162132-4	MW-203	Total/NA	Water	SM 2540C	
400-162132-5	DUP-05	Total/NA	Water	SM 2540C	
400-162132-6	DUP-06	Total/NA	Water	SM 2540C	
400-162132-7	EB--03	Total/NA	Water	SM 2540C	
400-162132-8	FB-03	Total/NA	Water	SM 2540C	
MB 400-420194/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-420194/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-162202-A-3 DU	Duplicate	Total/NA	Water	SM 2540C	
400-162202-A-4 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 420988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162132-3	MW-202	Total/NA	Water	SM 4500 SO4 E	
400-162132-6	DUP-06	Total/NA	Water	SM 4500 SO4 E	
400-162132-7	EB--03	Total/NA	Water	SM 4500 SO4 E	
400-162132-8	FB-03	Total/NA	Water	SM 4500 SO4 E	
MB 400-420988/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-420988/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-420988/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-162132-3 MS	MW-202	Total/NA	Water	SM 4500 SO4 E	
400-162132-3 MSD	MW-202	Total/NA	Water	SM 4500 SO4 E	

General Chemistry (Continued)

Analysis Batch: 421014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162132-1	MW-200	Total/NA	Water	SM 4500 SO4 E	
400-162132-2	MW-201	Total/NA	Water	SM 4500 SO4 E	
400-162132-4	MW-203	Total/NA	Water	SM 4500 SO4 E	
400-162132-5	DUP-05	Total/NA	Water	SM 4500 SO4 E	
MB 400-421014/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-421014/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-421014/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-162020-B-17 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-162020-B-17 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 421020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162132-1	MW-200	Total/NA	Water	SM 4500 Cl- E	
400-162132-4	MW-203	Total/NA	Water	SM 4500 Cl- E	
400-162132-5	DUP-05	Total/NA	Water	SM 4500 Cl- E	
MB 400-421020/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-421020/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-421020/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-162020-B-26 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-162020-B-26 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	
400-162020-B-32 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-162020-B-32 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 421030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162132-1	MW-200	Total/NA	Water	SM 4500 F C	
400-162132-2	MW-201	Total/NA	Water	SM 4500 F C	
400-162132-3	MW-202	Total/NA	Water	SM 4500 F C	
400-162132-4	MW-203	Total/NA	Water	SM 4500 F C	
400-162132-5	DUP-05	Total/NA	Water	SM 4500 F C	
400-162132-6	DUP-06	Total/NA	Water	SM 4500 F C	
400-162132-7	EB--03	Total/NA	Water	SM 4500 F C	
400-162132-8	FB-03	Total/NA	Water	SM 4500 F C	
MB 400-421030/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-421030/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-162020-B-32 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-162020-B-32 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-162132-6 DU	DUP-06	Total/NA	Water	SM 4500 F C	

Analysis Batch: 421040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162132-2	MW-201	Total/NA	Water	SM 4500 Cl- E	
400-162132-3	MW-202	Total/NA	Water	SM 4500 Cl- E	
400-162132-6	DUP-06	Total/NA	Water	SM 4500 Cl- E	
400-162132-7	EB--03	Total/NA	Water	SM 4500 Cl- E	
400-162132-8	FB-03	Total/NA	Water	SM 4500 Cl- E	
MB 400-421040/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-421040/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-421040/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-162132-2 MS	MW-201	Total/NA	Water	SM 4500 Cl- E	
400-162132-2 MSD	MW-201	Total/NA	Water	SM 4500 Cl- E	

Field Service / Mobile Lab

Analysis Batch: 422564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162132-1	MW-200	Total/NA	Water	Field Sampling	
400-162132-2	MW-201	Total/NA	Water	Field Sampling	
400-162132-3	MW-202	Total/NA	Water	Field Sampling	
400-162132-4	MW-203	Total/NA	Water	Field Sampling	

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-420865/1-A ^5
Matrix: Water
Analysis Batch: 421080

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 420865

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		11/26/18 17:25	11/27/18 13:25	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		11/26/18 17:25	11/27/18 13:25	5
Barium	0.00049	U	0.0025	0.00049	mg/L		11/26/18 17:25	11/27/18 13:25	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		11/26/18 17:25	11/27/18 13:25	5
Boron	0.021	U	0.050	0.021	mg/L		11/26/18 17:25	11/27/18 13:25	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		11/26/18 17:25	11/27/18 13:25	5
Calcium	0.13	U	0.25	0.13	mg/L		11/26/18 17:25	11/27/18 13:25	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		11/26/18 17:25	11/27/18 13:25	5
Lead	0.00035	U	0.0013	0.00035	mg/L		11/26/18 17:25	11/27/18 13:25	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		11/26/18 17:25	11/27/18 13:25	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		11/26/18 17:25	11/27/18 13:25	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		11/26/18 17:25	11/27/18 13:25	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		11/26/18 17:25	11/27/18 13:25	5

Lab Sample ID: LCS 400-420865/2-A
Matrix: Water
Analysis Batch: 421080

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 420865

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0581		mg/L		116	80 - 120
Arsenic	0.0500	0.0533		mg/L		107	80 - 120
Barium	0.0500	0.0547		mg/L		109	80 - 120
Beryllium	0.0500	0.0613	J3	mg/L		123	80 - 120
Boron	0.100	0.0996		mg/L		100	80 - 120
Cadmium	0.0500	0.0542		mg/L		108	80 - 120
Calcium	5.00	5.55		mg/L		111	80 - 120
Cobalt	0.0500	0.0568		mg/L		114	80 - 120
Lead	0.0500	0.0556		mg/L		111	80 - 120
Lithium	0.0500	0.0561		mg/L		112	80 - 120
Molybdenum	0.0500	0.0537		mg/L		107	80 - 120
Selenium	0.0500	0.0516		mg/L		103	80 - 120
Thallium	0.0100	0.0105		mg/L		105	80 - 120

Lab Sample ID: 400-162132-1 MS
Matrix: Water
Analysis Batch: 421080

Client Sample ID: MW-200
Prep Type: Total Recoverable
Prep Batch: 420865

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0010	U	0.0500	0.0592		mg/L		118	75 - 125
Arsenic	0.00072	I	0.0500	0.0554		mg/L		109	75 - 125
Barium	0.048		0.0500	0.0998		mg/L		103	75 - 125
Beryllium	0.00034	U J3	0.0500	0.0605		mg/L		121	75 - 125
Boron	7.7	L	0.100	7.71	L J3	mg/L		22	75 - 125
Cadmium	0.00034	U	0.0500	0.0553		mg/L		111	75 - 125
Calcium	230	L	5.00	235	L J3	mg/L		37	75 - 125
Cobalt	0.0019	I	0.0500	0.0550		mg/L		106	75 - 125
Lead	0.0014		0.0500	0.0572		mg/L		112	75 - 125
Lithium	0.0024	I	0.0500	0.0583		mg/L		112	75 - 125

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

Lab Sample ID: 400-162132-1 MS
Matrix: Water
Analysis Batch: 421080

Client Sample ID: MW-200
Prep Type: Total Recoverable
Prep Batch: 420865

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	0.0020	U	0.0500	0.0557		mg/L		111	75 - 125
Selenium	0.0062		0.0500	0.0585		mg/L		105	75 - 125
Thallium	0.000085	U	0.0100	0.0100		mg/L		100	75 - 125

Lab Sample ID: 400-162132-1 MSD
Matrix: Water
Analysis Batch: 421080

Client Sample ID: MW-200
Prep Type: Total Recoverable
Prep Batch: 420865

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.0010	U	0.0500	0.0586		mg/L		117	75 - 125	1	20
Arsenic	0.00072	I	0.0500	0.0549		mg/L		108	75 - 125	1	20
Barium	0.048		0.0500	0.102		mg/L		107	75 - 125	2	20
Beryllium	0.00034	U J3	0.0500	0.0610		mg/L		122	75 - 125	1	20
Boron	7.7	L	0.100	7.67	J3 L	mg/L		-21	75 - 125	1	20
Cadmium	0.00034	U	0.0500	0.0549		mg/L		110	75 - 125	1	20
Calcium	230	L	5.00	236	J3 L	mg/L		72	75 - 125	1	20
Cobalt	0.0019	I	0.0500	0.0549		mg/L		106	75 - 125	0	20
Lead	0.0014		0.0500	0.0582		mg/L		114	75 - 125	2	20
Lithium	0.0024	I	0.0500	0.0560		mg/L		107	75 - 125	4	20
Molybdenum	0.0020	U	0.0500	0.0534		mg/L		107	75 - 125	4	20
Selenium	0.0062		0.0500	0.0573		mg/L		102	75 - 125	2	20
Thallium	0.000085	U	0.0100	0.0101		mg/L		101	75 - 125	0	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-420772/14-A
Matrix: Water
Analysis Batch: 421169

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 420772

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		11/26/18 09:49	11/28/18 12:53	1

Lab Sample ID: LCS 400-420772/15-A
Matrix: Water
Analysis Batch: 421169

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 420772

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.00104		mg/L		104	80 - 120

Lab Sample ID: 400-162079-D-1-B MS
Matrix: Water
Analysis Batch: 421169

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 420772

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.000070	U	0.00201	0.00177		mg/L		88	80 - 120

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

Lab Sample ID: 400-162079-D-1-C MSD
Matrix: Water
Analysis Batch: 421169

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 420772

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.000070	U	0.00201	0.00174		mg/L		87	80 - 120	2	20

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

Lab Sample ID: MB 400-420194/1
Matrix: Water
Analysis Batch: 420194

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			11/20/18 08:50	1

Lab Sample ID: LCS 400-420194/2
Matrix: Water
Analysis Batch: 420194

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	262		mg/L		89	78 - 122

Lab Sample ID: 400-162202-A-3 DU
Matrix: Water
Analysis Batch: 420194

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	110		112		mg/L		2	5

Lab Sample ID: 400-162202-A-4 DU
Matrix: Water
Analysis Batch: 420194

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	24		24.0		mg/L		0	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-421020/6
Matrix: Water
Analysis Batch: 421020

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4	U	2.0	1.4	mg/L			11/27/18 14:57	1

Lab Sample ID: LCS 400-421020/7
Matrix: Water
Analysis Batch: 421020

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

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

Lab Sample ID: MRL 400-421020/3
Matrix: Water
Analysis Batch: 421020

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	1.62	I	mg/L		81	50 - 150

Lab Sample ID: 400-162020-B-26 MS
Matrix: Water
Analysis Batch: 421020

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	1.9	I	10.0	13.5		mg/L		117	73 - 120

Lab Sample ID: 400-162020-B-26 MSD
Matrix: Water
Analysis Batch: 421020

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	1.9	I	10.0	13.5		mg/L		117	73 - 120	0	8

Lab Sample ID: 400-162020-B-32 MS
Matrix: Water
Analysis Batch: 421020

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	58		10.0	65.4		mg/L		73	73 - 120

Lab Sample ID: 400-162020-B-32 MSD
Matrix: Water
Analysis Batch: 421020

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	58		10.0	65.1	J3	mg/L		70	73 - 120	0	8

Lab Sample ID: MB 400-421040/6
Matrix: Water
Analysis Batch: 421040

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4	U	2.0	1.4	mg/L			11/27/18 16:48	1

Lab Sample ID: LCS 400-421040/7
Matrix: Water
Analysis Batch: 421040

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	32.8		mg/L		109	90 - 110

Lab Sample ID: MRL 400-421040/3
Matrix: Water
Analysis Batch: 421040

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	1.39	I	mg/L		69	50 - 150

Lab Sample ID: 400-162132-2 MS
Matrix: Water
Analysis Batch: 421040

Client Sample ID: MW-201
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	41		10.0	48.5		mg/L		76	73 - 120		

Lab Sample ID: 400-162132-2 MSD
Matrix: Water
Analysis Batch: 421040

Client Sample ID: MW-201
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	41		10.0	48.1		mg/L		73	73 - 120	1	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-421030/3
Matrix: Water
Analysis Batch: 421030

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.032	U	0.10	0.032	mg/L			11/27/18 15:06	1

Lab Sample ID: LCS 400-421030/4
Matrix: Water
Analysis Batch: 421030

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	3.82		mg/L		96	90 - 110		

Lab Sample ID: 400-162020-B-32 MS
Matrix: Water
Analysis Batch: 421030

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	0.080	I	1.00	1.04		mg/L		96	75 - 125		

Lab Sample ID: 400-162020-B-32 MSD
Matrix: Water
Analysis Batch: 421030

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	0.080	I	1.00	1.04		mg/L		96	75 - 125	0	4

Lab Sample ID: 400-162132-6 DU
Matrix: Water
Analysis Batch: 421030

Client Sample ID: DUP-06
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Fluoride	0.67			0.680		mg/L				1	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-420988/6
Matrix: Water
Analysis Batch: 420988

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.4	U	5.0	1.4	mg/L			11/27/18 13:19	1

Lab Sample ID: LCS 400-420988/7
Matrix: Water
Analysis Batch: 420988

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	16.1		mg/L		107	90 - 110

Lab Sample ID: MRL 400-420988/3
Matrix: Water
Analysis Batch: 420988

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	4.48	I	mg/L		90	50 - 150

Lab Sample ID: 400-162132-3 MS
Matrix: Water
Analysis Batch: 420988

Client Sample ID: MW-202
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	21		10.0	26.2	J3	mg/L		56	77 - 128

Lab Sample ID: 400-162132-3 MSD
Matrix: Water
Analysis Batch: 420988

Client Sample ID: MW-202
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	21		10.0	25.8	J3	mg/L		53	77 - 128	1	5

Lab Sample ID: MB 400-421014/6
Matrix: Water
Analysis Batch: 421014

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.4	U	5.0	1.4	mg/L			11/27/18 07:50	1

Lab Sample ID: LCS 400-421014/7
Matrix: Water
Analysis Batch: 421014

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	15.1		mg/L		101	90 - 110

Lab Sample ID: MRL 400-421014/3
Matrix: Water
Analysis Batch: 421014

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	4.20	I	mg/L		84	50 - 150

QC Sample Results

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-162132-1
SDG: Gypsum Storage Area

Lab Sample ID: 400-162020-B-17 MS
Matrix: Water
Analysis Batch: 421014

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	45		10.0	54.9		mg/L		97	77 - 128		

Lab Sample ID: 400-162020-B-17 MSD
Matrix: Water
Analysis Batch: 421014

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	45		10.0	52.3	J3	mg/L		70	77 - 128	5	5

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Trevor Braddock/Rick Hayworth	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No:
Client Contact: Kristi Mitchell	Phone: 850-336-0142	E-Mail: cheyenne.whitmire@testamericainc.com		Page:
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days):			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: CCR Plant Crist	Project #: 40005424			
Site: Gypsum Storage Area	SSOW#:			

Analysis Requested

400-162132 COC

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)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	SM4500_Cl_E - Chloride, SM4500_SO4_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C - Fluoride	6020 - Sb,As,Ba,B,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, 7470A - Mercury	FieldSampling - Field Sampling Parameters	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
MW-200	11-13-18	1528	G	Water			X	X	X	X		
MW-201	11-14-18	0850	G	Water			X	X	X	X		
MW-202	11-14-18	1357	G	Water			X	X	X	X		
MW-203	11-13-18	1340	G	Water			X	X	X	X		
~~MW-204~~				Water								
~~MW-205~~				Water								
~~MW-206~~				Water								
Dup-05	11-13-18	1205	G				X	X	X	X		
Dup-06	11-14-18	0759	G				X	X	X	X		
EB-03	11-14-18	1030	G				X	X	X			
FB-03	11-14-18	1043	G				X	X	X			

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)

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	11-14-18 1535	RDH ENV.	[signature]	11/14/18 1535	TA Pen

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.9°C 1.0°C IR 8

12/13/2018

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-162132-1
SDG Number: Gypsum Storage Area

Login Number: 162132
List Number: 1
Creator: Perez, Trina M

List Source: 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	0.9°C, 1.0°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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-162132-1
SDG: Gypsum Storage Area

Laboratory: 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	12-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA180023	12-31-18
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	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
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	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

TestAmerica

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ANALYTICAL REPORT

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

TestAmerica Job ID: 400-162132-2
TestAmerica Sample Delivery Group: Gypsum Storage Area
Client Project/Site: CCR Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Cheyenne Whitmire

Authorized for release by:
12/19/2018 6:25:23 PM

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

LINKS

Review your project results through TotalAccess

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Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-162132-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-162132-2

RAD

Method(s) 9315: Radium-226 Prep Batch 160-401892. The sample exhibited a negative Ra-226 result greater in magnitude than the 3 sigma TPU. This occurrence was evaluated and determined to be random in nature. Sporadic occurrences such as this are statistically expected. No further action is required. EB--03 (400-162132-7)

Method Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-162132-2
SDG: Gypsum Storage Area

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

Sample Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-162132-2
SDG: Gypsum Storage Area

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-162132-1	MW-200	Water	11/13/18 15:28	11/14/18 15:35
400-162132-2	MW-201	Water	11/14/18 08:50	11/14/18 15:35
400-162132-3	MW-202	Water	11/14/18 13:53	11/14/18 15:35
400-162132-4	MW-203	Water	11/13/18 13:40	11/14/18 15:35
400-162132-5	DUP-05	Water	11/13/18 12:05	11/14/18 15:35
400-162132-6	DUP-06	Water	11/14/18 07:50	11/14/18 15:35
400-162132-7	EB--03	Water	11/14/18 10:30	11/14/18 15:35
400-162132-8	FB-03	Water	11/14/18 10:43	11/14/18 15:35

Client Sample ID: MW-200
Date Collected: 11/13/18 15:28
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-1
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	4.57		0.485	0.636	1.00	0.159	pCi/L	11/20/18 12:49	12/12/18 07:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.9*		*40 - 110*	*11/20/18 12:49*	*12/12/18 07:15*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.52		0.482	0.636	1.00	0.356	pCi/L	11/20/18 14:23	12/10/18 08:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.9*		*40 - 110*	*11/20/18 14:23*	*12/10/18 08:33*	*1*
Y Carrier	*79.6*		*40 - 110*	*11/20/18 14:23*	*12/10/18 08:33*	*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	9.09		0.684	0.899	5.00	0.356	pCi/L		12/17/18 16:04	1

Client Sample ID: MW-201

Date Collected: 11/14/18 08:50
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-2

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	2.55		0.401	0.462	1.00	0.196	pCi/L	11/20/18 12:49	12/12/18 07:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.3*		*40 - 110*	*11/20/18 12:49*	*12/12/18 07:15*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.11		0.403	0.494	1.00	0.355	pCi/L	11/20/18 14:23	12/10/18 08:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.3*		*40 - 110*	*11/20/18 14:23*	*12/10/18 08:33*	*1*
Y Carrier	*84.1*		*40 - 110*	*11/20/18 14:23*	*12/10/18 08:33*	*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	5.66		0.569	0.676	5.00	0.355	pCi/L		12/17/18 16:04	1

Client Sample ID: MW-202

Date Collected: 11/14/18 13:53
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-3

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	0.602		0.193	0.201	1.00	0.176	pCi/L	11/20/18 12:49	12/12/18 07:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.3*		*40 - 110*	*11/20/18 12:49*	*12/12/18 07:15*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.711		0.282	0.290	1.00	0.402	pCi/L	11/20/18 14:23	12/10/18 08:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.3*		*40 - 110*	*11/20/18 14:23*	*12/10/18 08:33*	*1*
Y Carrier	*85.2*		*40 - 110*	*11/20/18 14:23*	*12/10/18 08:33*	*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	1.31		0.342	0.353	5.00	0.402	pCi/L		12/17/18 16:04	1

Client Sample ID: MW-203

Date Collected: 11/13/18 13:40
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-4

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	2.04		0.329	0.376	1.00	0.154	pCi/L	11/20/18 12:49	12/12/18 07:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.2*		*40 - 110*	*11/20/18 12:49*	*12/12/18 07:15*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.91		0.452	0.578	1.00	0.377	pCi/L	11/20/18 14:23	12/10/18 08:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.2*		*40 - 110*	*11/20/18 14:23*	*12/10/18 08:33*	*1*
Y Carrier	*83.4*		*40 - 110*	*11/20/18 14:23*	*12/10/18 08:33*	*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	5.95		0.559	0.690	5.00	0.377	pCi/L		12/17/18 16:04	1

Client Sample ID: DUP-05
Date Collected: 11/13/18 12:05
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-5
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	2.06		0.334	0.382	1.00	0.186	pCi/L	11/20/18 12:49	12/12/18 07:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.1*		*40 - 110*	*11/20/18 12:49*	*12/12/18 07:15*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.77		0.479	0.650	1.00	0.364	pCi/L	11/20/18 14:23	12/10/18 08:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.1*		*40 - 110*	*11/20/18 14:23*	*12/10/18 08:33*	*1*
Y Carrier	*84.5*		*40 - 110*	*11/20/18 14:23*	*12/10/18 08:33*	*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	6.83		0.584	0.754	5.00	0.364	pCi/L		12/17/18 16:04	1

Client Sample ID: DUP-06

Date Collected: 11/14/18 07:50
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-6

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	2.25		0.344	0.399	1.00	0.166	pCi/L	11/20/18 12:49	12/12/18 07:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.5*		*40 - 110*	*11/20/18 12:49*	*12/12/18 07:15*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.01		0.407	0.492	1.00	0.355	pCi/L	11/20/18 14:23	12/10/18 08:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.5*		*40 - 110*	*11/20/18 14:23*	*12/10/18 08:33*	*1*
Y Carrier	*80.7*		*40 - 110*	*11/20/18 14:23*	*12/10/18 08:33*	*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	5.26		0.533	0.633	5.00	0.355	pCi/L		12/17/18 16:04	1

Client Sample ID: EB--03

Date Collected: 11/14/18 10:30
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-7

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	-0.0810	U	0.0489	0.0494	1.00	0.168	pCi/L	11/20/18 12:49	12/12/18 07:16	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*11/20/18 12:49*	*12/12/18 07:16*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.336	U	0.231	0.233	1.00	0.359	pCi/L	11/20/18 14:23	12/10/18 08:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*11/20/18 14:23*	*12/10/18 08:33*	*1*
Y Carrier	*83.4*		*40 - 110*	*11/20/18 14:23*	*12/10/18 08:33*	*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	0.255	U	0.236	0.238	5.00	0.359	pCi/L		12/17/18 16:04	1

Client Sample ID: FB-03

Date Collected: 11/14/18 10:43
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-8

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	0.0382	U	0.0922	0.0922	1.00	0.171	pCi/L	11/20/18 12:49	12/12/18 07:16	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.9*		*40 - 110*	*11/20/18 12:49*	*12/12/18 07:16*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.235	U	0.203	0.205	1.00	0.324	pCi/L	11/20/18 14:23	12/10/18 08:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.9*		*40 - 110*	*11/20/18 14:23*	*12/10/18 08:33*	*1*
Y Carrier	*84.1*		*40 - 110*	*11/20/18 14:23*	*12/10/18 08:33*	*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	0.274	U	0.223	0.225	5.00	0.324	pCi/L		12/17/18 16:04	1

Definitions/Glossary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-162132-2
SDG: Gypsum Storage Area

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: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-162132-2
SDG: Gypsum Storage Area

Client Sample ID: MW-200
Date Collected: 11/13/18 15:28
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			401892	11/20/18 12:49	REG	TAL SL
Total/NA	Analysis	9315		1	405210	12/12/18 07:15	KLS	TAL SL
Total/NA	Prep	PrecSep_0			401907	11/20/18 14:23	REG	TAL SL
Total/NA	Analysis	9320		1	404801	12/10/18 08:33	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	406213	12/17/18 16:04	RTM	TAL SL

Client Sample ID: MW-201
Date Collected: 11/14/18 08:50
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			401892	11/20/18 12:49	REG	TAL SL
Total/NA	Analysis	9315		1	405210	12/12/18 07:15	KLS	TAL SL
Total/NA	Prep	PrecSep_0			401907	11/20/18 14:23	REG	TAL SL
Total/NA	Analysis	9320		1	404801	12/10/18 08:33	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	406213	12/17/18 16:04	RTM	TAL SL

Client Sample ID: MW-202
Date Collected: 11/14/18 13:53
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			401892	11/20/18 12:49	REG	TAL SL
Total/NA	Analysis	9315		1	405210	12/12/18 07:15	KLS	TAL SL
Total/NA	Prep	PrecSep_0			401907	11/20/18 14:23	REG	TAL SL
Total/NA	Analysis	9320		1	404801	12/10/18 08:33	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	406213	12/17/18 16:04	RTM	TAL SL

Client Sample ID: MW-203
Date Collected: 11/13/18 13:40
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			401892	11/20/18 12:49	REG	TAL SL
Total/NA	Analysis	9315		1	405210	12/12/18 07:15	KLS	TAL SL
Total/NA	Prep	PrecSep_0			401907	11/20/18 14:23	REG	TAL SL
Total/NA	Analysis	9320		1	404801	12/10/18 08:33	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	406213	12/17/18 16:04	RTM	TAL SL

Lab Chronicle

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-162132-2
SDG: Gypsum Storage Area

Client Sample ID: DUP-05
Date Collected: 11/13/18 12:05
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			401892	11/20/18 12:49	REG	TAL SL
Total/NA	Analysis	9315		1	405210	12/12/18 07:15	KLS	TAL SL
Total/NA	Prep	PrecSep_0			401907	11/20/18 14:23	REG	TAL SL
Total/NA	Analysis	9320		1	404801	12/10/18 08:33	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	406213	12/17/18 16:04	RTM	TAL SL

Client Sample ID: DUP-06
Date Collected: 11/14/18 07:50
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			401892	11/20/18 12:49	REG	TAL SL
Total/NA	Analysis	9315		1	405210	12/12/18 07:15	KLS	TAL SL
Total/NA	Prep	PrecSep_0			401907	11/20/18 14:23	REG	TAL SL
Total/NA	Analysis	9320		1	404801	12/10/18 08:33	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	406213	12/17/18 16:04	RTM	TAL SL

Client Sample ID: EB--03
Date Collected: 11/14/18 10:30
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			401892	11/20/18 12:49	REG	TAL SL
Total/NA	Analysis	9315		1	405210	12/12/18 07:16	KLS	TAL SL
Total/NA	Prep	PrecSep_0			401907	11/20/18 14:23	REG	TAL SL
Total/NA	Analysis	9320		1	404801	12/10/18 08:33	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	406213	12/17/18 16:04	RTM	TAL SL

Client Sample ID: FB-03
Date Collected: 11/14/18 10:43
Date Received: 11/14/18 15:35

Lab Sample ID: 400-162132-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			401892	11/20/18 12:49	REG	TAL SL
Total/NA	Analysis	9315		1	405210	12/12/18 07:16	KLS	TAL SL
Total/NA	Prep	PrecSep_0			401907	11/20/18 14:23	REG	TAL SL
Total/NA	Analysis	9320		1	404801	12/10/18 08:33	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	406213	12/17/18 16:04	RTM	TAL SL

Laboratory References:

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

Rad

Prep Batch: 401892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162132-1	MW-200	Total/NA	Water	PrecSep-21	
400-162132-2	MW-201	Total/NA	Water	PrecSep-21	
400-162132-3	MW-202	Total/NA	Water	PrecSep-21	
400-162132-4	MW-203	Total/NA	Water	PrecSep-21	
400-162132-5	DUP-05	Total/NA	Water	PrecSep-21	
400-162132-6	DUP-06	Total/NA	Water	PrecSep-21	
400-162132-7	EB--03	Total/NA	Water	PrecSep-21	
400-162132-8	FB-03	Total/NA	Water	PrecSep-21	
MB 160-401892/20-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-401892/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
600-176043-B-1-D DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 401907

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162132-1	MW-200	Total/NA	Water	PrecSep_0	
400-162132-2	MW-201	Total/NA	Water	PrecSep_0	
400-162132-3	MW-202	Total/NA	Water	PrecSep_0	
400-162132-4	MW-203	Total/NA	Water	PrecSep_0	
400-162132-5	DUP-05	Total/NA	Water	PrecSep_0	
400-162132-6	DUP-06	Total/NA	Water	PrecSep_0	
400-162132-7	EB--03	Total/NA	Water	PrecSep_0	
400-162132-8	FB-03	Total/NA	Water	PrecSep_0	
MB 160-401907/20-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-401907/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
600-176043-B-1-F DU	Duplicate	Total/NA	Water	PrecSep_0	

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-401892/20-A
Matrix: Water
Analysis Batch: 405211

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 401892

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1088	U	0.0965	0.0970	1.00	0.143	pCi/L	11/20/18 12:49	12/12/18 07:19	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*11/20/18 12:49*	*12/12/18 07:19*	*1*

Lab Sample ID: LCS 160-401892/1-A
Matrix: Water
Analysis Batch: 405210

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 401892

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.4	11.44		1.28	1.00	0.155	pCi/L	101	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*95.6*		*40 - 110*

Lab Sample ID: 600-176043-B-1-D DU
Matrix: Water
Analysis Batch: 405211

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 401892

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-226	0.380			0.2502		0.131	1.00	0.143	pCi/L			0.45	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ba Carrier	*97.1*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-401907/20-A
Matrix: Water
Analysis Batch: 404802

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 401907

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1980	U	0.214	0.215	1.00	0.351	pCi/L	11/20/18 14:23	12/10/18 08:35	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*11/20/18 14:23*	*12/10/18 08:35*	*1*
Y Carrier	*83.7*		*40 - 110*	*11/20/18 14:23*	*12/10/18 08:35*	*1*

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

Lab Sample ID: LCS 160-401907/1-A
Matrix: Water
Analysis Batch: 404801

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 401907

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			9.14	8.489		1.01	1.00	0.380	pCi/L	93	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*95.6*		*40 - 110*
Y Carrier	*76.6*		*40 - 110*

Lab Sample ID: 600-176043-B-1-F DU
Matrix: Water
Analysis Batch: 404802

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 401907

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-228	0.701			0.5006		0.254	1.00	0.369	pCi/L			0.38	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ba Carrier	*97.1*		*40 - 110*
Y Carrier	*85.2*		*40 - 110*

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Trevor Braddock/Rick Hayes	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No:
Client Contact: Kristi Mitchell	Phone: 850-336-0142	E-Mail: cheyenne.whitmire@testamericainc.com		Page:
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days):			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: CCR Plant Crist	Project #: 40005424			
Site: Gypsum Storage Area	SSOW#:			

