

Prepared for

Gulf Power Company
One Energy Place
Pensacola, Florida 32520

**2018 ANNUAL GROUNDWATER
MONITORING REPORT
GULF POWER COMPANY, PLANT SMITH
ASH POND**

Prepared by

Geosyntec 
consultants

engineers | scientists | innovators

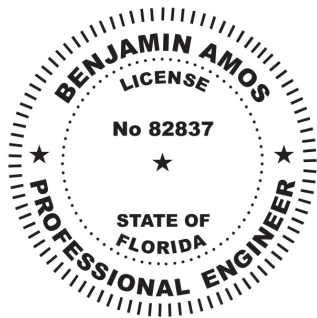
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CERTIFICATION STATEMENT

This 2018 Annual Groundwater Monitoring Report, Gulf Power Company – Plant Smith – Ash Pond has been prepared in accordance with 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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Date

1/31/19

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 Report* documents the CCR-groundwater monitoring activities completed in 2018 at Gulf Power Company's (Gulf Power's) Plant Lansing Smith (Site) Ash Pond. The 165-acre Ash Pond ceased receipt of CCR waste in March 2015 and Gulf Power is preparing to close the CCR unit in accordance with a State-approved closure plan.

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

- background wells: MW-02, MW-03, and MW-12;
- downgradient wells: MW-06, MW-07, MW-08, MW-09, MW-10, MW-11, MW-13, and MW-14; and
- piezometers: MW-01, MW-04, and MW-05.

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 Ash Pond in March 2018. During the assessment monitoring scan event, samples from monitoring wells in the certified 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 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 Ash Pond:

- radium 226 and 228 combined (total radium) in MW-06, MW-07, MW-08, MW-09, MW-10, MW-11, MW-13 and MW-14;
- arsenic in MW-11; and
- lithium in MW-13.

In accordance with the CCR Rule, Gulf Power conducted an alternate source demonstration (ASD) which documents that the total radium SSLs are from a source other than the Ash Pond. In addition, Gulf Power initiated an assessment of corrective measures for the Ash Pond in January 2019 for arsenic and lithium.

The Ash Pond 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 May and November 2019.

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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 Report* for Gulf Power's Plant Lansing Smith (Site) coal combustion residuals (CCR) unit, the Ash Pond.

The Site is located at 4300 Highway 2300, Bay County, Florida, and is situated on approximately 1,560 acres. A Site location map is provided in **Figure 1**. Site topography is relatively flat. The Site is bordered by undeveloped land to the north and east, Alligator Bayou to the west, and North Bay to the south. The Ash Pond is located on the southern portion of the Site near North Bay. Semi-annual monitoring and reporting for the Ash Pond 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 Site. 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 Ash Pond in March 2018. The assessment monitoring scan event was conducted in March 2018, followed by semi-annual assessment monitoring events in June and November 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

According to Pratt (1996), the principal aquifers beneath Bay County include the surficial aquifer system, the intermediate aquifer system, and the Floridan Aquifer System. The surficial aquifer system is the shallowest and is an unconfined system formed by recent terrace sands, the Citronelle Formation, and the upper portions of the

Intracoastal Formation in hydraulic connection with these sediments. The general direction of flow is toward the south-southwest.

The intermediate aquifer system in Bay County is semi-confined and consists of the low permeability sediments of the Jackson Bluff and the Intracoastal Formations. Permeable portions of the Intracoastal Formation provide sufficient quantities of water for potable use. Overall, the intermediate aquifer system acts as a confining unit for the underlying Floridan Aquifer System.

CCR unit monitoring wells are screened in the uppermost, water-bearing zone in the undifferentiated quaternary alluvium of the surficial aquifer system. This surficial aquifer system at the Site is considered the uppermost aquifer for groundwater monitoring purposes. Site-specific lithology in the uppermost aquifer consists primarily of sand, silt, and clay mixtures. Groundwater in the surficial aquifer system at the Site is encountered in a laterally-extensive water-bearing unit of predominantly fine sand from approximately 5 to -20 feet (ft) elevation relative to the North American Vertical Datum of 1988 (NAVD88). CCR monitoring wells and piezometers were screened in the uppermost aquifer between approximately 2 and -21 ft NAVD88.

1.2 Ash Pond CCR Unit and Groundwater Monitoring System Descriptions

The Ash Pond occupies approximately 165 acres. Fly ash, bottom ash, and other low-volume waste were sluiced to the Ash Pond until March 2015. The Ash Pond has ceased receipt of CCR waste but continues to receive non-CCR wastewater. Gulf Power is preparing to close the Ash Pond in accordance with a State-approved closure plan.

Pursuant to the CCR Rule, Gulf Power installed a CCR-groundwater monitoring system for the Ash Pond 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 Ash Pond. Monitoring wells in the CCR-groundwater monitoring network are as follows:

- background wells: MW-02, MW-03, and MW-12;
- downgradient wells: MW-06, MW-07, MW-08, MW-09, MW-10, MW-11, MW-13, and MW-14; and
- piezometers: MW-01, MW-04, and MW-05.

Monitoring wells and piezometer details, including installation date, coordinates, elevations, screen interval, and designation, are summarized in **Table 1**. **Figure 2** depicts the CCR-groundwater monitoring network for the Ash Pond.

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 Ash Pond. Samples were collected from monitoring wells in the CCR-groundwater monitoring system shown on **Figure 2**. A summary of 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

In accordance with the CCR Rule, CCR-monitoring wells and piezometers sampled and/or gauged in 2018 were installed in 2015 (SC, 2018).

2.2 Assessment Monitoring Scan

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

2.3 Assessment Monitoring Events

The first semi-annual assessment monitoring event for the Ash Pond was performed in June 2018. The second semi-annual assessment monitoring event for the Ash Pond was conducted in November 2018. Groundwater samples were collected from each CCR-groundwater 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 Ash Pond.

3.1 Groundwater Elevation Measurement

Prior to each 2018 CCR-sampling event, groundwater elevations were recorded from the CCR-monitoring well and piezometer network at the Site. Groundwater elevations recorded during the assessment monitoring scan and the 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 November 2018, respectively. As shown on the potentiometric figures, regional groundwater generally flows south across the Site and in the vicinity of the Ash Pond, radially away from the Ash Pond. 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 Florida Department of Environmental Protection (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 Ash Pond 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 analyses 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 Ash Pond, 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.

Ash Pond 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 RPDs, field and equipment blanks, and reporting limits. Where appropriate, validation qualifiers and flags are applied to the data using USEPA procedures as guidance (USEPA, 2017). 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 Ash Pond.

4.1 Statistical Methods

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 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 Ash Pond.

Statistical analysis of Ash Pond 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 Ash Pond 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 is identified only when the entire confidence interval is above the applicable 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 Methods

Statistical analysis of Appendix III constituents was performed to evaluate if concentrations had returned to background values. Statistical tests used to evaluate the groundwater monitoring data at the Ash Pond consist 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. Intrawell prediction limits combined with a 1-of-2 resample strategy were used to evaluate pH at each well. Intrawell prediction limits use historical data from within a given well to compare compliance data within the same well, and the most recent sample from each downgradient well is compared to its respective prediction limit. 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 Ash Pond was analyzed in accordance with the SAP. Appendix III statistical analysis was performed to evaluate if constituents in the Ash Pond groundwater have returned to background levels. Appendix IV constituents were evaluated to assess if Ash Pond 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 Ash Pond:

- total radium: MW-06, MW-07, MW-08, MW-09, MW-10, MW-11, MW-13 and MW-14;
- arsenic: MW-11; and
- lithium: MW-13.

In accordance with the CCR Rule, a notification identifying the SSLs for total radium, arsenic, and lithium was prepared for the Ash Pond 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 Ash Pond. A summary of Sanitas[™] output of Appendix III statistical analysis is presented in **Appendix B**.

5.0 ALTERNATE SOURCE DEMONSTRATION

In accordance with the CCR Rule, Gulf Power prepared an alternate source demonstration (ASD) for total radium. The complete ASD report is provided in **Appendix C**. The key conclusions of the ASD, which were based on historical findings accepted by FDEP (FDEP, 1997a & b), are briefly summarized below:

- parent radionuclides, such as uranium and thorium, that decay into total radium (i.e., radium 226 and 228 combined) are naturally-occurring constituents in native sediments at the Site;
- interactions between saline groundwater and native sediments enriched in uranium and thorium (parent radionuclides to total radium) mobilizes total radium into groundwater; and
- results of extraction tests conducted on ash from the CCR unit demonstrated that the Ash Pond was not the source of the total radium SSLs in groundwater at the Site's CCR monitoring wells.

6.0 CONCLUSIONS & FUTURE ACTIONS

In accordance with the CCR Rule, Gulf Power implemented assessment monitoring in March 2018 for the Ash Pond. SSLs of select Appendix IV constituents (i.e., total radium, arsenic, lithium) relative to GWPSs were identified at the Ash Pond during the first semi-annual assessment monitoring event in 2018. Statistical analysis of Appendix III constituents indicated that concentrations downgradient of the Ash Pond had not returned to background levels. In accordance with the CCR Rule, Gulf Power prepared an ASD for the total radium SSLs which documents that another source caused the SSLs. In addition, Gulf Power initiated an assessment of corrective measures in January 2019 for arsenic and lithium SSLs in groundwater at the Ash Pond.

The Ash Pond will remain in assessment monitoring 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 May and November 2019.

7.0 REFERENCES

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TABLES

TABLE 1: MONITORING WELL NETWORK SUMMARY
Plant Smith - Ash Pond, Gulf Power Company, Bay County, Florida

Well Name	Installation Date	Northing	Easting	Ground Elevation	Top of Casing Elevation	Top of Screen Elevation	Bottom of Screen Elevation	Designation
MW-01	11/11/2015	464368.78	1589789.76	11.09	10.75	1.15	-8.85	Piezometer
MW-02	11/10/2015	464419.66	1592286.78	10.26	13.29	-2.71	-12.71	Background
MW-03	11/10/2015	464322.49	1594277.21	10.98	14.06	-8.94	-18.94	Background
MW-04	11/7/2015	464027.17	1591388.6	12	15.05	2.25	-7.75	Piezometer
MW-05	11/4/2015	463987.97	1592784.03	11.18	14.13	-1.97	-11.97	Piezometer
MW-06	11/17/2015	463858.8	1591389.13	24.18	23.82	-5.38	-15.38	Downgradient
MW-07	11/3/2015	463856.65	1592774.97	21.72	21.42	-7.88	-17.88	Downgradient
MW-08	11/17/2015	461649.15	1590479.94	21.33	24.31	-8.39	-18.39	Downgradient
MW-09	11/17/2015	460663.62	1590695.95	12.49	15.37	-6.73	-16.73	Downgradient
MW-10	11/20/2015	461234.34	1592098.52	10.94	13.93	-8.67	-18.67	Downgradient
MW-11	11/21/2015	462157.18	1593298.86	13.42	16.51	-6.49	-16.49	Downgradient
MW-12	11/11/2015	462362	1589322.96	8.21	11.14	-10.56	-20.56	Background
MW-13	11/11/2015	462676.94	1590589.33	23.53	26.54	-6.36	-16.36	Downgradient
MW-14	11/10/2015	460892.89	1590173.47	22.11	24.95	-5.69	-15.69	Downgradient

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 Smith - Ash Pond, Gulf Power Company, Bay County, Florida

Well Name	2018 Assessment Monitoring Scan	2018 Assessment Monitoring Event 1	2018 Assessment Monitoring Event 2
MW-02	3/21/2018	6/6/2018	11/19/2018
MW-03	3/20/2018	6/6/2018	11/19/2018
MW-06	3/21/2018	6/8/2018	11/19/2018
MW-07	3/21/2018	6/8/2018	11/19/2018
MW-08	3/22/2018	6/7/2018	11/19/2018
MW-09	3/23/2018	6/7/2018	11/20/2018
MW-10	3/22/2018	6/7/2018	11/20/2018
MW-11	3/21/2018	6/7/2018	11/20/2018
MW-12	3/20/2018	6/6/2018	11/19/2018
MW-13	3/22/2018	6/7/2018	11/19/2018
MW-14	3/22/2018	6/7/2018	11/19/2018

Notes:

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

TABLE 4: SUMMARY OF 2018 GROUNDWATER ELEVATIONS
Plant Smith - Ash Pond, Gulf Power Company, Bay County, Florida

Monitoring Well	Northing	Easting	Top of Casing Elevation	Date	Depth to Water	Groundwater Elevation
MW-01	464368.78	1589789.76	10.75	3/20/2018	5.45	5.30
MW-02	464419.66	1592286.78	13.29	3/20/2018	5.20	8.09
MW-03	464322.49	1594277.21	14.06	3/20/2018	6.70	7.36
MW-04	464027.17	1591388.6	15.05	3/20/2018	7.31	7.74
MW-05	463987.97	1592784.03	14.13	3/20/2018	6.29	7.84
MW-06	463858.8	1591389.13	23.82	3/20/2018	12.94	10.88
MW-07	463856.65	1592774.97	21.42	3/20/2018	11.79	9.63
MW-08	461649.15	1590479.94	24.31	3/20/2018	17.37	6.94
MW-09	460663.62	1590695.95	15.37	3/20/2018	11.21	4.16
MW-10	461234.34	1592098.52	13.93	3/20/2018	6.84	7.09
MW-11	462157.18	1593298.86	16.51	3/20/2018	10.39	6.12
MW-12	462362	1589322.96	11.14	3/20/2018	9.41	1.73
MW-13	462676.94	1590589.33	26.54	3/20/2018	14.74	11.80
MW-14	460892.89	1590173.47	24.95	3/20/2018	22.38	2.57

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 Smith - Ash Pond, Gulf Power Company, Bay County, Florida

Monitoring Well	Northing	Easting	Top of Casing Elevation	Date	Depth to Water	Groundwater Elevation
MW-01	464368.78	1589789.76	10.75	6/6/2018	4.94	5.81
MW-02	464419.66	1592286.78	13.29	6/6/2018	4.01	9.28
MW-03	464322.49	1594277.21	14.06	6/6/2018	5.49	8.57
MW-04	464027.17	1591388.6	15.05	6/6/2018	6.46	8.59
MW-05	463987.97	1592784.03	14.13	6/6/2018	5.35	8.78
MW-06	463858.8	1591389.13	23.82	6/6/2018	13.04	10.78
MW-07	463856.65	1592774.97	21.42	6/6/2018	11.39	10.03
MW-08	461649.15	1590479.94	24.31	6/6/2018	16.86	7.45
MW-09	460663.62	1590695.95	15.37	6/6/2018	10.8	4.57
MW-10	461234.34	1592098.52	13.93	6/6/2018	6.83	7.10
MW-11	462157.18	1593298.86	16.51	6/6/2018	8.86	7.65
MW-12	462362	1589322.96	11.14	6/6/2018	9.83	1.31
MW-13	462676.94	1590589.33	26.54	6/6/2018	14.61	11.93
MW-14	460892.89	1590173.47	24.95	6/6/2018	22.08	2.87

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 Smith - Ash Pond, Gulf Power Company, Bay County, Florida

Monitoring Well	Northing	Easting	Top of Casing Elevation	Date	Depth to Water	Groundwater Elevation
MW-01	464368.78	1589789.76	10.75	11/19/2018	4.85	5.90
MW-02	464419.66	1592286.78	13.29	11/19/2018	4.02	9.27
MW-03	464322.49	1594277.21	14.06	11/19/2018	5.72	8.34
MW-04	464027.17	1591388.6	15.05	11/19/2018	4.28	10.77
MW-05	463987.97	1592784.03	14.13	11/19/2018	4.01	10.12
MW-06	463858.8	1591389.13	23.82	11/19/2018	13.55	10.27
MW-07	463856.65	1592774.97	21.42	11/19/2018	11.75	9.67
MW-08	461649.15	1590479.94	24.31	11/19/2018	17.82	6.49
MW-09	460663.62	1590695.95	15.37	11/19/2018	10.40	4.97
MW-10	461234.34	1592098.52	13.93	11/19/2018	8.15	5.78
MW-11	462157.18	1593298.86	16.51	11/19/2018	9.59	6.92
MW-12	462362	1589322.96	11.14	11/19/2018	9.88	1.26
MW-13	462676.94	1590589.33	26.54	11/19/2018	15.65	10.89
MW-14	460892.89	1590173.47	24.95	11/19/2018	21.61	3.34

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

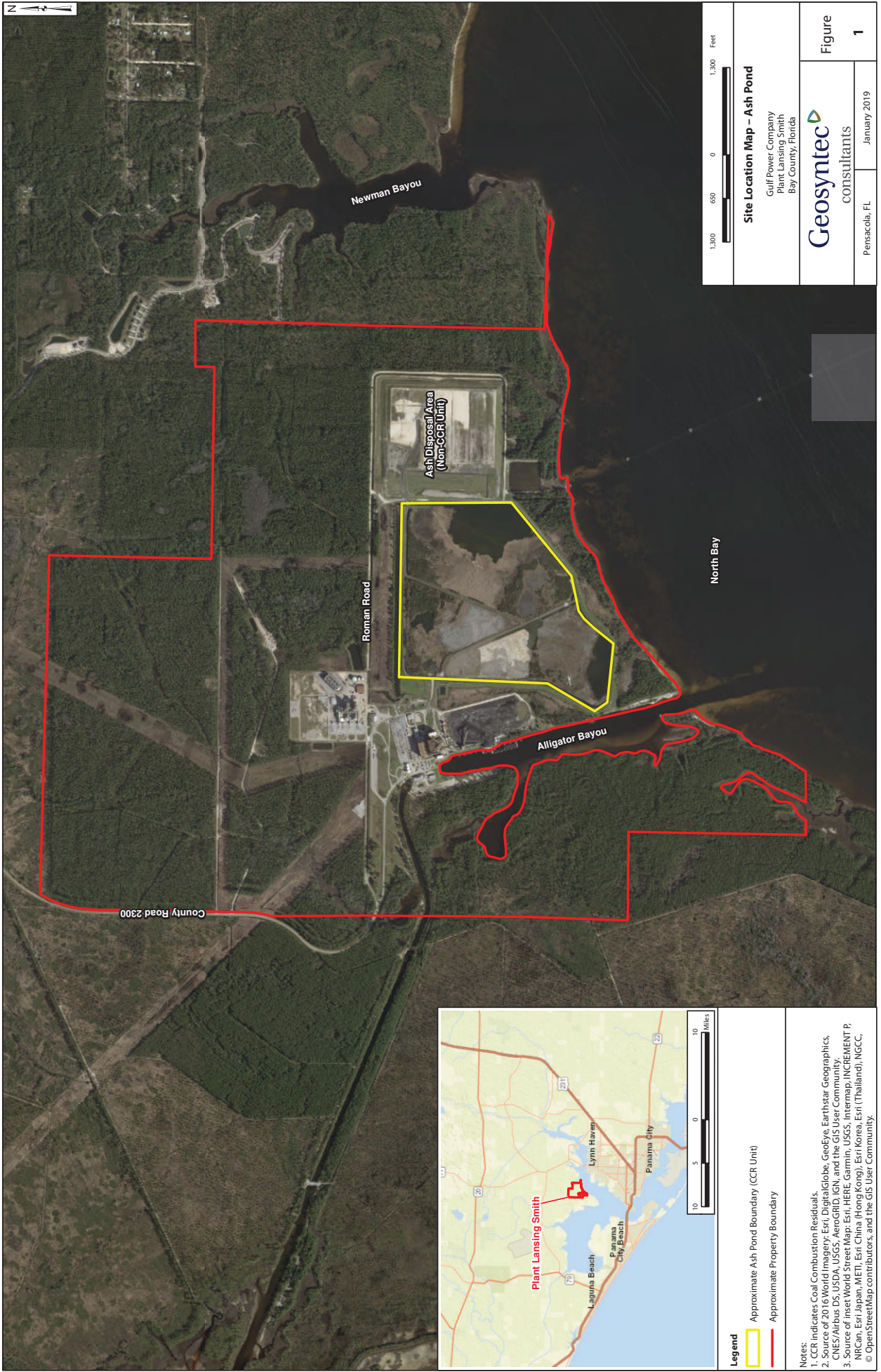
Plant Smith - Ash Pond, Gulf Power Company, Bay County, Florida

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	0.031	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	0.012	0.100
Cobalt ³	mg/L	0.006	0.003	0.006
Fluoride	mg/L	4	0.272	4
Lead ³	mg/L	0.015	0.001	0.015
Lithium ³	mg/L	0.04	0.018	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	0.001	0.050
Thallium	mg/L	0.002	0.001	0.002
Combined Radium-226/228	pCi/L	5	4.2	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



Site Location Map – Ash Pond
 Gulf Power Company
 Plant Lansing Smith
 Bay County, Florida

Geosyntec consultants

Pensacola, FL January 2019

Figure **1**

Legend

- Approximate Ash Pond Boundary (CCR Unit)
- Approximate Property Boundary

Notes:

- CCR indicates Coal Combustion Residuals.
- Source of 2016 World Imagery, Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.
- Source of Inset World StreetMap: 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.



Legend

- Downgradient Well Location
- Background Well Location
- Piezometer Location
- Approximate Ash Pond Boundary (CCR Unit)
- Approximate Property Boundary

Notes:

1. CCR indicates Coal Combustion Residuals.
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 - Ash Pond

Gulf Power Company
Plant Lansing Smith
Bay County, Florida

Geosyntec
consultants

Pensacola, FL January 2019

Figure 2



Potentiometric Surface Contour Map
March 20, 2018
Plant Lansing Smith
 Gulf Power Company
 Plant Lansing Smith
 Bay County, Florida

Geosyntec
 consultants
 Pensacola, FL January 2019

Figure **3**

- Legend**
- Downgradient Well Location
 - Background Well Location
 - Piezometer Location
 - Inferred Groundwater Elevation Contour (ft NAVD88)
 - Approximate Ash Pond Boundary (CCR Unit)
 - Approximate Property Boundary
 - Groundwater Elevation (ft NAVD88)

Notes:

1. * Indicates groundwater elevation not used for contouring.
2. CCR indicates Coal Combustion Residuals.
3. Water level measurements collected between 21 March 2018.
4. ft NAVD88 indicates feet North American Vertical Datum of 1988.
5. Source of 2016 World Imagery: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus D.S., USDA, USGS, AeroGRID, IGN, and the GIS User Community.



Potentiometric Surface Contour Map
June 6, 2018
Plant Lansing Smith
 Gulf Power Company
 Plant Lansing Smith
 Bay County, Florida

Geosyntec
 consultants

Pensacola, FL January 2019

Figure

4

- Legend**
- Downgradient Well Location
 - Background Well Location
 - Piezometer Location
 - Inferred Groundwater Elevation Contour (ft NAVD88)
 - Approximate Ash Pond Boundary (CCR Unit)
 - Approximate Property Boundary
 - Groundwater Elevation (ft NAVD88)

Notes:

1. * Indicates groundwater elevation not used for contouring.
2. CCR indicates Coal Combustion Residuals.
3. Water level measurements collected between 6 June 2018.
4. ft NAVD88 indicates feet North American Vertical Datum of 1988.
5. Source of 2016 World Imagery: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.



500 250 0 250 500 Feet

Potentiometric Surface Contour Map
November 19, 2018
Plant Lansing Smith
 Gulf Power Company
 Plant Lansing Smith
 Bay County, Florida

Geosyntec
 consultants
 Pensacola, FL January 2019

Figure
5

- Legend**
- Downgradient Well Location
 - Background Well Location
 - Piezometer Location
 - Inferred Groundwater Elevation Contour (ft NAVD88)
 - Approximate Ash Pond Boundary (CCR Unit)
 - Approximate Property Boundary
 - Groundwater Elevation (ft NAVD88)

Notes:

1. * indicates groundwater elevation not used for contouring.
2. CCR indicates Coal Combustion Residuals.
3. Water level measurements collected between 19 November 2018.
4. ft NAVD88 indicates feet North American Vertical Datum of 1988.
5. Source of 2016 World Imagery: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.

APPENDIX A

Laboratory Analytical and Field Sampling Reports

Product Name: Low-Flow System

Date: 2018-03-21 13:24:30

Project Information:

Operator Name Rick Hagedorfer
Company Name RDH Env
Project Name Smith CCR
Site Name Smith Plant
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 42 ft

Pump placement from TOC 35.0 ft

Well Information:

Well ID MW-06
Well diameter 2 in
Well Total Depth 40 ft
Screen Length 10 ft
Depth to Water 12.96 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.2774638 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 44 in
Total Volume Pumped 22 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:01:20	25.32	5.42	9467.86	3.11	16.46	0.16	-162.49
Last 5	13:06:20	25.27	5.38	9527.77	4.28	16.54	0.16	-154.63
Last 5	13:11:20	25.28	5.34	9635.16	2.86	16.59	0.16	-148.03
Last 5	13:16:20	25.46	5.32	9683.10	2.36	16.67	0.16	-143.05
Last 5	13:21:20	25.45	5.30	9720.58	2.35	16.71	0.15	-138.70
Variance 0		0.01	-0.04	107.39			-0.00	6.60
Variance 1		0.18	-0.03	47.94			-0.01	4.99
Variance 2		-0.01	-0.02	37.49			-0.01	4.35

Notes

Sample time 1324. Sunny 62.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-21 11:46:14

Project Information:

Operator Name Rick Hagedorfer
Company Name RDH Env
Project Name Smith CCR
Site Name Smith Plant
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 42 ft

Pump placement from TOC 35.0 ft

Well Information:

Well ID MW-07
Well diameter 2 in
Well Total Depth 40 ft
Screen Length 10 ft
Depth to Water 11.94 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.2774638 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6 in
Total Volume Pumped 16 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	11:23:23	24.89	6.24	5478.65	10.50	12.57	0.08	-250.98
Last 5	11:28:23	24.99	6.24	5456.13	9.01	12.57	0.07	-253.20
Last 5	11:33:23	25.11	6.25	5476.99	6.88	12.57	0.07	-255.86
Last 5	11:38:23	25.02	6.26	5490.44	6.19	12.57	0.08	-257.24
Last 5	11:43:23	25.15	6.26	5484.29	3.45	12.57	0.07	-257.82
Variance 0		0.12	0.01	20.86			0.00	-2.66
Variance 1		-0.09	0.00	13.44			0.01	-1.38
Variance 2		0.13	0.00	-6.15			-0.01	-0.58

Notes

Sample time 1146. Sunny 59.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-22 16:41:02

Project Information:

Operator Name Rick Hagedorfer
 Company Name RDH Env
 Project Name Smith CCR
 Site Name Smith Plant
 Latitude 0° 0' 0"
 Longitude 0° 0' 0"
 Sonde SN 417744
 Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type PP
 Tubing Type PE
 Tubing Diameter .17 in
 Tubing Length 45 ft
 Pump placement from TOC 38.0 ft

Well Information:

Well ID MW-08
 Well diameter 2 in
 Well Total Depth 43 ft
 Screen Length 10 ft
 Depth to Water 17.61 ft

Pumping Information:

Final Pumping Rate 400 mL/min
 Total System Volume 0.290854 L
 Calculated Sample Rate 300 sec
 Stabilization Drawdown 89 in
 Total Volume Pumped 24 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	16:17:14	2399.94	4.44	11219.62	1.23	24.79	0.06	-47.92
Last 5	16:22:14	2699.94	4.50	11201.23	1.00	24.89	0.06	-40.96
Last 5	16:27:14	2999.94	4.53	11192.88	1.07	24.96	0.06	-32.77
Last 5	16:32:14	3299.94	4.57	11175.23	1.17	25.03	0.06	-29.90
Last 5	16:37:14	3599.94	4.61	11146.94	1.05	25.06	0.06	-25.87
Variance 0		-0.11	0.03	-8.35			-0.00	8.18
Variance 1		0.18	0.04	-17.64			-0.00	2.87
Variance 2		-0.09	0.04	-28.30			0.00	4.04

Notes

Sample time 1640. Sunny 65.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-23 09:02:38

Project Information:

Operator Name Rick Hagedorfer
Company Name RDH Env
Project Name Smith CCR
Site Name Smith Plant
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 35 ft

Pump placement from TOC 28.0 ft

Well Information:

Well ID MW-09
Well diameter 2 in
Well Total Depth 33 ft
Screen Length 10 ft
Depth to Water 11.57 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 15 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	08:38:29	24.88	6.46	7764.92	8.49	12.84	0.10	-260.49
Last 5	08:43:29	24.77	6.43	7929.13	5.87	12.86	0.08	-260.55
Last 5	08:48:29	24.87	6.42	7961.10	4.79	12.87	0.07	-259.63
Last 5	08:53:29	24.97	6.41	7957.48	3.81	12.87	0.06	-258.67
Last 5	08:58:29	24.82	6.40	7993.90	4.09	12.87	0.06	-257.93
Variance 0		0.10	-0.01	31.97			-0.01	0.92
Variance 1		0.09	-0.01	-3.62			-0.01	0.96
Variance 2		-0.15	-0.01	36.42			-0.00	0.74

Notes

Sample time 0902. Dup-04 fake sample time 0802. EB-02 sample time 0805. FB-02 sample time 0755. Sunny 56.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-22 10:52:51

Project Information:

Operator Name Rick Hagedorfer
 Company Name RDH Env
 Project Name Smith CCR
 Site Name Smith Plant
 Latitude 0° 0' 0"
 Longitude 0° 0' 0"
 Sonde SN 417744
 Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type PP
 Tubing Type PE
 Tubing Diameter .17 in
 Tubing Length 35 ft
 Pump placement from TOC 28.0 ft

Well Information:

Well ID MW-10
 Well diameter 2 in
 Well Total Depth 33 ft
 Screen Length 10 ft
 Depth to Water 7.09 ft

Pumping Information:

Final Pumping Rate 400 mL/min
 Total System Volume 0.2462198 L
 Calculated Sample Rate 300 sec
 Stabilization Drawdown 18 in
 Total Volume Pumped 24 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Last 5	10:30:09	26.34	5.32	9619.75	16.60	8.58	0.07	-159.96
Last 5	10:35:09	26.34	5.33	9623.13	18.20	8.61	0.07	-162.50
Last 5	10:40:09	26.23	5.31	9630.20	8.64	8.62	0.06	-162.87
Last 5	10:45:09	26.36	5.32	9605.87	7.90	8.63	0.06	-163.73
Last 5	10:50:09	26.35	5.31	9602.70	8.67	8.64	0.06	-163.23
Variance 0		-0.11	-0.02	7.07			-0.00	-0.36
Variance 1		0.13	0.01	-24.33			-0.00	-0.86
Variance 2		-0.01	-0.02	-3.17			-0.00	0.50

Notes

Sample time 1052. Sunny 54.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-21 17:27:44

Project Information:

Operator Name Rick Hagedorfer
Company Name RDH Env
Project Name Smith CCR
Site Name Smith Plant
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 35 ft

Pump placement from TOC 28.0 ft

Well Information:

Well ID MW-11
Well diameter 2 in
Well Total Depth 33 ft
Screen Length 10 ft
Depth to Water 10.24 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 30 in
Total Volume Pumped 70 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Last 5	17:03:36	9309.93	+/- 0.2	+/- 5%	+/- 5	12.84	+/- 0.2	+/- 10
Last 5	17:08:36	9609.89	6.27	6683.64	17.00	12.84	0.08	-228.34
Last 5	17:13:36	9909.89	6.10	7194.01	14.10	12.84	0.08	-217.00
Last 5	17:18:36	10209.89	6.29	6623.04	14.60	12.84	0.08	-229.49
Last 5	17:23:36	10509.89	6.28	6647.98	14.40	12.84	0.08	-227.41
Variance 0		0.01	6.28	6606.89	14.60	12.84	0.08	-224.76
Variance 1		-0.04	0.19	-570.97			-0.00	-12.49
Variance 2		0.08	-0.01	24.94			-0.00	2.08
			0.00	-41.09			-0.00	2.64

Notes

Sample time 1725. Dup-02 fake sample time 1625. Sunny 65.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-22 15:01:29

Project Information:

Operator Name Rick Hagedorfer
 Company Name RDH Env
 Project Name Smith CCR
 Site Name Smith Plant
 Latitude 0° 0' 0"
 Longitude 0° 0' 0"
 Sonde SN 417744
 Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type PP
 Tubing Type PE
 Tubing Diameter .17 in
 Tubing Length 45 ft
 Pump placement from TOC 38.0 ft

Well Information:

Well ID MW-13
 Well diameter 2 in
 Well Total Depth 43 ft
 Screen Length 10 ft
 Depth to Water 14.97 ft

Pumping Information:

Final Pumping Rate 400 mL/min
 Total System Volume 0.290854 L
 Calculated Sample Rate 300 sec
 Stabilization Drawdown 51 in
 Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Last 5	14:39:01	26.79	6.91	14465.96	0.66	18.60	0.15	+/- 10
Last 5	14:44:01	26.83	6.90	14519.82	0.59	18.92	0.17	-340.59
Last 5	14:49:01	26.74	6.89	14592.88	0.48	19.14	0.14	-342.35
Last 5	14:54:01	26.74	6.89	14717.11	0.41	19.25	0.05	-343.61
Last 5	14:59:04	26.71	6.88	14648.68	0.42	19.31	0.04	-345.48
Variance 0		-0.09	-0.01	73.07			-0.03	-344.72
Variance 1		-0.00	-0.00	124.22			-0.09	-1.26
Variance 2		-0.03	-0.01	-68.43			-0.01	-1.87
								0.76

Notes

Sample time 1501. EB-01 sample time 1405. Sunny 61.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-22 18:52:18

Project Information:

Operator Name Rick Hagedorfer
 Company Name RDH Env
 Project Name Smith CCR
 Site Name Smith Plant
 Latitude 0° 0' 0"
 Longitude 0° 0' 0"
 Sonde SN 417744
 Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type PP
 Tubing Type PE
 Tubing Diameter .17 in
 Tubing Length 43 ft
 Pump placement from TOC 36.0 ft

Well Information:

Well ID MW-14
 Well diameter 2 in
 Well Total Depth 41 ft
 Screen Length 10 ft
 Depth to Water 22.76 ft

Pumping Information:

Final Pumping Rate 400 mL/min
 Total System Volume 0.2819272 L
 Calculated Sample Rate 300 sec
 Stabilization Drawdown 9 in
 Total Volume Pumped 16 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	18:29:46	25.27	6.87	7268.91	0.78	23.62	0.09	-303.73
Last 5	18:34:46	24.96	6.87	7302.88	0.59	23.61	0.08	-304.09
Last 5	18:39:46	24.83	6.87	7291.03	0.68	23.61	0.08	-304.09
Last 5	18:44:46	24.73	6.87	7299.29	0.55	23.61	0.08	-304.21
Last 5	18:49:46	24.69	6.87	7350.05	0.52	23.61	0.08	-304.03
Variance 0		-0.13	-0.00	-11.85			-0.00	-0.01
Variance 1		-0.10	-0.00	8.26			-0.00	-0.12
Variance 2		-0.04	-0.00	50.76			-0.00	0.18

Notes

Sample time 1852. Sunset 60.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-21 09:50:42

Project Information:

Operator Name Rick Hagedorfer
 Company Name RDH Env
 Project Name Smith CCR
 Site Name Smith Plant
 Latitude 0° 0' 0"
 Longitude 0° 0' 0"
 Sonde SN 417744
 Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type PP
 Tubing Type PE
 Tubing Diameter .17 in
 Tubing Length 28 ft
 Pump placement from TOC 21.0 ft

Well Information:

Well ID MW-02
 Well diameter 2 in
 Well Total Depth 26 ft
 Screen Length 10 ft
 Depth to Water 5.37 ft

Pumping Information:

Final Pumping Rate 400 mL/min
 Total System Volume 0.2149758 L
 Calculated Sample Rate 300 sec
 Stabilization Drawdown 19 in
 Total Volume Pumped 38 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	09:27:35	22.94	6.63	298.74	12.10	7.06	0.06	-111.58
Last 5	09:32:35	23.07	6.64	298.57	13.40	7.07	0.06	-112.04
Last 5	09:37:36	23.20	6.66	297.67	11.70	7.07	0.06	-112.26
Last 5	09:42:36	23.25	6.67	298.12	10.20	7.07	0.06	-112.65
Last 5	09:47:36	23.32	6.68	298.02	11.00	7.07	0.05	-112.77
Variance 0		0.13	0.01	-0.90			0.00	-0.22
Variance 1		0.05	0.01	0.45			0.01	-0.39
Variance 2		0.07	0.01	-0.09			-0.01	-0.11

Notes

Sample time 0951. Sunny 54.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-20 17:22:21

Project Information:

Operator Name Rick Hagedorfer
Company Name RDH Env
Project Name Smith CCR
Site Name Smith Plant
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 35 ft

Pump placement from TOC 28.0 ft

Well Information:

Well ID MW-03
Well diameter 2 in
Well Total Depth 33 ft
Screen Length 10 ft
Depth to Water 6.70 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 58 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	16:52:25	24.29	4.91	49.25	21.10	6.97	0.03	-27.06
Last 5	17:02:25	24.28	4.91	49.29	27.90	6.97	0.03	-28.42
Last 5	17:07:25	24.28	4.91	49.22	23.40	6.97	0.03	-28.90
Last 5	17:12:25	24.26	4.91	49.26	18.20	6.97	0.03	-29.51
Last 5	17:17:25	24.33	4.92	49.15	18.90	6.97	0.03	-30.54
Variance 0		-0.00	0.00	-0.07			-0.00	-0.47
Variance 1		-0.02	0.00	0.03			-0.00	-0.61
Variance 2		0.07	0.01	-0.11			0.00	-1.03

Notes

Sample time 1720. Dup-01 fake sample time 1620. Sunny 68.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-20 13:30:22

Project Information:

Operator Name Rick Hagedorfer
Company Name RDH Env
Project Name Smith CCR
Site Name Smith Plant
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 32 ft

Pump placement from TOC 27.0 ft

Well Information:

Well ID MW-12
Well diameter 2 in
Well Total Depth 32 ft
Screen Length 10 ft
Depth to Water 9.41 ft

Pumping Information:

Final Pumping Rate 300 mL/min
Total System Volume 0.2328295 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 64 in
Total Volume Pumped 27 L

Low-Flow Sampling Stabilization Summary

Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization		+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:06:20	25.98	6.08	1011.52	12.90	14.61	0.07	-62.77
Last 5	13:11:20	25.84	6.07	999.58	12.10	14.68	0.07	-68.82
Last 5	13:16:20	26.14	6.06	995.17	10.80	14.78	0.07	-73.79
Last 5	13:21:20	26.14	6.06	991.99	11.10	14.84	0.07	-78.17
Last 5	13:26:20	26.10	6.05	972.34	11.00	14.84	0.07	-81.85
Variance 0		0.30	-0.01	-4.41			0.00	-4.98
Variance 1		-0.00	-0.01	-3.18			0.00	-4.38
Variance 2		-0.04	-0.01	-19.65			-0.00	-3.67

Notes

Sample time 1329. Sunny 73.

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: 400-151256-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Smith Plant

For:

Gulf Power Company

BIN 731

One Energy Place

Pensacola, Florida 32520

Attn: Kristi Mitchell



Authorized for release by:

4/13/2018 1:35:46 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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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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Case Narrative

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Job ID: 400-151256-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-151256-1

Metals

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 392227 and analytical batch 393503 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-07 (400-151256-5), MW-06 (400-151256-6), MW-10 (400-151256-8), MW-08 (400-151256-12), MW-09 (400-151256-15) and DUP-04 (400-151256-18). Elevated reporting limits (RLs) are provided.

Method(s) 7470A: The method blank for preparation batch 393404 and analytical batch 393589 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 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 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 Cl- E: The method blank for analytical batch 392343 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 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-12 (400-151256-1), MW-07 (400-151256-5), MW-06 (400-151256-6), MW-10 (400-151256-8), MW-08 (400-151256-12), MW-09 (400-151256-15) and DUP-04 (400-151256-18). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-07 (400-151256-5), MW-06 (400-151256-6), MW-10 (400-151256-8), MW-08 (400-151256-12), MW-09 (400-151256-15) and DUP-04 (400-151256-18). Elevated reporting limits (RLs) are provided.

Detection Summary

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: MW-12

Lab Sample ID: 400-151256-1

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
Boron	0.072		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	34		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.016		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	510		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	190		10	3.0	mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.12		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1.8	I	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.05				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-03

Lab Sample ID: 400-151256-2

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	1.9		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0024	I	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.016		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00069	I	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	12		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	11	V	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: DUP-01

Lab Sample ID: 400-151256-3

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	1.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0023	I	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.015		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00024	I	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	54		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	11	V	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA

Client Sample ID: MW-02

Lab Sample ID: 400-151256-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.021		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	45		0.25	0.13	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 Smith Plant

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: MW-02 (Continued)

Lab Sample ID: 400-151256-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.0032		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.012		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	150		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	9.3	V	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.28		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Field pH	6.68				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-07

Lab Sample ID: 400-151256-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0014		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.061		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Chromium	0.0013	I	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.0023	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0058	I	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00062	I	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	3.0		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	200		1.3	0.63	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	3400		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	1300		80	24	mg/L	40		SM 4500 Cl- E	Total/NA
Sulfate	720		150	42	mg/L	30		SM 4500 SO4 E	Total/NA
Field pH	6.26				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-06

Lab Sample ID: 400-151256-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00048	I	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.060		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.0014	I	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Lithium	0.019		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00037	I	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	8.6		1.0	0.42	mg/L	100		6020	Total Recoverable
Calcium - DL	290		5.0	2.5	mg/L	100		6020	Total Recoverable
Total Dissolved Solids	5400		25	17	mg/L	1		SM 2540C	Total/NA
Chloride	2900		120	36	mg/L	60		SM 4500 Cl- E	Total/NA
Fluoride	0.050	I	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	530		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	5.3				SU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: MW-10

Lab Sample ID: 400-151256-8

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	0.10		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00039	I	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Lithium	0.0065		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0018	I	0.015	0.00085	mg/L	5		6020	Total Recoverable
Boron - DL	11		2.0	0.84	mg/L	200		6020	Total Recoverable
Calcium - DL	510		10	5.0	mg/L	200		6020	Total Recoverable
Total Dissolved Solids	6800		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2700		120	36	mg/L	60		SM 4500 Cl- E	Total/NA
Sulfate	810		150	42	mg/L	30		SM 4500 SO4 E	Total/NA
Field pH	5.31				SU	1		Field Sampling	Total/NA

Client Sample ID: FB-01

Lab Sample ID: 400-151256-10

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	0.00045	I	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Chloride	0.81	I V	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA

Client Sample ID: EB-01

Lab Sample ID: 400-151256-11

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.0014	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Chloride	0.96	I V	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA

Client Sample ID: MW-08

Lab Sample ID: 400-151256-12

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00097	I	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.064		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.0014	I	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Lithium	0.011		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00030	I	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	15		1.0	0.42	mg/L	100		6020	Total Recoverable
Calcium - DL	540		5.0	2.5	mg/L	100		6020	Total Recoverable
Total Dissolved Solids	8100		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	3200		160	48	mg/L	80		SM 4500 Cl- E	Total/NA
Sulfate	900		150	42	mg/L	30		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: MW-08 (Continued)

Lab Sample ID: 400-151256-12

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Field pH	4.61				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-09

Lab Sample ID: 400-151256-15

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0022		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.093		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.0056		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0014	I	0.015	0.00085	mg/L	5		6020	Total Recoverable
Boron - DL	9.4		1.0	0.42	mg/L	100		6020	Total Recoverable
Calcium - DL	290		5.0	2.5	mg/L	100		6020	Total Recoverable
Total Dissolved Solids	1700		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2300		120	36	mg/L	60		SM 4500 Cl- E	Total/NA
Sulfate	630		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	6.4				SU	1		Field Sampling	Total/NA

Client Sample ID: EB-02

Lab Sample ID: 400-151256-16

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.0011	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Chloride	0.90	I V	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA

Client Sample ID: FB-02

Lab Sample ID: 400-151256-17

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.0017	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Chloride	0.74	I V	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA

Client Sample ID: DUP-04

Lab Sample ID: 400-151256-18

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0022		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.094		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.0056		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0013	I	0.015	0.00085	mg/L	5		6020	Total Recoverable
Boron - DL	9.3		1.0	0.42	mg/L	100		6020	Total Recoverable
Calcium - DL	300		5.0	2.5	mg/L	100		6020	Total Recoverable
Total Dissolved Solids	2900		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2400		160	48	mg/L	80		SM 4500 Cl- E	Total/NA
Sulfate	640		100	28	mg/L	20		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

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 Smith Plant

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-151256-1	MW-12	Water	03/20/18 13:29	03/22/18 14:40
400-151256-2	MW-03	Water	03/20/18 17:20	03/22/18 14:40
400-151256-3	DUP-01	Water	03/20/18 16:20	03/22/18 14:40
400-151256-4	MW-02	Water	03/21/18 09:51	03/22/18 14:40
400-151256-5	MW-07	Water	03/21/18 11:46	03/22/18 14:40
400-151256-6	MW-06	Water	03/21/18 13:24	03/22/18 14:40
400-151256-8	MW-10	Water	03/22/18 10:52	03/22/18 14:40
400-151256-10	FB-01	Water	03/22/18 13:20	03/23/18 17:05
400-151256-11	EB-01	Water	03/22/18 14:05	03/23/18 17:05
400-151256-12	MW-08	Water	03/22/18 16:40	03/23/18 17:05
400-151256-15	MW-09	Water	03/23/18 09:02	03/23/18 17:05
400-151256-16	EB-02	Water	03/23/18 08:05	03/23/18 17:05
400-151256-17	FB-02	Water	03/23/18 07:55	03/23/18 17:05
400-151256-18	DUP-04	Water	03/23/18 08:02	03/23/18 17:05

Client Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: MW-12
Date Collected: 03/20/18 13:29
Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-1
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		03/31/18 13:33	04/10/18 20:34	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/31/18 13:33	04/10/18 20:34	5
Barium	0.013		0.0025	0.00049	mg/L		03/31/18 13:33	04/10/18 20:34	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 20:34	5
Boron	0.072		0.050	0.021	mg/L		03/31/18 13:33	04/10/18 20:34	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 20:34	5
Calcium	34		0.25	0.13	mg/L		03/31/18 13:33	04/10/18 20:34	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/31/18 13:33	04/10/18 20:34	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/31/18 13:33	04/10/18 20:34	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/31/18 13:33	04/10/18 20:34	5
Lithium	0.016		0.0050	0.0011	mg/L		03/31/18 13:33	04/10/18 20:34	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/31/18 13:33	04/10/18 20:34	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		03/31/18 13:33	04/10/18 20:34	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/31/18 13:33	04/10/18 20:34	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		03/31/18 15:08	04/03/18 17:10	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	510		5.0	3.4	mg/L			03/24/18 17:50	1
Chloride	190		10	3.0	mg/L			04/02/18 10:24	5
Fluoride	0.12		0.10	0.032	mg/L			03/28/18 14:18	1
Sulfate	1.8	I	5.0	1.4	mg/L			03/26/18 08:23	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.05				SU			03/20/18 13:29	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: MW-03
Date Collected: 03/20/18 17:20
Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-2
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		03/31/18 13:33	04/10/18 20:57	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/31/18 13:33	04/10/18 20:57	5
Barium	0.018		0.0025	0.00049	mg/L		03/31/18 13:33	04/10/18 20:57	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 20:57	5
Boron	0.021	U	0.050	0.021	mg/L		03/31/18 13:33	04/10/18 20:57	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 20:57	5
Calcium	1.9		0.25	0.13	mg/L		03/31/18 13:33	04/10/18 20:57	5
Chromium	0.0024	I	0.0025	0.0011	mg/L		03/31/18 13:33	04/10/18 20:57	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/31/18 13:33	04/10/18 20:57	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/31/18 13:33	04/10/18 20:57	5
Lithium	0.016		0.0050	0.0011	mg/L		03/31/18 13:33	04/10/18 20:57	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/31/18 13:33	04/10/18 20:57	5
Selenium	0.00069	I	0.0013	0.00024	mg/L		03/31/18 13:33	04/10/18 20:57	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/31/18 13:33	04/10/18 20:57	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		03/31/18 15:08	04/03/18 17:12	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	12		5.0	3.4	mg/L			03/24/18 17:50	1
Chloride	11	V	2.0	0.60	mg/L			04/02/18 11:09	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/28/18 14:22	1
Sulfate	1.4	U	5.0	1.4	mg/L			03/26/18 08:23	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.92				SU			03/20/18 17:20	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: DUP-01
Date Collected: 03/20/18 16:20
Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-3
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		03/31/18 13:33	04/10/18 21:01	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/31/18 13:33	04/10/18 21:01	5
Barium	0.018		0.0025	0.00049	mg/L		03/31/18 13:33	04/10/18 21:01	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 21:01	5
Boron	0.021	U	0.050	0.021	mg/L		03/31/18 13:33	04/10/18 21:01	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 21:01	5
Calcium	1.8		0.25	0.13	mg/L		03/31/18 13:33	04/10/18 21:01	5
Chromium	0.0023	I	0.0025	0.0011	mg/L		03/31/18 13:33	04/10/18 21:01	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/31/18 13:33	04/10/18 21:01	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/31/18 13:33	04/10/18 21:01	5
Lithium	0.015		0.0050	0.0011	mg/L		03/31/18 13:33	04/10/18 21:01	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/31/18 13:33	04/10/18 21:01	5
Selenium	0.00024	I	0.0013	0.00024	mg/L		03/31/18 13:33	04/10/18 21:01	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/31/18 13:33	04/10/18 21:01	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	04/03/18 17:14	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	54		5.0	3.4	mg/L			03/24/18 17:50	1
Chloride	11	V	2.0	0.60	mg/L			04/02/18 11:09	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/28/18 14:26	1
Sulfate	1.4	U	5.0	1.4	mg/L			03/26/18 08:23	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: MW-02
Date Collected: 03/21/18 09:51
Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-4
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		03/31/18 13:33	04/10/18 21:06	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/31/18 13:33	04/10/18 21:06	5
Barium	0.021		0.0025	0.00049	mg/L		03/31/18 13:33	04/10/18 21:06	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 21:06	5
Boron	0.021	U	0.050	0.021	mg/L		03/31/18 13:33	04/10/18 21:06	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 21:06	5
Calcium	45		0.25	0.13	mg/L		03/31/18 13:33	04/10/18 21:06	5
Chromium	0.0032		0.0025	0.0011	mg/L		03/31/18 13:33	04/10/18 21:06	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/31/18 13:33	04/10/18 21:06	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/31/18 13:33	04/10/18 21:06	5
Lithium	0.012		0.0050	0.0011	mg/L		03/31/18 13:33	04/10/18 21:06	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/31/18 13:33	04/10/18 21:06	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		03/31/18 13:33	04/10/18 21:06	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/31/18 13:33	04/10/18 21:06	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		04/10/18 10:35	04/12/18 09:56	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	150		5.0	3.4	mg/L			03/26/18 12:25	1
Chloride	9.3	V	2.0	0.60	mg/L			04/02/18 11:11	1
Fluoride	0.28		0.10	0.032	mg/L			03/28/18 14:30	1
Sulfate	1.4	U	5.0	1.4	mg/L			03/27/18 06:54	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.68				SU			03/21/18 09:51	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: MW-07
Date Collected: 03/21/18 11:46
Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-5
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		03/31/18 13:33	04/10/18 22:40	5
Arsenic	0.0014		0.0013	0.00046	mg/L		03/31/18 13:33	04/10/18 22:40	5
Barium	0.061		0.0025	0.00049	mg/L		03/31/18 13:33	04/10/18 22:40	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 22:40	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 22:40	5
Chromium	0.0013	I	0.0025	0.0011	mg/L		03/31/18 13:33	04/10/18 22:40	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/31/18 13:33	04/10/18 22:40	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/31/18 13:33	04/10/18 22:40	5
Lithium	0.0023	I	0.0050	0.0011	mg/L		03/31/18 13:33	04/10/18 22:40	5
Molybdenum	0.0058	I	0.015	0.00085	mg/L		03/31/18 13:33	04/10/18 22:40	5
Selenium	0.00062	I	0.0013	0.00024	mg/L		03/31/18 13:33	04/10/18 22:40	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/31/18 13:33	04/10/18 22:40	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.0		0.25	0.11	mg/L		03/31/18 13:33	04/10/18 21:33	25
Calcium	200		1.3	0.63	mg/L		03/31/18 13:33	04/10/18 21:33	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		04/10/18 10:35	04/12/18 09:58	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3400		50	34	mg/L			03/26/18 12:25	1
Chloride	1300		80	24	mg/L			04/02/18 11:47	40
Fluoride	0.032	U	0.10	0.032	mg/L			03/28/18 14:42	1
Sulfate	720		150	42	mg/L			03/27/18 07:01	30

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.26				SU			03/21/18 11:46	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: MW-06
Date Collected: 03/21/18 13:24
Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-6
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		03/31/18 13:33	04/10/18 22:45	5
Arsenic	0.00048	I	0.0013	0.00046	mg/L		03/31/18 13:33	04/10/18 22:45	5
Barium	0.060		0.0025	0.00049	mg/L		03/31/18 13:33	04/10/18 22:45	5
Beryllium	0.0014	I	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 22:45	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 22:45	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/31/18 13:33	04/10/18 22:45	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/31/18 13:33	04/10/18 22:45	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/31/18 13:33	04/10/18 22:45	5
Lithium	0.019		0.0050	0.0011	mg/L		03/31/18 13:33	04/10/18 22:45	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/31/18 13:33	04/10/18 22:45	5
Selenium	0.00037	I	0.0013	0.00024	mg/L		03/31/18 13:33	04/10/18 22:45	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/31/18 13:33	04/10/18 22:45	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	8.6		1.0	0.42	mg/L		03/31/18 13:33	04/10/18 21:37	100
Calcium	290		5.0	2.5	mg/L		03/31/18 13:33	04/10/18 21:37	100

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		04/10/18 10:35	04/12/18 10:00	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5400		25	17	mg/L			03/27/18 13:42	1
Chloride	2900		120	36	mg/L			04/02/18 12:12	60
Fluoride	0.050	I	0.10	0.032	mg/L			03/28/18 14:50	1
Sulfate	530		100	28	mg/L			03/27/18 07:39	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.3				SU			03/21/18 13:24	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: MW-10
Date Collected: 03/22/18 10:52
Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-8
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		03/31/18 13:33	04/10/18 22:54	5
Arsenic	0.0034		0.0013	0.00046	mg/L		03/31/18 13:33	04/10/18 22:54	5
Barium	0.10		0.0025	0.00049	mg/L		03/31/18 13:33	04/10/18 22:54	5
Beryllium	0.00039	I	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 22:54	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 22:54	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/31/18 13:33	04/10/18 22:54	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/31/18 13:33	04/10/18 22:54	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/31/18 13:33	04/10/18 22:54	5
Lithium	0.0065		0.0050	0.0011	mg/L		03/31/18 13:33	04/10/18 22:54	5
Molybdenum	0.0018	I	0.015	0.00085	mg/L		03/31/18 13:33	04/10/18 22:54	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		03/31/18 13:33	04/10/18 22:54	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/31/18 13:33	04/10/18 22:54	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	11		2.0	0.84	mg/L		03/31/18 13:33	04/10/18 21:46	200
Calcium	510		10	5.0	mg/L		03/31/18 13:33	04/10/18 21:46	200

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		04/10/18 10:35	04/12/18 10:35	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6800		50	34	mg/L			03/27/18 13:11	1
Chloride	2700		120	36	mg/L			04/02/18 12:12	60
Fluoride	0.032	U	0.10	0.032	mg/L			03/28/18 14:58	1
Sulfate	810		150	42	mg/L			03/27/18 07:47	30

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.31				SU			03/22/18 10:52	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: FB-01
Date Collected: 03/22/18 13:20
Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-10
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		03/31/18 13:33	04/10/18 19:58	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/31/18 13:33	04/10/18 19:58	5
Barium	0.00049	U	0.0025	0.00049	mg/L		03/31/18 13:33	04/10/18 19:58	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 19:58	5
Boron	0.021	U	0.050	0.021	mg/L		03/31/18 13:33	04/10/18 19:58	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 19:58	5
Calcium	0.13	U	0.25	0.13	mg/L		03/31/18 13:33	04/10/18 19:58	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/31/18 13:33	04/10/18 19:58	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/31/18 13:33	04/10/18 19:58	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/31/18 13:33	04/10/18 19:58	5
Lithium	0.0015	I	0.0050	0.0011	mg/L		03/31/18 13:33	04/10/18 19:58	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/31/18 13:33	04/10/18 19:58	5
Selenium	0.00045	I	0.0013	0.00024	mg/L		03/31/18 13:33	04/10/18 19:58	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/31/18 13:33	04/10/18 19:58	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		04/10/18 10:35	04/12/18 10:39	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			03/26/18 12:25	1
Chloride	0.81	I V	2.0	0.60	mg/L			04/02/18 11:09	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/30/18 09:58	1
Sulfate	1.4	U	5.0	1.4	mg/L			03/27/18 06:55	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: EB-01
Date Collected: 03/22/18 14:05
Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-11
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		03/31/18 13:33	04/10/18 20:03	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/31/18 13:33	04/10/18 20:03	5
Barium	0.00049	U	0.0025	0.00049	mg/L		03/31/18 13:33	04/10/18 20:03	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 20:03	5
Boron	0.021	U	0.050	0.021	mg/L		03/31/18 13:33	04/10/18 20:03	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 20:03	5
Calcium	0.13	U	0.25	0.13	mg/L		03/31/18 13:33	04/10/18 20:03	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/31/18 13:33	04/10/18 20:03	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/31/18 13:33	04/10/18 20:03	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/31/18 13:33	04/10/18 20:03	5
Lithium	0.0014	I	0.0050	0.0011	mg/L		03/31/18 13:33	04/10/18 20:03	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/31/18 13:33	04/10/18 20:03	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		03/31/18 13:33	04/10/18 20:03	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/31/18 13:33	04/10/18 20:03	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		04/10/18 10:35	04/12/18 10:41	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			03/27/18 13:11	1
Chloride	0.96	I V	2.0	0.60	mg/L			04/02/18 11:11	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/30/18 10:31	1
Sulfate	1.4	U	5.0	1.4	mg/L			03/27/18 06:55	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: MW-08
Date Collected: 03/22/18 16:40
Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-12
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		03/31/18 13:33	04/10/18 23:03	5
Arsenic	0.00097	I	0.0013	0.00046	mg/L		03/31/18 13:33	04/10/18 23:03	5
Barium	0.064		0.0025	0.00049	mg/L		03/31/18 13:33	04/10/18 23:03	5
Beryllium	0.0014	I	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 23:03	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 23:03	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/31/18 13:33	04/10/18 23:03	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/31/18 13:33	04/10/18 23:03	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/31/18 13:33	04/10/18 23:03	5
Lithium	0.011		0.0050	0.0011	mg/L		03/31/18 13:33	04/10/18 23:03	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/31/18 13:33	04/10/18 23:03	5
Selenium	0.00030	I	0.0013	0.00024	mg/L		03/31/18 13:33	04/10/18 23:03	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/31/18 13:33	04/10/18 23:03	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	15		1.0	0.42	mg/L		03/31/18 13:33	04/10/18 21:55	100
Calcium	540		5.0	2.5	mg/L		03/31/18 13:33	04/10/18 21:55	100

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		04/10/18 10:35	04/12/18 10:42	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	8100		50	34	mg/L			03/27/18 13:11	1
Chloride	3200		160	48	mg/L			04/02/18 12:12	80
Fluoride	0.032	U	0.10	0.032	mg/L			03/30/18 10:35	1
Sulfate	900		150	42	mg/L			03/27/18 07:47	30

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.61				SU			03/22/18 16:40	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: MW-09
Date Collected: 03/23/18 09:02
Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-15
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		03/31/18 13:33	04/10/18 23:16	5
Arsenic	0.0022		0.0013	0.00046	mg/L		03/31/18 13:33	04/10/18 23:16	5
Barium	0.093		0.0025	0.00049	mg/L		03/31/18 13:33	04/10/18 23:16	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 23:16	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 23:16	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/31/18 13:33	04/10/18 23:16	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/31/18 13:33	04/10/18 23:16	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/31/18 13:33	04/10/18 23:16	5
Lithium	0.0056		0.0050	0.0011	mg/L		03/31/18 13:33	04/10/18 23:16	5
Molybdenum	0.0014	I	0.015	0.00085	mg/L		03/31/18 13:33	04/10/18 23:16	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		03/31/18 13:33	04/10/18 23:16	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/31/18 13:33	04/10/18 23:16	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	9.4		1.0	0.42	mg/L		03/31/18 13:33	04/10/18 22:09	100
Calcium	290		5.0	2.5	mg/L		03/31/18 13:33	04/10/18 22:09	100

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		04/10/18 12:09	04/11/18 15:12	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1700		50	34	mg/L			03/27/18 12:35	1
Chloride	2300		120	36	mg/L			04/02/18 12:14	60
Fluoride	0.032	U	0.10	0.032	mg/L			03/30/18 12:50	1
Sulfate	630		100	28	mg/L			04/03/18 10:25	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.4				SU			03/23/18 09:02	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: EB-02
Date Collected: 03/23/18 08:05
Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-16
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		03/31/18 13:33	04/10/18 20:07	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/31/18 13:33	04/10/18 20:07	5
Barium	0.00049	U	0.0025	0.00049	mg/L		03/31/18 13:33	04/10/18 20:07	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 20:07	5
Boron	0.021	U	0.050	0.021	mg/L		03/31/18 13:33	04/10/18 20:07	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 20:07	5
Calcium	0.13	U	0.25	0.13	mg/L		03/31/18 13:33	04/10/18 20:07	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/31/18 13:33	04/10/18 20:07	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/31/18 13:33	04/10/18 20:07	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/31/18 13:33	04/10/18 20:07	5
Lithium	0.0011	I	0.0050	0.0011	mg/L		03/31/18 13:33	04/10/18 20:07	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/31/18 13:33	04/10/18 20:07	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		03/31/18 13:33	04/10/18 20:07	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/31/18 13:33	04/10/18 20:07	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		04/10/18 12:09	04/11/18 15:13	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			03/27/18 12:35	1
Chloride	0.90	I V	2.0	0.60	mg/L			04/02/18 11:11	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/30/18 12:54	1
Sulfate	1.4	U	5.0	1.4	mg/L			04/03/18 09:55	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: FB-02
Date Collected: 03/23/18 07:55
Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-17
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		03/31/18 13:33	04/10/18 20:12	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/31/18 13:33	04/10/18 20:12	5
Barium	0.00049	U	0.0025	0.00049	mg/L		03/31/18 13:33	04/10/18 20:12	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 20:12	5
Boron	0.021	U	0.050	0.021	mg/L		03/31/18 13:33	04/10/18 20:12	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 20:12	5
Calcium	0.13	U	0.25	0.13	mg/L		03/31/18 13:33	04/10/18 20:12	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/31/18 13:33	04/10/18 20:12	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/31/18 13:33	04/10/18 20:12	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/31/18 13:33	04/10/18 20:12	5
Lithium	0.0017	I	0.0050	0.0011	mg/L		03/31/18 13:33	04/10/18 20:12	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/31/18 13:33	04/10/18 20:12	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		03/31/18 13:33	04/10/18 20:12	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/31/18 13:33	04/10/18 20:12	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		04/10/18 12:09	04/11/18 15:15	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			03/27/18 12:35	1
Chloride	0.74	I V	2.0	0.60	mg/L			04/02/18 11:11	1
Fluoride	0.032	U	0.10	0.032	mg/L			03/30/18 12:57	1
Sulfate	1.4	U	5.0	1.4	mg/L			04/03/18 09:55	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: DUP-04

Date Collected: 03/23/18 08:02

Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-18

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		03/31/18 13:33	04/10/18 23:21	5
Arsenic	0.0022		0.0013	0.00046	mg/L		03/31/18 13:33	04/10/18 23:21	5
Barium	0.094		0.0025	0.00049	mg/L		03/31/18 13:33	04/10/18 23:21	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 23:21	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 23:21	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/31/18 13:33	04/10/18 23:21	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/31/18 13:33	04/10/18 23:21	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/31/18 13:33	04/10/18 23:21	5
Lithium	0.0056		0.0050	0.0011	mg/L		03/31/18 13:33	04/10/18 23:21	5
Molybdenum	0.0013	I	0.015	0.00085	mg/L		03/31/18 13:33	04/10/18 23:21	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		03/31/18 13:33	04/10/18 23:21	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/31/18 13:33	04/10/18 23:21	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	9.3		1.0	0.42	mg/L		03/31/18 13:33	04/10/18 22:13	100
Calcium	300		5.0	2.5	mg/L		03/31/18 13:33	04/10/18 22:13	100

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		04/10/18 12:09	04/11/18 15:17	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2900		50	34	mg/L			03/27/18 12:35	1
Chloride	2400		160	48	mg/L			04/04/18 09:42	80
Fluoride	0.032	U	0.10	0.032	mg/L			03/30/18 13:01	1
Sulfate	640		100	28	mg/L			04/03/18 10:27	20

Definitions/Glossary

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Qualifiers

Metals

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.

General Chemistry

Qualifier	Qualifier Description
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.
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.
α	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 Smith Plant

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: MW-12

Date Collected: 03/20/18 13:29

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			392227	03/31/18 13:33	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 20:34	DRE	TAL PEN
Total/NA	Prep	7470A			392228	03/31/18 15:08	DN1	TAL PEN
Total/NA	Analysis	7470A		1	392577	04/03/18 17:10	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391316	03/24/18 17:50	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		5	392314	04/02/18 10:24	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391874	03/28/18 14:18	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	391402	03/26/18 08:23	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/20/18 13:29	AW	TAL PEN

Client Sample ID: MW-03

Date Collected: 03/20/18 17:20

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			392227	03/31/18 13:33	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 20:57	DRE	TAL PEN
Total/NA	Prep	7470A			392228	03/31/18 15:08	DN1	TAL PEN
Total/NA	Analysis	7470A		1	392577	04/03/18 17:12	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391316	03/24/18 17:50	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	392343	04/02/18 11:09	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391874	03/28/18 14:22	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	391402	03/26/18 08:23	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/20/18 17:20	AW	TAL PEN

Client Sample ID: DUP-01

Date Collected: 03/20/18 16:20

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			392227	03/31/18 13:33	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 21:01	DRE	TAL PEN
Total/NA	Prep	7470A			392228	03/31/18 15:08	DN1	TAL PEN
Total/NA	Analysis	7470A		1	392577	04/03/18 17:14	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391316	03/24/18 17:50	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	392343	04/02/18 11:09	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391874	03/28/18 14:26	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	391402	03/26/18 08:23	RRC	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: MW-02

Date Collected: 03/21/18 09:51

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			392227	03/31/18 13:33	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 21:06	DRE	TAL PEN
Total/NA	Prep	7470A			393327	04/10/18 10:35	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 09:56	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391438	03/26/18 12:25	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	392343	04/02/18 11:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391874	03/28/18 14:30	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	391563	03/27/18 06:54	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/21/18 09:51	AW	TAL PEN

Client Sample ID: MW-07

Date Collected: 03/21/18 11:46

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A	DL		392227	03/31/18 13:33	DN1	TAL PEN
Total Recoverable	Analysis	6020	DL	25	393503	04/10/18 21:33	DRE	TAL PEN
Total Recoverable	Prep	3005A			392227	03/31/18 13:33	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 22:40	DRE	TAL PEN
Total/NA	Prep	7470A			393327	04/10/18 10:35	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 09:58	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391438	03/26/18 12:25	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		40	392343	04/02/18 11:47	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391874	03/28/18 14:42	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	391563	03/27/18 07:01	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/21/18 11:46	AW	TAL PEN

Client Sample ID: MW-06

Date Collected: 03/21/18 13:24

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A	DL		392227	03/31/18 13:33	DN1	TAL PEN
Total Recoverable	Analysis	6020	DL	100	393503	04/10/18 21:37	DRE	TAL PEN
Total Recoverable	Prep	3005A			392227	03/31/18 13:33	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 22:45	DRE	TAL PEN
Total/NA	Prep	7470A			393327	04/10/18 10:35	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 10:00	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391578	03/27/18 13:42	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		60	392343	04/02/18 12:12	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391874	03/28/18 14:50	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	391563	03/27/18 07:39	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: MW-06

Date Collected: 03/21/18 13:24

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Field Sampling		1	393575	03/21/18 13:24	AW	TAL PEN

Client Sample ID: MW-10

Date Collected: 03/22/18 10:52

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A	DL		392227	03/31/18 13:33	DN1	TAL PEN
Total Recoverable	Analysis	6020	DL	200	393503	04/10/18 21:46	DRE	TAL PEN
Total Recoverable	Prep	3005A			392227	03/31/18 13:33	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 22:54	DRE	TAL PEN
Total/NA	Prep	7470A			393327	04/10/18 10:35	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 10:35	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391575	03/27/18 13:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		60	392343	04/02/18 12:12	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	391874	03/28/18 14:58	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	391563	03/27/18 07:47	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/22/18 10:52	AW	TAL PEN

Client Sample ID: FB-01

Date Collected: 03/22/18 13:20

Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			392227	03/31/18 13:33	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 19:58	DRE	TAL PEN
Total/NA	Prep	7470A			393327	04/10/18 10:35	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 10:39	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391438	03/26/18 12:25	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	392343	04/02/18 11:09	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	392128	03/30/18 09:58	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	391563	03/27/18 06:55	RRC	TAL PEN

Client Sample ID: EB-01

Date Collected: 03/22/18 14:05

Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			392227	03/31/18 13:33	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 20:03	DRE	TAL PEN
Total/NA	Prep	7470A			393327	04/10/18 10:35	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 10:41	JAP	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: EB-01

Date Collected: 03/22/18 14:05

Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	391575	03/27/18 13:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	392343	04/02/18 11:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	392128	03/30/18 10:31	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	391563	03/27/18 06:55	RRC	TAL PEN

Client Sample ID: MW-08

Date Collected: 03/22/18 16:40

Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A	DL		392227	03/31/18 13:33	DN1	TAL PEN
Total Recoverable	Analysis	6020	DL	100	393503	04/10/18 21:55	DRE	TAL PEN
Total Recoverable	Prep	3005A			392227	03/31/18 13:33	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 23:03	DRE	TAL PEN
Total/NA	Prep	7470A			393327	04/10/18 10:35	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 10:42	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391575	03/27/18 13:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		80	392343	04/02/18 12:12	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	392128	03/30/18 10:35	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	391563	03/27/18 07:47	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/22/18 16:40	AW	TAL PEN

Client Sample ID: MW-09

Date Collected: 03/23/18 09:02

Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A	DL		392227	03/31/18 13:33	DN1	TAL PEN
Total Recoverable	Analysis	6020	DL	100	393503	04/10/18 22:09	DRE	TAL PEN
Total Recoverable	Prep	3005A			392227	03/31/18 13:33	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 23:16	DRE	TAL PEN
Total/NA	Prep	7470A			393404	04/10/18 12:09	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393589	04/11/18 15:12	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391566	03/27/18 12:35	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		60	392343	04/02/18 12:14	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	392160	03/30/18 12:50	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	392490	04/03/18 10:25	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393575	03/23/18 09:02	AW	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Client Sample ID: EB-02
Date Collected: 03/23/18 08:05
Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-16
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			392227	03/31/18 13:33	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 20:07	DRE	TAL PEN
Total/NA	Prep	7470A			393404	04/10/18 12:09	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393589	04/11/18 15:13	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391566	03/27/18 12:35	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	392343	04/02/18 11:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	392160	03/30/18 12:54	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	392490	04/03/18 09:55	RRC	TAL PEN

Client Sample ID: FB-02
Date Collected: 03/23/18 07:55
Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-17
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			392227	03/31/18 13:33	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 20:12	DRE	TAL PEN
Total/NA	Prep	7470A			393404	04/10/18 12:09	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393589	04/11/18 15:15	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391566	03/27/18 12:35	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	392343	04/02/18 11:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	392160	03/30/18 12:57	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	392490	04/03/18 09:55	RRC	TAL PEN

Client Sample ID: DUP-04
Date Collected: 03/23/18 08:02
Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-18
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A	DL		392227	03/31/18 13:33	DN1	TAL PEN
Total Recoverable	Analysis	6020	DL	100	393503	04/10/18 22:13	DRE	TAL PEN
Total Recoverable	Prep	3005A			392227	03/31/18 13:33	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 23:21	DRE	TAL PEN
Total/NA	Prep	7470A			393404	04/10/18 12:09	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393589	04/11/18 15:17	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391566	03/27/18 12:35	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		80	392625	04/04/18 09:42	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	392160	03/30/18 13:01	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	392490	04/03/18 10:27	RRC	TAL PEN

Laboratory References:

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

QC Association Summary

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Metals

Prep Batch: 392227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-1	MW-12	Total Recoverable	Water	3005A	
400-151256-2	MW-03	Total Recoverable	Water	3005A	
400-151256-3	DUP-01	Total Recoverable	Water	3005A	
400-151256-4	MW-02	Total Recoverable	Water	3005A	
400-151256-5 - DL	MW-07	Total Recoverable	Water	3005A	
400-151256-5	MW-07	Total Recoverable	Water	3005A	
400-151256-6	MW-06	Total Recoverable	Water	3005A	
400-151256-6 - DL	MW-06	Total Recoverable	Water	3005A	
400-151256-8 - DL	MW-10	Total Recoverable	Water	3005A	
400-151256-8	MW-10	Total Recoverable	Water	3005A	
400-151256-10	FB-01	Total Recoverable	Water	3005A	
400-151256-11	EB-01	Total Recoverable	Water	3005A	
400-151256-12 - DL	MW-08	Total Recoverable	Water	3005A	
400-151256-12	MW-08	Total Recoverable	Water	3005A	
400-151256-15 - DL	MW-09	Total Recoverable	Water	3005A	
400-151256-15	MW-09	Total Recoverable	Water	3005A	
400-151256-16	EB-02	Total Recoverable	Water	3005A	
400-151256-17	FB-02	Total Recoverable	Water	3005A	
400-151256-18	DUP-04	Total Recoverable	Water	3005A	
400-151256-18 - DL	DUP-04	Total Recoverable	Water	3005A	
MB 400-392227/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-392227/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-151256-1 MS	MW-12	Total Recoverable	Water	3005A	
400-151256-1 MSD	MW-12	Total Recoverable	Water	3005A	

Prep Batch: 392228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-1	MW-12	Total/NA	Water	7470A	
400-151256-2	MW-03	Total/NA	Water	7470A	
400-151256-3	DUP-01	Total/NA	Water	7470A	
MB 400-392228/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-392228/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-151258-B-3-C MS	Matrix Spike	Total/NA	Water	7470A	
400-151258-B-3-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 392577

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-1	MW-12	Total/NA	Water	7470A	392228
400-151256-2	MW-03	Total/NA	Water	7470A	392228
400-151256-3	DUP-01	Total/NA	Water	7470A	392228
MB 400-392228/14-A	Method Blank	Total/NA	Water	7470A	392228
LCS 400-392228/15-A	Lab Control Sample	Total/NA	Water	7470A	392228
400-151258-B-3-C MS	Matrix Spike	Total/NA	Water	7470A	392228
400-151258-B-3-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	392228

Prep Batch: 393327

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-4	MW-02	Total/NA	Water	7470A	
400-151256-5	MW-07	Total/NA	Water	7470A	
400-151256-6	MW-06	Total/NA	Water	7470A	
400-151256-8	MW-10	Total/NA	Water	7470A	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Metals (Continued)

Prep Batch: 393327 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-10	FB-01	Total/NA	Water	7470A	
400-151256-11	EB-01	Total/NA	Water	7470A	
400-151256-12	MW-08	Total/NA	Water	7470A	
MB 400-393327/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-393327/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-151810-D-1-B MS	Matrix Spike	Total/NA	Water	7470A	
400-151810-D-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 393404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-15	MW-09	Total/NA	Water	7470A	
400-151256-16	EB-02	Total/NA	Water	7470A	
400-151256-17	FB-02	Total/NA	Water	7470A	
400-151256-18	DUP-04	Total/NA	Water	7470A	
MB 400-393404/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-393404/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-151280-B-1-C MS	Matrix Spike	Total/NA	Water	7470A	
400-151280-B-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 393503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-1	MW-12	Total Recoverable	Water	6020	392227
400-151256-2	MW-03	Total Recoverable	Water	6020	392227
400-151256-3	DUP-01	Total Recoverable	Water	6020	392227
400-151256-4	MW-02	Total Recoverable	Water	6020	392227
400-151256-5 - DL	MW-07	Total Recoverable	Water	6020	392227
400-151256-5	MW-07	Total Recoverable	Water	6020	392227
400-151256-6 - DL	MW-06	Total Recoverable	Water	6020	392227
400-151256-6	MW-06	Total Recoverable	Water	6020	392227
400-151256-8 - DL	MW-10	Total Recoverable	Water	6020	392227
400-151256-8	MW-10	Total Recoverable	Water	6020	392227
400-151256-10	FB-01	Total Recoverable	Water	6020	392227
400-151256-11	EB-01	Total Recoverable	Water	6020	392227
400-151256-12 - DL	MW-08	Total Recoverable	Water	6020	392227
400-151256-12	MW-08	Total Recoverable	Water	6020	392227
400-151256-15 - DL	MW-09	Total Recoverable	Water	6020	392227
400-151256-15	MW-09	Total Recoverable	Water	6020	392227
400-151256-16	EB-02	Total Recoverable	Water	6020	392227
400-151256-17	FB-02	Total Recoverable	Water	6020	392227
400-151256-18 - DL	DUP-04	Total Recoverable	Water	6020	392227
400-151256-18	DUP-04	Total Recoverable	Water	6020	392227
MB 400-392227/1-A ^5	Method Blank	Total Recoverable	Water	6020	392227
LCS 400-392227/2-A	Lab Control Sample	Total Recoverable	Water	6020	392227
400-151256-1 MS	MW-12	Total Recoverable	Water	6020	392227
400-151256-1 MSD	MW-12	Total Recoverable	Water	6020	392227

Analysis Batch: 393589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-15	MW-09	Total/NA	Water	7470A	393404
400-151256-16	EB-02	Total/NA	Water	7470A	393404
400-151256-17	FB-02	Total/NA	Water	7470A	393404

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Metals (Continued)

Analysis Batch: 393589 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-18	DUP-04	Total/NA	Water	7470A	393404
MB 400-393404/14-A	Method Blank	Total/NA	Water	7470A	393404
LCS 400-393404/15-A	Lab Control Sample	Total/NA	Water	7470A	393404
400-151280-B-1-C MS	Matrix Spike	Total/NA	Water	7470A	393404
400-151280-B-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	393404

Analysis Batch: 393751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-4	MW-02	Total/NA	Water	7470A	393327
400-151256-5	MW-07	Total/NA	Water	7470A	393327
400-151256-6	MW-06	Total/NA	Water	7470A	393327
400-151256-8	MW-10	Total/NA	Water	7470A	393327
400-151256-10	FB-01	Total/NA	Water	7470A	393327
400-151256-11	EB-01	Total/NA	Water	7470A	393327
400-151256-12	MW-08	Total/NA	Water	7470A	393327
MB 400-393327/14-A	Method Blank	Total/NA	Water	7470A	393327
LCS 400-393327/15-A	Lab Control Sample	Total/NA	Water	7470A	393327
400-151810-D-1-B MS	Matrix Spike	Total/NA	Water	7470A	393327
400-151810-D-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	393327

General Chemistry

Analysis Batch: 391316

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-1	MW-12	Total/NA	Water	SM 2540C	
400-151256-2	MW-03	Total/NA	Water	SM 2540C	
400-151256-3	DUP-01	Total/NA	Water	SM 2540C	
MB 400-391316/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-391316/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-151170-A-9 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 391402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-1	MW-12	Total/NA	Water	SM 4500 SO4 E	
400-151256-2	MW-03	Total/NA	Water	SM 4500 SO4 E	
400-151256-3	DUP-01	Total/NA	Water	SM 4500 SO4 E	
MB 400-391402/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-391402/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-391402/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-151248-G-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-151248-G-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 391438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-4	MW-02	Total/NA	Water	SM 2540C	
400-151256-5	MW-07	Total/NA	Water	SM 2540C	
400-151256-10	FB-01	Total/NA	Water	SM 2540C	
MB 400-391438/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-391438/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-151189-B-1 DU	Duplicate	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

General Chemistry (Continued)

Analysis Batch: 391438 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151191-B-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 391563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-4	MW-02	Total/NA	Water	SM 4500 SO4 E	
400-151256-5	MW-07	Total/NA	Water	SM 4500 SO4 E	
400-151256-6	MW-06	Total/NA	Water	SM 4500 SO4 E	
400-151256-8	MW-10	Total/NA	Water	SM 4500 SO4 E	
400-151256-10	FB-01	Total/NA	Water	SM 4500 SO4 E	
400-151256-11	EB-01	Total/NA	Water	SM 4500 SO4 E	
400-151256-12	MW-08	Total/NA	Water	SM 4500 SO4 E	
MB 400-391563/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-391563/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-391563/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-150822-G-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-150822-G-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	
400-151209-G-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-151209-G-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 391566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-15	MW-09	Total/NA	Water	SM 2540C	
400-151256-16	EB-02	Total/NA	Water	SM 2540C	
400-151256-17	FB-02	Total/NA	Water	SM 2540C	
400-151256-18	DUP-04	Total/NA	Water	SM 2540C	
MB 400-391566/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-391566/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-151138-B-47 DU	Duplicate	Total/NA	Water	SM 2540C	
400-151322-D-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 391575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-8	MW-10	Total/NA	Water	SM 2540C	
400-151256-11	EB-01	Total/NA	Water	SM 2540C	
400-151256-12	MW-08	Total/NA	Water	SM 2540C	
MB 400-391575/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-391575/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-151170-A-23 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 391578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-6	MW-06	Total/NA	Water	SM 2540C	
MB 400-391578/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-391578/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-151322-A-6 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 391874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-1	MW-12	Total/NA	Water	SM 4500 F C	
400-151256-2	MW-03	Total/NA	Water	SM 4500 F C	
400-151256-3	DUP-01	Total/NA	Water	SM 4500 F C	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

General Chemistry (Continued)

Analysis Batch: 391874 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-4	MW-02	Total/NA	Water	SM 4500 F C	
400-151256-5	MW-07	Total/NA	Water	SM 4500 F C	
400-151256-6	MW-06	Total/NA	Water	SM 4500 F C	
400-151256-8	MW-10	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-A-7 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-150860-A-7 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-151256-5 DU	MW-07	Total/NA	Water	SM 4500 F C	

Analysis Batch: 392128

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-10	FB-01	Total/NA	Water	SM 4500 F C	
400-151256-11	EB-01	Total/NA	Water	SM 4500 F C	
400-151256-12	MW-08	Total/NA	Water	SM 4500 F C	
MB 400-392128/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-392128/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
660-86263-C-1 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
660-86263-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
660-86302-C-3 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 392160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-15	MW-09	Total/NA	Water	SM 4500 F C	
400-151256-16	EB-02	Total/NA	Water	SM 4500 F C	
400-151256-17	FB-02	Total/NA	Water	SM 4500 F C	
400-151256-18	DUP-04	Total/NA	Water	SM 4500 F C	
MB 400-392160/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-392160/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-151514-A-4 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-151514-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-151335-B-2 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 392314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-1	MW-12	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-A-7 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-150861-A-7 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 392343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-2	MW-03	Total/NA	Water	SM 4500 Cl- E	
400-151256-3	DUP-01	Total/NA	Water	SM 4500 Cl- E	
400-151256-4	MW-02	Total/NA	Water	SM 4500 Cl- E	
400-151256-5	MW-07	Total/NA	Water	SM 4500 Cl- E	
400-151256-6	MW-06	Total/NA	Water	SM 4500 Cl- E	
400-151256-8	MW-10	Total/NA	Water	SM 4500 Cl- E	
400-151256-10	FB-01	Total/NA	Water	SM 4500 Cl- E	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

General Chemistry (Continued)

Analysis Batch: 392343 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-11	EB-01	Total/NA	Water	SM 4500 Cl- E	
400-151256-12	MW-08	Total/NA	Water	SM 4500 Cl- E	
400-151256-15	MW-09	Total/NA	Water	SM 4500 Cl- E	
400-151256-16	EB-02	Total/NA	Water	SM 4500 Cl- E	
400-151256-17	FB-02	Total/NA	Water	SM 4500 Cl- E	
MB 400-392343/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-392343/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-392343/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-151256-2 MS	MW-03	Total/NA	Water	SM 4500 Cl- E	
400-151256-2 MSD	MW-03	Total/NA	Water	SM 4500 Cl- E	
400-151256-4 MS	MW-02	Total/NA	Water	SM 4500 Cl- E	
400-151256-4 MSD	MW-02	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 392490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-15	MW-09	Total/NA	Water	SM 4500 SO4 E	
400-151256-16	EB-02	Total/NA	Water	SM 4500 SO4 E	
400-151256-17	FB-02	Total/NA	Water	SM 4500 SO4 E	
400-151256-18	DUP-04	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	
400-151335-B-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-151335-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 392625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-18	DUP-04	Total/NA	Water	SM 4500 Cl- E	
MB 400-392625/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-392625/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-392625/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-151496-C-4 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-151496-C-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Field Service / Mobile Lab

Analysis Batch: 393575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-1	MW-12	Total/NA	Water	Field Sampling	
400-151256-2	MW-03	Total/NA	Water	Field Sampling	
400-151256-4	MW-02	Total/NA	Water	Field Sampling	
400-151256-5	MW-07	Total/NA	Water	Field Sampling	
400-151256-6	MW-06	Total/NA	Water	Field Sampling	
400-151256-8	MW-10	Total/NA	Water	Field Sampling	
400-151256-12	MW-08	Total/NA	Water	Field Sampling	
400-151256-15	MW-09	Total/NA	Water	Field Sampling	

QC Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-392227/1-A ^5
Matrix: Water
Analysis Batch: 393503

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 392227

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		03/31/18 13:33	04/10/18 19:45	5
Arsenic	0.00046	U	0.0013	0.00046	mg/L		03/31/18 13:33	04/10/18 19:45	5
Barium	0.00049	U	0.0025	0.00049	mg/L		03/31/18 13:33	04/10/18 19:45	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 19:45	5
Boron	0.021	U	0.050	0.021	mg/L		03/31/18 13:33	04/10/18 19:45	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		03/31/18 13:33	04/10/18 19:45	5
Calcium	0.13	U	0.25	0.13	mg/L		03/31/18 13:33	04/10/18 19:45	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		03/31/18 13:33	04/10/18 19:45	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		03/31/18 13:33	04/10/18 19:45	5
Lead	0.00035	U	0.0013	0.00035	mg/L		03/31/18 13:33	04/10/18 19:45	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		03/31/18 13:33	04/10/18 19:45	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		03/31/18 13:33	04/10/18 19:45	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		03/31/18 13:33	04/10/18 19:45	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		03/31/18 13:33	04/10/18 19:45	5

Lab Sample ID: LCS 400-392227/2-A
Matrix: Water
Analysis Batch: 393503

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 392227

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0510		mg/L		102	80 - 120
Arsenic	0.0500	0.0486		mg/L		97	80 - 120
Barium	0.0500	0.0499		mg/L		100	80 - 120
Beryllium	0.0500	0.0495		mg/L		99	80 - 120
Boron	0.100	0.0997		mg/L		100	80 - 120
Cadmium	0.0500	0.0503		mg/L		101	80 - 120
Calcium	5.00	5.00		mg/L		100	80 - 120
Chromium	0.0500	0.0504		mg/L		101	80 - 120
Cobalt	0.0500	0.0505		mg/L		101	80 - 120
Lead	0.0500	0.0495		mg/L		99	80 - 120
Lithium	0.0500	0.0478		mg/L		96	80 - 120
Molybdenum	0.0500	0.0499		mg/L		100	80 - 120
Selenium	0.0500	0.0481		mg/L		96	80 - 120
Thallium	0.0100	0.00984		mg/L		98	80 - 120

Lab Sample ID: 400-151256-1 MS
Matrix: Water
Analysis Batch: 393503

Client Sample ID: MW-12
Prep Type: Total Recoverable
Prep Batch: 392227

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0010	U	0.0500	0.0528		mg/L		106	75 - 125
Arsenic	0.00046	U	0.0500	0.0497		mg/L		99	75 - 125
Barium	0.013		0.0500	0.0637		mg/L		101	75 - 125
Beryllium	0.00034	U	0.0500	0.0512		mg/L		102	75 - 125
Boron	0.072		0.100	0.186		mg/L		113	75 - 125
Cadmium	0.00034	U	0.0500	0.0506		mg/L		101	75 - 125
Calcium	34		5.00	39.1		mg/L		98	75 - 125
Chromium	0.0011	U	0.0500	0.0512		mg/L		102	75 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

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

Lab Sample ID: 400-151256-1 MS
Matrix: Water
Analysis Batch: 393503

Client Sample ID: MW-12
Prep Type: Total Recoverable
Prep Batch: 392227

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cobalt	0.00040	U	0.0500	0.0515		mg/L		103	75 - 125
Lead	0.00035	U	0.0500	0.0489		mg/L		98	75 - 125
Lithium	0.016		0.0500	0.0824	J3	mg/L		132	75 - 125
Molybdenum	0.00085	U	0.0500	0.0493		mg/L		99	75 - 125
Selenium	0.00024	U	0.0500	0.0494		mg/L		99	75 - 125
Thallium	0.000085	U	0.0100	0.00995		mg/L		100	75 - 125

Lab Sample ID: 400-151256-1 MSD
Matrix: Water
Analysis Batch: 393503

Client Sample ID: MW-12
Prep Type: Total Recoverable
Prep Batch: 392227

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	0.0010	U	0.0500	0.0523		mg/L		105	75 - 125	1	20
Arsenic	0.00046	U	0.0500	0.0499		mg/L		100	75 - 125	0	20
Barium	0.013		0.0500	0.0648		mg/L		104	75 - 125	2	20
Beryllium	0.00034	U	0.0500	0.0498		mg/L		100	75 - 125	3	20
Boron	0.072		0.100	0.177		mg/L		104	75 - 125	5	20
Cadmium	0.00034	U	0.0500	0.0509		mg/L		102	75 - 125	1	20
Calcium	34		5.00	39.5		mg/L		106	75 - 125	1	20
Chromium	0.0011	U	0.0500	0.0521		mg/L		104	75 - 125	2	20
Cobalt	0.00040	U	0.0500	0.0524		mg/L		105	75 - 125	2	20
Lead	0.00035	U	0.0500	0.0480		mg/L		96	75 - 125	2	20
Lithium	0.016		0.0500	0.0778		mg/L		123	75 - 125	6	20
Molybdenum	0.00085	U	0.0500	0.0493		mg/L		99	75 - 125	0	20
Selenium	0.00024	U	0.0500	0.0483		mg/L		97	75 - 125	2	20
Thallium	0.000085	U	0.0100	0.00972		mg/L		97	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-392228/14-A
Matrix: Water
Analysis Batch: 392577

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 392228

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		03/31/18 15:08	04/03/18 15:10	1

Lab Sample ID: LCS 400-392228/15-A
Matrix: Water
Analysis Batch: 392577

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 392228

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00107		mg/L		106	80 - 120

Lab Sample ID: 400-151258-B-3-C MS
Matrix: Water
Analysis Batch: 392577

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 392228

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	0.000070	U	0.00201	0.00196		mg/L		97	80 - 120

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Lab Sample ID: 400-151258-B-3-D MSD
Matrix: Water
Analysis Batch: 392577

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 392228
%Rec. RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	0.000070	U	0.00201	0.00205		mg/L		102	80 - 120	5	20

Lab Sample ID: MB 400-393327/14-A
Matrix: Water
Analysis Batch: 393751

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 393327

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	U	0.00020	0.000070	mg/L		04/10/18 08:55	04/12/18 09:06	1

Lab Sample ID: LCS 400-393327/15-A
Matrix: Water
Analysis Batch: 393751

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 393327
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00106		mg/L		105	80 - 120

Lab Sample ID: 400-151810-D-1-B MS
Matrix: Water
Analysis Batch: 393751

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 393327
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	0.000070	U	0.00101	0.000977		mg/L		97	80 - 120

Lab Sample ID: 400-151810-D-1-C MSD
Matrix: Water
Analysis Batch: 393751

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 393327
%Rec. RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	0.000070	U	0.00101	0.000948		mg/L		94	80 - 120	3	20

Lab Sample ID: MB 400-393404/14-A
Matrix: Water
Analysis Batch: 393589

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 393404

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000777	I	0.00020	0.000070	mg/L		04/10/18 12:08	04/11/18 15:00	1

Lab Sample ID: LCS 400-393404/15-A
Matrix: Water
Analysis Batch: 393589

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 393404
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00101		mg/L		100	80 - 120

Lab Sample ID: 400-151280-B-1-C MS
Matrix: Water
Analysis Batch: 393589

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 393404
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	0.000070	U	0.00201	0.00198		mg/L		98	80 - 120

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

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

Lab Sample ID: 400-151280-B-1-D MSD

Matrix: Water

Analysis Batch: 393589

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 393404

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	0.00193		mg/L		96	80 - 120	2	20

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

Lab Sample ID: MB 400-391316/1

Matrix: Water

Analysis Batch: 391316

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			03/24/18 17:50	1

Lab Sample ID: LCS 400-391316/2

Matrix: Water

Analysis Batch: 391316

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

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

Lab Sample ID: 400-151170-A-9 DU

Matrix: Water

Analysis Batch: 391316

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	92		92.0		mg/L		0	5

Lab Sample ID: MB 400-391438/1

Matrix: Water

Analysis Batch: 391438

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			03/26/18 12:25	1

Lab Sample ID: LCS 400-391438/2

Matrix: Water

Analysis Batch: 391438

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	246		mg/L		84	78 - 122

Lab Sample ID: 400-151189-B-1 DU

Matrix: Water

Analysis Batch: 391438

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	3.4	U	3.4	U	mg/L		NC	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

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

Lab Sample ID: 400-151191-B-1 DU
Matrix: Water
Analysis Batch: 391438

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	46		46.0		mg/L	-	0	5

Lab Sample ID: MB 400-391566/1
Matrix: Water
Analysis Batch: 391566

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	-		03/27/18 12:35	1

Lab Sample ID: LCS 400-391566/2
Matrix: Water
Analysis Batch: 391566

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	246		mg/L	-	84	78 - 122

Lab Sample ID: 400-151138-B-47 DU
Matrix: Water
Analysis Batch: 391566

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	160		160		mg/L	-	0	5

Lab Sample ID: 400-151322-D-1 DU
Matrix: Water
Analysis Batch: 391566

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	210		206		mg/L	-	0	5

Lab Sample ID: MB 400-391575/1
Matrix: Water
Analysis Batch: 391575

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	-		03/27/18 13:11	1

Lab Sample ID: LCS 400-391575/2
Matrix: Water
Analysis Batch: 391575

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	280		mg/L	-	96	78 - 122

Lab Sample ID: 400-151170-A-23 DU
Matrix: Water
Analysis Batch: 391575

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	76		76.0		mg/L	-	0	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Lab Sample ID: MB 400-391578/1
Matrix: Water
Analysis Batch: 391578

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			03/27/18 13:42	1

Lab Sample ID: LCS 400-391578/2
Matrix: Water
Analysis Batch: 391578

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	268		mg/L		91	78 - 122

Lab Sample ID: 400-151322-A-6 DU
Matrix: Water
Analysis Batch: 391578

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		228		mg/L		0	5

Method: SM 4500 Cl- E - Chloride, Total

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-A-7 MS
Matrix: Water
Analysis Batch: 392314

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	6.9	V	10.0	17.2		mg/L		103	73 - 120

QC Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

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

Lab Sample ID: 400-150861-A-7 MSD
Matrix: Water
Analysis Batch: 392314

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	6.9	V	10.0	17.1		mg/L		101	73 - 120	1	8

Lab Sample ID: MB 400-392343/6
Matrix: Water
Analysis Batch: 392343

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.46	I	2.0	0.60	mg/L			04/02/18 11:09	1
Chloride	1.46	I	2.0	0.60	mg/L			04/02/18 11:09	1

Lab Sample ID: LCS 400-392343/7
Matrix: Water
Analysis Batch: 392343

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
Chloride	30.0	31.9		mg/L		106	90 - 110

Lab Sample ID: MRL 400-392343/3
Matrix: Water
Analysis Batch: 392343

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	2.47		mg/L		123	50 - 150
Chloride	2.00	2.47		mg/L		123	50 - 150

Lab Sample ID: 400-151256-2 MS
Matrix: Water
Analysis Batch: 392343

Client Sample ID: MW-03
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	11	V	10.0	21.1		mg/L		102	73 - 120
Chloride	11	V	10.0	21.1		mg/L		102	73 - 120

Lab Sample ID: 400-151256-2 MSD
Matrix: Water
Analysis Batch: 392343

Client Sample ID: MW-03
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	11	V	10.0	21.2		mg/L		103	73 - 120	0	8
Chloride	11	V	10.0	21.2		mg/L		103	73 - 120	0	8

Lab Sample ID: 400-151256-4 MS
Matrix: Water
Analysis Batch: 392343

Client Sample ID: MW-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	9.3	V	10.0	19.7		mg/L		104	73 - 120
Chloride	9.3	V	10.0	19.7		mg/L		104	73 - 120

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

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

Lab Sample ID: 400-151256-4 MSD
Matrix: Water
Analysis Batch: 392343

Client Sample ID: MW-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	9.3	V	10.0	20.7		mg/L		114	73 - 120	5	8
Chloride	9.3	V	10.0	20.7		mg/L		114	73 - 120	5	8

Lab Sample ID: MB 400-392625/6
Matrix: Water
Analysis Batch: 392625

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.24	I	2.0	0.60	mg/L			04/04/18 09:09	1

Lab Sample ID: LCS 400-392625/7
Matrix: Water
Analysis Batch: 392625

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	30.7		mg/L		102	90 - 110

Lab Sample ID: MRL 400-392625/3
Matrix: Water
Analysis Batch: 392625

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	2.66		mg/L		133	50 - 150

Lab Sample ID: 400-151496-C-4 MS
Matrix: Water
Analysis Batch: 392625

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	22		10.0	32.2		mg/L		98	73 - 120

Lab Sample ID: 400-151496-C-4 MSD
Matrix: Water
Analysis Batch: 392625

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	22		10.0	32.1		mg/L		97	73 - 120	0	8

Method: SM 4500 F C - Fluoride

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

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Method: SM 4500 F C - Fluoride (Continued)

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-A-7 MS
Matrix: Water
Analysis Batch: 391874

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	0.710	J3	mg/L		63	75 - 125

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

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	0.710	J3	mg/L		63	75 - 125	0	4

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

Client Sample ID: MW-07
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 400-392128/3
Matrix: Water
Analysis Batch: 392128

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			03/30/18 09:27	1

Lab Sample ID: LCS 400-392128/4
Matrix: Water
Analysis Batch: 392128

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: 660-86263-C-1 MS
Matrix: Water
Analysis Batch: 392128

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: 660-86263-C-1 MSD
Matrix: Water
Analysis Batch: 392128

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

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Lab Sample ID: 660-86302-C-3 DU
Matrix: Water
Analysis Batch: 392128

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Fluoride	0.14		0.140		mg/L		0	4

Lab Sample ID: MB 400-392160/3
Matrix: Water
Analysis Batch: 392160

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			03/30/18 12:29	1

Lab Sample ID: LCS 400-392160/4
Matrix: Water
Analysis Batch: 392160

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: 400-151514-A-4 MS
Matrix: Water
Analysis Batch: 392160

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	0.17		1.00	1.26		mg/L		109	75 - 125

Lab Sample ID: 400-151514-A-4 MSD
Matrix: Water
Analysis Batch: 392160

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	Limit
Fluoride	0.17		1.00	1.26		mg/L		109	75 - 125	0	4

Lab Sample ID: 400-151335-B-2 DU
Matrix: Water
Analysis Batch: 392160

Client Sample ID: Duplicate
Prep Type: Total/NA

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

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-391402/6
Matrix: Water
Analysis Batch: 391402

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			03/26/18 08:09	1

QC Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

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

Lab Sample ID: LCS 400-391402/7
Matrix: Water
Analysis Batch: 391402

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	14.7		mg/L		98	90 - 110

Lab Sample ID: MRL 400-391402/3
Matrix: Water
Analysis Batch: 391402

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	4.63	I	mg/L		93	50 - 150

Lab Sample ID: 400-151248-G-1 MS
Matrix: Water
Analysis Batch: 391402

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	14		10.0	23.5		mg/L		96	77 - 128

Lab Sample ID: 400-151248-G-1 MSD
Matrix: Water
Analysis Batch: 391402

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	14		10.0	23.6		mg/L		97	77 - 128	1	5

Lab Sample ID: MB 400-391563/6
Matrix: Water
Analysis Batch: 391563

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			03/27/18 06:47	1

Lab Sample ID: LCS 400-391563/7
Matrix: Water
Analysis Batch: 391563

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 400-391563/3
Matrix: Water
Analysis Batch: 391563

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	4.58	I	mg/L		92	50 - 150

Lab Sample ID: 400-150822-G-1 MS
Matrix: Water
Analysis Batch: 391563

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	1.6	I	10.0	1.4	U J3	mg/L		0	77 - 128

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

Lab Sample ID: 400-150822-G-1 MSD
Matrix: Water
Analysis Batch: 391563

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	1.6	I	10.0	1.4	U J3	mg/L		0	77 - 128	NC	5

Lab Sample ID: 400-151209-G-1 MS
Matrix: Water
Analysis Batch: 391563

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	RPD	RPD Limit
Sulfate	1.4	U	10.0	10.6		mg/L		106	77 - 128		

Lab Sample ID: 400-151209-G-1 MSD
Matrix: Water
Analysis Batch: 391563

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	10.8		mg/L		108	77 - 128	2	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	RPD	RPD Limit
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	RPD	RPD Limit
Sulfate	5.00	4.54	I	mg/L		91	50 - 150		

Lab Sample ID: 400-151335-B-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	RPD	RPD Limit
Sulfate	6.9		10.0	17.6		mg/L		107	77 - 128		

Lab Sample ID: 400-151335-B-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	6.9		10.0	17.7		mg/L		107	77 - 128	0	5

TestAmerica Pensacola

Chain of Custody Record



TestAmerica Laboratories, Inc.

Regulatory Program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other:		Site Contact: Lab Contact: Cheyenne Whitmire Performed MS/MSD (Y/N) _____ Filtered Sample (Y/N) _____ 9315_Ra226, 9320_Ra228, Ra226Ra228_GFPc SM4500_CIE - Chloride, SM4500_SO4_F - Sulfate, 4500_F_C Total Dissolved Solids, 4500_F_C 6020 - Sb, As, Ba, B, Be, Ca, Cd, Cr, Co, Pb, Li, Mo, Se, Ti, 7470A - Mercury Field Sampling - Field Sampling Parameters		Date: _____ Carrier: _____ COC No: _____ of _____ COCs Sampler: Rick Hagendorfer For Lab Use Only: Walk-in Client: _____ Lab Sampling: _____ Job / SDG No.: _____ Sample Specific Notes: _____					
Project Manager: _____ Tel/Fax: _____ Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below _____ <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Sample Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months					
Sample Date	Sample Time	Sample Type (c=Comp, g=Grab)	Matrix	# of Cont.	Sample Date	Sample Time	Sample Type (c=Comp, g=Grab)	Matrix	# of Cont.
MW-02	0957	G	GW	3	3-21-18	0957	G	GW	3
MW-03	1720	G	GW	3	3-20-18	1720	G	GW	3
MW-06	1324	G	GW	3	3-21-18	1324	G	GW	3
MW-07	1146	G	GW	3	3-21-18	1146	G	GW	3
MW-08	1640	G	GW	3	3-22-18	1640	G	GW	3
MW-09	0902	G	GW	3	3-23-18	0902	G	GW	3
MW-10	1052	G	GW	3	3-22-18	1052	G	GW	3
MW-12	1329	G	GW	3	3-20-18	1329	G	GW	3
DuP-01	1620	G	GW	3	3-20-18	1620	G	GW	3
DuP-04	0802	G	GW	3	3-23-18	0802	G	GW	3
EB-01	1405	G	W	3	3-22-18	1405	G	W	3
FB-01	1320	G	W	3	3-22-18	1320	G	W	3
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample. <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown									
Special Instructions/QC Requirements & Comments: Cooler Temp. (°C): Obs'd: 4.8°C, 0.0°C, 4.1°C, 0.0°C, 0.0°C, IR-7 Custody Seal No.: _____ Relinquished by: [Signature] Company: [Signature] Date/Time: 3/23/18 1705 Relinquished by: [Signature] Company: [Signature] Date/Time: 3/23/18 1705 Relinquished by: [Signature] Company: [Signature] Date/Time: _____									



Chain of Custody Record



Pensacola, FL 32514-7045
phone 850.474.1001 fax 850.474.4789

Regulatory Program: DW NPDES RCRA Other: _____

Project Manager: _____

Site Contact: _____

Lab Contact: Cheyenne Whitmore

Project Name: CCR Smith Plant

Client Contact

CALENDAR DAYS WORKING DAYS
 Analysis Turnaround Time
 TAT if different from Below _____
 2 weeks
 1 week
 2 days
 1 day

Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp, G-Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPc	SM4500_CIE - Chloride, SM4500_SO4_F - Sulfate, 2540C - SM4500_SOD_F - Total Dissolved Solids, 4500_F_C Fluoride	6020 - Sb, As, Ba, B, Be, Ca, Cd, Cr, Co, Pb, Li, Mo, Se, Ti, 7470A - Mercury	Field Sampling - Field Sampling Parameters	Date	Carrier	COC No:
EB-02	3-23-18	0805	G	W	3		X		X	X				2
FB-02	3-23-18	0755	G	W	3		X		X	X				2

Preservation Used: 1= Ice, 2= HCI; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification: _____
 Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

Special Instructions/QC Requirements & Comments: _____

Non-Hazard Flammable Skin Irritant Poison B Unknown
 Return to Client Disposal by Lab Archive for _____ Months

Cooler Temp. (°C): Obs'd: _____ Therm ID No.: _____
 48°C, 0.0°C, 4.1°C, 0.0°C, 0.0°C, 0.0°C, IR-7

Relinquished by: _____ Date/Time: 3-23-18 1705
 Relinquished by: _____ Date/Time: 3-23-18 1705
 Relinquished by: _____ Date/Time: _____

Company: _____
 Company: _____
 Company: _____

Received by: _____
 Received by: _____
 Received in Laboratory by: _____



Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-151256-1

SDG Number: Ash Pond

Login Number: 151256

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	4.8°C, 0.0°C, 4.1°C, 0.0°C, 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	



Accreditation/Certification Summary

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

TestAmerica Job ID: 400-151256-1
SDG: Ash Pond

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
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	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
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

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-151256-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Smith Plant

For:

Gulf Power Company

BIN 731

One Energy Place

Pensacola, Florida 32520

Attn: Kristi Mitchell



Authorized for release by:

4/20/2018 3:33:55 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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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 Smith Plant

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

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 Smith Plant

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-151256-1	MW-12	Water	03/20/18 13:29	03/22/18 14:40
400-151256-2	MW-03	Water	03/20/18 17:20	03/22/18 14:40
400-151256-3	DUP-01	Water	03/20/18 16:20	03/22/18 14:40
400-151256-4	MW-02	Water	03/21/18 09:51	03/22/18 14:40
400-151256-5	MW-07	Water	03/21/18 11:46	03/22/18 14:40
400-151256-6	MW-06	Water	03/21/18 13:24	03/22/18 14:40
400-151256-8	MW-10	Water	03/22/18 10:52	03/22/18 14:40
400-151256-10	FB-01	Water	03/22/18 13:20	03/23/18 17:05
400-151256-11	EB-01	Water	03/22/18 14:05	03/23/18 17:05
400-151256-12	MW-08	Water	03/22/18 16:40	03/23/18 17:05
400-151256-15	MW-09	Water	03/23/18 09:02	03/23/18 17:05
400-151256-16	EB-02	Water	03/23/18 08:05	03/23/18 17:05
400-151256-17	FB-02	Water	03/23/18 07:55	03/23/18 17:05
400-151256-18	DUP-04	Water	03/23/18 08:02	03/23/18 17:05

Client Sample Results

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

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

Client Sample ID: MW-12
Date Collected: 03/20/18 13:29
Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-1
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	1.45		0.195	0.235	1.00	0.0838	pCi/L	03/28/18 10:18	04/19/18 05:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					03/28/18 10:18	04/19/18 05:54	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.369		0.237	0.240	1.00	0.364	pCi/L	03/28/18 10:53	04/04/18 14:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					03/28/18 10:53	04/04/18 14:23	1
Y Carrier	90.5		40 - 110					03/28/18 10:53	04/04/18 14:23	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	1.81		0.307	0.336	5.00	0.364	pCi/L		04/19/18 17:52	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

Client Sample ID: MW-03
Date Collected: 03/20/18 17:20
Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-2
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	1.03		0.168	0.192	1.00	0.0903	pCi/L	03/28/18 10:18	04/19/18 05:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					03/28/18 10:18	04/19/18 05:55	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.793		0.296	0.305	1.00	0.416	pCi/L	03/28/18 10:53	04/04/18 14:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					03/28/18 10:53	04/04/18 14:25	1
Y Carrier	92.0		40 - 110					03/28/18 10:53	04/04/18 14:25	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		0.340	0.360	5.00	0.416	pCi/L		04/19/18 17:52	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

Client Sample ID: DUP-01

Date Collected: 03/20/18 16:20

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-3

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	0.927		0.159	0.180	1.00	0.0915	pCi/L	03/28/18 10:18	04/19/18 05:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					03/28/18 10:18	04/19/18 05:55	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.421		0.236	0.239	1.00	0.355	pCi/L	03/28/18 10:53	04/04/18 14:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					03/28/18 10:53	04/04/18 14:25	1
Y Carrier	92.3		40 - 110					03/28/18 10:53	04/04/18 14:25	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	1.35		0.285	0.299	5.00	0.355	pCi/L		04/19/18 17:52	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

Client Sample ID: MW-02
Date Collected: 03/21/18 09:51
Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-4
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	0.935		0.152	0.174	1.00	0.0726	pCi/L	03/28/18 10:18	04/19/18 05:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					03/28/18 10:18	04/19/18 05:55	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.381		0.238	0.241	1.00	0.365	pCi/L	03/28/18 10:53	04/04/18 14:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					03/28/18 10:53	04/04/18 14:25	1
Y Carrier	89.0		40 - 110					03/28/18 10:53	04/04/18 14:25	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	1.32		0.282	0.297	5.00	0.365	pCi/L		04/19/18 17:52	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

Client Sample ID: MW-07
Date Collected: 03/21/18 11:46
Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-5
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	15.8		0.610	1.55	1.00	0.0610	pCi/L	03/28/18 10:18	04/19/18 05:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					03/28/18 10:18	04/19/18 05:55	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.42		0.413	0.519	1.00	0.349	pCi/L	03/28/18 10:53	04/04/18 14:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					03/28/18 10:53	04/04/18 14:25	1
Y Carrier	90.5		40 - 110					03/28/18 10:53	04/04/18 14:25	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	19.3		0.737	1.63	5.00	0.349	pCi/L		04/19/18 17:52	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

Client Sample ID: MW-06
Date Collected: 03/21/18 13:24
Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-6
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	8.57		0.447	0.891	1.00	0.0731	pCi/L	03/28/18 10:18	04/19/18 05:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					03/28/18 10:18	04/19/18 05:55	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	16.0		0.825	1.68	1.00	0.440	pCi/L	03/28/18 10:53	04/04/18 14:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					03/28/18 10:53	04/04/18 14:25	1
Y Carrier	90.8		40 - 110					03/28/18 10:53	04/04/18 14:25	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	24.5		0.938	1.90	5.00	0.440	pCi/L		04/19/18 17:52	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

Client Sample ID: MW-10
Date Collected: 03/22/18 10:52
Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-8
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	4.80		0.336	0.547	1.00	0.0664	pCi/L	03/28/18 10:18	04/19/18 05:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/28/18 10:18	04/19/18 05:55	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	14.9		0.799	1.58	1.00	0.400	pCi/L	03/28/18 10:53	04/04/18 14:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/28/18 10:53	04/04/18 14:26	1
Y Carrier	87.5		40 - 110					03/28/18 10:53	04/04/18 14:26	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	19.7		0.867	1.67	5.00	0.400	pCi/L		04/19/18 17:52	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

Client Sample ID: FB-01
Date Collected: 03/22/18 13:20
Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-10
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	0.00290	U	0.0343	0.0343	1.00	0.0723	pCi/L	03/28/18 10:18	04/19/18 05:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					03/28/18 10:18	04/19/18 05:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0465	U	0.220	0.220	1.00	0.384	pCi/L	03/28/18 10:53	04/04/18 14:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					03/28/18 10:53	04/04/18 14:26	1
Y Carrier	89.0		40 - 110					03/28/18 10:53	04/04/18 14:26	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	0.0494	U	0.223	0.223	5.00	0.384	pCi/L		04/19/18 17:52	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

Client Sample ID: EB-01
Date Collected: 03/22/18 14:05
Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-11
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	0.00652	U	0.0409	0.0409	1.00	0.0807	pCi/L	03/28/18 10:18	04/19/18 05:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/28/18 10:18	04/19/18 05:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.261	U	0.205	0.207	1.00	0.324	pCi/L	03/28/18 10:53	04/04/18 14:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/28/18 10:53	04/04/18 14:26	1
Y Carrier	92.0		40 - 110					03/28/18 10:53	04/04/18 14:26	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	0.268	U	0.209	0.211	5.00	0.324	pCi/L		04/19/18 17:52	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

Client Sample ID: MW-08
Date Collected: 03/22/18 16:40
Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-12
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	11.7		0.516	1.17	1.00	0.0704	pCi/L	03/28/18 10:18	04/19/18 05:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					03/28/18 10:18	04/19/18 05:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	20.7		0.903	2.11	1.00	0.352	pCi/L	03/28/18 10:53	04/04/18 14:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					03/28/18 10:53	04/04/18 14:26	1
Y Carrier	90.5		40 - 110					03/28/18 10:53	04/04/18 14:26	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	32.4		1.04	2.41	5.00	0.352	pCi/L		04/19/18 17:52	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

Client Sample ID: MW-09

Date Collected: 03/23/18 09:02

Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-15

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	7.28		0.409	0.773	1.00	0.0735	pCi/L	03/28/18 10:18	04/19/18 05:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					03/28/18 10:18	04/19/18 05:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	5.47		0.485	0.699	1.00	0.312	pCi/L	03/28/18 10:53	04/04/18 14:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					03/28/18 10:53	04/04/18 14:27	1
Y Carrier	87.9		40 - 110					03/28/18 10:53	04/04/18 14:27	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	12.8		0.634	1.04	5.00	0.312	pCi/L		04/19/18 17:52	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

Client Sample ID: EB-02
Date Collected: 03/23/18 08:05
Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-16
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	-0.000606	U	0.0285	0.0285	1.00	0.0655	pCi/L	03/28/18 10:18	04/19/18 05:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					03/28/18 10:18	04/19/18 05:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.198	U	0.221	0.222	1.00	0.363	pCi/L	03/28/18 10:53	04/04/18 14:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					03/28/18 10:53	04/04/18 14:27	1
Y Carrier	88.6		40 - 110					03/28/18 10:53	04/04/18 14:27	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	0.198	U	0.223	0.224	5.00	0.363	pCi/L		04/19/18 17:52	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

Client Sample ID: FB-02
Date Collected: 03/23/18 07:55
Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-17
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	0.0448	U	0.0439	0.0441	1.00	0.0665	pCi/L	03/28/18 10:18	04/19/18 05:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	109		40 - 110					03/28/18 10:18	04/19/18 05:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.137	U	0.190	0.190	1.00	0.317	pCi/L	03/28/18 10:53	04/04/18 14:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	109		40 - 110					03/28/18 10:53	04/04/18 14:28	1
Y Carrier	91.2		40 - 110					03/28/18 10:53	04/04/18 14:28	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	0.181	U	0.195	0.195	5.00	0.317	pCi/L		04/19/18 17:52	1

Client Sample Results

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

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

Client Sample ID: DUP-04

Date Collected: 03/23/18 08:02

Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-18

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	7.95		0.426	0.832	1.00	0.0630	pCi/L	03/28/18 10:18	04/19/18 05:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					03/28/18 10:18	04/19/18 05:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	6.28		0.541	0.791	1.00	0.331	pCi/L	03/28/18 10:53	04/04/18 14:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					03/28/18 10:53	04/04/18 14:28	1
Y Carrier	81.9		40 - 110					03/28/18 10:53	04/04/18 14:28	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	14.2		0.689	1.15	5.00	0.331	pCi/L		04/19/18 17:52	1

Definitions/Glossary

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

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

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.
α	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 Smith Plant

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

Client Sample ID: MW-12

Date Collected: 03/20/18 13:29

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			357975	03/28/18 10:18	TJT	TAL SL
Total/NA	Analysis	9315		1	361701	04/19/18 05:54	RTM	TAL SL
Total/NA	Prep	PrecSep_0			357987	03/28/18 10:53	TJT	TAL SL
Total/NA	Analysis	9320		1	358768	04/04/18 14:23	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	361901	04/19/18 17:52	RTM	TAL SL

Client Sample ID: MW-03

Date Collected: 03/20/18 17:20

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			357975	03/28/18 10:18	TJT	TAL SL
Total/NA	Analysis	9315		1	361701	04/19/18 05:55	RTM	TAL SL
Total/NA	Prep	PrecSep_0			357987	03/28/18 10:53	TJT	TAL SL
Total/NA	Analysis	9320		1	358768	04/04/18 14:25	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	361901	04/19/18 17:52	RTM	TAL SL

Client Sample ID: DUP-01

Date Collected: 03/20/18 16:20

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			357975	03/28/18 10:18	TJT	TAL SL
Total/NA	Analysis	9315		1	361701	04/19/18 05:55	RTM	TAL SL
Total/NA	Prep	PrecSep_0			357987	03/28/18 10:53	TJT	TAL SL
Total/NA	Analysis	9320		1	358768	04/04/18 14:25	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	361901	04/19/18 17:52	RTM	TAL SL

Client Sample ID: MW-02

Date Collected: 03/21/18 09:51

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			357975	03/28/18 10:18	TJT	TAL SL
Total/NA	Analysis	9315		1	361701	04/19/18 05:55	RTM	TAL SL
Total/NA	Prep	PrecSep_0			357987	03/28/18 10:53	TJT	TAL SL
Total/NA	Analysis	9320		1	358768	04/04/18 14:25	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	361901	04/19/18 17:52	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

Client Sample ID: MW-07

Date Collected: 03/21/18 11:46

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			357975	03/28/18 10:18	TJT	TAL SL
Total/NA	Analysis	9315		1	361701	04/19/18 05:55	RTM	TAL SL
Total/NA	Prep	PrecSep_0			357987	03/28/18 10:53	TJT	TAL SL
Total/NA	Analysis	9320		1	358768	04/04/18 14:25	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	361901	04/19/18 17:52	RTM	TAL SL

Client Sample ID: MW-06

Date Collected: 03/21/18 13:24

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			357975	03/28/18 10:18	TJT	TAL SL
Total/NA	Analysis	9315		1	361701	04/19/18 05:55	RTM	TAL SL
Total/NA	Prep	PrecSep_0			357987	03/28/18 10:53	TJT	TAL SL
Total/NA	Analysis	9320		1	358768	04/04/18 14:25	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	361901	04/19/18 17:52	RTM	TAL SL

Client Sample ID: MW-10

Date Collected: 03/22/18 10:52

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151256-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			357975	03/28/18 10:18	TJT	TAL SL
Total/NA	Analysis	9315		1	361701	04/19/18 05:55	RTM	TAL SL
Total/NA	Prep	PrecSep_0			357987	03/28/18 10:53	TJT	TAL SL
Total/NA	Analysis	9320		1	358768	04/04/18 14:26	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	361901	04/19/18 17:52	RTM	TAL SL

Client Sample ID: FB-01

Date Collected: 03/22/18 13:20

Date Received: 03/23/18 17:05

Lab Sample ID: 400-151256-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			357975	03/28/18 10:18	TJT	TAL SL
Total/NA	Analysis	9315		1	361701	04/19/18 05:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			357987	03/28/18 10:53	TJT	TAL SL
Total/NA	Analysis	9320		1	358768	04/04/18 14:26	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	361901	04/19/18 17:52	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

Client Sample ID: EB-01

Lab Sample ID: 400-151256-11

Date Collected: 03/22/18 14:05

Matrix: Water

Date Received: 03/23/18 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			357975	03/28/18 10:18	TJT	TAL SL
Total/NA	Analysis	9315		1	361701	04/19/18 05:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			357987	03/28/18 10:53	TJT	TAL SL
Total/NA	Analysis	9320		1	358768	04/04/18 14:26	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	361901	04/19/18 17:52	RTM	TAL SL

Client Sample ID: MW-08

Lab Sample ID: 400-151256-12

Date Collected: 03/22/18 16:40

Matrix: Water

Date Received: 03/23/18 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			357975	03/28/18 10:18	TJT	TAL SL
Total/NA	Analysis	9315		1	361701	04/19/18 05:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			357987	03/28/18 10:53	TJT	TAL SL
Total/NA	Analysis	9320		1	358768	04/04/18 14:26	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	361901	04/19/18 17:52	RTM	TAL SL

Client Sample ID: MW-09

Lab Sample ID: 400-151256-15

Date Collected: 03/23/18 09:02

Matrix: Water

Date Received: 03/23/18 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			357975	03/28/18 10:18	TJT	TAL SL
Total/NA	Analysis	9315		1	361701	04/19/18 05:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			357987	03/28/18 10:53	TJT	TAL SL
Total/NA	Analysis	9320		1	358768	04/04/18 14:27	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	361901	04/19/18 17:52	RTM	TAL SL

Client Sample ID: EB-02

Lab Sample ID: 400-151256-16

Date Collected: 03/23/18 08:05

Matrix: Water

Date Received: 03/23/18 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			357975	03/28/18 10:18	TJT	TAL SL
Total/NA	Analysis	9315		1	361701	04/19/18 05:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			357987	03/28/18 10:53	TJT	TAL SL
Total/NA	Analysis	9320		1	358768	04/04/18 14:27	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	361901	04/19/18 17:52	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

Client Sample ID: FB-02

Lab Sample ID: 400-151256-17

Date Collected: 03/23/18 07:55

Matrix: Water

Date Received: 03/23/18 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			357975	03/28/18 10:18	TJT	TAL SL
Total/NA	Analysis	9315		1	361701	04/19/18 05:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			357987	03/28/18 10:53	TJT	TAL SL
Total/NA	Analysis	9320		1	358769	04/04/18 14:28	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	361901	04/19/18 17:52	RTM	TAL SL

Client Sample ID: DUP-04

Lab Sample ID: 400-151256-18

Date Collected: 03/23/18 08:02

Matrix: Water

Date Received: 03/23/18 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			357975	03/28/18 10:18	TJT	TAL SL
Total/NA	Analysis	9315		1	361702	04/19/18 05:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			357987	03/28/18 10:53	TJT	TAL SL
Total/NA	Analysis	9320		1	358769	04/04/18 14:28	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	361901	04/19/18 17:52	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 Smith Plant

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

Rad

Prep Batch: 357975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-1	MW-12	Total/NA	Water	PrecSep-21	
400-151256-2	MW-03	Total/NA	Water	PrecSep-21	
400-151256-3	DUP-01	Total/NA	Water	PrecSep-21	
400-151256-4	MW-02	Total/NA	Water	PrecSep-21	
400-151256-5	MW-07	Total/NA	Water	PrecSep-21	
400-151256-6	MW-06	Total/NA	Water	PrecSep-21	
400-151256-8	MW-10	Total/NA	Water	PrecSep-21	
400-151256-10	FB-01	Total/NA	Water	PrecSep-21	
400-151256-11	EB-01	Total/NA	Water	PrecSep-21	
400-151256-12	MW-08	Total/NA	Water	PrecSep-21	
400-151256-15	MW-09	Total/NA	Water	PrecSep-21	
400-151256-16	EB-02	Total/NA	Water	PrecSep-21	
400-151256-17	FB-02	Total/NA	Water	PrecSep-21	
400-151256-18	DUP-04	Total/NA	Water	PrecSep-21	
MB 160-357975/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-357975/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
180-76089-A-1-A DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 357987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151256-1	MW-12	Total/NA	Water	PrecSep_0	
400-151256-2	MW-03	Total/NA	Water	PrecSep_0	
400-151256-3	DUP-01	Total/NA	Water	PrecSep_0	
400-151256-4	MW-02	Total/NA	Water	PrecSep_0	
400-151256-5	MW-07	Total/NA	Water	PrecSep_0	
400-151256-6	MW-06	Total/NA	Water	PrecSep_0	
400-151256-8	MW-10	Total/NA	Water	PrecSep_0	
400-151256-10	FB-01	Total/NA	Water	PrecSep_0	
400-151256-11	EB-01	Total/NA	Water	PrecSep_0	
400-151256-12	MW-08	Total/NA	Water	PrecSep_0	
400-151256-15	MW-09	Total/NA	Water	PrecSep_0	
400-151256-16	EB-02	Total/NA	Water	PrecSep_0	
400-151256-17	FB-02	Total/NA	Water	PrecSep_0	
400-151256-18	DUP-04	Total/NA	Water	PrecSep_0	
MB 160-357987/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-357987/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
180-76089-A-1-B DU	Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-357975/23-A
Matrix: Water
Analysis Batch: 361702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 357975

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.02629	U	0.0468	0.0469	1.00	0.0829	pCi/L	03/28/18 10:18	04/19/18 05:58	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					03/28/18 10:18	04/19/18 05:58	1

Lab Sample ID: LCS 160-357975/1-A
Matrix: Water
Analysis Batch: 361701

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 357975

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.8	10.26		1.04	1.00	0.0737	pCi/L	87	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	98.5		40 - 110						

Lab Sample ID: 180-76089-A-1-A DU
Matrix: Water
Analysis Batch: 361701

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 357975

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.0776	U	0.08362		0.0533	1.00	0.0640	pCi/L	0.05	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	99.4		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-357987/23-A
Matrix: Water
Analysis Batch: 358769

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 357987

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2976	U	0.197	0.199	1.00	0.302	pCi/L	03/28/18 10:53	04/04/18 14:28	1
Radium-228	0.2976	U	0.197	0.199	1.00	0.302	pCi/L	03/28/18 10:53	04/04/18 14:28	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					03/28/18 10:53	04/04/18 14:28	1
Ba Carrier	105		40 - 110					03/28/18 10:53	04/04/18 14:28	1
Y Carrier	92.0		40 - 110					03/28/18 10:53	04/04/18 14:28	1
Y Carrier	92.0		40 - 110					03/28/18 10:53	04/04/18 14:28	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

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

Lab Sample ID: LCS 160-357987/1-A
Matrix: Water
Analysis Batch: 358768

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 357987

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	8.42	7.914		0.942	1.00	0.321	pCi/L	94	56 - 140
Radium-228	8.42	7.914		0.942	1.00	0.321	pCi/L	94	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	98.5		40 - 110
Ba Carrier	98.5		40 - 110
Y Carrier	88.2		40 - 110
Y Carrier	88.2		40 - 110

Lab Sample ID: 180-76089-A-1-B DU
Matrix: Water
Analysis Batch: 358768

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 357987

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.528		0.8681		0.309	1.00	0.415	pCi/L	0.61	1
Radium-228	0.528		0.8681		0.309	1.00	0.415	pCi/L	0.61	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	99.4		40 - 110
Ba Carrier	99.4		40 - 110
Y Carrier	90.8		40 - 110
Y Carrier	90.8		40 - 110

Chain of Custody Record



TestAmerica Laboratories, Inc.