Analysis Requested

400-162132 COC

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)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	SM4500_Cl_E - Chloride, SM4500_SO4_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C - Fluoride	6020 - Sb,As,Ba,B,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, 7470A - Mercury	FieldSampling - Field Sampling Parameters	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
MW-200	11-13-18	1528	G	Water			X	X	X	X		
MW-201	11-14-18	0850	G	Water			X	X	X	X		
MW-202	11-14-18	1353	G	Water			X	X	X	X		
MW-203	11-13-18	1340	G	Water			X	X	X	X		
~~MW-204~~				Water								
~~MW-205~~				Water								
~~MW-206~~				Water								
Dup-05	11-13-18	1205	G				X	X	X	X		
Dup-06	11-14-18	0759	G				X	X	X	X		
EB-03	11-14-18	1030	G				X	X	X			
FB-03	11-14-18	1043	G				X	X	X			

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)

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	11-14-18 1535	RDH ENV.	[signature]	11/14/18 1535	TA Pen

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.9°C 1.0°C IR 8

12/19/2018

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-162132-2
SDG Number: Gypsum Storage Area

Login Number: 162132
List Number: 1
Creator: Perez, Trina M

List Source: 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	0.9°C, 1.0°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: Gulf Power Company

Job Number: 400-162132-2
SDG Number: Gypsum Storage Area

Login Number: 162132
List Number: 2
Creator: Dupart, Lacee S

List Source: TestAmerica St. Louis
List Creation: 11/16/18 05:35 PM

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.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18.0
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").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-162132-2
SDG: Gypsum Storage Area

Laboratory: 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	12-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA180023	12-31-18
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	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
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	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

Laboratory: 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
Alaska	State Program	10	MO00054	06-30-19
ANAB	DoD ELAP		L2305	04-06-19
Arizona	State Program	9	AZ0813	12-08-18 *
California	State Program	9	2886	06-30-19
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-19
Illinois	NELAP	5	200023	11-30-18 *
Iowa	State Program	7	373	12-01-18 *
Kansas	NELAP	7	E-10236	10-31-19
Kentucky (DW)	State Program	4	90125	12-31-18
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA180017	12-31-18 *
Maryland	State Program	3	310	09-30-19
Michigan	State Program	5	9005	06-30-19
Missouri	State Program	7	780	06-30-19

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

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: CCR Plant Crist

TestAmerica Job ID: 400-162132-2
SDG: Gypsum Storage Area

Laboratory: TestAmerica St. Louis (Continued)

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
Nevada	State Program	9	MO000542018-1	07-31-19
New Jersey	NELAP	2	MO002	06-30-19
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-19
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-19
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-19
Texas	NELAP	6	T104704193-18-12	07-31-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19
Virginia	NELAP	3	460230	06-14-19
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19

APPENDIX B

Statistical Analyses

JUNE 2018 STATISTICAL ANALYSIS – ASSESSMENT MONITORING STATISTICS

Series 200 Confidence Intervals -Significant Results

Plant Crist Client: Southern Company Data: Plant Crist CCR Printed 10/14/2018, 5:13 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Cobalt (mg/L)	**MW-204**	**0.02036**	**0.01624**	**0.006**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
Combined Radium 226 + 228 (pCi/L)	**MW-200**	**21.71**	**10.74**	**5**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
Combined Radium 226 + 228 (pCi/L)	**MW-201**	**24.36**	**9.784**	**5**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
Combined Radium 226 + 228 (pCi/L)	**MW-203**	**6.998**	**5.508**	**5**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
Combined Radium 226 + 228 (pCi/L)	**MW-204**	**16.2**	**12.3**	**5**	**Yes**	**10**	**0**	**No**	**0.011**	**NP (normality)**
Combined Radium 226 + 228 (pCi/L)	**MW-206**	**36.65**	**21.53**	**5**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**

Series 200 Confidence Intervals -All Results

Plant Crist Client: Southern Company Data: Plant Crist CCR Printed 10/14/2018, 5:13 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	MW-200	0.00125	0.00125	0.006	No	10	100	No	0.011	NP (NDs)
Antimony (mg/L)	MW-201	0.00125	0.001	0.006	No	10	90	No	0.011	NP (NDs)
Antimony (mg/L)	MW-202	0.00125	0.00125	0.006	No	10	100	No	0.011	NP (NDs)
Antimony (mg/L)	MW-203	0.00125	0.00125	0.006	No	10	100	No	0.011	NP (NDs)
Antimony (mg/L)	MW-204	0.00125	0.00125	0.006	No	10	100	No	0.011	NP (NDs)
Antimony (mg/L)	MW-205	0.00125	0.00125	0.006	No	10	100	No	0.011	NP (NDs)
Antimony (mg/L)	MW-206	0.00125	0.0011	0.006	No	10	90	No	0.011	NP (NDs)
Arsenic (mg/L)	MW-200	0.004475	0.001151	0.01	No	10	10	No	0.01	Param.
Arsenic (mg/L)	MW-201	0.007244	0.001066	0.01	No	10	0	No	0.01	Param.
Arsenic (mg/L)	MW-202	0.00065	0.00065	0.01	No	10	100	No	0.011	NP (NDs)
Arsenic (mg/L)	MW-203	0.0007762	0.0005293	0.01	No	10	30	sqrt(x)	0.01	Param.
Arsenic (mg/L)	MW-204	0.006901	0.003479	0.01	No	10	0	No	0.01	Param.
Arsenic (mg/L)	MW-205	0.00065	0.00051	0.01	No	10	80	No	0.011	NP (NDs)
Arsenic (mg/L)	MW-206	0.01567	0.004634	0.01	No	10	0	No	0.01	Param.
Barium (mg/L)	MW-200	0.07659	0.04721	2	No	10	0	No	0.01	Param.
Barium (mg/L)	MW-201	0.08377	0.04163	2	No	10	0	No	0.01	Param.
Barium (mg/L)	MW-202	0.037	0.012	2	No	10	0	No	0.011	NP (normality)
Barium (mg/L)	MW-203	0.04462	0.03898	2	No	10	0	No	0.01	Param.
Barium (mg/L)	MW-204	0.02673	0.02467	2	No	10	0	No	0.01	Param.
Barium (mg/L)	MW-205	0.01959	0.005087	2	No	10	0	ln(x)	0.01	Param.
Barium (mg/L)	MW-206	0.1271	0.09069	2	No	10	0	No	0.01	Param.
Beryllium (mg/L)	MW-200	0.00125	0.00125	0.004	No	10	100	No	0.011	NP (NDs)
Beryllium (mg/L)	MW-201	0.00125	0.00125	0.004	No	10	100	No	0.011	NP (NDs)
Beryllium (mg/L)	MW-202	0.00125	0.00125	0.004	No	10	100	No	0.011	NP (NDs)
Beryllium (mg/L)	MW-203	0.00125	0.00125	0.004	No	10	100	No	0.011	NP (NDs)
Beryllium (mg/L)	MW-204	0.0006938	0.0005882	0.004	No	10	0	No	0.01	Param.
Beryllium (mg/L)	MW-205	0.00125	0.00125	0.004	No	10	100	No	0.011	NP (NDs)
Beryllium (mg/L)	MW-206	0.00125	0.00042	0.004	No	10	70	No	0.011	NP (normality)
Cadmium (mg/L)	MW-200	0.00125	0.00039	0.005	No	9	88.89	No	0.002	NP (NDs)
Cadmium (mg/L)	MW-201	0.015	0.0029	0.005	No	9	0	No	0.002	NP (normality)
Cadmium (mg/L)	MW-202	0.00125	0.00125	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	MW-203	0.00125	0.00125	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	MW-204	0.00125	0.00125	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	MW-205	0.00125	0.00125	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	MW-206	0.003072	0.001928	0.005	No	10	0	No	0.01	Param.
Chromium (mg/L)	MW-200	0.00125	0.00125	0.1	No	10	100	No	0.011	NP (NDs)
Chromium (mg/L)	MW-201	0.00125	0.00125	0.1	No	10	100	No	0.011	NP (NDs)
Chromium (mg/L)	MW-202	0.00125	0.00125	0.1	No	10	90	No	0.011	NP (NDs)
Chromium (mg/L)	MW-203	0.00125	0.00125	0.1	No	10	100	No	0.011	NP (NDs)
Chromium (mg/L)	MW-204	0.00125	0.00125	0.1	No	10	100	No	0.011	NP (NDs)
Chromium (mg/L)	MW-205	0.00125	0.00125	0.1	No	10	100	No	0.011	NP (NDs)
Chromium (mg/L)	MW-206	0.00125	0.00125	0.1	No	10	90	No	0.011	NP (NDs)
Cobalt (mg/L)	MW-200	0.002116	0.0008593	0.006	No	10	20	No	0.01	Param.
Cobalt (mg/L)	MW-201	0.004077	0.001623	0.006	No	10	0	No	0.01	Param.
Cobalt (mg/L)	MW-202	0.001349	0.0008285	0.006	No	10	0	ln(x)	0.01	Param.
Cobalt (mg/L)	MW-203	0.003441	0.002679	0.006	No	10	0	No	0.01	Param.
Cobalt (mg/L)	**MW-204**	**0.02036**	**0.01624**	**0.006**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	MW-205	0.00125	0.00099	0.006	No	10	80	No	0.011	NP (NDs)
Cobalt (mg/L)	MW-206	0.005959	0.003141	0.006	No	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	**MW-200**	**21.71**	**10.74**	**5**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
Combined Radium 226 + 228 (pCi/L)	**MW-201**	**24.36**	**9.784**	**5**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
Combined Radium 226 + 228 (pCi/L)	MW-202	2.226	0.9033	5	No	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	**MW-203**	**6.998**	**5.508**	**5**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
Combined Radium 226 + 228 (pCi/L)	**MW-204**	**16.2**	**12.3**	**5**	**Yes**	**10**	**0**	**No**	**0.011**	**NP (normality)**
Combined Radium 226 + 228 (pCi/L)	MW-205	2.5	0.273	5	No	10	10	No	0.011	NP (normality)
Combined Radium 226 + 228 (pCi/L)	**MW-206**	**36.65**	**21.53**	**5**	**Yes**	**10**	**0**	**No**	**0.01**	**Param.**
Fluoride (mg/L)	MW-200	0.0847	0.05119	4	No	11	9.091	ln(x)	0.01	Param.
Fluoride (mg/L)	MW-201	0.847	0.5464	4	No	12	0	No	0.01	Param.
Fluoride (mg/L)	MW-202	0.05	0.04	4	No	11	72.73	No	0.006	NP (normality)
Fluoride (mg/L)	MW-203	0.06	0.04	4	No	11	18.18	No	0.006	NP (normality)
Fluoride (mg/L)	MW-204	0.2858	0.2325	4	No	12	0	No	0.01	Param.
Fluoride (mg/L)	MW-205	0.05	0.035	4	No	11	81.82	No	0.006	NP (NDs)
Fluoride (mg/L)	MW-206	0.08336	0.04564	4	No	12	0	No	0.01	Param.
Lead (mg/L)	MW-200	0.001639	0.0005855	0.015	No	10	20	No	0.01	Param.
Lead (mg/L)	MW-201	0.00065	0.00065	0.015	No	10	100	No	0.011	NP (NDs)
Lead (mg/L)	MW-202	0.00065	0.00037	0.015	No	10	90	No	0.011	NP (NDs)
Lead (mg/L)	MW-203	0.00065	0.00065	0.015	No	10	100	No	0.011	NP (NDs)
Lead (mg/L)	MW-204	0.002357	0.001235	0.015	No	10	10	No	0.01	Param.

Series 200 Confidence Intervals -All Results

Plant Crist Client: Southern Company Data: Plant Crist CCR Printed 10/14/2018, 5:13 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Lead (mg/L)	MW-205	0.00065	0.0004	0.015	No	10	80	No	0.011	NP (NDs)
Lead (mg/L)	MW-206	0.01054	0.005897	0.015	No	10	0	No	0.01	Param.
Lithium (mg/L)	MW-200	0.0025	0.0025	0.04	No	10	90	No	0.011	NP (NDs)
Lithium (mg/L)	MW-201	0.01196	0.004229	0.04	No	10	20	ln(x)	0.01	Param.
Lithium (mg/L)	MW-202	0.0025	0.0013	0.04	No	10	90	No	0.011	NP (NDs)
Lithium (mg/L)	MW-203	0.0025	0.0025	0.04	No	10	100	No	0.011	NP (NDs)
Lithium (mg/L)	MW-204	0.0025	0.0015	0.04	No	10	80	No	0.011	NP (NDs)
Lithium (mg/L)	MW-205	0.0025	0.0025	0.04	No	10	100	No	0.011	NP (NDs)
Lithium (mg/L)	MW-206	0.0025	0.0012	0.04	No	10	90	No	0.011	NP (NDs)
Mercury (mg/L)	MW-200	0.002785	0.001435	0.002	No	10	0	No	0.01	Param.
Mercury (mg/L)	MW-201	0.0026	0.00016	0.002	No	10	0	No	0.011	NP (normality)
Mercury (mg/L)	MW-202	0.00028	0.000087	0.002	No	10	70	No	0.011	NP (normality)
Mercury (mg/L)	MW-203	0.0001274	0.00008964	0.002	No	10	60	No	0.01	Param.
Mercury (mg/L)	MW-204	0.0001	0.0001	0.002	No	10	100	No	0.011	NP (NDs)
Mercury (mg/L)	MW-205	0.0001	0.0001	0.002	No	10	100	No	0.011	NP (NDs)
Mercury (mg/L)	MW-206	0.0007325	0.0002215	0.002	No	10	0	No	0.01	Param.
Molybdenum (mg/L)	MW-200	0.0075	0.0075	0.1	No	10	90	No	0.011	NP (NDs)
Molybdenum (mg/L)	MW-201	0.0075	0.0015	0.1	No	10	90	No	0.011	NP (NDs)
Molybdenum (mg/L)	MW-202	0.0075	0.0016	0.1	No	10	90	No	0.011	NP (NDs)
Molybdenum (mg/L)	MW-203	0.0075	0.0075	0.1	No	10	100	No	0.011	NP (NDs)
Molybdenum (mg/L)	MW-204	0.0075	0.0075	0.1	No	10	100	No	0.011	NP (NDs)
Molybdenum (mg/L)	MW-205	0.0075	0.0075	0.1	No	10	100	No	0.011	NP (NDs)
Molybdenum (mg/L)	MW-206	0.0075	0.00092	0.1	No	10	90	No	0.011	NP (NDs)
Selenium (mg/L)	MW-200	0.01692	0.007879	0.05	No	10	0	No	0.01	Param.
Selenium (mg/L)	MW-201	0.01592	0.008083	0.05	No	10	0	No	0.01	Param.
Selenium (mg/L)	MW-202	0.0007	0.00029	0.05	No	10	50	No	0.011	NP (normality)
Selenium (mg/L)	MW-203	0.002024	0.000944	0.05	No	10	0	No	0.01	Param.
Selenium (mg/L)	MW-204	0.005509	0.003351	0.05	No	10	0	No	0.01	Param.
Selenium (mg/L)	MW-205	0.00065	0.00035	0.05	No	10	70	No	0.011	NP (normality)
Selenium (mg/L)	MW-206	0.02135	0.01545	0.05	No	10	0	No	0.01	Param.
Thallium (mg/L)	MW-200	0.0004384	0.0001796	0.002	No	10	10	No	0.01	Param.
Thallium (mg/L)	MW-201	0.0005261	0.0002959	0.002	No	10	0	No	0.01	Param.
Thallium (mg/L)	MW-202	0.00025	0.00025	0.002	No	10	100	No	0.011	NP (NDs)
Thallium (mg/L)	MW-203	0.00025	0.000085	0.002	No	10	30	No	0.011	NP (normality)
Thallium (mg/L)	MW-204	0.0003654	0.0003286	0.002	No	10	0	No	0.01	Param.
Thallium (mg/L)	MW-205	0.00025	0.00012	0.002	No	10	90	No	0.011	NP (NDs)
Thallium (mg/L)	MW-206	0.0009442	0.0006418	0.002	No	10	0	No	0.01	Param.

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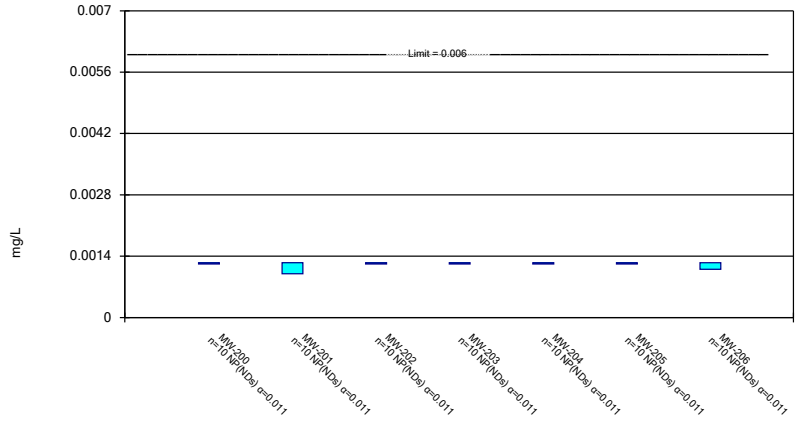
Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 10/14/2018 5:11 PM View: GWPS - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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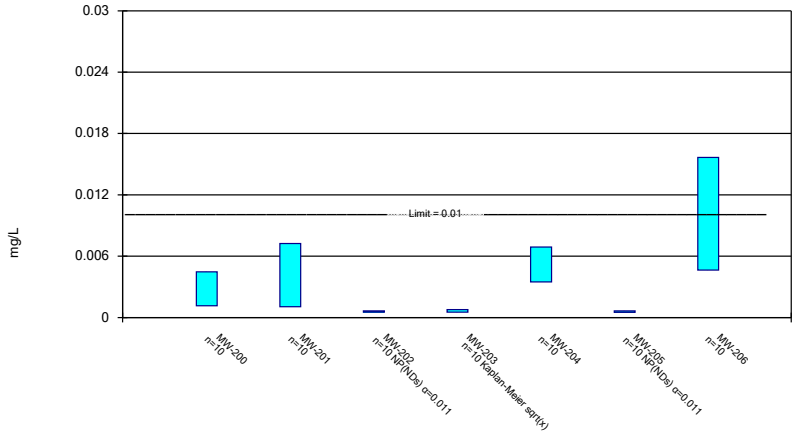
Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 10/14/2018 5:11 PM View: GWPS - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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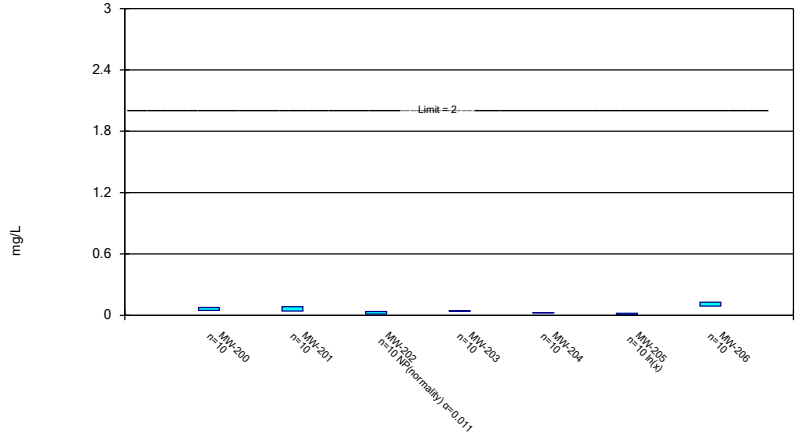
Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 10/14/2018 5:11 PM View: GWPS - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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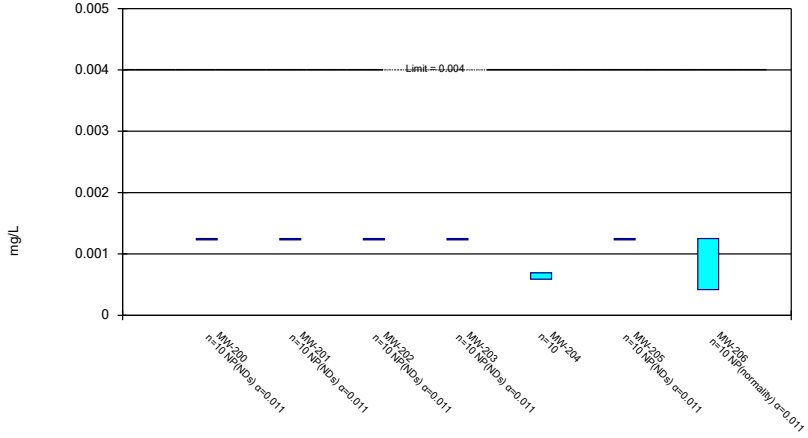
Parametric and Non-Parametric (NP) Confidence Interval

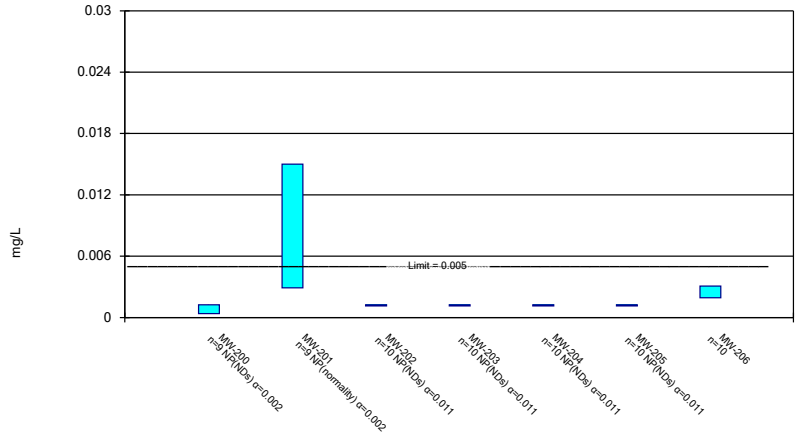
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Beryllium Analysis Run 10/14/2018 5:11 PM View: GWPS - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 10/14/2018 5:11 PM View: GWPS - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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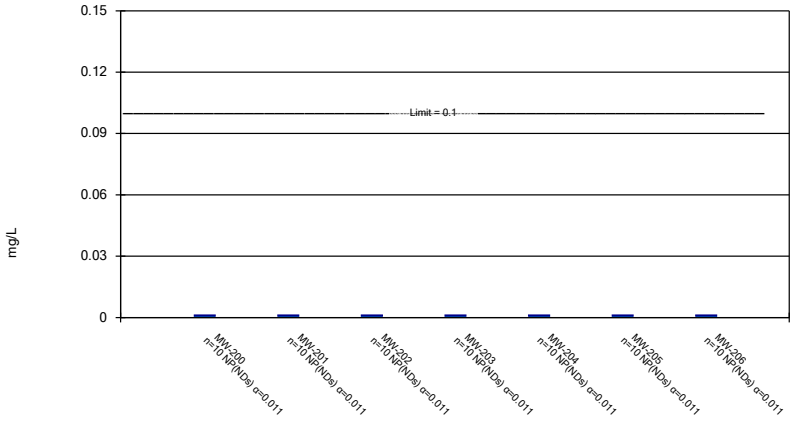
Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Chromium Analysis Run 10/14/2018 5:11 PM View: GWPS - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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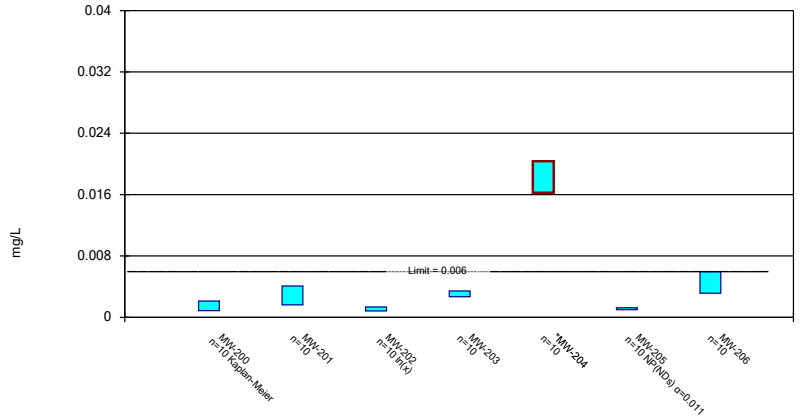
Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 10/14/2018 5:11 PM View: GWPS - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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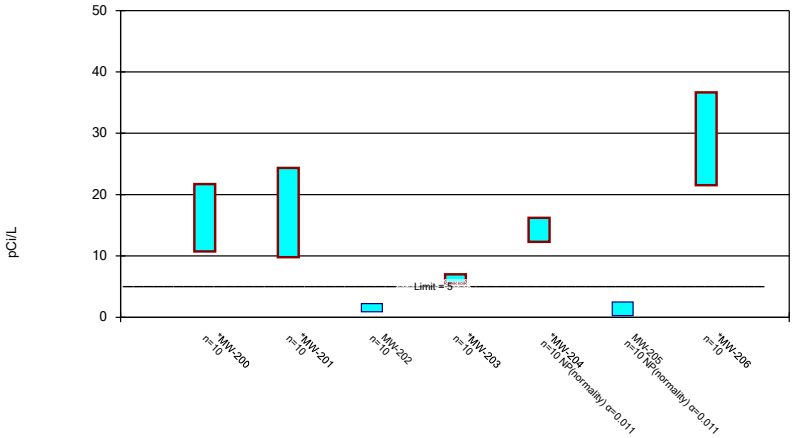
Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 10/14/2018 5:11 PM View: GWPS - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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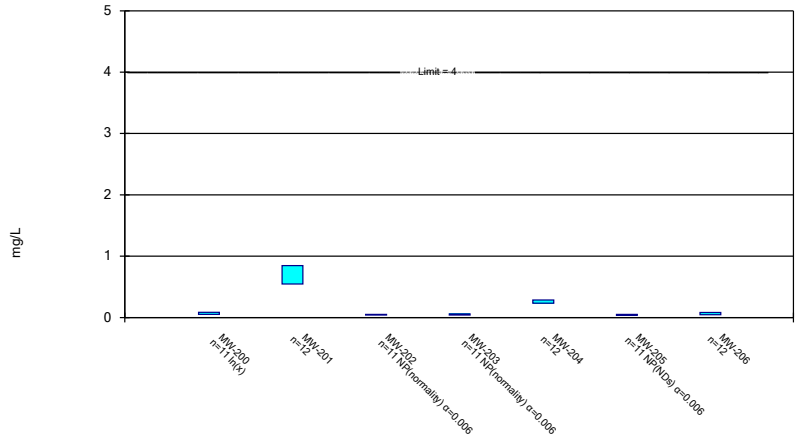
Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 10/14/2018 5:11 PM View: GWPS - 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

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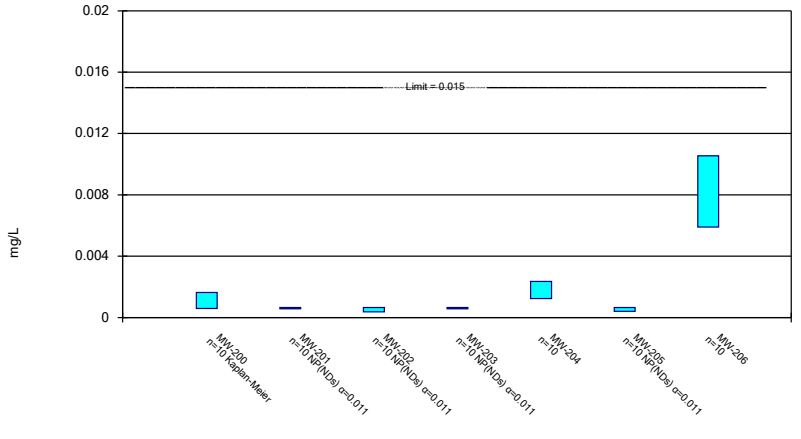
Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



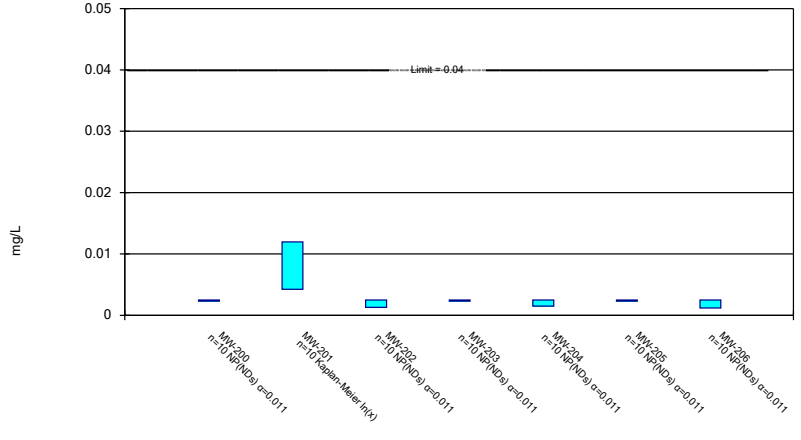
Constituent: Lead Analysis Run 10/14/2018 5:11 PM View: GWPS - 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



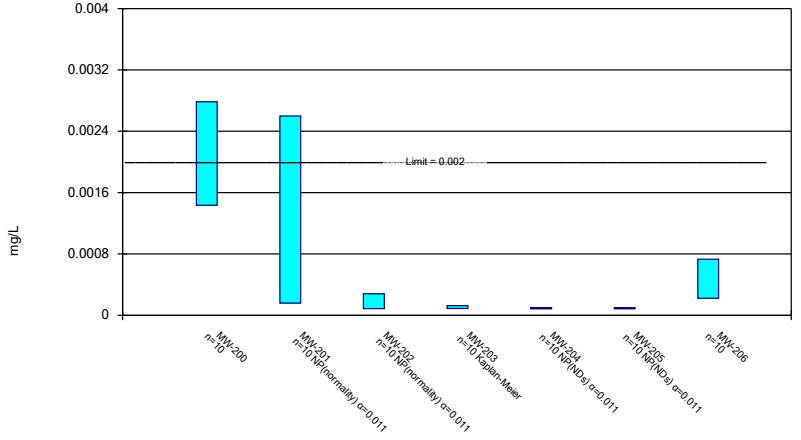
Constituent: Lithium Analysis Run 10/14/2018 5:11 PM View: GWPS - 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Mercury Analysis Run 10/14/2018 5:11 PM View: GWPS - 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

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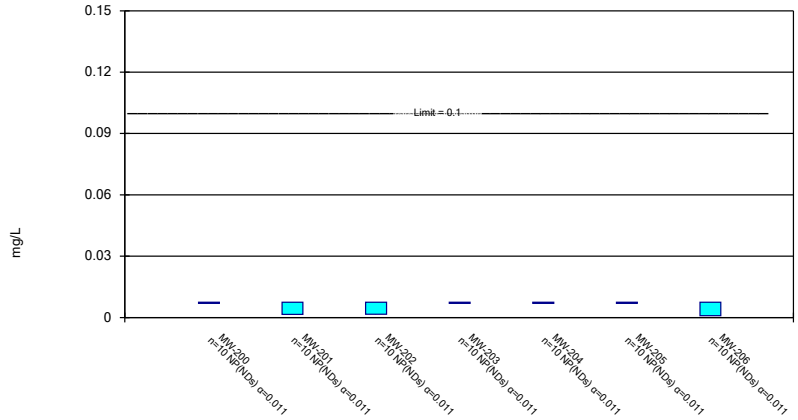
Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Molybdenum Analysis Run 10/14/2018 5:11 PM View: GWPS - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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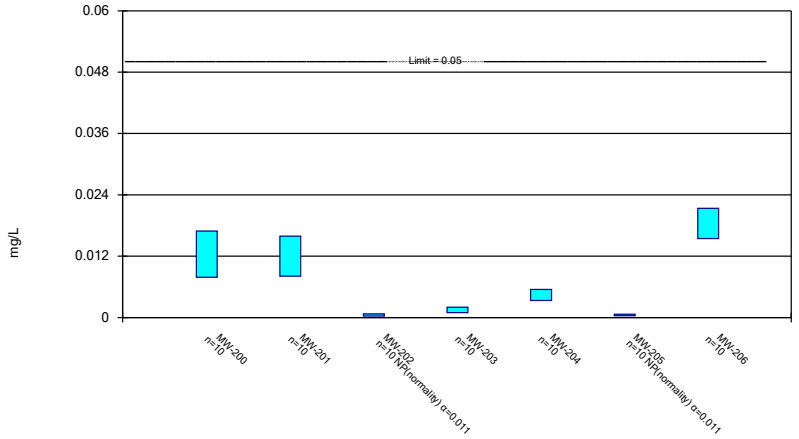
Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 10/14/2018 5:11 PM View: GWPS - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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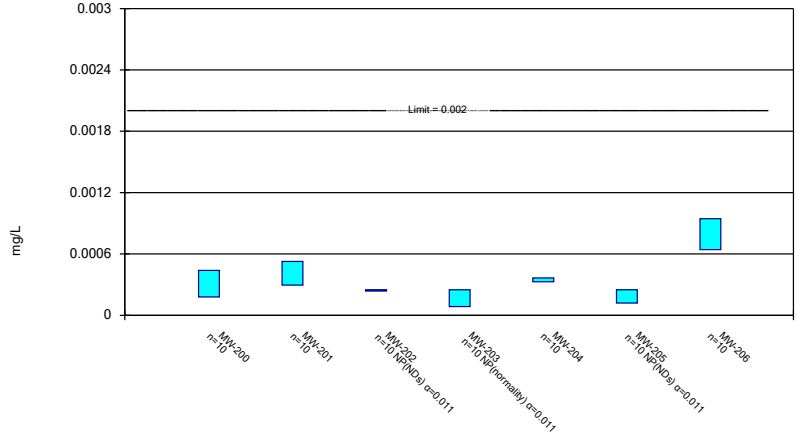
Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium Analysis Run 10/14/2018 5:11 PM View: GWPS - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Appendix IV Trend Test Summary Table - Significant Results

Plant Crist Client: Southern Company Data: Plant Crist CCR Printed 10/14/2018, 5:18 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Cobalt (mg/L)	**MW-304**	**-0.08632**	**-31**	**-30**	**Yes**	**10**	**0**	**n/a**	**n/a**	**0.01**	**NP**

Appendix IV Trend Test Summary Table - All Results

Plant Crist Client: Southern Company Data: Plant Crist CCR Printed 10/14/2018, 5:18 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Cobalt (mg/L)	MW-104	0.005644	22	30	No	10	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	MW-204	-0.0005192	-4	-30	No	10	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	**MW-304**	**-0.08632**	**-31**	**-30**	**Yes**	**10**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Combined Radium 226 + 228 (pCi/L)	MW-103	0.1316	7	30	No	10	0	n/a	n/a	0.01	NP
Combined Radium 226 + 228 (pCi/L)	MW-104	3.573	19	30	No	10	0	n/a	n/a	0.01	NP
Combined Radium 226 + 228 (pCi/L)	MW-110	0.4834	4	30	No	10	0	n/a	n/a	0.01	NP
Combined Radium 226 + 228 (pCi/L)	MW-200	-5.927	-24	-30	No	10	0	n/a	n/a	0.01	NP
Combined Radium 226 + 228 (pCi/L)	MW-201	-9.534	-27	-30	No	10	0	n/a	n/a	0.01	NP
Combined Radium 226 + 228 (pCi/L)	MW-203	-0.08831	-3	-30	No	10	0	n/a	n/a	0.01	NP
Combined Radium 226 + 228 (pCi/L)	MW-204	-0.3812	-8	-30	No	10	0	n/a	n/a	0.01	NP
Combined Radium 226 + 228 (pCi/L)	MW-205	0.001437	1	30	No	10	10	n/a	n/a	0.01	NP
Mercury (mg/L)	MW-110	-0.0005794	-13	-30	No	10	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	MW-303	-0.2417	-4	-30	No	10	0	n/a	n/a	0.01	NP

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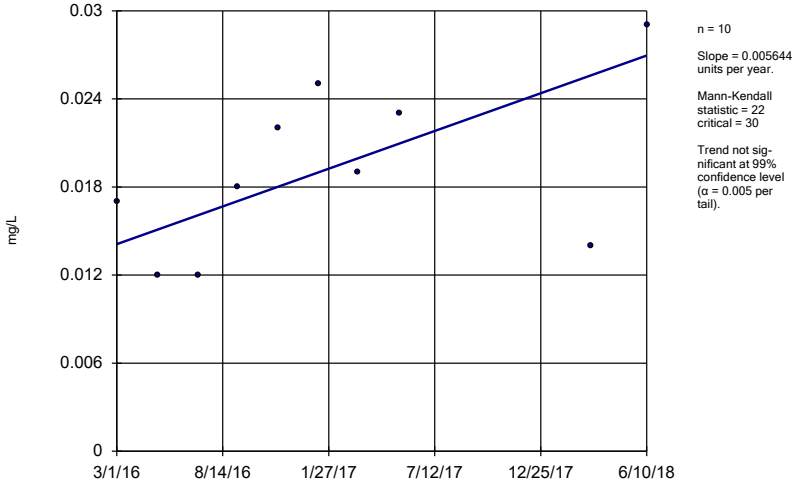
Cobalt

MW-104



n = 10

Slope = 0.005644 units per year.

Mann-Kendall statistic = 22 critical = 30

Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 10/14/2018 5:16 PM View: Trend Tests - Appendix IV

Plant Crist Client: Southern Company Data: Plant Crist CCR

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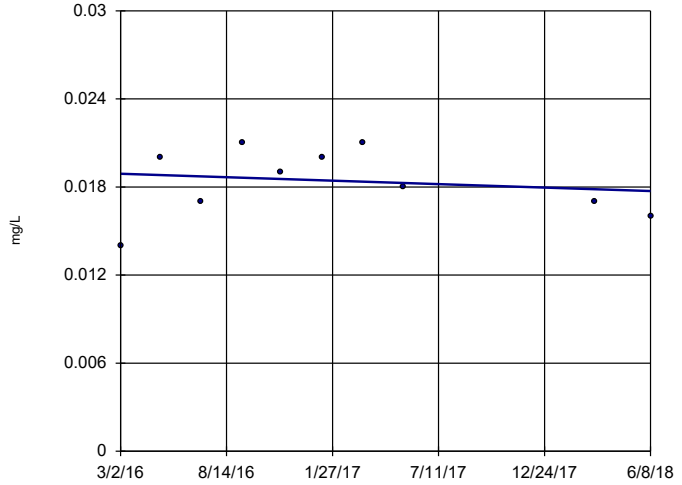
Cobalt

MW-204



n = 10

Slope = -0.0005192 units per year.

Mann-Kendall statistic = -4 critical = -30

Trend not significant at 99% confidence level (α = 0.005 per tail).

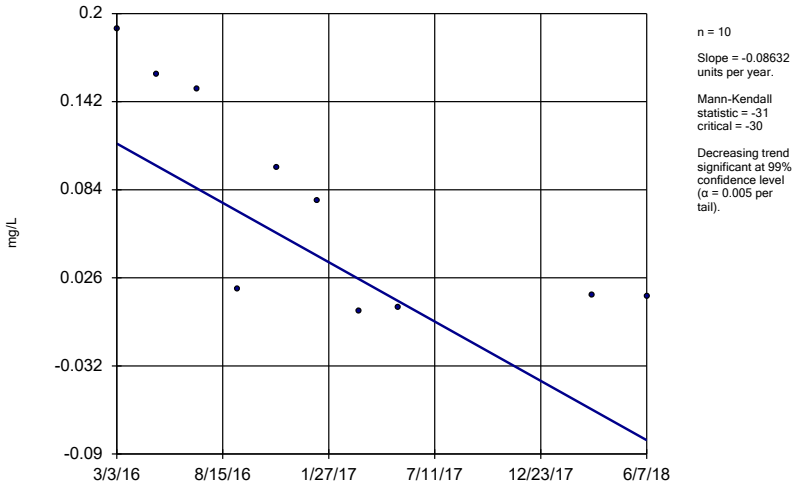
Sen's Slope Estimator Analysis Run 10/14/2018 5:16 PM View: Trend Tests - Appendix IV

Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Cobalt

MW-304



n = 10

Slope = -0.08632 units per year.

Mann-Kendall statistic = -31 critical = -30

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 10/14/2018 5:16 PM View: Trend Tests - Appendix IV

Plant Crist Client: Southern Company Data: Plant Crist CCR

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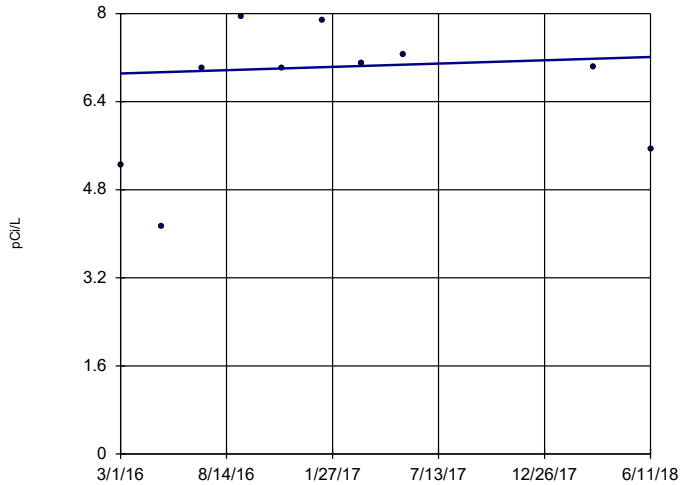
Combined Radium 226 + 228

MW-103



n = 10

Slope = 0.1316 units per year.

Mann-Kendall statistic = 7 critical = 30

Trend not significant at 99% confidence level (α = 0.005 per tail).

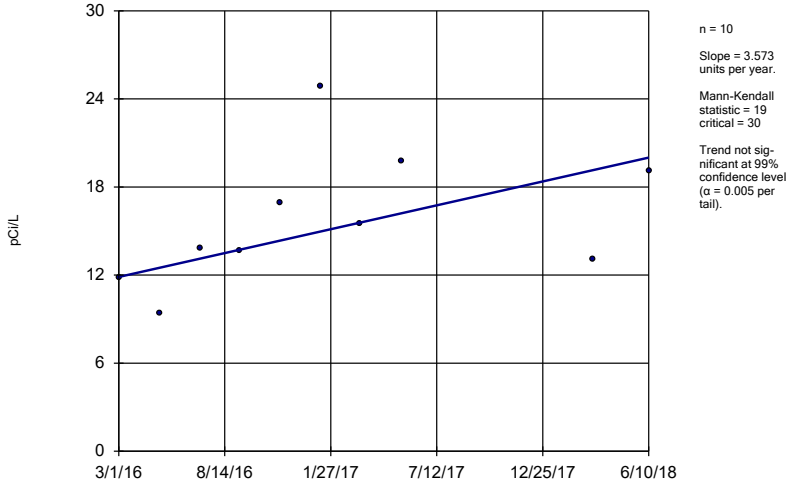
Sen's Slope Estimator Analysis Run 10/14/2018 5:16 PM View: Trend Tests - Appendix IV

Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Combined Radium 226 + 228

MW-104



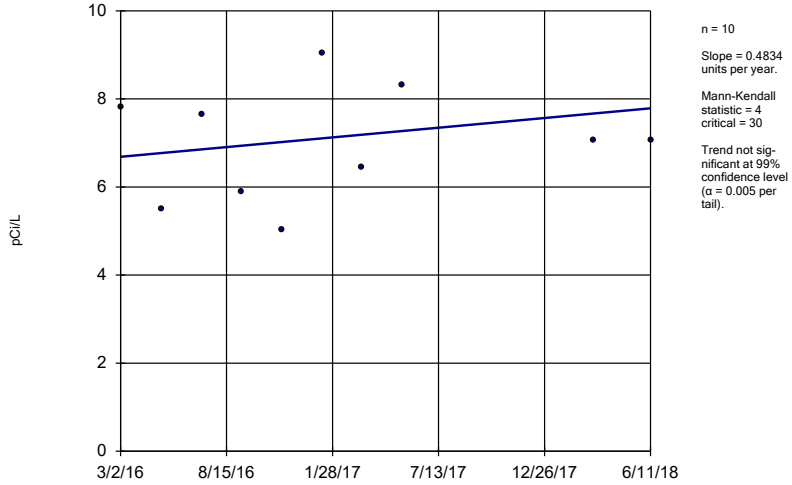
Sen's Slope Estimator Analysis Run 10/14/2018 5:16 PM View: Trend Tests - Appendix IV

Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Combined Radium 226 + 228

MW-110



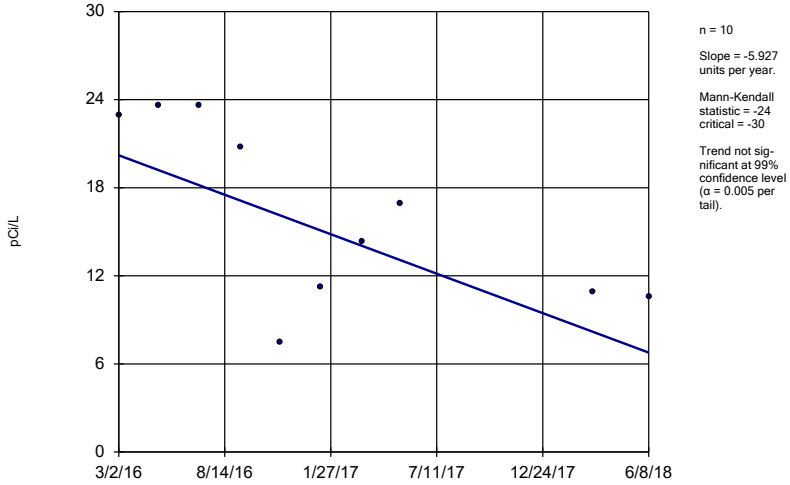
Sen's Slope Estimator Analysis Run 10/14/2018 5:16 PM View: Trend Tests - Appendix IV

Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Combined Radium 226 + 228

MW-200



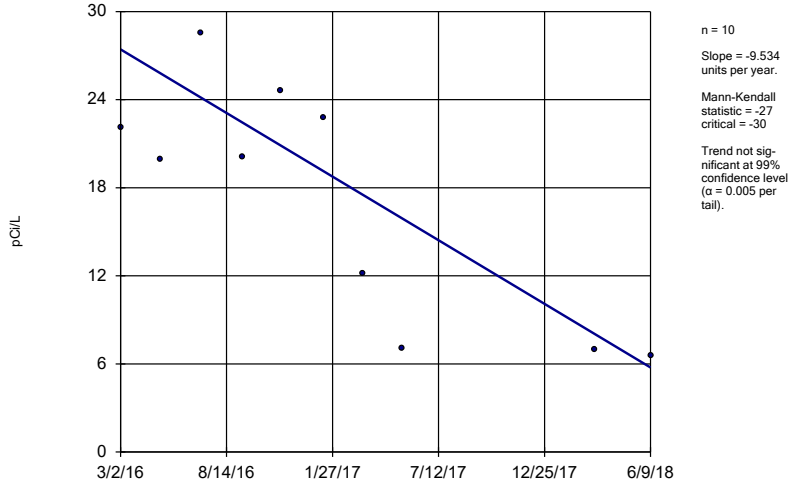
Sen's Slope Estimator Analysis Run 10/14/2018 5:16 PM View: Trend Tests - Appendix IV

Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Combined Radium 226 + 228

MW-201



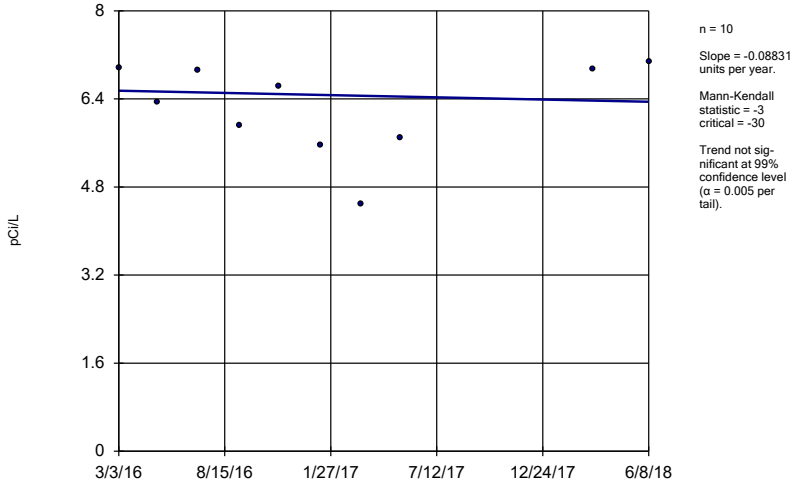
Sen's Slope Estimator Analysis Run 10/14/2018 5:16 PM View: Trend Tests - Appendix IV

Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Combined Radium 226 + 228

MW-203

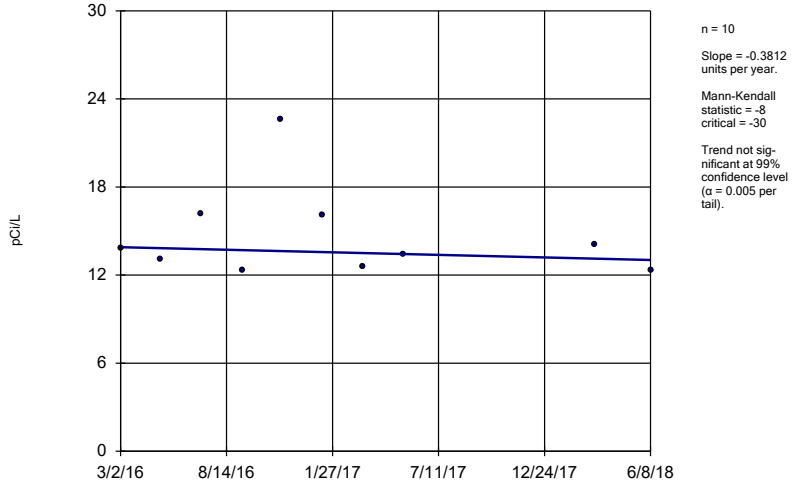


Sen's Slope Estimator Analysis Run 10/14/2018 5:16 PM View: Trend Tests - Appendix IV
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Combined Radium 226 + 228

MW-204

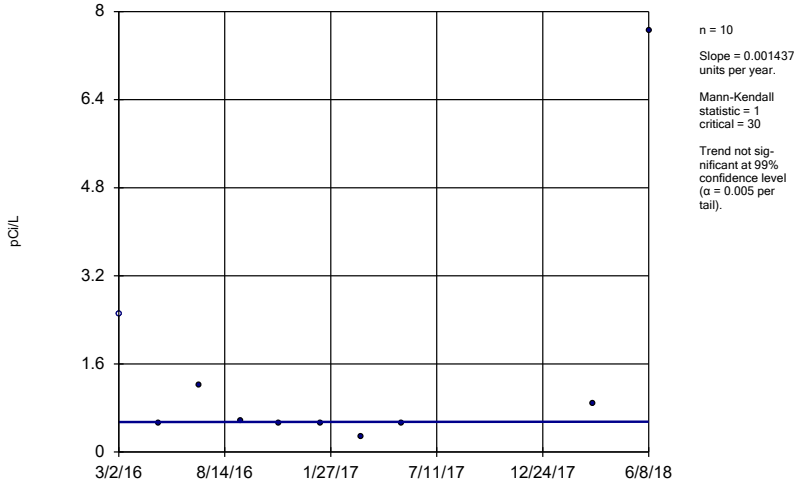


Sen's Slope Estimator Analysis Run 10/14/2018 5:16 PM View: Trend Tests - Appendix IV
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG
Hollow symbols indicate censored values.

Combined Radium 226 + 228

MW-205

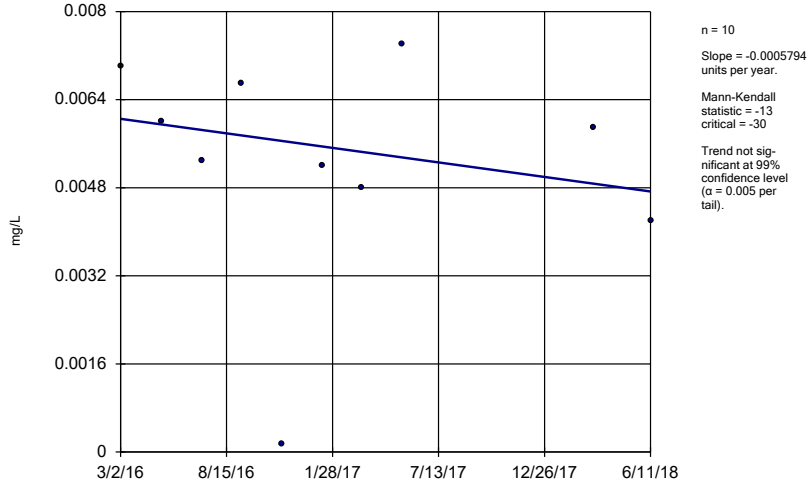


Sen's Slope Estimator Analysis Run 10/14/2018 5:16 PM View: Trend Tests - Appendix IV
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

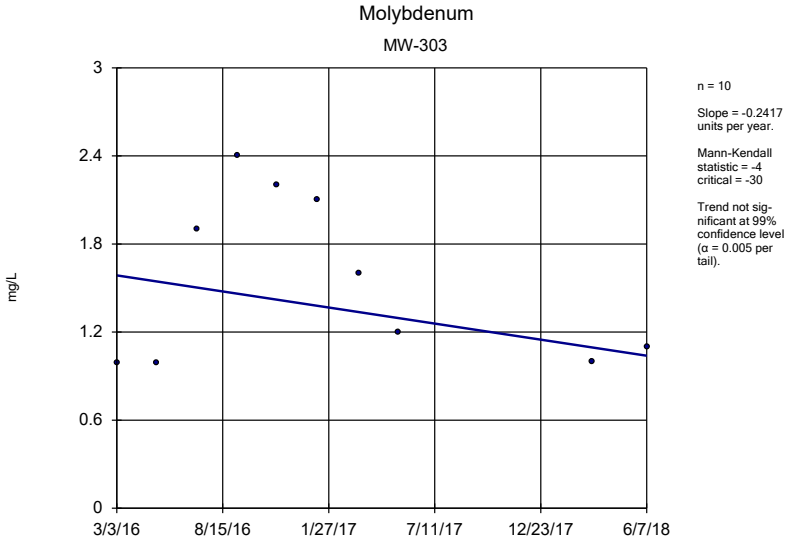
Mercury

MW-110



Sen's Slope Estimator Analysis Run 10/14/2018 5:16 PM View: Trend Tests - Appendix IV
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG



Sen's Slope Estimator Analysis Run 10/14/2018 5:16 PM View: Trend Tests - Appendix IV

Plant Crist Client: Southern Company Data: Plant Crist CCR

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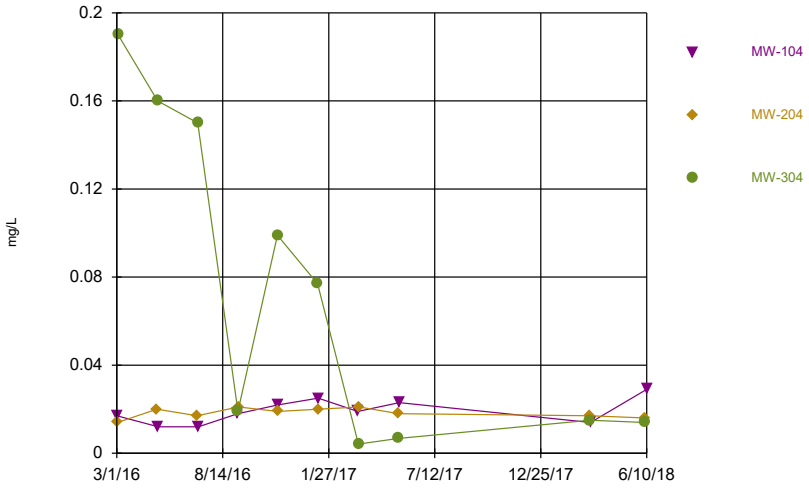
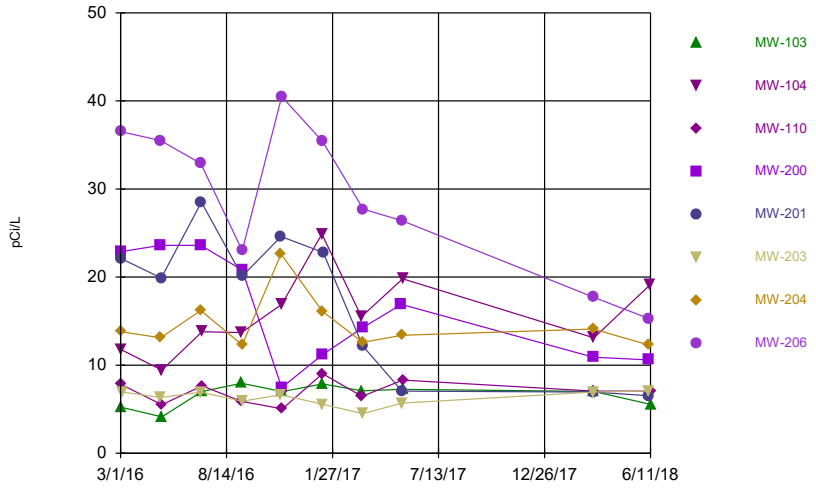
Cobalt



Time Series Analysis Run 10/14/2018 5:15 PM View: Time Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

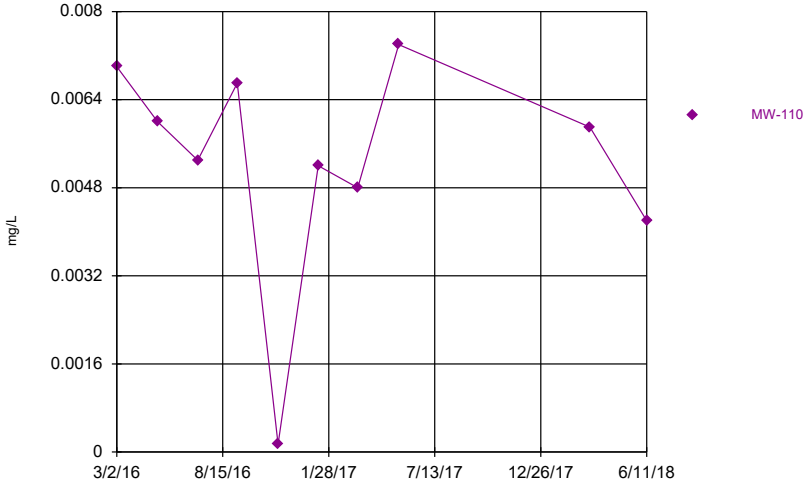
Combined Radium 226 + 228



Time Series Analysis Run 10/14/2018 5:15 PM View: Time Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

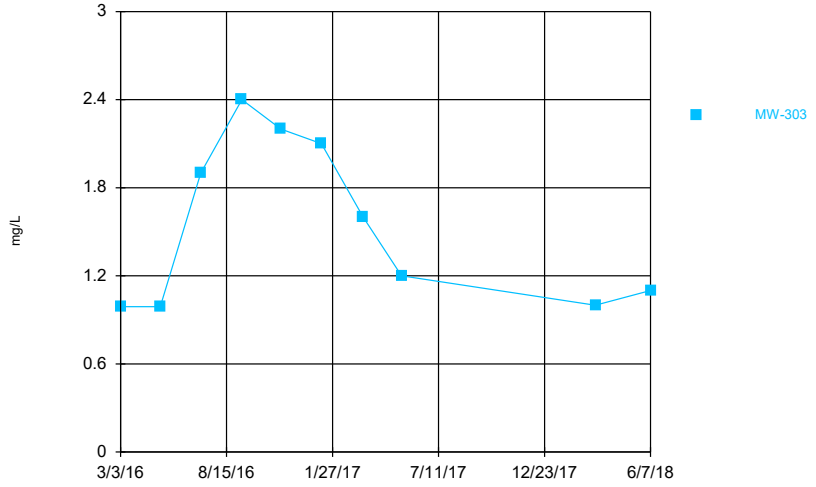
Mercury



Time Series Analysis Run 10/14/2018 5:15 PM View: Time Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Molybdenum



Time Series Analysis Run 10/14/2018 5:15 PM View: Time Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Time Series

Constituent: Cobalt (mg/L) Analysis Run 10/14/2018 5:16 PM View: Time Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-104	MW-204	MW-304
3/1/2016	0.017		
3/2/2016		0.014	
3/3/2016			0.19
5/3/2016		0.02	
5/4/2016			0.16
5/5/2016	0.012		
7/5/2016		0.017	
7/6/2016			0.15
7/7/2016	0.012		
9/7/2016	0.018		0.019
9/8/2016		0.021	
11/8/2016		0.019	0.099
11/9/2016	0.022		
1/10/2017			0.077
1/11/2017	0.025		
1/12/2017		0.02	
3/14/2017	0.019		
3/15/2017			0.0042
3/16/2017		0.021	
5/16/2017			0.0067
5/17/2017		0.018	
5/18/2017	0.023		
3/13/2018		0.017	0.015
3/14/2018	0.014		
6/7/2018			0.014
6/8/2018		0.016	
6/10/2018	0.029		