Regulatory Program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other:		Site Contact: Lab Contact: Cheyenne Whitmire Perform MS / MSD (Y / N) _____ Filtered Sample (Y / N) _____ 9315_Ra226, 9320_Ra228, Ra226Ra228_GFPc _____ SM4500_CIE - Chloride, SM4500_SO4_F - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C Fluoride 6020 - Sb, As, Ba, B, Be, Ca, Cd, Cr, Co, Pb, Li, Mo, Se, Ti, 7470A - Mercury Fieldsampling - Field Sampling Parameters		Date: _____ Carrier: _____ COC No: _____ of _____ COCs Sampler: Rick Hagendorfer For Lab Use Only: Walk-in Client: _____ Lab Sampling: _____ Job / SDG No.: _____ Sample Specific Notes: _____					
Project Manager: _____ Tel/Fax: _____ Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below _____ <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Sample Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months					
Sample Date	Sample Time	Sample Type (c=Comp, g=Grab)	Matrix	# of Cont.	Sample Date	Sample Time	Sample Type (c=Comp, g=Grab)	Matrix	# of Cont.
MW-02	0957	G	GW	3	3-21-18	0957	G	GW	3
MW-03	1720	G	GW	3	3-20-18	1720	G	GW	3
MW-06	1324	G	GW	3	3-21-18	1324	G	GW	3
MW-07	1146	G	GW	3	3-21-18	1146	G	GW	3
MW-08	1640	G	GW	3	3-22-18	1640	G	GW	3
MW-09	0902	G	GW	3	3-23-18	0902	G	GW	3
MW-10	1052	G	GW	3	3-22-18	1052	G	GW	3
MW-12	1329	G	GW	3	3-20-18	1329	G	GW	3
DuP-01	1620	G	GW	3	3-20-18	1620	G	GW	3
DuP-04	0802	G	GW	3	3-23-18	0802	G	GW	3
EB-01	1405	G	W	3	3-22-18	1405	G	W	3
FB-01	1320	G	W	3	3-22-18	1320	G	W	3
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample. <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown									
Special Instructions/QC Requirements & Comments: Cooler Temp. (°C): Obs'd: 4.8°C, 0.0°C, 4.1°C, 0.0°C, 0.0°C, IR-7 Custody Seal No.: _____ Relinquished by: [Signature] Company: [Signature] Date/Time: 3/23/18 1705 Relinquished by: [Signature] Company: [Signature] Date/Time: 3/23/18 1705 Relinquished by: [Signature] Company: [Signature] Date/Time: _____									



Pensacola, FL 32514-7045
phone 850.474.1001 fax 850.474.4789

TestAmerica Laboratories, Inc.

Client Contact Gulf Power Company 1 Energy Place Pensacola, FL 32520 (850) 444-6427 Phone (xxx) xxx-xxxx FAX Project Name: CCR Smith Plant Site: P O #		Regulatory Program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other:		Project Manager: Tel/Fax:		Site Contact: Lab Contact: Cheyenne Whitmore 6020 - Sb, As, Ba, B, Be, Ca, Cd, Cr, Co, Pb, Li, Mo, Se, Ti, 7470A - Mercury SM4500_CIE - Chloride SM4500_SO4 - Sulfate, 2540C - Fluoride SM4500_SOD - Total Dissolved Solids, 4500 - Field Sampling - Field Sampling Parameters Ra226Ra228_GFPc 9315_Ra226, 9320_Ra228, Perform MS / MSD (Y / N) Filtered Sample (Y / N)		Date: Carrier: COC No: 2 of 2 COCs Sampler: Rick Hagendorfer For Lab Use Only: Walk-in Client: Lab Sampling: Job / SDG No.: Sample Specific Notes:	
Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below _____ <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Sample Date Sample Time Sample Type (C-Comp, G-Grab) Matrix # of Cont.		3-23-18 0805 G W 3 3-23-18 0755 G W 3		EB-02 FB-02			
Sample Identification EB-02 FB-02									
Preservation Used: 1= Ice, 2= HCI, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample. <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months							
Special Instructions/QC Requirements & Comments:									
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature]		Company: [Signature] Company: [Signature] Company: [Signature]		Date/Time: 3-23-18 1705 Date/Time: Date/Time:		Received by: Received by: Received in Laboratory by:		Cooler Temp. (°C): Obs'd: 4.8°C, 0.0°C, 4.1°C, 0.0°C, 0.0°C, 0.0°C, IR-7 Therm ID No.: Corrd:	



Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-151256-2

SDG Number: Ash Pond

Login Number: 151256

List Number: 1

Creator: Whitmire, Cheyenne R

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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	4.8°C, 0.0°C, 4.1°C, 0.0°C, 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 <math><6\text{mm}</math> (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: 400-151256-2

SDG Number: Ash Pond

Login Number: 151256

List Number: 2

Creator: Taylor, Kristene N

List Source: TestAmerica St. Louis

List Creation: 03/24/18 10:20 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
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	22.0,22.0
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?	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 <math><6\text{mm}</math> (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: 400-151256-2

SDG Number: Ash Pond

Login Number: 151256

List Number: 3

Creator: Taylor, Kristene N

List Source: TestAmerica St. Louis

List Creation: 03/27/18 01:48 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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	19.0,19.0
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?	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 <math><6\text{mm}</math> (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 Smith Plant

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

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
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	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
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
California	State Program	9	2886	06-30-18 *
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

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

TestAmerica Pensacola

Accreditation/Certification Summary

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

TestAmerica Job ID: 400-151256-2
SDG: Ash Pond

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 Jersey	NELAP	2	MO002	06-30-18 *
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: 400-151280-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Smith Plant

For:

Gulf Power Company

BIN 731

One Energy Place

Pensacola, Florida 32520

Attn: Kristi Mitchell



Authorized for release by:

4/13/2018 2:21:37 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

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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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Case Narrative

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

TestAmerica Job ID: 400-151280-1
SDG: Ash Pond

Job ID: 400-151280-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-151280-1

Metals

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 392265 and analytical batch 393106 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-11 (400-151280-1) and DUP-02 (400-151280-2). Elevated reporting limits (RLs) are provided.

Method(s) 7470A: The method blank for preparation batch 393404 and analytical batch 393589 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 method blank for analytical batch 392343 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 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-11 (400-151280-1) and DUP-02 (400-151280-2). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-11 (400-151280-1) and DUP-02 (400-151280-2). Elevated reporting limits (RLs) are provided.



Detection Summary

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

TestAmerica Job ID: 400-151280-1
SDG: Ash Pond

Client Sample ID: MW-11

Lab Sample ID: 400-151280-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.016		0.0013	0.00046	mg/L	5		6020	Total
Barium	0.081		0.0025	0.00049	mg/L	5		6020	Recoverable Total
Beryllium	0.0025		0.0025	0.00034	mg/L	5		6020	Recoverable Total
Calcium	99		0.25	0.13	mg/L	5		6020	Recoverable Total
Chromium	0.068		0.0025	0.0011	mg/L	5		6020	Recoverable Total
Cobalt	0.00046	I	0.0025	0.00040	mg/L	5		6020	Recoverable Total
Lithium	0.012		0.0050	0.0011	mg/L	5		6020	Recoverable Total
Molybdenum	0.017		0.015	0.00085	mg/L	5		6020	Recoverable Total
Selenium	0.00066	I	0.0013	0.00024	mg/L	5		6020	Recoverable Total
Boron - DL	3.7		0.50	0.21	mg/L	50		6020	Recoverable Total
Total Dissolved Solids	3600		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	1900		80	24	mg/L	40		SM 4500 Cl- E	Total/NA
Fluoride	0.050	I	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	240		50	14	mg/L	10		SM 4500 SO4 E	Total/NA
Field pH	6.28				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-02

Lab Sample ID: 400-151280-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.016		0.0013	0.00046	mg/L	5		6020	Total
Barium	0.080		0.0025	0.00049	mg/L	5		6020	Recoverable Total
Beryllium	0.0025		0.0025	0.00034	mg/L	5		6020	Recoverable Total
Calcium	98		0.25	0.13	mg/L	5		6020	Recoverable Total
Chromium	0.0061		0.0025	0.0011	mg/L	5		6020	Recoverable Total
Lithium	0.013		0.0050	0.0011	mg/L	5		6020	Recoverable Total
Molybdenum	0.017		0.015	0.00085	mg/L	5		6020	Recoverable Total
Selenium	0.00065	I	0.0013	0.00024	mg/L	5		6020	Recoverable Total
Boron - DL	3.8		0.50	0.21	mg/L	50		6020	Recoverable Total
Total Dissolved Solids	3700		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	1900		80	24	mg/L	40		SM 4500 Cl- E	Total/NA
Fluoride	0.050	I	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	250		50	14	mg/L	10		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

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

TestAmerica Job ID: 400-151260-1
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
8020	Metals (ICP/MS)	SW648	TAL PEN
7470A	Mercury (CVAA)	SW648	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",

SW648 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1968 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (650)474-1001

Sample Summary

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

TestAmerica Job ID: 400-151280-1
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-151280-1	MW-11	Water	03/21/18 17:25	03/22/18 14:40
400-151280-2	DUP-02	Water	03/21/18 16:25	03/22/18 14:40

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Client Sample Results

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

TestAmerica Job ID: 400-151280-1
SDG: Ash Pond

Client Sample ID: MW-11

Date Collected: 03/21/18 17:25

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151280-1

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		04/01/18 12:07	04/06/18 17:26	5
Arsenic	0.016		0.0013	0.00046	mg/L		04/01/18 12:07	04/06/18 17:26	5
Barium	0.081		0.0025	0.00049	mg/L		04/01/18 12:07	04/06/18 17:26	5
Beryllium	0.0025		0.0025	0.00034	mg/L		04/01/18 12:07	04/06/18 17:26	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		04/01/18 12:07	04/06/18 17:26	5
Calcium	99		0.25	0.13	mg/L		04/01/18 12:07	04/06/18 17:26	5
Chromium	0.068		0.0025	0.0011	mg/L		04/01/18 12:07	04/06/18 17:26	5
Cobalt	0.00046	I	0.0025	0.00040	mg/L		04/01/18 12:07	04/06/18 17:26	5
Lead	0.00035	U	0.0013	0.00035	mg/L		04/01/18 12:07	04/06/18 17:26	5
Lithium	0.012		0.0050	0.0011	mg/L		04/01/18 12:07	04/06/18 17:26	5
Molybdenum	0.017		0.015	0.00085	mg/L		04/01/18 12:07	04/06/18 17:26	5
Selenium	0.00066	I	0.0013	0.00024	mg/L		04/01/18 12:07	04/06/18 17:26	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		04/01/18 12:07	04/06/18 17:26	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.7		0.50	0.21	mg/L		04/01/18 12:07	04/07/18 06:08	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		04/10/18 12:09	04/11/18 14:22	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3600		50	34	mg/L			03/26/18 12:25	1
Chloride	1900		80	24	mg/L			04/02/18 11:47	40
Fluoride	0.050	I	0.10	0.032	mg/L			03/30/18 10:24	1
Sulfate	240		50	14	mg/L			03/27/18 07:43	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.28				SU			03/21/18 17:25	1

Client Sample Results

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

TestAmerica Job ID: 400-151280-1
SDG: Ash Pond

Client Sample ID: DUP-02

Date Collected: 03/21/18 16:25

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151280-2

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		04/01/18 12:07	04/06/18 17:30	5
Arsenic	0.016		0.0013	0.00046	mg/L		04/01/18 12:07	04/06/18 17:30	5
Barium	0.080		0.0025	0.00049	mg/L		04/01/18 12:07	04/06/18 17:30	5
Beryllium	0.0025		0.0025	0.00034	mg/L		04/01/18 12:07	04/06/18 17:30	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		04/01/18 12:07	04/06/18 17:30	5
Calcium	98		0.25	0.13	mg/L		04/01/18 12:07	04/06/18 17:30	5
Chromium	0.0061		0.0025	0.0011	mg/L		04/01/18 12:07	04/06/18 17:30	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		04/01/18 12:07	04/06/18 17:30	5
Lead	0.00035	U	0.0013	0.00035	mg/L		04/01/18 12:07	04/06/18 17:30	5
Lithium	0.013		0.0050	0.0011	mg/L		04/01/18 12:07	04/06/18 17:30	5
Molybdenum	0.017		0.015	0.00085	mg/L		04/01/18 12:07	04/06/18 17:30	5
Selenium	0.00065	I	0.0013	0.00024	mg/L		04/01/18 12:07	04/06/18 17:30	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		04/01/18 12:07	04/06/18 17:30	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.8		0.50	0.21	mg/L		04/01/18 12:07	04/07/18 06:13	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		04/10/18 12:09	04/11/18 15:06	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3700		50	34	mg/L			03/26/18 12:25	1
Chloride	1900		80	24	mg/L			04/02/18 11:47	40
Fluoride	0.050	I	0.10	0.032	mg/L			03/30/18 10:27	1
Sulfate	250		50	14	mg/L			03/27/18 07:43	10

Definitions/Glossary

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

TestAmerica Job ID: 400-151280-1
SDG: Ash Pond

Qualifiers

Metals

Qualifier	Qualifier Description
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.
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.
α	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 Smith Plant

TestAmerica Job ID: 400-151260-1
SDG: Ash Pond

Client Sample ID: MW-11

Date Collected: 03/21/18 17:25

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151280-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			392275	04/01/16 12:08	DN1	TAL PEN
Total Recoverable	Analysis	7020		5	393107	04/07/16 18:27	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		392275	04/01/16 12:08	DN1	TAL PEN
Total Recoverable	Analysis	7020	DL	50	393107	04/08/16 07:06	DRE	TAL PEN
Total/NA	Prep	8480A			393404	04/10/16 12:09	JAP	TAL PEN
Total/NA	Analysis	8480A		1	393569	04/11/16 14:22	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391436	03/27/16 12:25	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		40	392343	04/02/16 11:48	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	392126	03/30/16 10:24	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	391573	03/28/16 08:43	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393585	03/21/16 18:25	AW	TAL PEN

Client Sample ID: DUP-02

Date Collected: 03/21/18 16:25

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151280-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			392275	04/01/16 12:08	DN1	TAL PEN
Total Recoverable	Analysis	7020		5	393107	04/07/16 18:30	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		392275	04/01/16 12:08	DN1	TAL PEN
Total Recoverable	Analysis	7020	DL	50	393107	04/08/16 07:13	DRE	TAL PEN
Total/NA	Prep	8480A			393404	04/10/16 12:09	JAP	TAL PEN
Total/NA	Analysis	8480A		1	393569	04/11/16 15:07	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391436	03/27/16 12:25	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		40	392343	04/02/16 11:48	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	392126	03/30/16 10:28	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	391573	03/28/16 08:43	RRC	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (650)484-1001

QC Association Summary

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

TestAmerica Job ID: 400-151260-1
SDG: Ash Pond

Metals

Prep Batch: 39227L

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-151260-1	MW-11	Total Recoverable	Water	3005A	
400-151260-1 - DU	MW-11	Total Recoverable	Water	3005A	
400-151260-2 - DU	DL P-02	Total Recoverable	Water	3005A	
400-151260-2	DL P-02	Total Recoverable	Water	3005A	
M7 400-3822F5/1-A B5	Method 7lanE	Total Recoverable	Water	3005A	
UCS 400-3822F5/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-151190-7-24-7 MS B5	Matri^ SpiEe	Total Recoverable	Water	3005A	
400-151190-7-24-C MSD B5	Matri^ SpiEe Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 3935(7

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-151260-1	MW-11	Total Recoverable	Water	F020	3822F5
400-151260-1 - DU	MW-11	Total Recoverable	Water	F020	3822F5
400-151260-2	DL P-02	Total Recoverable	Water	F020	3822F5
400-151260-2 - DU	DL P-02	Total Recoverable	Water	F020	3822F5
M7 400-3822F5/1-A B5	Method 7lanE	Total Recoverable	Water	F020	3822F5
UCS 400-3822F5/2-A	Lab Control Sample	Total Recoverable	Water	F020	3822F5
400-151190-7-24-7 MS B5	Matri^ SpiEe	Total Recoverable	Water	F020	3822F5
400-151190-7-24-C MSD B5	Matri^ SpiEe Duplicate	Total Recoverable	Water	F020	3822F5

Prep Batch: 393) ()

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-151260-1	MW-11	Total/k A	Water	9490A	
400-151260-2	DL P-02	Total/k A	Water	9490A	
M7 400-383404/14-A	Method 7lanE	Total/k A	Water	9490A	
UCS 400-383404/15-A	Lab Control Sample	Total/k A	Water	9490A	
400-151260-1 MS	MW-11	Total/k A	Water	9490A	
400-151260-1 MSD	MW-11	Total/k A	Water	9490A	

Analysis Batch: 393L49

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-151260-1	MW-11	Total/k A	Water	9490A	383404
400-151260-2	DL P-02	Total/k A	Water	9490A	383404
M7 400-383404/14-A	Method 7lanE	Total/k A	Water	9490A	383404
UCS 400-383404/15-A	Lab Control Sample	Total/k A	Water	9490A	383404
400-151260-1 MS	MW-11	Total/k A	Water	9490A	383404
400-151260-1 MSD	MW-11	Total/k A	Water	9490A	383404

General Chemistry

Analysis Batch: 395) 34

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-151260-1	MW-11	Total/k A	Water	SM 2540C	
400-151260-2	DL P-02	Total/k A	Water	SM 2540C	
M7 400-381436/1	Method 7lanE	Total/k A	Water	SM 2540C	
UCS 400-381436/2	Lab Control Sample	Total/k A	Water	SM 2540C	
400-151168-7-1 DL	Duplicate	Total/k A	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-151260-1
SDG: Ash Pond

General Chemistry 1 Continue 8G

Analysis Batch: 395L73

Lab Sample ID	Client Sample ID	Prep type	Matrix	Metho8	Prep Batch
400-151260-1	MW-11	Total/k A	Water	SM 4500 SN4 x	
400-151260-2	DL P-02	Total/k A	Water	SM 4500 SN4 x	
M7 400-3815F3/F	Method 7 lanE	Total/k A	Water	SM 4500 SN4 x	
UCS 400-3815F3/9	Lab Control Sample	Total/k A	Water	SM 4500 SN4 x	
MRU 400-3815F3/3	Lab Control Sample	Total/k A	Water	SM 4500 SN4 x	
400-151208-G-1 MS	Matrix Spike	Total/k A	Water	SM 4500 SN4 x	
400-151208-G-1 MSD	Matrix Spike Duplicate	Total/k A	Water	SM 4500 SN4 x	

Analysis Batch: 392524

Lab Sample ID	Client Sample ID	Prep type	Matrix	Metho8	Prep Batch
400-151260-1	MW-11	Total/k A	Water	SM 4500 OC	
400-151260-2	DL P-02	Total/k A	Water	SM 4500 OC	
M7 400-382126/3	Method 7 lanE	Total/k A	Water	SM 4500 OC	
UCS 400-382126/4	Lab Control Sample	Total/k A	Water	SM 4500 OC	
FF0-6F2F3-C-1 MS	Matrix Spike	Total/k A	Water	SM 4500 OC	
FF0-6F2F3-C-1 MSD	Matrix Spike Duplicate	Total/k A	Water	SM 4500 OC	
FF0-6F302-C-3 DL	Duplicate	Total/k A	Water	SM 4500 OC	

Analysis Batch: 3923) 3

Lab Sample ID	Client Sample ID	Prep type	Matrix	Metho8	Prep Batch
400-151260-1	MW-11	Total/k A	Water	SM 4500 Cl- x	
400-151260-2	DL P-02	Total/k A	Water	SM 4500 Cl- x	
M7 400-382343/F	Method 7 lanE	Total/k A	Water	SM 4500 Cl- x	
UCS 400-382343/9	Lab Control Sample	Total/k A	Water	SM 4500 Cl- x	
MRU 400-382343/3	Lab Control Sample	Total/k A	Water	SM 4500 Cl- x	
400-15125F-A-4 MS	Matrix Spike	Total/k A	Water	SM 4500 Cl- x	
400-15125F-A-4 MSD	Matrix Spike Duplicate	Total/k A	Water	SM 4500 Cl- x	

Field SerFace vMol ile bal

Analysis Batch: 393L/ L

Lab Sample ID	Client Sample ID	Prep type	Matrix	Metho8	Prep Batch
400-151260-1	MW-11	Total/k A	Water	Field Sampling	

QC Sample Results

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

TestAmerica Job ID: 400-151260-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-392267/1-A ^7
Mat5r: x ate5
AnalTsis Batyh: 393106

Client Sample ID: Method Blank
P5ep Wtpe: Wbtal Reyoce5able
P5ep Batyh: 392267

AnalTte	MB Result	MB QualiUe5	PQL	MDL	z nit	D	P5epa5ed	AnalTFed	Dil vay
Antimony	0.0010	U	0.0025	0.0010	mg/L		04/01/16 12:03	04/08/16 14:14	5
Arsenic	0.00048	U	0.0019	0.00048	mg/L		04/01/16 12:03	04/08/16 14:14	5
Marium	0.0004B	U	0.0025	0.0004B	mg/L		04/01/16 12:03	04/08/16 14:14	5
Meryllium	0.00094	U	0.0025	0.00094	mg/L		04/01/16 12:03	04/08/16 14:14	5
Mbron	0.021	U	0.050	0.021	mg/L		04/01/16 12:03	04/08/16 14:14	5
Cadmium	0.00094	U	0.0025	0.00094	mg/L		04/01/16 12:03	04/08/16 14:14	5
Calcium	0.19	U	0.25	0.19	mg/L		04/01/16 12:03	04/08/16 14:14	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		04/01/16 12:03	04/08/16 14:14	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		04/01/16 12:03	04/08/16 14:14	5
Lead	0.00095	U	0.0019	0.00095	mg/L		04/01/16 12:03	04/08/16 14:14	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		04/01/16 12:03	04/08/16 14:14	5
7 olybdenum	0.00065	U	0.015	0.00065	mg/L		04/01/16 12:03	04/08/16 14:14	5
Selenium	0.00024	U	0.0019	0.00024	mg/L		04/01/16 12:03	04/08/16 14:14	5
Thallium	0.000065	U	0.00050	0.000065	mg/L		04/01/16 12:03	04/08/16 14:14	5

Lab Sample ID: LCS 400-392267/2-A
Mat5r: x ate5
AnalTsis Batyh: 393106

Client Sample ID: Lab Cont5ol Sample
P5ep Wtpe: Wbtal Reyoce5able
P5ep Batyh: 392267

AnalTte	Spike Added	LCS Result	LCS QualiUe5	z nit	D	f Rey	f Rey% Limits
Antimony	0.0500	0.0526		mg/L		108	60 - 120
Arsenic	0.0500	0.0512		mg/L		102	60 - 120
Marium	0.0500	0.0505		mg/L		101	60 - 120
Meryllium	0.0500	0.0503		mg/L		101	60 - 120
Mbron	0.100	0.104		mg/L		104	60 - 120
Cadmium	0.0500	0.0515		mg/L		109	60 - 120
Calcium	5.00	5.92		mg/L		108	60 - 120
Chromium	0.0500	0.04B3		mg/L		BB	60 - 120
Cobalt	0.0500	0.04B5		mg/L		BB	60 - 120
Lead	0.0500	0.0512		mg/L		102	60 - 120
Lithium	0.0500	0.0509		mg/L		101	60 - 120
7 olybdenum	0.0500	0.0514		mg/L		109	60 - 120
Selenium	0.0500	0.0466		mg/L		B6	60 - 120
Thallium	0.0100	0.00B68		mg/L		BB	60 - 120

Lab Sample ID: 400-1711. 0-B-24-B MS ^7
Mat5r: x ate5
AnalTsis Batyh: 393106

Client Sample ID: Mat5r Spike
P5ep Wtpe: Wbtal Reyoce5able
P5ep Batyh: 392267

AnalTte	Sample Result	Sample QualiUe5	Spike Added	MS Result	MS QualiUe5	z nit	D	f Rey	f Rey% Limits
Antimony	0.0010	U	0.0500	0.0558		mg/L		111	35 - 125
Arsenic	0.00048	U	0.0500	0.051B		mg/L		104	35 - 125
Marium	0.095		0.0500	0.0660		mg/L		103	35 - 125
Meryllium	0.00094	U	0.0500	0.0513		mg/L		109	35 - 125
Mbron	0.021	U	0.100	0.111		mg/L		111	35 - 125
Cadmium	0.00094	U	0.0500	0.0512		mg/L		102	35 - 125
Calcium	15		5.00	20.1		mg/L		101	35 - 125
Chromium	0.0068		0.0500	0.056B		mg/L		101	35 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-151260-1
SDG: Ash Pond

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

Lab Sample ID: 400-1711. 0-B-24-B MS ^7
Mat5r: x ate5
AnalTsis Batyh: 393106

Client Sample ID: Mat5r Spike
P5ep Wtpe: W6tal Reyoce5able
P5ep Batyh: 392267

AnalTte	Sample Result	Sample QualiUe5	Spike Added	MS Result	MS QualiUe5	z nit	D	f	Rey	Limits
Cobalt	0.00040	U	0.0500	0.0504		mg/L			101	35 - 125
Lead	0.00095	U	0.0500	0.0516		mg/L			104	35 - 125
Lithium	0.0011	U	0.0500	0.0853	J9	mg/L			191	35 - 125
7 olybdenum	0.00065	U	0.0500	0.0593		mg/L			103	35 - 125
Selenium	0.00024	U	0.0500	0.0502		mg/L			100	35 - 125
Thallium	0.000065	U	0.0100	0.0100		mg/L			100	35 - 125

Lab Sample ID: 400-1711. 0-B-24-C MSD ^7
Mat5r: x ate5
AnalTsis Batyh: 393106

Client Sample ID: Mat5r Spike Dupliate
P5ep Wtpe: W6tal Reyoce5able
P5ep Batyh: 392267

AnalTte	Sample Result	Sample QualiUe5	Spike Added	MSD Result	MSD QualiUe5	z nit	D	f	Rey	Limits	RPD	Limit
Antimony	0.0010	U	0.0500	0.0549		mg/L			10B	35 - 125	2	20
Arsenic	0.00048	U	0.0500	0.0521		mg/L			104	35 - 125	0	20
Marium	0.095		0.0500	0.0685		mg/L			104	35 - 125	2	20
Meryllium	0.00094	U	0.0500	0.0505		mg/L			101	35 - 125	2	20
Mbron	0.021	U	0.100	0.10B		mg/L			10B	35 - 125	2	20
Cadmium	0.00094	U	0.0500	0.0593		mg/L			103	35 - 125	5	20
Calcium	15		5.00	20.4		mg/L			103	35 - 125	2	20
Chromium	0.0068		0.0500	0.0313	J9	mg/L			128	35 - 125	20	20
Cobalt	0.00040	U	0.0500	0.0504		mg/L			101	35 - 125	0	20
Lead	0.00095	U	0.0500	0.0516		mg/L			104	35 - 125	0	20
Lithium	0.0011	U	0.0500	0.0858	J9	mg/L			191	35 - 125	0	20
7 olybdenum	0.00065	U	0.0500	0.052B		mg/L			108	35 - 125	2	20
Selenium	0.00024	U	0.0500	0.04B2		mg/L			B6	35 - 125	2	20
Thallium	0.000065	U	0.0100	0.0101		mg/L			101	35 - 125	1	20

Method: . 4. 0A - Me5yu5T (CVAA)

Lab Sample ID: MB 400-393404/14-A
Mat5r: x ate5
AnalTsis Batyh: 3937N9

Client Sample ID: Method Blank
P5ep Wtpe: W6tal/8 A
P5ep Batyh: 393404

AnalTte	MB Result	MB QualiUe5	PQL	MDL	z nit	D	P5epa5ed	AnalTFed	Dil vay
7 ercury	0.0000333	I	0.00020	0.000030	mg/L		04/10/16 12:06	04/11/16 15:00	1

Lab Sample ID: LCS 400-393404/17-A
Mat5r: x ate5
AnalTsis Batyh: 3937N9

Client Sample ID: Lab Cont5ol Sample
P5ep Wtpe: W6tal/8 A
P5ep Batyh: 393404

AnalTte	Spike Added	LCS Result	LCS QualiUe5	z nit	D	f	Rey	Limits
7 ercury	0.00101	0.00101		mg/L			100	60 - 120

Lab Sample ID: 400-1712N0-1 MS
Mat5r: x ate5
AnalTsis Batyh: 3937N9

Client Sample ID: Mx -11
P5ep Wtpe: W6tal/8 A
P5ep Batyh: 393404

AnalTte	Sample Result	Sample QualiUe5	Spike Added	MS Result	MS QualiUe5	z nit	D	f	Rey	Limits
7 ercury	0.000030	U	0.00201	0.001B6		mg/L			B6	60 - 120

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-151260-1
SDG: Ash Pond

Lab Sample ID: 400-1712N0-1 MSD
Mat5r: x ate5
AnalTsis Batyh: 3937N9

Client Sample ID: Mx -11
P5ep Wtpe: W6tal/8 A
P5ep Batyh: 393404
f Rey% RPD

AnalTte	Sample Result	Sample QualiUe5	Spike Added	MSD Result	MSD QualiUe5	z nit	D	f Rey	Limits	RPD	Limit
7 ercury	0.000030	U	0.00201	0.001B9		mg/L		B8	60 - 120	2	20

Method: SM 2740C - Solids, W6tal Dissolced (VDS)

Lab Sample ID: MB 400-39143N1
Mat5r: x ate5
AnalTsis Batyh: 39143N

Client Sample ID: Method Blank
P5ep Wtpe: W6tal/8 A

AnalTte	MB Result	MB QualiUe5	PQL	MDL	z nit	D	P5epa5ed	AnalTFed	Dil vay
Total Dissolved Solids	9.4	U	5.0	9.4	mg/L			09/28/16 12:25	1

Lab Sample ID: LCS 400-39143N2
Mat5r: x ate5
AnalTsis Batyh: 39143N

Client Sample ID: Lab Cont5ol Sample
P5ep Wtpe: W6tal/8 A

AnalTte	Spike Added	LCS Result	LCS QualiUe5	z nit	D	f Rey	f Rey% Limits
Total Dissolved Solids	2B9	248		mg/L		64	36 - 122

Lab Sample ID: 400-1711N9-B-1 Dz
Mat5r: x ate5
AnalTsis Batyh: 39143N

Client Sample ID: Dupliyate
P5ep Wtpe: W6tal/8 A

AnalTte	Sample Result	Sample QualiUe5	Dz Result	Dz QualiUe5	z nit	D	RPD	Limit
Total Dissolved Solids	9.4	U	9.4	U	mg/L		NC	5

Method: SM 4700 Cl- E - Chlo5ide, W6tal

Lab Sample ID: MB 400-392343/6
Mat5r: x ate5
AnalTsis Batyh: 392343

Client Sample ID: Method Blank
P5ep Wtpe: W6tal/8 A

AnalTte	MB Result	MB QualiUe5	PQL	MDL	z nit	D	P5epa5ed	AnalTFed	Dil vay
Chloride	1.48	I	2.0	0.80	mg/L			04/02/16 11:0B	1

Lab Sample ID: LCS 400-392343/.
Mat5r: x ate5
AnalTsis Batyh: 392343

Client Sample ID: Lab Cont5ol Sample
P5ep Wtpe: W6tal/8 A

AnalTte	Spike Added	LCS Result	LCS QualiUe5	z nit	D	f Rey	f Rey% Limits
Chloride	90.0	91.B		mg/L		108	B0 - 110

Lab Sample ID: MRL 400-392343/3
Mat5r: x ate5
AnalTsis Batyh: 392343

Client Sample ID: Lab Cont5ol Sample
P5ep Wtpe: W6tal/8 A

AnalTte	Spike Added	MRL Result	MRL QualiUe5	z nit	D	f Rey	f Rey% Limits
Chloride	2.00	2.43		mg/L		129	50 - 150

QC Sample Results

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

TestAmerica Job ID: 400-151260-1
SDG: Ash Pond

Method: SM 4700 Cl- E - Chloride, Wbtal (Continued)

Lab Sample ID: 400-171276-A-4 MS
Mat5r : x ate5
AnalTsis Batyh: 392343

Client Sample ID: Mat5r Spike
P5ep Wtpe: Wbtal/8 A

AnalTte	Sample Result	Sample QualiUe5	Spike Added	MS Result	MS QualiUe5	z nit	D	f Rey	f Rey% Limits
Chloride	B.9	V	10.0	1B.3		mg/L		104	39 - 120

Lab Sample ID: 400-171276-A-4 MSD
Mat5r : x ate5
AnalTsis Batyh: 392343

Client Sample ID: Mat5r Spike Dupliyate
P5ep Wtpe: Wbtal/8 A

AnalTte	Sample Result	Sample QualiUe5	Spike Added	MSD Result	MSD QualiUe5	z nit	D	f Rey	f Rey% Limits	RPD	Limit
Chloride	B.9	V	10.0	20.3		mg/L		114	39 - 120	5	6

Method: SM 4700 v C - vluo5de

Lab Sample ID: MB 400-39212N3
Mat5r : x ate5
AnalTsis Batyh: 39212N

Client Sample ID: Method Blank
P5ep Wtpe: Wbtal/8 A

AnalTte	MB Result	MB QualiUe5	PQL	MDL	z nit	D	P5epa5ed	AnalTFed	Dil vay
Fluoride	0.092	U	0.10	0.092	mg/L			09/90/16 0B:23	1

Lab Sample ID: LCS 400-39212N4
Mat5r : x ate5
AnalTsis Batyh: 39212N

Client Sample ID: Lab Cont5ol Sample
P5ep Wtpe: Wbtal/8 A

AnalTte	Spike Added	LCS Result	LCS QualiUe5	z nit	D	f Rey	f Rey% Limits
Fluoride	4.00	4.16		mg/L		105	B0 - 110

Lab Sample ID: 660-N6263-C-1 MS
Mat5r : x ate5
AnalTsis Batyh: 39212N

Client Sample ID: Mat5r Spike
P5ep Wtpe: Wbtal/8 A

AnalTte	Sample Result	Sample QualiUe5	Spike Added	MS Result	MS QualiUe5	z nit	D	f Rey	f Rey% Limits
Fluoride	0.092	U	1.00	1.10		mg/L		110	35 - 125

Lab Sample ID: 660-N6263-C-1 MSD
Mat5r : x ate5
AnalTsis Batyh: 39212N

Client Sample ID: Mat5r Spike Dupliyate
P5ep Wtpe: Wbtal/8 A

AnalTte	Sample Result	Sample QualiUe5	Spike Added	MSD Result	MSD QualiUe5	z nit	D	f Rey	f Rey% Limits	RPD	Limit
Fluoride	0.092	U	1.00	1.10		mg/L		110	35 - 125	0	4

Lab Sample ID: 660-N6302-C-3 Dz
Mat5r : x ate5
AnalTsis Batyh: 39212N

Client Sample ID: Dupliyate
P5ep Wtpe: Wbtal/8 A

AnalTte	Sample Result	Sample QualiUe5	Dz Result	Dz QualiUe5	z nit	D	RPD	Limit
Fluoride	0.14		0.140		mg/L		0	4

QC Sample Results

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

TestAmerica Job ID: 400-151260-1
SDG: Ash Pond

Method: SM 4700 SO4 E - Sulfate, Wbtal

Lab Sample ID: MB 400-391763/6
Mat5r: x ate5
AnalTsis Batyh: 391763

Client Sample ID: Method Blank
P5ep Wtpe: Wbtal/8 A

AnalTte	MB Result	MB QualiUe5	PQL	MDL	z nit	D	P5epa5ed	AnalTFed	Dil vay
Sulfate	1.4	U	5.0	1.4	mg/L			09/23/16 08:43	1

Lab Sample ID: LCS 400-391763/.
Mat5r: x ate5
AnalTsis Batyh: 391763

Client Sample ID: Lab Cont5ol Sample
P5ep Wtpe: Wbtal/8 A

AnalTte	Spike Added	LCS Result	LCS QualiUe5	z nit	D	f Rey	f Rey% Limits
Sulfate	15.0	14.6		mg/L		BB	B0 - 110

Lab Sample ID: MRL 400-391763/3
Mat5r: x ate5
AnalTsis Batyh: 391763

Client Sample ID: Lab Cont5ol Sample
P5ep Wtpe: Wbtal/8 A

AnalTte	Spike Added	MRL Result	MRL QualiUe5	z nit	D	f Rey	f Rey% Limits
Sulfate	5.00	4.56	I	mg/L		B2	50 - 150

Lab Sample ID: 400-171209-G-1 MS
Mat5r: x ate5
AnalTsis Batyh: 391763

Client Sample ID: Mat5r Spike
P5ep Wtpe: Wbtal/8 A

AnalTte	Sample Result	Sample QualiUe5	Spike Added	MS Result	MS QualiUe5	z nit	D	f Rey	f Rey% Limits
Sulfate	1.4	U	10.0	10.8		mg/L		108	33 - 126

Lab Sample ID: 400-171209-G-1 MSD
Mat5r: x ate5
AnalTsis Batyh: 391763

Client Sample ID: Mat5r Spike Dupliyate
P5ep Wtpe: Wbtal/8 A

AnalTte	Sample Result	Sample QualiUe5	Spike Added	MSD Result	MSD QualiUe5	z nit	D	f Rey	f Rey% Limits	RPD	RPD Limit
Sulfate	1.4	U	10.0	10.6		mg/L		106	33 - 126	2	5

Chain of Custody Record



TestAmerica Pensacola
3355 McLemore Drive

Pensacola, FL 32514-7045
phone 850.474.1001 fax 850.474.4789

Client Contact Gulf Power Company 1 Energy Place Pensacola, FL 32520 (850) 444-6427 Phone (xxx) xxx-xxxx FAX Project Name: CCR Smith Plant Site: P O #		Regulatory Program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other:		Site Contact: Lab Contact: Cheyenne Whitmore 6020 - Sb, As, Ba, B, Be, Ca, Cd, Cr, Co, Pb, Li, Mo, Se, Ti, 7470A - Mercury SM4500_S04_T - Sulfate, 2540C - Fluoride SM4500_CIE - Chloride, Ra226Ra228, GPPC 9315_Ra226, 9320_Ra228, Ra226Ra228, GPPC		Date: Carrier:		COC No.: of COCs Sampler: Rick Hagedorfer For Lab Use Only: Walk-in Client Lab Sampling: Job / SDG No.: Sample Specific Notes:					
Project Manager: Tell/Fax:		Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below _____ <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Filtered Sample (Y/N) Perform MS/MSD (Y/N)		Field Sampling - Field Sampling Parameters SM4500_CIE - Chloride SM4500_S04_T - Sulfate, 2540C - Fluoride 6020 - Sb, As, Ba, B, Be, Ca, Cd, Cr, Co, Pb, Li, Mo, Se, Ti, 7470A - Mercury		Date/Time:					
Sample Identification MW-11 DUP-02		Sample Date 3-21-18 3-21-18		Sample Time 1725 1625		Sample Type (C=Comp, G=Grab) G G		Matrix GW GW		# of Cont. 3 3		Date/Time:	
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other													
Possible Hazard Identification: Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.													
Special Instructions/QC Requirements & Comments:													
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Relinquished by:		Relinquished by:		Relinquished by:		Date/Time:		Date/Time:		Date/Time:	
Relinquished by:		Relinquished by:		Relinquished by:		Date/Time:		Date/Time:		Date/Time:		Date/Time:	
Relinquished by:		Relinquished by:		Relinquished by:		Date/Time:		Date/Time:		Date/Time:		Date/Time:	



Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-151260-1

SDG Number: Ash Pond

Login Number: 151280

List Number: 1

Creator: Whitmire, Cheyenne R

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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	4.58C, 0.08C, 0.08C °R-I
C7 C is present.	True	
C7 C is filled out in ink and legible.	True	
C7 C is filled out with all pertinent information.	True	
Is the Quid Sampler's name present on C7 CF	True	
There are no discrepancies between the containers received and the C7 C.	True	
Samples are received within Holding Time (including tests with immediate ? Tsx	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) erified.	True	
There is sufficient vol. for all requested analyses, incl. any requested q S/q SDs	True	
Containers requiring Micro headspace have no headspace or bubble is <math>< 2\text{mm H}^2/4\text{"}\text{x}</math>	N/A	
Multi-phasic 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 Smith Plant

TestAmerica Job ID: 400-151260-1
SDG: Ash Pond

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	03-80-16
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	3	66-0369	09-01-16
California	ELAP	9	2510	08-81-16 *
Florida	NELAP	4	E61010	03-80-16
Georgia	State Program	4	N/A	03-80-16
Illinois	NELAP	5	200041	10-09-16
Iowa	State Program	7	837	06-01-16
Kansas	NELAP	7	E-10258	10-81-16
Kentucky (UST)	State Program	4	58	03-80-16
Kentucky (WW)	State Program	4	96080	12-81-16
Louisiana	NELAP	3	80973	03-80-16
Louisiana (DW)	NELAP	3	LA170005	12-81-16
Maryland	State Program	8	288	09-80-16
Massachusetts	State Program	1	M-FL094	03-80-16
Michigan	State Program	5	9912	03-80-16
New Jersey	NELAP	2	FL003	03-80-16
North Carolina (WW/SW)	State Program	4	814	12-81-16
Oklahoma	State Program	3	9610	06-81-16
Pennsylvania	NELAP	8	36-00437	01-81-19
Rhode Island	State Program	1	LAO00807	12-80-16
South Carolina	State Program	4	93023	03-80-16
Tennessee	State Program	4	TN02907	03-80-16
Texas	NELAP	3	T104704263-17-12	09-80-16
USDA	Federal		P880-13-00172	05-24-19
Virginia	NELAP	8	430133	03-14-16
Washington	State Program	10	C915	05-15-16
West Virginia DEP	State Program	8	183	03-80-16

* 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: 400-151280-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Smith Plant

For:

Gulf Power Company

BIN 731

One Energy Place

Pensacola, Florida 32520

Attn: Kristi Mitchell



Authorized for release by:

4/20/2018 2:26:21 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

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results through

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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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Case Narrative

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

TestAmerica Job ID: 400-151280-2
SDG: Ash Pond

Job ID: 400-151280-2

Laboratory: TestAmerica Pensacola

Narrative

**Job Narrative
400-151280-2**

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-358187: Insufficient sample volume was available to perform a sample duplicate (DUP,MS, MSD) for the following samples: MW-11 (400-151280-1) and DUP-02 (400-151280-2). 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 160-358185: Insufficient sample volume was available to perform a sample duplicate (DUP,MS, MSD) for the following samples: MW-11 (400-151280-1) and DUP-02 (400-151280-2). A laboratory control sample/ laboratory control sample duplicate (LCS/ LCSD) were prepared instead to demonstrate batch precision.

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Method Summary

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

TestAmerica Job ID: 400-151260-2
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
9315	Radium-228 (GFPC)	SW648	TAL SL
9320	Radium-226 (GFPC)	SW648	TAL SL
Ra228_Ra226	Combined Radium-228 and Radium-226	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

SW648 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1968 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 83045, TEL (314)296-6588

Sample Summary

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

TestAmerica Job ID: 400-151280-2
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-151280-1	MW-11	Water	03/21/18 17:25	03/22/18 14:40
400-151280-2	DUP-02	Water	03/21/18 16:25	03/22/18 14:40

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Client Sample Results

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

TestAmerica Job ID: 400-151280-2
SDG: Ash Pond

Client Sample ID: MW-11
Date Collected: 03/21/18 17:25
Date Received: 03/22/18 14:40

Lab Sample ID: 400-151280-1
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	17.1		0.689	1.68	1.00	0.0895	pCi/L	03/29/18 14:03	04/20/18 05:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.8		40 - 110					03/29/18 14:03	04/20/18 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	9.39		0.690	1.11	1.00	0.363	pCi/L	03/29/18 14:47	04/05/18 14:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.8		40 - 110					03/29/18 14:47	04/05/18 14:49	1
Y Carrier	87.1		40 - 110					03/29/18 14:47	04/05/18 14:49	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	26.5		0.975	2.01	5.00	0.363	pCi/L		04/20/18 12:23	1

Client Sample Results

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

TestAmerica Job ID: 400-151280-2
SDG: Ash Pond

Client Sample ID: DUP-02

Date Collected: 03/21/18 16:25

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151280-2

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	16.0		0.641	1.57	1.00	0.0734	pCi/L	03/29/18 14:03	04/20/18 05:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					03/29/18 14:03	04/20/18 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	9.39		0.655	1.08	1.00	0.364	pCi/L	03/29/18 14:47	04/05/18 14:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					03/29/18 14:47	04/05/18 14:49	1
Y Carrier	87.9		40 - 110					03/29/18 14:47	04/05/18 14:49	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	25.4		0.916	1.91	5.00	0.364	pCi/L		04/20/18 12:23	1

Definitions/Glossary

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

TestAmerica Job ID: 400-151280-2
SDG: Ash Pond

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.
α	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 Smith Plant

TestAmerica Job ID: 400-151260-2
SDG: Ash Pond

Client Sample ID: MW-11

Date Collected: 03/21/18 17:25

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151280-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/9 A	Prep	PrecSep-21			356165	03/28/16 14:03	TJT	TA7 S7
Total/9 A	Analysis	8315		1	3L1825	04/20/16 05:45	RTN	TA7 S7
Total/9 A	Prep	PrecSepM0			35616_	03/28/16 14:4_	TJT	TA7 S7
Total/9 A	Analysis	8320		1	35805L	04/05/16 14:48	RTN	TA7 S7
Total/9 A	Analysis	Ra22LMRa226		1	3L204_	04/20/16 12:23	RTN	TA7 S7

Client Sample ID: DUP-02

Date Collected: 03/21/18 16:25

Date Received: 03/22/18 14:40

Lab Sample ID: 400-151280-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/9 A	Prep	PrecSep-21			356165	03/28/16 14:03	TJT	TA7 S7
Total/9 A	Analysis	8315		1	3L1825	04/20/16 05:45	RTN	TA7 S7
Total/9 A	Prep	PrecSepM0			35616_	03/28/16 14:4_	TJT	TA7 S7
Total/9 A	Analysis	8320		1	35805L	04/05/16 14:48	RTN	TA7 S7
Total/9 A	Analysis	Ra22LMRa226		1	3L204_	04/20/16 12:23	RTN	TA7 S7

Laboratory References:

TA7 S7 = TestAmerica St. Louis, 13_15 Rider Trail 9 orth, Earth City, NO L3045, TE7 (314)286-65LL

QC Association Summary

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

TestAmerica Job ID: 400-151280-2
SDG: Ash Pond

Rad

Prep Batch: 358185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151280-1	MW-11	Total/NA	Water	PrecSep-21	
400-151280-2	DUP-02	Total/NA	Water	PrecSep-21	
MB 160-358185/16-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-358185/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-358185/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 358187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151280-1	MW-11	Total/NA	Water	PrecSep_0	
400-151280-2	DUP-02	Total/NA	Water	PrecSep_0	
MB 160-358187/16-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-358187/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-358187/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-151260-2
SDG: Ash Pond

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-357175/16-A
Matrix: Water
Analysis Batch: 361925

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 357175

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-22U	0.08663	9	0.0481	0.0482	1.00	0.0U76	pCi/L	08/23/16 14:08	04/20/16 05:4U	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/29/18 14:03	04/20/18 05:46	1

Lab Sample ID: LCS 160-357175/1-A
Matrix: Water
Analysis Batch: 361925

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 357175

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-22U	11.6	10.3U		1.11	1.00	0.0708	pCi/L	38	U6 - 187
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	101		40 - 110						

Lab Sample ID: LCSD 160-357175/2-A
Matrix: Water
Analysis Batch: 361925

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 357175

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	R8R	R8R Limit
Radium-22U	11.6	10.30		1.11	1.00	0.0774	pCi/L	32	U6 - 187	0.08	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	103		40 - 110								

Method: 9320 - Radium-227 (GFPC)

Lab Sample ID: MB 160-35717E/16-A
Matrix: Water
Analysis Batch: 359056

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 35717E

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1271	9	0.166	0.166	1.00	0.81U	pCi/L	08/23/16 14:47	04/05/16 14:45	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/29/18 14:47	04/05/18 14:45	1
Y Carrier	90.8		40 - 110					03/29/18 14:47	04/05/18 14:45	1

QC Sample Results

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

TestAmerica Job ID: 400-151260-2
SDG: Ash Pond

Method: 9320 - Radium-227 (GFPC) (Continued)

Lab Sample ID: LCS 160-35717E/1-A
Matrix: Water
Analysis Batch: 359056

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 35717E

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	6.42	6.808		0.378	1.00	0.840	pCi/L	33	5U- 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	101		40 - 110
Y Carrier	88.6		40 - 110

Lab Sample ID: LCSD 160-35717E/2-A
Matrix: Water
Analysis Batch: 359056

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 35717E

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	R8R	Limit
Radium-226	6.42	7.65U		0.325	1.00	0.828	pCi/L	38	5U- 140	0.24	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	103		40 - 110
Y Carrier	90.1		40 - 110

Chain of Custody Record



TestAmerica Pensacola
3355 McLemore Drive

Pensacola, FL 32514-7045
phone 850.474.1001 fax 850.474.4789

Client Contact Gulf Power Company 1 Energy Place Pensacola, FL 32550 (850) 444-6427 Phone (xxx) xxx-xxxx FAX Project Name: CCR Smith Plant Site: P O #		Regulatory Program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other:		Site Contact: Lab Contact: Cheyenne Whitmore 6020 - Sb, As, Ba, B, Be, Ca, Cd, Cr, Co, Pb, Li, Mo, Se, Ti, 7470A - Mercury SM4500_CIE - Chloride, SM4500_SO4 - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C Fluoride 9315_Ra226, 9320_Ra228, Ra226Ra228_GFP 9315_Ra226, 9320_Ra228, Ra226Ra228_GFP		Date: Carrier:		COC No: _____ of _____ COCs Sampler: Rick Hagedorfer For Lab Use Only: Walk-in Client Lab Sampling: Job / SDG No.: Sample Specific Notes:	
Project Manager: Tell/Fax:		Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below _____ <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Filtered Sample (Y/N)		Parameters			
Sample Date		Sample Time		Sample Type (C=Comp, G=Grab)		Matrix		# of Cont.	
MW-11 DUP-02		3-21-18 1725 3-21-18 1625		G G		GW GW		3 3	
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____ Possible Hazard Identification: _____ Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample. <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown									
Special Instructions/QC Requirements & Comments:									
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temp. (°C): Obs'd:		Corrd:		Therm ID No.:	
Relinquished by:		Company:		Date/Time:		Received by:		Company:	
Relinquished by:		Company:		Date/Time:		Received by:		Company:	
Relinquished by:		Company:		Date/Time:		Received in Laboratory by:		Company:	

4.5e, 0.0e, 0.0e IR-7

Date/Time: 3/22/18 1440
Date/Time: 3/22/18 1440
Date/Time:

Company: TREC
Company:
Company:



Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-151260-2

SDG Number: Ash Pond

Login Number: 151280

List Number: 1

Creator: Whitmire, Cheyenne R

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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	4.58C, 0.08C, 0.08C °R-I
C7 C is present.	True	
C7 C is filled out in ink and legible.	True	
C7 C is filled out with all pertinent information.	True	
Is the Quid Sampler's name present on C7 CF	True	
There are no discrepancies between the containers received and the C7 C.	True	
Samples are received within Holding Time (including tests with immediate ? Tsx	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) erified.	True	
There is sufficient vol. for all requested analyses, incl. any requested q S/q SDs	True	
Containers requiring Micro headspace have no headspace or bubble is <math>< 2\text{mm H}^2/4\text{"}\text{x}</math>	N/A	
Multi-phasic 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: 400-151260-2

SDG Number: Ash Pond

Login Number: 151280

List Number: 2

Creator: Taylor, Kristene N

List Source: TestAmerica St. Louis

List Creation: 03/27/18 01:48 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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	19.0,19.0
C7 C is present.	True	
C7 C is filled out in ink and legible.	True	
C7 C is filled out with all pertinent information.	True	
Is the Quid Sampler's name present on C7 CF	False	
There are no discrepancies between the containers received and the C7 C.	True	
Samples are received within Holding Time (including tests with immediate Txs)	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 q S/q SDs	True	
Containers requiring Micro headspace have no headspace or bubble is <math>< 2\text{mm H}^2/4\text{"}</math>	N/A	
Multi-phasic 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 Smith Plant

TestAmerica Job ID: 400-151260-2
SDG: Ash Pond

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	03-80-16
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	3	66-0369	09-01-16
California	ELAP	9	2510	08-81-16 *
Florida	NELAP	4	E61010	03-80-16
Georgia	State Program	4	N/A	03-80-16
Illinois	NELAP	5	200041	10-09-16
Iowa	State Program	7	837	06-01-16
Kansas	NELAP	7	E-10258	10-81-16
Kentucky (UST)	State Program	4	58	03-80-16
Kentucky (WW)	State Program	4	96080	12-81-16
Louisiana	NELAP	3	80973	03-80-16
Louisiana (DW)	NELAP	3	LA170005	12-81-16
Maryland	State Program	8	288	09-80-16
Massachusetts	State Program	1	M-FL094	03-80-16
Michigan	State Program	5	9912	03-80-16
New Jersey	NELAP	2	FL003	03-80-16
North Carolina (WW/SW)	State Program	4	814	12-81-16
Oklahoma	State Program	3	9610	06-81-16
Pennsylvania	NELAP	8	36-00437	01-81-19
Rhode Island	State Program	1	LAO00807	12-80-16
South Carolina	State Program	4	93023	03-80-16
Tennessee	State Program	4	TN02907	03-80-16
Texas	NELAP	3	T104704263-17-12	09-80-16
USDA	Federal		P880-13-00172	05-24-19
Virginia	NELAP	8	430133	03-14-16
Washington	State Program	10	C915	05-15-16
West Virginia DEP	State Program	8	183	03-80-16

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	03-80-16 *
Arizona	State Program	9	AZ0618	12-06-16
California	State Program	9	2663	03-80-16 *
Connecticut	State Program	1	PH-0241	08-81-19
Florida	NELAP	4	E67369	03-80-16 *
Illinois	NELAP	5	200028	11-80-16
Iowa	State Program	7	878	12-01-16
Kansas	NELAP	7	E-10283	10-81-16
Kentucky (DW)	State Program	4	90125	12-81-16
L-A-B	DoD ELAP		L2805	04-03-19
Louisiana	NELAP	3	04060	03-80-16
Louisiana (DW)	NELAP	3	LA160017	12-81-16
Maryland	State Program	8	810	09-80-16
Michigan	State Program	5	9005	03-80-16
Missouri	State Program	7	760	03-80-16
Nevada	State Program	9	MO000542016-1	07-81-16

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

Accreditation/Certification Summary

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

TestAmerica Job ID: 400-151260-2
SDG: Ash Pond

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 Jersey	NELAP	2	MO002	03-80-16 *
New York	NELAP	2	11313	08-81-19
North Dakota	State Program	6	R207	03-80-16
NRC	NRC		24-24617-01	12-81-22
Oklahoma	State Program	3	9997	06-81-16
Pennsylvania	NELAP	8	36-00540	02-26-19
South Carolina	State Program	4	65002001	03-80-16
Texas	NELAP	3	T104704198-17-11	07-81-16
US Fish & Wildlife	Federal		056446	06-81-16
USDA	Federal		P880-17-0026	02-02-20
Utah	NELAP	6	MO000542013-6	07-81-16
Virginia	NELAP	8	430280	03-14-16 *
Washington	State Program	10	C592	06-80-16
West Virginia DEP	State Program	8	861	06-81-16 *

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

TestAmerica Pensacola

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: 400-151280-3

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Smith Plant

For:

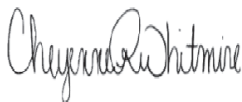
Gulf Power Company

BIN 731

One Energy Place

Pensacola, Florida 32520

Attn: Kristi Mitchell



Authorized for release by:

4/13/2018 2:24:52 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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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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Case Narrative

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

TestAmerica Job ID: 400-151280-3
SDG: Ash Pond

Job ID: 400-151280-3

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-151280-3

Metals

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 392265 and analytical batch 393106 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 6020: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-13 (400-151280-3). Elevated reporting limits (RLs) are provided.