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 10/14/2018 5:16 PM View: Time Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-103	MW-104	MW-110	MW-200	MW-201	MW-203	MW-204	MW-206
3/1/2016	5.24	11.8						
3/2/2016			7.8	22.9	22.1		13.8	36.5
3/3/2016						6.96		
5/3/2016				23.6		6.33	13.1	35.5
5/4/2016					19.9			
5/5/2016	4.13	9.43	5.51					
7/5/2016				23.6		6.93	16.2	32.9
7/6/2016					28.5			
7/7/2016	7.01	13.8	7.65					
9/7/2016	7.94	13.7	5.9					
9/8/2016				20.8	20.1	5.91	12.3	23
11/8/2016					24.6	6.63	22.6	
11/9/2016		16.9		7.46				40.5
11/10/2016	7		5.04					
1/11/2017		24.9						
1/12/2017	7.87		9.04	11.2		5.56	16.1	35.4
1/13/2017					22.8			
3/14/2017		15.5						
3/15/2017	7.1		6.46					
3/16/2017					12.2	4.49	12.6	
3/17/2017				14.3				27.7
5/16/2017				16.9				
5/17/2017					7.05	5.7	13.4	26.4
5/18/2017	7.26	19.8	8.31					
3/13/2018				10.9		6.95	14.1	
3/14/2018	7.02	13.1	7.06		6.95			17.7
6/8/2018				10.6		7.07	12.3	15.3
6/9/2018					6.52			
6/10/2018		19.1						
6/11/2018	5.54		7.06					

Time Series

Constituent: Mercury (mg/L) Analysis Run 10/14/2018 5:16 PM View: Time Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-110
3/2/2016	0.007
5/5/2016	0.006
7/7/2016	0.0053
9/7/2016	0.0067
11/10/2016	0.00014 (J)
1/12/2017	0.0052
3/15/2017	0.0048
5/18/2017	0.0074
3/14/2018	0.0059
6/11/2018	0.0042

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 10/14/2018 5:16 PM View: Time Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-303
3/3/2016	0.99
5/4/2016	0.99
7/6/2016	1.9
9/8/2016	2.4
11/8/2016	2.2
1/10/2017	2.1
3/16/2017	1.6
5/15/2017	1.2
3/13/2018	1
6/7/2018	1.1

UTL's - App IV

Plant Crist Client: Southern Company Data: Plant Crist CCR Printed 10/14/2018, 4:59 PM

Constituent	Upper Lim.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	0.0025	60	n/a	n/a	100	n/a	n/a	0.04607	NP Inter(NDs)
Arsenic (mg/L)	0.0013	60	n/a	n/a	86.67	n/a	n/a	0.04607	NP Inter(NDs)
Barium (mg/L)	0.01868	60	0.1122	0.01211	0	None	sqrt(x)	0.05	Inter
Beryllium (mg/L)	0.0025	60	n/a	n/a	100	n/a	n/a	0.04607	NP Inter(NDs)
Cadmium (mg/L)	0.0025	60	n/a	n/a	100	n/a	n/a	0.04607	NP Inter(NDs)
Chromium (mg/L)	0.017	60	n/a	n/a	85	n/a	n/a	0.04607	NP Inter(NDs)
Cobalt (mg/L)	0.0032	60	n/a	n/a	30	n/a	n/a	0.04607	NP Inter(normal...
Combined Radium 226 + 228 (pCi/L)	2.507	60	0.01249	0.4494	5	None	ln(x)	0.05	Inter
Fluoride (mg/L)	0.12	66	n/a	n/a	96.97	n/a	n/a	0.03387	NP Inter(NDs)
Lead (mg/L)	0.0013	60	n/a	n/a	100	n/a	n/a	0.04607	NP Inter(NDs)
Lithium (mg/L)	0.005	59	n/a	n/a	89.83	n/a	n/a	0.04849	NP Inter(NDs)
Mercury (mg/L)	0.0002	60	n/a	n/a	95	n/a	n/a	0.04607	NP Inter(NDs)
Molybdenum (mg/L)	0.015	60	n/a	n/a	95	n/a	n/a	0.04607	NP Inter(NDs)
Selenium (mg/L)	0.0025	60	n/a	n/a	71.67	n/a	n/a	0.04607	NP Inter(normal...
Thallium (mg/L)	0.0005	60	n/a	n/a	100	n/a	n/a	0.04607	NP Inter(NDs)

JUNE 2018 STATISTICAL ANALYSIS - APPENDIX III CONSTITUENTS

Series 200 Interwell Prediction Limit Summary Table - Significant Results

Plant Crist Client: Southern Company Data: Plant Crist CCR Printed 10/14/2018, 7:27 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	MW-200	0.05	n/a	6/8/2018	12	Yes	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-201	0.05	n/a	6/9/2018	4.1	Yes	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-202	0.05	n/a	6/9/2018	0.11	Yes	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-203	0.05	n/a	6/8/2018	0.99	Yes	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-204	0.05	n/a	6/8/2018	5.7	Yes	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-205	0.05	n/a	6/8/2018	2	Yes	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-206	0.05	n/a	6/8/2018	40	Yes	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Calcium (mg/L)	MW-200	1.435	n/a	6/8/2018	320	Yes	66	0.8993	0.1247	0	None	x^(1/3)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	MW-201	1.435	n/a	6/9/2018	64	Yes	66	0.8993	0.1247	0	None	x^(1/3)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	MW-202	1.435	n/a	6/9/2018	5.8	Yes	66	0.8993	0.1247	0	None	x^(1/3)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	MW-203	1.435	n/a	6/8/2018	28	Yes	66	0.8993	0.1247	0	None	x^(1/3)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	MW-204	1.435	n/a	6/8/2018	77	Yes	66	0.8993	0.1247	0	None	x^(1/3)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	MW-205	1.435	n/a	6/8/2018	44	Yes	66	0.8993	0.1247	0	None	x^(1/3)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	MW-206	1.435	n/a	6/8/2018	800	Yes	66	0.8993	0.1247	0	None	x^(1/3)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-200	6.837	n/a	6/8/2018	680	Yes	66	5.206	0.8892	0	None	No	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-201	6.837	n/a	6/9/2018	86	Yes	66	5.206	0.8892	0	None	No	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-202	6.837	n/a	6/9/2018	24	Yes	66	5.206	0.8892	0	None	No	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-203	6.837	n/a	6/8/2018	15	Yes	66	5.206	0.8892	0	None	No	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-204	6.837	n/a	6/8/2018	82	Yes	66	5.206	0.8892	0	None	No	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-205	6.837	n/a	6/8/2018	43	Yes	66	5.206	0.8892	0	None	No	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-206	6.837	n/a	6/8/2018	1800	Yes	66	5.206	0.8892	0	None	No	0.001504	Param Inter 1 of 2
Fluoride (mg/L)	MW-200	0.12	n/a	6/8/2018	0.13	Yes	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	MW-201	0.12	n/a	6/9/2018	0.78	Yes	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	MW-204	0.12	n/a	6/8/2018	0.28	Yes	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-200	5	n/a	6/8/2018	160	Yes	65	n/a	n/a	73.85	n/a	n/a	0.0004556	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-201	5	n/a	6/9/2018	170	Yes	65	n/a	n/a	73.85	n/a	n/a	0.0004556	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-202	5	n/a	6/9/2018	18	Yes	65	n/a	n/a	73.85	n/a	n/a	0.0004556	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-203	5	n/a	6/8/2018	100	Yes	65	n/a	n/a	73.85	n/a	n/a	0.0004556	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-204	5	n/a	6/8/2018	390	Yes	65	n/a	n/a	73.85	n/a	n/a	0.0004556	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-205	5	n/a	6/8/2018	180	Yes	65	n/a	n/a	73.85	n/a	n/a	0.0004556	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-206	5	n/a	6/8/2018	440	Yes	65	n/a	n/a	73.85	n/a	n/a	0.0004556	NP Inter (NDs) 1 of 2
Total Dissolved Solids (mg/L)	MW-200	44	n/a	6/8/2018	2000	Yes	66	n/a	n/a	36.36	n/a	n/a	0.0004421	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	MW-201	44	n/a	6/9/2018	430	Yes	66	n/a	n/a	36.36	n/a	n/a	0.0004421	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	MW-202	44	n/a	6/9/2018	72	Yes	66	n/a	n/a	36.36	n/a	n/a	0.0004421	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	MW-203	44	n/a	6/8/2018	98	Yes	66	n/a	n/a	36.36	n/a	n/a	0.0004421	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	MW-204	44	n/a	6/8/2018	700	Yes	66	n/a	n/a	36.36	n/a	n/a	0.0004421	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	MW-205	44	n/a	6/8/2018	320	Yes	66	n/a	n/a	36.36	n/a	n/a	0.0004421	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	MW-206	44	n/a	6/8/2018	5200	Yes	66	n/a	n/a	36.36	n/a	n/a	0.0004421	NP Inter (normality) 1 of 2

Series 200 Interwell Prediction Limit Summary Table - All Results

Plant Crist Client: Southern Company Data: Plant Crist CCR Printed 10/14/2018, 7:27 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	MW-200	0.05	n/a	6/8/2018	12	Yes	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-201	0.05	n/a	6/9/2018	4.1	Yes	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-202	0.05	n/a	6/9/2018	0.11	Yes	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-203	0.05	n/a	6/8/2018	0.99	Yes	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-204	0.05	n/a	6/8/2018	5.7	Yes	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-205	0.05	n/a	6/8/2018	2	Yes	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-206	0.05	n/a	6/8/2018	40	Yes	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Calcium (mg/L)	MW-200	1.435	n/a	6/8/2018	320	Yes	66	0.8993	0.1247	0	None	x^(1/3)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	MW-201	1.435	n/a	6/9/2018	64	Yes	66	0.8993	0.1247	0	None	x^(1/3)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	MW-202	1.435	n/a	6/9/2018	5.8	Yes	66	0.8993	0.1247	0	None	x^(1/3)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	MW-203	1.435	n/a	6/8/2018	28	Yes	66	0.8993	0.1247	0	None	x^(1/3)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	MW-204	1.435	n/a	6/8/2018	77	Yes	66	0.8993	0.1247	0	None	x^(1/3)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	MW-205	1.435	n/a	6/8/2018	44	Yes	66	0.8993	0.1247	0	None	x^(1/3)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	MW-206	1.435	n/a	6/8/2018	800	Yes	66	0.8993	0.1247	0	None	x^(1/3)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-200	6.837	n/a	6/8/2018	680	Yes	66	5.206	0.8892	0	None	No	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-201	6.837	n/a	6/9/2018	86	Yes	66	5.206	0.8892	0	None	No	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-202	6.837	n/a	6/9/2018	24	Yes	66	5.206	0.8892	0	None	No	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-203	6.837	n/a	6/8/2018	15	Yes	66	5.206	0.8892	0	None	No	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-204	6.837	n/a	6/8/2018	82	Yes	66	5.206	0.8892	0	None	No	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-205	6.837	n/a	6/8/2018	43	Yes	66	5.206	0.8892	0	None	No	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-206	6.837	n/a	6/8/2018	1800	Yes	66	5.206	0.8892	0	None	No	0.001504	Param Inter 1 of 2
Fluoride (mg/L)	MW-200	0.12	n/a	6/8/2018	0.13	Yes	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	MW-201	0.12	n/a	6/9/2018	0.78	Yes	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	MW-202	0.12	n/a	6/9/2018	0.07	No	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	MW-203	0.12	n/a	6/8/2018	0.06	No	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	MW-204	0.12	n/a	6/8/2018	0.28	Yes	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	MW-205	0.12	n/a	6/8/2018	0.1	No	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	MW-206	0.12	n/a	6/8/2018	0.1	No	66	n/a	n/a	96.97	n/a	n/a	0.0004421	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-200	5	n/a	6/8/2018	160	Yes	65	n/a	n/a	73.85	n/a	n/a	0.0004556	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-201	5	n/a	6/9/2018	170	Yes	65	n/a	n/a	73.85	n/a	n/a	0.0004556	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-202	5	n/a	6/9/2018	18	Yes	65	n/a	n/a	73.85	n/a	n/a	0.0004556	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-203	5	n/a	6/8/2018	100	Yes	65	n/a	n/a	73.85	n/a	n/a	0.0004556	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-204	5	n/a	6/8/2018	390	Yes	65	n/a	n/a	73.85	n/a	n/a	0.0004556	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-205	5	n/a	6/8/2018	180	Yes	65	n/a	n/a	73.85	n/a	n/a	0.0004556	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-206	5	n/a	6/8/2018	440	Yes	65	n/a	n/a	73.85	n/a	n/a	0.0004556	NP Inter (NDs) 1 of 2
Total Dissolved Solids (mg/L)	MW-200	44	n/a	6/8/2018	2000	Yes	66	n/a	n/a	36.36	n/a	n/a	0.0004421	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	MW-201	44	n/a	6/9/2018	430	Yes	66	n/a	n/a	36.36	n/a	n/a	0.0004421	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	MW-202	44	n/a	6/9/2018	72	Yes	66	n/a	n/a	36.36	n/a	n/a	0.0004421	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	MW-203	44	n/a	6/8/2018	98	Yes	66	n/a	n/a	36.36	n/a	n/a	0.0004421	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	MW-204	44	n/a	6/8/2018	700	Yes	66	n/a	n/a	36.36	n/a	n/a	0.0004421	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	MW-205	44	n/a	6/8/2018	320	Yes	66	n/a	n/a	36.36	n/a	n/a	0.0004421	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	MW-206	44	n/a	6/8/2018	5200	Yes	66	n/a	n/a	36.36	n/a	n/a	0.0004421	NP Inter (normality) 1 of 2

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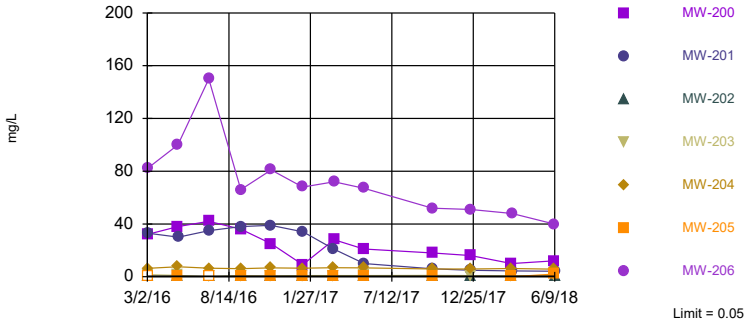
Hollow symbols indicate censored values.

Exceeds Limit: MW-200, MW-201, MW-202, MW-203, MW-204, MW-205, MW-206

Boron

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 66 background values. 96.97% NDs. Annual per-constituent alpha = 0.004412. Individual comparison alpha = 0.0004421 (1 of 2). Comparing 7 points to limit.

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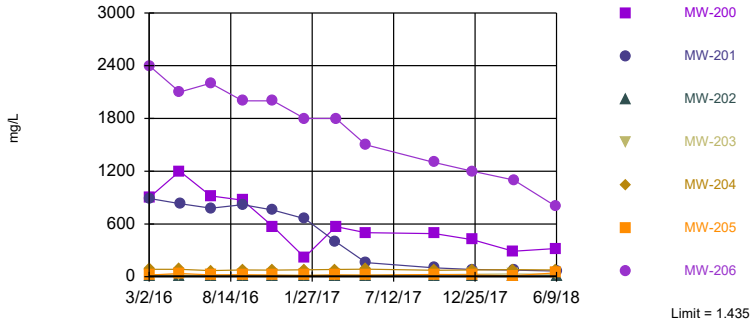
Exceeds Limit: MW-200, MW-201, MW-202, MW-203, MW-204, MW-205, MW-206

Calcium

Interwell Parametric



Background Data Summary (based on cube root transformation): Mean=0.8993, Std. Dev.=0.1247, n=66. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.958, critical = 0.948. Kappa = 1.834 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001504. Comparing 7 points to limit.

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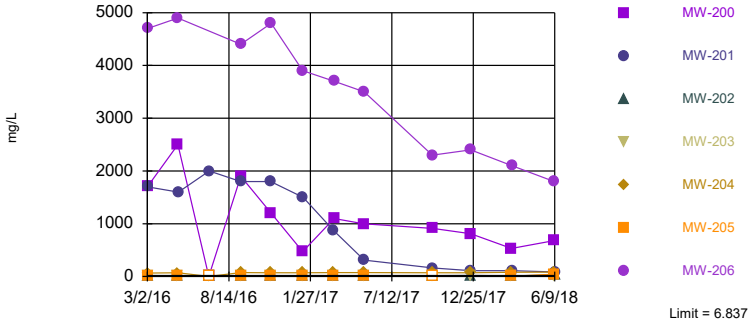
Hollow symbols indicate censored values.

Exceeds Limit: MW-200, MW-201, MW-202, MW-203, MW-204, MW-205, MW-206

Chloride

Interwell Parametric



Background Data Summary: Mean=5.206, Std. Dev.=0.8892, n=66. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9631, critical = 0.948. Kappa = 1.834 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001504. Comparing 7 points to limit.

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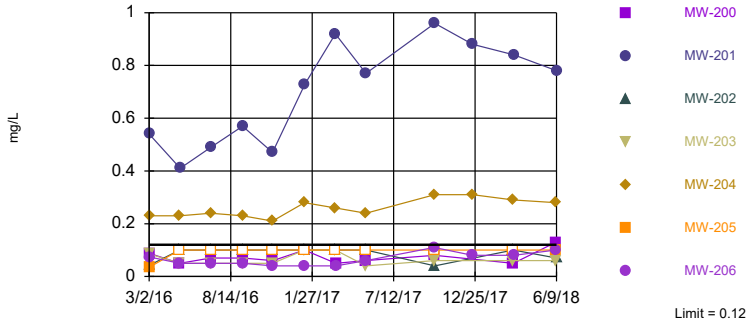
Hollow symbols indicate censored values.

Exceeds Limit: MW-200, MW-201, MW-204

Fluoride

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 66 background values. 96.97% NDs. Annual per-constituent alpha = 0.004412. Individual comparison alpha = 0.0004421 (1 of 2). Comparing 7 points to limit.

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/14/2018 7:27 PM View: PLs 200 Series Interwell

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-100 (bg)	MW-101 (bg)	MW-108 (bg)	MW-107 (bg)	MW-307 (bg)	MW-306 (bg)	MW-204	MW-206	MW-205
2/29/2016	<0.05	<0.05	<0.05	<0.05					
3/1/2016					<0.05	<0.05			
3/2/2016							6.3	82	<0.05
3/3/2016									
5/2/2016	<0.05		<0.05	<0.05	<0.05				
5/3/2016						<0.05	7.6	100	0.059
5/4/2016		<0.05							
7/5/2016	<0.05		<0.05	<0.05	<0.05	<0.05	6.5	150	
7/6/2016									<0.05 (*)
7/8/2016		<0.05							
9/6/2016	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05			
9/8/2016							6.1	66	0.14
11/7/2016	<0.05		<0.05	<0.05	<0.05	<0.05			
11/8/2016							6.7		0.16
11/9/2016								81	
11/10/2016		<0.05							
1/9/2017	<0.05		<0.05	<0.05	<0.05	<0.05			
1/11/2017		<0.05							
1/12/2017							6.5	68	0.045 (J)
1/13/2017									
3/13/2017	<0.05		0.022 (J)	<0.05	<0.05	<0.05			
3/14/2017		<0.05							
3/16/2017							6.8		0.072
3/17/2017								72	
5/15/2017	<0.05		<0.05	<0.05	<0.05	<0.05			
5/16/2017									
5/17/2017							6.7	67	0.074
5/18/2017		<0.05							
10/2/2017	<0.05		0.023 (J)	<0.05	<0.05	<0.05			
10/3/2017								52	
10/4/2017							5.9		0.039 (J)
10/5/2017		<0.05							
12/20/2017							5.9	51	
3/12/2018	<0.05		<0.05	<0.05	<0.05	<0.05			
3/13/2018							6.2		0.084
3/14/2018		<0.05						48	
6/5/2018	<0.05		<0.05	<0.05					
6/6/2018					<0.05	<0.05			
6/8/2018							5.7	40	2
6/9/2018									
6/10/2018		<0.05							

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/14/2018 7:27 PM View: PLs 200 Series Interwell

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-202	MW-201	MW-200	MW-203
2/29/2016				
3/1/2016				
3/2/2016	0.24 (J)	33	32	
3/3/2016				1.5
5/2/2016				
5/3/2016	0.32		38	0.97
5/4/2016		30		
7/5/2016			42	<0.05 (*)
7/6/2016	<0.05 (*)	35		
7/8/2016				
9/6/2016				
9/8/2016	0.26	38	36	0.7
11/7/2016				
11/8/2016	0.19	39		0.55
11/9/2016			25	
11/10/2016				
1/9/2017				
1/11/2017				
1/12/2017			9.1	0.87
1/13/2017	0.65	34		
3/13/2017				
3/14/2017				
3/16/2017	0.12	21		0.83
3/17/2017			28	
5/15/2017				
5/16/2017			21	
5/17/2017	0.11	10		0.94
5/18/2017				
10/2/2017				
10/3/2017				
10/4/2017	0.087	6	18	0.97
10/5/2017				
12/20/2017	0.048 (I)	4.9 (R)	16 (R)	0.87
3/12/2018				
3/13/2018	0.027 (J)		10	0.69
3/14/2018		4.4		
6/5/2018				
6/6/2018				
6/8/2018			12	0.99
6/9/2018	0.11	4.1		
6/10/2018				

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/14/2018 7:27 PM View: PLs 200 Series Interwell

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-100 (bg)	MW-101 (bg)	MW-108 (bg)	MW-107 (bg)	MW-307 (bg)	MW-306 (bg)	MW-204	MW-206	MW-205
2/29/2016	1	1 (J)	1.4	0.67					
3/1/2016					1.5	0.6			
3/2/2016							85	2400	19
3/3/2016									
5/2/2016	0.78		1.1	0.58	0.83				
5/3/2016						0.55	84	2100	36
5/4/2016		0.62							
7/5/2016	0.65		0.94	0.43	1.6	0.53	69	2200	
7/6/2016									20
7/8/2016		0.4							
9/6/2016	0.7	0.45	1	0.48	1.6	0.5			
9/8/2016							77	2000	22
11/7/2016	0.8		1.2	0.56	1.5	0.68			
11/8/2016							75		18
11/9/2016								2000	
11/10/2016		0.44							
1/9/2017	0.74		1.2	0.43	0.98	0.56			
1/11/2017		0.42							
1/12/2017							78	1800	14
1/13/2017									
3/13/2017	0.78		1.3	0.48	0.75	0.62			
3/14/2017		0.42							
3/16/2017							83		21
3/17/2017								1800	
5/15/2017	0.76		1	0.37	0.83	0.58			
5/16/2017									
5/17/2017							86	1500	16
5/18/2017		0.38							
10/2/2017	0.78		1.2	0.47	0.83	0.62			
10/3/2017								1300	
10/4/2017							74		26
10/5/2017		0.39							
12/20/2017							76	1200	21
3/12/2018	0.88		1.4	0.49	0.71	0.59			
3/13/2018							81		11
3/14/2018		0.49						1100	
6/5/2018	0.9		1.2	0.49					
6/6/2018					0.68	0.59			
6/8/2018							77	800	44
6/9/2018									
6/10/2018		0.39							

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/14/2018 7:27 PM View: PLs 200 Series Interwell

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-202	MW-201	MW-200	MW-203
2/29/2016				
3/1/2016				
3/2/2016	7.2	890	900	
3/3/2016				25
5/2/2016				
5/3/2016	6.2		1200	18
5/4/2016		830		
7/5/2016			920	17
7/6/2016	4.8	780		
7/8/2016				
9/6/2016				
9/8/2016	5.2	820	870	17
11/7/2016				
11/8/2016	4.7	760		16
11/9/2016			570	
11/10/2016				
1/9/2017				
1/11/2017				
1/12/2017			220	16
1/13/2017	4.9	660		
3/13/2017				
3/14/2017				
3/16/2017	4	400		18
3/17/2017			570	
5/15/2017				
5/16/2017			500	
5/17/2017	4	160		19
5/18/2017				
10/2/2017				
10/3/2017				
10/4/2017	4.9	100	490	24
10/5/2017				
12/20/2017	4.8	82 (R)	420 (R)	28
3/12/2018				
3/13/2018	4.1		290	31
3/14/2018		75		
6/5/2018				
6/6/2018				
6/8/2018			320	28
6/9/2018	5.8	64		
6/10/2018				

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/14/2018 7:27 PM View: PLs 200 Series Interwell

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-100 (bg)	MW-108 (bg)	MW-107 (bg)	MW-101 (bg)	MW-306 (bg)	MW-307 (bg)	MW-202	MW-204	MW-201
2/29/2016	5.3	7.4	8.1	5.4					
3/1/2016					5.6	4			
3/2/2016							12	64	1700
3/3/2016									
5/2/2016	4.4	6.3	6			3.6			
5/3/2016					5.1		15	69	
5/4/2016				4.5					1600
7/5/2016	4.2	4.8	5.2		4.7	3.6		<2.7 (*)	
7/6/2016							<2.7 (*)		2000
7/8/2016				4.9					
9/6/2016	4.3	6	5.5	4.3	4.4	4			
9/8/2016							13	74	1800
11/7/2016	4.2	5.7	5.4		4.6	4.4			
11/8/2016							12	71	1800
11/9/2016									
11/10/2016				4.5					
1/9/2017	5.3	6.8	6.1		5.3	4.4			
1/11/2017				5.3					
1/12/2017								71	
1/13/2017							13		1500
3/13/2017	5.2	6.8	5.5		5.6	4.1			
3/14/2017				5.5					
3/16/2017							11	73	870
3/17/2017									
5/15/2017	4.8	6.1	4.7		5.2	3.7			
5/16/2017									
5/17/2017							10	73	310
5/18/2017				5					
10/2/2017	5.5	6	6.1		5.5	4.8			
10/3/2017									
10/4/2017							17	70	160
10/5/2017				5.6					
12/20/2017							20	72	110 (R)
3/12/2018	5.3	5.9	6.1		5.6	4			
3/13/2018							14	81	
3/14/2018				5.2					110
6/5/2018	5.3	6.5	5.5						
6/6/2018					5.6	4.1			
6/8/2018								82	
6/9/2018							24		86
6/10/2018				5.2					

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/14/2018 7:27 PM View: PLs 200 Series Interwell

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-205	MW-200	MW-206	MW-203
2/29/2016				
3/1/2016				
3/2/2016	6.2	1700	4700	
3/3/2016				19
5/2/2016				
5/3/2016	3.6	2500	4900	14
5/4/2016				
7/5/2016		<2.7 (*)	360 (o)	<2.7 (*)
7/6/2016	<2.7 (*)			
7/8/2016				
9/6/2016				
9/8/2016	3	1900	4400	12
11/7/2016				
11/8/2016	5.9			12
11/9/2016		1200	4800	
11/10/2016				
1/9/2017				
1/11/2017				
1/12/2017	4.5	470	3900	12
1/13/2017				
3/13/2017				
3/14/2017				
3/16/2017	5.9			14
3/17/2017		1100	3700	
5/15/2017				
5/16/2017		1000		
5/17/2017	4.4		3500	15
5/18/2017				
10/2/2017				
10/3/2017			2300	
10/4/2017	<2.7 (*)	910		17
10/5/2017				
12/20/2017		810 (R)	2400	15
3/12/2018				
3/13/2018	4.1	530		14
3/14/2018			2100	
6/5/2018				
6/6/2018				
6/8/2018	43	680	1800	15
6/9/2018				
6/10/2018				

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 10/14/2018 7:27 PM View: PLs 200 Series Interwell

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-100 (bg)	MW-108 (bg)	MW-107 (bg)	MW-101 (bg)	MW-306 (bg)	MW-307 (bg)	MW-202	MW-204	MW-201
2/29/2016	<0.1	<0.1	<0.1	<0.1					
3/1/2016					<0.1	0.033 (J)			
3/2/2016							0.042 (J)	0.23	0.54
3/3/2016									
5/2/2016	<0.1	<0.1	<0.1			<0.1			
5/3/2016					<0.1		<0.1	0.23	
5/4/2016				<0.1					0.41
7/5/2016	<0.1	<0.1	<0.1		<0.1	<0.1		0.24	
7/6/2016							<0.1		0.49
7/8/2016				<0.1					
9/6/2016	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
9/8/2016							<0.1	0.23	0.57
11/7/2016	<0.1	<0.1	<0.1		<0.1	<0.1			
11/8/2016							<0.1	0.21	0.47
11/9/2016									
11/10/2016				<0.1					
1/9/2017	<0.1	<0.1	<0.1		<0.1	<0.1			
1/11/2017				<0.1					
1/12/2017								0.28	
1/13/2017							<0.1		0.73
3/13/2017	<0.1	<0.1	<0.1		<0.1	<0.1			
3/14/2017				<0.1					
3/16/2017							<0.1	0.26	0.92
3/17/2017									
5/15/2017	<0.1	<0.1	<0.1		<0.1	<0.1			
5/16/2017									
5/17/2017							<0.1	0.24	0.77
5/18/2017				<0.1					
10/2/2017	<0.1	<0.1	<0.1		<0.1	<0.1			
10/3/2017									
10/4/2017							0.04 (J)	0.31	0.96
10/5/2017				<0.1					
12/20/2017								0.31	0.88 (R)
3/12/2018	<0.1	<0.1	<0.1		<0.1	<0.1			
3/13/2018							<0.1	0.29	
3/14/2018				0.12					0.84
6/5/2018	<0.1	<0.1	<0.1						
6/6/2018					<0.1	<0.1			
6/8/2018								0.28	
6/9/2018							0.07 (J)		0.78
6/10/2018				<0.1					

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 10/14/2018 7:27 PM View: PLs 200 Series Interwell

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-205	MW-200	MW-206	MW-203
2/29/2016				
3/1/2016				
3/2/2016	0.035 (J)	0.088 (J)	0.074 (J)	
3/3/2016				0.085 (J)
5/2/2016				
5/3/2016	<0.1	0.05 (J)	0.05 (J)	0.05 (J)
5/4/2016				
7/5/2016		0.07 (J)	0.05 (J)	0.05 (J)
7/6/2016	<0.1			
7/8/2016				
9/6/2016				
9/8/2016	<0.1	0.07 (J)	0.05 (J)	0.05 (J)
11/7/2016				
11/8/2016	<0.1			0.05 (J)
11/9/2016		0.06 (J)	0.04 (J)	
11/10/2016				
1/9/2017				
1/11/2017				
1/12/2017	<0.1	<0.1	0.04 (J)	<0.1
1/13/2017				
3/13/2017				
3/14/2017				
3/16/2017	<0.1			<0.1
3/17/2017		0.05 (J)	0.04 (J)	
5/15/2017				
5/16/2017		0.06 (J)		
5/17/2017	<0.1		0.06 (J)	0.04 (J)
5/18/2017				
10/2/2017				
10/3/2017			0.11	
10/4/2017	<0.1	0.08 (J)		0.06 (J)
10/5/2017				
12/20/2017			0.08 (I)	
3/12/2018				
3/13/2018	<0.1	0.05 (J)		0.06 (J)
3/14/2018			0.08 (J)	
6/5/2018				
6/6/2018				
6/8/2018	0.1	0.13	0.1	0.06 (J)
6/9/2018				
6/10/2018				

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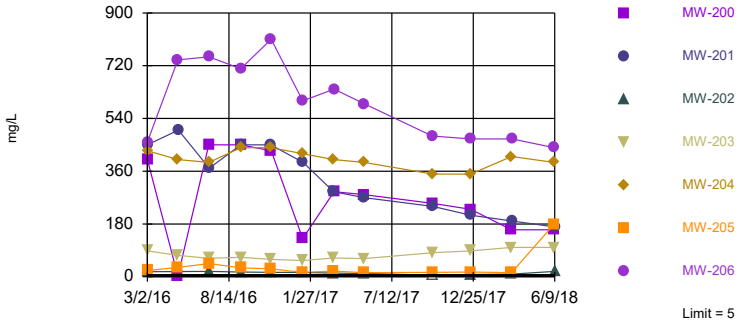
Hollow symbols indicate censored values.

Exceeds Limit: MW-200, MW-201, MW-202, MW-203, MW-204, MW-205, MW-206

Sulfate

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 65 background values. 73.85% NDs. Annual per-constituent alpha = 0.004547. Individual comparison alpha = 0.0004556 (1 of 2). Comparing 7 points to limit.

Prediction Limit Analysis Run 10/14/2018 7:24 PM View: PLs 200 Series Interwell
Plant Crist Client: Southern Company Data: Plant Crist CCR

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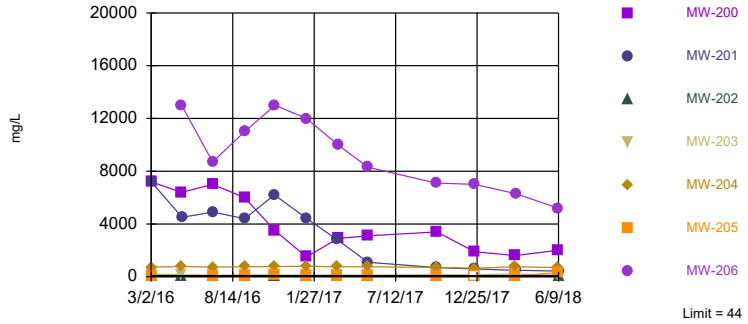
Hollow symbols indicate censored values.

Exceeds Limit: MW-200, MW-201, MW-202, MW-203, MW-204, MW-205, MW-206

Total Dissolved Solids

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 66 background values. 36.36% NDs. Annual per-constituent alpha = 0.004412. Individual comparison alpha = 0.0004421 (1 of 2). Comparing 7 points to limit.

Prediction Limit Analysis Run 10/14/2018 7:24 PM View: PLs 200 Series Interwell
Plant Crist Client: Southern Company Data: Plant Crist CCR

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/14/2018 7:27 PM View: PLs 200 Series Interwell

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-100 (bg)	MW-108 (bg)	MW-107 (bg)	MW-101 (bg)	MW-307 (bg)	MW-306 (bg)	MW-206	MW-205	MW-200
2/29/2016	<5	1.6 (J)	<5	<5					
3/1/2016					<5	<5			
3/2/2016							460	21	400
3/3/2016									
5/2/2016	15 (o)	2.1 (J)	<5		<5				
5/3/2016						<5	740	32	2.2 (J)
5/4/2016				<5					
7/5/2016	<5	2 (J)	<5		<5	<5	750		450 (J)
7/6/2016								45 (J)	
7/8/2016				<5					
9/6/2016	<5	1.8 (J)	<5	<5	3.7 (J)	<5			
9/8/2016							710	30	450
11/7/2016	<5	1.7 (J)	<5		<5	<5			
11/8/2016								27	
11/9/2016							810		430
11/10/2016				<5					
1/9/2017	<5	1.5 (J)	2.6 (J)		<5	<5			
1/11/2017				<5					
1/12/2017							600	15	130
1/13/2017									
3/13/2017	2.5 (J)	2.2 (J)	<5		<5	<5			
3/14/2017				<5					
3/16/2017								19	
3/17/2017							640		290
5/15/2017	<5	1.9 (J)	<5		<5	<5			
5/16/2017									280
5/17/2017							590	14	
5/18/2017				<5 (X)					
10/2/2017	<5	3.4 (J)	<5		1.7 (J)	1.5 (J)			
10/3/2017							480		
10/4/2017								15	250
10/5/2017				<5					
12/20/2017							470	16	230 (R)
3/12/2018	<5	2.6 (J)	<5		<5	<5			
3/13/2018								14	160
3/14/2018				<5			470		
6/5/2018	<5	2.6 (J)	<5						
6/6/2018					<5	<5			
6/8/2018							440	180	160
6/9/2018									
6/10/2018				1.5 (J)					

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/14/2018 7:27 PM View: PLs 200 Series Interwell

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-204	MW-201	MW-202	MW-203
2/29/2016				
3/1/2016				
3/2/2016	430	450	17	
3/3/2016				88
5/2/2016				
5/3/2016	400		360 (o)	73
5/4/2016		500		
7/5/2016	390			63
7/6/2016		370	18	
7/8/2016				
9/6/2016				
9/8/2016	440	450	16	66
11/7/2016				
11/8/2016	440	450	15	59
11/9/2016				
11/10/2016				
1/9/2017				
1/11/2017				
1/12/2017	420			55
1/13/2017		390	15	
3/13/2017				
3/14/2017				
3/16/2017	400	290	12 (V)	64
3/17/2017				
5/15/2017				
5/16/2017				
5/17/2017	390	270	11	62 (J)
5/18/2017				
10/2/2017				
10/3/2017				
10/4/2017	350	240	<5 (*)	82
10/5/2017				
12/20/2017	350	210 (R)	8	88
3/12/2018				
3/13/2018	410		8.6	100
3/14/2018		190		
6/5/2018				
6/6/2018				
6/8/2018	390			100
6/9/2018		170	18	
6/10/2018				

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/14/2018 7:27 PM View: PLs 200 Series Interwell

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-100 (bg)	MW-108 (bg)	MW-107 (bg)	MW-101 (bg)	MW-306 (bg)	MW-307 (bg)	MW-202	MW-204	MW-201
2/29/2016	20	12	<5	20					
3/1/2016					10	<5			
3/2/2016							50	730	7200
3/3/2016									
5/2/2016	<5	6	<5			36			
5/3/2016					<5		62	770	
5/4/2016				6					4500
7/5/2016	12	<5	14		<5	<5		730	
7/6/2016							32		4900
7/8/2016				6					
9/6/2016	36	38	30	36	36	44			
9/8/2016							68	750	4400
11/7/2016	18	<5	8		<5	30			
11/8/2016							56	770	6200
11/9/2016									
11/10/2016				16					
1/9/2017	4 (J)	14	<5		<5	12			
1/11/2017				38					
1/12/2017								790	
1/13/2017							20		4400
3/13/2017	6	8	<5		22	20			
3/14/2017				<5					
3/16/2017							42	750	2800
3/17/2017									
5/15/2017	<5	<5	<5		6	4 (J)			
5/16/2017									
5/17/2017							26	750	1100
5/18/2017				10					
10/2/2017	<5	6	<5		16	24			
10/3/2017									
10/4/2017							48	710	700
10/5/2017				<5					
12/20/2017							54	640	590 (R)
3/12/2018	18	<5	14		<5	<5			
3/13/2018							52	760	
3/14/2018				8					490
6/5/2018	10	14	<5						
6/6/2018					20	16			
6/8/2018								700	
6/9/2018							72		430
6/10/2018				8					

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/14/2018 7:27 PM View: PLs 200 Series Interwell

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-205	MW-200	MW-203	MW-206
2/29/2016				
3/1/2016				
3/2/2016	58	7200		32000 (o)
3/3/2016			190	
5/2/2016				
5/3/2016	160 (o)	6400	160	13000
5/4/2016				
7/5/2016		7000	96	8700
7/6/2016	70			
7/8/2016				
9/6/2016				
9/8/2016	66	6000	140	11000 (Q)
11/7/2016				
11/8/2016	100		130	
11/9/2016		3500		13000
11/10/2016				
1/9/2017				
1/11/2017				
1/12/2017	44	1500	120	12000
1/13/2017				
3/13/2017				
3/14/2017				
3/16/2017	70		130	
3/17/2017		2900		10000
5/15/2017				
5/16/2017		3100		
5/17/2017	46		110	8300
5/18/2017				
10/2/2017				
10/3/2017				7100
10/4/2017	50	3400	150	
10/5/2017				
12/20/2017	<5	1900 (R)	150	7000
3/12/2018				
3/13/2018	66	1600	210	
3/14/2018				6300
6/5/2018				
6/6/2018				
6/8/2018	320	2000	98	5200
6/9/2018				
6/10/2018				

Series 200 Intrawell Prediction Limit Summary Table - Significant Results

Plant Crist Client: Southern Company Data: Plant Crist CCR Printed 10/14/2018, 7:23 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Field pH (SU)	MW-205	6.184	4.954	6/8/2018	4.89	Yes	8	5.569	0.2245	0	None	No	0.000752	Param Intra 1 of 2

Series 200 Intrawell Prediction Limit Summary Table - All Results

Plant Crist Client: Southern Company Data: Plant Crist CCR Printed 10/14/2018, 7:23 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Field pH (SU)	MW-100	5.515	4.24	6/5/2018	4.92	No	8	4.878	0.2326	0	None	No	0.000752	Param Intra 1 of 2
Field pH (SU)	MW-101	5.779	4.151	6/10/2018	5.12	No	8	4.965	0.297	0	None	No	0.000752	Param Intra 1 of 2
Field pH (SU)	MW-107	5.726	4.169	6/5/2018	5.04	No	8	4.948	0.2841	0	None	No	0.000752	Param Intra 1 of 2
Field pH (SU)	MW-108	7.11	4.52	6/5/2018	4.9	No	8	n/a	n/a	0	n/a	n/a	0.04288	NP Intra (normality) 1 of 2
Field pH (SU)	MW-200	5.385	4.545	6/8/2018	5.05	No	8	4.965	0.1534	0	None	No	0.000752	Param Intra 1 of 2
Field pH (SU)	MW-201	6	4.55	6/9/2018	4.81	No	8	5.275	0.2646	0	None	No	0.000752	Param Intra 1 of 2
Field pH (SU)	MW-202	5.39	4.05	6/9/2018	4.58	No	8	4.72	0.2445	0	None	No	0.000752	Param Intra 1 of 2
Field pH (SU)	MW-203	5.102	4.255	6/8/2018	4.63	No	8	4.679	0.1545	0	None	No	0.000752	Param Intra 1 of 2
Field pH (SU)	MW-204	5.316	3.724	6/8/2018	4.29	No	8	4.52	0.2906	0	None	No	0.000752	Param Intra 1 of 2
Field pH (SU)	MW-205	6.184	4.954	6/8/2018	4.89	Yes	8	5.569	0.2245	0	None	No	0.000752	Param Intra 1 of 2
Field pH (SU)	MW-206	4.846	3.794	6/8/2018	4.31	No	8	4.32	0.1921	0	None	No	0.000752	Param Intra 1 of 2
Field pH (SU)	MW-306	5.716	4.409	6/6/2018	5.09	No	8	5.063	0.2384	0	None	No	0.000752	Param Intra 1 of 2
Field pH (SU)	MW-307	6.976	4.936	6/6/2018	5.58	No	8	5.956	0.3722	0	None	No	0.000752	Param Intra 1 of 2

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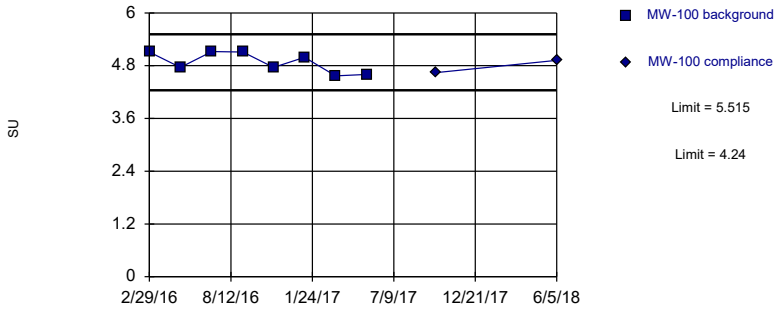
Within Limits

Field pH

Intrawell Parametric



Background Data Summary: Mean=4.878, Std. Dev.=0.2326, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8522, critical = 0.749. Kappa = 2.74 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Prediction Limit Analysis Run 10/14/2018 5:40 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

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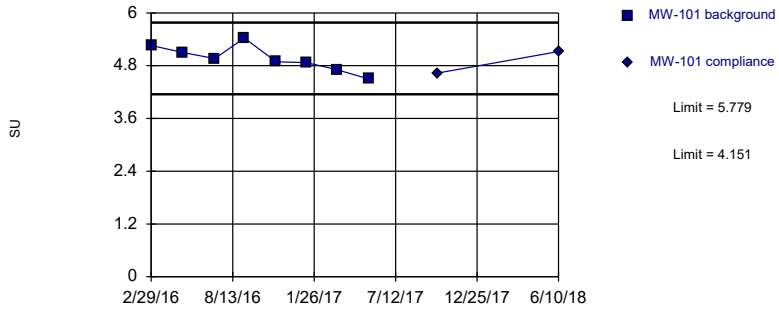
Within Limits

Field pH

Intrawell Parametric



Background Data Summary: Mean=4.965, Std. Dev.=0.297, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9876, critical = 0.749. Kappa = 2.74 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Prediction Limit Analysis Run 10/14/2018 5:40 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

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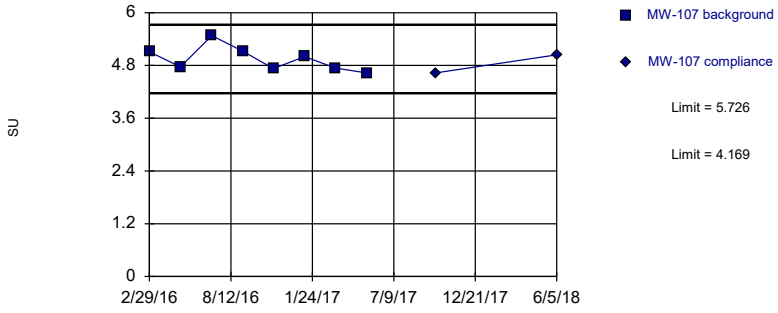
Within Limits

Field pH

Intrawell Parametric



Background Data Summary: Mean=4.948, Std. Dev.=0.2841, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9051, critical = 0.749. Kappa = 2.74 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Prediction Limit Analysis Run 10/14/2018 5:40 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

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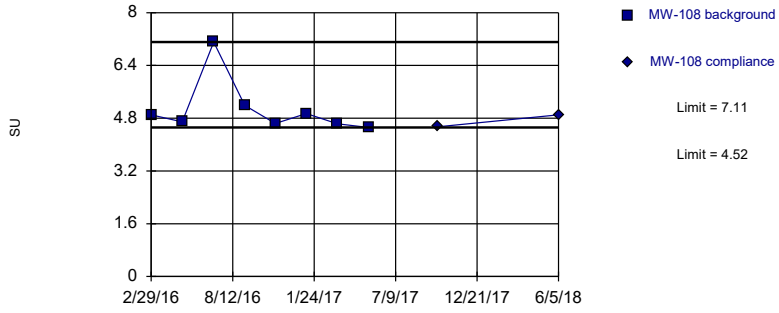
Within Limits

Field pH

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 8 background values. Well-constituent pair annual alpha = 0.08484. Individual comparison alpha = 0.04288 (1 of 2).

Prediction Limit Analysis Run 10/14/2018 5:40 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

Prediction Limit

Constituent: Field pH (SU) Analysis Run 10/14/2018 7:23 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-100	MW-100
2/29/2016	5.11	
5/2/2016	4.76	
7/5/2016	5.12	
9/6/2016	5.11	
11/7/2016	4.76	
1/9/2017	4.99	
3/13/2017	4.57	
5/15/2017	4.6	
10/2/2017		4.64
6/5/2018		4.92

Prediction Limit

Constituent: Field pH (SU) Analysis Run 10/14/2018 7:23 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-101	MW-101
2/29/2016	5.26	
5/4/2016	5.1	
7/8/2016	4.96	
9/6/2016	5.43	
11/10/2016	4.89	
1/11/2017	4.87	
3/14/2017	4.71	
5/18/2017	4.5	
10/5/2017		4.63
6/10/2018		5.12

Prediction Limit

Constituent: Field pH (SU) Analysis Run 10/14/2018 7:23 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-107	MW-107
2/29/2016	5.11	
5/2/2016	4.77	
7/5/2016	5.48	
9/6/2016	5.12	
11/7/2016	4.73	
1/9/2017	5	
3/13/2017	4.74	
5/15/2017	4.63	
10/2/2017		4.63
6/5/2018		5.04

Prediction Limit

Constituent: Field pH (SU) Analysis Run 10/14/2018 7:23 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-108	MW-108
2/29/2016	4.9	
5/2/2016	4.69	
7/5/2016	7.11	
9/6/2016	5.19	
11/7/2016	4.64	
1/9/2017	4.94	
3/13/2017	4.63	
5/15/2017	4.52	
10/2/2017		4.54
6/5/2018		4.9

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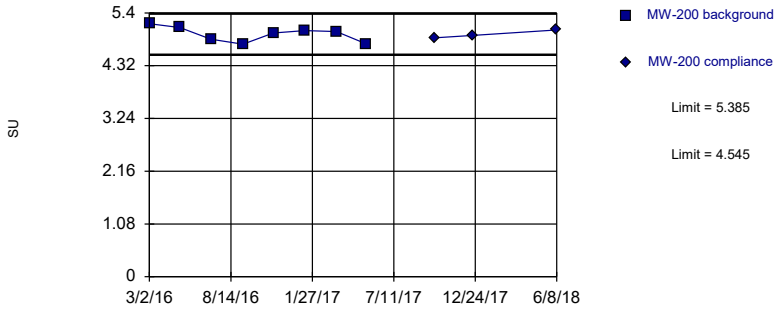
Within Limits

Field pH

Intrawell Parametric



Background Data Summary: Mean=4.965, Std. Dev.=0.1534, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9308, critical = 0.749. Kappa = 2.74 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Prediction Limit Analysis Run 10/14/2018 5:40 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

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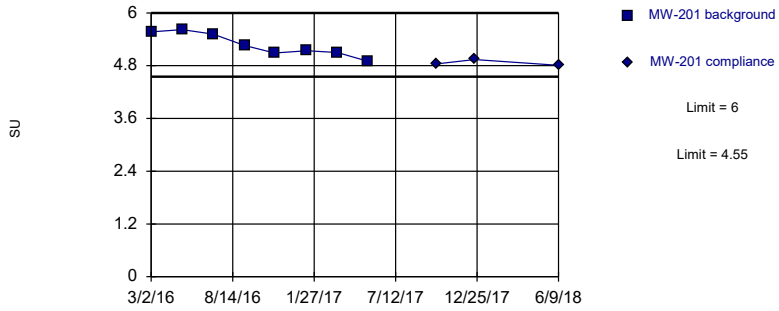
Within Limits

Field pH

Intrawell Parametric



Background Data Summary: Mean=5.275, Std. Dev.=0.2646, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9094, critical = 0.749. Kappa = 2.74 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Prediction Limit Analysis Run 10/14/2018 5:40 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

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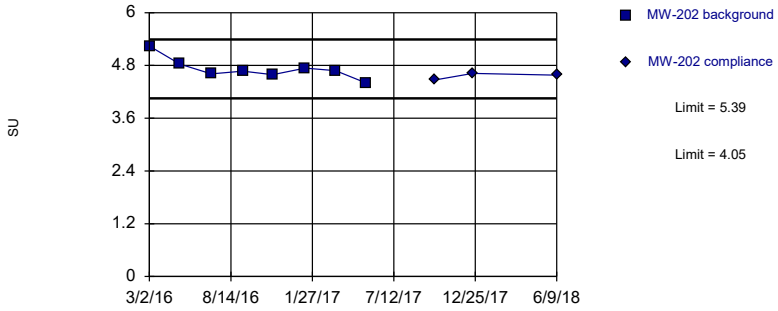
Within Limits

Field pH

Intrawell Parametric



Background Data Summary: Mean=4.72, Std. Dev.=0.2445, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8821, critical = 0.749. Kappa = 2.74 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Prediction Limit Analysis Run 10/14/2018 5:40 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

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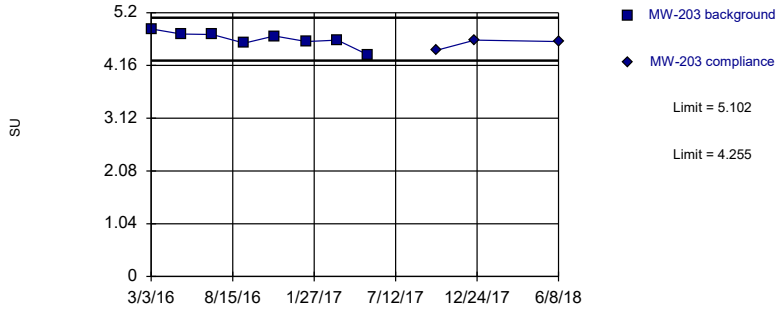
Within Limits

Field pH

Intrawell Parametric



Background Data Summary: Mean=4.679, Std. Dev.=0.1545, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9314, critical = 0.749. Kappa = 2.74 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Prediction Limit Analysis Run 10/14/2018 5:40 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

Prediction Limit

Constituent: Field pH (SU) Analysis Run 10/14/2018 7:23 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-200	MW-200
3/2/2016	5.18	
5/3/2016	5.1	
7/5/2016	4.86	
9/8/2016	4.76	
11/9/2016	4.99	
1/12/2017	5.04	
3/17/2017	5.02	
5/16/2017	4.77	
10/4/2017		4.89
12/20/2017		4.94 (R)
6/8/2018		5.05

Prediction Limit

Constituent: Field pH (SU) Analysis Run 10/14/2018 7:23 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-201	MW-201
3/2/2016	5.57	
5/4/2016	5.62	
7/6/2016	5.52	
9/8/2016	5.26	
11/8/2016	5.09	
1/13/2017	5.14	
3/16/2017	5.1	
5/17/2017	4.9	
10/4/2017		4.84
12/20/2017		4.94 (R)
6/9/2018		4.81

Prediction Limit

Constituent: Field pH (SU) Analysis Run 10/14/2018 7:23 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-202	MW-202
3/2/2016	5.24	
5/3/2016	4.83	
7/6/2016	4.61	
9/8/2016	4.67	
11/8/2016	4.59	
1/13/2017	4.74	
3/16/2017	4.68	
5/17/2017	4.4	
10/4/2017		4.47
12/20/2017		4.62 (R)
6/9/2018		4.58

Prediction Limit

Constituent: Field pH (SU) Analysis Run 10/14/2018 7:23 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-203	MW-203
3/3/2016	4.88	
5/3/2016	4.78	
7/5/2016	4.77	
9/8/2016	4.6	
11/8/2016	4.74	
1/12/2017	4.63	
3/16/2017	4.66	
5/17/2017	4.37	
10/4/2017		4.46
12/20/2017		4.66 (R)
6/8/2018		4.63

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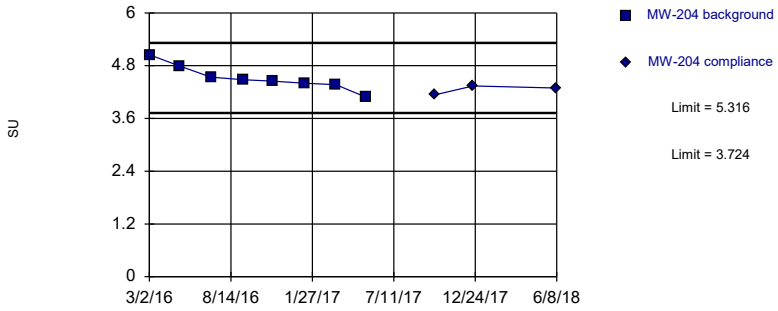
Within Limits

Field pH

Intrawell Parametric



Background Data Summary: Mean=4.52, Std. Dev.=0.2906, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9414, critical = 0.749. Kappa = 2.74 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Prediction Limit Analysis Run 10/14/2018 5:41 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

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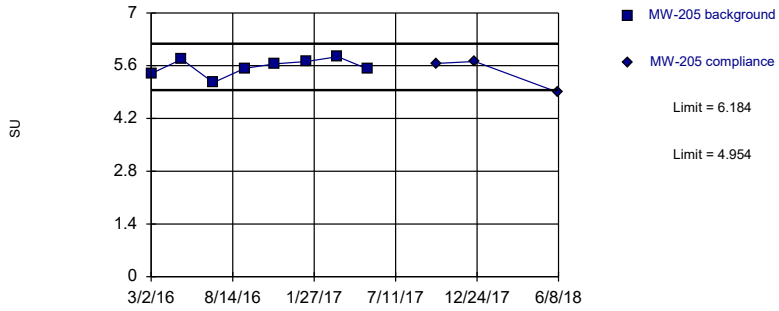
Exceeds Limits

Field pH

Intrawell Parametric



Background Data Summary: Mean=5.569, Std. Dev.=0.2245, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9513, critical = 0.749. Kappa = 2.74 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Prediction Limit Analysis Run 10/14/2018 5:41 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

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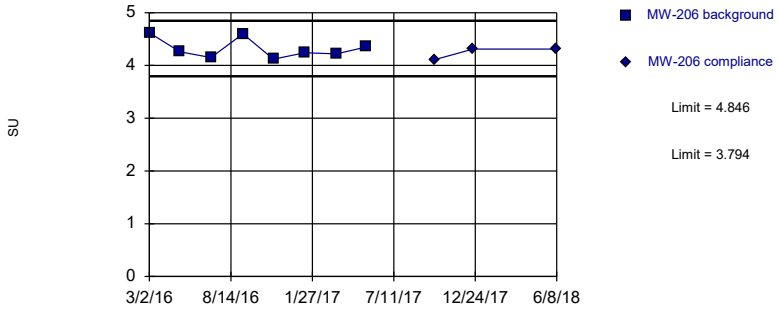
Within Limits

Field pH

Intrawell Parametric



Background Data Summary: Mean=4.32, Std. Dev.=0.1921, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.851, critical = 0.749. Kappa = 2.74 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Prediction Limit Analysis Run 10/14/2018 5:41 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

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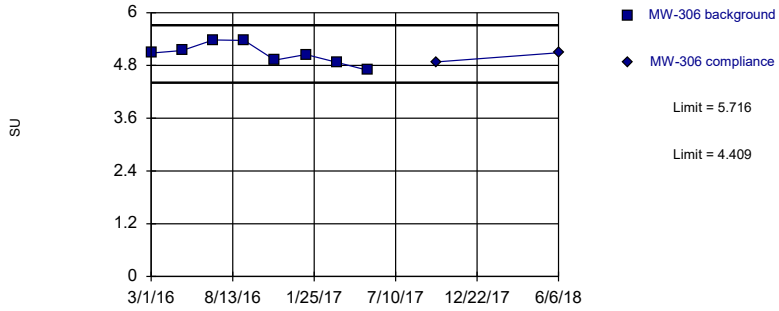
Within Limits

Field pH

Intrawell Parametric



Background Data Summary: Mean=5.063, Std. Dev.=0.2384, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.953, critical = 0.749. Kappa = 2.74 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Prediction Limit Analysis Run 10/14/2018 5:41 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

Prediction Limit

Constituent: Field pH (SU) Analysis Run 10/14/2018 7:23 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-204	MW-204
3/2/2016	5.05	
5/3/2016	4.79	
7/5/2016	4.54	
9/8/2016	4.48	
11/8/2016	4.45	
1/12/2017	4.4	
3/16/2017	4.37	
5/17/2017	4.08	
10/4/2017		4.14
12/20/2017		4.34 (R)
6/8/2018		4.29

Prediction Limit

Constituent: Field pH (SU) Analysis Run 10/14/2018 7:23 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-206	MW-206
3/2/2016	4.62	
5/3/2016	4.26	
7/5/2016	4.15	
9/8/2016	4.6	
11/9/2016	4.12	
1/12/2017	4.24	
3/17/2017	4.22	
5/17/2017	4.35	
10/3/2017		4.11
12/20/2017		4.31 (R)
6/8/2018		4.31

Prediction Limit

Constituent: Field pH (SU) Analysis Run 10/14/2018 7:23 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-306	MW-306
3/1/2016	5.08	
5/3/2016	5.14	
7/5/2016	5.38	
9/6/2016	5.37	
11/7/2016	4.92	
1/9/2017	5.05	
3/13/2017	4.87	
5/15/2017	4.69	
10/2/2017		4.88
6/6/2018		5.09

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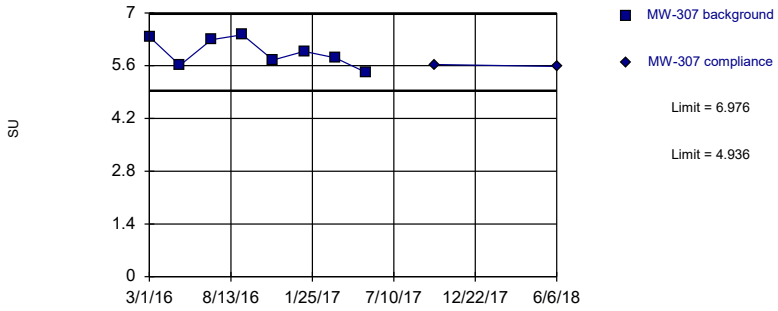
Within Limits

Field pH

Intrawell Parametric



Background Data Summary: Mean=5.956, Std. Dev.=0.3722, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9295, critical = 0.749. Kappa = 2.74 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Prediction Limit

Constituent: Field pH (SU) Analysis Run 10/14/2018 7:23 PM View: PLs 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

	MW-307	MW-307
3/1/2016	6.37	
5/2/2016	5.61	
7/5/2016	6.29	
9/6/2016	6.42	
11/7/2016	5.75	
1/9/2017	5.98	
3/13/2017	5.81	
5/15/2017	5.42	
10/2/2017		5.63
6/6/2018		5.58

Series 300 Intrawell Prediction Limit Summary Table - Significant Results

Plant Crist Client: Southern Company Data: Plant Crist CCR Printed 10/14/2018, 7:23 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Field pH (SU)	MW-205	6.184	4.954	6/8/2018	4.89	Yes	8	5.569	0.2245	0	None	No	0.000752	Param Intra 1 of 2

Series 300 Intrawell Prediction Limit Summary Table - Significant Results

Plant Crist Client: Southern Company Data: Plant Crist CCR Printed 10/14/2018, 7:23 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Field pH (SU)	MW-205	6.184	4.954	6/8/2018	4.89	Yes	8	5.569	0.2245	0	None	No	0.000752	Param Intra 1 of 2

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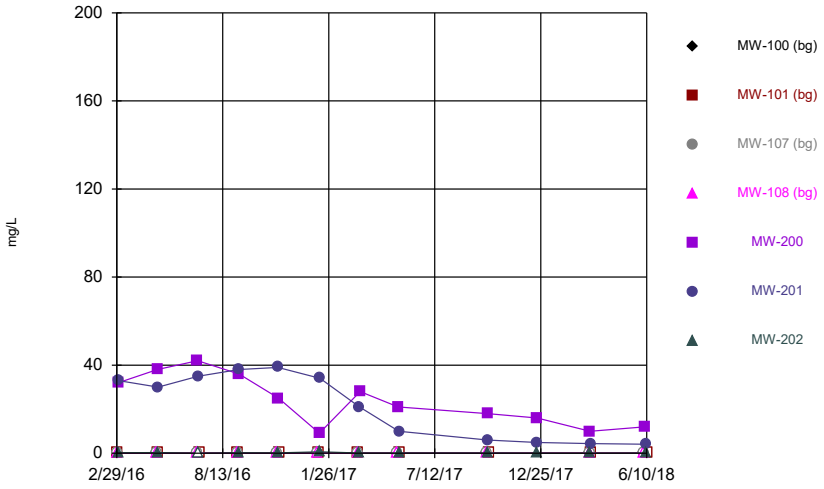
Hollow symbols indicate censored values.