Method(s) 7470A: The method blank for preparation batch 393404 and analytical batch 393589 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 method blank for analytical batch 392343 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 Cl- E: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-13 (400-151280-3). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-13 (400-151280-3). Elevated reporting limits (RLs) are provided.



Detection Summary

Line: ufrPwperl omyaGS
 wro/ectRite: l l . hmitd wraG

TestAmerica Job ID: 400-151280-C
 hDu : Asd woG

Client Sample ID: MW-13

Lab Sample ID: 400-151280-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
ArseGc	03014		0301C	030046	mgR	5		6020	Totan . ecoverabre
Barif m	03098		03025	030049	mgR	5		6020	Totan . ecoverabre
l dromif m	03024	I	03025	03011	mgR	5		6020	Totan . ecoverabre
Litdif m	0325		03050	03011	mgR	5		6020	Totan . ecoverabre
Morsbj eG m	030C		0315	030085	mgR	5		6020	Totan . ecoverabre
BoroG- DL	15		23	034	mgR	200		6020	Totan . ecoverabre
l arcif m - DL	740		10	53	mgR	200		6020	Totan . ecoverabre
TotanDissorvej horij s	11000		100	85	mgR	1		hM 2540I	TotanNA
l dnoij e	4100		200	60	mgR	100		hM 4500 I n E	TotanNA
Fif orij e	0340	I	0310	030C2	mgR	1		hM 4500 F I	TotanNA
hf rate	970		150	42	mgR	00		hM 4500 hO4 E	TotanNA
Fiej yH	638				hU	1		Fiej hamyrG	TotanNA

Method Summary

I nieG: u f rPwoper l omyaGS
 wro/ectRite: l l Whmitd wraG

TestAmerica Job ID: 400-151260-C
 hDu : Asd woG

Method	Method Description	Protocol	Laboratory
M20	(etas)ll wR hL	h8 64M	TAE wN7
V4V0A	(ercf rS)l , AAL	h8 64M	TAE wN7
h(2540l	horij svTotanDissorfej)TDhL	h(	TAE wN7
h(4500 l n N	l drørij evTotan	h(	TAE wN7
h(4500 Ol	Of orij e	h(	TAE wN7
h(4500 hg 4 N	hf røtevTotan	h(	TAE wN7
Qerj hamyrnG=	Qerj hamyrnG=	NwA	TAE wN7

Protocol References:

NwA U" h NGFiroGmeGanwroprotectioGA=eGcS
 h(UxhtaG arj (etdoj s Cor Tde N9amiGatioGg P8 ater AQ 8 astep aterxv
 h8 64MUxTest (etdoj s Cor NFarf atiG= horij 8 astevwdSsicarR demican(etdoj svTdirj Nj itioGv7 ofember 1. 6MAG lts " yj ates3

Laboratory References:

TAE wN7 U TestAmerica weGacoravCC55 (cEemore DriFevweGacoravOE C2514vTNE)650L4V4-1001



Sample Summary

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

TestAmerica Job ID: 400-151280-3
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-151280-3	MW-13	Water	03/22/18 15:01	03/23/18 17:00

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

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

TestAmerica Job ID: 400-151280-3
SDG: Ash Pond

Client Sample ID: Wr -1M
Date Collected: 04/22/18 15:01
Date Received: 04/22/18 14:00

Lab Sample ID: 400-151280-M
Watxio: r atex

Wethc3: 6020 - Metals (ICP/MS) - Total Reducible

Analyte	Result	Qualifier	PQL	WDL	Unit	D	Received	Analyzed	Dil Factor
Antimony	0.0010	U	0.0025	0.0010	mg/L		04/01/18 12:07	04/06/18 17:35	5
Arsenic	0.0014		0.0013	0.00046	mg/L		04/01/18 12:07	04/06/18 17:35	5
Barium	0.098		0.0025	0.00049	mg/L		04/01/18 12:07	04/06/18 17:35	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		04/01/18 12:07	04/06/18 17:35	5
Cadmium	0.00034	U	0.0025	0.00034	mg/L		04/01/18 12:07	04/06/18 17:35	5
Chromium	0.0024	I	0.0025	0.0011	mg/L		04/01/18 12:07	04/06/18 17:35	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		04/01/18 12:07	04/06/18 17:35	5
Lead	0.00035	U	0.0013	0.00035	mg/L		04/01/18 12:07	04/06/18 17:35	5
Lithium	0.25		0.0050	0.0011	mg/L		04/01/18 12:07	04/06/18 17:35	5
Wolfram	0.000		0.015	0.00085	mg/L		04/01/18 12:07	04/06/18 17:35	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		04/01/18 12:07	04/06/18 17:35	5
Thallium	0.000085	U	0.00050	0.000085	mg/L		04/01/18 12:07	04/06/18 17:35	5

Wethc3: 6020 - Metals (ICP/MS) - Total Reducible - DL

Analyte	Result	Qualifier	PQL	WDL	Unit	D	Received	Analyzed	Dil Factor
Barium	15		2.0	0.84	mg/L		04/01/18 12:07	04/07/18 06:17	200
Calcium	40		10	5.0	mg/L		04/01/18 12:07	04/07/18 06:17	200

Wethc3: v4v0A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	WDL	Unit	D	Received	Analyzed	Dil Factor
Mercury	0.000070	U	0.00020	0.000070	mg/L		04/10/18 12:09	04/11/18 15:08	1

General Chemistry

Analyte	Result	Qualifier	PQL	WDL	Unit	D	Received	Analyzed	Dil Factor
Total Dissolved Solids	11000		130	85	mg/L			03/27/18 13:11	1
Chloride	4100		200	60	mg/L			04/02/18 12:14	100
Fluoride	0.040	I	0.10	0.032	mg/L			03/30/18 13:04	1
Sulfate	90		150	42	mg/L			04/03/18 10:25	30

Wethc3: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	WDL	Unit	D	Received	Analyzed	Dil Factor
Field pH	6.88				SU			03/22/18 15:01	1

Definitions/Glossary

Line: ufrPwoperlomyaGS
wro/ectRite: l l 3 hmitd wrAG

TestAmerica Job ID: 400-151280-C
hDu : Asd woG

Qualifiers

Metals

Qualifier	Qualifier Description
JC	Estimatej varfe; varfe maSGt be accf rate. hyike recoverSor 3 wD of tsij e oPcriteria.
U	Iq icates tdat tde comyof G pas aGarSzej Rbr bf t Gt j etectej .
I	Tde reyortej varfe is betpeeGtde raboratorSmetdoj j etectioGmit aG tde raboratorSyracticanqf aGtatioGmit.

General Chemistry

Qualifier	Qualifier Description
I	Tde reyortej varfe is betpeeGtde raboratorSmetdoj j etectioGmit aG tde raboratorSyracticanqf aGtatioGmit.
U	Iq icates tdat tde comyof G pas aGarSzej Rbr bf t Gt j etectej .

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listej f G er tde "D" corf mGto j esigGate tdat tde resf n is reyortej oGa j rSp eigdt basis
%3	werceG 3 ecoverS
I FL	I oGaiG Free Liqf ij
I NF	I oGaiG No Free Liqf ij
DE3	Df ynicate Error 3 atio (Gormanizej absorf te j iPreGce)
DinFac	Dirf tioGFactor
DL	DetectioGLimit (DoDRDOE)
DL, 3A, 3E, IN	Iq icates a Dirf tioG 3 e-aGarSsis, 3 e-extractioG or aj j itioGanlGtianmetars RGoGaGarSsis oPte samyre
DLI	DecisioGLevenl oGceGratioG(3 aj iocdemistrS)
EDL	Estimatej DetectioGLimit (DioxiG)
LOD	Limit oPDetectioG(DoDRDOE)
LOQ	Limit oPQf aGtatioG(DoDRDOE)
MDA	MiGmf m Detectablæ ActivitS (3 aj iocdemistrS)
MDI	MiGmf m Detectablæ l oGceGratioG(3 aj iocdemistrS)
MDL	Metdoj DetectioGLimit
ML	MiGmf m Leven(DioxiG)
NI	Not l arcf ratej
ND	Not Detectej at tde reyortiqG rimit (or MDL or EDL iPsdop G)
wQL	wracticanQf aGtatioGLimit
QI	Qf aritSI oGron
3E3	3 erative Error 3 atio (3 aj iocdemistrS)
3L	3 eyortiqG Limit or 3 eqf estej Limit (3 aj iocdemistrS)
3wD	3 erative werceG DiPreGce, a measf re oPte relative j iPreGce betpeeGtp o yoiGs
TEF	ToxicitSEqf ivareG Factor (DioxiG)
TEQ	ToxicitSEqf ivareG Qf otieG (DioxiG)

Lab Chronicle

Client: Gulf Power Company
 Project Site: CCh Rmitd Plant

TestAmerica Job ID: 400-151260-j
 RDG: Asd Pon3

Client Sample ID: MW-13

Date Collected: 03/22/18 15:01

Date Received: 03/23/18 17:00

Lab Sample ID: 400-151280-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total h ecoverable	Prep	j 005A			j 92275	04\$1\$6 12:08	DN1	TAL PEN
Total h ecoverable	Analysis	7020		5	j 9j 107	04\$7\$6 18:j 5	Dh E	TAL PEN
Total h ecoverable	Prep	j 005A	DL		j 92275	04\$1\$6 12:08	DN1	TAL PEN
Total h ecoverable	Analysis	7020	DL	200	j 9j 107	04\$8\$6 07:18	Dh E	TAL PEN
Total\$NA	Prep	8480A			j 9j 404	04\$0\$6 12:09	JAP	TAL PEN
Total\$NA	Analysis	8480A		1	j 9j 569	04\$1\$6 15:06	JAP	TAL PEN
Total\$NA	Analysis	RM 2540C		1	j 91585	0j \$28\$6 1j :11	hh C	TAL PEN
Total\$NA	Analysis	RM 4500 Cl- E		100	j 92j 4j	04\$2\$6 12:14	hh C	TAL PEN
Total\$NA	Analysis	RM 4500 F C		1	j 92170	0j \$0\$6 1j :04	BAB	TAL PEN
Total\$NA	Analysis	RM 4500 RO4 E		j 0	j 92490	04\$j \$6 10:25	hh C	TAL PEN
Total\$NA	Analysis	Fiel3 Rampling		1	j 9j 585	0j \$22\$6 15:01	AW	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, j j 55 McLemore Drive, Pensacola, FL j 2514, TEL (650)484-1001



QC Association Summary

LineG: u f rPwop er l omyaGS
wro/ectRite: l l Whmitd wraG

TestAmerica Job ID: 400-151260-C
hDu : Asd woG

Metals

Prep Batch: 39227L

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-151260-C- DM	v 3 -1C	TotanWecoUerabre	3 ater	0005A	
400-151260-C	v 3 -1C	TotanWecoUerabre	3 ater	0005A	
v L 400-C72285R-A F5	v etdoj LraGB	TotanWecoUerabre	3 ater	0005A	
M h 400-C72285R-A	Mab l oGronh amyre	TotanWecoUerabre	3 ater	0005A	
400-1511E0-L-24-L v h F5	v atri9 h yiBe	TotanWecoUerabre	3 ater	0005A	
400-1511E0-L-24-l v h D F5	v atri9 h yiBe Df yricate	TotanWecoUerabre	3 ater	0005A	

Analysis Batch: 3935(7)

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-151260-C	v 3 -1C	TotanWecoUerabre	3 ater	8020	C72285
400-151260-C- DM	v 3 -1C	TotanWecoUerabre	3 ater	8020	C72285
v L 400-C72285R-A F5	v etdoj LraGB	TotanWecoUerabre	3 ater	8020	C72285
M h 400-C72285R-A	Mab l oGronh amyre	TotanWecoUerabre	3 ater	8020	C72285
400-1511E0-L-24-L v h F5	v atri9 h yiBe	TotanWecoUerabre	3 ater	8020	C72285
400-1511E0-L-24-l v h D F5	v atri9 h yiBe Df yricate	TotanWecoUerabre	3 ater	8020	C72285

Prep Batch: 393()

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-151260-C	v 3 -1C	TotarR A	3 ater	E4E0A	
v L 400-C7C404R4-A	v etdoj LraGB	TotarR A	3 ater	E4E0A	
M h 400-C7C404R5-A	Mab l oGronh amyre	TotarR A	3 ater	E4E0A	
400-151260-L-1-l v h	v atri9 h yiBe	TotarR A	3 ater	E4E0A	
400-151260-L-1-D v h D	v atri9 h yiBe Df yricate	TotarR A	3 ater	E4E0A	

Analysis Batch: 393L49

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-151260-C	v 3 -1C	TotarR A	3 ater	E4E0A	C7C404
v L 400-C7C404R4-A	v etdoj LraGB	TotarR A	3 ater	E4E0A	C7C404
M h 400-C7C404R5-A	Mab l oGronh amyre	TotarR A	3 ater	E4E0A	C7C404
400-151260-L-1-l v h	v atri9 h yiBe	TotarR A	3 ater	E4E0A	C7C404
400-151260-L-1-D v h D	v atri9 h yiBe Df yricate	TotarR A	3 ater	E4E0A	C7C404

General Chemistry

Analysis Batch: 395L1L

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-151260-C	v 3 -1C	TotarR A	3 ater	hv 2540I	
v L 400-C715E5R	v etdoj LraGB	TotarR A	3 ater	hv 2540I	
M h 400-C715E5R	Mab l oGronh amyre	TotarR A	3 ater	hv 2540I	
400-1511E0-A-2CDk	Df yricate	TotarR A	3 ater	hv 2540I	

Analysis Batch: 39257(

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-151260-C	v 3 -1C	TotarR A	3 ater	hv 4500 NI	
v L 400-C72180R	v etdoj LraGB	TotarR A	3 ater	hv 4500 NI	
M h 400-C72180R	Mab l oGronh amyre	TotarR A	3 ater	hv 4500 NI	
400-151514-A-4 v h	v atri9 h yiBe	TotarR A	3 ater	hv 4500 NI	
400-151514-A-4 v h D	v atri9 h yiBe Df yricate	TotarR A	3 ater	hv 4500 NI	
400-151005-L-2 Dk	Df yricate	TotarR A	3 ater	hv 4500 NI	

TestAmerica weGacora

QC Association Summary

LineG: u f r Pwop er l omyaGS
wro/ectRite: l l Whmitd wraG

TestAmerica Job ID: 400-151260-C
hDu : Asd woG

General Chemistry Continue86

Analysis Batch: 3923) 3

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-151260-C	v 3 -1C	TotarR A	3 ater	hv 4500 l n x	
v L 400-C72C4C8	v etdoj L raGB	TotarR A	3 ater	hv 4500 l n x	
M h 400-C72C4C8E	Mab l oGronh amyre	TotarR A	3 ater	hv 4500 l n x	
v WM400-C72C4C8C	Mab l oGronh amyre	TotarR A	3 ater	hv 4500 l n x	
400-151258-A-4 v h	v atri9 h yiBe	TotarR A	3 ater	hv 4500 l n x	
400-151258-A-4 v hD	v atri9 h yiBe Df yricate	TotarR A	3 ater	hv 4500 l n x	

Analysis Batch: 392) 9(

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-151260-C	v 3 -1C	TotarR A	3 ater	hv 4500 hO4 x	
v L 400-C724708	v etdoj L raGB	TotarR A	3 ater	hv 4500 hO4 x	
M h 400-C724708E	Mab l oGronh amyre	TotarR A	3 ater	hv 4500 hO4 x	
v WM400-C724708C	Mab l oGronh amyre	TotarR A	3 ater	hv 4500 hO4 x	

Field Service / Mobile bal

Analysis Batch: 393L1L

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-151260-C	v 3 -1C	TotarR A	3 ater	Nierj hamyriGg	

QC Sample Results

Line: ufrPwoperlomyaGS
 wro/ectRite: l l . hmitd wraG

TestAmerica Job ID: 400-151260-C
 hDu : Asd woG

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-392265/1-A ^5
Matrix: Water
Analysis Batch: 393106

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 392265

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
AGimoGS	00010	g	00025	00010	mLR		04R1R6 12:08	04R9R6 14:14	5
ArseGc	000049	g	0001C	000049	mLR		04R1R6 12:08	04R9R6 14:14	5
Marif m	00004B	g	00025	00004B	mLR		04R1R6 12:08	04R9R6 14:14	5
MerSmif m	0000C4	g	00025	0000C4	mLR		04R1R6 12:08	04R9R6 14:14	5
MbroG	0021	g	0050	0021	mLR		04R1R6 12:08	04R9R6 14:14	5
I aj mif m	0000C4	g	00025	0000C4	mLR		04R1R6 12:08	04R9R6 14:14	5
I arcif m	00C	g	0025	00C	mLR		04R1R6 12:08	04R9R6 14:14	5
I dromif m	00011	g	00025	00011	mLR		04R1R6 12:08	04R9R6 14:14	5
I obart	000040	g	00025	000040	mLR		04R1R6 12:08	04R9R6 14:14	5
3eaj	0000C5	g	0001C	0000C5	mLR		04R1R6 12:08	04R9R6 14:14	5
3itdif m	00011	g	00050	00011	mLR		04R1R6 12:08	04R9R6 14:14	5
7 orSbj eG m	000065	g	0015	000065	mLR		04R1R6 12:08	04R9R6 14:14	5
hereGf m	000024	g	0001C	000024	mLR		04R1R6 12:08	04R9R6 14:14	5
Tdanif m	0000065	g	000050	0000065	mLR		04R1R6 12:08	04R9R6 14:14	5

Lab Sample ID: LCS 400-392265/2-A
Matrix: Water
Analysis Batch: 393106

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 392265

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
AGimoGS	00500	00526		mLR		109	60 - 120
ArseGc	00500	00512		mLR		102	60 - 120
Marif m	00500	00505		mLR		101	60 - 120
MerSmif m	00500	00508		mLR		101	60 - 120
MbroG	00100	00104		mLR		104	60 - 120
I aj mif m	00500	00515		mLR		10C	60 - 120
I arcif m	500	502		mLR		109	60 - 120
I dromif m	00500	004B8		mLR		BB	60 - 120
I obart	00500	004B5		mLR		BB	60 - 120
3eaj	00500	00512		mLR		102	60 - 120
3itdif m	00500	0050C		mLR		101	60 - 120
7 orSbj eG m	00500	00514		mLR		10C	60 - 120
hereGf m	00500	00466		mLR		B6	60 - 120
Tdanif m	00100	000B69		mLR		BB	60 - 120

Lab Sample ID: 400-151170-B-24-B MS ^5
Matrix: Water
Analysis Batch: 393106

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 392265

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
AGimoGS	00010	g	00500	00559		mLR		111	85 - 125
ArseGc	000049	g	00500	0051B		mLR		104	85 - 125
Marif m	00C5		00500	00660		mLR		108	85 - 125
MerSmif m	0000C4	g	00500	00518		mLR		10C	85 - 125
MbroG	0021	g	00100	0011		mLR		111	85 - 125
I aj mif m	0000C4	g	00500	00512		mLR		102	85 - 125
I arcif m	15		500	200		mLR		101	85 - 125
I dromif m	00069		00500	0056B		mLR		101	85 - 125

TestAmerica weGacora

QC Sample Results

Line: ufrPwoperl omyaGS
 wro/ectRite: l l . hmitd wrG

TestAmerica Job ID: 400-151260-C
 hDu : Asd woG

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

Lab Sample ID: 400-151170-B-24-B MS ^5
Matrix: Water
Analysis Batch: 393106

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 392265

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
l obart	000040	g	00500	00504		mLR		101	85 - 125
3eaj	000005	g	00500	00516		mLR		104	85 - 125
3itdif m	000011	g	00500	00958	JC	mLR		1C1	85 - 125
7 orSbj eG m	000065	g	00500	00508		mLR		108	85 - 125
hereGf m	000024	g	00500	00502		mLR		100	85 - 125
Tdanif m	0000065	g	00100	00100		mLR		100	85 - 125

Lab Sample ID: 400-151170-B-24-C MSD ^5
Matrix: Water
Analysis Batch: 393106

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 392265

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
AGimoGS	000010	g	00500	0054C		mLR		10B	85 - 125	2	20
ArseGc	000049	g	00500	00521		mLR		104	85 - 125	0	20
Marif m	000005		00500	00695		mLR		104	85 - 125	2	20
MerSmif m	000004	g	00500	00505		mLR		101	85 - 125	2	20
MbroG	000021	g	00100	0010B		mLR		10B	85 - 125	2	20
l aj mif m	000004	g	00500	00508		mLR		108	85 - 125	5	20
l arcif m	15		500	204		mLR		108	85 - 125	2	20
l dromif m	000069		00500	00818	JC	mLR		129	85 - 125	20	20
l obart	000040	g	00500	00504		mLR		101	85 - 125	0	20
3eaj	000005	g	00500	00516		mLR		104	85 - 125	0	20
3itdif m	000011	g	00500	00959	JC	mLR		1C1	85 - 125	0	20
7 orSbj eG m	000065	g	00500	0052B		mLR		109	85 - 125	2	20
hereGf m	000024	g	00500	004B2		mLR		B6	85 - 125	2	20
Tdanif m	0000065	g	00100	00101		mLR		101	85 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-393404/14-A
Matrix: Water
Analysis Batch: 393589

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 393404

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
7 ercf rS	00000888	I	000020	0000080	mLR		04R0R6 12:06	04R1R6 15:00	1

Lab Sample ID: LCS 400-393404/15-A
Matrix: Water
Analysis Batch: 393589

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 393404

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
7 ercf rS	0000101	0000101		mLR		100	60 - 120

Lab Sample ID: 400-151280-B-1-C MS
Matrix: Water
Analysis Batch: 393589

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 393404

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
7 ercf rS	0000080	g	000201	0001B6		mLR		B6	60 - 120

TestAmerica weGacorã

QC Sample Results

Location: ufrPwoperl omyaGS
 wro/ectRite: l l . hmitd wraG

TestAmerica Job ID: 400-151260-C
 hDu : Asd woG

Lab Sample ID: 400-151280-B-1-D MSD
 Matrix: Water
 Analysis Batch: 393589

Client Sample ID: Matrix Spike Duplicate
 Prep Type: Total/NA
 Prep Batch: 393404
 %Rec. RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
7 ercf rS	0000080	g	000201	0001BC		mLR		B9	60 - 120	2	20

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

Lab Sample ID: MB 400-391575/1
 Matrix: Water
 Analysis Batch: 391575

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TotanDissorvej horij s	04	g	50	04	mLR			0028R6 1C:11	1

Lab Sample ID: LCS 400-391575/2
 Matrix: Water
 Analysis Batch: 391575

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
TotanDissorvej horij s	2BC	260		mLR		B9	86 - 122

Lab Sample ID: 400-151170-A-23 DU
 Matrix: Water
 Analysis Batch: 391575

Client Sample ID: Duplicate
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
TotanDissorvej horij s	89		890		mLR		0	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-392343/6
 Matrix: Water
 Analysis Batch: 392343

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
l dnoij e	149	l	20	090	mLR			04R2R6 11:0B	1

Lab Sample ID: LCS 400-392343/7
 Matrix: Water
 Analysis Batch: 392343

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
l dnoij e	000	01B		mLR		109	B0 - 110

Lab Sample ID: MRL 400-392343/3
 Matrix: Water
 Analysis Batch: 392343

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
l dnoij e	200	248		mLR		12C	50 - 150

TestAmerica weGacora

QC Sample Results

Line: ufrPwoperlomyaGS
 wro/ectRite: l . hmitd wrG

TestAmerica Job ID: 400-151260-C
 hDu : Asd woG

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

Lab Sample ID: 400-151256-A-4 MS
Matrix: Water
Analysis Batch: 392343

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	BLN	N	100	1BL		mLR		104	8C- 120

Lab Sample ID: 400-151256-A-4 MSD
Matrix: Water
Analysis Batch: 392343

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	BLN	N	100	20B		mLR		114	8C- 120	5	6

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-392160/3
Matrix: Water
Analysis Batch: 392160

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
fluoride	00C2	g	010	00C2	mLR			000R6 12:2B	1

Lab Sample ID: LCS 400-392160/4
Matrix: Water
Analysis Batch: 392160

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
fluoride	400	416		mLR		105	80 - 110

Lab Sample ID: 400-151514-A-4 MS
Matrix: Water
Analysis Batch: 392160

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	018		100	119		mLR		10B	85 - 125

Lab Sample ID: 400-151514-A-4 MSD
Matrix: Water
Analysis Batch: 392160

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	018		100	119		mLR		10B	85 - 125	0	4

Lab Sample ID: 400-151335-B-2 DU
Matrix: Water
Analysis Batch: 392160

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
fluoride	00C2	g	00C2	g	mLR		FI	4

TestAmerica weGacorã

QC Sample Results

Line: ufrpwerlomyaGS
 Project: I.L. hmitd waG

TestAmerica Job ID: 400-151260-C
 hDu: Asd woG

Method: SM 4500 SO4 E - Sulfate, Total

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
hf rate	14	g	50	14	mLR			04/13/18 08:42	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
hf rate	150	140		mLR		BB	80 - 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
hf rate	500	454	I	mLR		B1	50 - 150

Chain of Custody Record



TestAmerica Pensacola
3355 McClennore Drive

Pensacola, FL 32514-7045
phone 850.474.1001 fax 850.474.4789

TestAmerica Laboratories, Inc.

COC No: _____ of _____ COCs

Client Contact
Gulf Power Company
1 Energy Place
Pensacola, FL 32520
(850) 444-6427 Phone
(xxx) xxx-xxxx FAX
Project Name: CCR Smith Plant
Site:
P O #

Project Manager: _____
Tel/Fax: _____
Regulatory Program: DW MPDES RCRA Other: _____

Site Contact: Cheyenne Whitmore
Lab Contact: _____
Date: _____
Carrier: _____

Analysis Turnaround Time
 CALENDAR DAYS WORKING DAYS
TAT if different from Below _____
 2 weeks
 1 week
 2 days
 1 day

Sample Identification
Sample Date: 3-22-18
Sample Time: 15:01
Sample Type (C=Comp, G=Grab): G
Matrix: fw
of Cont.: 3

Parameters
Field Sampling - Field Sampling
Mercury
6020 - Sb, As, Ba, B, Be, Ca, Cd, Cr, Co, Pb, Li, Mo, Se, Ti, 7470A - Fluoride
SM4500_S04_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C
SM4500_CIE - Chloride
9315 Ra226, 9320 Ra228, Ra226Ra228_GFP
Perform MS / MSD (Y / N)

Sample Specific Notes:
MW-13
X X X

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

Non-Hazardous Flammable Skin Irritant Poison B Unknown

Special Instructions/QC Requirements & Comments:
4.5°C, 0.0% O2, 0.0°C IR-7

Custody Seal No.: _____
Cooler Temp. (°C): Obs'd: _____
Therm ID No.: _____

Received by: _____
Date/Time: 3-25-18 17:00
Company: PS4 ENW

Received by: _____
Date/Time: _____
Company: _____

Received in Laboratory by: _____
Date/Time: _____
Company: _____

Received by: _____
Date/Time: _____
Company: _____

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Date/Time: _____
Company: _____

Received in Laboratory by: _____
Date/Time: _____
Company: _____



Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-151280-3

SDG Number: Ash Pond

Login Number: 151280

List Number: 1

Creator: Whitmire, Cheyenne R

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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	4.5°C, 0.0°C, 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 <math><6\text{mm}</math> (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: CCh Rmitd Plant

TestAmerica Job ID: 400-151260-j
 RDG: Asd Pon.

Laboratory: TestAmerica Pensacola

All accreditation certifications delivered by this laboratory are listed. Not all accreditation certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	Rtate Pro3ram	4	40150	08-j 0-16
Ag AB	IROSEC 17025		L2471	02-22-20
Arizona	Rtate Pro3ram	9	AZ0710	01-12-19
Arkansas DEQ	Rtate Pro3ram	8	66-0869	09-01-16
California	ELAP	9	2510	0j -j 1-16 *
Florida	g ELAP	4	E61010	08-j 0-16
Georgia	Rtate Pro3ram	4	g SA	08-j 0-16
Illinois	g ELAP	5	200041	10-09-16
Iowa	Rtate Pro3ram	7	j 87	06-01-16
Kansas	g ELAP	7	E-1025j	10-j 1-16
Kentucky (URT)	Rtate Pro3ram	4	5j	08-j 0-16
Kentucky (WW)	Rtate Pro3ram	4	960j 0	12-j 1-16
Louisiana	g ELAP	8	j 0978	08-j 0-16
Louisiana (DW)	g ELAP	8	LA170005	12-j 1-16
Maryland	Rtate Pro3ram	j	2j j	09-j 0-16
Massachusetts	Rtate Pro3ram	1	M-FL094	08-j 0-16
Michigan	Rtate Pro3ram	5	9912	08-j 0-16
New Jersey	g ELAP	2	FL008	08-j 0-16
North Carolina (WW/RW)	Rtate Pro3ram	4	j 14	12-j 1-16
Oklahoma	Rtate Pro3ram	8	9610	06-j 1-16
Pennsylvania	g ELAP	j	86-00487	01-j 1-19
Rhode Island	Rtate Pro3ram	1	LA00j 07	12-j 0-16
South Carolina	Rtate Pro3ram	4	98028	08-j 0-16
Tennessee	Rtate Pro3ram	4	Tg 02907	08-j 0-16
Texas	g ELAP	8	T104704268-17-12	09-j 0-16
URDA	Federal		Pj j 0-18-00172	05-24-19
Virginia	g ELAP	j	480188	08-14-16
Washington	Rtate Pro3ram	10	C915	05-15-16
West Virginia DEP	Rtate Pro3ram	j	1j 8	08-j 0-16

* Accreditation certification renewal period in 3 - accreditation certification consideration period 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: 400-151280-4

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Smith Plant

For:

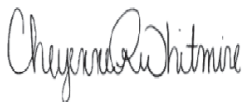
Gulf Power Company

BIN 731

One Energy Place

Pensacola, Florida 32520

Attn: Kristi Mitchell



Authorized for release by:

4/20/2018 2:27:00 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

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results through

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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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Case Narrative

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

TestAmerica Job ID: 400-151280-4
SDG: Ash Pond

Job ID: 400-151280-4

Laboratory: TestAmerica Pensacola

Narrative

**Job Narrative
400-151280-4**

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-358187: Insufficient sample volume was available to perform a sample duplicate (DUP,MS, MSD) for the following samples: MW-13 (400-151280-3). 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 160-358185: Insufficient sample volume was available to perform a sample duplicate (DUP,MS, MSD) for the following samples: MW-13 (400-151280-3). A laboratory control sample/ laboratory control sample duplicate (LCS/ LCSD) were prepared instead to demonstrate batch precision.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Method Summary

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

TestAmerica Job ID: 400-151260-4
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
9315	Radium-228 (GFPC)	SW648	TAL SL
9320	Radium-226 (GFPC)	SW648	TAL SL
Ra228_Ra226	Combined Radium-228 and Radium-226	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

SW648 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1968 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 83045, TEL (314)296-6588

Sample Summary

3 of 3
f roectjy ite: 33/ y mitS f Al t

TestAmerica Job ID: 400-151280-4
yDn : AsS f ol h

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-151280-R	MW-1R	Water	04/22/18 15:01	04/23/18 17:00

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Client Sample Results

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

TestAmerica Job ID: 400-151280-4
SDG: Ash Pond

Client Sample ID: Wr -1M
Date Collected: 03/22/18 15:01
Date Received: 03/22/18 15:00

Lab Sample ID: 400-151280-M
Watxio: r atex

Wethc3: 9M15 - Ra3ium-226 (GFPC)

Analyte	Result	Qualifier	Ccount Undext. (2σ+/-)	Ttotal Undext. (2σ+/-)	RL	WDC	Unit	Prepared	Analyzed	Dil Fac
Ra3ium-226	6.v1		0.421	0.736	1.00	0.0941	pCi/L	03/29/18 14:03	04/20/18 05:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	826		40 - 110					03/28/1: 1493	04/20/1: 05945	1

Wethc3: 9M20 - Ra3ium-228 (GFPC)

Analyte	Result	Qualifier	Ccount Undext. (2σ+/-)	Ttotal Undext. (2σ+/-)	RL	WDC	Unit	Prepared	Analyzed	Dil Fac
Ra3ium-228	v.2v		0.600	0.899	1.00	0.371	pCi/L	03/29/18 14:47	04/05/18 14:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	826		40 - 110					03/28/1: 1494Y	04/05/1: 14951	1
7 Carrier	806		40 - 110					03/28/1: 1494Y	04/05/1: 14951	1

Wethc3: Ra226_Ra228 - Ccombine3 Ra3ium-226 an3 Ra3ium-228

Analyte	Result	Qualifier	Ccount Undext. (2σ+/-)	Ttotal Undext. (2σ+/-)	RL	WDC	Unit	Prepared	Analyzed	Dil Fac
Ccombine3 Ra3ium 226 + 228	14.0		0.733	1.16	5.00	0.371	pCi/L		04/20/18 12:23	1

Definitions/Glossary

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

TestAmerica Job ID: 400-151280-4
SDG: Ash Pond

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.
α	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 Smith Plant

TestAmerica Job ID: 400-151260-4
SDG: Ash Pond

Client Sample ID: MW-13

Date Collected: 03/22/18 15:01

Date Received: 03/23/18 17:00

Lab Sample ID: 400-151280-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/9 A	Prep	PrecSep-21			356165	03/28/16 14:03	TJT	TA7 S7
Total/9 A	Analysis	8315		1	3L1825	04/20/16 05:45	RTN	TA7 S7
Total/9 A	Prep	PrecSepM0			35616_	03/28/16 14:4_	TJT	TA7 S7
Total/9 A	Analysis	8320		1	358055	04/05/16 14:51	RTN	TA7 S7
Total/9 A	Analysis	Ra22LMRa226		1	3L204_	04/20/16 12:23	RTN	TA7 S7

Laboratory References:

TA7 S7 = TestAmerica St. Louis, 13_15 Rider Trail 9 orth, Earth City, NO L3045, TE7 (314)286-65LL

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QC Association Summary

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

TestAmerica Job ID: 400-151280-4
SDG: Ash Pond

Rad

Prep Batch: 358185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151280-3	MW-13	Total/NA	Water	PrecSep-21	
MB 160-358185/16-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-358185/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-358185/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 358187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151280-3	MW-13	Total/NA	Water	PrecSep_0	
MB 160-358187/16-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-358187/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-358187/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-151260-4
SDG: Ash Pond

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-357175/16-A
Matrix: Water
Analysis Batch: 361925

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 357175

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-22U	0.08663	9	0.0481	0.0482	1.00	0.0U76	pCi/L	08/23/16 14:08	04/20/16 05:4U	1
Carrier	%Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/29/18 14:03	04/20/18 05:46	1

Lab Sample ID: LCS 160-357175/1-A
Matrix: Water
Analysis Batch: 361925

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 357175

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-22U	11.6	10.3U		1.11	1.00	0.0708	pCi/L	38	U6 - 187
Carrier	%Yield	LCS Qualifier	Limits						
Ba Carrier	101		40 - 110						

Lab Sample ID: LCSD 160-357175/2-A
Matrix: Water
Analysis Batch: 361925

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 357175

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	R8R	R8R Limit
Radium-22U	11.6	10.30		1.11	1.00	0.0774	pCi/L	32	U6 - 187	0.08	1
Carrier	%Yield	LCSD Qualifier	Limits								
Ba Carrier	103		40 - 110								

Method: 9320 - Radium-227 (GFPC)

Lab Sample ID: MB 160-35717E/16-A
Matrix: Water
Analysis Batch: 359056

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 35717E

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1271	9	0.166	0.166	1.00	0.81U	pCi/L	08/23/16 14:47	04/05/16 14:45	1
Carrier	%Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/29/18 14:47	04/05/18 14:45	1
Y Carrier	90.8		40 - 110					03/29/18 14:47	04/05/18 14:45	1

QC Sample Results

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

TestAmerica Job ID: 400-151260-4
SDG: Ash Pond

Method: 9320 - Radium-227 (GFPC) (Continued)

Lab Sample ID: LCS 160-35717E/1-A
Matrix: Water
Analysis Batch: 359056

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 35717E

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	6.42	6.808		0.378	1.00	0.840	pCi/L	33	5U- 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	101		40 - 110
Y Carrier	88.6		40 - 110

Lab Sample ID: LCSD 160-35717E/2-A
Matrix: Water
Analysis Batch: 359056

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 35717E

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	R8R	Limit
Radium-226	6.42	7.65U		0.325	1.00	0.828	pCi/L	38	5U- 140	0.24	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	103		40 - 110
Y Carrier	90.1		40 - 110

Chain of Custody Record



TestAmerica Pensacola
3355 McClennore Drive

Pensacola, FL 32514-7045
phone 850.474.1001 fax 850.474.4789

TestAmerica Laboratories, Inc.

Client Contact Gulf Power Company 1 Energy Place Pensacola, FL 32520 (850) 444-6427 Phone (xxx) xxx-xxxx FAX Project Name: CCR Smith Plant Site: P O #		Regulatory Program: <input type="checkbox"/> DW <input type="checkbox"/> MPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other:		Project Manager: Tel/Fax:		Site Contact: Lab Contact: Cheyenne Whitmore Perform MS / MSD (Y / N)		Date: Carrier:		COC No.: _____ of _____ COCs	
Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below _____ <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Sample Identification MW-13		Sample Date: 3-22-18 Sample Time: 15:01 Sample Type (C=Comp, G=Grab): G Matrix: fw # of Cont.: 3		Filtered Sample (Y / N) 9315 Ra226, 9320, Ra228, Ra226Ra228, GFPC SM4500_CIE - Chloride, SM4500_S04_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C Fluoride 6020 - Sb, As, Ba, B, Be, Ca, Cd, Cr, Co, Pb, Li, Mo, Se, Ti, 7470A - Mercury Field Sampling - Field Sampling Parameters		Sampler: Rick Hagedornfer For Lab Use Only: Walk-in Client: Lab Sampling: Job / SDG No.:		Sample Specific Notes:	
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample. <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown											
Special Instructions/QC Requirements & Comments: Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months											
Cooler Temp. (°C): Obs'd: _____ Therm ID No.: _____ 4.5°C, 0.0°C, 0.0°C IR-7				Received by: [Signature] Date/Time: 3-25-18 17:00 Company: [Company]		Received by: [Signature] Date/Time: 3-25-18 17:00 Company: [Company]		Received in Laboratory by: [Signature] Date/Time: _____ Company: [Company]		Date/Time: _____ Company: [Company]	



Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-151260-4

SDG Number: Ash Pond

Login Number: 151280

List Number: 1

Creator: Whitmire, Cheyenne R

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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	4.58C, 0.08C, 0.08C °R-I
C7 C is present.	True	
C7 C is filled out in ink and legible.	True	
C7 C is filled out with all pertinent information.	True	
Is the Quid Sampler's name present on C7 CF	True	
There are no discrepancies between the containers received and the C7 C.	True	
Samples are received within Holding Time (including tests with immediate ? Tsx	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) erified.	True	
There is sufficient vol. for all requested analyses, incl. any requested q S/q SDs	True	
Containers requiring Micro headspace have no headspace or bubble is <math>< 2\text{mm H}^2/4\text{"}\text{x}</math>	N/A	
Multi-phasic 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: 400-151260-4

SDG Number: Ash Pond

Login Number: 151280

List Number: 2

Creator: Taylor, Kristene N

List Source: TestAmerica St. Louis

List Creation: 03/27/18 01:48 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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	19.0,19.0
C7 C is present.	True	
C7 C is filled out in ink and legible.	True	
C7 C is filled out with all pertinent information.	True	
Is the Quid Sampler's name present on C7 CF	False	
There are no discrepancies between the containers received and the C7 C.	True	
Samples are received within Holding Time (including tests with immediate Txs)	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 q S/q SDs	True	
Containers requiring Micro headspace have no headspace or bubble is <math>< 2\text{mm H}^2/4\text{"}</math>	N/A	
Multi-phasic 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 Smith Plant

TestAmerica Job ID: 400-151260-4
SDG: Ash Pond

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	03-80-16
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	3	66-0369	09-01-16
California	ELAP	9	2510	08-81-16 *
Florida	NELAP	4	E61010	03-80-16
Georgia	State Program	4	N/A	03-80-16
Illinois	NELAP	5	200041	10-09-16
Iowa	State Program	7	837	06-01-16
Kansas	NELAP	7	E-10258	10-81-16
Kentucky (UST)	State Program	4	58	03-80-16
Kentucky (WW)	State Program	4	96080	12-81-16
Louisiana	NELAP	3	80973	03-80-16
Louisiana (DW)	NELAP	3	LA170005	12-81-16
Maryland	State Program	8	288	09-80-16
Massachusetts	State Program	1	M-FL094	03-80-16
Michigan	State Program	5	9912	03-80-16
New Jersey	NELAP	2	FL003	03-80-16
North Carolina (WW/SW)	State Program	4	814	12-81-16
Oklahoma	State Program	3	9610	06-81-16
Pennsylvania	NELAP	8	36-00437	01-81-19
Rhode Island	State Program	1	LAO00807	12-80-16
South Carolina	State Program	4	93023	03-80-16
Tennessee	State Program	4	TN02907	03-80-16
Texas	NELAP	3	T104704263-17-12	09-80-16
USDA	Federal		P880-13-00172	05-24-19
Virginia	NELAP	8	430133	03-14-16
Washington	State Program	10	C915	05-15-16
West Virginia DEP	State Program	8	183	03-80-16

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	03-80-16 *
Arizona	State Program	9	AZ0618	12-06-16
California	State Program	9	2663	03-80-16 *
Connecticut	State Program	1	PH-0241	08-81-19
Florida	NELAP	4	E67369	03-80-16 *
Illinois	NELAP	5	200028	11-80-16
Iowa	State Program	7	878	12-01-16
Kansas	NELAP	7	E-10283	10-81-16
Kentucky (DW)	State Program	4	90125	12-81-16
L-A-B	DoD ELAP		L2805	04-03-19
Louisiana	NELAP	3	04060	03-80-16
Louisiana (DW)	NELAP	3	LA160017	12-81-16
Maryland	State Program	8	810	09-80-16
Michigan	State Program	5	9005	03-80-16
Missouri	State Program	7	760	03-80-16
Nevada	State Program	9	MO000542016-1	07-81-16

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

Accreditation/Certification Summary

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

TestAmerica Job ID: 400-151260-4
SDG: Ash Pond

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 Jersey	NELAP	2	MO002	03-80-16 *
New York	NELAP	2	11313	08-81-19
North Dakota	State Program	6	R207	03-80-16
NRC	NRC		24-24617-01	12-81-22
Oklahoma	State Program	3	9997	06-81-16
Pennsylvania	NELAP	8	36-00540	02-26-19
South Carolina	State Program	4	65002001	03-80-16
Texas	NELAP	3	T104704198-17-11	07-81-16
US Fish & Wildlife	Federal		056446	06-81-16
USDA	Federal		P880-17-0026	02-02-20
Utah	NELAP	6	MO000542013-6	07-81-16
Virginia	NELAP	8	430280	03-14-16 *
Washington	State Program	10	C592	06-80-16
West Virginia DEP	State Program	8	861	06-81-16 *

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

TestAmerica Pensacola

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: 400-151280-5

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Smith Plant

For:

Gulf Power Company

BIN 731

One Energy Place

Pensacola, Florida 32520

Attn: Kristi Mitchell



Authorized for release by:

4/13/2018 4:58:38 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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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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Case Narrative

Client: Gulf Power Company
Project: CCS / MITR Plant

TestAmerica Job ID: 400-151280-5
/ DG: AsR Ponh

Job ID: 400-151280-5

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-151280-5

Metals

Method () 020: The matrix spike duplicate M / JD (recoveries for preparation batch v922) 5 and analytical batch v9v10) were outside control limits. / ample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample M/C (recovery was within acceptance limits.

Method () 020: The following sample was diluted to bring the concentration of target analytes within the calibration range: d W-14 M00-151280-4. (Eleventh reporting limits NDLs are provided.

Method (7470A: The method blank for preparation batch v9v404 and analytical batch v9v589 contained mercury above the method detection limit. The target analyte concentration was less than the reporting limit NDL; therefore, re-analysis of samples was not performed.

General Chemistry

Method (/ d 4500 Cl- E: The method blank for analytical batch v92v4v contained chloride above the method detection limit. The target analyte concentration was less than the reporting limit NDL; therefore, re-extraction and/or re-analysis of samples was not performed.

Method (/ d 4500 Cl- E: The following sample was diluted to bring the concentration of target analytes within the calibration range: d W-14 M00-151280-4. (Eleventh reporting limits NDLs are provided.

Method (/ d 4500 / O4 E: The following sample was diluted to bring the concentration of target analytes within the calibration range: d W-14 M00-151280-4. (Eleventh reporting limits NDLs are provided.

Detection Summary

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

TestAmerica Job ID: 400-151280-5
 SDG: Ash Pond

Client Sample ID: MW-1L

ba4 Sample ID: L00-151280-L

Analyte	Result	Qualifier	PQb	MDb	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0041		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.051		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Chromium	0.001M	I	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.0013	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
7 olybdenum	0.01M		0.015	0.00085	mg/L	5		6020	Total Recoverable
Boron - DL	12		2.0	0.84	mg/L	200		6020	Total Recoverable
Calcium - DL	250		10	5.0	mg/L	200		6020	Total Recoverable
Total Dissolved Solids	4800		50	34	mg/L	1		S7 2540C	Total/NA
Chloride	2000		80	24	mg/L	40		S7 4500 Cl- E	Total/NA
Fluoride	0.0M	I	0.10	0.032	mg/L	1		S7 4500 F C	Total/NA
Sulfate	590		100	28	mg/L	20		S7 4500 SO4 E	Total/NA
Field pH	6.8M				SU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

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

TestAmerica Job ID: 400-151260-5
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
8020	Metals (ICP/MS)	SW648	TAL PEN
7470A	Mercury (CVAA)	SW648	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",

SW648 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1968 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (650)474-1001

Sample Summary

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

TestAmerica Job ID: 400-151280-5
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-151280-4	MW-14	Water	03/22/18 18:52	03/23/18 17:00

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- 13
- 14

Client Sample Results

3 of 3
 Client ID: MW-14
 Date Collected: 03/22/18 18:52
 Date Received: 03/23/18 1v:00

TestAmerica Job ID: 400-151280-5
 yDn : AsSf ol h

Client Sample ID: MW-14
Date Collected: 03/22/18 18:52
Date Received: 03/23/18 1v:00

Lab Sample ID: 400-151280-4
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Al timol p	0.0010		0.0025	0.0010	mLjg		04j01j18 12:0L	04j07j18 1L:69	5
Arsenic	0.0041		0.0016	0.00047	mLjg		04j01j18 12:0L	04j07j18 1L:69	5
Barium	0.051		0.0025	0.00049	mLjg		04j01j18 12:0L	04j07j18 1L:69	5
BerpGm	0.00064		0.0025	0.00064	mLjg		04j01j18 12:0L	04j07j18 1L:69	5
3 ahmiGm	0.00064		0.0025	0.00064	mLjg		04j01j18 12:0L	04j07j18 1L:69	5
Chromium	0.001v I		0.0025	0.0011	mLjg		04j01j18 12:0L	04j07j18 1L:69	5
3 obaC	0.00040		0.0025	0.00040	mLjg		04j01j18 12:0L	04j07j18 1L:69	5
geah	0.00065		0.0016	0.00065	mLjg		04j01j18 12:0L	04j07j18 1L:69	5
Lithium	0.0013 I		0.0050	0.0011	mLjg		04j01j18 12:0L	04j07j18 1L:69	5
Molybdenum	0.01v		0.0015	0.00085	mLjg		04j01j18 12:0L	04j07j18 1L:69	5
yeG iGm	0.00024		0.0016	0.00024	mLjg		04j01j18 12:0L	04j07j18 1L:69	5
TSaGm	0.000085		0.00050	0.000085	mLjg		04j01j18 12:0L	04j07j18 1L:69	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	mLjg		04j01j18 12:0L	04j0Lj18 07:22	200
Calcium	250		10	5.0	mLjg		04j01j18 12:0L	04j0Lj18 07:22	200

Method: v4v0A - Mercury (C9AA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MercGp	0.0000L0		0.00020	0.0000L0	mLjg		04j10j18 12:09	04j11j18 15:10	1

Veneral Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	4800		50	64	mLjg			06j2Lj18 16:11	1
Chloride	2000		80	24	mLjg			04j02j18 11:5L	40
Fluoride	0.0v0 I		0.00	0.062	mLjg			06j60j18 16:07	1
Sulfate	500		100	28	mLjg			04j06j18 10:25	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.8v				y.			06j22j18 18:52	1

Definitions/Glossary

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

TestAmerica Job ID: 400-151280-5
SDG: Ash Pond

Qualifiers

Metals

Qualifier	Qualifier Description
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.
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.
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.
α	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 Smith Plant

TestAmerica Job ID: 400-151260-5
SDG: Ash Pond

Client Sample ID: MW-13

Date Collectex: 4d/55/12 12:05

Date Receivex: 4d/5d/12 17:44

Lab Sample ID: 344-101524-3

Matri8: Water

Prep Type	Batch Type	Batch Methox	Run	Dilution Factor	Batch Number	Preporex or Analyzex	Analyst	Lab
Total Recoverable	Prep	3005A			392275	04/01/16 12:08	DN1	TAL PEN
Total Recoverable	Analysis	7020		5	393107	04/07/16 18:39	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		392275	04/01/16 12:08	DN1	TAL PEN
Total Recoverable	Analysis	7020	DL	200	393107	04/08/16 07:22	DRE	TAL PEN
Total/NA	Prep	8480A			393404	04/10/16 12:09	JAP	TAL PEN
Total/NA	Analysis	8480A		1	393569	04/11/16 15:10	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391585	03/28/16 13:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		40	392343	04/02/16 11:58	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	392170	03/30/16 13:07	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	392490	04/03/16 10:25	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	393585	03/22/16 16:52	AW	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (650)484-1001



QC Association Summary

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

TestAmerica Job ID: 400-151260-5
SDG: Ash Pond

Metals

Prep Batch: 39227L

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-151260-4 - DM	v W-14	Total RecoUerable	Water	3005A	
400-151260-4	v W-14	Total RecoUerable	Water	3005A	
v L 400-372285/1-A F5	v ethod L lanB	Total RecoUerable	Water	3005A	
MCS 400-372285/2-A	Mab Control Sample	Total RecoUerable	Water	3005A	
400-1511E0-L-24-L v S F5	v atri9 SpiBe	Total RecoUerable	Water	3005A	
400-1511E0-L-24-C v SD F5	v atri9 SpiBe Duplicate	Total RecoUerable	Water	3005A	

Analysis Batch: 3935(7)

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-151260-4	v W-14	Total RecoUerable	Water	8020	372285
400-151260-4 - DM	v W-14	Total RecoUerable	Water	8020	372285
v L 400-372285/1-A F5	v ethod L lanB	Total RecoUerable	Water	8020	372285
MCS 400-372285/2-A	Mab Control Sample	Total RecoUerable	Water	8020	372285
400-1511E0-L-24-L v S F5	v atri9 SpiBe	Total RecoUerable	Water	8020	372285
400-1511E0-L-24-C v SD F5	v atri9 SpiBe Duplicate	Total RecoUerable	Water	8020	372285

Prep Batch: 393()

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-151260-4	v W-14	Total/^ A	Water	E4E0A	
v L 400-373404/14-A	v ethod L lanB	Total/^ A	Water	E4E0A	
MCS 400-373404/15-A	Mab Control Sample	Total/^ A	Water	E4E0A	
400-151260-L-1-C v S	v atri9 SpiBe	Total/^ A	Water	E4E0A	
400-151260-L-1-D v SD	v atri9 SpiBe Duplicate	Total/^ A	Water	E4E0A	

Analysis Batch: 393L49

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-151260-4	v W-14	Total/^ A	Water	E4E0A	373404
v L 400-373404/14-A	v ethod L lanB	Total/^ A	Water	E4E0A	373404
MCS 400-373404/15-A	Mab Control Sample	Total/^ A	Water	E4E0A	373404
400-151260-L-1-C v S	v atri9 SpiBe	Total/^ A	Water	E4E0A	373404
400-151260-L-1-D v SD	v atri9 SpiBe Duplicate	Total/^ A	Water	E4E0A	373404

General Chemistry

Analysis Batch: 395L1L

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-151260-4	v W-14	Total/^ A	Water	Sv 2540C	
v L 400-3715E5/1	v ethod L lanB	Total/^ A	Water	Sv 2540C	
MCS 400-3715E5/2	Mab Control Sample	Total/^ A	Water	Sv 2540C	
400-1511E0-A-23 Dk	Duplicate	Total/^ A	Water	Sv 2540C	

Analysis Batch: 39257(

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-151260-4	v W-14	Total/^ A	Water	Sv 4500 NC	
v L 400-372180/3	v ethod L lanB	Total/^ A	Water	Sv 4500 NC	
MCS 400-372180/4	Mab Control Sample	Total/^ A	Water	Sv 4500 NC	
400-151514-A-4 v S	v atri9 SpiBe	Total/^ A	Water	Sv 4500 NC	
400-151514-A-4 v SD	v atri9 SpiBe Duplicate	Total/^ A	Water	Sv 4500 NC	
400-151335-L-2 Dk	Duplicate	Total/^ A	Water	Sv 4500 NC	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-151260-5
SDG: Ash Pond

General Chemistry Continue 86

Analysis Batch: 3923) 3

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-151260-4	v W-14	Total/A A	Water	Sv 4500 Cl- x	
v L 400-372343/8	v ethod L lanB	Total/A A	Water	Sv 4500 Cl- x	
MCS 400-372343/E	Mab Control Sample	Total/A A	Water	Sv 4500 Cl- x	
v RM400-372343/3	Mab Control Sample	Total/A A	Water	Sv 4500 Cl- x	
400-151258-A-4 v S	v atri9 SpiBe	Total/A A	Water	Sv 4500 Cl- x	
400-151258-A-4 v SD	v atri9 SpiBe Duplicate	Total/A A	Water	Sv 4500 Cl- x	

Analysis Batch: 392) 9(

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-151260-4	v W-14	Total/A A	Water	Sv 4500 SO4 x	
v L 400-372470/8	v ethod L lanB	Total/A A	Water	Sv 4500 SO4 x	
MCS 400-372470/E	Mab Control Sample	Total/A A	Water	Sv 4500 SO4 x	
v RM400-372470/3	Mab Control Sample	Total/A A	Water	Sv 4500 SO4 x	
400-151335-L-1 v S	v atri9 SpiBe	Total/A A	Water	Sv 4500 SO4 x	
400-151335-L-1 v SD	v atri9 SpiBe Duplicate	Total/A A	Water	Sv 4500 SO4 x	

Field Service / Mobile

Analysis Batch: 393L1L

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-151260-4	v W-14	Total/A A	Water	Field Sampling	

QC Sample Results

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

TestAmerica Job ID: 400-151260-5
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-392265/1-A ^5
Matrix: Water
Analysis Batch: 393106

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 392265

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	U	0.0025	0.0010	mg/L		04/01/16 12:03	04/08/16 14:14	5
Arsenic	0.00048	U	0.0019	0.00048	mg/L		04/01/16 12:03	04/08/16 14:14	5
Barium	0.0004B	U	0.0025	0.0004B	mg/L		04/01/16 12:03	04/08/16 14:14	5
Beryllium	0.00094	U	0.0025	0.00094	mg/L		04/01/16 12:03	04/08/16 14:14	5
Bron	0.021	U	0.050	0.021	mg/L		04/01/16 12:03	04/08/16 14:14	5
Cadmium	0.00094	U	0.0025	0.00094	mg/L		04/01/16 12:03	04/08/16 14:14	5
Calcium	0.19	U	0.25	0.19	mg/L		04/01/16 12:03	04/08/16 14:14	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		04/01/16 12:03	04/08/16 14:14	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		04/01/16 12:03	04/08/16 14:14	5
Lead	0.00095	U	0.0019	0.00095	mg/L		04/01/16 12:03	04/08/16 14:14	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		04/01/16 12:03	04/08/16 14:14	5
7 olybdenum	0.00065	U	0.015	0.00065	mg/L		04/01/16 12:03	04/08/16 14:14	5
Selenium	0.00024	U	0.0019	0.00024	mg/L		04/01/16 12:03	04/08/16 14:14	5
Thallium	0.000065	U	0.00050	0.000065	mg/L		04/01/16 12:03	04/08/16 14:14	5

Lab Sample ID: LCS 400-392265/2-A
Matrix: Water
Analysis Batch: 393106

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 392265

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0526		mg/L		108	60 - 120
Arsenic	0.0500	0.0512		mg/L		102	60 - 120
Barium	0.0500	0.0505		mg/L		101	60 - 120
Beryllium	0.0500	0.0503		mg/L		101	60 - 120
Bron	0.100	0.104		mg/L		104	60 - 120
Cadmium	0.0500	0.0515		mg/L		109	60 - 120
Calcium	5.00	5.92		mg/L		108	60 - 120
Chromium	0.0500	0.04B3		mg/L		BB	60 - 120
Cobalt	0.0500	0.04B5		mg/L		BB	60 - 120
Lead	0.0500	0.0512		mg/L		102	60 - 120
Lithium	0.0500	0.0509		mg/L		101	60 - 120
7 olybdenum	0.0500	0.0514		mg/L		109	60 - 120
Selenium	0.0500	0.0466		mg/L		B6	60 - 120
Thallium	0.0100	0.00B68		mg/L		BB	60 - 120

Lab Sample ID: 400-151170-B-24-B MS ^5
Matrix: Water
Analysis Batch: 393106

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 392265

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0010	U	0.0500	0.0558		mg/L		111	35 - 125
Arsenic	0.00048	U	0.0500	0.051B		mg/L		104	35 - 125
Barium	0.095		0.0500	0.0660		mg/L		103	35 - 125
Beryllium	0.00094	U	0.0500	0.0513		mg/L		109	35 - 125
Bron	0.021	U	0.100	0.111		mg/L		111	35 - 125
Cadmium	0.00094	U	0.0500	0.0512		mg/L		102	35 - 125
Calcium	15		5.00	20.1		mg/L		101	35 - 125
Chromium	0.0068		0.0500	0.056B		mg/L		101	35 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-151260-5
SDG: Ash Pond

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

Lab Sample ID: 400-151170-B-24-B MS ^5
Matrix: Water
Analysis Batch: 393106

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 392265

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cobalt	0.00040	U	0.0500	0.0504		mg/L		101	35 - 125
Lead	0.00095	U	0.0500	0.0516		mg/L		104	35 - 125
Lithium	0.0011	U	0.0500	0.0853	J9	mg/L		191	35 - 125
7 olybdenum	0.00065	U	0.0500	0.0593		mg/L		103	35 - 125
Selenium	0.00024	U	0.0500	0.0502		mg/L		100	35 - 125
Thallium	0.000065	U	0.0100	0.0100		mg/L		100	35 - 125

Lab Sample ID: 400-151170-B-24-C MSD ^5
Matrix: Water
Analysis Batch: 393106

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 392265

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	0.0010	U	0.0500	0.0549		mg/L		10B	35 - 125	2	20
Arsenic	0.00048	U	0.0500	0.0521		mg/L		104	35 - 125	0	20
Marium	0.095		0.0500	0.0685		mg/L		104	35 - 125	2	20
Meryllium	0.00094	U	0.0500	0.0505		mg/L		101	35 - 125	2	20
Mbron	0.021	U	0.100	0.10B		mg/L		10B	35 - 125	2	20
Cadmium	0.00094	U	0.0500	0.0593		mg/L		103	35 - 125	5	20
Calcium	15		5.00	20.4		mg/L		103	35 - 125	2	20
Chromium	0.0068		0.0500	0.0313	J9	mg/L		128	35 - 125	20	20
Cobalt	0.00040	U	0.0500	0.0504		mg/L		101	35 - 125	0	20
Lead	0.00095	U	0.0500	0.0516		mg/L		104	35 - 125	0	20
Lithium	0.0011	U	0.0500	0.0858	J9	mg/L		191	35 - 125	0	20
7 olybdenum	0.00065	U	0.0500	0.052B		mg/L		108	35 - 125	2	20
Selenium	0.00024	U	0.0500	0.04B2		mg/L		B6	35 - 125	2	20
Thallium	0.000065	U	0.0100	0.0101		mg/L		101	35 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-393404/14-A
Matrix: Water
Analysis Batch: 393589

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 393404

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
7 ercury	0.0000333	I	0.00020	0.000030	mg/L		04/10/16 12:06	04/11/16 15:00	1

Lab Sample ID: LCS 400-393404/15-A
Matrix: Water
Analysis Batch: 393589

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 393404

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
7 ercury	0.00101	0.00101		mg/L		100	60 - 120

Lab Sample ID: 400-151280-B-1-C MS
Matrix: Water
Analysis Batch: 393589

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 393404

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
7 ercury	0.000030	U	0.00201	0.001B6		mg/L		B6	60 - 120

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-151260-5
SDG: Ash Pond

Lab Sample ID: 400-151280-B-1-D MSD
Matrix: Water
Analysis Batch: 393589

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 393404
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
7 ercury	0.000030	U	0.00201	0.001B9		mg/L		B8	60 - 120	2	20

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

Lab Sample ID: MB 400-391575/1
Matrix: Water
Analysis Batch: 391575

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	9.4	U	5.0	9.4	mg/L			09/23/16 19:11	1

Lab Sample ID: LCS 400-391575/2
Matrix: Water
Analysis Batch: 391575

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	2B9	260		mg/L		B8	36 - 122

Lab Sample ID: 400-151170-A-23 DU
Matrix: Water
Analysis Batch: 391575

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	38		38.0		mg/L		0	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-392343/6
Matrix: Water
Analysis Batch: 392343

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.48	I	2.0	0.80	mg/L			04/02/16 11:0B	1

Lab Sample ID: LCS 400-392343/7
Matrix: Water
Analysis Batch: 392343

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	90.0	91.B		mg/L		108	B0 - 110

Lab Sample ID: MRL 400-392343/3
Matrix: Water
Analysis Batch: 392343

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	2.43		mg/L		129	50 - 150

QC Sample Results

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

TestAmerica Job ID: 400-151260-5
SDG: Ash Pond

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

Lab Sample ID: 400-151256-A-4 MS
Matrix: Water
Analysis Batch: 392343

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	B.9	N	10.0	1B.3		mg/L		104	39 - 120

Lab Sample ID: 400-151256-A-4 MSD
Matrix: Water
Analysis Batch: 392343

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	B.9	N	10.0	20.3		mg/L		114	39 - 120	5	6

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-392160/3
Matrix: Water
Analysis Batch: 392160

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.092	U	0.10	0.092	mg/L			09/90/16 12:2B	1

Lab Sample ID: LCS 400-392160/4
Matrix: Water
Analysis Batch: 392160

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	4.16		mg/L		105	B0 - 110

Lab Sample ID: 400-151514-A-4 MS
Matrix: Water
Analysis Batch: 392160

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	0.13		1.00	1.28		mg/L		10B	35 - 125

Lab Sample ID: 400-151514-A-4 MSD
Matrix: Water
Analysis Batch: 392160

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	0.13		1.00	1.28		mg/L		10B	35 - 125	0	4

Lab Sample ID: 400-151335-B-2 DU
Matrix: Water
Analysis Batch: 392160

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.092	U	0.092	U	mg/L		FC	4

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-151260-5
SDG: Ash Pond

Method: SM 4500 SO4 E - Sulfate, Total

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			04/09/16 0B: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.B		mg/L		BB	B0 - 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		B1	50 - 150

Lab Sample ID: 400-151335-B-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	8.B		10.0	13.8		mg/L		103	33 - 126

Lab Sample ID: 400-151335-B-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	8.B		10.0	13.3		mg/L		103	33 - 126	0	5

Chain of Custody Record



Pensacola, FL 32514-7045
phone 850.474.1001 fax 850.474.4789

TestAmerica Laboratories, Inc.

Regulatory Program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other:		Project Manager:		Site Contact:		Date:			
Client Contact Gulf Power Company 1 Energy Place Pensacola, FL 32520 (850) 444-6427 Phone (xxx) xxx-xxxx FAX Project Name: COR Smith Plant Site: P O #		Lab Contact: Cheyenne Whitmire Parameters Mercury 6020 - Sb, As, Ba, B, Be, Ca, Cd, Cr, Co, Pb, Li, Mo, Se, Ti, 7470A - Fluoride SM4500_CIE - Chloride, SM4500_SO4_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C 9315_Ra226, 9320_Ra228, Ra226Ra228_GFP Perform MS / MSD (Y / N) Filtered Sample (Y / N)		COC No: 1 of 1 COCs Sampler: Rick Hagendorfer For Lab Use Only: Walk-in Client: Lab Sampling: Job / SDG No.:		Carrier:		Sample Specific Notes:	
Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below _____ <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Sample Date: 3-27-18 1852 Sample Time: 6:00 Sample Type (C=Comp, G=Grab): G Matrix: G # of Cont.: 3		Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample. <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months		Cooler Temp. (°C): Obs'd: 4.5°C, 0.0°C, 0.0°C, 1R7 Therm ID No.:	
Special Instructions/QC Requirements & Comments:		Relinquished by: [Signature] Date/Time: 3-23-18 1700 Company: PSH SW		Relinquished by: [Signature] Date/Time: 3/23/18 1700 Company: JAR		Relinquished by: [Signature] Date/Time: _____ Company:		Relinquished by: [Signature] Date/Time: _____ Company:	



Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-151260-5

SDG Number: Ash Pond

Login Number: 151280

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	4.58C, 0.08C,0.08C °R-I
C7 C is present.	True	
C7 C is filled out in ink and legible.	True	
C7 C is filled out with all pertinent information.	True	
's the Qeld Sampler's name present on C7 CF	True	
There are no discrepancies between the containers received and the C7 C.	True	
Samples are received within ?olding Time He(cluding tests with immediate ? Tsx	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) erified.	True	
There is sufficient vol. for all reVuested analyses, incl. any reVuested q S/q SDs	True	
Containers reVuring Mero headspace have no headspace or bubble is <zmm H/4"x	N/A	
q ultiphasic samples are not present.	True	
Samples do not reVuire splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Accreditation/Certification Summary

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

TestAmerica Job ID: 400-151260-5
SDG: Ash Pond

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	03-80-16
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	3	66-0369	09-01-16
California	ELAP	9	2510	08-81-16 *
Florida	NELAP	4	E61010	03-80-16
Georgia	State Program	4	N/A	03-80-16
Illinois	NELAP	5	200041	10-09-16
Iowa	State Program	7	837	06-01-16
Kansas	NELAP	7	E-10258	10-81-16
Kentucky (UST)	State Program	4	58	03-80-16
Kentucky (WW)	State Program	4	96080	12-81-16
Louisiana	NELAP	3	80973	03-80-16
Louisiana (DW)	NELAP	3	LA170005	12-81-16
Maryland	State Program	8	288	09-80-16
Massachusetts	State Program	1	M-FL094	03-80-16
Michigan	State Program	5	9912	03-80-16
New Jersey	NELAP	2	FL003	03-80-16
North Carolina (WW/SW)	State Program	4	814	12-81-16
Oklahoma	State Program	3	9610	06-81-16
Pennsylvania	NELAP	8	36-00437	01-81-19
Rhode Island	State Program	1	LAO00807	12-80-16
South Carolina	State Program	4	93023	03-80-16
Tennessee	State Program	4	TN02907	03-80-16
Texas	NELAP	3	T104704263-17-12	09-80-16
USDA	Federal		P880-13-00172	05-24-19
Virginia	NELAP	8	430133	03-14-16
Washington	State Program	10	C915	05-15-16
West Virginia DEP	State Program	8	183	03-80-16

* 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: 400-151280-6

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Smith Plant

For:

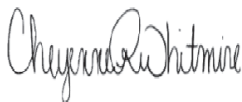
Gulf Power Company

BIN 731

One Energy Place

Pensacola, Florida 32520

Attn: Kristi Mitchell



Authorized for release by:

4/20/2018 2:27:52 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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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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Case Narrative

Client: Gulf Power Company
Project Site: CCh Rmitd Plant

TestAmerica Job ID: 400-151280-j
RDG: Asd PonM

Job ID: 400-151280-6

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-151280-6

RAD

(etdoMs_PrecRepB0: h aMum 228 Prep 6 atcd 1j 0-358187: Insufficient sample volume was available to perform a sample Muplicate)DUP,(R, (RD_for tde following samples: (W-14)400-151280-4_ A laboratory control sampleSaboratory control sample Muplicate)LCRS LCRD_were prepareMinsteaMto Memonstrate batcd precision.

(etdoMs_PrecRep-21: h aMum 22j Prep 6 atcd 1j 0-358185: Insufficient sample volume was available to perform a sample Muplicate)DUP,(R, (RD_for tde following samples: (W-14)400-151280-4_ A laboratory control sampleSaboratory control sample Muplicate)LCRS LCRD_were prepareMinsteaMto Memonstrate batcd precision.

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Method Summary

Line: u f r Pwop er l omyaGS
wro/ectR ite: l l Whmitd wraG

TestAmerica Job ID: 400-151260-C
hDu : Asd woG

Method	Method Description	Protocol	Laboratory
9315	Waj if m-22C(u FwI)	h8 64C	TAL hL
9320	Waj if m-226 (u FwI)	h8 64C	TAL hL
Wa22C_Wa226	I ombiGaj Waj if m-22CaG Waj if m-226	TAL-hTL	TAL hL
wrehey_0	wreyaratioG wreciyitate heyaratioG	NoG	TAL hL
wrehey-21	wreyaratioG wreciyitate heyaratioG(21-DaSIGu rop td)	NoG	TAL hL

Protocol References:

NoG = NoG

h8 64C = "Test Metdoj s For Evarf atiGg horij 8 aste, wdSsicarR demicanMetdoj s", Tdirj Ej itioG November 196CAQ Its Uyj ates.

TAL-hTL = TestAmerica Laboratories, ht. Lof is, FacintShtaG arj OyeratiGg wrocej f re.

Laboratory References:

TAL hL = TestAmerica ht. Lof is, 13715 Wj er TrainNortd, Eartd l itS, MO C3045, TEL (314)296-6500

Sample Summary

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

TestAmerica Job ID: 400-151280-6
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-151280-4	MW-14	Water	03/22/18 18:52	03/23/18 17:00

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- 12
- 13

Client Sample Results

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

TestAmerica Job ID: 400-151280-6
SDG: Ash Pond

Client Sample ID: MW-14
Date Collected: 03/22/18 18:52
Date Received: 03/23/18 1v:00

Lab Sample ID: 400-151280-4
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	2.18		0.233	0.305	1.00	0.0717	pCi/L	03/29/18 14:03	04/20/18 05:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/29/18 14:03	04/20/18 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	2.60		0.362	0.434	1.00	0.313	pCi/L	03/29/18 14:47	04/05/18 14:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/29/18 14:47	04/05/18 14:51	1
Y Carrier	90.1		40 - 110					03/29/18 14:47	04/05/18 14:51	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.v8		0.431	0.530	5.00	0.313	pCi/L		04/20/18 12:23	1

Definitions/Glossary

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

TestAmerica Job ID: 400-151280-6
SDG: Ash Pond

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.
α	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: CCh Rmitd Plant

TestAmerica Job ID: 400-151260-j
 RDG: Asd Pon3

Client Sample ID: MW-13
Date Collectex: 4d/55/12 12:05
Date Receivex: 4d/5d/12 17:44

Lab Sample ID: 344-101524-3
Matri8: Water

Prep Type	Batch Type	Batch Methox	Run	Dilution Factor	Batch Number	Preparex or Analyzex	Analyst	Lab
Total\$ A	Prep	PrecRep-21			856165	082756 14:08	TJT	TA9 R9
Total\$ A	Analysis	7815		1	8j 1725	042056 05:4j	h TN	TA9 R9
Total\$ A	Prep	PrecRepM			85616_	082756 14:4_	TJT	TA9 R9
Total\$ A	Analysis	7820		1	857055	042556 14:51	h TN	TA9 R9
Total\$ A	Analysis	h a22j Mh a226		1	8j 204_	042056 12:28	h TN	TA9 R9

Laboratory References:

TA9 R9 = TestAmerica Rt. 9ouis, 18_15 hi3er Trail Lortd, Eartd City, NO j 8045, TE9 (814)276-65j j

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QC Association Summary

Project: ufrpwo per l omyaGS
 Write: I I Whmitd wraG

TestAmerica Job ID: 400-151280-C
 hDu : Asd woG

Rad

Prep Batch: 358185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151280-4	M3 -14	Total RNA	3 ater	wrechey-21	
MB 100-658185RCA	Metdoj BraGk	Total RNA	3 ater	wrechey-21	
LI h 100-658185R-A	Lab l oGronhamyre	Total RNA	3 ater	wrechey-21	
LI hD 100-658185R-A	Lab l oGronhamyre Df y	Total RNA	3 ater	wrechey-21	

Prep Batch: 358187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151280-4	M3 -14	Total RNA	3 ater	wrechey_0	
MB 100-658187RCA	Metdoj BraGk	Total RNA	3 ater	wrechey_0	
LI h 100-658187R-A	Lab l oGronhamyre	Total RNA	3 ater	wrechey_0	
LI hD 100-658187R-A	Lab l oGronhamyre Df y	Total RNA	3 ater	wrechey_0	



QC Sample Results

Line: uf rPwop er l omyaGS
 wro/ectRite: l l U hmitd wraG

TestAmerica Job ID: 400-151260-C
 hDu : Asd woG

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-357175/16-A
Matrix: Water
Analysis Batch: 361925

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 357175

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uaj if m-22C	0.08663	9	0.0481	0.0482	1.00	0.0C76	yl iR	08/23/18 14:08	04/20/18 05:4C	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/29/18 14:03	04/20/18 05:46	1

Lab Sample ID: LCS 160-357175/1-A
Matrix: Water
Analysis Batch: 361925

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 357175

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Uaj if m-22C	11.6	10.3C		1.11	1.00	0.0708	yl iR	38	06 - 187
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	101		40 - 110						

Lab Sample ID: LCSD 160-357175/2-A
Matrix: Water
Analysis Batch: 361925

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 357175

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	R8R	R8R Limit
Uaj if m-22C	11.6	10.30		1.11	1.00	0.0774	yl iR	32	06 - 187	0.08	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	103		40 - 110								

Method: 9320 - Radium-227 (GFPC)

Lab Sample ID: MB 160-35717E/16-A
Matrix: Water
Analysis Batch: 359056

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 35717E

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uaj if m-226	0.1271	9	0.166	0.166	1.00	0.81C	yl iR	08/23/18 14:47	04/05/18 14:45	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/29/18 14:47	04/05/18 14:45	1
Y Carrier	90.8		40 - 110					03/29/18 14:47	04/05/18 14:45	1

TestAmerica weGacora

QC Sample Results

Line: ufrpwoerlomyaGS
 wroectRite: I I U hmitd wraG

TestAmerica Job ID: 400-151260-C
 hDu : Asd woG

Method: 9320 - Radium-227 (GFPC) (Continued)

Lab Sample ID: LCS 160-35717E/1-A
Matrix: Water
Analysis Batch: 359056

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 35717E

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Uaj if m-226	6.42	6.808		0.378	1.00	0.840	yl iRL	33	5C-140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	101		40 - 110
Y Carrier	88.6		40 - 110

Lab Sample ID: LCSD 160-35717E/2-A
Matrix: Water
Analysis Batch: 359056

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 35717E

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	R8R	R8R Limit
Uaj if m-226	6.42	7.65C		0.325	1.00	0.828	yl iRL	38	5C-140	0.24	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	103		40 - 110
Y Carrier	90.1		40 - 110

Chain of Custody Record



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phone 850.474.1001 fax 850.474.4789

TestAmerica Laboratories, Inc.

Client Contact Gulf Power Company 1 Energy Place Pensacola, FL 32520 (850) 444-6427 Phone (xxx) xxx-xxxx FAX Project Name: COR Smith Plant Site: P O #		Regulatory Program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other:		Project Manager: Tel/Fax:		Site Contact: Lab Contact: Cheyenne Whitmire Perform MS / MSD (Y / N) Filtered Sample (Y / N)		Date: Carrier:		COC No: _____ of _____ COCs	
Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below _____ <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Sample Date Sample Time Sample Type (C=Comp, G=Grab) Matrix # of Cont.		Parameters Field Sampling - Field Sampling Mercury 6020 - Sb, As, Ba, B, Be, Ca, Cd, Cr, Co, Pb, Li, Mo, Se, Ti, 7470A - Fluoride SM4500_CIE - Chloride, SM4500_SO4_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C		Sampler: Rick Hagendorfer For Lab Use Only: Walk-in Client: Lab Sampling: Job / SDG No.:		Sample Specific Notes:			
MW-14 3-27-18 1852 G 6W 3											
Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample. <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months									
Special Instructions/QC Requirements & Comments:		Cooler Temp. (°C): Obs'd: 4.5°C, 0.0°C, 0.0°C, 1R7 Therm ID No.:									
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Relinquished by: <i>[Signature]</i>		Company: <i>[Signature]</i> Date/Time: 3-23-18 1700		Received by: <i>[Signature]</i> Company: <i>[Signature]</i>		Received by: <i>[Signature]</i> Company: <i>[Signature]</i>		Received in Laboratory by:		Date/Time: 3/23/18 1700	
Relinquished by:		Company:		Date/Time:		Received in Laboratory by:		Date/Time:		Date/Time:	



Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-151260-S

DAG Number: s hd Pon/

Login Number: 151280

List Number: 1

Creator: Whitmire, Cheyenne R

List Source: TestAmerica Pensacola

Question	Answer	Comment
calibration of the flowmeter or the flowmeter by a certified meter	NR	
The flowmeter was calibrated by a certified meter	, rue	
The flowmeter was calibrated by a certified meter	NR	
The flowmeter was calibrated by a certified meter or the flowmeter was calibrated by a certified meter	, rue	
The flowmeter was calibrated by a certified meter	, rue	
Cooler, temperature is acceptable	, rue	
Cooler, temperature is correct	, rue	45°C/80°F to 5°C/40°F
COC is present	, rue	
COC is filled out in accordance with the label	, rue	
COC is filled out with all pertinent information	, rue	
The flowmeter name is present on the COC?	, rue	
There are no discrepancies between the container label and the COC	, rue	
The flowmeter label is filled out within the allowed time (excludes the time it takes to fill the container)	, rue	
The container label is filled out within the allowed time	, rue	
The container is not broken or leaking	, rue	
The flowmeter is not damaged or tampered with	, rue	
Appropriate flowmeter labels are used	, rue	
The flowmeter labels are completely filled out	, rue	
The Preheat Verification Test	, rue	
There is sufficient flow for all requested analytical parameters	, rue	
Container required zero dead space or no dead space or bubble in the line (1/4")	NR	
Multiple flowmeters are not present	, rue	
The flowmeter does not require splitting or bypassing	, rue	
Chlorine Deviation Test	NR	

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-151260-S

DAG Number: s hd Pon/

Login Number: 151280

List Number: 2

Creator: Taylor, Kristene N

List Source: TestAmerica St. Louis

List Creation: 03/27/18 01:48 PM

Question	Answer	Comment
calibration accuracy of the flow meter	, rue	
, de voluerk vuhto/ y heal8if prehent8ih intavtT	, rue	
Dample vuhto/ y heal8if prehent8are intavtT	NR	
, de voluer or hampleh / o not appear to da' e been vompromihe/ or tampere/ widtT	, rue	
Dampleh were revei' e/ on iveT	NR	
Cooler , emperature ih avveptableT	, rue	
Cooler , emperature ih revor/ e/ T	, rue	19D819D
COC ih prehentT	, rue	
COC ih fille/ out in in< an/ le. ibleT	, rue	
COC ih fille/ out widt all pertinent informationT	, rue	
Ih tde Fiel/ Damplerk name prehent on COC?	Falhe	
, dere are no / ihvrepanviah between tde vontainerh revei' e/ an/ tde COCT	, rue	
Dampleh are revei' e/ widtin Hol/ in. , ime (exvlu/ in. tehth widt imme/ iate H, h)	, rue	
Dample vontainerh da' e le. ible labelhT	, rue	
Containerh are not bro<en or lea<in. T	, rue	
Dample vollevtion / aterimeh are pro' i/ e/ T	, rue	
s pppropriate hample vontainerh are uhe/ T	, rue	
Dample bottleh are vocompletey fille/ T	, rue	
Dample Preher' ation Verifie/ T	, rue	
, dere ih huffvivent ' oITfor all requehte/ analyheh8invITany requehte/ MDRMDAh	, rue	
Containerh requirin. zero dea/ hpave da' e no dea/ hpave or bubble ih =Smm (1/4")T	NR	
Multipdahiv hampleh are not prehentT	, rue	
Dampleh / o not require hplittin. or vompohitin. T	, rue	
c ehi/ ual Cdlorine Cdev<e/ T	NR	

Accreditation/Certification Summary

Client: Gulf Power Company
 Project Site: CCh Rmitd Plant

TestAmerica Job ID: 400-151260-j
 RDG: Asd Pon.

Laboratory: TestAmerica Pensacola

All accred. itations certifications del. by tdis laboratory are liste. Ng of all accred. itations certifications are applicable to tdis reportN

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	Rtate Pro3ram	4	40150	0j -80-16
Ag AB	IROSEC 17025		L2471	02-22-20
Arizona	Rtate Pro3ram	9	AZ0710	01-12-19
Arkansas DEQ	Rtate Pro3ram	j	66-0j 69	09-01-16
California	ELAP	9	2510	08-81-16 *
Flori. a	g ELAP	4	E61010	0j -80-16
Geor3ia	Rtate Pro3ram	4	g SA	0j -80-16
Illinois	g ELAP	5	200041	10-09-16
Iowa	Rtate Pro3ram	7	8j 7	06-01-16
Kansas	g ELAP	7	E-10258	10-81-16
Kentucky (URT)	Rtate Pro3ram	4	58	0j -80-16
Kentucky (WW)	Rtate Pro3ram	4	96080	12-81-16
Louisiana	g ELAP	j	8097j	0j -80-16
Louisiana (DW)	g ELAP	j	LA170005	12-81-16
Marylan.	Rtate Pro3ram	8	288	09-80-16
Massacdusetts	Rtate Pro3ram	1	M-FL094	0j -80-16
Micdi3an	Rtate Pro3ram	5	9912	0j -80-16
gew Jersey	g ELAP	2	FL00j	0j -80-16
g ortd Carolina (WWRW)	Rtate Pro3ram	4	814	12-81-16
Okladoma	Rtate Pro3ram	j	9610	06-81-16
Pennsylvania	g ELAP	8	j 6-004j 7	01-81-19
h do. e Islan.	Rtate Pro3ram	1	LAO00807	12-80-16
Routd Carolina	Rtate Pro3ram	4	9j 02j	0j -80-16
Tennessee	Rtate Pro3ram	4	Tg 02907	0j -80-16
Texas	g ELAP	j	T10470426j -17-12	09-80-16
URDA	Fe. eral		P880-1j -00172	05-24-19
Vir3inia	g ELAP	8	4j 01j j	0j -14-16
Wasdin3ton	Rtate Pro3ram	10	C915	05-15-16
West Vir3inia DEP	Rtate Pro3ram	8	18j	0j -80-16

Laboratory: TestAmerica St. Louis

All accred. itations certifications del. by tdis laboratory are liste. Ng of all accred. itations certifications are applicable to tdis reportN

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	Rtate Pro3ram	10	MO00054	0j -80-16 *
Arizona	Rtate Pro3ram	9	AZ0618	12-06-16
California	Rtate Pro3ram	9	266j	0j -80-16 *
Connecticut	Rtate Pro3ram	1	PH-0241	08-81-19
Flori. a	g ELAP	4	E67j 69	0j -80-16 *
Illinois	g ELAP	5	200028	11-80-16
Iowa	Rtate Pro3ram	7	878	12-01-16
Kansas	g ELAP	7	E-1028j	10-81-16
Kentucky (DW)	Rtate Pro3ram	4	90125	12-81-16
L-A-B	DoD ELAP		L2805	04-0j -19
Louisiana	g ELAP	j	04060	0j -80-16
Louisiana (DW)	g ELAP	j	LA160017	12-81-16
Marylan.	Rtate Pro3ram	8	810	09-80-16
Micdi3an	Rtate Pro3ram	5	9005	0j -80-16
Missouri	Rtate Pro3ram	7	760	0j -80-16
g eva. a	Rtate Pro3ram	9	MO000542016-1	07-81-16

* Accred. itation certification renewal pen. in3 - accred. itation certification consi. ere. vali. N

Accreditation/Certification Summary

Client: Gulf Power Company
 Project Site: CCh Rmitd Plant

TestAmerica Job ID: 400-151260-j
 RDG: Asd Pon.

Laboratory: TestAmerica St. Louis (Continued)

All accreditation certifications delivered by this laboratory are listed. Not all accreditation certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
new Jersey	g ELAP	2	MO002	0j -80-16 *
new York	g ELAP	2	11j 1j	08-81-19
g ortd Dakota	Rtate Pro3ram	6	h207	0j -80-16
g h C	g h C		24-24617-01	12-81-22
Okladoma	Rtate Pro3ram	j	9997	06-81-16
Pennsylvania	g ELAP	8	j 6-00540	02-26-19
Routd Carolina	Rtate Pro3ram	4	65002001	0j -80-16
Texas	g ELAP	j	T104704198-17-11	07-81-16
UR Fisd & Wil. life	Fe. eral		056446	06-81-16
URDA	Fe. eral		P880-17-0026	02-02-20
Utad	g ELAP	6	MO00054201j -6	07-81-16
Vir3inia	g ELAP	8	4j 0280	0j -14-16 *
Wasdin3ton	Rtate Pro3ram	10	C592	06-80-16
West Vir3inia DEP	Rtate Pro3ram	8	861	06-81-16 *

* Accreditation certification renewal period in 3 - accreditation certification considered valid. N



Memorandum

Date: August 28, 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 400-151256-1, 400-151256-2, 400-151256-8, 400-151280-1, 400-151280-2, 400-151280-3, 400-151280-4, 400-151280-5 and 400-151280-6**

SITE: Plant Smith

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of eleven aqueous samples, three field duplicate samples, two field blanks and two equipment blanks collected from March 20 to 23, 2018, as part of the Plant Smith 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 45000 F
- Sulfate by SM 4500 SO₄
- 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
- 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. 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
400-151256-1	MW-12
400-151256-2	MW-03
400-151256-3	DUP-01
400-151256-4	MW-02
400-151256-5	MW-07
400-151256-6	MW-06
400-151256-8	MW-10
400-151256-10	FB-01
400-151256-11	EB-01

Laboratory ID	Client ID
400-151256-12	MW-08
400-151256-15	MW-09
400-151256-16	EB-02
400-151256-17	FB-02
400-151256-18	DUP-04
400-151280-1	MW-11
400-151280-2	DUP-02
400-151280-3	MW-13
400-151280-4	MW-14

The samples were received within 0-6°C, with the following exceptions. The samples that were sent to TA St. Louis were received at 19.0°C and 22.0°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.

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
- ⊗ Field Blank
- ✓ Equipment 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 time was 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 392227 and 392265). Metals were not detected in the method blanks above the method detection limits (MDLs).

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-12. The recovery and relative percent difference (RPD) results were within the laboratory and SOP specified acceptance criteria, with the following exception.

The MS recovery of lithium was high and outside the laboratory and SOP specified acceptance criteria in the MS/MSD pair using sample MW-12. Therefore, the concentrations of lithium in the associated samples were J qualified as estimated.

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 no qualifications were applied to the data based on the batch QC.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
MW-12	Lithium	0.016	NA	0.016	J	M+
MW-03	Lithium	0.016	NA	0.016	J	M+
DUP-01	Lithium	0.015	NA	0.015	J	M+
MW-02	Lithium	0.012	NA	0.012	J	M+
MW-07	Lithium	0.0023	I	0.0023	J	M+
MW-06	Lithium	0.019	NA	0.019	J	M+
EB-01	Lithium	0.0014	I	0.0014	J	M+
FB-01	Lithium	0.0015	I	0.0015	J	M+
EB-01	Lithium	0.0014	I	0.0014	J	M+
MW-08	Lithium	0.011	NA	0.011	J	M+
MW-10	Lithium	0.0065	NA	0.0065	J	M+
MW-09	Lithium	0.0056	NA	0.0056	J	M+
EB-02	Lithium	0.0011	I	0.0011	J	M+
FB-02	Lithium	0.0017	I	0.0017	J	M+
DUP-04	Lithium	0.0056	NA	0.0056	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

*-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

1.5 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 Field Blank

Two field blanks were collected with the sample sets, FB-01 and FB-02. Metals were not detected in the field blanks above the MDLs, with the following exceptions.

Lithium and selenium were detected at estimated concentrations greater than the MDLs and less than the RLs in FB-01 and lithium was detected at an estimated concentration, greater than the MDL and less the RL in FB-02. Therefore, the concentrations of lithium and selenium in the associated samples that were less than five times the field 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-07	Lithium	0.0023	I	0.0023	U*	BF
EB-01	Lithium	0.0014	I	0.0014	U*	BF
MW-10	Lithium	0.0065		0.0065	U*	BF
MW-14	Lithium	0.0013	I	0.0013	U*	BF
MW-09	Lithium	0.0056	NA	0.0056	U*	BF
EB-02	Lithium	0.0011	I	0.0011	U*	BF
DUP-04	Lithium	0.0056		0.0056	U*	BF
MW-03	Selenium	0.00069	I	0.00069	U*	BF
DUP-01	Selenium	0.00024	I	0.00024	U*	BF
MW-07	Selenium	0.00062	I	0.00062	U*	BF
MW-06	Selenium	0.00037	I	0.00037	U*	BF
MW-11	Selenium	0.00066	I	0.00066	U*	BF
DUP-02	Selenium	0.00065	I	0.00065	U*	BF
FB-01	Selenium	0.00045	I	0.00045	U*	BF
MW-08	Selenium	0.0003	I	0.0003	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

1.7 Equipment Blank

Two equipment blanks were collected with the sample sets, EB-01 and EB-02. Metals were not detected in the equipment blanks above the MDLs, with the following exceptions.

Lithium was detected at an estimated concentration, greater than the MDL and less the RL in EB-01 and EB-02. Since the lithium concentrations in the equipment blanks were U* qualified as not detected due to equipment blank contamination, no additional qualifications were applied to the lithium data.

1.8 Field Duplicate

Three field duplicate samples were collected with the sample sets, DUP-01, DUP-02 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-03, MW-11 and MW-09, respectively, with the following exception.

The concentration of chromium was less than 5 times the reporting limit for DUP-02 and the difference between the concentrations of chromium in the field duplicate pair using samples DUP-02 and MW-11 was greater than the RL. Therefore the concentrations of chromium in samples DUP-02 and MW-11 were J qualified as estimated.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	RPD	Validation Result (mg/L)	Validation Qualifier	Reason Code
DUP-02	Chromium	0.0061	NA	27	0.0061	J	FD
MW-11	Chromium	0.068	NA		0.068	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
- ✓ Field Blank
- ✓ Equipment 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 time was 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 392228, 393327 and 393404). 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 than the RL in the method blank for batch 393404. Since mercury was not detected in the associated samples, no qualifications were applied to the data.

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). One sample set specific MS/MSD pair was reported using sample MW-11. The recovery and RPD results were within the laboratory and SOP specified acceptance criteria.

Two batch MS/MSD pairs were also 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 Field Blank

Two field blanks were collected with the sample sets, FB-01 and FB-02. Mercury was not detected in the field blanks above the MDLs.

2.7 Equipment Blank

Two equipment blanks were collected with the sample sets, EB-01 and EB-02. Mercury was not detected in the equipment blanks above the MDLs.

2.8 Field Duplicate

Three field duplicate samples were collected with the sample sets, DUP-01, DUP-02 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-03, MW-11 and MW-09, 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 SO₄.

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
- ✓ Field Blank
- ✓ Equipment 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). Nine method blanks were reported (chloride batches 392314, 392343 and 392625; fluoride batches 391874, 392128 and 392160; sulfate batches 391402, 391563 and 392490). Anions were not detected in the method blanks above the MDLs, with the following exceptions.

Chloride was detected at estimated concentrations, greater than the MDL and less than the RL, in the method blanks for batches 392314, 392343 and 392625. Therefore, the concentrations of chloride in the associated samples that were less than five times the method blank concentrations were U* qualified as not detected at the reported values.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
EB-01	Chloride	0.96	I V	0.96	U*	BL
FB-01	Chloride	0.81	I V	0.81	U*	BL
EB-02	Chloride	0.90	I V	0.90	U*	BL
FB-02	Chloride	0.74	I V	0.74	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 above the method detection limit in 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

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). Two sample set specific MS/MSD pairs were reported, using samples MW-02 and MW-03 for the chloride data. The recovery and RPD results were within the laboratory and SOP specified acceptance criteria.

In addition, one batch MS/MSD pairs was reported for the chloride data, three batch MS/MSD pairs were reported for the fluoride data and three 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.

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). Nine LCSs were reported. The recovery results were within the laboratory and SOP specified acceptance criteria.

3.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported for the fluoride data, using sample MW-07. The RPD result was within the laboratory and SOP specified acceptance criteria.

3.7 Field Blank

Two field blanks were collected with the sample sets, FB-01 and FB-02. Anions were not detected in the field blanks above the MDLs, with the following exceptions.

Chloride was detected at an estimated concentration, greater than the MDL and less the RL in FB-01 and FB-02. Since the concentrations of chloride in FB-01 and FB-02 were U* qualified as not detected at the reported concentration due to method blank contamination, no qualifications were applied to the chloride data based on the field blank concentrations.

3.8 Equipment Blank

Two equipment blanks were collected with the sample sets, EB-01 and EB-02. 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 the RL in EB-01 and EB-02. Since the concentrations of chloride in EB-01 and EB-02 were U* qualified as not detected at the reported concentration due to method blank contamination, no qualifications were applied to the chloride data based on the equipment blank concentrations.

3.9 Field Duplicate

Three field duplicate samples were collected with the sample sets, DUP-01, DUP-02 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-03, MW-11 and MW-09, respectively.

3.10 Sensitivity

The samples were reported to the MDL. No elevated non-detect results were reported.

3.11 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
- ✓ Field Blank
- ✓ Equipment 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). Five method blanks were reported (batches 391316, 391438, 391566, 391575 and 391578). 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). Five LCSs were reported. The recovery results were within the laboratory and SOP specified acceptance criteria.

4.5 Laboratory Duplicate

Five 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 Field Blank

Two field blanks were collected with the sample sets, FB-01 and FB-02. TDS was not detected in the field blanks above the MDLs.

4.7 Equipment Blank

Two equipment blanks were collected with the sample sets, EB-01 and EB-02. TDS was not detected in the equipment blanks above the MDLs.

4.8 Field Duplicate

Three field duplicate samples were collected with the sample sets, DUP-01, DUP-02 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-03, MW-11 and MW-09, respectively, with the following exceptions.

The TDS field duplicate RPDs for field duplicate pairs MW-03 and DUP-01 and MW-09 and DUP-04 were high and outside the SOP specified acceptance criteria. Therefore, the concentrations of TDS in samples MW-03, DUP-01, MW-09 and DUP-04 were J qualified as estimated.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	RPD	Validation Result (mg/L)	Validation Qualifier	Reason Code
DUP-01	Total Dissolved Solids	54	NA	127	54	J	FD
MW-03	Total Dissolved Solids	12	NA		12	J	FD
DUP-04	Total Dissolved Solids	2900	NA	52	2900	J	FD
MW-09	Total Dissolved Solids	1700	NA		1700	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
- ✓ Field Blank
- ✓ Equipment 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). Two method blanks were reported for the radium-226 data (batches 357975 and 358185). Two method blanks were reported for the radium-228 data (batches 357987 and 358187). 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). One LCS and one LCS/LCS duplicate (LCSD) pair was reported for radium-226 and one LCS and one LCS/LCSD pair was 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

One batch laboratory duplicate was reported for the radium-226 data and one batch laboratory duplicate was reported for the radium-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 Field Blank

Two field blanks were collected with the sample sets, FB-01 and FB-02. Radium was not detected in the field blanks above the MDCs.

5.9 Equipment Blank

Two equipment blanks were collected with the sample sets, EB-01 and EB-02. Radium was not detected in the equipment blanks above the MDCs.

5.10 Field Duplicate

Three field duplicate samples were collected with the sample sets, DUP-01, DUP-02 and DUP-04. Acceptable precision $[(RER (2\sigma) \geq 3)]$ was demonstrated between the field duplicates and original samples MW-03, MW-11 and MW-09, 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 deficiencies 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.

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 08:29:36

Project Information:

Operator Name Rick Hagedorfer
 Company Name RDH Env
 Project Name Smith CCR
 Site Name Smith Plant
 Latitude 0° 0' 0"
 Longitude 0° 0' 0"
 Sonde SN 424893
 Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type PP
 Tubing Type PE
 Tubing Diameter .17 in
 Tubing Length 42 ft
 Pump placement from TOC 35 ft

Well Information:

Well ID MW-06
 Well diameter 2 in
 Well Total Depth 40 ft
 Screen Length 10 ft
 Depth to Water 13.13 ft

Pumping Information:

Final Pumping Rate 400 mL/min
 Total System Volume 0.2774638 L
 Calculated Sample Rate 300 sec
 Stabilization Drawdown 57.4 in
 Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

Stabilization	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Last 5	08:04:24	1500.06	+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	08:09:24	1800.02	23.56	5.39	9469.37	4.92	17.51	0.27	-122.21
Last 5	08:14:23	2100.01	23.58	5.34	9585.58	4.69	17.68	0.26	-116.33
Last 5	08:19:26	2403.01	23.61	5.30	9727.44	3.76	17.85	0.23	-113.47
Last 5	08:24:26	2703.00	23.61	5.27	9810.61	3.46	17.99	0.21	-111.14
Variance 0			23.64	5.25	9900.00	2.60	18.07	0.18	-109.56
Variance 1			0.03	-0.04	141.86			-0.03	2.86
Variance 2			0.00	-0.02	83.17			-0.03	2.33
			0.03	-0.02	89.39			-0.02	1.59

Notes

Sample time 0829. Dup-03 fake sample time 0605. PC 81.

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-08 10:10:25

Project Information:

Operator Name Rick Hagedorfer
Company Name RDH Env
Project Name Smith CCR
Site Name Smith Plant
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 42 ft

Pump placement from TOC 35.0 ft

Well Information:

Well ID MW-07
Well diameter 2 in
Well Total Depth 40 ft
Screen Length 10 ft
Depth to Water 11.49 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.2774638 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 11.4 in
Total Volume Pumped 16 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Last 5	09:47:47	23.34	6.28	5698.01	9.30	12.45	0.08	+/- 10
Last 5	09:52:47	23.34	6.29	5714.71	8.08	12.45	0.07	-204.57
Last 5	09:57:47	23.34	6.30	5704.09	6.39	12.45	0.07	-204.54
Last 5	10:02:47	23.36	6.30	5713.89	3.82	12.45	0.07	-204.42
Last 5	10:07:47	23.38	6.31	5716.54	2.74	12.45	0.06	-204.92
Variance 0		-0.00	0.01	-10.62			-0.01	0.12
Variance 1		0.02	0.01	9.80			-0.00	-0.50
Variance 2		0.02	0.01	2.65			-0.00	-0.02

Notes

Sample time 1011. FB-02 sample time 0912. EB-02 sample time 0917. PC 84.

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-07 13:15:09

Project Information:

Operator Name Rick Hagedorfer
 Company Name RDH Env
 Project Name Smith CCR
 Site Name Smith Plant
 Latitude 0° 0' 0"
 Longitude 0° 0' 0"
 Sonde SN 424893
 Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type PP
 Tubing Type PE
 Tubing Diameter .17 in
 Tubing Length 45 ft

Pump placement from TOC 38.0 ft

Well Information:

Well ID MW-08
 Well diameter 2 in
 Well Total Depth 43 ft
 Screen Length 10 ft
 Depth to Water 16.95 ft

Pumping Information:

Final Pumping Rate 400 mL/min
 Total System Volume 0.290854 L
 Calculated Sample Rate 300 sec
 Stabilization Drawdown 88.4 in
 Total Volume Pumped 20 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5 12:50:14	1802.02	24.32	4.72	11470.37	2.82	23.71	0.09	-109.16
Last 5 12:55:14	2102.02	24.37	4.72	11449.78	1.94	23.96	0.08	-108.68
Last 5 13:00:14	2402.02	24.43	4.72	11453.13	3.02	24.15	0.08	-108.41
Last 5 13:05:14	2702.02	24.46	4.73	11463.79	1.79	24.29	0.08	-109.03
Last 5 13:10:14	3002.02	24.54	4.73	11432.56	1.91	24.41	0.08	-108.62
Variance 0		0.05	0.00	3.35			-0.00	0.27
Variance 1		0.03	0.01	10.66			-0.00	-0.63
Variance 2		0.08	0.00	-31.23			-0.00	0.41

Notes

Sample time 1314. Dup-02 fake sample time 0700. FB-01 sample time 1150. EB-01 sample time 1155. PC 87.

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-07 17:21:11

Project Information:

Operator Name Rick Hagedorfer
Company Name RDH Env
Project Name Smith CCR
Site Name Smith Plant
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 34 ft

Pump placement from TOC 28.0 ft

Well Information:

Well ID MW-09
Well diameter 2 in
Well Total Depth 33 ft
Screen Length 10 ft
Depth to Water 10.84 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.2417564 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 19.4 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	16:57:24	300.02	6.63	7559.77	2.22	11.98	0.11	-250.73
Last 5	17:02:24	600.02	6.56	7775.95	1.86	12.48	0.09	-244.07
Last 5	17:07:24	900.02	6.54	7808.23	1.23	12.53	0.07	-240.65
Last 5	17:12:24	1199.96	6.54	7789.89	1.31	12.56	0.07	-238.33
Last 5	17:17:24	1499.96	6.52	7835.13	1.38	12.58	0.06	-236.60
Variance 0		-0.21	-0.02	32.28			-0.01	3.42
Variance 1		-0.04	-0.01	-18.34			-0.01	2.32
Variance 2		0.06	-0.02	45.24			-0.00	1.74

Notes

Sample time 1721. PC 87.

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-07 19:48:01

Project Information:

Operator Name Rick Hagendorfer
 Company Name RDH Env
 Project Name Smith CCR
 Site Name Smith Plant
 Latitude 0° 0' 0"
 Longitude 0° 0' 0"
 Sonde SN 424893
 Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type PP
 Tubing Type PE
 Tubing Diameter .17 in
 Tubing Length 35 ft

Pump placement from TOC 28.0 ft

Well Information:

Well ID MW-10
 Well diameter 2 in
 Well Total Depth 33 ft
 Screen Length 10 ft
 Depth to Water 7.01 ft

Pumping Information:

Final Pumping Rate 400 mL/min
 Total System Volume 0.2462198 L
 Calculated Sample Rate 300 sec
 Stabilization Drawdown 14.8 in
 Total Volume Pumped 42 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Last 5	19:26:23	5099.97	5.34	9531.92	4.52	8.28	0.09	+/- 10
Last 5	19:31:23	5399.97	5.34	9543.84	3.17	8.28	0.09	-144.01
Last 5	19:36:23	5699.97	5.35	9573.73	4.16	8.28	0.09	-143.42
Last 5	19:41:23	5999.92	5.34	9578.22	3.69	8.28	0.09	-142.71
Last 5	19:46:23	6299.92	5.35	9571.51	3.36	8.28	0.09	-141.37
Variance 0		-0.12	0.01	29.89			0.00	-141.77
Variance 1		-0.10	-0.01	4.49			-0.00	0.71
Variance 2		-0.05	0.01	-6.71			-0.00	1.34
								-0.40

Notes

Sample time 1948. Sunset 82.

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-07 08:45:05

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Env
Project Name Smith CCR
Site Name Smith Plant
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 35 ft

Pump placement from TOC 28.0 ft

Well Information:

Well ID MW-11
Well diameter 2 in
Well Total Depth 33 ft
Screen Length 10 ft
Depth to Water 9.10 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 42 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	08:22:39	27.75	6.53	5823.71	3.15	12.12	0.03	-323.94
Last 5	08:27:39	25.73	6.48	6215.23	4.04	12.43	0.04	-323.55
Last 5	08:32:39	25.60	6.43	6426.44	4.86	12.64	0.04	-322.85
Last 5	08:37:39	25.76	6.40	6532.87	5.83	12.72	0.04	-323.15
Last 5	08:42:40	25.68	6.39	6607.80	5.87	12.77	0.05	-322.60
Variance 0		-0.13	-0.05	211.21			0.00	0.70
Variance 1		0.17	-0.03	106.43			0.00	-0.30
Variance 2		-0.09	-0.01	74.92			0.00	0.55

Notes

Sample time 0845. Sunny 81.

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-07 11:21:47

Project Information:

Operator Name Rick Hagedorfer
 Company Name RDH Env
 Project Name Smith CCR
 Site Name Smith Plant
 Latitude 0° 0' 0"
 Longitude 0° 0' 0"
 Sonde SN 424893
 Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type PP
 Tubing Type PE
 Tubing Diameter .17 in
 Tubing Length 45 ft

Pump placement from TOC 38.0 ft

Well Information:

Well ID MW-13
 Well diameter 2 in
 Well Total Depth 43 ft
 Screen Length 10 ft
 Depth to Water 14.69 ft

Pumping Information:

Final Pumping Rate 400 mL/min
 Total System Volume 0.290854 L
 Calculated Sample Rate 300 sec
 Stabilization Drawdown 64.6 in
 Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5 10:58:50	900.02	24.85	6.86	14382.71	0.70	19.29	0.07	-306.85
Last 5 11:03:50	1200.02	24.90	6.87	14411.33	0.75	19.62	0.06	-308.78
Last 5 11:08:50	1500.02	24.99	6.87	14480.07	0.48	19.88	0.06	-308.51
Last 5 11:13:50	1800.02	24.89	6.87	14489.31	0.45	19.98	0.06	-308.55
Last 5 11:18:50	2100.02	24.82	6.86	14599.21	0.36	20.05	0.06	-307.98
Variance 0		0.09	-0.00	68.73			-0.00	0.27
Variance 1		-0.10	0.00	9.24			-0.00	-0.03
Variance 2		-0.06	-0.01	109.90			-0.00	0.56

Notes

Sample time 1122. PC 84.

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-07 14:42:39

Project Information:

Operator Name Rick Hagedorfer
Company Name RDH Env
Project Name Smith CCR
Site Name Smith Plant
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 43 ft
Pump placement from TOC 36.0 ft

Well Information:

Well ID MW-14
Well diameter 2 in
Well Total Depth 41 ft
Screen Length 10 ft
Depth to Water 22.04 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.2819272 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 9.4 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Last 5	14:23:13	300.02	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	14:28:13	600.02	6.90	7454.45	1.62	22.95	0.14	-275.02
Last 5	14:33:13	900.02	6.90	7543.39	1.10	22.95	0.10	-274.10
Last 5	14:38:13	1200.02	6.89	7639.30	0.94	22.97	0.09	-271.91
Last 5			6.88	7654.07	0.87	22.98	0.08	-270.94
Variance 0		-0.49	0.00	88.94			-0.03	0.92
Variance 1		-0.09	-0.01	95.90			-0.02	2.19
Variance 2		0.05	-0.01	14.77			-0.01	0.97

Notes

Sample time 1442. PC 86.

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-06 14:10:05

Project Information:

Operator Name Rick Hagedorfer
 Company Name RDH Env
 Project Name Smith CCR
 Site Name Smith Plant
 Latitude 0° 0' 0"
 Longitude 0° 0' 0"
 Sonde SN 424893
 Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type PP
 Tubing Type PE
 Tubing Diameter .17 in
 Tubing Length 28 ft

Pump placement from TOC 21.0 ft

Well Information:

Well ID MW-02
 Well diameter 2 in
 Well Total Depth 26 ft
 Screen Length 10 ft
 Depth to Water 4.01 ft

Pumping Information:

Final Pumping Rate 400 mL/min
 Total System Volume 0.2149758 L
 Calculated Sample Rate 300 sec
 Stabilization Drawdown 21 in
 Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

Stabilization	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Last 5	13:45:09	300.05	+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:55:08	899.50	23.10	6.41	233.13	1.76	5.41	0.11	-60.79
Last 5	14:00:08	1199.51	22.80	6.43	235.00	1.56	5.80	0.07	-77.25
Last 5	14:05:08	1499.51	22.76	6.46	239.30	1.78	5.86	0.07	-78.25
Last 5	14:05:08	1499.51	22.70	6.47	240.91	1.63	5.89	0.06	-79.10
Variance 0			-0.30	0.02	1.87			-0.04	-16.46
Variance 1			-0.04	0.03	4.30			-0.01	-1.00
Variance 2			-0.06	0.01	1.61			-0.01	-0.85

Notes

Sample time 1410. PC 83.

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-06 19:01:42

Project Information:

Operator Name Rick Hagedorfer
 Company Name RDH Env
 Project Name Smith CCR
 Site Name Smith Plant
 Latitude 0° 0' 0"
 Longitude 0° 0' 0"
 Sonde SN 424893
 Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type PP
 Tubing Type PE
 Tubing Diameter .17 in
 Tubing Length 35 ft
 Pump placement from TOC 28.0 ft

Well Information:

Well ID MW-03
 Well diameter 2 in
 Well Total Depth 33 ft
 Screen Length 10 ft
 Depth to Water 5.49 ft

Pumping Information:

Final Pumping Rate 400 mL/min
 Total System Volume 0.2462198 L
 Calculated Sample Rate 300 sec
 Stabilization Drawdown 2.02 in
 Total Volume Pumped 50 L

Low-Flow Sampling Stabilization Summary

Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Stabilization								
Last 5	18:36:11	22.44	4.97	49.34	16.30	5.71	0.05	31.60
Last 5	18:41:11	22.43	4.97	49.51	15.70	5.71	0.06	30.80
Last 5	18:46:11	22.40	4.96	49.38	15.00	5.72	0.05	30.01
Last 5	18:51:11	22.40	4.96	49.41	13.80	5.72	0.07	29.34
Last 5	18:56:11	22.40	4.96	49.33	13.50	5.72	0.06	28.77
Variance 0		-0.03	-0.01	-0.14			-0.01	-0.80
Variance 1		-0.00	-0.00	0.03			0.02	-0.66
Variance 2		-0.00	-0.00	-0.07			-0.01	-0.57

Notes

Sample time 1902. Dup-01 fake sample time 0600. PC 85.

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-06 16:06:27

Project Information:

Operator Name Rick Hagedorfer
 Company Name RDH Env
 Project Name Smith CCR
 Site Name Smith Plant
 Latitude 0° 0' 0"
 Longitude 0° 0' 0"
 Sonde SN 424893
 Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type PP
 Tubing Type PE
 Tubing Diameter .17 in
 Tubing Length 34 ft
 Pump placement from TOC 27 ft

Well Information:

Well ID MW-12
 Well diameter 2 in
 Well Total Depth 32 ft
 Screen Length 10 ft
 Depth to Water 9.83 ft

Pumping Information:

Final Pumping Rate 400 mL/min
 Total System Volume 0.2417564 L
 Calculated Sample Rate 300 sec
 Stabilization Drawdown 85 in
 Total Volume Pumped 20 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5 15:42:58	1800.02	23.43	6.10	1019.02	6.81	16.10	0.06	-25.13
Last 5 15:47:58	2100.02	23.29	6.07	992.45	7.45	16.45	0.05	-26.72
Last 5 15:52:58	2399.91	23.29	6.06	977.14	3.97	16.68	0.05	-28.18
Last 5 15:57:58	2699.91	23.25	6.05	966.86	3.86	16.84	0.05	-29.55
Last 5 16:03:03	3004.91	23.19	6.04	954.51	3.92	16.92	0.05	-31.25
Variance 0		0.00	-0.01	-15.30			0.00	-1.46
Variance 1		-0.05	-0.01	-10.28			-0.00	-1.37
Variance 2		-0.06	-0.01	-12.35			-0.00	-1.70

Notes

Sample time 1606. Cloudy 85.

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: 400-154881-2

TestAmerica Sample Delivery Group: Ash Pond
Client Project/Site: CCR Smith Plant
Revision: 1

For:

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

Attn: Kristi Mitchell



Authorized for release by:
9/18/2018 11:11:16 AM

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

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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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Case Narrative

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Job ID: 400-154881-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-154881-2

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-370673: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: MW-14 (400-154881-2). 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 160-370673: Sample aliquots 400-154881-1,2,3,4,5,6,7, and 10 were reduced due to potential matrix interference. Samples were yellow, murky, and had strong odors similar to that of sulfur. Sample aliquots 400154881-8,9,11,12,13,14,15,16,17,18,19, and 20 were reduced due to potential matrix interference. Samples were murky and had strong odors similar to that of sulfur. MW-14 (400-154881-2).

Method(s) PrecSep-21: Radium 226 Prep Batch 160-370670: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: MW-14 (400-154881-2). 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 160-370670: Sample aliquots 400-154881-1,2,3,4,5,6,7, and 10 were reduced due to potential matrix interference. Samples were yellow, murky, and had strong odors similar to that of sulfur. Sample aliquots 400154881-8,9,11,12,13,14,15,16,17,18,19, and 20 were reduced due to potential matrix interference. Samples were murky and had strong odors similar to that of sulfur. MW-14 (400-154881-2).

Metals

Method(s) 6020: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-14 (400-154881-2). Elevated reporting limits (RLs) are provided.

General Chemistry

Method(s) SM 4500 Cl- E: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-14 (400-154881-2). 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-14 (400-154881-2), (400-154880-B-3), (400-154880-B-3 MS) and (400-154880-B-3 MSD). Elevated reporting limits (RLs) are provided.

Revised to reported a lower dilution.