Boron



Time Series Analysis Run 9/20/2018 10:19 AM View: Time Series - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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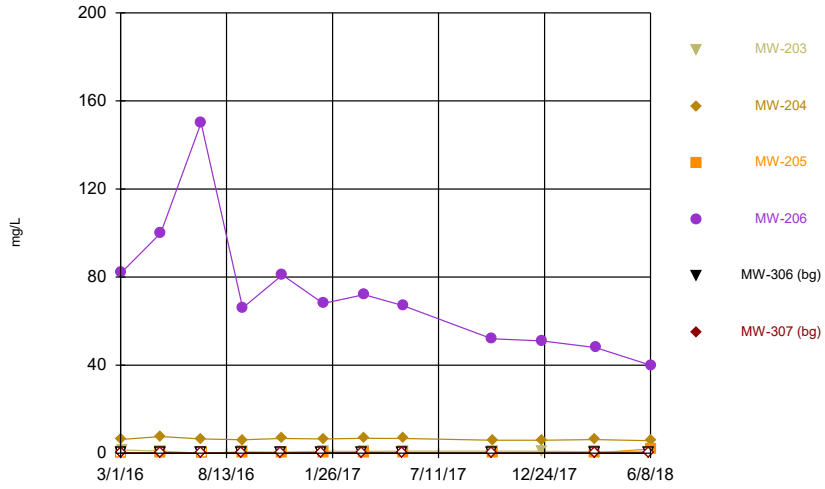
Hollow symbols indicate censored values.

Boron



Time Series Analysis Run 9/20/2018 10:19 AM View: Time Series - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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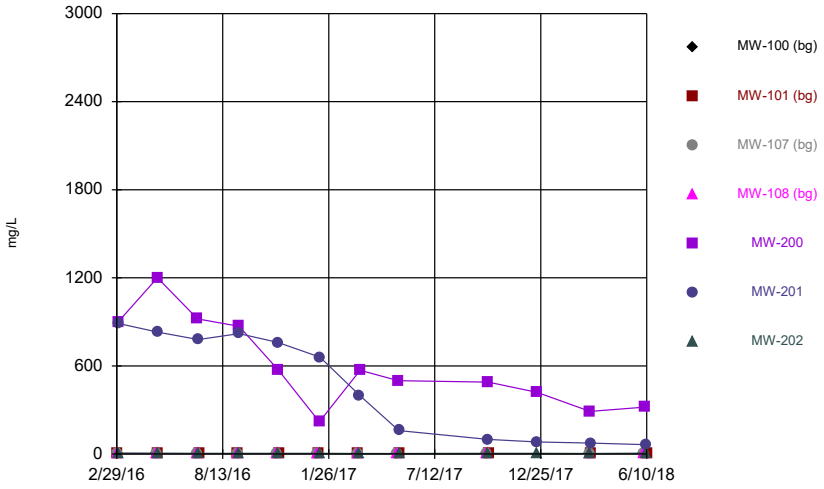
Calcium



Time Series Analysis Run 9/20/2018 10:19 AM View: Time Series - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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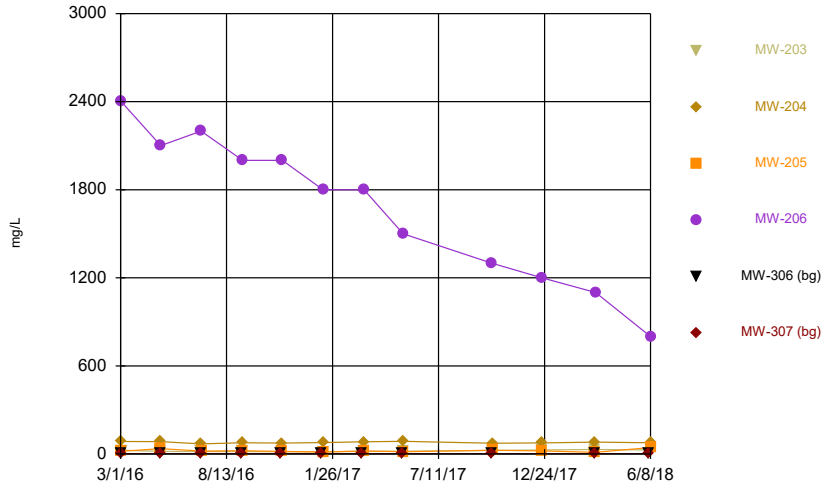
Calcium



Time Series Analysis Run 9/20/2018 10:19 AM View: Time Series - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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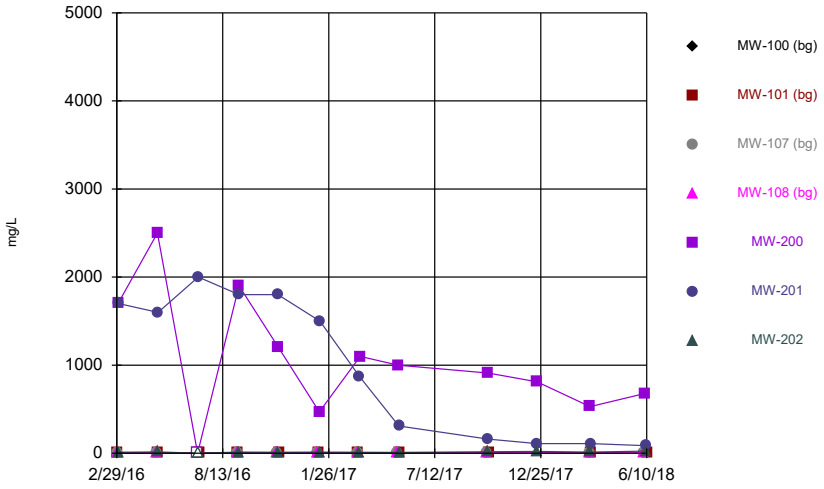
Hollow symbols indicate censored values.

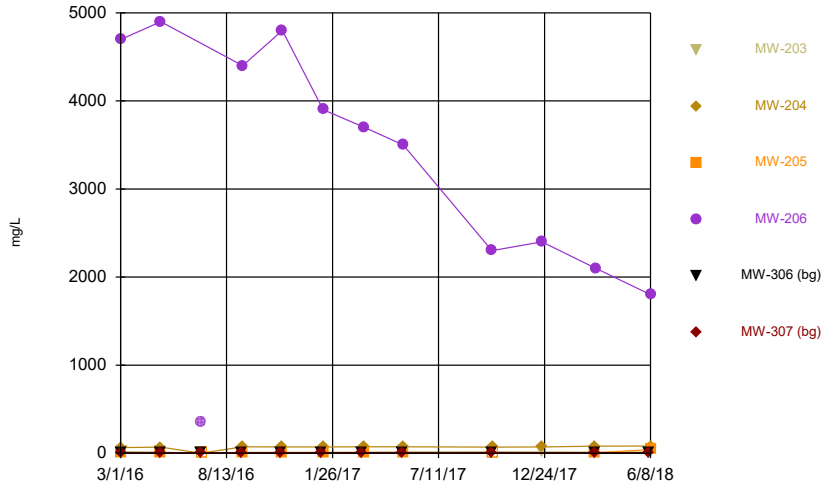
Chloride



Time Series Analysis Run 9/20/2018 10:19 AM View: Time Series - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG
Hollow symbols indicate censored values.

Chloride



Time Series Analysis Run 9/20/2018 10:19 AM View: Time Series - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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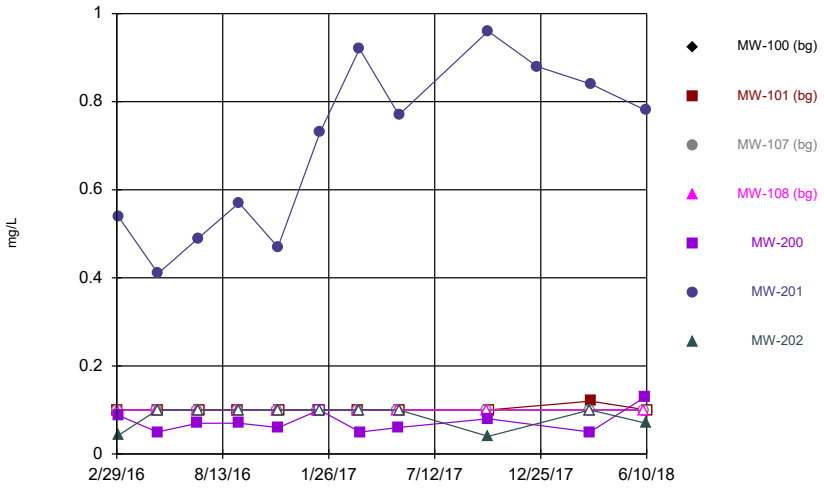
Hollow symbols indicate censored values.

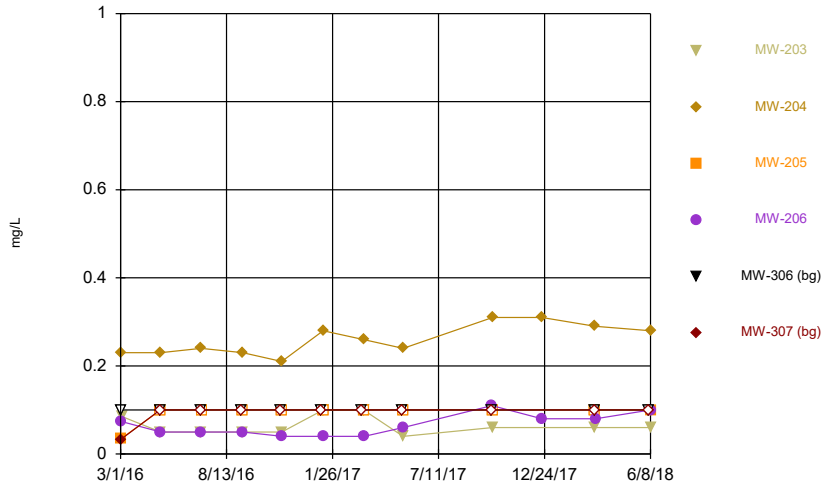
Fluoride



Time Series Analysis Run 9/20/2018 10:19 AM View: Time Series - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG
Hollow symbols indicate censored values.

Fluoride



Time Series Analysis Run 9/20/2018 10:20 AM View: Time Series - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG
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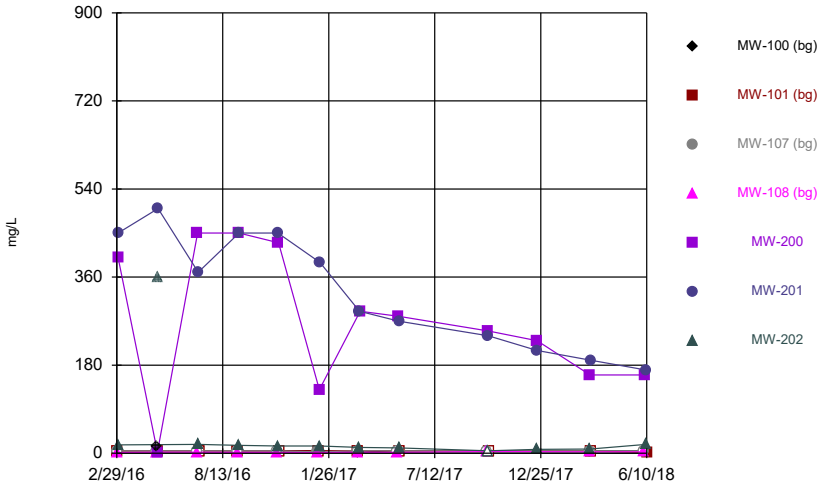
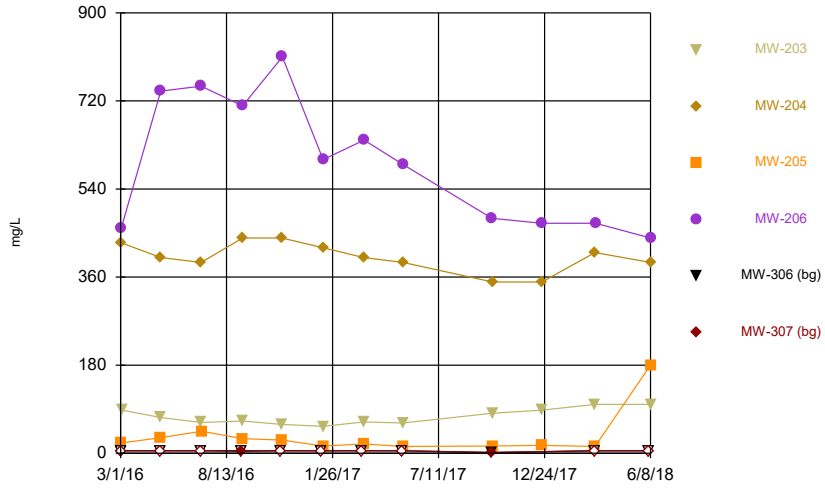
Sulfate



Time Series Analysis Run 9/20/2018 10:20 AM View: Time Series - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG
Hollow symbols indicate censored values.

Sulfate



Time Series Analysis Run 9/20/2018 10:20 AM View: Time Series - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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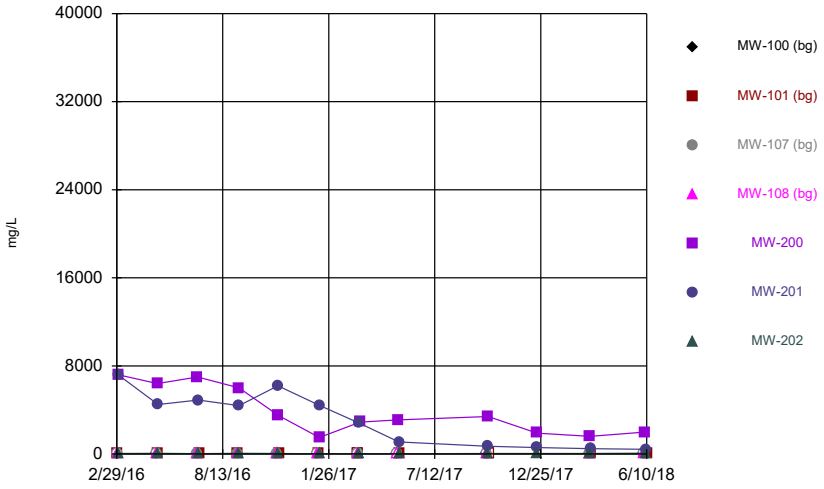
Hollow symbols indicate censored values.

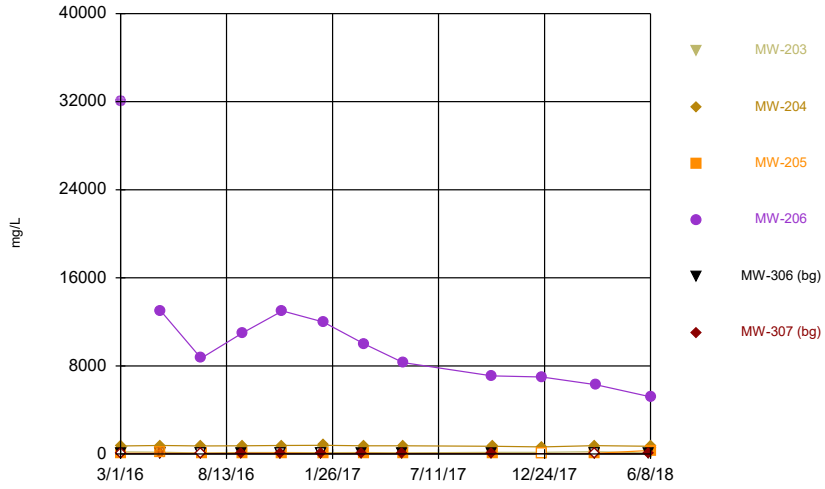
Total Dissolved Solids



Time Series Analysis Run 9/20/2018 10:20 AM View: Time Series - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG
Hollow symbols indicate censored values.

Total Dissolved Solids



Time Series Analysis Run 9/20/2018 10:20 AM View: Time Series - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Trend Test Summary Table - Significant Results

Plant Crist Client: Southern Company Data: Plant Crist CCR Printed 9/20/2018, 10:27 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	**MW-200**	**-12.71**	**-42**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	**MW-201**	**-16.37**	**-44**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	**MW-202**	**-0.1185**	**-43**	**-38**	**Yes**	**12**	**8.333**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	**MW-206**	**-25.02**	**-50**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**MW-200**	**-315.8**	**-47**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**MW-201**	**-428.4**	**-64**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**MW-206**	**-657.7**	**-62**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**MW-201**	**-961.5**	**-52**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**MW-206**	**-1477**	**-47**	**-34**	**Yes**	**11**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (SU)	**MW-201**	**-0.3688**	**-56**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (SU)	**MW-204**	**-0.2525**	**-51**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	**MW-201**	**-137.7**	**-55**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	**MW-200**	**-2346**	**-42**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	**MW-201**	**-2924**	**-57**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	**MW-206**	**-3650**	**-42**	**-34**	**Yes**	**11**	**0**	**n/a**	**n/a**	**0.01**	**NP**

Trend Test Summary Table - All Results

Plant Crist Client: Southern Company Data: Plant Crist CCR Printed 9/20/2018, 10:27 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	**MW-200**	**-12.71**	**-42**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	**MW-201**	**-16.37**	**-44**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	**MW-202**	**-0.1185**	**-43**	**-38**	**Yes**	**12**	**8.333**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	MW-203	0.03836	6	38	No	12	8.333	n/a	n/a	0.01	NP
Boron (mg/L)	MW-204	-0.3783	-25	-38	No	12	0	n/a	n/a	0.01	NP
Boron (mg/L)	MW-205	-0.02012	-6	-34	No	11	18.18	n/a	n/a	0.01	NP
Boron (mg/L)	**MW-206**	**-25.02**	**-50**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**MW-200**	**-315.8**	**-47**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**MW-201**	**-428.4**	**-64**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	MW-202	-0.6525	-21	-38	No	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	MW-203	5.707	28	38	No	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	MW-204	-0.943	-5	-38	No	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	MW-205	-0.39	-1	-38	No	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	**MW-206**	**-657.7**	**-62**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	MW-200	-483.9	-30	-38	No	12	8.333	n/a	n/a	0.01	NP
Chloride (mg/L)	**MW-201**	**-961.5**	**-52**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	MW-202	4.008	24	38	No	12	8.333	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-203	1.136	17	38	No	12	8.333	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-204	6.323	36	38	No	12	8.333	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-205	0.2688	3	34	No	11	18.18	n/a	n/a	0.01	NP
Chloride (mg/L)	**MW-206**	**-1477**	**-47**	**-34**	**Yes**	**11**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Fluoride (mg/L)	MW-200	0	-1	-34	No	11	9.091	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-201	0.1931	36	38	No	12	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-202	0	11	34	No	11	72.73	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-203	1.1e-9	5	34	No	11	18.18	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-204	0.02994	34	38	No	12	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-205	0	19	34	No	11	81.82	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-206	0.01693	21	38	No	12	0	n/a	n/a	0.01	NP
pH (SU)	MW-200	0.01086	2	38	No	12	0	n/a	n/a	0.01	NP
pH (SU)	**MW-201**	**-0.3688**	**-56**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (SU)	MW-202	-0.1165	-27	-38	No	12	0	n/a	n/a	0.01	NP
pH (SU)	MW-203	-0.08162	-32	-38	No	12	0	n/a	n/a	0.01	NP
pH (SU)	**MW-204**	**-0.2525**	**-51**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (SU)	MW-205	-0.0311	-3	-38	No	12	0	n/a	n/a	0.01	NP
pH (SU)	MW-206	-0.01993	-4	-38	No	12	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	MW-200	-105.9	-26	-38	No	12	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	**MW-201**	**-137.7**	**-55**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	MW-202	-5.046	-27	-34	No	11	9.091	n/a	n/a	0.01	NP
Sulfate (mg/L)	MW-203	14.39	18	38	No	12	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	MW-204	-24.87	-26	-38	No	12	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	MW-205	-5.748	-22	-38	No	12	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	MW-206	-145.2	-35	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	**MW-200**	**-2346**	**-42**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	**MW-201**	**-2924**	**-57**	**-38**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	MW-202	3.522	6	38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	MW-203	-9.175	-6	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	MW-204	-15.18	-15	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	MW-205	0	-1	-34	No	11	9.091	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	**MW-206**	**-3650**	**-42**	**-34**	**Yes**	**11**	**0**	**n/a**	**n/a**	**0.01**	**NP**

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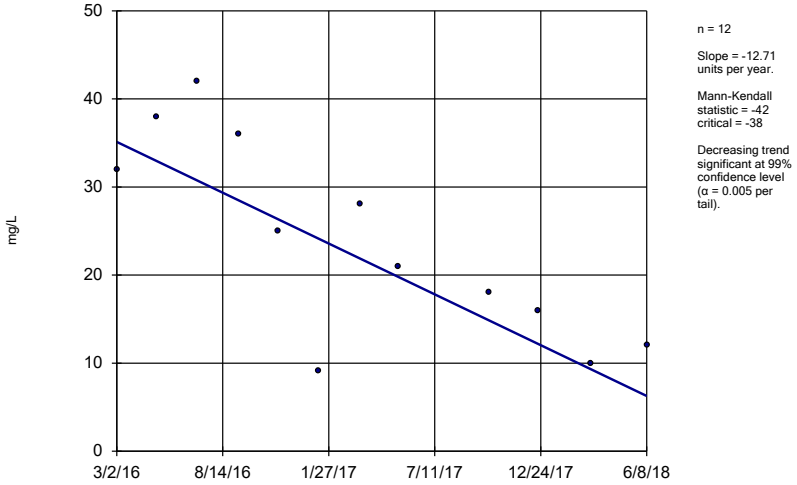
Boron

MW-200



n = 12

Slope = -12.71 units per year.

Mann-Kendall statistic = -42
critical = -38

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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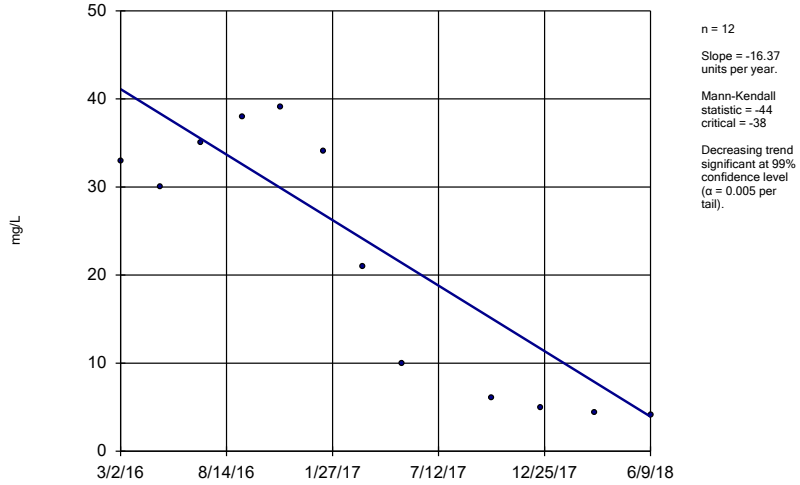
Boron

MW-201



n = 12

Slope = -16.37 units per year.

Mann-Kendall statistic = -44
critical = -38

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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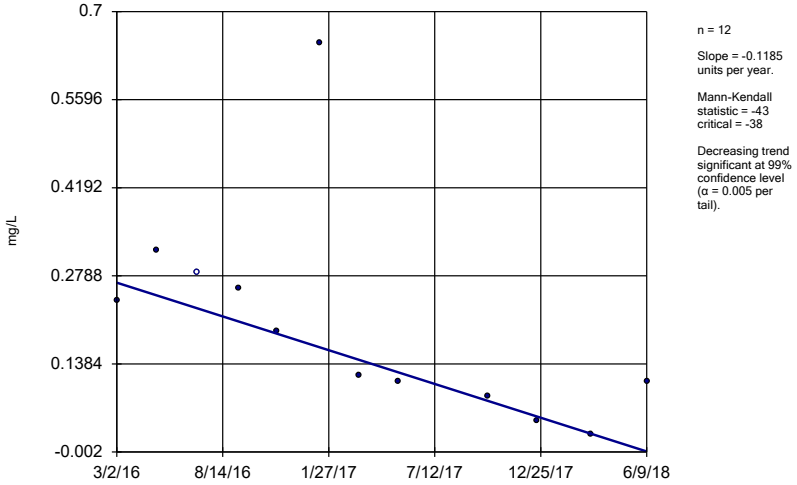
Hollow symbols indicate censored values.

Boron

MW-202



n = 12

Slope = -0.1185 units per year.

Mann-Kendall statistic = -43
critical = -38

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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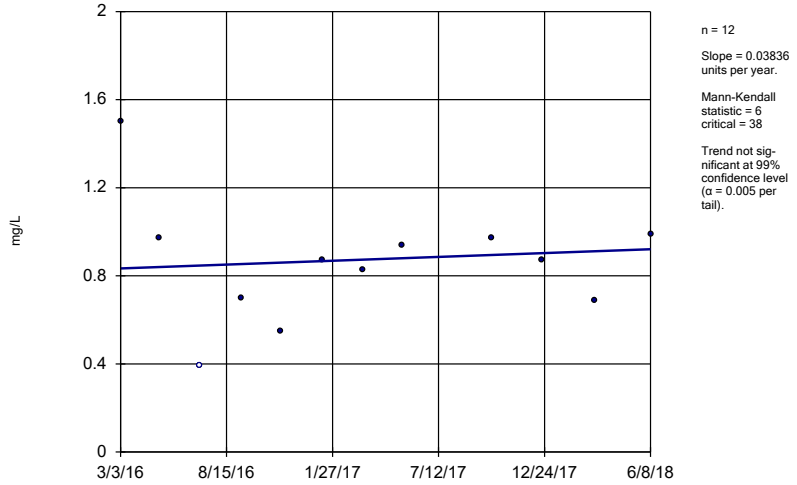
Hollow symbols indicate censored values.

Boron

MW-203



n = 12

Slope = 0.03836 units per year.

Mann-Kendall statistic = 6
critical = 38

Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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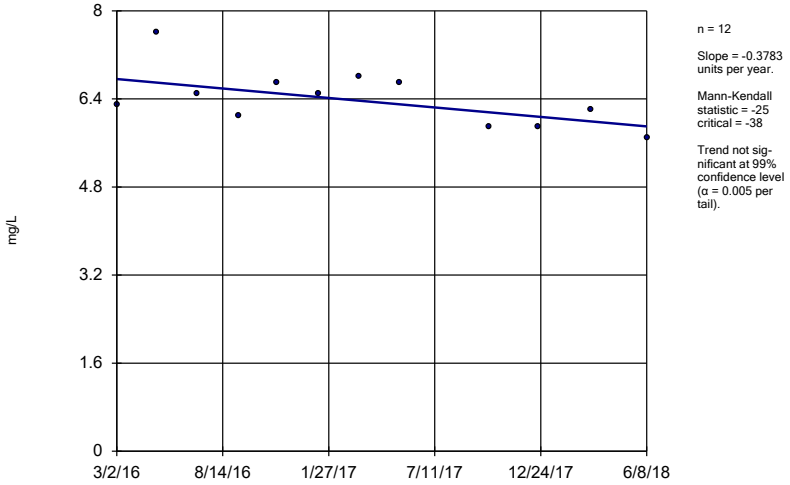
Boron

MW-204



n = 12

Slope = -0.3783 units per year.