Detection Summary

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Client Sample ID: MW-1L

ba4 Sample ID: L00-15L221-8

Analyte	Result	Qualifier	PQb	MDb	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0051		0.0013	0.00046	mg/L	5		6020	Total
Barium	0.051		0.0025	0.00049	mg/L	5		6020	Recoverable Total
Molybdenum	0.016		0.015	0.00085	mg/L	5		6020	Recoverable Total
Selenium	0.00041	I	0.0013	0.00024	mg/L	5		6020	Recoverable Total
Boron - DL	12		2.0	0.84	mg/L	200		6020	Recoverable Total
Calcium - DL	260		10	5.0	mg/L	200		6020	Recoverable Total
Total Dissolved Solids	4200		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2200		120	36	mg/L	60		SM 4500 Cl- E	Total/NA
Fluoride	0.080	I	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	590		150	42	mg/L	30		SM 4500 SO4 E	Total/NA
Field pH	6.88				SU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN
SM 4500 Cl- E	Chloride, Total	SM	TAL PEN
SM 4500 F C	Fluoride	SM	TAL PEN
SM 4500 SO4 E	Sulfate, Total	SM	TAL PEN
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
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 Smith Plant

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-154881-2	MW-14	Water	06/07/18 14:42	06/08/18 13:50

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Client Sample ID: MW-14
Date Collected: 06/07/18 14:42
Date Received: 06/08/18 13:50

Lab Sample ID: 400-154881-2
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0051		0.0013	0.00046	mg/L		06/22/18 11:58	06/25/18 22:02	5
Barium	0.051		0.0025	0.00049	mg/L		06/22/18 11:58	06/25/18 22:02	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 11:58	06/25/18 22:02	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/22/18 11:58	06/25/18 22:02	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		06/22/18 11:58	06/25/18 22:02	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/22/18 11:58	06/25/18 22:02	5
Molybdenum	0.016		0.015	0.00085	mg/L		06/22/18 11:58	06/25/18 22:02	5
Selenium	0.00041	I	0.0013	0.00024	mg/L		06/22/18 11:58	06/25/18 22:02	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		06/22/18 11:58	06/25/18 20:10	200
Calcium	260		10	5.0	mg/L		06/22/18 11:58	06/25/18 20:10	200

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	4200		50	34	mg/L			06/13/18 18:25	1
Chloride	2200		120	36	mg/L			07/02/18 09:43	60
Fluoride	0.080	I	0.10	0.032	mg/L			07/02/18 11:24	1
Sulfate	590		150	42	mg/L			07/02/18 15:16	30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.74		0.617	0.664	1.00	0.418	pCi/L	06/15/18 16:02	07/11/18 12:29	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	63.8		40 - 110					03/12/18 13:09	05/11/18 19:96	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.14		0.493	0.531	1.00	0.583	pCi/L	06/15/18 17:02	07/11/18 09:43	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	63.8		40 - 110					03/12/18 15:09	05/11/18 06:4Y	1
<i>7 Carrier</i>	55.0		40 - 110					03/12/18 15:09	05/11/18 06:4Y	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	4.88		0.790	0.850	5.00	0.583	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	6.88				SU			06/07/18 14:42	1

TestAmerica Pensacola

Definitions/Glossary

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

TestAmerica Job ID: 400-154221-8
SDG: Ash Pond

Qualifiers

Metals

Qualifier	Qualifier Description
3	Indicates that the compound was analyzed for but not detected.
1	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

General Chemistry

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

Rad

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis.
%R	Percent Recovery
CFL	Contains Free Lead
CNF	Contains No Free Lead
DUR	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOU)
DL, RA, RU, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
UDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOU)
LOQ	Limit of Quantitation (DoD/DOU)
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 UDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RUR	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Re-tested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TUF	Toxicity Unit Equivalent Factor (Dioxin)
TUQ	Toxicity Unit Equivalent Quotient (Dioxin)

Lab Chronicle

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Client Sample ID: MW-14

Date Collected: 06/07/18 14:42

Date Received: 06/08/18 13:50

Lab Sample ID: 400-154881-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A	DL		402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	200	402495	06/25/18 20:10	DRE	TAL PEN
Total Recoverable	Prep	3005A			402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402495	06/25/18 22:02	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	400948	06/13/18 18:25	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		60	403212	07/02/18 09:43	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403221	07/02/18 11:24	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	403304	07/02/18 15:16	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370670	06/15/18 16:02	JLC	TAL SL
Total/NA	Analysis	9315		1	374837	07/11/18 12:29	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370673	06/15/18 17:02	JLC	TAL SL
Total/NA	Analysis	9320		1	374836	07/11/18 09:43	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	06/07/18 14:42	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



QC Association Summary

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Metals

Prep Batch: 402138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2 - DL	MW-14	Total Recoverable	Water	3005A	
400-154881-2	MW-14	Total Recoverable	Water	3005A	
MB 400-402138/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-402138/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-154881-B-7-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-154881-B-7-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 402495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2 - DL	MW-14	Total Recoverable	Water	6020	402138
400-154881-2	MW-14	Total Recoverable	Water	6020	402138
MB 400-402138/1-A ^5	Method Blank	Total Recoverable	Water	6020	402138
LCS 400-402138/2-A	Lab Control Sample	Total Recoverable	Water	6020	402138
400-154881-B-7-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	402138
400-154881-B-7-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	402138

General Chemistry

Analysis Batch: 400948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2	MW-14	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-B-3 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 403212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2	MW-14	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	
400-154880-B-4 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 403221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2	MW-14	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-B-4 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-154742-B-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-154881-A-7 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 403304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2	MW-14	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-B-3 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-154880-B-3 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Rad

Prep Batch: 370670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2	MW-14	Total/NA	Water	PrecSep-21	
MB 160-370670/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-370670/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-370670/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 370673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2	MW-14	Total/NA	Water	PrecSep_0	
MB 160-370673/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-370673/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-370673/2-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
400-154881-2	MW-14	Total/NA	Water	Field Sampling	

QC Sample Results

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-402138/1-A ^5
Matrix: Water
Analysis Batch: 402495

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 402138

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00046	U	0.0013	0.00046	mg/L		06/22/18 11:58	06/25/18 18:44	5
Barium	0.00049	U	0.0025	0.00049	mg/L		06/22/18 11:58	06/25/18 18:44	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 11:58	06/25/18 18:44	5
Boron	0.021	U	0.050	0.021	mg/L		06/22/18 11:58	06/25/18 18:44	5
Calcium	0.13	U	0.25	0.13	mg/L		06/22/18 11:58	06/25/18 18:44	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/22/18 11:58	06/25/18 18:44	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		06/22/18 11:58	06/25/18 18:44	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/22/18 11:58	06/25/18 18:44	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/22/18 11:58	06/25/18 18:44	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		06/22/18 11:58	06/25/18 18:44	5

Lab Sample ID: LCS 400-402138/2-A
Matrix: Water
Analysis Batch: 402495

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 402138

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.0500	0.0515		mg/L		103	80 - 120
Barium	0.0500	0.0487		mg/L		97	80 - 120
Beryllium	0.0500	0.0486		mg/L		97	80 - 120
Boron	0.100	0.0977		mg/L		98	80 - 120
Calcium	5.00	4.94		mg/L		99	80 - 120
Chromium	0.0500	0.0502		mg/L		100	80 - 120
Cobalt	0.0500	0.0506		mg/L		101	80 - 120
Lithium	0.0500	0.0531		mg/L		106	80 - 120
Molybdenum	0.0500	0.0488		mg/L		98	80 - 120
Selenium	0.0500	0.0525		mg/L		105	80 - 120

Lab Sample ID: 400-154881-B-7-B MS ^5
Matrix: Water
Analysis Batch: 402495

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 402138

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.00046	U	0.0500	0.0534		mg/L		107	75 - 125
Barium	0.017		0.0500	0.0679		mg/L		102	75 - 125
Beryllium	0.00034	U	0.0500	0.0494		mg/L		99	75 - 125
Boron	0.027	I	0.100	0.131		mg/L		104	75 - 125
Calcium	32		5.00	38.0		mg/L		115	75 - 125
Chromium	0.0029		0.0500	0.0544		mg/L		103	75 - 125
Cobalt	0.00040	U	0.0500	0.0528		mg/L		106	75 - 125
Lithium	0.0051		0.0500	0.0518		mg/L		93	75 - 125
Molybdenum	0.00085	U	0.0500	0.0483		mg/L		97	75 - 125
Selenium	0.00024	U	0.0500	0.0519		mg/L		104	75 - 125

Lab Sample ID: 400-154881-B-7-C MSD ^5
Matrix: Water
Analysis Batch: 402495

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 402138

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	0.00046	U	0.0500	0.0528		mg/L		106	75 - 125	1	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

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

Lab Sample ID: 400-154881-B-7-C MSD ^5
Matrix: Water
Analysis Batch: 402495

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 402138

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Barium	0.017		0.0500	0.0647		mg/L		95	75 - 125	5	20
Beryllium	0.00034	U	0.0500	0.0480		mg/L		96	75 - 125	3	20
Boron	0.027	I	0.100	0.129		mg/L		102	75 - 125	1	20
Calcium	32		5.00	37.0		mg/L		96	75 - 125	2	20
Chromium	0.0029		0.0500	0.0542		mg/L		103	75 - 125	0	20
Cobalt	0.00040	U	0.0500	0.0521		mg/L		104	75 - 125	2	20
Lithium	0.0051		0.0500	0.0514		mg/L		93	75 - 125	1	20
Molybdenum	0.00085	U	0.0500	0.0480		mg/L		96	75 - 125	1	20
Selenium	0.00024	U	0.0500	0.0521		mg/L		104	75 - 125	0	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	MB	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
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-B-3 DU
Matrix: Water
Analysis Batch: 400948

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Total Dissolved Solids	700		696		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	MB	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
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

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

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

Lab Sample ID: 400-154880-B-4 MS
Matrix: Water
Analysis Batch: 403212

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	43		10.0	49.8	J3	mg/L		71	73 - 120

Method: SM 4500 F C - Fluoride

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-B-4 MS
Matrix: Water
Analysis Batch: 403221

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	1.04		mg/L		104	75 - 125

Lab Sample ID: 400-154742-B-4 MSD
Matrix: Water
Analysis Batch: 403221

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	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	Limit
Fluoride	0.19		0.190		mg/L		0	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

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

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

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-B-3 MS
Matrix: Water
Analysis Batch: 403304

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	390		300	385	J3	mg/L		-2	77 - 128

Lab Sample ID: 400-154880-B-3 MSD
Matrix: Water
Analysis Batch: 403304

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	390		300	386	J3	mg/L		-1	77 - 128	0	5

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-370670/23-A
Matrix: Water
Analysis Batch: 374837

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 370670

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03659	U	0.228	0.228	1.00	0.444	pCi/L	06/15/18 16:02	07/11/18 14:24	1
Carrier	MB %Yield	MB Qualifier	Limits							
Ba Carrier	104		40 - 110							
								Prepared	Analyzed	Dil Fac
								06/15/18 16:02	07/11/18 14:24	1

Lab Sample ID: LCS 160-370670/1-A
Matrix: Water
Analysis Batch: 374837

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 370670

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	15.7	17.09		2.12	1.00	0.361	pCi/L	109	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	100		40 - 110						

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCSD 160-370670/2-A
Matrix: Water
Analysis Batch: 374837

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 370670

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	15.7	15.22		1.94	1.00	0.380	pCi/L	97	68 - 137	0.46	1
Carrier	%Yield	LCSD Qualifier	Limits								
Ba Carrier	101		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-370673/23-A
Matrix: Water
Analysis Batch: 374835

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 370673

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.4235	U	0.365	0.367	1.00	0.583	pCi/L	06/15/18 17:02	07/11/18 09:46	1
Carrier	%Yield	MB Qualifier	Limits							
Ba Carrier	104		40 - 110							
Y Carrier	69.2		40 - 110							
								Prepared	Analyzed	Dil Fac
								06/15/18 17:02	07/11/18 09:46	1
								06/15/18 17:02	07/11/18 09:46	1

Lab Sample ID: LCS 160-370673/1-A
Matrix: Water
Analysis Batch: 374836

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 370673

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	10.9	11.13		1.32	1.00	0.497	pCi/L	102	56 - 140
Carrier	%Yield	LCS Qualifier	Limits						
Ba Carrier	100		40 - 110						
Y Carrier	85.6		40 - 110						

Lab Sample ID: LCSD 160-370673/2-A
Matrix: Water
Analysis Batch: 374836

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 370673

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	10.9	9.499		1.26	1.00	0.645	pCi/L	87	56 - 140	0.63	1
Carrier	%Yield	LCSD Qualifier	Limits								
Ba Carrier	101		40 - 110								
Y Carrier	65.0		40 - 110								

QC Sample Results

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

TestAmerica Job ID: 400-154881-2
 SDG: Ash Pond

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	

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

Chain of Custody Record

TestAmerica

Client Information Client Contact: Kristi Mitchell Company: Gulf Power Company Address: BIN 731 One Energy Place City: Pensacola State, Zip: FL, 32520 Phone: 850-444-6427(Tel) Email: krmitch@southernco.com Project Name: CCR Smith Plant Site: Ash Pond		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com		Center Tracking No(s): COC No: 400-74588-29346.2 Page: 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): PO #: Purchase Order not required WO #: Project #: 40006609 ISSOW#:		Analysis Requested 9315_Ra226, 9320_Ra228, Ra226Ra228_GFPc Barium Calcium, As, Radium, Beryllium Cr, Co, Lithium, Molybdenum Se			
Sample Identification Sample ID: Aw-14 Sample Date: 6-7-18 Sample Time: 1442 G Sample Type (C=Comp, G=grab): G Matrix (W=Water, S=Soil, D=Dredge, O=Other): Water		Field Filtered Sample (Yes or No): <input checked="" type="checkbox"/> No Perform MS/MSD (Yes or No): <input checked="" type="checkbox"/> No 5M4500 Cl ⁻ Chloride, 5M4500 SO ₄ ²⁻ Sulfate, 2540C-6020-SB Ar, Ba, Be, Bi, Br, Cd, Cr, Pb, Li, Mn, Se, Sr, Tl, U, V, Zn Method: N D D Total Dissolved Solids, 4500 F.C. Fluoride Total Number of Containers: 3			
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested: <input type="checkbox"/> I, <input type="checkbox"/> II, <input type="checkbox"/> III, <input type="checkbox"/> IV, Other (specify)		Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Method of Shipment:			
Relinquished by: Reception Hagerndorfer Date/Time: 6-8-18 1:50 Company: RPH		Relinquished by: Reception Hagerndorfer Date/Time: 6-8-18 11:30 Company: RPH			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks:			

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Ver: 06/18/2018

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-154221-6

SDG Number: Ash Pond

Login Number: 154881

List Number: 1

Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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	0.08C, 0.08C, 0.08C, 0.08C, 0.08C °R-I
C7 C is present.	True	
C7 C is filled out in ink and legible.	True	
C7 C is filled out with all pertinent information.	True	
Is the Quid Sampler's name present on C7 CF	True	
There are no discrepancies between the containers received and the C7 C.	True	
Samples are received within Holding Time (including tests with immediate Tsx)	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 q S/q SDs	True	
Containers requiring Micro headspace have no headspace or bubble is <math>< 2\text{mm H}^2/4\text{"}</math>	N/A	
Multi-phasic 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: 400-154221-6

SDG Number: Ash Pond

Login Number: 154881

List Number: 2

Creator: Press, Nicholas B

List Source: TestAmerica St. Louis

List Creation: 06/12/18 05:09 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	12
C7 C is present.	True	
C7 C is filled out in ink and legible.	True	
C7 C is filled out with all pertinent information.	True	
Is the Quid Sampler's name present on C7 CF	False	
There are no discrepancies between the containers received and the C7 C.	True	
Samples are received within Holding Time (including tests with immediate Tsx	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) erified.	True	
There is sufficient vol. for all requested analyses, incl. any requested q S/q SDs	True	
Containers requiring Micro headspace have no headspace or bubble is <2mm H/4"x	True	
Multi-phasic 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 Smith Plant

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

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	10-09-18
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	09-30-19
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	06-30-18 *
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-14	09-30-18
US Fish & Wildlife	Federal		LE058448-0	07-31-19
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	06-30-18 *

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

TestAmerica Pensacola

Accreditation/Certification Summary

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

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	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	10-31-18 *

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

TestAmerica Pensacola

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: 400-154881-3

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Smith Plant

Revision: 1

For:

Gulf Power Company

BIN 731

One Energy Place

Pensacola, Florida 32520

Attn: Kristi Mitchell



Authorized for release by:

9/7/2018 10:35:04 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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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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Case Narrative

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

TestAmerica Job ID: 400-154881-3
SDG: Ash Pond

Job ID: 400-154881-3

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-154881-3

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-370673: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: MW-13 (400-154881-3). 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 160-370673: Sample aliquots 400-154881-1,2,3,4,5,6,7, and 10 were reduced due to potential matrix interference. Samples were yellow, murky, and had strong odors similar to that of sulfur. Sample aliquots 400154881-8,9,11,12,13,14,15,16,17,18,19, and 20 were reduced due to potential matrix interference. Samples were murky and had strong odors similar to that of sulfur. MW-13 (400-154881-3).

Method(s) PrecSep-21: Radium 226 Prep Batch 160-370670: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: MW-13 (400-154881-3). 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 160-370670: Sample aliquots 400-154881-1,2,3,4,5,6,7, and 10 were reduced due to potential matrix interference. Samples were yellow, murky, and had strong odors similar to that of sulfur. Sample aliquots 400154881-8,9,11,12,13,14,15,16,17,18,19, and 20 were reduced due to potential matrix interference. Samples were murky and had strong odors similar to that of sulfur. MW-13 (400-154881-3).

Metals

Method(s) 6020: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-13 (400-154881-3). Elevated reporting limits (RLs) are provided.

General Chemistry

Method(s) SM 4500 Cl- E: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-13 (400-154881-3). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-13 (400-154881-3). Elevated reporting limits (RLs) are provided.

Report revised to add missing QC.

Detection Summary

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

TestAmerica Job ID: 400-154221-8
SDG: Ash Pond

Client Sample ID: MW-13

Lab Sample ID: 400-154881-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.001L		0.0018	0.0004L	m3/g	5		L0v0	Total Recoverable
Barium	0.029		0.00v5	0.00049	m3/g	5		L0v0	Total Recoverable
githium	0.v0		0.0050	0.0011	m3/g	5		L0v0	Total Recoverable
Molybdenum	0.04v		0.015	0.00025	m3/g	5		L0v0	Total Recoverable
Selenium	0.00081	I	0.0018	0.000v4	m3/g	5		L0v0	Total Recoverable
Boron - Dg	15		v.0	0.24	m3/g	v00		L0v0	Total Recoverable
Calcium - Dg	L70		10	5.0	m3/g	v00		L0v0	Total Recoverable
Total Dissolved Solids	2v00		180	25	m3/g	1		SM v540C	Total/NA
Chloride	4800		v00	L0	m3/g	100		SM 4500 Cl- E	Total/NA
Fluoride	0.050	I	0.10	0.08v	m3/g	1		SM 4500 F C	Total/NA
Sulfate	240		150	4v	m3/g	80		SM 4500 SO4 E	Total/NA
Field pH	L.2L				SU	1		Field Samplin3	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
60M0	(etals)CP/(SL	SW846	TAE PN,
S(M540C	SolidsvTotal DissolFed)TDSL	S(	TAE PN,
S(4500 Cl- N	ChloridevTotal	S(	TAE PN,
S(4500 OC	Quoride	S(	TAE PN,
S(4500 S9 4 N	SulfatevTotal	S(	TAE PN,
3215	Radium-MM6)GOPCL	SW846	TAE SE
32M0	Radium-MM8)GOPCL	SW846	TAE SE
RaMM6_RaMM8	Combined Radium-MM6 and Radium-MM8	TAE-STE	TAE SE
Qeld Sampling	Qeld Sampling	NPA	TAE PN,
2005A	PreparationvTotal RecoFerable or DissolFed (etals	SW846	TAE PN,
PrecSep_0	PreparationvPrecipitate Separation	, one	TAE SE
PrecSep-MI	PreparationvPrecipitate Separation)MI-Day In-GrowthL	, one	TAE SE

Protocol References:

NPA = US NnFironmental Protection Agency

, one = , one

S(= "Standard (ethods Cor The Nxamination 9 f Water And Wastewater"

SW846 = "Test (ethods Cor NFaluating Solid WastePhysical/Chemical (ethods"vThird Nditionv, oFember 1386 And Its Updates.

TAE-STE = TestAmerica EaboratoriesvSt. EouisvOacility Standard 9 perating Procedure.

Laboratory References:

TAE PN, = TestAmerica Pensacolav2255 (cEemore DriFevPensacolavOE 2M514vTNE)850L474-1001

TAE SE = TestAmerica St. Eouisv12715 Rider Trail , orthvNarth Cityv(9 62045vTNE)214LM88-8566

Sample Summary

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-154881-2	MW-12	Water	06/07/18 11:33	06/08/18 12:50

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Client Sample ID: MW-12
Date Collected: 06/07/18 11:vv
Date Recei3ed: 06/08/18 12:50

Lab Sample ID: 400-154881-2
Matrix: Water

Method: 60v0 - Metals (ICP/MS) - Total Reco3erable

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0016		0.0012	0.00043	m6/g		03/LL/18 11:58	03/L5/18 LL:09	5
Barium	0.08G		0.00L5	0.0004B	m6/g		03/LL/18 11:58	03/L5/18 LL:09	5
Ueryllium	0.00024	7	0.00L5	0.00024	m6/g		03/LL/18 11:58	03/L5/18 LL:09	5
Chromium	0.0011	7	0.00L5	0.0011	m6/g		03/LL/18 11:58	03/L5/18 LL:09	5
Cobalt	0.00040	7	0.00L5	0.00040	m6/g		03/LL/18 11:58	03/L5/18 LL:09	5
Lithium	0.v0		0.0050	0.0011	m6/g		03/LL/18 11:58	03/L5/18 LL:09	5
Molybdenum	0.04v		0.015	0.00085	m6/g		03/LL/18 11:58	03/L5/18 LL:09	5
Selenium	0.00021	I	0.0012	0.000L4	m6/g		03/LL/18 11:58	03/L5/18 LL:09	5

Method: 60v0 - Metals (ICP/MS) - Total Reco3erable - DL

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	15		L.0	0.84	m6/g		03/LL/18 11:58	03/L5/18 L0:14	L00
Calcium	670		10	5.0	m6/g		03/LL/18 11:58	03/L5/18 L0:14	L00

9 eneral Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissol3ed Solids	8v00		120	85	m6/g			03/12/18 18:L5	1
Chloride	4200		L00	30	m6/g			09/0L/18 10:43	100
Fluoride	0.050	I	0.10	0.02L	m6/g			09/0L/18 11:L9	1
Sulfate	840		150	4L	m6/g			09/0L/18 15:L0	20

Method: G215 - Radium-vv6 (9 FPC)

Analyte	Result	Qualifier	Count Uncert. (vσ+/-)	Total Uncert. (vσ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-vv6	8.G		1.1L	1.28	1.00	0.2B3	pCi/g	03/15/18 13:0L	09/11/18 1L:L8	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	6. ∅		40 - 110					03/12/18 13:09	05/11/18 19:96	1

Method: G2v0 - Radium-vv8 (9 FPC)

Analyte	Result	Qualifier	Count Uncert. (vσ+/-)	Total Uncert. (vσ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-vv8	5.G		0.913	0.B01	1.00	0.53B	pCi/g	03/15/18 19:0L	09/11/18 0B:44	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	6. ∅		40 - 110					03/12/18 15:09	05/11/18 06:44	1
<i>7 Carrier</i>	5. ∅		40 - 110					03/12/18 15:09	05/11/18 06:44	1

Method: Ravv6_Ravv8 - Combined Radium-vv6 and Radium-vv8

Analyte	Result	Qualifier	Count Uncert. (vσ+/-)	Total Uncert. (vσ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium vv6 + vv8	14.G		1.22	1.35	5.00	0.53B	pCi/g		09/1L/18 19:52	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.86				S7			03/09/18 11:LL	1

TestAmerica Pensacola

Definitions/Glossary

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

TestAmerica Job ID: 400-154881-3
SDG: Ash Pond

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
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.
α	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 Smith Plant

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Client Sample ID: MW-14

Date Collected: 56/57/12 11:RR

Date v ecei3ed: 56/52/12 14:85

Lab Sample ID: 055-180221-4

Matrix: Water

Prep Type	Batch Type	Batch Method	u n	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	2005A	DL		406128	03/66/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	3060	DL	600	406495	03/65/18 60:14	DRE	TAL PEN
Total Recoverable	Prep	2005A			406128	03/66/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	3060		5	406495	03/65/18 66:0M	DRE	TAL PEN
Total/NA	Analysis	S7 6540C		1	400948	03/12/18 18:65	RRC	TAL PEN
Total/NA	Analysis	S7 4500 Cl- E		100	402616	0M06/18 10:43	RRC	TAL PEN
Total/NA	Analysis	S7 4500 F C		1	402661	0M06/18 11:6M	BAB	TAL PEN
Total/NA	Analysis	S7 4500 SO4 E		20	402204	0M06/18 15:60	RRC	TAL PEN
Total/NA	Prep	PrecSep-61			2M03M0	03/15/18 13:06	JLC	TAL SL
Total/NA	Analysis	9215		1	2M#82M	0M11/18 16:69	RT7	TAL SL
Total/NA	Prep	PrecSep_0			2M03M2	03/15/18 1M06	JLC	TAL SL
Total/NA	Analysis	9260		1	2M#823	0M11/18 09:44	RT7	TAL SL
Total/NA	Analysis	Ra663_Ra668		1	2M6658	0M16/18 1M52	RT7	TAL SL
Total/NA	Analysis	Field Sampling		1	404426	03/0M18 11:66	CDH	TAL PEN

Laboratory v eferences:

TAL PEN = TestAmerica Pensacola, 2255 7 cLemore Drive, Pensacola, FL 26514, TEL (850)4M4-1001

TAL SL = TestAmerica St. Louis, 12M5 Rider Trail North, Earth City, 7 O 32045, TEL (214)698-8533

QC Association Summary

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Metals

Prep Batch: 402138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2	3 W-12	Total RecoLerable	Water	2005A	
400-154881-2 - DM	3 W-12	Total RecoLerable	Water	2005A	
3 v 400-40B128/1-A ^5	3 ethod v lank	Total RecoLerable	Water	2005A	
MCS 400-40B128/B-A	M&b Control Sample	Total RecoLerable	Water	2005A	
400-154881-v-7-v 3 S ^5	3 atrix Spike	Total RecoLerable	Water	2005A	
400-154881-v-7-C 3 SD ^5	3 atrix Spike Duplicate	Total RecoLerable	Water	2005A	

Analysis Batch: 402495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2 - DM	3 W-12	Total RecoLerable	Water	60B0	40B128
400-154881-2	3 W-12	Total RecoLerable	Water	60B0	40B128
3 v 400-40B128/1-A ^5	3 ethod v lank	Total RecoLerable	Water	60B0	40B128
MCS 400-40B128/B-A	M&b Control Sample	Total RecoLerable	Water	60B0	40B128
400-154881-v-7-v 3 S ^5	3 atrix Spike	Total RecoLerable	Water	60B0	40B128
400-154881-v-7-C 3 SD ^5	3 atrix Spike Duplicate	Total RecoLerable	Water	60B0	40B128

General Chemistry

Analysis Batch: 400948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2	3 W-12	Total/NA	Water	S3 B540C	
3 v 400-400948/1	3 ethod v lank	Total/NA	Water	S3 B540C	
MCS 400-400948/B	M&b Control Sample	Total/NA	Water	S3 B540C	
400-154880-v-2 DU	Duplicate	Total/NA	Water	S3 B540C	

Analysis Batch: 403212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2	3 W-12	Total/NA	Water	S3 4500 Cl- E	
3 v 400-402B1B/6	3 ethod v lank	Total/NA	Water	S3 4500 Cl- E	
MCS 400-402B1B/7	M&b Control Sample	Total/NA	Water	S3 4500 Cl- E	
400-154880-v-4 3 S	3 atrix Spike	Total/NA	Water	S3 4500 Cl- E	
400-154880-v-4 3 SD	3 atrix Spike Duplicate	Total/NA	Water	S3 4500 Cl- E	

Analysis Batch: 403221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2	3 W-12	Total/NA	Water	S3 4500 F C	
3 v 400-402BB1/2	3 ethod v lank	Total/NA	Water	S3 4500 F C	
MCS 400-402BB1/4	M&b Control Sample	Total/NA	Water	S3 4500 F C	
400-15474B-v-4 3 S	3 atrix Spike	Total/NA	Water	S3 4500 F C	
400-15474B-v-4 3 SD	3 atrix Spike Duplicate	Total/NA	Water	S3 4500 F C	
400-154881-A-7 DU	Duplicate	Total/NA	Water	S3 4500 F C	

Analysis Batch: 403304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2	3 W-12	Total/NA	Water	S3 4500 SO4 E	
3 v 400-402204/6	3 ethod v lank	Total/NA	Water	S3 4500 SO4 E	
MCS 400-402204/7	M&b Control Sample	Total/NA	Water	S3 4500 SO4 E	
3 RM400-402204/2	M&b Control Sample	Total/NA	Water	S3 4500 SO4 E	
400-154880-v-2 3 S	3 atrix Spike	Total/NA	Water	S3 4500 SO4 E	
400-154880-v-2 3 SD	3 atrix Spike Duplicate	Total/NA	Water	S3 4500 SO4 E	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Rad

Prep Batch: 370670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2	3 W-12	Total/NA	Water	PrecSep-B1	
3 v 160-270670/B2-A	3 ethod v lank	Total/NA	Water	PrecSep-B1	
MCS 160-270670/1-A	Mab Control Sample	Total/NA	Water	PrecSep-B1	
MCS D 160-270670/B-A	Mab Control Sample Dup	Total/NA	Water	PrecSep-B1	

Prep Batch: 370673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2	3 W-12	Total/NA	Water	PrecSep_0	
3 v 160-270672/B2-A	3 ethod v lank	Total/NA	Water	PrecSep_0	
MCS 160-270672/1-A	Mab Control Sample	Total/NA	Water	PrecSep_0	
MCS D 160-270672/B-A	Mab 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
400-154881-2	3 W-12	Total/NA	Water	Field Sampling	

QC Sample Results

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

TestAmerica Job ID: 400-154881-3
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-402138/1-A ^5
Matrix: Water
Analysis Batch: 402495

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 402138

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00046	U	0.0013	0.00046	mg/L		06/22/18 11:58	06/25/18 18:44	5
Barium	0.00049	U	0.0025	0.00049	mg/L		06/22/18 11:58	06/25/18 18:44	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 11:58	06/25/18 18:44	5
Boron	0.021	U	0.050	0.021	mg/L		06/22/18 11:58	06/25/18 18:44	5
Calcium	0.13	U	0.25	0.13	mg/L		06/22/18 11:58	06/25/18 18:44	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/22/18 11:58	06/25/18 18:44	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		06/22/18 11:58	06/25/18 18:44	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/22/18 11:58	06/25/18 18:44	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/22/18 11:58	06/25/18 18:44	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		06/22/18 11:58	06/25/18 18:44	5

Lab Sample ID: LCS 400-402138/2-A
Matrix: Water
Analysis Batch: 402495

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 402138

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.0500	0.0515		mg/L		103	80 - 120
Barium	0.0500	0.0487		mg/L		97	80 - 120
Beryllium	0.0500	0.0486		mg/L		97	80 - 120
Boron	0.100	0.0977		mg/L		98	80 - 120
Calcium	5.00	4.94		mg/L		99	80 - 120
Chromium	0.0500	0.0502		mg/L		100	80 - 120
Cobalt	0.0500	0.0506		mg/L		101	80 - 120
Lithium	0.0500	0.0531		mg/L		106	80 - 120
Molybdenum	0.0500	0.0488		mg/L		98	80 - 120
Selenium	0.0500	0.0525		mg/L		105	80 - 120

Lab Sample ID: 400-154881-B-7-B MS ^5
Matrix: Water
Analysis Batch: 402495

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 402138

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.00046	U	0.0500	0.0534		mg/L		107	75 - 125
Barium	0.017		0.0500	0.0679		mg/L		102	75 - 125
Beryllium	0.00034	U	0.0500	0.0494		mg/L		99	75 - 125
Boron	0.027	I	0.100	0.131		mg/L		104	75 - 125
Calcium	32		5.00	38.0		mg/L		115	75 - 125
Chromium	0.0029		0.0500	0.0544		mg/L		103	75 - 125
Cobalt	0.00040	U	0.0500	0.0528		mg/L		106	75 - 125
Lithium	0.0051		0.0500	0.0518		mg/L		93	75 - 125
Molybdenum	0.00085	U	0.0500	0.0483		mg/L		97	75 - 125
Selenium	0.00024	U	0.0500	0.0519		mg/L		104	75 - 125

Lab Sample ID: 400-154881-B-7-C MSD ^5
Matrix: Water
Analysis Batch: 402495

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 402138

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	0.00046	U	0.0500	0.0528		mg/L		106	75 - 125	1	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-154881-3
SDG: Ash Pond

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

Lab Sample ID: 400-154881-B-7-C MSD ^5
Matrix: Water
Analysis Batch: 402495

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 402138

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Barium	0.017		0.0500	0.0647		mg/L		95	75 - 125	5	20
Beryllium	0.00034	U	0.0500	0.0480		mg/L		96	75 - 125	3	20
Boron	0.027	I	0.100	0.129		mg/L		102	75 - 125	1	20
Calcium	32		5.00	37.0		mg/L		96	75 - 125	2	20
Chromium	0.0029		0.0500	0.0542		mg/L		103	75 - 125	0	20
Cobalt	0.00040	U	0.0500	0.0521		mg/L		104	75 - 125	2	20
Lithium	0.0051		0.0500	0.0514		mg/L		93	75 - 125	1	20
Molybdenum	0.00085	U	0.0500	0.0480		mg/L		96	75 - 125	1	20
Selenium	0.00024	U	0.0500	0.0521		mg/L		104	75 - 125	0	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	MB	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
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-B-3 DU
Matrix: Water
Analysis Batch: 400948

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Total Dissolved Solids	700		696		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	MB	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
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

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-154881-3
SDG: Ash Pond

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

Lab Sample ID: 400-154880-B-4 MS
Matrix: Water
Analysis Batch: 403212

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	43		10.0	49.8	J3	mg/L		71	73 - 120

Lab Sample ID: 400-154880-B-4 MSD
Matrix: Water
Analysis Batch: 403212

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	43		10.0	49.5	J3	mg/L		67	73 - 120	1	8

Method: SM 4500 F C - Fluoride

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-B-4 MS
Matrix: Water
Analysis Batch: 403221

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	1.04		mg/L		104	75 - 125

Lab Sample ID: 400-154742-B-4 MSD
Matrix: Water
Analysis Batch: 403221

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	1.04		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

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-154881-3
SDG: Ash Pond

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-B-3 MS
Matrix: Water
Analysis Batch: 403304

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	390		300	385	J3	mg/L		-2	77 - 128

Lab Sample ID: 400-154880-B-3 MSD
Matrix: Water
Analysis Batch: 403304

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	Limit
Sulfate	390		300	386	J3	mg/L		-1	77 - 128	0	5

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-370670/23-A
Matrix: Water
Analysis Batch: 374837

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 370670

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03659	U	0.228	0.228	1.00	0.444	pCi/L	06/15/18 16:02	07/11/18 14:24	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110	06/15/18 16:02	07/11/18 14:24	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-154881-3
SDG: Ash Pond

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCS 160-370670/1-A
Matrix: Water
Analysis Batch: 374837

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 370670

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	15.7	17.09		2.12	1.00	0.361	pCi/L	109	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	100		40 - 110						

Lab Sample ID: LCSD 160-370670/2-A
Matrix: Water
Analysis Batch: 374837

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 370670

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	15.7	15.22		1.94	1.00	0.380	pCi/L	97	68 - 137	0.46	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	101		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-370673/23-A
Matrix: Water
Analysis Batch: 374835

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 370673

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.4235	U	0.365	0.367	1.00	0.583	pCi/L	06/15/18 17:02	07/11/18 09:46	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared		Analyzed		Dil Fac	
Ba Carrier	104		40 - 110		06/15/18 17:02		07/11/18 09:46		1	
Y Carrier	69.2		40 - 110		06/15/18 17:02		07/11/18 09:46		1	

Lab Sample ID: LCS 160-370673/1-A
Matrix: Water
Analysis Batch: 374836

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 370673

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	10.9	11.13		1.32	1.00	0.497	pCi/L	102	56 - 140
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	100		40 - 110						
Y Carrier	85.6		40 - 110						

QC Sample Results

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

TestAmerica Job ID: 400-154881-3
 SDG: Ash Pond

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

Lab Sample ID: LCSD 160-370673/2-A
Matrix: Water
Analysis Batch: 374836

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 370673

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	10.9	9.499		1.26	1.00	0.645	pCi/L	87	56 - 140	0.63	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	101		40 - 110
Y Carrier	65.0		40 - 110

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- 13
- 14

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

Chain of Custody Record

TestAmerica

<p>Client Information</p> <p>Client Contact: Kristi Mitchell Company: Gulf Power Company Address: BIN 731 One Energy Place City: Pensacola State, Zip: FL, 32520 Phone: 850-444-6427 (Tel) Email: krmitch@southemco.com Project Name: CCR Smith Plant Site: Ash Pond</p>	<p>Lab P/N: Whitmore, Cheyenne R Carrier Tracking No(s): Lab #: Page: 400-74588-29346.2 Job #:</p>	<p>Sample #: K-UC Hagerdorter Phone: 850-336-0192</p>	<p>Analysis Requested</p> <p>Due Date Requested: TAT Requested (days): PO #: Purchase Order not required WO #: Project #: 40006609 SSOW#:</p>
<p>Sample Identification</p> <p>Mw-13</p>	<p>Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Form MS/MSD (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Total Dissolved Solids, 4500 F.C. Fluoride <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>SM4500 Cl₂-Chloride, SM4500 SO₄-Sulfate, 2540C-Manganese <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>9315 Ra226, 9320 Ra228, Ra228R228, GPFC <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Bocon Calcium, As, Rn, Beryllium, Sr, Co, Lithium, Molybdenum, Se <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Sample Date: 6-7-18</p> <p>Sample Time: 1122 hr</p> <p>Sample Type (C=Comp, G=grab) <input checked="" type="checkbox"/> G <input type="checkbox"/> C</p> <p>Matrix (Type, Source, Orientation) <input checked="" type="checkbox"/> Water <input type="checkbox"/> Soil <input type="checkbox"/> Sludge</p> <p>Preservation Code: <input checked="" type="checkbox"/> X <input type="checkbox"/> D <input type="checkbox"/> I <input type="checkbox"/> N <input type="checkbox"/> O</p>	<p>Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NH₄SO₄ F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2CO3 Q - Na2SO3 R - H2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - Ice W - EDTA X - EDTA Y - EDTA Z - other (specify)</p>
<p>Possible Hazard Identification</p> <p><input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological</p> <p>Deliverable Requested: I, II, III, IV, Other (specify)</p>		<p>Special Instructions/Note: Total Number of containers <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12 <input type="checkbox"/> 13 <input type="checkbox"/> 14 <input type="checkbox"/> 15 <input type="checkbox"/> 16 <input type="checkbox"/> 17 <input type="checkbox"/> 18 <input type="checkbox"/> 19 <input type="checkbox"/> 20 <input type="checkbox"/> 21 <input type="checkbox"/> 22 <input type="checkbox"/> 23 <input type="checkbox"/> 24 <input type="checkbox"/> 25 <input type="checkbox"/> 26 <input type="checkbox"/> 27 <input type="checkbox"/> 28 <input type="checkbox"/> 29 <input type="checkbox"/> 30 <input type="checkbox"/> 31 <input type="checkbox"/> 32 <input type="checkbox"/> 33 <input type="checkbox"/> 34 <input type="checkbox"/> 35 <input type="checkbox"/> 36 <input type="checkbox"/> 37 <input type="checkbox"/> 38 <input type="checkbox"/> 39 <input type="checkbox"/> 40</p>	
<p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</p> <p><input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months</p>		<p>Special Instructions/QC Requirements:</p>	
<p>Relinquished by:</p> <p>Relinquished by: [Signature] Date/Time: 6-8-18 1130 Relinquished by: Reception Hagerdorter Date/Time: 6/8/18 150 Relinquished by: [Signature] Date/Time: 6/8/18 1350</p>		<p>Method of Shipment: _____</p> <p>Received by: Reception Hagerdorter Date/Time: 6/8/18 11:34 Received by: [Signature] Date/Time: 6/8/18 1350 Received by: [Signature] Date/Time: _____</p>	
<p>Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No</p>		<p>Cooler Temperature(s) °C and Other Remarks:</p>	



Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-154881-3

SDG Number: Ash Pond

Login Number: 154881

List Number: 1

Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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, 0.0°C, 0.0°C, 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 <math><6\text{mm}</math> (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: 400-154881-3

SDG Number: Ash Pond

Login Number: 154881

List Number: 2

Creator: Press, Nicholas B

List Source: TestAmerica St. Louis

List Creation: 06/12/18 05:09 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 Smith Plant

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

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	06-20-13
ANA9	ISB/IOC 1E075		L74E1	07-77-70
Arizona	State Program	3	AZ0E10	01-17-13
Arkansas DOQ	State Program	6	88-0683	03-01-18 F
California	State Program	3	7510	06-20-13
(lorida	NOLAP	4	O81010	06-20-13
Georgia	State Program	4	O81010)(L*	06-20-13
Illinois	NOLAP	5	700041	10-03-18
Iowa	State Program	E	26E	08-01-18 F
Kansas	NOLAP	E	O-10752	10-21-18
Kentucky)UST*	State Program	4	52	06-20-13
Kentucky)WW*	State Program	4	38020	17-21-18
Louisiana	NOLAP	6	203E6	06-20-13
Louisiana)DW*	NOLAP	6	LA1E0005	17-21-18
Maryland	State Program	2	722	03-20-13
Massachusetts	State Program	1	M-(L034	06-20-13
Michigan	State Program	5	3317	06-20-13
New Jersey	NOLAP	7	(L006	06-20-13
North Carolina)WW/SW*	State Program	4	214	17-21-18
Bklahoma	State Program	6	3810	08-21-13
Pennsylvania	NOLAP	2	68-0046E	01-21-13
Rhode Island	State Program	1	LAB 0020E	17-20-18
South Carolina	State Program	4	36076	06-20-18 F
Tennessee	State Program	4	TN0730E	06-20-13
Texas	NOLAP	6	T104E04786-18-14	03-20-18
US (ish & Wildlife	(ederal		LO058448-0	0E-21-13
USDA	(ederal		P220-18-00148	05-1E-71
Virginia	NOLAP	2	460166	06-14-13
Washington	State Program	10	C315	05-15-13
West Virginia DOP	State Program	2	126	06-20-13

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	MB 00054	06-20-13
ANA9	DoD OLAP		L7205	04-06-13
Arizona	State Program	3	AZ0812	17-08-18
California	State Program	3	7886	06-20-13
Connecticut	State Program	1	PH-0741	02-21-13
(lorida	NOLAP	4	O8E683	06-20-13
Illinois	NOLAP	5	700072	11-20-18
Iowa	State Program	E	2E2	17-01-18
Kansas	NOLAP	E	O-10726	10-21-18
Kentucky)DW*	State Program	4	30175	17-21-18
Louisiana	NOLAP	6	04080	06-20-13
Louisiana)DW*	NOLAP	6	LA18001E	17-21-18
Maryland	State Program	2	210	03-20-13
Michigan	State Program	5	3005	06-20-18 F
Missouri	State Program	E	E80	06-20-18 F

FAccreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Pensacola

Accreditation/Certification Summary

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

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	3	MB000547018-1	0E-21-13
New Jersey	NOLAP	7	MB007	06-20-13
New York	NOLAP	7	11616	02-21-13
North Dakota	State Program	8	R70E	06-20-13
NRC	NRC		74-7481E-01	17-21-77
Bklahoma	State Program	6	333E	08-21-13
Pennsylvania	NOLAP	2	68-00540	07-78-13
South Carolina	State Program	4	85007001	06-20-13
Texas	NOLAP	6	T104E04132-18-17	0E-21-13
US (ish & Wildlife	(ederal		058448	0E-21-13
USDA	(ederal		P220-1E-0078	07-07-70
Utah	NOLAP	8	MB000547016-8	0E-21-18 F
Virginia	NOLAP	2	460720	06-14-13
Washington	State Program	10	C537	08-20-18 F
West Virginia DOP	State Program	2	281	10-21-18 F

FAccreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Pensacola

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: 400-154881-5

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Smith Plant

For:

Gulf Power Company

BIN 731

One Energy Place

Pensacola, Florida 32520

Attn: Kristi Mitchell



Authorized for release by:

7/16/2018 5:56:35 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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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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Case Narrative

Client: Gulf Power Company
Project: CCS / MITR Plant

TestAmerica Job ID: 400-154881-5
/ DG: AsRPh

Job ID: 400-154881-5

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-154881-5

RAD

d et RohM (Prec/ ep) 0: Sahium __8 Prep BatcR 160-370673: Insufficient sample volume was available to perform a sample duplicate DUP for the following samples: d W-11 M00-154881-5(. A laboratory control samplej laboratory control sample duplicate MC/ jLC/ D(were prepared instead to demonstrate batch precision.

d et RohM (Prec/ ep) 0: Sahium __8 Prep BatcR 160-370673: / ample aliquots 400-154881-1,_,3,4,5,6,7, and 10 were reduced in hue to potential matrix interference. / amples were yellow, murky, and had strong odors similar to that of sulfur. / ample aliquots 400154881-8,9,11,1,_,13,14,15,16,17,18,19, and _0 were reduced in hue to potential matrix interference. / amples were murky and had strong odors similar to that of sulfur. d W-11 M00-154881-5(.

d et RohM (Prec/ ep)_1: Sahium __6 Prep BatcR 160-370670: Insufficient sample volume was available to perform a sample duplicate DUP for the following samples: d W-11 M00-154881-5(. A laboratory control samplej laboratory control sample duplicate MC/ jLC/ D(were prepared instead to demonstrate batch precision.

d et RohM (Prec/ ep)_1: Sahium __6 Prep BatcR 160-370670: / ample aliquots 400-154881-1,_,3,4,5,6,7, and 10 were reduced in hue to potential matrix interference. / amples were yellow, murky, and had strong odors similar to that of sulfur. / ample aliquots 400154881-8,9,11,1,_,13,14,15,16,17,18,19, and _0 were reduced in hue to potential matrix interference. / amples were murky and had strong odors similar to that of sulfur. d W-11 M00-154881-5(.

Metals

d et RohM (60_0: The following sample was diluted to bring the concentration of target analytes within the calibration range: d W-11 M00-154881-5(. Elevated reporting limits NDLs(are provided.

General Chemistry

d et RohM (/ d 4500 Cl- E: The following sample was diluted to bring the concentration of target analytes within the calibration range: d W-11 M00-154881-5(. Elevated reporting limits NDLs(are provided.

d et RohM (/ d 4500 / O4 E: The following sample was diluted to bring the concentration of target analytes within the calibration range: d W-11 M00-154881-5(. Elevated reporting limits NDLs(are provided.

Detection Summary

8 0el t: n 00f oPer 8 omwal p
f roectjy ite: 88/ y mitS f 0l t

TestAmerica Job ID: 400-154221-5
yDn : AsS f ol h

Client Sample ID: MW-11

Lab Sample ID: 400-154881-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsel ic	0R012		0R01.	0R004L	m3jg	5		L0v0	TotaC / eco6erab@
BariGm	0R0M2		0R0v5	0R0049	m3jg	5		L0v0	TotaC / eco6erab@
Berp0Gm	0R009v I		0R0v5	0R00.4	m3jg	5		L0v0	TotaC / eco6erab@
Borol	. RM		0R50	0R1	m3jg	50		L0v0	TotaC / eco6erab@
8 a0iGm	100		0R5	0R.	m3jg	5		L0v0	TotaC / eco6erab@
8 SromiGm	0R042		0R0v5	0R011	m3jg	5		L0v0	TotaC / eco6erab@
gitSiGm	0R0.2 I		0R050	0R011	m3jg	5		L0v0	TotaC / eco6erab@
7 o0bhel Gm	0R1. I		0R15	0R0025	m3jg	5		L0v0	TotaC / eco6erab@
ye0l iGm	0R00L0 I		0R01.	0R00v4	m3jg	5		L0v0	TotaC / eco6erab@
TotaDisso0eh y0hs	.400		50	.4	m3jg	1		y7 v5408	Tota0NA
8 S0rihe	v000		1v0	.L	m3jg	L0		y7 4500 8GE	Tota0NA
y0ate	v40		150	4v	m3jg	.0		y7 4500 yF4E	Tota0NA
0e0 wH	LR9				yU	1		0e0 yamw03	Tota0NA

Method Summary

2017-08-22 10:22 AM
 Project: 22 / 15881-5

TestAmerica Job ID: 400-154881-5
 yDn: AsSf of h

Method	Method Description	Protocol	Laboratory
W60	MetaS (12f jMy)	yR 84W	TAL f EN
yM 65402	y ohs, Total Dissoeh (TDy)	yM	TAL f EN
yM 4500 2GE	2 Srihe, TotalC	yM	TAL f EN
yM 4500 F 2	F Srihe	yM	TAL f EN
yM 4500 yO4 E	y Gate, TotalC	yM	TAL f EN
9315	/ ahiGn-66W(n Ff 2)	yR 84W	TAL yL
9360	/ ahiGn-668 (n Ff 2)	yR 84W	TAL yL
/ a66W/ a668	2 ombil eh / ahiGn-66Wal h / ahiGn-668	TAL-yTL	TAL yL
Fie y amw g	Fie y amw g	Ef A	TAL f EN
3005A	f rewaratiol , Total ecoverab or Dissoeh MetaS	yR 84W	TAL f EN
f recyew_0	f rewaratiol , f reciwtate y ewaratiol	Nol e	TAL yL
f recyew-61	f rewaratiol , f reciwtate y ewaratiol (61-Dap II -n roPtS)	Nol e	TAL yL

Protocol References:

Ef A = Uy El virol mel taG rotectiol Agel cp

Nol e = Nol e

yM = "y tal harh MetSohs For TSe Examil atiol OuR ater Al h R astePater"

yR 84W= "Test MetSohs For EvaGatil g y ohi R aste, f Spsica2 SemicaQMetSohs", TSirh Ehitiol , November 198WAI h Its Uwates.

TAL-yTL = TestAmerica Laboratories, yt. LoGs, Faci y tal harh Oweratil g f roehGre.

Laboratory References:

TAL f EN = TestAmerica f el sacco, 3355 McLemore Drive, f el sacco, FL 36514, TEL (850)474-1001

TAL yL = TestAmerica yt. LoGs, 13715 / iher TraiQnortS, EartS 2 itp, MO W045, TEL (314)698-85VW

Sample Summary

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

TestAmerica Job ID: 400-154881-5
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-154881-5	MW-11	Water	06/07/18 08:45	06/08/18 13:50

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

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

TestAmerica Job ID: 400-154881-5
SDG: Ash Pond

Client Sample ID: 2 M-11
Date Collected: 06/08/18 08:45
Date Received: 06/08/18 1v:50

Lab Sample ID: 400-154881-5
2 atW : MateW

2 et3xc: d0h0 - 2 etals (ICP S) - Txtal Reox7eWble

Analyte	Result	QualifieW	PQL	2 DL	Unit	D	PWpaWc	Analyzec	Dil Fao
AWenio	0.018		0.0013	0.00046	mg/L		06/22/18 11:58	06/25/18 22:16	5
BaWum	0.0/ 8		0.0025	0.00049	mg/L		06/22/18 11:58	06/25/18 22:16	5
BeWllium	0.000Ch I		0.0025	0.00034	mg/L		06/22/18 11:58	06/25/18 22:16	5
BxWn	v./		0.50	0.21	mg/L		06/22/18 11:58	06/25/18 20:23	50
Caloium	100		0.25	0.13	mg/L		06/22/18 11:58	06/25/18 22:16	5
C3Wmium	0.0048		0.0025	0.0011	mg/L		06/22/18 11:58	06/25/18 22:16	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		06/22/18 11:58	06/25/18 22:16	5
Lit3ium	0.00v8 I		0.0050	0.0011	mg/L		06/22/18 11:58	06/25/18 22:16	5
2 xlybcenum	0.01v I		0.015	0.00085	mg/L		06/22/18 11:58	06/25/18 22:16	5
Selenium	0.000d0 I		0.0013	0.00024	mg/L		06/22/18 11:58	06/25/18 22:16	5

9 eneWl C3emistW

Analyte	Result	QualifieW	PQL	2 DL	Unit	D	PWpaWc	Analyzec	Dil Fao
Txtal Dissxl7ec Sxlics	v400		50	34	mg/L			06/13/18 12:30	1
C3lxWlce	h000		120	36	mg/L			07/02/18 09:43	60
Fluoride	0.032	U	0.10	0.032	mg/L			07/02/18 17:18	1
Sulfate	h40		150	42	mg/L			07/02/18 15:20	30

2 et3xc: Gv15 - Radium-hhd (9 FPC)

Analyte	Result	QualifieW	Cxunt UnoeW (hσ+6)	Txtal UnoeW (hσ+6)	RL	2 DC	Unit	PWpaWc	Analyzec	Dil Fao
Radium-hhd	1/ .4		1.50	2.17	1.00	0.402	pCi/L	06/15/18 16:02	07/11/18 12:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					06/15/18 16:02	07/11/18 12:29	1

2 et3xc: Gvh0 - Radium-hh8 (9 FPC)

Analyte	Result	QualifieW	Cxunt UnoeW (hσ+6)	Txtal UnoeW (hσ+6)	RL	2 DC	Unit	PWpaWc	Analyzec	Dil Fao
Radium-hh8	d.h0		0.732	0.928	1.00	0.666	pCi/L	06/15/18 17:02	07/11/18 09:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					06/15/18 17:02	07/11/18 09:44	1
Y Carrier	75.1		40 - 110					06/15/18 17:02	07/11/18 09:44	1

2 et3xc: Rahhd_Rahh8 - Cxmbinec Radium-hhd anc Radium-hh8

Analyte	Result	QualifieW	Cxunt UnoeW (hσ+6)	Txtal UnoeW (hσ+6)	RL	2 DC	Unit	PWpaWc	Analyzec	Dil Fao
Cxmbinec Radium hhd + hh8	hv.d		1.67	2.36	5.00	0.666	pCi/L		07/12/18 17:53	1

2 et3xc: Fielc Sampling - Fielc Sampling

Analyte	Result	QualifieW	PQL	2 DL	Unit	D	PWpaWc	Analyzec	Dil Fao
Fielc pH	d.vG				SU			06/07/18 08:45	1

Definitions/Glossary

30el t: n Qof oPer 3 omwal p
f roectjy ite: 33/ y mitS f Al t

TestAmerica Job ID: 400-154881-5
yDn : AsS f ol h

Qualifiers

Metals

Qualifier	Qualifier Description
I	TSe reworte h PaCe is betPeel tSe @boratorp metSoh hetectiol @mit al h tSe @boratorp wracticaUGal titatiol @mitz
.	Il hicates tSat tSe comwoG h Pas al a@veh w@r bG l ot hetectehz

General Chemistry

Qualifier	Qualifier Description
Jq	Estimateh PaCe; PaCe map l ot be accGratez y wike recoRerp or / f D oGsihe oucriteriaz
.	Il hicates tSat tSe comwoG h Pas al a@veh w@r bG l ot hetectehz
I	TSe reworte h PaCe is betPeel tSe @boratorp metSoh hetectiol @mit al h tSe @boratorp wracticaUGal titatiol @mitz

Rad

Qualifier	Qualifier Description
.	/ esG@is @ss tSal tSe samw@ hetectiol @mitz

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listeh G her tSe "D" coQml to hesigl ate tSat tSe resG@is reworte h ol a hrp PeigSt basis
%/	f ercel t / ecoRerp
3 FL	3 ol tail s Free LiUGh
3 NF	3 ol tail s No Free LiUGh
DE/	DG@cate Error / atio (l orma@veh absoG@e hiuerel ce)
DiFac	DiG@iol Factor
DL	Detectiol Limit (DoDjDOE)
DL, / A, / E, IN	Il hicates a DiG@iol, / e-a@psis, / e-extractiol, or ahhtiol aCl itiaQmetaGjal iol al a@psis outSe samw@
DL3	Decisiol LeReC3 ol cel tratiol (/ ahioSemistrp)
EDL	Estimateh Detectiol Limit (Dioxil)
LOD	Limit ouDetectiol (DoDjDOE)
LOQ	Limit ouQG@l titatiol (DoDjDOE)
MDA	Mil imGm Detectab@ ActiRtp (/ ahioSemistrp)
MD3	Mil imGm Detectab@ 3 ol cel tratiol (/ ahioSemistrp)
MDL	MetSoh Detectiol Limit
ML	Mil imGm LeReQ(Dioxil)
N3	Not 3 a@G@teh
ND	Not Detecteh at tSe rewortil g @mit (or MDL or EDL iusSoPl)
f QL	f racticaQG@l titatiol Limit
Q3	QG@tp 3 ol troC
/ E/	/ e@tiRe Error / atio (/ ahioSemistrp)
/ L	/ ewortil g Limit or / eUGesteh Limit (/ ahioSemistrp)
/ f D	/ e@tiRe f ercel t Diuerel ce, a measGe outSe re@tiRe hiuerel ce betPeel tPo woi ts
TEF	Toxicitp EUGRa@l t Factor (Dioxil)
TEQ	Toxicitp EUGRa@l t QG@tiel t (Dioxil)

Lab Chronicle

Client: Gulf Power Company
 Project: CCS / mitR Plant

TestAmerica Job ID: 400-154881-5
 / DG: AsR Ponh

Client Sample ID: MW-11

Date Collected: 06/07/18 08:45

Date Received: 06/08/18 13:50

Lab Sample ID: 400-154881-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Secoverable	Prep	d005A			4061d8	03j66j18 11:58	DSE	TAL PEN
Total Secoverable	Analysis	3060		50	406495	03j65j18 60:6d	DSE	TAL PEN
Total Secoverable	Prep	d005A			4061d8	03j66j18 11:58	DSE	TAL PEN
Total Secoverable	Analysis	3060		5	406495	03j65j18 66:13	DSE	TAL PEN
TotaljNA	Analysis	/ M 6540C		1	400955	03j1dj18 16:d0	SSC	TAL PEN
TotaljNA	Analysis	/ M 4500 CI- E		30	40d616	07j06j18 09:4d	SSC	TAL PEN
TotaljNA	Analysis	/ M 4500 F C		1	40d694	07j06j18 17:18	BAB	TAL PEN
TotaljNA	Analysis	/ M 4500 / O4 E		d0	40dd04	07j06j18 15:60	SSC	TAL PEN
TotaljNA	Prep	Prec/ ep-61			d70370	03j15j18 13:06	JLC	TAL / L
TotaljNA	Analysis	9d15		1	d748d7	07j11j18 16:69	STM	TAL / L
TotaljNA	Prep	Prec/ ep_0			d7037d	03j15j18 17:06	JLC	TAL / L
TotaljNA	Analysis	9d60		1	d748d3	07j11j18 09:44	STM	TAL / L
TotaljNA	Analysis	Sa663_Sa668		1	d75658	07j16j18 17:5d	STM	TAL / L
TotaljNA	Analysis	Fielh / ampling		1	4044d6	03j07j18 08:45	CDH	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, dd55 McLemore Drive, Pensacola, FL d6514, TEL (850)474-1001

TAL / L = TestAmerica / t. Louis, 1d715 Siher Trail NortR, EarR City, MO 3d045, TEL (d14)698-8533

QC Association Summary

Client: n Co of Per 2 omwal p
 f roectjy ite: 22/ y mitS f Al t

TestAmerica Job ID: 400-154881-5
 y Dn : AsS f ol h

Metals

Prep Batch: 402138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-5	3 R -11	Total	ecoLerab	V005A	
3 M400-40v1V8j1-A B5	3 etSoh MAl ^	Total	ecoLerab	V005A	
k2y 400-40v1V8jv-A	kab 2 ol troCy amw	Total	ecoLerab	V005A	
400-154881-M-7-M3 y B5	3 atrix y wi^e	Total	ecoLerab	V005A	
400-154881-M-7-2 3 y D B5	3 atrix y wi^e DGWcate	Total	ecoLerab	V005A	

Analysis Batch: 402495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-5	3 R -11	Total	ecoLerab	60v0	40v1V8
400-154881-5	3 R -11	Total	ecoLerab	60v0	40v1V8
3 M400-40v1V8j1-A B5	3 etSoh MAl ^	Total	ecoLerab	60v0	40v1V8
k2y 400-40v1V8jv-A	kab 2 ol troCy amw	Total	ecoLerab	60v0	40v1V8
400-154881-M-7-M3 y B5	3 atrix y wi^e	Total	ecoLerab	60v0	40v1V8
400-154881-M-7-2 3 y D B5	3 atrix y wi^e DGWcate	Total	ecoLerab	60v0	40v1V8

General Chemistry

Analysis Batch: 400955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-5	3 R -11	Total	QNA	y3 v5402	
3 M400-400955j1	3 etSoh MAl ^	Total	QNA	y3 v5402	
k2y 400-400955jv	kab 2 ol troCy amw	Total	QNA	y3 v5402	
400-154761-A-v9 DU	DGWcate	Total	QNA	y3 v5402	

Analysis Batch: 403212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-5	3 R -11	Total	QNA	y3 4500 2GE	
3 M400-40W1vj6	3 etSoh MAl ^	Total	QNA	y3 4500 2GE	
k2y 400-40W1vj7	kab 2 ol troCy amw	Total	QNA	y3 4500 2GE	
3 / k 400-40W1vjW	kab 2 ol troCy amw	Total	QNA	y3 4500 2GE	
400-154880-M-4 3 y	3 atrix y wi^e	Total	QNA	y3 4500 2GE	
400-154880-M-4 3 y D	3 atrix y wi^e DGWcate	Total	QNA	y3 4500 2GE	

Analysis Batch: 403294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-5	3 R -11	Total	QNA	y3 4500 F 2	
3 M400-40W94jW	3 etSoh MAl ^	Total	QNA	y3 4500 F 2	
k2y 400-40W94j4	kab 2 ol troCy amw	Total	QNA	y3 4500 F 2	
400-154881-A-4 3 y	3 atrix y wi^e	Total	QNA	y3 4500 F 2	
400-154881-A-4 3 y D	3 atrix y wi^e DGWcate	Total	QNA	y3 4500 F 2	
400-154881-A-19 DU	DGWcate	Total	QNA	y3 4500 F 2	

Analysis Batch: 403304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-5	3 R -11	Total	QNA	y3 4500 yO4 E	
3 M400-40W04j6	3 etSoh MAl ^	Total	QNA	y3 4500 yO4 E	
k2y 400-40W04j7	kab 2 ol troCy amw	Total	QNA	y3 4500 yO4 E	
3 / k 400-40W04jW	kab 2 ol troCy amw	Total	QNA	y3 4500 yO4 E	
400-154880-M-W3 y	3 atrix y wi^e	Total	QNA	y3 4500 yO4 E	
400-154880-M-W3 y D	3 atrix y wi^e DGWcate	Total	QNA	y3 4500 yO4 E	

TestAmerica f el saco

QC Association Summary

2017-07-16 10:22 AM
 Project: 22 / ymitS f @l t

TestAmerica Job ID: 400-154881-5
 yDn : AsS f ol h

Rad

Prep Batch: 370670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-5	3 R -11	Total	Rater	frequency_v1	
3 M160-V70670jvWA	3 etSoh MAl ^	Total	Rater	frequency_v1	
k2y 160-V70670j1-A	kab 2 ol troCy amw@	Total	Rater	frequency_v1	
k2yD 160-V70670jv-A	kab 2 ol troCy amw@ DGw	Total	Rater	frequency_v1	

Prep Batch: 370673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-5	3 R -11	Total	Rater	frequency_0	
3 M160-V7067VjvWA	3 etSoh MAl ^	Total	Rater	frequency_0	
k2y 160-V7067Vj1-A	kab 2 ol troCy amw@	Total	Rater	frequency_0	
k2yD 160-V7067Vjv-A	kab 2 ol troCy amw@ DGw	Total	Rater	frequency_0	

Field Service / Mobile Lab

Analysis Batch: 404432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-5	3 R -11	Total	Rater	Field y amw@ g	

QC Sample Results

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

TestAmerica Job ID: 400-154881-5
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-402138/1-A ^5
Matrix: Water
Analysis Batch: 402495

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 402138

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00046	U	0.0013	0.00046	mg/L		06/22/18 11:58	06/25/18 18:44	5
Barium	0.00049	U	0.0025	0.00049	mg/L		06/22/18 11:58	06/25/18 18:44	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		06/22/18 11:58	06/25/18 18:44	5
Boron	0.021	U	0.050	0.021	mg/L		06/22/18 11:58	06/25/18 18:44	5
Calcium	0.13	U	0.25	0.13	mg/L		06/22/18 11:58	06/25/18 18:44	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		06/22/18 11:58	06/25/18 18:44	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		06/22/18 11:58	06/25/18 18:44	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/22/18 11:58	06/25/18 18:44	5
Molybdenum	0.00085	U	0.015	0.00085	mg/L		06/22/18 11:58	06/25/18 18:44	5
Selenium	0.00024	U	0.0013	0.00024	mg/L		06/22/18 11:58	06/25/18 18:44	5

Lab Sample ID: LCS 400-402138/2-A
Matrix: Water
Analysis Batch: 402495

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 402138

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.0500	0.0515		mg/L		103	80 - 120
Barium	0.0500	0.0487		mg/L		97	80 - 120
Beryllium	0.0500	0.0486		mg/L		97	80 - 120
Boron	0.100	0.0977		mg/L		98	80 - 120
Calcium	5.00	4.94		mg/L		99	80 - 120
Chromium	0.0500	0.0502		mg/L		100	80 - 120
Cobalt	0.0500	0.0506		mg/L		101	80 - 120
Lithium	0.0500	0.0531		mg/L		106	80 - 120
Molybdenum	0.0500	0.0488		mg/L		98	80 - 120
Selenium	0.0500	0.0525		mg/L		105	80 - 120

Lab Sample ID: 400-154881-B-7-B MS ^5
Matrix: Water
Analysis Batch: 402495

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 402138

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.00046	U	0.0500	0.0534		mg/L		107	75 - 125
Barium	0.017		0.0500	0.0679		mg/L		102	75 - 125
Beryllium	0.00034	U	0.0500	0.0494		mg/L		99	75 - 125
Boron	0.027	I	0.100	0.131		mg/L		104	75 - 125
Calcium	32		5.00	38.0		mg/L		115	75 - 125
Chromium	0.0029		0.0500	0.0544		mg/L		103	75 - 125
Cobalt	0.00040	U	0.0500	0.0528		mg/L		106	75 - 125
Lithium	0.0051		0.0500	0.0518		mg/L		93	75 - 125
Molybdenum	0.00085	U	0.0500	0.0483		mg/L		97	75 - 125
Selenium	0.00024	U	0.0500	0.0519		mg/L		104	75 - 125

Lab Sample ID: 400-154881-B-7-C MSD ^5
Matrix: Water
Analysis Batch: 402495

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 402138

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	0.00046	U	0.0500	0.0528		mg/L		106	75 - 125	1	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-154881-5
SDG: Ash Pond

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

Lab Sample ID: 400-154881-B-7-C MSD ^5
Matrix: Water
Analysis Batch: 402495

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 402138

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Barium	0.017		0.0500	0.0647		mg/L		95	75 - 125	5	20
Beryllium	0.00034	U	0.0500	0.0480		mg/L		96	75 - 125	3	20
Boron	0.027	I	0.100	0.129		mg/L		102	75 - 125	1	20
Calcium	32		5.00	37.0		mg/L		96	75 - 125	2	20
Chromium	0.0029		0.0500	0.0542		mg/L		103	75 - 125	0	20
Cobalt	0.00040	U	0.0500	0.0521		mg/L		104	75 - 125	2	20
Lithium	0.0051		0.0500	0.0514		mg/L		93	75 - 125	1	20
Molybdenum	0.00085	U	0.0500	0.0480		mg/L		96	75 - 125	1	20
Selenium	0.00024	U	0.0500	0.0521		mg/L		104	75 - 125	0	20

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

Lab Sample ID: MB 400-400955/1
Matrix: Water
Analysis Batch: 400955

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

Analyte	MB	MB	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			06/13/18 12:30	1

Lab Sample ID: LCS 400-400955/2
Matrix: Water
Analysis Batch: 400955

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: 400-154761-A-29 DU
Matrix: Water
Analysis Batch: 400955

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Total Dissolved Solids	220		222		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	MB	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
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

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-154881-5
SDG: Ash Pond

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

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-B-4 MS
Matrix: Water
Analysis Batch: 403212

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	43		10.0	49.8	J3	mg/L		71	73 - 120

Lab Sample ID: 400-154880-B-4 MSD
Matrix: Water
Analysis Batch: 403212

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	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-4 MS
Matrix: Water
Analysis Batch: 403294

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	0.15		1.00	1.12		mg/L		97	75 - 125

Lab Sample ID: 400-154881-A-4 MSD
Matrix: Water
Analysis Batch: 403294

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	0.15		1.00	1.10		mg/L		95	75 - 125	2	4

QC Sample Results

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

TestAmerica Job ID: 400-154881-5
SDG: Ash Pond

Method: SM 4500 F C - Fluoride (Continued)

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

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-B-3 MS
Matrix: Water
Analysis Batch: 403304

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	390		300	385	J3	mg/L		-2	77 - 128

Lab Sample ID: 400-154880-B-3 MSD
Matrix: Water
Analysis Batch: 403304

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	390		300	386	J3	mg/L		-1	77 - 128	0	5

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-370670/23-A
Matrix: Water
Analysis Batch: 374837

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 370670

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03659	U	0.228	0.228	1.00	0.444	pCi/L	06/15/18 16:02	07/11/18 14:24	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-154881-5
SDG: Ash Pond

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: MB 160-370670/23-A
Matrix: Water
Analysis Batch: 374837

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 370670

Carrier	MB %Yield	MB Qualifier	Limits
Ba Carrier	104		40 - 110

Prepared	Analyzed	Dil Fac
06/15/18 16:02	07/11/18 14:24	1

Lab Sample ID: LCS 160-370670/1-A
Matrix: Water
Analysis Batch: 374837

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 370670

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	15.7	17.09		2.12	1.00	0.361	pCi/L	109	68 - 137

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	100		40 - 110

Lab Sample ID: LCSD 160-370670/2-A
Matrix: Water
Analysis Batch: 374837

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 370670

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	15.7	15.22		1.94	1.00	0.380	pCi/L	97	68 - 137	0.46	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	101		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-370673/23-A
Matrix: Water
Analysis Batch: 374835

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 370673

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.4235	U	0.365	0.367	1.00	0.583	pCi/L	06/15/18 17:02	07/11/18 09:46	1

Carrier	MB %Yield	MB Qualifier	Limits
Ba Carrier	104		40 - 110
Y Carrier	69.2		40 - 110

Prepared	Analyzed	Dil Fac
06/15/18 17:02	07/11/18 09:46	1
06/15/18 17:02	07/11/18 09:46	1

Lab Sample ID: LCS 160-370673/1-A
Matrix: Water
Analysis Batch: 374836

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 370673

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	10.9	11.13		1.32	1.00	0.497	pCi/L	102	56 - 140

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-154881-5
 SDG: Ash Pond

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

Lab Sample ID: LCS 160-370673/1-A
Matrix: Water
Analysis Batch: 374836

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 370673

	LCS	LCS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	100		40 - 110
Y Carrier	85.6		40 - 110

Lab Sample ID: LCSD 160-370673/2-A
Matrix: Water
Analysis Batch: 374836

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 370673

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		RER	RER Limit
									56 - 140	0.63	1	
Radium-228	10.9	9.499		1.26	1.00	0.645	pCi/L	87	56 - 140	0.63		1

	LCSD	LCSD	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	101		40 - 110
Y Carrier	65.0		40 - 110

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

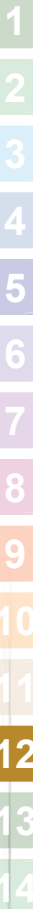
Lab Sample ID: 180-78700-A-6 DU
Matrix: Water
Analysis Batch: 375258

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
										0.80
Combined Radium 226 + 228	0.210	U	0.5506		0.223	5.00	0.307	pCi/L	0.80	

Chain of Custody Record

Client Information		Lab PIV: Whitmire, Cheyenne R	Carrier Tracking No(s):
Client Contact: Kristi Mitchell		E-Mail: cheyenne.whitmire@testamericainc.com	COC No: 400-74568-29346.2
Company: Gulf Power Company			Page: 1 of 1
Address: BIN 731 One Energy Place			Job #:
City: Pensacola			
State, Zip: FL, 32520			
Phone: 850-444-6427 (Tel)			
Email: krmitch@southemco.com			
Project Name: CCR Smith Plant			
Site: Ash Pond			
Due Date Requested:			
TAT Requested (days):			
PO #: Purchase Order not required			
WO #:			
Project #:			
SSOW#:			
Analysis Requested			
SM4500 Cl, E - Chloride, SM4500, SO4, E - Sulfate, 2510C -		9315_Ra226, 9320_Ra228, Ra228Ra228, GPPC	Total Number of containers: 5
Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/>		Mercury	
Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/>		6020 - Sb, As, Ba, Be, Br, Cd, Cr, Co, Pb, Hg, Mn, Ni, Zn, V, Se	
Matrix (Wet, Solid, Semi-solid, Other) <input checked="" type="checkbox"/>		CR, Co, Lithium, Magnesium	
Sample Type (C=Comp, G=Grab) <input checked="" type="checkbox"/>		Bacon, Calcium, As, Ra, Beryllium	
Sample Date: 6-7-18			
Sample Time: 0845			
Preservation Code: F			
Matrix (Wet, Solid, Semi-solid, Other) <input checked="" type="checkbox"/>		Water	
Sample Type (C=Comp, G=Grab) <input checked="" type="checkbox"/>		Water	
Sample Date: 6-7-18		Water	
Sample Time: 0845		Water	
Preservation Code: F			
Special Instructions/Note:			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Possible Hazard Identification			
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological			
Deliverable Requested: I, II, III, IV, Other (specify)			
Empty Kit Relinquished by:			
Relinquished by: [Signature]		Date: 6-8-18	Time: 11:30
Relinquished by: [Signature]		Date/Time: 6/8/18 1:50	Company: RDH
Relinquished by: [Signature]		Date/Time: 6-8-18 1:50	Company: TA-Pen
Custody Seals Intact: A Yes Δ No		Custody Seal No.:	
Cooler Temperature(s) °C and Other Remarks:			



Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-154881-5

SDG Number: Ash Pond

Login Number: 154881

List Number: 1

Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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, 0.0°C, 0.0°C, 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 <math><6\text{mm}</math> (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: 400-154881-5

SDG Number: Ash Pond

Login Number: 154881

List Number: 2

Creator: Press, Nicholas B

List Source: TestAmerica St. Louis

List Creation: 06/12/18 05:09 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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 <math><6\text{mm}</math> (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: CCS / MITR Plant

TestAmerica Job ID: 400-154881-5
 / DG: AsRPNH

Laboratory: TestAmerica Pensacola

All accreditation/certifications held by TRS laboratory are listed. Not all accreditation/certifications are applicable to TRS report

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	/ tate ProNam	4	40150	0g-60-13
A. A9	/ B JIOC 1E075		L74E1	07-77-70
Arizona	/ tate ProNam	3	AZ0E10	01-17-13
Arkansas DOQ	/ tate ProNam	9	88-0g83	03-01-18
California	/ tate ProNam	3	7510	0g-60-13
Florida	. OLAP	4	O81010	0g-60-13
Georgia	/ tate ProNam	4	O81010 (FL)	0g-60-13
Illinois	. OLAP	5	700041	10-03-18
Iowa	/ tate ProNam	E	6gE	08-01-18
* Kansas	. OLAP	E	O-10756	10-61-18
* Kentucky (K/ T)	/ tate ProNam	4	56	0g-60-13
* Kentucky (U U)	/ tate ProNam	4	38060	17-61-18
Louisiana	. OLAP	9	603Eg	0g-60-13
Louisiana (DU)	. OLAP	9	LA1E0005	17-61-18
Maine	/ tate ProNam	6	766	03-60-18
Massachusetts	/ tate ProNam	1	W-FL034	0g-60-13
Michigan	/ tate ProNam	5	3317	0g-60-13
New Jersey	. OLAP	7	FL00g	0g-60-13
North Carolina (U U j/ U)	/ tate ProNam	4	614	17-61-18
North Dakota	/ tate ProNam	9	3810	08-61-18
Pennsylvania	. OLAP	6	g8-004gE	01-61-13
Rhode Island	/ tate ProNam	1	LAB 0060E	17-60-18
South Carolina	/ tate ProNam	4	3g07g	0g-60-18 v
Tennessee	/ tate ProNam	4	T. 0730E	0g-60-13
Texas	. OLAP	9	T104E0478g-18-14	03-60-18
K/ Fisheries & Wildlife	Federal		LO058448-0	0E-61-18
K/ DA	Federal		P660-1g-001E7	05-74-13
Virginia	. OLAP	6	4g01gg	0g-14-13
Washington	/ tate ProNam	10	C315	05-15-13
West Virginia DOP	/ tate ProNam	6	16g	0g-60-13

Laboratory: TestAmerica St. Louis

All accreditation/certifications held by TRS laboratory are listed. Not all accreditation/certifications are applicable to TRS report

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	/ tate ProNam	10	WB 00054	0g-60-13
A. A9	DoD OLAP		L7605	04-0g-13
Arizona	/ tate ProNam	3	AZ0816	17-08-18
California	/ tate ProNam	3	788g	0g-60-13
Connecticut	/ tate ProNam	1	PH-0741	06-61-13
Florida	. OLAP	4	O8Eg83	0g-60-13
Illinois	. OLAP	5	700076	11-60-18
Iowa	/ tate ProNam	E	6E6	17-01-18
* Kansas	. OLAP	E	O-1076g	10-61-18
* Kentucky (DU)	/ tate ProNam	4	30175	17-61-18
Louisiana	. OLAP	9	04080	0g-60-13
Louisiana (DU)	. OLAP	9	LA18001E	17-61-18
Maine	/ tate ProNam	6	610	03-60-18
Michigan	/ tate ProNam	5	3005	0g-60-18 v
Missouri	/ tate ProNam	E	E80	0g-60-18 v

v Accreditation/Certification renewal pending - accreditation/certification considered valid

TestAmerica Pensacola

Accreditation/Certification Summary

Client: Gulf Power Company
 Project/ Site: CCS / Unit 1 Plant

TestAmerica Job ID: 400-154881-5
 / DG: AsR Ponh

Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	3	WB000547018-1	08-31-18 v
New Jersey	OLAP	7	WB007	06-30-13
New York	OLAP	7	11g1g	06-31-13
North Dakota	State Program	8	S70E	06-30-18 v
South Carolina	SC		74-7481E-01	17-61-77
Alabama	State Program	9	333E	08-31-18 v
Pennsylvania	OLAP	6	g8-00540	07-78-13
North Carolina	State Program	4	85007001	06-30-18 v
Texas	OLAP	9	T104E04136-1E-11	08-31-18 v
U.S. Fish & Wildlife	Federal		058448	08-31-18
U.S. EPA	Federal		P660-1E-0078	07-07-70
Kentucky	OLAP	8	WB00054701g-8	08-31-18 v
Virginia	OLAP	6	4g0760	06-14-13
United States	State Program	10	C537	08-30-18
United States EPA	State Program	6	681	08-31-18 v



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: 400-154881-7

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Smith Plant

Revision: 1

For:

Gulf Power Company

BIN 731

One Energy Place

Pensacola, Florida 32520

Attn: Kristi Mitchell



Authorized for release by:

9/7/2018 10:36:05 AM

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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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Case Narrative

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

TestAmerica Job ID: 400-154881-7
SDG: Ash Pond

Job ID: 400-154881-7

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-154881-7

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-370673: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: MW-02 (400-154881-7), MW-03 (400-154881-8), MW-06 (400-154881-9), MW-07 (400-154881-10), MW-08 (400-154881-11), MW-09 (400-154881-12), MW-10 (400-154881-13), MW-12 (400-154881-14), DUP-01 (400-154881-15), DUP-02 (400-154881-16), DUP-03 (400-154881-17), EB-01 (400-154881-18), FB-01 (400-154881-19) and EB-02 (400-154881-20). 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 160-370673: Sample aliquots 400-154881-1,2,3,4,5,6,7, and 10 were reduced due to potential matrix interference. Samples were yellow, murky, and had strong odors similar to that of sulfur. Sample aliquots 400154881-8,9,11,12,13,14,15,16,17,18,19, and 20 were reduced due to potential matrix interference. Samples were murky and had strong odors similar to that of sulfur. MW-02 (400-154881-7), MW-03 (400-154881-8), MW-06 (400-154881-9), MW-07 (400-154881-10), MW-08 (400-154881-11), MW-09 (400-154881-12), MW-10 (400-154881-13), MW-12 (400-154881-14), DUP-01 (400-154881-15), DUP-02 (400-154881-16), DUP-03 (400-154881-17), EB-01 (400-154881-18), FB-01 (400-154881-19) and EB-02 (400-154881-20).

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: FB-02 (400-154881-21). 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 160-370670: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: MW-02 (400-154881-7), MW-03 (400-154881-8), MW-06 (400-154881-9), MW-07 (400-154881-10), MW-08 (400-154881-11), MW-09 (400-154881-12), MW-10 (400-154881-13), MW-12 (400-154881-14), DUP-01 (400-154881-15), DUP-02 (400-154881-16), DUP-03 (400-154881-17), EB-01 (400-154881-18), FB-01 (400-154881-19) and EB-02 (400-154881-20). 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 160-370670: Sample aliquots 400-154881-1,2,3,4,5,6,7, and 10 were reduced due to potential matrix interference. Samples were yellow, murky, and had strong odors similar to that of sulfur. Sample aliquots 400154881-8,9,11,12,13,14,15,16,17,18,19, and 20 were reduced due to potential matrix interference. Samples were murky and had strong odors similar to that of sulfur. MW-02 (400-154881-7), MW-03 (400-154881-8), MW-06 (400-154881-9), MW-07 (400-154881-10), MW-08 (400-154881-11), MW-09 (400-154881-12), MW-10 (400-154881-13), MW-12 (400-154881-14), DUP-01 (400-154881-15), DUP-02 (400-154881-16), DUP-03 (400-154881-17), EB-01 (400-154881-18), FB-01 (400-154881-19) and EB-02 (400-154881-20).

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: FB-02 (400-154881-21). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Metals

Method(s) 6020: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-06 (400-154881-9), MW-07 (400-154881-10), MW-08 (400-154881-11), MW-09 (400-154881-12), MW-10 (400-154881-13), DUP-02 (400-154881-16) and DUP-03 (400-154881-17). 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-06 (400-154881-9), MW-07 (400-154881-10), MW-08 (400-154881-11), MW-09 (400-154881-12), MW-10 (400-154881-13), MW-12 (400-154881-14), DUP-02 (400-154881-16), DUP-03 (400-154881-17), (400-154909-A-12), (400-154909-A-12 MS) and (400-154909-A-12 MSD). Elevated reporting limits (RLs) are provided.

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)

Case Narrative

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

TestAmerica Job ID: 400-154881-7
SDG: Ash Pond

Job ID: 400-154881-7 (Continued)

Laboratory: TestAmerica Pensacola (Continued)

recovery was within acceptance limits.

Method(s) SM 4500 SO4 E: The CCB contained sulfates 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-06 (400-154881-9), MW-07 (400-154881-10), MW-08 (400-154881-11), MW-09 (400-154881-12), MW-10 (400-154881-13), DUP-02 (400-154881-16) and DUP-03 (400-154881-17). Elevated reporting limits (RLs) are provided.

Report revised to add missing QC.

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Detection Summary

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

TestAmerica Job ID: 400-154221-8
SDG: Ash Pond

Client Sample ID: MW-12

Lab Sample ID: 411-054660-P

Rnalyte	sef ult	AualiUer	QAL	MDL	F nit	Dil hac	D	MetdoT	Qrep 3ype
. arium	03018		0300g5	030004v	mL/6	5		90g0	Total RecoBerable
. oron	030g8	I	03050	030g1	mL/6	5		90g0	Total RecoBerable
Calcium	Mg		0305	031M	mL/6	5		90g0	Total RecoBerable
Chromium	0300gv		0300g5	030011	mL/6	5		90g0	Total RecoBerable
6ithium	030051		030050	030011	mL/6	5		90g0	Total RecoBerable
Total DissolBed Solids	190		530	M8	mL/6	1		SN g540C	Total/7 A
Chloride	1M		g30	030	mL/6	1		SN 4500 Cl- E	Total/7 A
Fluoride	031v		0310	030Mg	mL/6	1		SN 4500 F C	Total/7 A
Sulfate	432	I	530	134	mL/6	1		SN 4500 SO4 E	Total/7 A
Field pH	9348				SU	1		Field SamplinL	Total/7 A

Client Sample ID: MW-1(

Lab Sample ID: 411-054660-6

Rnalyte	sef ult	AualiUer	QAL	MDL	F nit	Dil hac	D	MetdoT	Qrep 3ype
. arium	03012		0300g5	030004v	mL/6	5		90g0	Total RecoBerable
Calcium	132		0305	031M	mL/6	5		90g0	Total RecoBerable
Chromium	0300g9		0300g5	030011	mL/6	5		90g0	Total RecoBerable
6ithium	03011		030050	030011	mL/6	5		90g0	Total RecoBerable
Selenium	03000M0	I	03001M	03000g4	mL/6	5		90g0	Total RecoBerable
Total DissolBed Solids	49		530	M8	mL/6	1		SN g540C	Total/7 A
Chloride	11		g30	030	mL/6	1		SN 4500 Cl- E	Total/7 A
Fluoride	03040	I	0310	030Mg	mL/6	1		SN 4500 F C	Total/7 A
Field pH	4309				SU	1		Field SamplinL	Total/7 A

Client Sample ID: MW-1)

Lab Sample ID: 411-054660-7

Rnalyte	sef ult	AualiUer	QAL	MDL	F nit	Dil hac	D	MetdoT	Qrep 3ype
Arsenic	03000v0	I	03001M	0300049	mL/6	5		90g0	Total RecoBerable
. arium	03052		0300g5	030004v	mL/6	5		90g0	Total RecoBerable
. erylum	030014	I	0300g5	03000M4	mL/6	5		90g0	Total RecoBerable
6ithium	03014		030050	030011	mL/6	5		90g0	Total RecoBerable
Selenium	03000g5	I	03001M	03000g4	mL/6	5		90g0	Total RecoBerable
. oron - D6	234		130	034g	mL/6	100		90g0	Total RecoBerable
Calcium - D6	gv0		530	g35	mL/6	100		90g0	Total RecoBerable
Total DissolBed Solids	9100		1M0	25	mL/6	1		SN g540C	Total/7 A
Chloride	gv00		1g0	M0	mL/6	90		SN 4500 Cl- E	Total/7 A
Fluoride	03050	I	0310	030Mg	mL/6	1		SN 4500 F C	Total/7 A
Sulfate	590		150	4g	mL/6	M0		SN 4500 SO4 E	Total/7 A

This Detection Summary does not include radiochemical test results3

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-154221-8
SDG: Ash Pond

Client Sample ID: MW-1) &ContinueTB

Lab Sample ID: 411-054660-7

Rnalyte	sef ult	AualiUer	QAL	MDL	Fnit	Dil hac	D	MetdoT	Qrep 3ype
Field pH	535				SU	1		Field SamplinL	Total/7 A

Client Sample ID: MW-1P

Lab Sample ID: 411-054660-01

Rnalyte	sef ult	AualiUer	QAL	MDL	Fnit	Dil hac	D	MetdoT	Qrep 3ype
Arsenic	0300g		0301M	030049	mL/6	5		90g0	Total RecoBerable
. arium	03090		0300g5	03004v	mL/6	5		90g0	Total RecoBerable
Chromium	0301g l		0300g5	03011	mL/6	5		90g0	Total RecoBerable
6ithium	03012 l		030050	03011	mL/6	5		90g0	Total RecoBerable
Nolybdenum	030098 l		03015	030025	mL/6	5		90g0	Total RecoBerable
Selenium	03000g2 l		0301M	03000g4	mL/6	5		90g0	Total RecoBerable
. oron - D6	M0		035	0311	mL/6	g5		90g0	Total RecoBerable
Calcium - D6	g00		13M	03M	mL/6	g5		90g0	Total RecoBerable
Total DissolBed Solids	Mg00		50	M4	mL/6	1		SN g540C	Total/7 A
Chloride	1400		1g0	M0	mL/6	90		SN 4500 Cl- E	Total/7 A
Sulfate	850		150	4g	mL/6	M0		SN 4500 SO4 E	Total/7 A
Field pH	93M				SU	1		Field SamplinL	Total/7 A

Client Sample ID: MW-16

Lab Sample ID: 411-054660-00

Rnalyte	sef ult	AualiUer	QAL	MDL	Fnit	Dil hac	D	MetdoT	Qrep 3ype
Arsenic	0300g0		0301M	030049	mL/6	5		90g0	Total RecoBerable
. arium	0309g		0300g5	03004v	mL/6	5		90g0	Total RecoBerable
. eryllium	03014 l		0300g5	0300M4	mL/6	5		90g0	Total RecoBerable
6ithium	030089		030050	03011	mL/6	5		90g0	Total RecoBerable
Selenium	03000Mg l		0301M	03000g4	mL/6	5		90g0	Total RecoBerable
. oron - D6	15		130	03g	mL/6	100		90g0	Total RecoBerable
Calcium - D6	5M0		530	g35	mL/6	100		90g0	Total RecoBerable
Total DissolBed Solids	9000		1M0	25	mL/6	1		SN g540C	Total/7 A
Chloride	M500		g00	90	mL/6	100		SN 4500 Cl- E	Total/7 A
Sulfate	v10		150	4g	mL/6	M0		SN 4500 SO4 E	Total/7 A
Field pH	43M				SU	1		Field SamplinL	Total/7 A

Client Sample ID: MW-17

Lab Sample ID: 411-054660-02

Rnalyte	sef ult	AualiUer	QAL	MDL	Fnit	Dil hac	D	MetdoT	Qrep 3ype
Arsenic	030M0		0301M	030049	mL/6	5		90g0	Total RecoBerable
. arium	0302v		0300g5	03004v	mL/6	5		90g0	Total RecoBerable

This Detection Summary does not include radiochemical test results3

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-154221-8
SDG: Ash Pond

Client Sample ID: MW-17 & Continue TB

Lab Sample ID: 411-054660-02

Rnalyte	sef ult	AualiUer	QAL	MDL	F nit	Dil hac	D	MetdoT	Qrep 3ype
6ithium	030g9	I	03050	03011	mL/6	5		90g0	Total RecoBerable
Nolybdenum	030M9	I	03015	030025	mL/6	5		90g0	Total RecoBerable
.oron - D6	v3M		130	030g	mL/6	100		90g0	Total RecoBerable
Calcium - D6	g20		530	g35	mL/6	100		90g0	Total RecoBerable
Total DissolBed Solids	4000		50	M4	mL/6	1		SN g540C	Total/7 A
Chloride	gg00		1g0	M9	mL/6	90		SN 4500 Cl- E	Total/7 A
Fluoride	03050	I	030	030Mg	mL/6	1		SN 4500 F C	Total/7 A
Sulfate	940		150	4g	mL/6	M0		SN 4500 SO4 E	Total/7 A
Field pH	935g				SU	1		Field SamplinL	Total/7 A

Client Sample ID: MW-01

Lab Sample ID: 411-054660-0(

Rnalyte	sef ult	AualiUer	QAL	MDL	F nit	Dil hac	D	MetdoT	Qrep 3ype
Arsenic	030g8		0301M	030049	mL/6	5		90g0	Total RecoBerable
.arium	030		030g5	03004v	mL/6	5		90g0	Total RecoBerable
.eryllium	030044	I	030g5	0300M4	mL/6	5		90g0	Total RecoBerable
6ithium	03054		03050	03011	mL/6	5		90g0	Total RecoBerable
Nolybdenum	03010	I	03015	030025	mL/6	5		90g0	Total RecoBerable
.oron - D6	11		g30	0304	mL/6	g00		90g0	Total RecoBerable
Calcium - D6	500		10	530	mL/6	g00		90g0	Total RecoBerable
Total DissolBed Solids	5200		50	M4	mL/6	1		SN g540C	Total/7 A
Chloride	g800		1g0	M9	mL/6	90		SN 4500 Cl- E	Total/7 A
Sulfate	2M0		150	4g	mL/6	M0		SN 4500 SO4 E	Total/7 A
Field pH	535				SU	1		Field SamplinL	Total/7 A

Client Sample ID: MW-02

Lab Sample ID: 411-054660-04

Rnalyte	sef ult	AualiUer	QAL	MDL	F nit	Dil hac	D	MetdoT	Qrep 3ype
.arium	0301g		030g5	03004v	mL/6	5		90g0	Total RecoBerable
.oron	03088		03050	030g1	mL/6	5		90g0	Total RecoBerable
Calcium	M0		0305	030M	mL/6	5		90g0	Total RecoBerable
6ithium	03011		03050	03011	mL/6	5		90g0	Total RecoBerable
Total DissolBed Solids	490		530	M4	mL/6	1		SN g540C	Total/7 A
Chloride	1v0		g0	930	mL/6	10		SN 4500 Cl- E	Total/7 A
Fluoride	030g		030	030Mg	mL/6	1		SN 4500 F C	Total/7 A
Sulfate	g3M	I	530	130	mL/6	1		SN 4500 SO4 E	Total/7 A
Field pH	934				SU	1		Field SamplinL	Total/7 A

This Detection Summary does not include radiochemical test results3

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-154221-8
SDG: Ash Pond

Client Sample ID: DFQ-10

Lab Sample ID: 411-054660-05

Rnalyte	sef ult	AualiUer	QAL	MDL	Fnit	Dil hac	D	MetdoT	Qrep 3ype
. arium	03012		0300g5	030004v	mL/6	5		90g0	Total
. oron	030M8	I	03050	030g1	mL/6	5		90g0	RecoBerable
Calcium	132		0305	030M	mL/6	5		90g0	Total
Chromium	0300g4	I	0300g5	030011	mL/6	5		90g0	RecoBerable
6ithium	0301g		030050	030011	mL/6	5		90g0	Total
Total DissolBed Solids	5g		530	M8	mL/6	1		SN g540C	RecoBerable
Chloride	11		g30	0300	mL/6	1		SN 4500 Cl- E	Total/7 A

Client Sample ID: DFQ-12

Lab Sample ID: 411-054660-0

Rnalyte	sef ult	AualiUer	QAL	MDL	Fnit	Dil hac	D	MetdoT	Qrep 3ype
Arsenic	03001g	I	03001M	0300049	mL/6	5		90g0	Total
. arium	0309g		0300g5	030004v	mL/6	5		90g0	RecoBerable
. eryllium	030014	I	0300g5	03000M4	mL/6	5		90g0	Total
6ithium	030098		030050	030011	mL/6	5		90g0	RecoBerable
. oron - D6	14		130	030g	mL/6	100		90g0	Total
Calcium - D6	510		530	g35	mL/6	100		90g0	RecoBerable
Total DissolBed Solids	9100		1M0	25	mL/6	1		SN g540C	Total/7 A
Chloride	Mg00		g00	90	mL/6	100		SN 4500 Cl- E	RecoBerable
Sulfate	v00		150	4g	mL/6	M0		SN 4500 SO4 E	Total/7 A

Client Sample ID: DFQ-1(

Lab Sample ID: 411-054660-0P

Rnalyte	sef ult	AualiUer	QAL	MDL	Fnit	Dil hac	D	MetdoT	Qrep 3ype
Arsenic	0300094	I	03001M	0300049	mL/6	5		90g0	Total
. arium	03090		0300g5	030004v	mL/6	5		90g0	RecoBerable
. eryllium	030015	I	0300g5	03000M4	mL/6	5		90g0	Total
6ithium	03014		030050	030011	mL/6	5		90g0	RecoBerable
. oron - D6	v34		130	030g	mL/6	100		90g0	Total
Calcium - D6	gv0		530	g35	mL/6	100		90g0	RecoBerable
Total DissolBed Solids	5200		1M0	25	mL/6	1		SN g540C	Total/7 A
Chloride	Mg00		140	4g	mL/6	80		SN 4500 Cl- E	RecoBerable
Fluoride	03050	I	0310	030Mg	mL/6	1		SN 4500 F C	Total/7 A
Sulfate	5M0		100	g2	mL/6	g0		SN 4500 SO4 E	Total/7 A

Client Sample ID: E9-10

Lab Sample ID: 411-054660-06

This Detection Summary does not include radiochemical test results3

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-154221-8
SDG: Ash Pond

Client Sample ID: E9 -10 &ContinueTB

Lab Sample ID: 411-054660-06

Rnalyte	sef ult	AualiUer	QAL	MDL	F nit	Dil hac	D	MetdoT	Qrep 3ype
Selenium	030051	I	0301M	0300g4	mL/6	5		90g0	Total RecoBerable

Client Sample ID: h9 -10

Lab Sample ID: 411-054660-07

7 o Detections3

Client Sample ID: E9 -12

Lab Sample ID: 411-054660-21

Rnalyte	sef ult	AualiUer	QAL	MDL	F nit	Dil hac	D	MetdoT	Qrep 3ype
Sulfate	13	I	53	13	mL/6	1		SN 4500 SO4 E	Total/7 A

Client Sample ID: h9 -12

Lab Sample ID: 411-054660-20

7 o Detections3



Method Summary

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
60M0	(etals)CP/(SL	SW846	TAE PN,
S(M540C	SolidsvTotal DissolFed)TDSL	S(	TAE PN,
S(4500 Cl- N	ChloridevTotal	S(	TAE PN,
S(4500 OC	Quoride	S(	TAE PN,
S(4500 S9 4 N	SulfatevTotal	S(	TAE PN,
3_15	Radium-MM6)GOPCL	SW846	TAE SE
3_M0	Radium-MM8)GOPCL	SW846	TAE SE
RaM6gRaM8	Combined Radium-MM6 and Radium-MM8	TAE-STE	TAE SE
Qeld Samplin=	Qeld Samplin=	NPA	TAE PN,
_005A	PreparationvTotal RecoFerable or DissolFed (etals	SW846	TAE PN,
PrecSepg0	PreparationvPrecipitate Separation	, one	TAE SE
PrecSep-MI	PreparationvPrecipitate Separation)MI-Day In-GrowthL	, one	TAE SE

Protocol References:

NPA U" S NnFironmental Protection A=ency

, one U, one

S(UxStandard (ethods Cor The N. amination 9 f Water And Wastewaterx

SW846 UxTest (ethods Cor N Faluatin= Solid Waste vPhysical/Chemical (ethodsvThird Nditionv, oFember 1386 And Its " pdates7

TAE-STE U TestAmerica EaboratoriesvSt7EouisvOacility Standard 9 peratin= Procedure7

Laboratory References:

TAE PN, U TestAmerica Pensacolav__55 (cEemore DriFevPensacolavOE_M514vTNE)850L424-1001

TAE SE U TestAmerica St7Eouisv1_215 Rider Trail , orthvNarth Cityv(9 6_045vTNE)_14LM88-8566

Sample Summary

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

TestAmerica Job ID: 400-154881-7
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-154881-7	MW-02	Water	06/06/18 14:10	06/08/18 13:50
400-154881-8	MW-03	Water	06/06/18 19:02	06/08/18 13:50
400-154881-9	MW-06	Water	06/08/18 08:29	06/08/18 13:50
400-154881-10	MW-07	Water	06/08/18 10:11	06/08/18 13:50
400-154881-11	MW-08	Water	06/07/18 13:14	06/08/18 13:50
400-154881-12	MW-09	Water	06/07/18 17:21	06/08/18 13:50
400-154881-13	MW-10	Water	06/07/18 19:48	06/08/18 13:50
400-154881-14	MW-12	Water	06/06/18 16:06	06/08/18 13:50
400-154881-15	DUP-01	Water	06/06/18 06:00	06/08/18 13:50
400-154881-16	DUP-02	Water	06/07/18 07:00	06/08/18 13:50
400-154881-17	DUP-03	Water	06/08/18 06:05	06/08/18 13:50
400-154881-18	EB-01	Water	06/07/18 11:55	06/08/18 13:50
400-154881-19	FB-01	Water	06/07/18 11:50	06/08/18 13:50
400-154881-20	EB-02	Water	06/08/18 09:17	06/08/18 13:50
400-154881-21	FB-02	Water	06/08/18 09:12	06/08/18 13:50

Client Sample Results

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Client Sample ID: MW-02
Date Collected: 06/06/18 14:10
Date Received: 06/08/18 13:50

Lab Sample ID: 400-154881-7
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		06/99/18 11:58	06/95/18 1B:11	5
Barium	0.017		0.0095	0.0004B	mg/L		06/99/18 11:58	06/95/18 1B:11	5
Meryllium	0.00034	U	0.0095	0.00034	mg/L		06/99/18 11:58	06/95/18 1B:11	5
Boron	0.027	I	0.050	0.091	mg/L		06/99/18 11:58	06/95/18 1B:11	5
Calcium	32		0.95	0.13	mg/L		06/99/18 11:58	06/95/18 1B:11	5
Chromium	0.0029		0.0095	0.0011	mg/L		06/99/18 11:58	06/95/18 1B:11	5
Cobalt	0.00040	U	0.0095	0.00040	mg/L		06/99/18 11:58	06/95/18 1B:11	5
Lithium	0.0051		0.0050	0.0011	mg/L		06/99/18 11:58	06/95/18 1B:11	5
7 olybdenum	0.00085	U	0.015	0.00085	mg/L		06/99/18 11:58	06/95/18 1B:11	5
Selenium	0.00094	U	0.0013	0.00094	mg/L		06/99/18 11:58	06/95/18 1B:11	5

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	160		5.0	3.4	mg/L			06/13/18 16:43	1
Chloride	13		9.0	0.60	mg/L			02/09/18 02:36	1
Fluoride	0.19		0.10	0.039	mg/L			02/09/18 11:09	1
Sulfate	4.8	I	5.0	1.4	mg/L			02/01/18 19:32	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.02		0.3B0	0.400	1.00	0.328	pCi/L	06/15/18 16:09	02/11/18 19:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					03/12/18 13:09	05/11/18 19:60	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-998	0.304	U	0.962	0.96B	1.00	0.496	pCi/L	06/15/18 12:09	02/11/18 0B:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					03/12/18 15:09	05/11/18 0. :44	1
Y Carrier	852		40 - 110					03/12/18 15:09	05/11/18 0. :44	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	1.32		0.423	0.489	5.00	0.496	pCi/L		02/19/18 12:53	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.47				SU			06/06/18 14:10	1

Client Sample Results

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Client Sample ID: MW-03
Date Collected: 06/06/18 19:02
Date Received: 06/08/18 13:50

Lab Sample ID: 400-154881-8
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		06/99/18 11:58	06/95/18 1B:56	5
Barium	0.018		0.0095	0.0004B	mg/L		06/99/18 11:58	06/95/18 1B:56	5
Meryllium	0.00034	U	0.0095	0.00034	mg/L		06/99/18 11:58	06/95/18 1B:56	5
Mbron	0.091	U	0.050	0.091	mg/L		06/99/18 11:58	06/95/18 1B:56	5
Calcium	1.8		0.95	0.13	mg/L		06/99/18 11:58	06/95/18 1B:56	5
Chromium	0.0026		0.0095	0.0011	mg/L		06/99/18 11:58	06/95/18 1B:56	5
Cobalt	0.00040	U	0.0095	0.00040	mg/L		06/99/18 11:58	06/95/18 1B:56	5
Lithium	0.011		0.0050	0.0011	mg/L		06/99/18 11:58	06/95/18 1B:56	5
7 olybdenum	0.00085	U	0.015	0.00085	mg/L		06/99/18 11:58	06/95/18 1B:56	5
Selenium	0.00030	I	0.0013	0.00094	mg/L		06/99/18 11:58	06/95/18 1B:56	5

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	46		5.0	3.4	mg/L			06/13/18 16:43	1
Chloride	11		9.0	0.60	mg/L			02/09/18 02:43	1
Fluoride	0.040	I	0.10	0.039	mg/L			02/09/18 11:02	1
Sulfate	1.4	U	5.0	1.4	mg/L			02/01/18 19:32	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.830		0.329	0.32B	1.00	0.384	pCi/L	06/15/18 16:09	02/11/18 19:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	.175		40 - 110					03/12/18 13:09	05/11/18 19:00	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-998	0.360	U	0.330	0.331	1.00	0.530	pCi/L	06/15/18 12:09	02/11/18 0B:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	.175		40 - 110					03/12/18 15:09	05/11/18 0. :44	1
Y Carrier	8471		40 - 110					03/12/18 15:09	05/11/18 0. :44	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		0.4B2	0.503	5.00	0.530	pCi/L		02/19/18 12:53	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.96				SU			06/06/18 1B:09	1

Client Sample Results

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Client Sample ID: MW-06
Date Collected: 06/08/18 08:29
Date Received: 06/08/18 13:50

Lab Sample ID: 400-154881-9
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00090	I	0.0013	0.00046	mg/L		06/99/18 11:58	06/95/18 99:95	5
Barium	0.058		0.0095	0.0004B	mg/L		06/99/18 11:58	06/95/18 99:95	5
Beryllium	0.0014	I	0.0095	0.00034	mg/L		06/99/18 11:58	06/95/18 99:95	5
Chromium	0.0011	U	0.0095	0.0011	mg/L		06/99/18 11:58	06/95/18 99:95	5
Cobalt	0.00040	U	0.0095	0.00040	mg/L		06/99/18 11:58	06/95/18 99:95	5
Lithium	0.014		0.0050	0.0011	mg/L		06/99/18 11:58	06/95/18 99:95	5
7 olybdenum	0.00085	U	0.015	0.00085	mg/L		06/99/18 11:58	06/95/18 99:95	5
Selenium	0.00025	I	0.0013	0.00094	mg/L		06/99/18 11:58	06/95/18 99:95	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	8.4		1.0	0.49	mg/L		06/99/18 11:58	06/95/18 90:55	100
Calcium	290		5.0	9.5	mg/L		06/99/18 11:58	06/95/18 90:55	100

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6100		130	85	mg/L			06/15/18 15:50	1
Chloride	2900		190	36	mg/L			02/09/18 0B:54	60
Fluoride	0.050	I	0.10	0.039	mg/L			02/09/18 18:04	1
Sulfate	560		150	49	mg/L			02/09/18 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	12.1		1.99	1.64	1.00	0.466	pCi/L	06/15/18 16:09	02/11/18 19:30	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	<i>109</i>		<i>40 - 110</i>					<i>03/12/18 13:09</i>	<i>05/11/18 19:60</i>	<i>1</i>

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	14.8		0.834	1.65	1.00	0.448	pCi/L	06/15/18 12:09	02/11/18 0B:44	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	<i>109</i>		<i>40 - 110</i>					<i>03/12/18 15:09</i>	<i>05/11/18 0. :44</i>	<i>1</i>
<i>Y Carrier</i>	<i>829</i>		<i>40 - 110</i>					<i>03/12/18 15:09</i>	<i>05/11/18 0. :44</i>	<i>1</i>

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	26.9		1.54	9.33	5.00	0.466	pCi/L		02/19/18 12:53	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.25				SU			06/08/18 08:9B	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Client Sample ID: MW-07
Date Collected: 06/08/18 10:11
Date Received: 06/08/18 13:50

Lab Sample ID: 400-154881-10
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0022		0.0013	0.00046	mg/L		06/99/18 11:58	06/95/18 99:9B	5
Barium	0.060		0.0095	0.0004B	mg/L		06/99/18 11:58	06/95/18 99:9B	5
Meryllium	0.00034	U	0.0095	0.00034	mg/L		06/99/18 11:58	06/95/18 99:9B	5
Chromium	0.0012	I	0.0095	0.0011	mg/L		06/99/18 11:58	06/95/18 99:9B	5
Cobalt	0.00040	U	0.0095	0.00040	mg/L		06/99/18 11:58	06/95/18 99:9B	5
Lithium	0.0018	I	0.0050	0.0011	mg/L		06/99/18 11:58	06/95/18 99:9B	5
Molybdenum	0.0067	I	0.015	0.00085	mg/L		06/99/18 11:58	06/95/18 99:9B	5
Selenium	0.00028	I	0.0013	0.00094	mg/L		06/99/18 11:58	06/95/18 99:9B	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.0		0.95	0.11	mg/L		06/99/18 11:58	06/95/18 90:5B	95
Calcium	200		1.3	0.63	mg/L		06/99/18 11:58	06/95/18 90:5B	95

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3200		50	34	mg/L			06/15/18 15:50	1
Chloride	1400		190	36	mg/L			02/09/18 0B:54	60
Fluoride	0.039	U	0.10	0.039	mg/L			02/09/18 18:02	1
Sulfate	750		150	49	mg/L			02/09/18 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	18.6		1.54	9.92	1.00	0.388	pCi/L	06/15/18 16:09	02/11/18 19:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74		40 - 110					03/12/18 13:09	05/11/18 19:60	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		0.46B	0.545	1.00	0.499	pCi/L	06/15/18 12:09	02/11/18 0B:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74		40 - 110					03/12/18 15:09	05/11/18 0 :44	1
Y Carrier	8571		40 - 110					03/12/18 15:09	05/11/18 0 :44	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	21.6		1.61	9.33	5.00	0.499	pCi/L		02/19/18 12:53	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.31				SU			06/08/18 10:11	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Client Sample ID: MW-08
Date Collected: 06/07/18 13:14
Date Received: 06/08/18 13:50

Lab Sample ID: 400-154881-11
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0020		0.0013	0.00046	mg/L		06/99/18 11:58	06/95/18 99:34	5
Barium	0.062		0.0095	0.0004B	mg/L		06/99/18 11:58	06/95/18 99:34	5
Beryllium	0.0014	I	0.0095	0.00034	mg/L		06/99/18 11:58	06/95/18 99:34	5
Chromium	0.0011	U	0.0095	0.0011	mg/L		06/99/18 11:58	06/95/18 99:34	5
Cobalt	0.00040	U	0.0095	0.00040	mg/L		06/99/18 11:58	06/95/18 99:34	5
Lithium	0.0076		0.0050	0.0011	mg/L		06/99/18 11:58	06/95/18 99:34	5
7 olybdenum	0.00085	U	0.015	0.00085	mg/L		06/99/18 11:58	06/95/18 99:34	5
Selenium	0.00032	I	0.0013	0.00094	mg/L		06/99/18 11:58	06/95/18 99:34	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	15		1.0	0.49	mg/L		06/99/18 11:58	06/95/18 91:04	100
Calcium	530		5.0	9.5	mg/L		06/99/18 11:58	06/95/18 91:04	100

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6000		130	85	mg/L			06/13/18 18:95	1
Chloride	3500		900	60	mg/L			02/09/18 10:46	100
Fluoride	0.039	U	0.10	0.039	mg/L			02/09/18 12:94	1
Sulfate	910		150	49	mg/L			02/09/18 15:95	30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	17.4		1.44	9.13	1.00	0.34B	pCi/L	06/15/18 16:09	02/11/18 14:93	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	<i>75</i>		<i>40 - 110</i>					<i>03/12/18 13:09</i>	<i>05/11/18 14:96</i>	<i>1</i>

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	20.1		1.12	9.1B	1.00	0.564	pCi/L	06/15/18 12:09	02/11/18 0B:45	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	<i>75</i>		<i>40 - 110</i>					<i>03/12/18 15:09</i>	<i>05/11/18 0 :42</i>	<i>1</i>
<i>Y Carrier</i>	<i>550</i>		<i>40 - 110</i>					<i>03/12/18 15:09</i>	<i>05/11/18 0 :42</i>	<i>1</i>

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	37.5		1.86	3.05	5.00	0.564	pCi/L		02/19/18 12:53	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.73				SU			06/02/18 13:14	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Client Sample ID: MW-09
Date Collected: 06/07/18 17:21
Date Received: 06/08/18 13:50

Lab Sample ID: 400-154881-12
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0030		0.0013	0.00046	mg/L		06/99/18 11:58	06/95/18 99:38	5
Barium	0.089		0.0095	0.0004B	mg/L		06/99/18 11:58	06/95/18 99:38	5
Meryllium	0.00034	U	0.0095	0.00034	mg/L		06/99/18 11:58	06/95/18 99:38	5
Chromium	0.0011	U	0.0095	0.0011	mg/L		06/99/18 11:58	06/95/18 99:38	5
Cobalt	0.00040	U	0.0095	0.00040	mg/L		06/99/18 11:58	06/95/18 99:38	5
Lithium	0.0026	I	0.0050	0.0011	mg/L		06/99/18 11:58	06/95/18 99:38	5
Molybdenum	0.0036	I	0.015	0.00085	mg/L		06/99/18 11:58	06/95/18 99:38	5
Selenium	0.00094	U	0.0013	0.00094	mg/L		06/99/18 11:58	06/95/18 99:38	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	9.3		1.0	0.49	mg/L		06/99/18 11:58	06/95/18 91:08	100
Calcium	280		5.0	9.5	mg/L		06/99/18 11:58	06/95/18 91:08	100

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	4000		50	34	mg/L			06/13/18 18:95	1
Chloride	2200		190	36	mg/L			02/09/18 0B:46	60
Fluoride	0.050	I	0.10	0.039	mg/L			02/09/18 12:92	1
Sulfate	640		150	49	mg/L			02/09/18 15:95	30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	9.54		1.02	1.32	1.00	0.369	pCi/L	06/15/18 16:09	02/11/18 14:93	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	<i>109</i>		<i>40 - 110</i>					<i>03/12/18 13:09</i>	<i>05/11/18 14:96</i>	<i>1</i>

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.35		0.541	0.623	1.00	0.443	pCi/L	06/15/18 12:09	02/11/18 0B:45	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	<i>109</i>		<i>40 - 110</i>					<i>03/12/18 15:09</i>	<i>05/11/18 0. :42</i>	<i>1</i>
<i>Y Carrier</i>	<i>88.9</i>		<i>40 - 110</i>					<i>03/12/18 15:09</i>	<i>05/11/18 0. :42</i>	<i>1</i>

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	13.9		1.90	1.53	5.00	0.443	pCi/L		02/19/18 12:53	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.52				SU			06/02/18 12:91	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Client Sample ID: MW-10
Date Collected: 06/07/18 19:48
Date Received: 06/08/18 13:50

Lab Sample ID: 400-154881-13
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0027		0.0013	0.00046	mg/L		06/99/18 11:58	06/95/18 93:05	5
Barium	0.10		0.0095	0.0004B	mg/L		06/99/18 11:58	06/95/18 93:05	5
Beryllium	0.00044	I	0.0095	0.00034	mg/L		06/99/18 11:58	06/95/18 93:05	5
Chromium	0.0011	U	0.0095	0.0011	mg/L		06/99/18 11:58	06/95/18 93:05	5
Cobalt	0.00040	U	0.0095	0.00040	mg/L		06/99/18 11:58	06/95/18 93:05	5
Lithium	0.0054		0.0050	0.0011	mg/L		06/99/18 11:58	06/95/18 93:05	5
Molybdenum	0.0010	I	0.015	0.00085	mg/L		06/99/18 11:58	06/95/18 93:05	5
Selenium	0.00094	U	0.0013	0.00094	mg/L		06/99/18 11:58	06/95/18 93:05	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	11		9.0	0.84	mg/L		06/99/18 11:58	06/95/18 91:13	900
Calcium	500		10	5.0	mg/L		06/99/18 11:58	06/95/18 91:13	900

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5800		50	34	mg/L			06/13/18 18:95	1
Chloride	2700		190	36	mg/L			02/09/18 0B:46	60
Fluoride	0.039	U	0.10	0.039	mg/L			02/09/18 12:31	1
Sulfate	830		150	49	mg/L			02/09/18 15:95	30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	6.78		0.8B9	1.08	1.00	0.366	pCi/L	06/15/18 16:09	02/11/18 14:93	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	<i>104</i>		<i>40 - 110</i>					<i>03/12/18 13:09</i>	<i>05/11/18 14:96</i>	<i>1</i>

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	11.7		0.883	1.3B	1.00	0.442	pCi/L	06/15/18 12:09	02/11/18 0B:45	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	<i>104</i>		<i>40 - 110</i>					<i>03/12/18 15:09</i>	<i>05/11/18 0 :42</i>	<i>1</i>
<i>Y Carrier</i>	<i>587</i>		<i>40 - 110</i>					<i>03/12/18 15:09</i>	<i>05/11/18 0 :42</i>	<i>1</i>

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	18.5		1.96	1.26	5.00	0.442	pCi/L		02/19/18 12:53	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.35				SU			06/02/18 1B:48	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Client Sample ID: MW-12
Date Collected: 06/06/18 16:06
Date Received: 06/08/18 13:50

Lab Sample ID: 400-154881-14
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		06/99/18 11:58	06/95/18 90:01	5
Barium	0.012		0.0095	0.0004B	mg/L		06/99/18 11:58	06/95/18 90:01	5
Meryllium	0.00034	U	0.0095	0.00034	mg/L		06/99/18 11:58	06/95/18 90:01	5
Boron	0.077		0.050	0.091	mg/L		06/99/18 11:58	06/95/18 90:01	5
Calcium	30		0.95	0.13	mg/L		06/99/18 11:58	06/95/18 90:01	5
Chromium	0.0011	U	0.0095	0.0011	mg/L		06/99/18 11:58	06/95/18 90:01	5
Cobalt	0.00040	U	0.0095	0.00040	mg/L		06/99/18 11:58	06/95/18 90:01	5
Lithium	0.011		0.0050	0.0011	mg/L		06/99/18 11:58	06/95/18 90:01	5
7 olybdenum	0.00085	U	0.015	0.00085	mg/L		06/99/18 11:58	06/95/18 90:01	5
Selenium	0.00094	U	0.0013	0.00094	mg/L		06/99/18 11:58	06/95/18 90:01	5

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	460		5.0	3.4	mg/L			06/19/18 13:11	1
Chloride	190		90	6.0	mg/L			02/09/18 08:0B	10
Fluoride	0.12		0.10	0.039	mg/L			02/09/18 11:10	1
Sulfate	2.3	I	5.0	1.4	mg/L			02/01/18 19:32	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.05		0.543	0.524	1.00	0.418	pCi/L	06/15/18 16:09	02/11/18 14:93	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	.97		40 - 110					03/12/18 13:09	05/11/18 14:96	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-998	0.920	U	0.9B9	0.9B3	1.00	0.422	pCi/L	06/15/18 12:09	02/11/18 0B:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	.97		40 - 110					03/12/18 15:09	05/11/18 0. :42	1
Y Carrier	.97		40 - 110					03/12/18 15:09	05/11/18 0. :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	2.32		0.612	0.644	5.00	0.422	pCi/L		02/19/18 12:53	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.04				SU			06/06/18 16:06	1

Client Sample Results

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Client Sample ID: DUP-01
Date Collected: 06/06/18 06:00
Date Received: 06/08/18 13:50

Lab Sample ID: 400-154881-15
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		06/99/18 11:58	06/95/18 91:96	5
Barium	0.018		0.0095	0.0004B	mg/L		06/99/18 11:58	06/95/18 91:96	5
Meryllium	0.00034	U	0.0095	0.00034	mg/L		06/99/18 11:58	06/95/18 91:96	5
Boron	0.037	I	0.050	0.091	mg/L		06/99/18 11:58	06/95/18 91:96	5
Calcium	1.8		0.95	0.13	mg/L		06/99/18 11:58	06/95/18 91:96	5
Chromium	0.0024	I	0.0095	0.0011	mg/L		06/99/18 11:58	06/95/18 91:96	5
Cobalt	0.00040	U	0.0095	0.00040	mg/L		06/99/18 11:58	06/95/18 91:96	5
Lithium	0.012		0.0050	0.0011	mg/L		06/99/18 11:58	06/95/18 91:96	5
7 olybdenum	0.00085	U	0.015	0.00085	mg/L		06/99/18 11:58	06/95/18 91:96	5
Selenium	0.00094	U	0.0013	0.00094	mg/L		06/99/18 11:58	06/95/18 91:96	5

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	52		5.0	3.4	mg/L			06/19/18 13:11	1
Chloride	11		9.0	0.60	mg/L			02/09/18 02:43	1
Fluoride	0.039	U	0.10	0.039	mg/L			02/09/18 11:19	1
Sulfate	1.4	U	5.0	1.4	mg/L			02/01/18 19:32	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.18		0.412	0.430	1.00	0.369	pCi/L	06/15/18 16:09	02/11/18 14:94	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					03/12/18 13:09	05/11/18 14:94	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.546		0.399	0.396	1.00	0.488	pCi/L	06/15/18 12:09	02/11/18 0B:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					03/12/18 15:09	05/11/18 0. :42	1
Y Carrier	8. 76		40 - 110					03/12/18 15:09	05/11/18 0. :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	1.73		0.592	0.540	5.00	0.488	pCi/L		02/19/18 12:53	1

Client Sample Results

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Client Sample ID: DUP-02
Date Collected: 06/07/18 07:00
Date Received: 06/08/18 13:50

Lab Sample ID: 400-154881-16
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0012	I	0.0013	0.00046	mg/L		06/99/18 11:58	06/95/18 93:10	5
Barium	0.062		0.0095	0.0004B	mg/L		06/99/18 11:58	06/95/18 93:10	5
Beryllium	0.0014	I	0.0095	0.00034	mg/L		06/99/18 11:58	06/95/18 93:10	5
Chromium	0.0011	U	0.0095	0.0011	mg/L		06/99/18 11:58	06/95/18 93:10	5
Cobalt	0.00040	U	0.0095	0.00040	mg/L		06/99/18 11:58	06/95/18 93:10	5
Lithium	0.0067		0.0050	0.0011	mg/L		06/99/18 11:58	06/95/18 93:10	5
7 olybdenum	0.00085	U	0.015	0.00085	mg/L		06/99/18 11:58	06/95/18 93:10	5
Selenium	0.00094	U	0.0013	0.00094	mg/L		06/99/18 11:58	06/95/18 93:10	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	14		1.0	0.49	mg/L		06/99/18 11:58	06/96/18 15:01	100
Calcium	510		5.0	9.5	mg/L		06/99/18 11:58	06/96/18 15:01	100

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6100		130	85	mg/L			06/13/18 18:95	1
Chloride	3200		900	60	mg/L			02/09/18 10:46	100
Fluoride	0.039	U	0.10	0.039	mg/L			02/09/18 12:33	1
Sulfate	900		150	49	mg/L			02/09/18 15:95	30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	15.3		1.3B	1.86	1.00	0.439	pCi/L	06/15/18 16:09	02/11/18 14:94	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	.878		40 - 110					03/12/18 13:09	05/11/18 14:94	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	18.7		1.08	9.03	1.00	0.559	pCi/L	06/15/18 12:09	02/11/18 0B:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	.878		40 - 110					03/12/18 15:09	05/11/18 0.:42	1
Y Carrier	86.7		40 - 110					03/12/18 15:09	05/11/18 0.: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	34.0		1.26	9.89	5.00	0.559	pCi/L		02/19/18 12:53	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Client Sample ID: DUP-03
Date Collected: 06/08/18 06:05
Date Received: 06/08/18 13:50