Mann-Kendall statistic = -25
critical = -38

Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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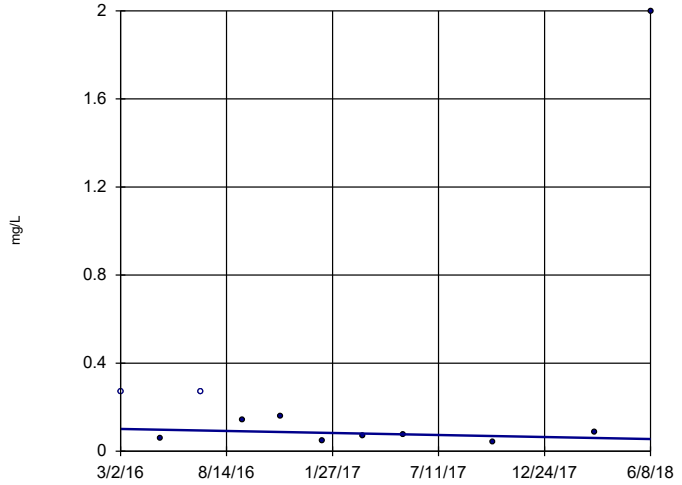
Hollow symbols indicate censored values.

Boron

MW-205



n = 11

Slope = -0.02012 units per year.

Mann-Kendall statistic = -6
critical = -34

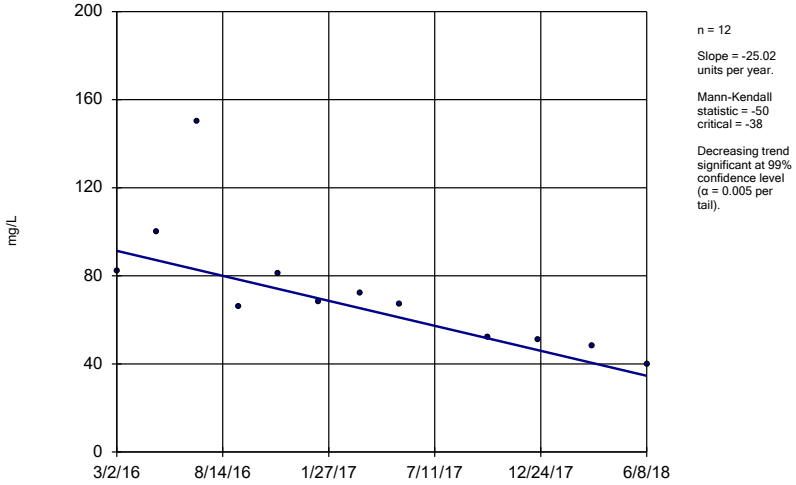
Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Boron

MW-206



n = 12

Slope = -25.02 units per year.

Mann-Kendall statistic = -50
critical = -38

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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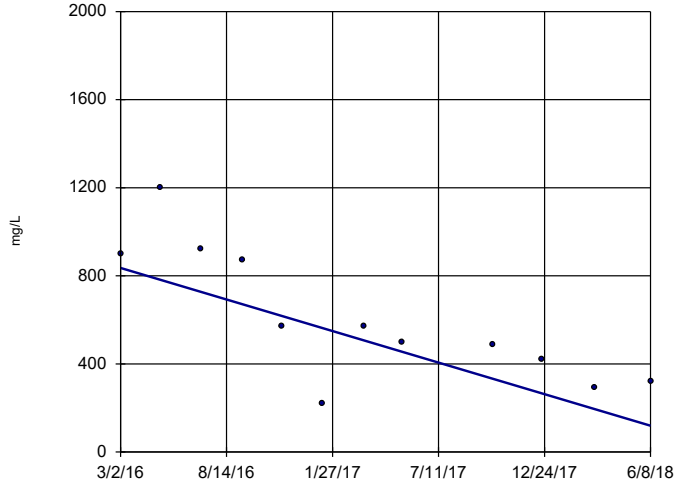
Calcium

MW-200



n = 12

Slope = -315.8 units per year.

Mann-Kendall statistic = -47
critical = -38

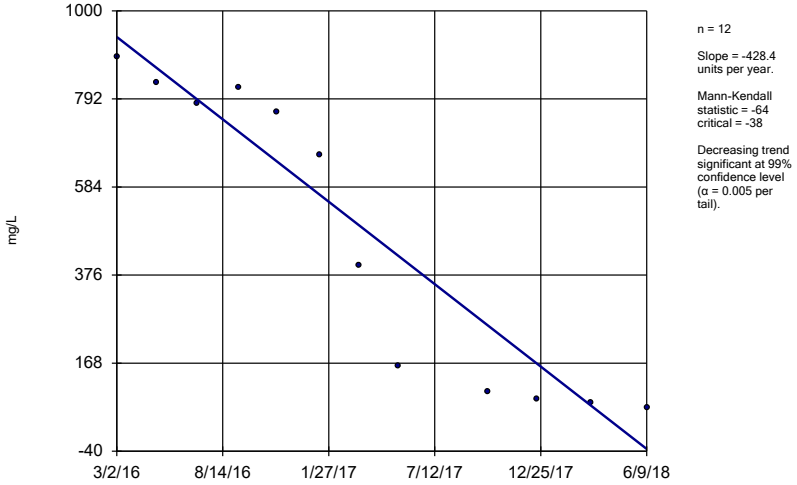
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Calcium

MW-201



n = 12

Slope = -428.4 units per year.

Mann-Kendall statistic = -64 critical = -38

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

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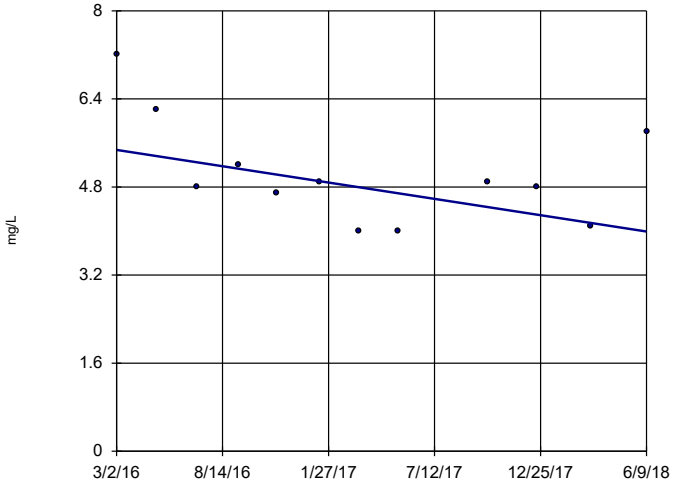
Calcium

MW-202



n = 12

Slope = -0.6525 units per year.

Mann-Kendall statistic = -21 critical = -38

Trend not significant at 99% confidence level (α = 0.005 per tail).

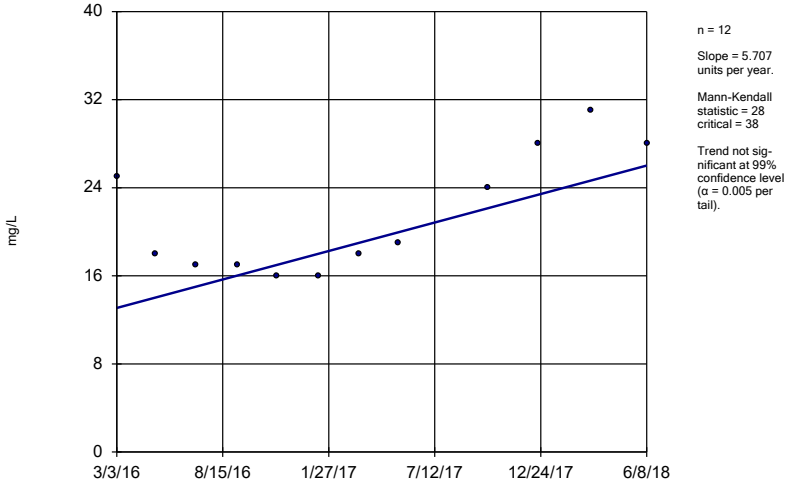
Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Calcium

MW-203



n = 12

Slope = 5.707 units per year.

Mann-Kendall statistic = 28 critical = 38

Trend not significant at 99% confidence level (α = 0.005 per tail).

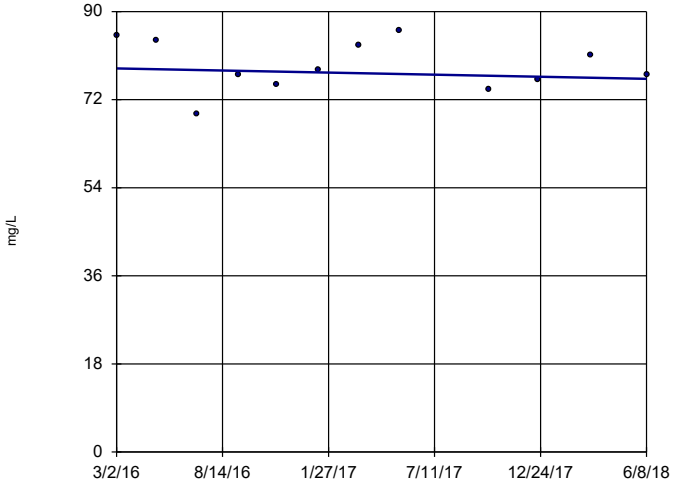
Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Calcium

MW-204



n = 12

Slope = -0.943 units per year.

Mann-Kendall statistic = -5 critical = -38

Trend not significant at 99% confidence level (α = 0.005 per tail).

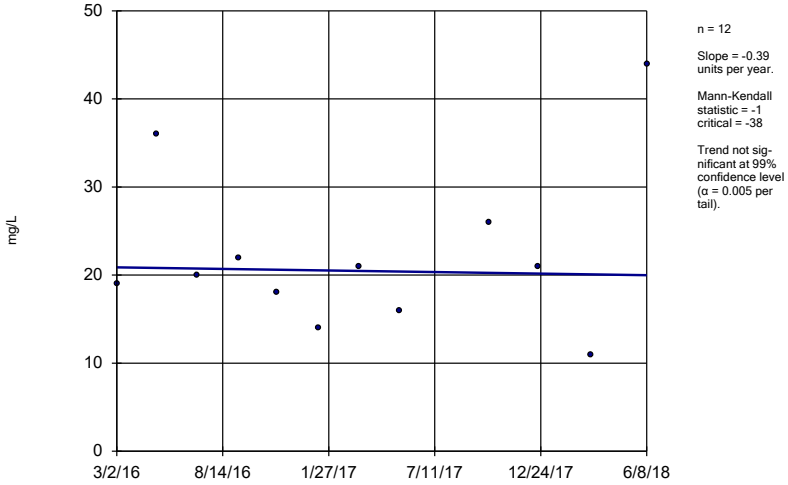
Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Calcium

MW-205



n = 12

Slope = -0.39 units per year.

Mann-Kendall statistic = -1
critical = -38

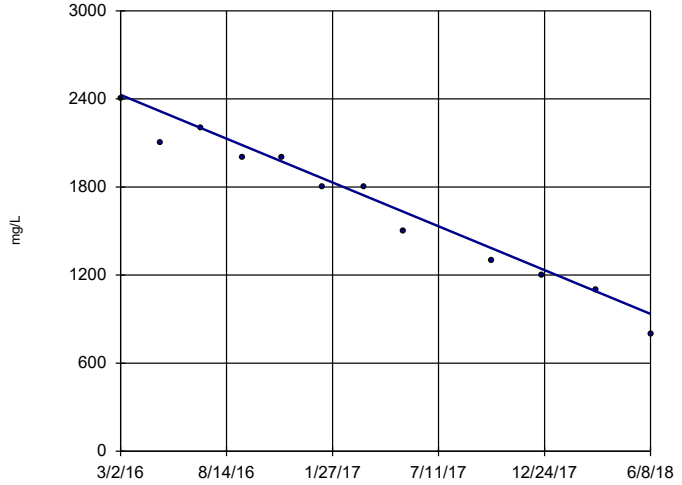
Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Calcium

MW-206



n = 12

Slope = -657.7 units per year.

Mann-Kendall statistic = -62
critical = -38

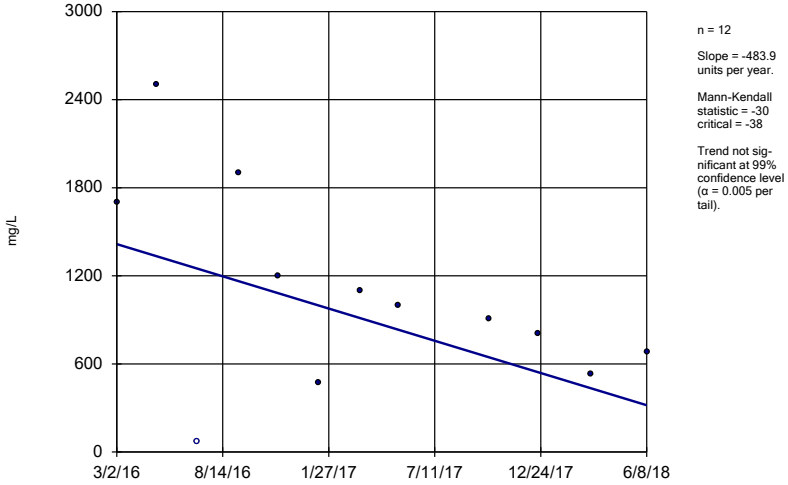
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG
Hollow symbols indicate censored values.

Chloride

MW-200



n = 12

Slope = -483.9 units per year.

Mann-Kendall statistic = -30
critical = -38

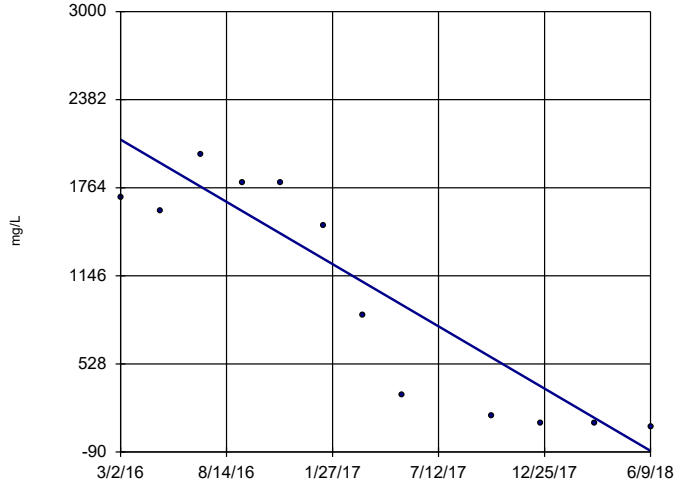
Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Chloride

MW-201



n = 12

Slope = -961.5 units per year.

Mann-Kendall statistic = -52
critical = -38

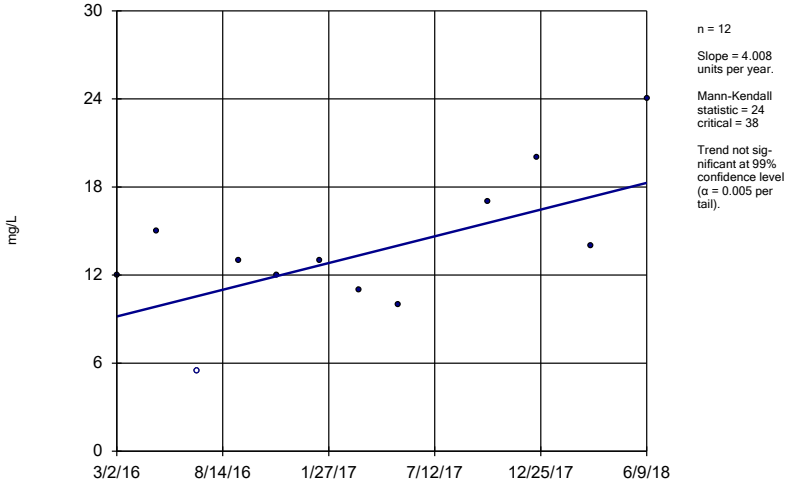
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG
Hollow symbols indicate censored values.

Chloride

MW-202



n = 12

Slope = 4.008 units per year.

Mann-Kendall statistic = 24 critical = 38

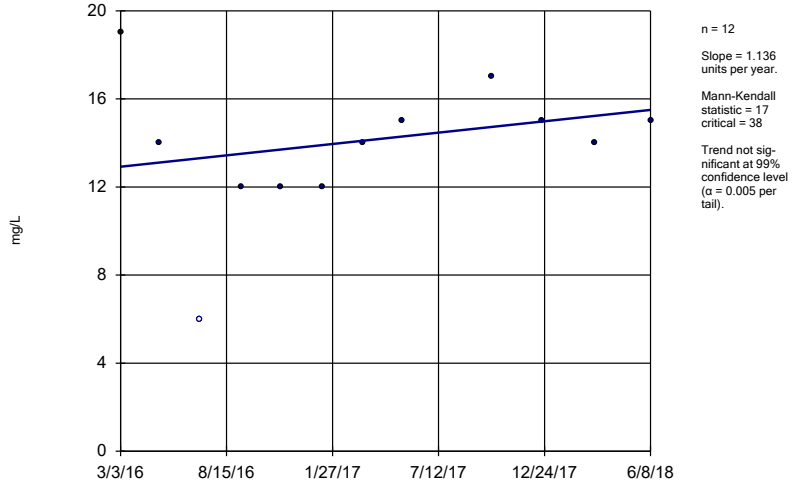
Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG
Hollow symbols indicate censored values.

Chloride

MW-203



n = 12

Slope = 1.136 units per year.

Mann-Kendall statistic = 17 critical = 38

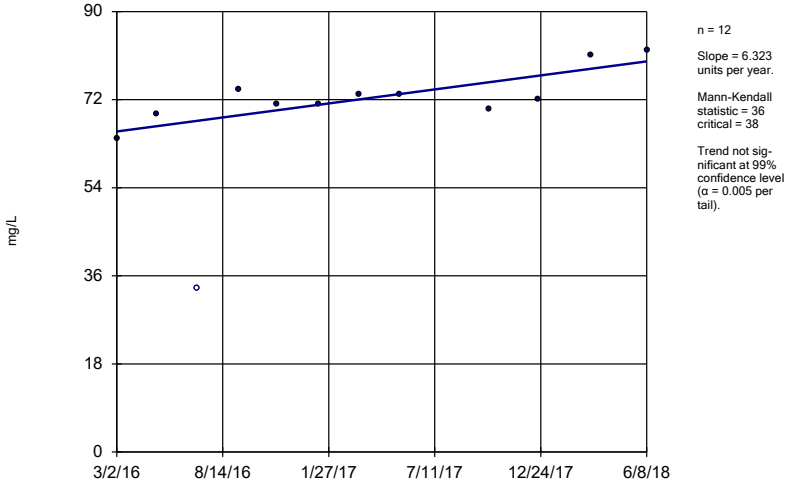
Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG
Hollow symbols indicate censored values.

Chloride

MW-204



n = 12

Slope = 6.323 units per year.

Mann-Kendall statistic = 36 critical = 38

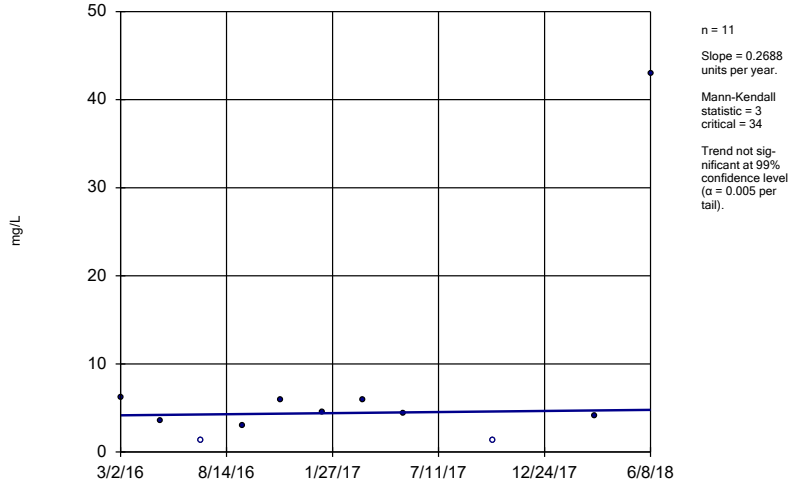
Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG
Hollow symbols indicate censored values.

Chloride

MW-205



n = 11

Slope = 0.2688 units per year.

Mann-Kendall statistic = 3 critical = 34

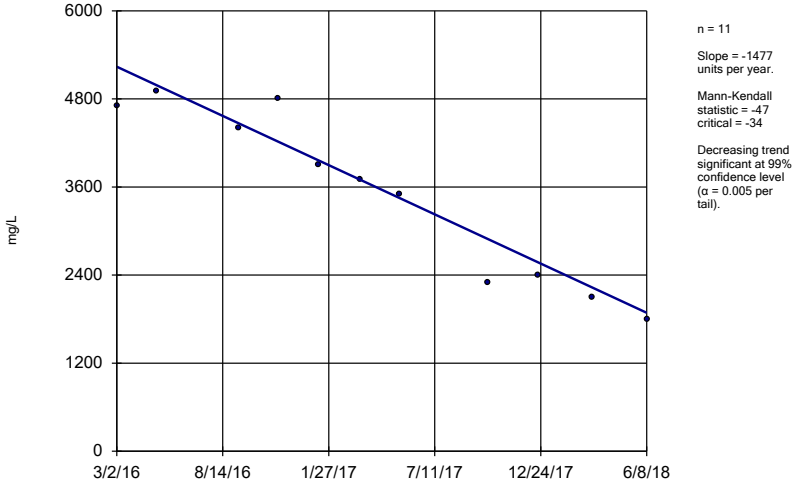
Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Chloride

MW-206



n = 11

Slope = -1477 units per year.

Mann-Kendall statistic = -47 critical = -34

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series

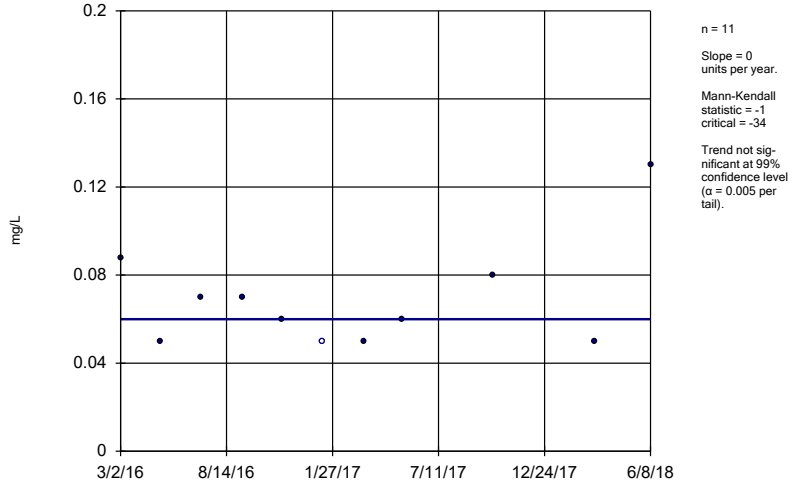
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Hollow symbols indicate censored values.

Fluoride

MW-200



n = 11

Slope = 0 units per year.

Mann-Kendall statistic = -1 critical = -34

Trend not significant at 99% confidence level (α = 0.005 per tail).

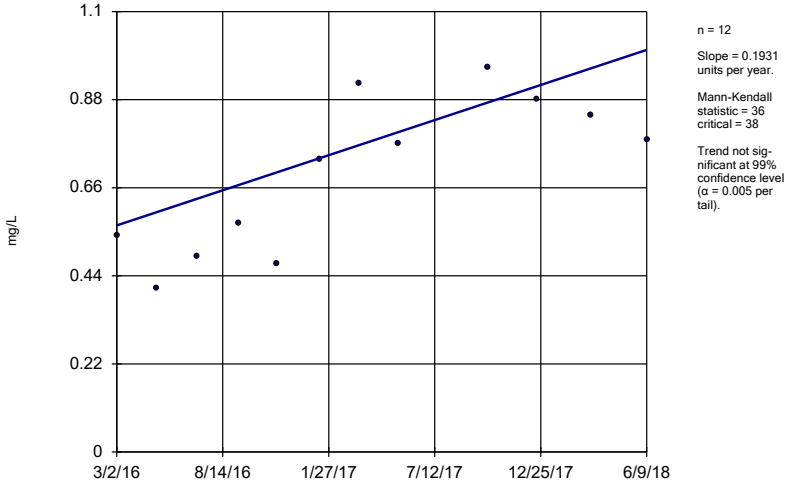
Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Fluoride

MW-201



n = 12

Slope = 0.1931 units per year.

Mann-Kendall statistic = 36 critical = 38

Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series

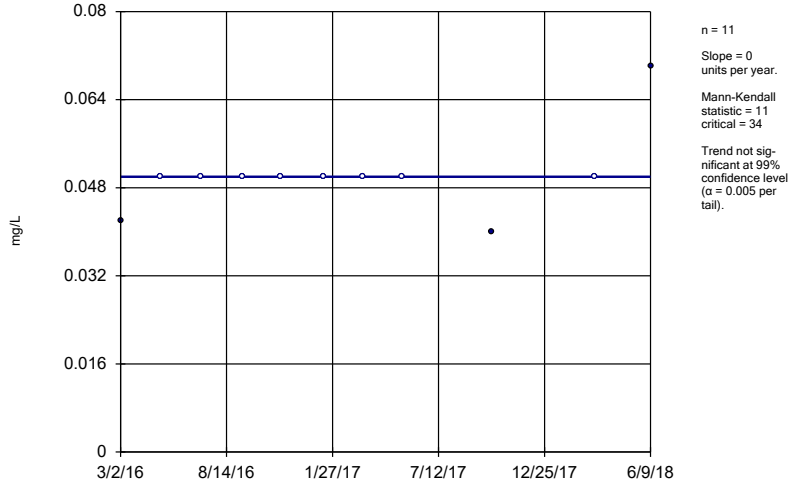
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Hollow symbols indicate censored values.

Fluoride

MW-202



n = 11

Slope = 0 units per year.

Mann-Kendall statistic = 11 critical = 34

Trend not significant at 99% confidence level (α = 0.005 per tail).

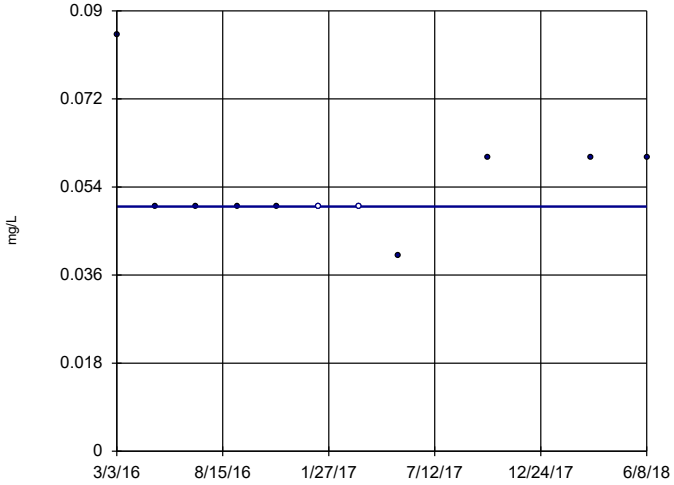
Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG
Hollow symbols indicate censored values.

Fluoride

MW-203



n = 11

Slope = 1.1e-9 units per year.

Mann-Kendall statistic = 5 critical = 34

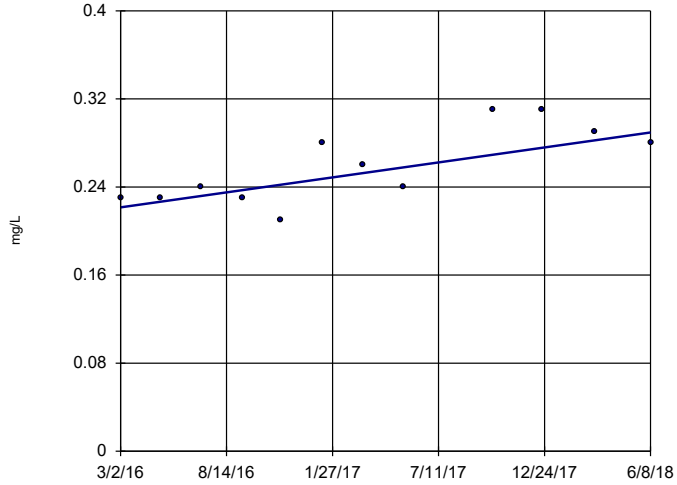
Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Fluoride

MW-204



n = 12

Slope = 0.02994 units per year.

Mann-Kendall statistic = 34 critical = 38

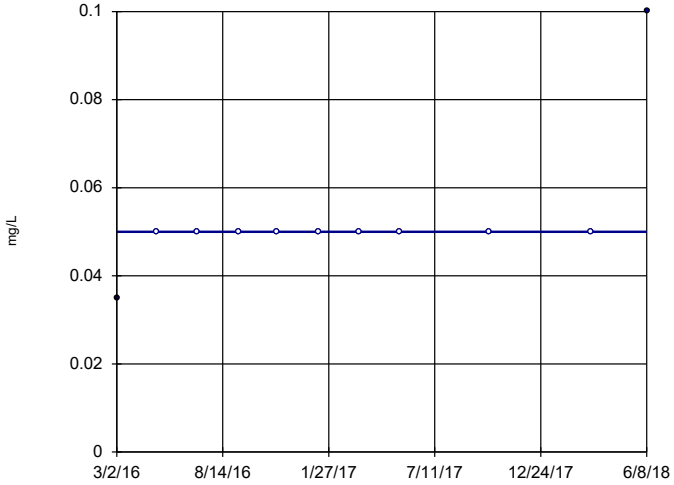
Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG
Hollow symbols indicate censored values.

Fluoride

MW-205



n = 11

Slope = 0 units per year.

Mann-Kendall statistic = 19 critical = 34

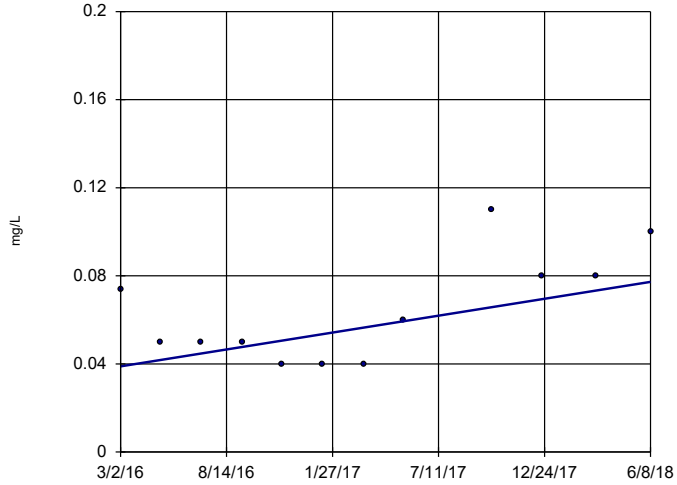
Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Fluoride

MW-206



n = 12

Slope = 0.01693 units per year.

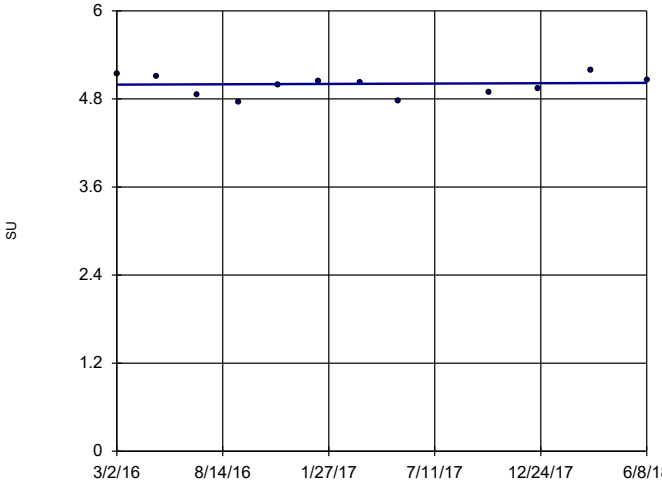
Mann-Kendall statistic = 21 critical = 38

Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

pH

MW-200



n = 12

Slope = 0.01086 units per year.

Mann-Kendall statistic = 2 critical = 38

Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

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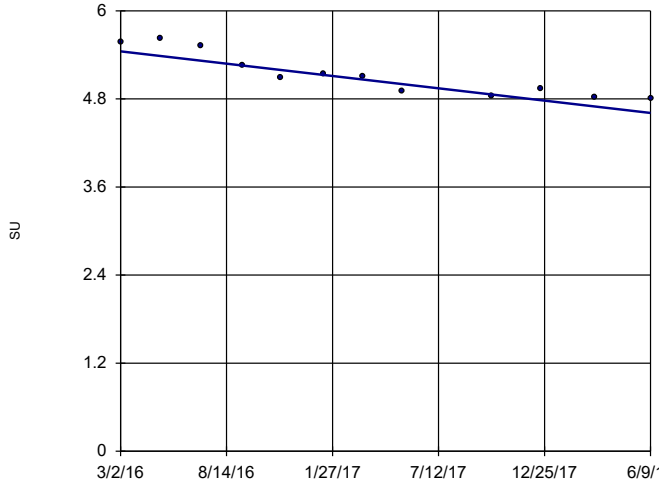
pH

MW-201



n = 12

Slope = -0.3688 units per year.

Mann-Kendall statistic = -56 critical = -38

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

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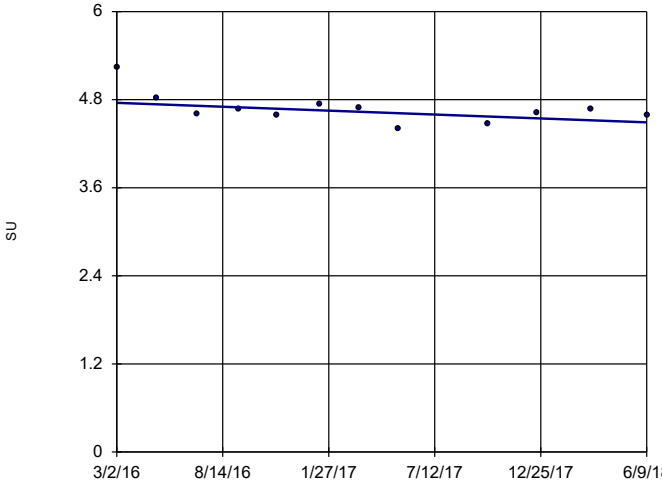
pH

MW-202



n = 12

Slope = -0.1165 units per year.

Mann-Kendall statistic = -27 critical = -38

Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

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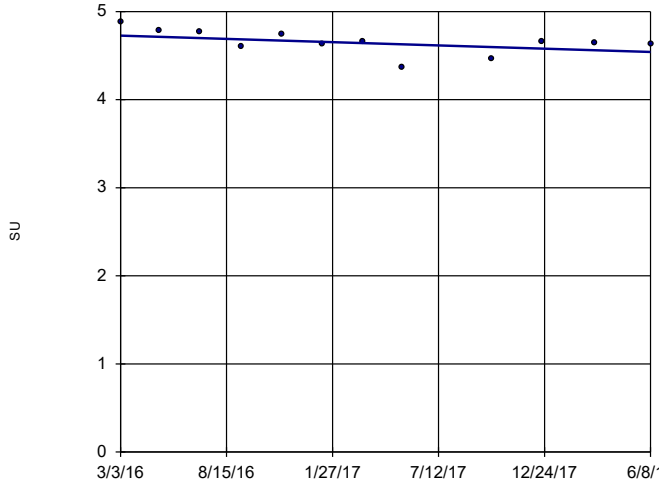
pH

MW-203



n = 12

Slope = -0.08162 units per year.

Mann-Kendall statistic = -32 critical = -38

Trend not significant at 99% confidence level (α = 0.005 per tail).

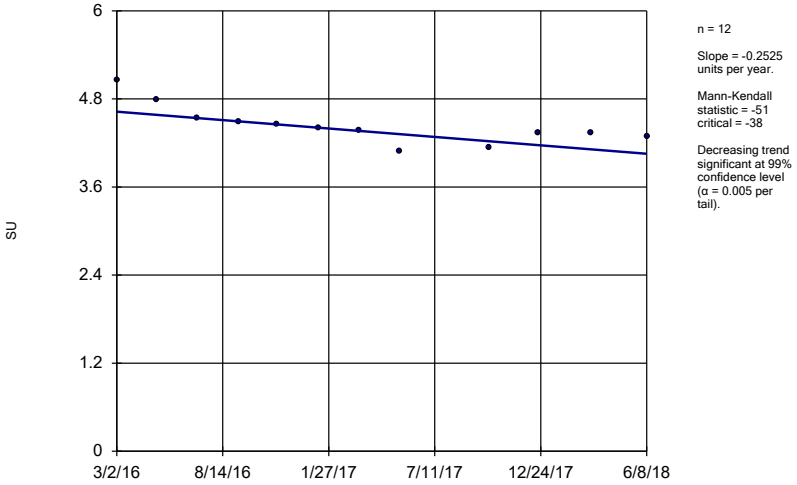
Sen's Slope Estimator Analysis Run 9/20/2018 10:25 AM View: Trends - 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

pH

MW-204



n = 12

Slope = -0.2525 units per year.

Mann-Kendall statistic = -51 critical = -38

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:26 AM View: Trends - 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

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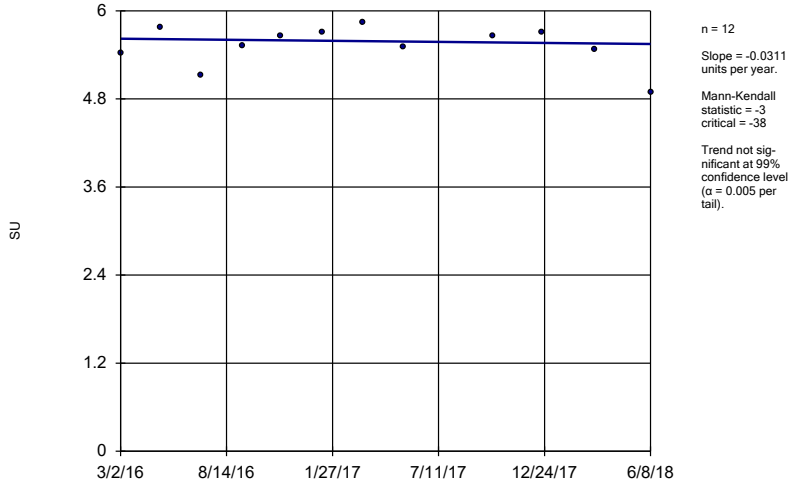
pH

MW-205



n = 12

Slope = -0.0311 units per year.

Mann-Kendall statistic = -3 critical = -38

Trend not significant at 99% confidence level (α = 0.005 per tail).

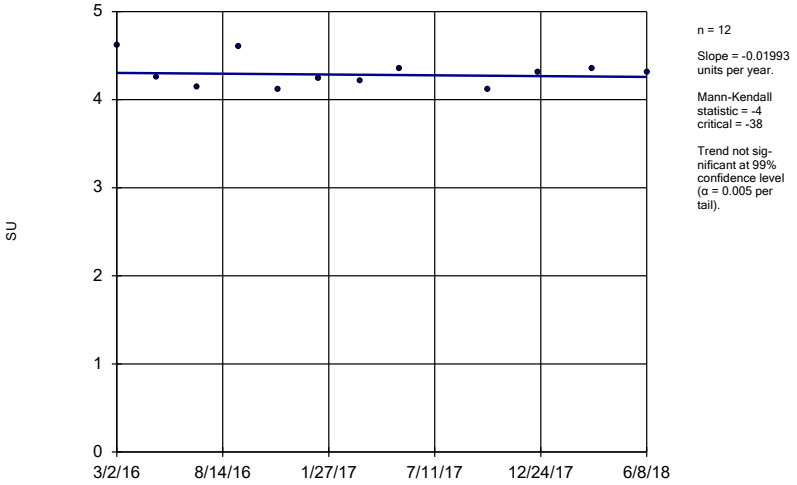
Sen's Slope Estimator Analysis Run 9/20/2018 10:26 AM View: Trends - 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

pH

MW-206



n = 12

Slope = -0.01993 units per year.

Mann-Kendall statistic = -4 critical = -38

Trend not significant at 99% confidence level (α = 0.005 per tail).

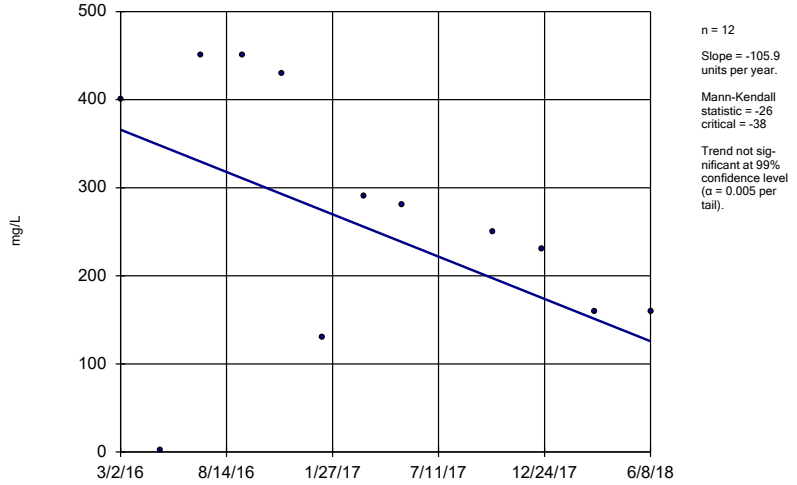
Sen's Slope Estimator Analysis Run 9/20/2018 10:26 AM View: Trends - 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Sulfate

MW-200



n = 12

Slope = -105.9 units per year.

Mann-Kendall statistic = -26 critical = -38

Trend not significant at 99% confidence level (α = 0.005 per tail).

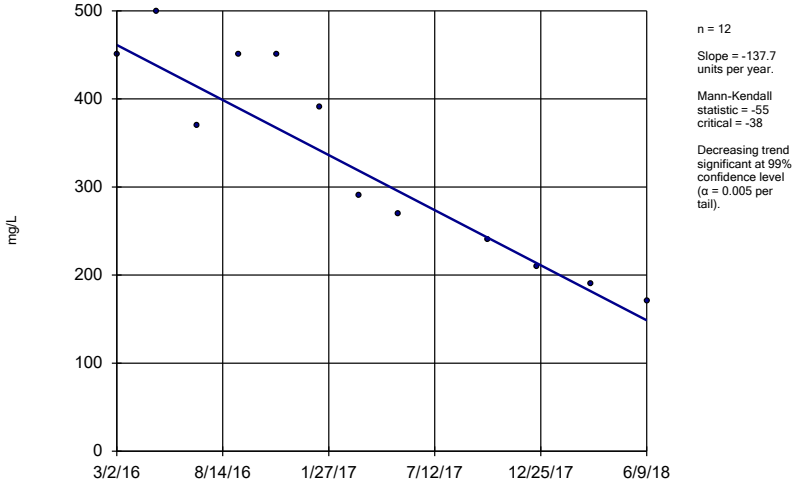
Sen's Slope Estimator Analysis Run 9/20/2018 10:26 AM View: Trends - 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Sulfate

MW-201



n = 12

Slope = -137.7 units per year.

Mann-Kendall statistic = -55 critical = -38

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:26 AM View: Trends - 200 Series

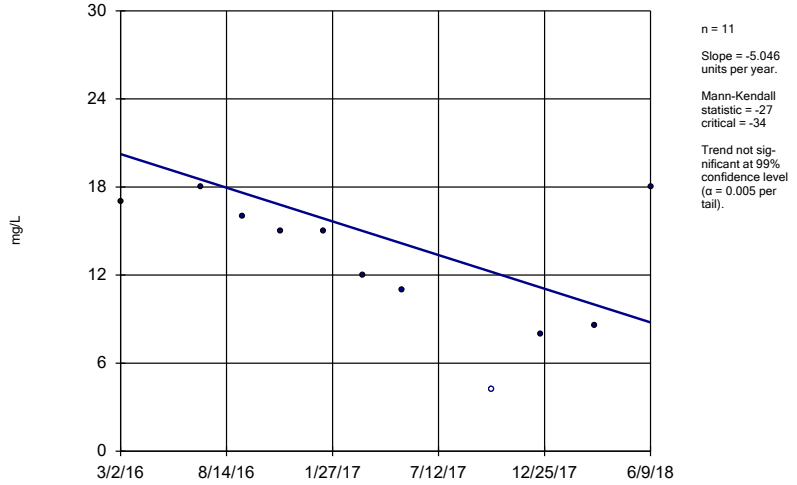
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Hollow symbols indicate censored values.

Sulfate

MW-202



n = 11

Slope = -5.046 units per year.

Mann-Kendall statistic = -27 critical = -34

Trend not significant at 99% confidence level (α = 0.005 per tail).

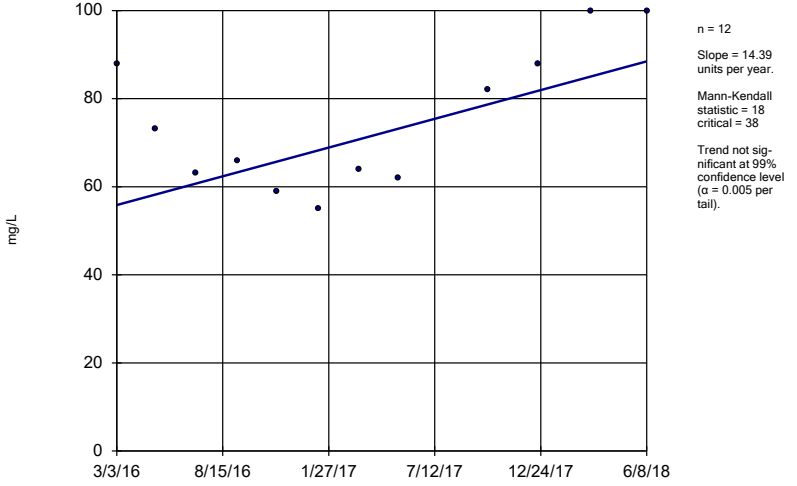
Sen's Slope Estimator Analysis Run 9/20/2018 10:26 AM View: Trends - 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Sulfate

MW-203



n = 12

Slope = 14.39 units per year.

Mann-Kendall statistic = 18 critical = 38

Trend not significant at 99% confidence level (α = 0.005 per tail).

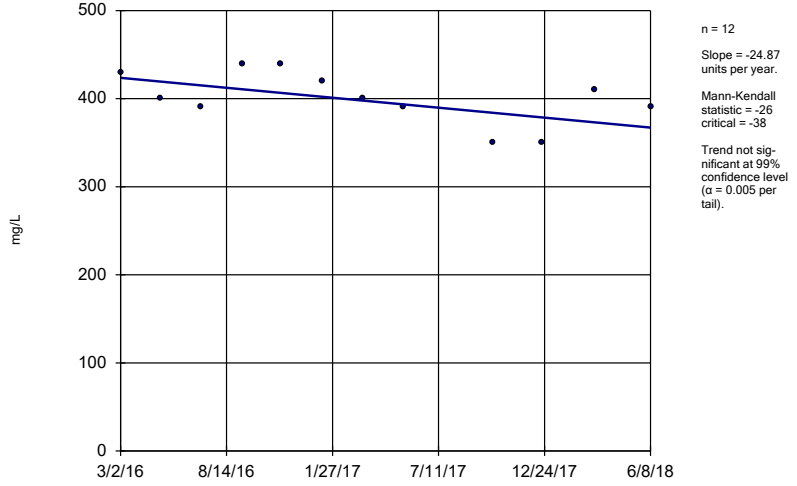
Sen's Slope Estimator Analysis Run 9/20/2018 10:26 AM View: Trends - 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Sulfate

MW-204



n = 12

Slope = -24.87 units per year.

Mann-Kendall statistic = -26 critical = -38

Trend not significant at 99% confidence level (α = 0.005 per tail).

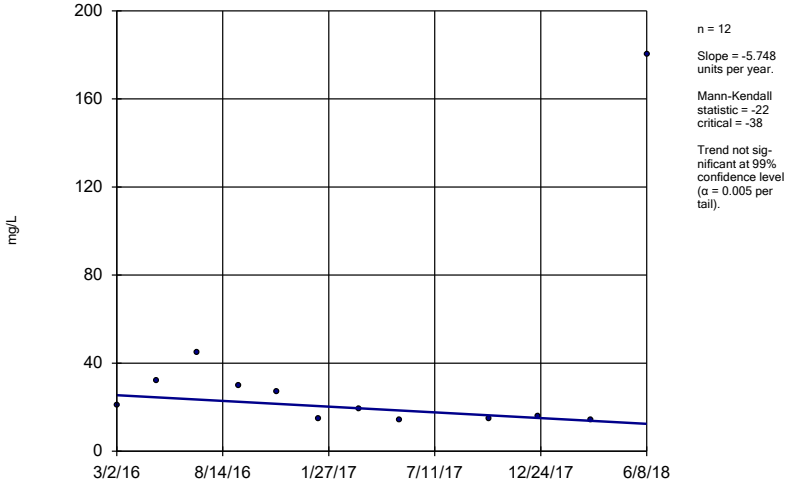
Sen's Slope Estimator Analysis Run 9/20/2018 10:26 AM View: Trends - 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Sulfate

MW-205



n = 12

Slope = -5.748 units per year.

Mann-Kendall statistic = -22
critical = -38

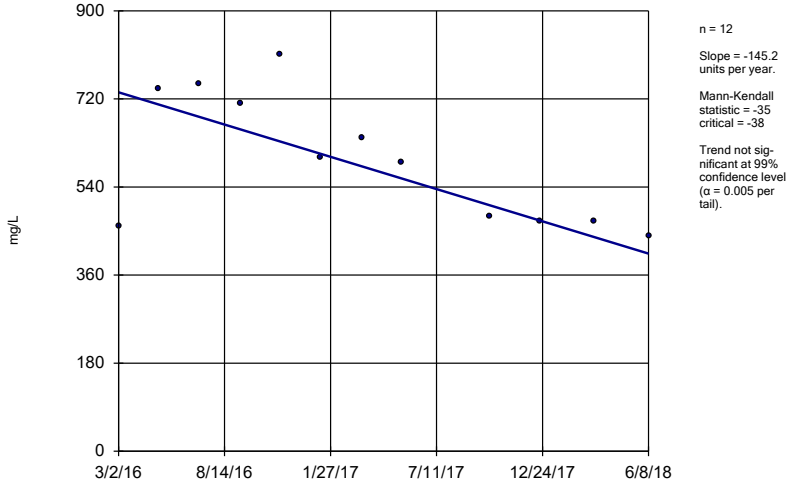
Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:26 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Sulfate

MW-206



n = 12

Slope = -145.2 units per year.

Mann-Kendall statistic = -35
critical = -38

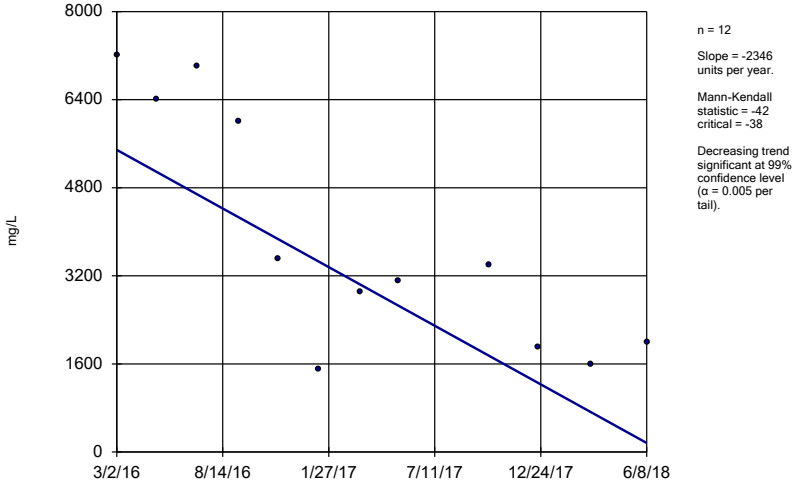
Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:26 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

Sanitas™ v.9.6.07 Sanitas software licensed to Southern Company. UG

Total Dissolved Solids

MW-200



n = 12

Slope = -2346 units per year.

Mann-Kendall statistic = -42
critical = -38

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:26 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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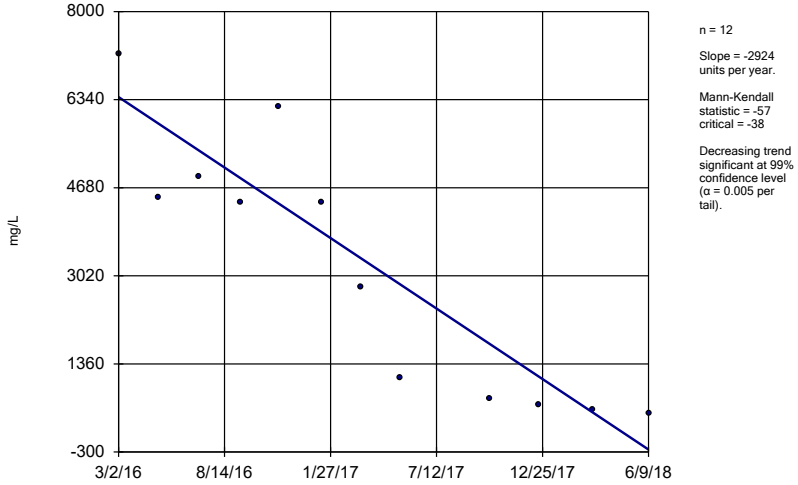
Total Dissolved Solids

MW-201



n = 12

Slope = -2924 units per year.

Mann-Kendall statistic = -57
critical = -38

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:26 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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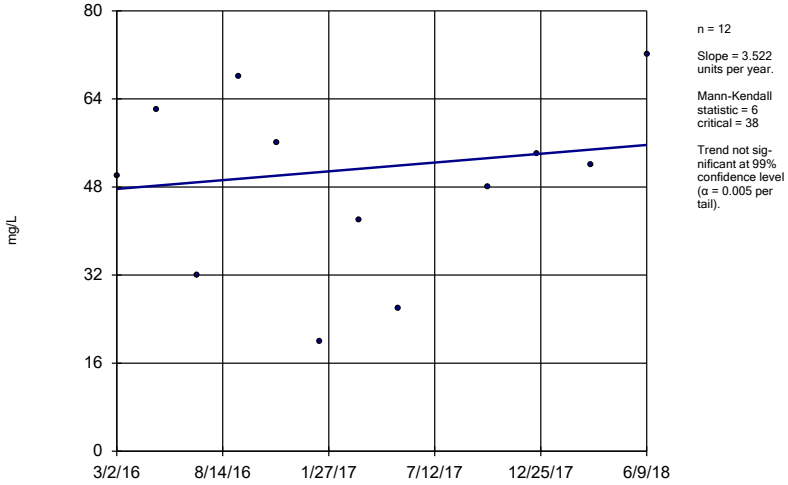
Total Dissolved Solids

MW-202



n = 12

Slope = 3.522 units per year.

Mann-Kendall statistic = 6
critical = 38

Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:26 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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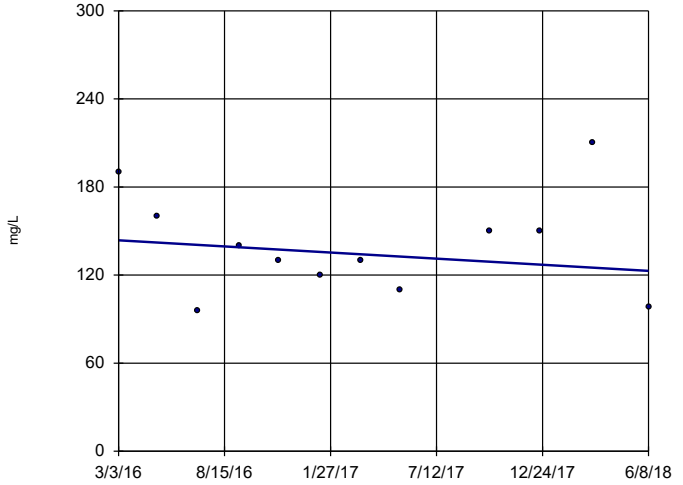
Total Dissolved Solids

MW-203



n = 12

Slope = -9.175 units per year.

Mann-Kendall statistic = -6
critical = -38

Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:26 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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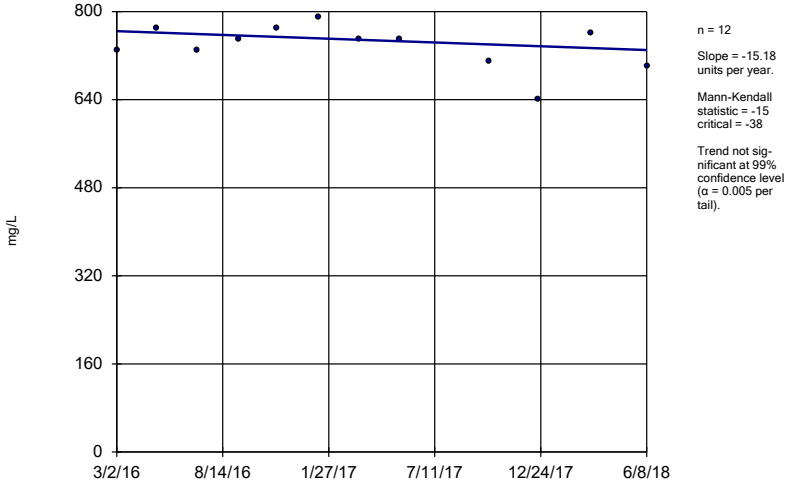
Total Dissolved Solids

MW-204



n = 12

Slope = -15.18 units per year.

Mann-Kendall statistic = -15
critical = -38

Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:26 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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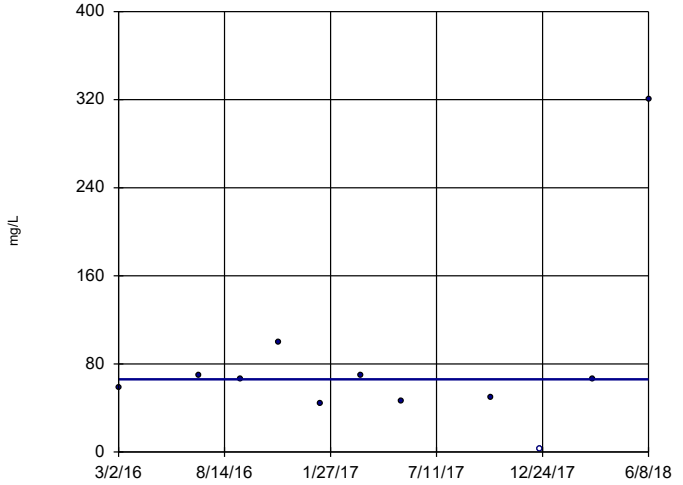
Hollow symbols indicate censored values.

Total Dissolved Solids

MW-205



n = 11

Slope = 0 units per year.

Mann-Kendall statistic = -1
critical = -34

Trend not significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:26 AM View: Trends - 200 Series
Plant Crist Client: Southern Company Data: Plant Crist CCR

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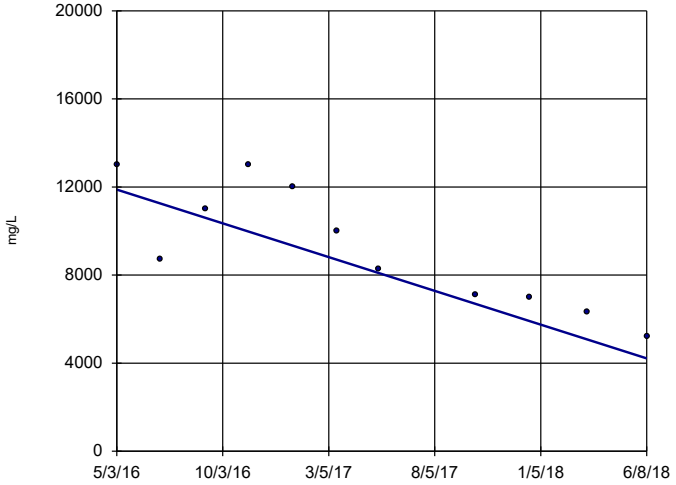
Total Dissolved Solids

MW-206



n = 11

Slope = -3650 units per year.

Mann-Kendall statistic = -42 critical = -34

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Sen's Slope Estimator Analysis Run 9/20/2018 10:26 AM View: Trends - 200 Series

Plant Crist Client: Southern Company Data: Plant Crist CCR