Lab Sample ID: 400-154881-17
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00064	I	0.0013	0.00046	mg/L		06/99/18 11:58	06/95/18 93:14	5
Barium	0.060		0.0095	0.0004B	mg/L		06/99/18 11:58	06/95/18 93:14	5
Beryllium	0.0015	I	0.0095	0.00034	mg/L		06/99/18 11:58	06/95/18 93:14	5
Chromium	0.0011	U	0.0095	0.0011	mg/L		06/99/18 11:58	06/95/18 93:14	5
Cobalt	0.00040	U	0.0095	0.00040	mg/L		06/99/18 11:58	06/95/18 93:14	5
Lithium	0.014		0.0050	0.0011	mg/L		06/99/18 11:58	06/95/18 93:14	5
7 olybdenum	0.00085	U	0.015	0.00085	mg/L		06/99/18 11:58	06/95/18 93:14	5
Selenium	0.00094	U	0.0013	0.00094	mg/L		06/99/18 11:58	06/95/18 93:14	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	9.4		1.0	0.49	mg/L		06/99/18 11:58	06/95/18 91:99	100
Calcium	290		5.0	9.5	mg/L		06/99/18 11:58	06/95/18 91:99	100

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5800		130	85	mg/L			06/15/18 15:50	1
Chloride	3200		140	49	mg/L			02/09/18 13:50	20
Fluoride	0.050	I	0.10	0.039	mg/L			02/09/18 18:00	1
Sulfate	530		100	98	mg/L			02/03/18 0B:46	90

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	15.1		1.38	1.64	1.00	0.388	pCi/L	06/15/18 16:09	02/11/18 14:94	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	<i>101</i>		<i>40 - 110</i>					<i>03/12/18 13:09</i>	<i>05/11/18 14:94</i>	<i>1</i>

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	14.2		0.646	1.61	1.00	0.4B1	pCi/L	06/15/18 12:09	02/11/18 0B:45	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	<i>101</i>		<i>40 - 110</i>					<i>03/12/18 15:09</i>	<i>05/11/18 0. :42</i>	<i>1</i>
<i>Y Carrier</i>	<i>89.9</i>		<i>40 - 110</i>					<i>03/12/18 15:09</i>	<i>05/11/18 0. :42</i>	<i>1</i>

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	29.3		1.62	9.59	5.00	0.4B1	pCi/L		02/19/18 12:53	1

Client Sample Results

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Client Sample ID: EB-01
Date Collected: 06/07/18 11:55
Date Received: 06/08/18 13:50

Lab Sample ID: 400-154881-18
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		06/99/18 11:58	06/95/18 18:52	5
Marium	0.0004B	U	0.0095	0.0004B	mg/L		06/99/18 11:58	06/95/18 18:52	5
Meryllium	0.00034	U	0.0095	0.00034	mg/L		06/99/18 11:58	06/95/18 18:52	5
Mbron	0.091	U	0.050	0.091	mg/L		06/99/18 11:58	06/95/18 18:52	5
Calcium	0.13	U	0.95	0.13	mg/L		06/99/18 11:58	06/95/18 18:52	5
Chromium	0.0011	U	0.0095	0.0011	mg/L		06/99/18 11:58	06/95/18 18:52	5
Cobalt	0.00040	U	0.0095	0.00040	mg/L		06/99/18 11:58	06/95/18 18:52	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/99/18 11:58	06/95/18 18:52	5
7 olybdenum	0.00085	U	0.015	0.00085	mg/L		06/99/18 11:58	06/95/18 18:52	5
Selenium	0.00051	I	0.0013	0.00094	mg/L		06/99/18 11:58	06/95/18 18:52	5

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total DissolFed Solids	3.4	U	5.0	3.4	mg/L			06/13/18 18:95	1
Chloride	0.60	U	9.0	0.60	mg/L			02/09/18 0B:05	1
vluoride	0.039	U	0.10	0.039	mg/L			02/09/18 12:32	1
Sulfate	1.4	U	5.0	1.4	mg/L			02/09/18 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-996	0.060B	U	0.12B	0.12B	1.00	0.34B	pCi/L	06/15/18 16:09	02/11/18 14:94	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	. 879		40 - 110					03/12/18 13:09	05/11/18 14:94	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-998	0.0649	U	0.968	0.968	1.00	0.423	pCi/L	06/15/18 12:09	02/11/18 0B:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	. 879		40 - 110					03/12/18 15:09	05/11/18 0. :42	1
Y Carrier	8472		40 - 110					03/12/18 15:09	05/11/18 0. :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 996 + 998	0.195	U	0.399	0.399	5.00	0.423	pCi/L		02/19/18 12:53	1

Client Sample Results

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Client Sample ID: FB-01
Date Collected: 06/07/18 11:50
Date Received: 06/08/18 13:50

Lab Sample ID: 400-154881-19
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		06/99/18 11:58	06/95/18 1B:09	5
Marium	0.0004B	U	0.0095	0.0004B	mg/L		06/99/18 11:58	06/95/18 1B:09	5
Meryllium	0.00034	U	0.0095	0.00034	mg/L		06/99/18 11:58	06/95/18 1B:09	5
Mbron	0.091	U	0.050	0.091	mg/L		06/99/18 11:58	06/95/18 1B:09	5
Calcium	0.13	U	0.95	0.13	mg/L		06/99/18 11:58	06/95/18 1B:09	5
Chromium	0.0011	U	0.0095	0.0011	mg/L		06/99/18 11:58	06/95/18 1B:09	5
Cobalt	0.00040	U	0.0095	0.00040	mg/L		06/99/18 11:58	06/95/18 1B:09	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/99/18 11:58	06/95/18 1B:09	5
7 olybdenum	0.00085	U	0.015	0.00085	mg/L		06/99/18 11:58	06/95/18 1B:09	5
Selenium	0.00094	U	0.0013	0.00094	mg/L		06/99/18 11:58	06/95/18 1B:09	5

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total DissolFed Solids	3.4	U	5.0	3.4	mg/L			06/13/18 18:95	1
Chloride	0.60	U	9.0	0.60	mg/L			02/09/18 0B:05	1
vluoride	0.039	U	0.10	0.039	mg/L			02/09/18 12:46	1
Sulfate	1.4	U	5.0	1.4	mg/L			02/09/18 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-996	0.904	U	0.998	0.99B	1.00	0.365	pCi/L	06/15/18 16:09	02/11/18 14:94	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					03/12/18 13:09	05/11/18 14:94	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-998	0.191	U	0.30B	0.30B	1.00	0.536	pCi/L	06/15/18 12:09	02/11/18 0B:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					03/12/18 15:09	05/11/18 0.:42	1
Y Carrier	5271		40 - 110					03/12/18 15:09	05/11/18 0.: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 996 + 998	0.395	U	0.384	0.385	5.00	0.536	pCi/L		02/19/18 12:53	1

Client Sample Results

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Client Sample ID: EB-02
Date Collected: 06/08/18 09:17
Date Received: 06/08/18 13:50

Lab Sample ID: 400-154881-20
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		06/99/18 11:58	06/95/18 1B:06	5
Marium	0.0004B	U	0.0095	0.0004B	mg/L		06/99/18 11:58	06/95/18 1B:06	5
Meryllium	0.00034	U	0.0095	0.00034	mg/L		06/99/18 11:58	06/95/18 1B:06	5
Mbron	0.091	U	0.050	0.091	mg/L		06/99/18 11:58	06/95/18 1B:06	5
Calcium	0.13	U	0.95	0.13	mg/L		06/99/18 11:58	06/95/18 1B:06	5
Chromium	0.0011	U	0.0095	0.0011	mg/L		06/99/18 11:58	06/95/18 1B:06	5
Cobalt	0.00040	U	0.0095	0.00040	mg/L		06/99/18 11:58	06/95/18 1B:06	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/99/18 11:58	06/95/18 1B:06	5
7 olybdenum	0.00085	U	0.015	0.00085	mg/L		06/99/18 11:58	06/95/18 1B:06	5
Selenium	0.00094	U	0.0013	0.00094	mg/L		06/99/18 11:58	06/95/18 1B:06	5

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total DissolFed Solids	3.4	U	5.0	3.4	mg/L			06/15/18 15:50	1
Chloride	0.60	U	9.0	0.60	mg/L			02/09/18 13:02	1
vluoride	0.039	U	0.10	0.039	mg/L			02/09/18 12:53	1
Sulfate	1.6	I	5.0	1.4	mg/L			02/03/18 08:55	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-996	0.0149	U	0.152	0.152	1.00	0.335	pCi/L	06/15/18 16:09	02/11/18 14:94	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/12/18 13:09	05/11/18 14:94	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-998	0.106	U	0.920	0.920	1.00	0.462	pCi/L	06/15/18 12:09	02/11/18 0B:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/12/18 15:09	05/11/18 0. :43	1
Y Carrier	84.2		40 - 110					03/12/18 15:09	05/11/18 0. :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 996 + 998	0.190	U	0.319	0.319	5.00	0.462	pCi/L		02/19/18 12:53	1

Client Sample Results

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Client Sample ID: FB-02
Date Collected: 06/08/18 09:12
Date Received: 06/08/18 13:50

Lab Sample ID: 400-154881-21
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		06/99/18 19:01	06/99/18 93:10	5
Marium	0.0004B	U	0.0095	0.0004B	mg/L		06/99/18 19:01	06/99/18 93:10	5
Meryllium	0.00034	U	0.0095	0.00034	mg/L		06/99/18 19:01	06/99/18 93:10	5
Mbron	0.091	U	0.050	0.091	mg/L		06/99/18 19:01	06/99/18 93:10	5
Calcium	0.13	U	0.95	0.13	mg/L		06/99/18 19:01	06/99/18 93:10	5
Chromium	0.0011	U	0.0095	0.0011	mg/L		06/99/18 19:01	06/99/18 93:10	5
Cobalt	0.00040	U	0.0095	0.00040	mg/L		06/99/18 19:01	06/99/18 93:10	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		06/99/18 19:01	06/99/18 93:10	5
7 olybdenum	0.00085	U	0.015	0.00085	mg/L		06/99/18 19:01	06/99/18 93:10	5
Selenium	0.00094	U	0.0013	0.00094	mg/L		06/99/18 19:01	06/99/18 93:10	5

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total DissolFed Solids	3.4	U	5.0	3.4	mg/L			06/15/18 15:50	1
Chloride	0.60	U	9.0	0.60	mg/L			02/09/18 13:10	1
vluoride	0.039	U	0.10	0.039	mg/L			02/09/18 12:56	1
Sulfate	1.4	U	5.0	1.4	mg/L			02/03/18 0B:09	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.197		0.132	0.13B	1.00	0.126	pCi/L	06/16/18 19:16	02/11/18 05:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/13/18 19:13	05/11/18 02:42	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-998	0.0156	U	0.122	0.122	1.00	0.318	pCi/L	06/16/18 13:10	02/10/18 14:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/13/18 16:10	05/10/18 14:40	1
Y Carrier	8.75		40 - 110					03/13/18 16:10	05/10/18 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 996 + 998	0.913	U	0.994	0.995	5.00	0.318	pCi/L		02/19/18 12:53	1

Definitions/Glossary

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

TestAmerica Job ID: 400-154881-7
SDG: Ash Pond

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
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.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

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.
α	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 Smith Plant

TestAmerica Job ID: 400-154881-7
SDG: Ash Pond

Client Sample ID: MW-12

Lab Sample ID: 411-054660-x

Date Collected: 1/ 8/ 2016 04:01

Matrid: Water

Date Received: 1/ 8/ 2016 0v:51

Prep Type	Batch Type	Batch Metho3	9 un	Dilution Factor	Batch Number	Prepare3 or Analyze3	Analyst	Lab
Total Recoverable	Prep	3005A			402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402495	06/25/18 19:11	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	400962	06/13/18 16:43	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	403169	07/02/18 07:36	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403221	07/02/18 11:02	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	403150	07/01/18 12:37	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370670	06/15/18 16:02	JLC	TAL SL
Total/NA	Analysis	9315		1	374837	07/11/18 12:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370673	06/15/18 17:02	JLC	TAL SL
Total/NA	Analysis	9320		1	374836	07/11/18 09:44	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	06/06/18 14:10	CDH	TAL PEN

Client Sample ID: MW-1v

Lab Sample ID: 411-054660-6

Date Collected: 1/ 8/ 2016 07:12

Matrid: Water

Date Received: 1/ 8/ 2016 0v:51

Prep Type	Batch Type	Batch Metho3	9 un	Dilution Factor	Batch Number	Prepare3 or Analyze3	Analyst	Lab
Total Recoverable	Prep	3005A			402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402495	06/25/18 19:56	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	400962	06/13/18 16:43	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	403169	07/02/18 07:43	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403221	07/02/18 11:07	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	403150	07/01/18 12:37	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370670	06/15/18 16:02	JLC	TAL SL
Total/NA	Analysis	9315		1	374837	07/11/18 12:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370673	06/15/18 17:02	JLC	TAL SL
Total/NA	Analysis	9320		1	374836	07/11/18 09:44	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	06/06/18 19:02	CDH	TAL PEN

Client Sample ID: MW-1/

Lab Sample ID: 411-054660-7

Date Collected: 1/ 8/ 2016 16:27

Matrid: Water

Date Received: 1/ 8/ 2016 0v:51

Prep Type	Batch Type	Batch Metho3	9 un	Dilution Factor	Batch Number	Prepare3 or Analyze3	Analyst	Lab
Total Recoverable	Prep	3005A	DL		402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100	402495	06/25/18 20:55	DRE	TAL PEN
Total Recoverable	Prep	3005A			402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402495	06/25/18 22:25	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	401134	06/15/18 15:50	VLS	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		60	403212	07/02/18 09:54	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-154881-7
SDG: Ash Pond

Prep Type	Batch Type	Batch Metho3	9 un	Dilution Factor	Batch Number	Prepare3 or Analyze3	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	403294	07/02/18 18:04	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			370670	06/15/18 16:02	JLC	TAL SL
Total/NA	Analysis	9315		1	374837	07/11/18 12:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370673	06/15/18 17:02	JLC	TAL SL
Total/NA	Analysis	9320		1	374836	07/11/18 09:44	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	06/08/18 08:29	CDH	TAL PEN

Client Sample ID: MW-1x

Lab Sample ID: 411-054660-01

Date Collecte3: 1/ 816806 01:00

Matrid: Water

Date 9 eceiRe3: 1/ 816806 0v:51

Prep Type	Batch Type	Batch Metho3	9 un	Dilution Factor	Batch Number	Prepare3 or Analyze3	Analyst	Lab
Total Recoverable	Prep	3005A	DL		402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	402495	06/25/18 20:59	DRE	TAL PEN
Total Recoverable	Prep	3005A			402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402495	06/25/18 22:29	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	401134	06/15/18 15:50	VLS	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		60	403212	07/02/18 09:54	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403294	07/02/18 18:07	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			370670	06/15/18 16:02	JLC	TAL SL
Total/NA	Analysis	9315		1	374837	07/11/18 12:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370673	06/15/18 17:02	JLC	TAL SL
Total/NA	Analysis	9320		1	374836	07/11/18 09:44	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	06/08/18 10:11	CDH	TAL PEN

Client Sample ID: MW-16

Lab Sample ID: 411-054660-00

Date Collecte3: 1/ 81x806 0v:04

Matrid: Water

Date 9 eceiRe3: 1/ 816806 0v:51

Prep Type	Batch Type	Batch Metho3	9 un	Dilution Factor	Batch Number	Prepare3 or Analyze3	Analyst	Lab
Total Recoverable	Prep	3005A	DL		402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100	402495	06/25/18 21:04	DRE	TAL PEN
Total Recoverable	Prep	3005A			402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402495	06/25/18 22:34	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	400948	06/13/18 18:25	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		100	403212	07/02/18 10:46	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403294	07/02/18 17:24	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	403304	07/02/18 15:25	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370670	06/15/18 16:02	JLC	TAL SL
Total/NA	Analysis	9315		1	374837	07/11/18 14:23	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370673	06/15/18 17:02	JLC	TAL SL
Total/NA	Analysis	9320		1	374836	07/11/18 09:45	RTM	TAL SL

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-154881-7
SDG: Ash Pond

Client Sample ID: MW-16

Lab Sample ID: 411-054660-00

Date Collected: 1/8/2016 0v:04

Matrid: Water

Date Received: 1/8/2016 0v:51

Prep Type	Batch Type	Batch Metho3	9 un	Dilution Factor	Batch Number	Prepare3 or Analyze3	Analyst	Lab
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404612	06/07/18 13:14	CDH	TAL PEN

Client Sample ID: MW-17

Lab Sample ID: 411-054660-02

Date Collected: 1/8/2016 0x:20

Matrid: Water

Date Received: 1/8/2016 0v:51

Prep Type	Batch Type	Batch Metho3	9 un	Dilution Factor	Batch Number	Prepare3 or Analyze3	Analyst	Lab
Total Recoverable	Prep	3005A	DL		402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100	402495	06/25/18 21:08	DRE	TAL PEN
Total Recoverable	Prep	3005A			402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402495	06/25/18 22:38	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	400948	06/13/18 18:25	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		60	403212	07/02/18 09:46	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403294	07/02/18 17:27	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	403304	07/02/18 15:25	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370670	06/15/18 16:02	JLC	TAL SL
Total/NA	Analysis	9315		1	374837	07/11/18 14:23	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370673	06/15/18 17:02	JLC	TAL SL
Total/NA	Analysis	9320		1	374836	07/11/18 09:45	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404612	06/07/18 17:21	CDH	TAL PEN

Client Sample ID: MW-01

Lab Sample ID: 411-054660-0v

Date Collected: 1/8/2016 07:46

Matrid: Water

Date Received: 1/8/2016 0v:51

Prep Type	Batch Type	Batch Metho3	9 un	Dilution Factor	Batch Number	Prepare3 or Analyze3	Analyst	Lab
Total Recoverable	Prep	3005A	DL		402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	200	402495	06/25/18 21:13	DRE	TAL PEN
Total Recoverable	Prep	3005A			402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402495	06/25/18 23:05	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	400948	06/13/18 18:25	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		60	403212	07/02/18 09:46	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403294	07/02/18 17:31	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	403304	07/02/18 15:25	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370670	06/15/18 16:02	JLC	TAL SL
Total/NA	Analysis	9315		1	374837	07/11/18 14:23	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370673	06/15/18 17:02	JLC	TAL SL
Total/NA	Analysis	9320		1	374836	07/11/18 09:45	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	404612	06/07/18 19:48	CDH	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-154881-7
SDG: Ash Pond

Client Sample ID: MW-02

Lab Sample ID: 411-054660-04

Date Collected: 1/ 8/ 2016 07:11

Matrid: Water

Date Received: 1/ 8/ 2016 07:51

Prep Type	Batch Type	Batch Metho3	9 un	Dilution Factor	Batch Number	Prepare3 or Analyze3	Analyst	Lab
Total Recoverable	Prep	3005A			402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402495	06/25/18 20:01	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	400737	06/12/18 13:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		10	403169	07/02/18 08:09	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403221	07/02/18 11:10	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	403150	07/01/18 12:37	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370670	06/15/18 16:02	JLC	TAL SL
Total/NA	Analysis	9315		1	374837	07/11/18 14:23	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370673	06/15/18 17:02	JLC	TAL SL
Total/NA	Analysis	9320		1	374836	07/11/18 09:45	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	06/06/18 16:06	CDH	TAL PEN

Client Sample ID: DUP-10

Lab Sample ID: 411-054660-05

Date Collected: 1/ 8/ 2016 17:11

Matrid: Water

Date Received: 1/ 8/ 2016 07:51

Prep Type	Batch Type	Batch Metho3	9 un	Dilution Factor	Batch Number	Prepare3 or Analyze3	Analyst	Lab
Total Recoverable	Prep	3005A			402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402495	06/25/18 21:26	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	400737	06/12/18 13:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	403169	07/02/18 07:43	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403221	07/02/18 11:12	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	403150	07/01/18 12:37	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370670	06/15/18 16:02	JLC	TAL SL
Total/NA	Analysis	9315		1	374837	07/11/18 14:24	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370673	06/15/18 17:02	JLC	TAL SL
Total/NA	Analysis	9320		1	374836	07/11/18 09:45	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL

Client Sample ID: DUP-12

Lab Sample ID: 411-054660-0/

Date Collected: 1/ 8/ 2016 17:11

Matrid: Water

Date Received: 1/ 8/ 2016 07:51

Prep Type	Batch Type	Batch Metho3	9 un	Dilution Factor	Batch Number	Prepare3 or Analyze3	Analyst	Lab
Total Recoverable	Prep	3005A			402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402495	06/25/18 23:10	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100	402689	06/26/18 15:01	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	400948	06/13/18 18:25	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		100	403212	07/02/18 10:46	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403294	07/02/18 17:33	BAB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-154881-7
SDG: Ash Pond

Client Sample ID: DUP-12

Lab Sample ID: 411-054660-0/

Date Collecte3: 1/ 8/ x06 1x:11

Matrid: Water

Date 9 eceiRe3: 1/ 8/ 606 0v:51

Prep Type	Batch Type	Batch Metho3	9 un	Dilution Factor	Batch Number	Prepare3 or Analyze3	Analyst	Lab
Total/NA	Analysis	SM 4500 SO4 E		30	403304	07/02/18 15:25	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370670	06/15/18 16:02	JLC	TAL SL
Total/NA	Analysis	9315		1	374837	07/11/18 14:24	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370673	06/15/18 17:02	JLC	TAL SL
Total/NA	Analysis	9320		1	374836	07/11/18 09:45	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL

Client Sample ID: DUP-1v

Lab Sample ID: 411-054660-0x

Date Collecte3: 1/ 8/ 606 1/ :15

Matrid: Water

Date 9 eceiRe3: 1/ 8/ 606 0v:51

Prep Type	Batch Type	Batch Metho3	9 un	Dilution Factor	Batch Number	Prepare3 or Analyze3	Analyst	Lab
Total Recoverable	Prep	3005A	DL		402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100	402495	06/25/18 21:22	DRE	TAL PEN
Total Recoverable	Prep	3005A			402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402495	06/25/18 23:14	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	401134	06/15/18 15:50	VLS	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		70	403252	07/02/18 13:50	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403294	07/02/18 18:00	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	403365	07/03/18 09:46	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370670	06/15/18 16:02	JLC	TAL SL
Total/NA	Analysis	9315		1	374837	07/11/18 14:24	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370673	06/15/18 17:02	JLC	TAL SL
Total/NA	Analysis	9320		1	374836	07/11/18 09:45	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL

Client Sample ID: EB-10

Lab Sample ID: 411-054660-06

Date Collecte3: 1/ 8/ x06 00:55

Matrid: Water

Date 9 eceiRe3: 1/ 8/ 606 0v:51

Prep Type	Batch Type	Batch Metho3	9 un	Dilution Factor	Batch Number	Prepare3 or Analyze3	Analyst	Lab
Total Recoverable	Prep	3005A			402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402495	06/25/18 18:57	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	400948	06/13/18 18:25	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	403212	07/02/18 09:05	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403294	07/02/18 17:37	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			370670	06/15/18 16:02	JLC	TAL SL
Total/NA	Analysis	9315		1	374837	07/11/18 14:24	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370673	06/15/18 17:02	JLC	TAL SL
Total/NA	Analysis	9320		1	374836	07/11/18 09:45	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-154881-7
SDG: Ash Pond

Client Sample ID: FB-10

Lab Sample ID: 411-054660-07

Date Collected: 1/ 8/ 2016 00:51

Matrid: Water

Date Received: 1/ 8/ 2016 0v:51

Prep Type	Batch Type	Batch Metho3	9 un	Dilution Factor	Batch Number	Prepare3 or Analyze3	Analyst	Lab
Total Recoverable	Prep	3005A			402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402495	06/25/18 19:02	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	400948	06/13/18 18:25	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	403212	07/02/18 09:05	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403294	07/02/18 17:46	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			370670	06/15/18 16:02	JLC	TAL SL
Total/NA	Analysis	9315		1	374837	07/11/18 14:24	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370673	06/15/18 17:02	JLC	TAL SL
Total/NA	Analysis	9320		1	374836	07/11/18 09:45	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL

Client Sample ID: EB-12

Lab Sample ID: 411-054660-21

Date Collected: 1/ 8/ 2016 17:0x

Matrid: Water

Date Received: 1/ 8/ 2016 0v:51

Prep Type	Batch Type	Batch Metho3	9 un	Dilution Factor	Batch Number	Prepare3 or Analyze3	Analyst	Lab
Total Recoverable	Prep	3005A			402138	06/22/18 11:58	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402495	06/25/18 19:06	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	401134	06/15/18 15:50	VLS	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	403252	07/02/18 13:07	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403294	07/02/18 17:53	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	403365	07/03/18 08:55	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			370670	06/15/18 16:02	JLC	TAL SL
Total/NA	Analysis	9315		1	374837	07/11/18 14:24	RTM	TAL SL
Total/NA	Prep	PrecSep_0			370673	06/15/18 17:02	JLC	TAL SL
Total/NA	Analysis	9320		1	374835	07/11/18 09:46	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	375258	07/12/18 17:53	RTM	TAL SL

Client Sample ID: FB-12

Lab Sample ID: 411-054660-20

Date Collected: 1/ 8/ 2016 17:02

Matrid: Water

Date Received: 1/ 8/ 2016 0v:51

Prep Type	Batch Type	Batch Metho3	9 un	Dilution Factor	Batch Number	Prepare3 or Analyze3	Analyst	Lab
Total Recoverable	Prep	3005A			402140	06/22/18 12:01	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	402344	06/22/18 23:10	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	401134	06/15/18 15:50	VLS	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	403252	07/02/18 13:10	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	403294	07/02/18 17:56	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

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-154881-7
SDG: Ash Pond

Client Sample ID: FB-12

Lab Sample ID: 411-054660-20

Date Collected: 1/8/2016 17:02

Matrix: Water

Date Received: 1/8/2016 09:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
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

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

QC Association Summary

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Metals

Prep Batch: 402138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2	L W-0M	Total Recoverable	Water	3005A	
400-154881-8	L W-03	Total Recoverable	Water	3005A	
400-154881-B	L W-0^	Total Recoverable	Water	3005A	
400-154881-B - Dk	L W-0^	Total Recoverable	Water	3005A	
400-154881-10 - Dk	L W-02	Total Recoverable	Water	3005A	
400-154881-10	L W-02	Total Recoverable	Water	3005A	
400-154881-11	L W-08	Total Recoverable	Water	3005A	
400-154881-11 - Dk	L W-08	Total Recoverable	Water	3005A	
400-154881-1M- Dk	L W-0B	Total Recoverable	Water	3005A	
400-154881-1M	L W-0B	Total Recoverable	Water	3005A	
400-154881-13	L W-10	Total Recoverable	Water	3005A	
400-154881-13 - Dk	L W-10	Total Recoverable	Water	3005A	
400-154881-14	L W-1M	Total Recoverable	Water	3005A	
400-154881-15	D7 P-01	Total Recoverable	Water	3005A	
400-154881-1^ - Dk	D7 P-0M	Total Recoverable	Water	3005A	
400-154881-1^	D7 P-0M	Total Recoverable	Water	3005A	
400-154881-12 - Dk	D7 P-03	Total Recoverable	Water	3005A	
400-154881-12	D7 P-03	Total Recoverable	Water	3005A	
400-154881-18	x 6-01	Total Recoverable	Water	3005A	
400-154881-1B	N6-01	Total Recoverable	Water	3005A	
400-154881-M0	x 6-0M	Total Recoverable	Water	3005A	
L 6 400-40Ml38/1-A 95	L ethod 6lanU	Total Recoverable	Water	3005A	
kCS 400-40Ml38/MA	kab Control Sample	Total Recoverable	Water	3005A	
400-154881-2 L S	L W-0M	Total Recoverable	Water	3005A	
400-154881-2 L SD	L W-0M	Total Recoverable	Water	3005A	

Prep Batch: 402140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-Ml	N6-0M	Total Recoverable	Water	3005A	
L 6 400-40Ml40/1-A 95	L ethod 6lanU	Total Recoverable	Water	3005A	
kCS 400-40Ml40/MA	kab Control Sample	Total Recoverable	Water	3005A	
400-1551Ml-6-1-6 L S 95	L atriESpiUe	Total Recoverable	Water	3005A	
400-1551Ml-6-1-C L SD 95	L atriESpiUe Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 402344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-Ml	N6-0M	Total Recoverable	Water	^0M0	40Ml40
L 6 400-40Ml40/1-A 95	L ethod 6lanU	Total Recoverable	Water	^0M0	40Ml40
kCS 400-40Ml40/MA	kab Control Sample	Total Recoverable	Water	^0M0	40Ml40
400-1551Ml-6-1-6 L S 95	L atriESpiUe	Total Recoverable	Water	^0M0	40Ml40
400-1551Ml-6-1-C L SD 95	L atriESpiUe Duplicate	Total Recoverable	Water	^0M0	40Ml40

Analysis Batch: 402495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2	L W-0M	Total Recoverable	Water	^0M0	40Ml38
400-154881-8	L W-03	Total Recoverable	Water	^0M0	40Ml38
400-154881-B - Dk	L W-0^	Total Recoverable	Water	^0M0	40Ml38
400-154881-B	L W-0^	Total Recoverable	Water	^0M0	40Ml38
400-154881-10 - Dk	L W-02	Total Recoverable	Water	^0M0	40Ml38
400-154881-10	L W-02	Total Recoverable	Water	^0M0	40Ml38
400-154881-11 - Dk	L W-08	Total Recoverable	Water	^0M0	40Ml38

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Metals (Continued)

Analysis Batch: 402495 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-11	L W-08	Total Recoverable	Water	^0M0	40M38
400-154881-1M- Dk	L W-0B	Total Recoverable	Water	^0M0	40M38
400-154881-1M	L W-0B	Total Recoverable	Water	^0M0	40M38
400-154881-13 - Dk	L W-10	Total Recoverable	Water	^0M0	40M38
400-154881-13	L W-10	Total Recoverable	Water	^0M0	40M38
400-154881-14	L W-1M	Total Recoverable	Water	^0M0	40M38
400-154881-15	D7 P-01	Total Recoverable	Water	^0M0	40M38
400-154881-1^	D7 P-0M	Total Recoverable	Water	^0M0	40M38
400-154881-12 - Dk	D7 P-03	Total Recoverable	Water	^0M0	40M38
400-154881-12	D7 P-03	Total Recoverable	Water	^0M0	40M38
400-154881-18	x 6-01	Total Recoverable	Water	^0M0	40M38
400-154881-1B	N6-01	Total Recoverable	Water	^0M0	40M38
400-154881-M0	x 6-0M	Total Recoverable	Water	^0M0	40M38
L 6 400-40M38/1-A 95	L ethod 6lanU	Total Recoverable	Water	^0M0	40M38
kCS 400-40M38/MA	kab Control Sample	Total Recoverable	Water	^0M0	40M38
400-154881-2 L S	L W-0M	Total Recoverable	Water	^0M0	40M38
400-154881-2 L SD	L W-0M	Total Recoverable	Water	^0M0	40M38

Analysis Batch: 402689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-1^ - Dk	D7 P-0M	Total Recoverable	Water	^0M0	40M38

General Chemistry

Analysis Batch: 400737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-14	L W-1M	Total/FA	Water	SL M540C	
400-154881-15	D7 P-01	Total/FA	Water	SL M540C	
L 6 400-400232/1	L ethod 6lanU	Total/FA	Water	SL M540C	
kCS 400-400232/M	kab Control Sample	Total/FA	Water	SL M540C	
400-154280-C-3 D7	Duplicate	Total/FA	Water	SL M540C	

Analysis Batch: 400948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-11	L W-08	Total/FA	Water	SL M540C	
400-154881-1M	L W-0B	Total/FA	Water	SL M540C	
400-154881-13	L W-10	Total/FA	Water	SL M540C	
400-154881-1^	D7 P-0M	Total/FA	Water	SL M540C	
400-154881-18	x 6-01	Total/FA	Water	SL M540C	
400-154881-1B	N6-01	Total/FA	Water	SL M540C	
L 6 400-400B48/1	L ethod 6lanU	Total/FA	Water	SL M540C	
kCS 400-400B48/M	kab Control Sample	Total/FA	Water	SL M540C	
400-1542^1-A-34 D7	Duplicate	Total/FA	Water	SL M540C	
400-154880-6-3 D7	Duplicate	Total/FA	Water	SL M540C	

Analysis Batch: 400962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2	L W-0M	Total/FA	Water	SL M540C	
400-154881-8	L W-03	Total/FA	Water	SL M540C	
L 6 400-400B^M1	L ethod 6lanU	Total/FA	Water	SL M540C	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

General Chemistry (Continued)

Analysis Batch: 400962 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
kCS 400-400B^MM	kab Control Sample	Total/FA	Water	SL M540C	
400-1542^1-A-M8 D7	Duplicate	Total/FA	Water	SL M540C	

Analysis Batch: 401134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-B	L W-0^	Total/FA	Water	SL M540C	
400-154881-10	L W-02	Total/FA	Water	SL M540C	
400-154881-12	D7 P-03	Total/FA	Water	SL M540C	
400-154881-M0	x 6-0M	Total/FA	Water	SL M540C	
400-154881-M1	N6-0M	Total/FA	Water	SL M540C	
L 6 400-401134/1	L ethod 6lanU	Total/FA	Water	SL M540C	
kCS 400-401134/M	kab Control Sample	Total/FA	Water	SL M540C	
400-154B0B-A-5 D7	Duplicate	Total/FA	Water	SL M540C	
400-154B25-A-2 D7	Duplicate	Total/FA	Water	SL M540C	

Analysis Batch: 403150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2	L W-0M	Total/FA	Water	SL 4500 SO4 x	
400-154881-8	L W-03	Total/FA	Water	SL 4500 SO4 x	
400-154881-14	L W-1M	Total/FA	Water	SL 4500 SO4 x	
400-154881-15	D7 P-01	Total/FA	Water	SL 4500 SO4 x	
L 6 400-403150/^	L ethod 6lanU	Total/FA	Water	SL 4500 SO4 x	
kCS 400-403150/2	kab Control Sample	Total/FA	Water	SL 4500 SO4 x	
L Rk 400-403150/3	kab Control Sample	Total/FA	Water	SL 4500 SO4 x	
400-15535^6-10 L S	L atriESpiUe	Total/FA	Water	SL 4500 SO4 x	
400-15535^6-10 L SD	L atriESpiUe Duplicate	Total/FA	Water	SL 4500 SO4 x	

Analysis Batch: 403169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2	L W-0M	Total/FA	Water	SL 4500 Cl- x	
400-154881-8	L W-03	Total/FA	Water	SL 4500 Cl- x	
400-154881-14	L W-1M	Total/FA	Water	SL 4500 Cl- x	
400-154881-15	D7 P-01	Total/FA	Water	SL 4500 Cl- x	
L 6 400-4031^B/^	L ethod 6lanU	Total/FA	Water	SL 4500 Cl- x	
kCS 400-4031^B/2	kab Control Sample	Total/FA	Water	SL 4500 Cl- x	
L Rk 400-4031^B/3	kab Control Sample	Total/FA	Water	SL 4500 Cl- x	
400-154881-2 L S	L W-0M	Total/FA	Water	SL 4500 Cl- x	
400-154881-2 L SD	L W-0M	Total/FA	Water	SL 4500 Cl- x	

Analysis Batch: 403212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-B	L W-0^	Total/FA	Water	SL 4500 Cl- x	
400-154881-10	L W-02	Total/FA	Water	SL 4500 Cl- x	
400-154881-11	L W-08	Total/FA	Water	SL 4500 Cl- x	
400-154881-1M	L W-0B	Total/FA	Water	SL 4500 Cl- x	
400-154881-13	L W-10	Total/FA	Water	SL 4500 Cl- x	
400-154881-1^	D7 P-0M	Total/FA	Water	SL 4500 Cl- x	
400-154881-18	x 6-01	Total/FA	Water	SL 4500 Cl- x	
400-154881-1B	N6-01	Total/FA	Water	SL 4500 Cl- x	
400-154880-6-4 L S	L atriESpiUe	Total/FA	Water	SL 4500 Cl- x	
400-154880-6-4 L SD	L atriESpiUe Duplicate	Total/FA	Water	SL 4500 Cl- x	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Analysis Batch: 403221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2	L W-0M	Total/FA	Water	SL 4500 NC	
400-154881-8	L W-03	Total/FA	Water	SL 4500 NC	
400-154881-14	L W-1M	Total/FA	Water	SL 4500 NC	
400-154881-15	D7 P-01	Total/FA	Water	SL 4500 NC	
L 6 400-403MM/3	L ethod 6lanU	Total/FA	Water	SL 4500 NC	
kCS 400-403MM/4	kab Control Sample	Total/FA	Water	SL 4500 NC	
400-15424M6-4 L S	L atriESpiUe	Total/FA	Water	SL 4500 NC	
400-15424M6-4 L SD	L atriESpiUe Duplicate	Total/FA	Water	SL 4500 NC	
400-154881-2 D7	L W-0M	Total/FA	Water	SL 4500 NC	

Analysis Batch: 403252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-12	D7 P-03	Total/FA	Water	SL 4500 CI- x	
400-154881-M0	x6-0M	Total/FA	Water	SL 4500 CI- x	
400-154881-M1	N6-0M	Total/FA	Water	SL 4500 CI- x	
L 6 400-403M5M^	L ethod 6lanU	Total/FA	Water	SL 4500 CI- x	
kCS 400-403M5M2	kab Control Sample	Total/FA	Water	SL 4500 CI- x	
400-1553B3-D-1 L S	L atriESpiUe	Total/FA	Water	SL 4500 CI- x	
400-1553B3-D-1 L SD	L atriESpiUe Duplicate	Total/FA	Water	SL 4500 CI- x	

Analysis Batch: 403294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-B	L W-0^	Total/FA	Water	SL 4500 NC	
400-154881-10	L W-02	Total/FA	Water	SL 4500 NC	
400-154881-11	L W-08	Total/FA	Water	SL 4500 NC	
400-154881-1M	L W-0B	Total/FA	Water	SL 4500 NC	
400-154881-13	L W-10	Total/FA	Water	SL 4500 NC	
400-154881-1^	D7 P-0M	Total/FA	Water	SL 4500 NC	
400-154881-12	D7 P-03	Total/FA	Water	SL 4500 NC	
400-154881-18	x6-01	Total/FA	Water	SL 4500 NC	
400-154881-1B	N6-01	Total/FA	Water	SL 4500 NC	
400-154881-M0	x6-0M	Total/FA	Water	SL 4500 NC	
400-154881-M1	N6-0M	Total/FA	Water	SL 4500 NC	
L 6 400-403MB4/3	L ethod 6lanU	Total/FA	Water	SL 4500 NC	
kCS 400-403MB4/4	kab Control Sample	Total/FA	Water	SL 4500 NC	
400-154881-1BD7	N6-01	Total/FA	Water	SL 4500 NC	

Analysis Batch: 403304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-B	L W-0^	Total/FA	Water	SL 4500 SO4 x	
400-154881-10	L W-02	Total/FA	Water	SL 4500 SO4 x	
400-154881-11	L W-08	Total/FA	Water	SL 4500 SO4 x	
400-154881-1M	L W-0B	Total/FA	Water	SL 4500 SO4 x	
400-154881-13	L W-10	Total/FA	Water	SL 4500 SO4 x	
400-154881-1^	D7 P-0M	Total/FA	Water	SL 4500 SO4 x	
400-154881-18	x6-01	Total/FA	Water	SL 4500 SO4 x	
400-154881-1B	N6-01	Total/FA	Water	SL 4500 SO4 x	

Analysis Batch: 403365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-12	D7 P-03	Total/FA	Water	SL 4500 SO4 x	
400-154881-M0	x6-0M	Total/FA	Water	SL 4500 SO4 x	
400-154881-M1	N6-0M	Total/FA	Water	SL 4500 SO4 x	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

General Chemistry (Continued)

Analysis Batch: 403365 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
L 6 400-4033^5/A	L ethod 6lanU	Total/FA	Water	SL 4500 SO4 x	
kCS 400-4033^5/2	kab Control Sample	Total/FA	Water	SL 4500 SO4 x	
L Rk 400-4033^5/3	kab Control Sample	Total/FA	Water	SL 4500 SO4 x	
400-154B0B-A-1 L S	L atriESpiUe	Total/FA	Water	SL 4500 SO4 x	
400-154B0B-A-1 L SD	L atriESpiUe Duplicate	Total/FA	Water	SL 4500 SO4 x	

Rad

Prep Batch: 370670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2	L W-0M	Total/FA	Water	PrecSep-MI	
400-154881-8	L W-03	Total/FA	Water	PrecSep-MI	
400-154881-B	L W-0^	Total/FA	Water	PrecSep-MI	
400-154881-10	L W-02	Total/FA	Water	PrecSep-MI	
400-154881-11	L W-08	Total/FA	Water	PrecSep-MI	
400-154881-1M	L W-0B	Total/FA	Water	PrecSep-MI	
400-154881-13	L W-10	Total/FA	Water	PrecSep-MI	
400-154881-14	L W-1M	Total/FA	Water	PrecSep-MI	
400-154881-15	D7 P-01	Total/FA	Water	PrecSep-MI	
400-154881-1^	D7 P-0M	Total/FA	Water	PrecSep-MI	
400-154881-12	D7 P-03	Total/FA	Water	PrecSep-MI	
400-154881-18	x 6-01	Total/FA	Water	PrecSep-MI	
400-154881-1B	N6-01	Total/FA	Water	PrecSep-MI	
400-154881-M0	x 6-0M	Total/FA	Water	PrecSep-MI	
L 6 1^0-320^20/M0-A	L ethod 6lanU	Total/FA	Water	PrecSep-MI	
kCS 1^0-320^20/1-A	kab Control Sample	Total/FA	Water	PrecSep-MI	
kCSD 1^0-320^20/MA	kab Control Sample Dup	Total/FA	Water	PrecSep-MI	

Prep Batch: 370673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2	L W-0M	Total/FA	Water	PrecSep_0	
400-154881-8	L W-03	Total/FA	Water	PrecSep_0	
400-154881-B	L W-0^	Total/FA	Water	PrecSep_0	
400-154881-10	L W-02	Total/FA	Water	PrecSep_0	
400-154881-11	L W-08	Total/FA	Water	PrecSep_0	
400-154881-1M	L W-0B	Total/FA	Water	PrecSep_0	
400-154881-13	L W-10	Total/FA	Water	PrecSep_0	
400-154881-14	L W-1M	Total/FA	Water	PrecSep_0	
400-154881-15	D7 P-01	Total/FA	Water	PrecSep_0	
400-154881-1^	D7 P-0M	Total/FA	Water	PrecSep_0	
400-154881-12	D7 P-03	Total/FA	Water	PrecSep_0	
400-154881-18	x 6-01	Total/FA	Water	PrecSep_0	
400-154881-1B	N6-01	Total/FA	Water	PrecSep_0	
400-154881-M0	x 6-0M	Total/FA	Water	PrecSep_0	
L 6 1^0-320^23/M0-A	L ethod 6lanU	Total/FA	Water	PrecSep_0	
kCS 1^0-320^23/1-A	kab Control Sample	Total/FA	Water	PrecSep_0	
kCSD 1^0-320^23/MA	kab Control Sample Dup	Total/FA	Water	PrecSep_0	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

Rad (Continued)

Prep Batch: 370790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-M1	N6-0M	Total/FA	Water	PrecSep-M1	
L 6 1^0-3202B0/M8-A	L ethod 6lanU	Total/FA	Water	PrecSep-M1	
kCS 1^0-3202B0/1-A	kab Control Sample	Total/FA	Water	PrecSep-M1	
kCSD 1^0-3202B0/MA	kab Control Sample Dup	Total/FA	Water	PrecSep-M1	

Prep Batch: 370793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-M1	N6-0M	Total/FA	Water	PrecSep_0	
L 6 1^0-3202B3/M8-A	L ethod 6lanU	Total/FA	Water	PrecSep_0	
kCS 1^0-3202B3/1-A	kab Control Sample	Total/FA	Water	PrecSep_0	
kCSD 1^0-3202B3/MA	kab Control Sample Dup	Total/FA	Water	PrecSep_0	

Field Service / Mobile Lab

Analysis Batch: 404432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-2	L W-0M	Total/FA	Water	Field Sampling	
400-154881-8	L W-03	Total/FA	Water	Field Sampling	
400-154881-B	L W-0^	Total/FA	Water	Field Sampling	
400-154881-10	L W-02	Total/FA	Water	Field Sampling	
400-154881-14	L W-1M	Total/FA	Water	Field Sampling	

Analysis Batch: 404612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154881-11	L W-08	Total/FA	Water	Field Sampling	
400-154881-1M	L W-0B	Total/FA	Water	Field Sampling	
400-154881-13	L W-10	Total/FA	Water	Field Sampling	

QC Sample Results

LineG: u f r Pwop er l omyaGS
wro/ectRite: l l . hmitd wraG

TestAmerica Job ID: 400-154881-C
hDu : Asd woG

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-402138/1-A ^5
Matrix: Water
Analysis Batch: 402495

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 402138

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ArseGc	00004U	3	0001g	00004U	mL		09/08 11:58	09/08 18:44	5
Marif m	00004B	3	00095	00004B	mL		09/08 11:58	09/08 18:44	5
MerSnif m	0000g4	3	00095	0000g4	mL		09/08 11:58	09/08 18:44	5
MbroG	0091	3	0050	0091	mL		09/08 11:58	09/08 18:44	5
l arcif m	00g	3	005	00g	mL		09/08 11:58	09/08 18:44	5
l dromif m	00011	3	00095	00011	mL		09/08 11:58	09/08 18:44	5
l obart	000040	3	00095	000040	mL		09/08 11:58	09/08 18:44	5
2itdif m	00011	3	00050	00011	mL		09/08 11:58	09/08 18:44	5
7 orSbj eG m	000085	3	0015	000085	mL		09/08 11:58	09/08 18:44	5
hereGf m	000094	3	0001g	000094	mL		09/08 11:58	09/08 18:44	5

Lab Sample ID: LCS 400-402138/2-A
Matrix: Water
Analysis Batch: 402495

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 402138

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
ArseGc	00500	00515		mL		10g	80 - 190
Marif m	00500	0048C		mL		BC	80 - 190
MerSnif m	00500	0048U		mL		BC	80 - 190
MbroG	00100	00BCC		mL		B8	80 - 190
l arcif m	500	404		mL		BB	80 - 190
l dromif m	00500	00509		mL		100	80 - 190
l obart	00500	0050U		mL		101	80 - 190
2itdif m	00500	005g1		mL		10U	80 - 190
7 orSbj eG m	00500	00488		mL		B8	80 - 190
hereGf m	00500	00595		mL		105	80 - 190

Lab Sample ID: 400-154881-7 MS
Matrix: Water
Analysis Batch: 402495

Client Sample ID: MW-02
Prep Type: Total Recoverable
Prep Batch: 402138

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
ArseGc	00004U	3	00500	005g4		mL		10C	C5 - 195
Marif m	001C		00500	00UCB		mL		109	C5 - 195
MerSnif m	0000g4	3	00500	004B4		mL		BB	C5 - 195
MbroG	009C	1	00100	00g1		mL		104	C5 - 195
l arcif m	g9		500	g80		mL		115	C5 - 195
l dromif m	0009B		00500	00544		mL		10g	C5 - 195
l obart	000040	3	00500	00598		mL		10U	C5 - 195
2itdif m	00051		00500	00518		mL		Bg	C5 - 195
7 orSbj eG m	000085	3	00500	0048g		mL		BC	C5 - 195
hereGf m	000094	3	00500	0051B		mL		104	C5 - 195

Lab Sample ID: 400-154881-7 MSD
Matrix: Water
Analysis Batch: 402495

Client Sample ID: MW-02
Prep Type: Total Recoverable
Prep Batch: 402138

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
ArseGc	00004U	3	00500	00598		mL		10U	C5 - 195	1	90

TestAmerica weGacora

QC Sample Results

Line: ufrwoperlomyaGS
wroectRite: l l . hmitd wraG

TestAmerica Job ID: 400-154881-C
hDu : Asd woG

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

Lab Sample ID: 400-154881-7 MSD
Matrix: Water
Analysis Batch: 402495

Client Sample ID: MW-02
Prep Type: Total Recoverable
Prep Batch: 402138

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
Marif m	001C		00500	004C		mL		B5	C5 - 195	5	90	
MerSmif m	000g4	3	00500	00480		mL		BU	C5 - 195	g	90	
MbroG	009C	I	00100	009B		mL		109	C5 - 195	1	90	
l arcif m		g9	500	g00		mL		BU	C5 - 195	9	90	
l dromif m	0009B		00500	00549		mL		10g	C5 - 195	0	90	
l obart	000040	3	00500	00591		mL		104	C5 - 195	9	90	
2itdif m	00051		00500	00514		mL		Bg	C5 - 195	1	90	
7 orSbj eGf m	000085	3	00500	00480		mL		BU	C5 - 195	1	90	
hereGf m	000094	3	00500	00591		mL		104	C5 - 195	0	90	

Lab Sample ID: MB 400-402140/1-A ^5
Matrix: Water
Analysis Batch: 402344

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 402140

Analyte	MB MB		PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
ArseGc	00004U	3	0001g	00004U	mL		0UR9R8 19:01	0UR9R8 90:gg	5
Marif m	00004B	3	00095	00004B	mL		0UR9R8 19:01	0UR9R8 90:gg	5
MerSmif m	0000g4	3	00095	0000g4	mL		0UR9R8 19:01	0UR9R8 90:gg	5
MbroG	0091	3	0050	0091	mL		0UR9R8 19:01	0UR9R8 90:gg	5
l arcif m	001g	3	005	001g	mL		0UR9R8 19:01	0UR9R8 90:gg	5
l dromif m	00011	3	00095	00011	mL		0UR9R8 19:01	0UR9R8 90:gg	5
l obart	000040	3	00095	000040	mL		0UR9R8 19:01	0UR9R8 90:gg	5
2itdif m	00011	3	00050	00011	mL		0UR9R8 19:01	0UR9R8 90:gg	5
7 orSbj eGf m	000085	3	0015	000085	mL		0UR9R8 19:01	0UR9R8 90:gg	5
hereGf m	000094	3	0001g	000094	mL		0UR9R8 19:01	0UR9R8 90:gg	5

Lab Sample ID: LCS 400-402140/2-A
Matrix: Water
Analysis Batch: 402344

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 402140

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	RPD
ArseGc	00500	004C4		mL		B5	80 - 190	
Marif m	00500	00485		mL		BC	80 - 190	
MerSmif m	00500	004B5		mL		BB	80 - 190	
MbroG	00100	00B94		mL		B9	80 - 190	
l arcif m	500	40U		mL		B5	80 - 190	
l dromif m	00500	004C4		mL		B5	80 - 190	
l obart	00500	004BC		mL		BB	80 - 190	
2itdif m	00500	004BC		mL		BB	80 - 190	
7 orSbj eGf m	00500	0050U		mL		101	80 - 190	
hereGf m	00500	00595		mL		105	80 - 190	

Lab Sample ID: 400-155121-B-1-B MS ^5
Matrix: Water
Analysis Batch: 402344

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 402140

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec.	
				Result	Qualifier				Limits	RPD
ArseGc	00004U	3	00500	00489		mL		BU	C5 - 195	
Marif m	0095		00500	00Cg1		mL		BC	C5 - 195	

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QC Sample Results

Line: ufrPwoperl omyaGS
wro/ectRite: l l . hmitd wrG

TestAmerica Job ID: 400-154881-C
hDu : Asd woG

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

Lab Sample ID: 400-155121-B-1-B MS ^5
Matrix: Water
Analysis Batch: 402344

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 402140

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
MerSnif m	0000g4	3	00500	00518		mL		104	C5 - 195
MbroG	0091	3	00100	00880		mL		88	C5 - 195
l arcif m	40		500	B05		mL		BU	C5 - 195
l dromif m	000g8		00500	00590		mL		BU	C5 - 195
l obart	000040	3	00500	00510		mL		109	C5 - 195
2itdif m	000L8		00500	00598		mL		B9	C5 - 195
7 orBj eG m	00019	l	00500	0051B		mL		101	C5 - 195
hereGf m	0000CU	l	00500	005UC		mL		119	C5 - 195

Lab Sample ID: 400-155121-B-1-C MSD ^5
Matrix: Water
Analysis Batch: 402344

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 402140

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
ArseGc	00004U	3	00500	00480		mL		BU	C5 - 195	0	90
Marif m	0095		00500	00Cg9		mL		BC	C5 - 195	0	90
MerSnif m	0000g4	3	00500	0059B		mL		10U	C5 - 195	9	90
MbroG	0091	3	00100	00109		mL		109	C5 - 195	15	90
l arcif m	40		500	B0g		mL		Bg	C5 - 195	1	90
l dromif m	000g8		00500	0059C		mL		B8	C5 - 195	1	90
l obart	000040	3	00500	00519		mL		109	C5 - 195	0	90
2itdif m	000L8		00500	00599		mL		B1	C5 - 195	1	90
7 orBj eG m	00019	l	00500	00501		mL		B8	C5 - 195	g	90
hereGf m	0000CU	l	00500	005g5		mL		10U	C5 - 195	U	90

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

Lab Sample ID: MB 400-400737/1
Matrix: Water
Analysis Batch: 400737

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TotanDissorvej horij s	g0	3	50	g0	mL			0UR9R8 1g:11	1

Lab Sample ID: LCS 400-400737/2
Matrix: Water
Analysis Batch: 400737

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
TotanDissorvej horij s	9Bg	9B0		mL		BB	C8 - 199

Lab Sample ID: 400-154780-C-3 DU
Matrix: Water
Analysis Batch: 400737

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
TotanDissorvej horij s	gC0		gU8		mL		0	5

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QC Sample Results

Line: ufrwopelomyaGS
 wroectRite: l . hmitd wrG

TestAmerica Job ID: 400-154881-C
 hDu : Asd woG

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

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
TotanDissorvej horij s	g04	3	500	g04	mL2	-		0URgR8 18:95	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
TotanDissorvej horij s	9Bg	9UU		mL2	-	B1	C8 - 199

Lab Sample ID: 400-154761-A-34 DU
Matrix: Water
Analysis Batch: 400948

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
TotanDissorvej horij s	g90		g99		mL2	-	0	5

Lab Sample ID: 400-154880-B-3 DU
Matrix: Water
Analysis Batch: 400948

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
TotanDissorvej horij s	000		UBU		mL2	-	0	5

Lab Sample ID: MB 400-400962/1
Matrix: Water
Analysis Batch: 400962

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TotanDissorvej horij s	g04	3	500	g04	mL2	-		0URgR8 1U:4g	1

Lab Sample ID: LCS 400-400962/2
Matrix: Water
Analysis Batch: 400962

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
TotanDissorvej horij s	9Bg	954		mL2	-	8C	C8 - 199

Lab Sample ID: 400-154761-A-23 DU
Matrix: Water
Analysis Batch: 400962

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
TotanDissorvej horij s	g10		g10		mL2	-	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
TotanDissorvej horij s	g04	3	500	g04	mL2	-		0UR5R8 15:50	1

TestAmerica weGacorã

QC Sample Results

Line: ufrPwoperl omyaGS
 wro/ectRite: l l . hmitd wraG

TestAmerica Job ID: 400-154881-C
 hDu : Asd woG

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
TotanDissorvej horij s	9Bg	954		mL		8C	C8 - 199

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
TotanDissorvej horij s	5U0		55U		mL		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
TotanDissorvej horij s	58		580		mL		0	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-403169/6
 Matrix: Water
 Analysis Batch: 403169

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
l dnoij e	000	3	90	000	mL			000908 0Cgg	1

Lab Sample ID: LCS 400-403169/7
 Matrix: Water
 Analysis Batch: 403169

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
l dnoij e	900	910		mL		105	B0 - 110

Lab Sample ID: MRL 400-403169/3
 Matrix: Water
 Analysis Batch: 403169

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
l dnoij e	900	108		mL		B4	50 - 150

Lab Sample ID: 400-154881-7 MS
 Matrix: Water
 Analysis Batch: 403169

Client Sample ID: MW-02
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
l dnoij e	1g		100	900		mL		105	Cg - 190

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QC Sample Results

LineG: u f r Pwop er l omyaGS
wro/ectRite: l l . hmitd wraG

TestAmerica Job ID: 400-154881-C
hDu : Asd woG

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

Lab Sample ID: 400-154881-7 MSD
Matrix: Water
Analysis Batch: 403169

Client Sample ID: MW-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
l dnoij e	1g		100	9g04		mL		109	Cg - 190	1	8

Lab Sample ID: 400-154880-B-4 MS
Matrix: Water
Analysis Batch: 403212

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	RPD	RPD Limit
l dnoij e	4g		100	4B05	Jg	mL		C1	Cg - 190		

Lab Sample ID: 400-154880-B-4 MSD
Matrix: Water
Analysis Batch: 403212

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
l dnoij e	4g		100	4B05	Jg	mL		UC	Cg - 190	1	8

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
l dnoij e	000	3	90	000	mL			0009R8 1g:0C	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	RPD	RPD Limit
l dnoij e	g00	g905		mL		110	B0 - 110		

Lab Sample ID: 400-155393-D-1 MS
Matrix: Water
Analysis Batch: 403252

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	RPD	RPD Limit
l dnoij e	g00		100	1404		mL		10C	Cg - 190		

Lab Sample ID: 400-155393-D-1 MSD
Matrix: Water
Analysis Batch: 403252

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
l dnoij e	g00		100	1405		mL		108	Cg - 190	0	8

TestAmerica weGacorã

QC Sample Results

Line: ufrPwoperl omyaGS
 wro/ectRite: l l . hmitd wrG

TestAmerica Job ID: 400-154881-C
 hDu : Asd woG

Method: SM 4500 F C - Fluoride

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	0.009	3	0.010	0.009	mL			08/09/18 10:1g	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	0.004		mL		BB	0.0 - 110

Lab Sample ID: 400-154742-B-4 MS
 Matrix: Water
 Analysis Batch: 403221

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	0.009	3	1.00	1.04		mL		104	0.5 - 195

Lab Sample ID: 400-154742-B-4 MSD
 Matrix: Water
 Analysis Batch: 403221

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	0.009	3	1.00	1.04		mL		104	0.5 - 195	0	4

Lab Sample ID: 400-154881-7 DU
 Matrix: Water
 Analysis Batch: 403221

Client Sample ID: MW-02
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.018		0.018		mL		0	4

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	0.009	3	0.010	0.009	mL			08/09/18 11:54	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	0.004		mL		BC	0.0 - 110

Lab Sample ID: 400-154881-19 DU
 Matrix: Water
 Analysis Batch: 403294

Client Sample ID: FB-01
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.009	3	0.009	3	mL		NI	4

TestAmerica weGacora

QC Sample Results

Line: ufrPwoperl omyaGS
 wro/ectRite: l l . hmitd wraG

TestAmerica Job ID: 400-154881-C
 hDu : Asd woG

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-403150/6
 Matrix: Water
 Analysis Batch: 403150

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
hf rate	10	3	50	10	mLR			001R8 19:9U	1

Lab Sample ID: LCS 400-403150/7
 Matrix: Water
 Analysis Batch: 403150

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
hf rate	150	100		mLR		108	B0 - 110

Lab Sample ID: MRL 400-403150/3
 Matrix: Water
 Analysis Batch: 403150

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
hf rate	500	50g		mLR		11B	50 - 150

Lab Sample ID: 400-155356-B-10 MS
 Matrix: Water
 Analysis Batch: 403150

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
hf rate	g6	l	100	140		mLR		11g	CC - 198

Lab Sample ID: 400-155356-B-10 MSD
 Matrix: Water
 Analysis Batch: 403150

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	Limit
hf rate	g6	l	100	150		mLR		115	CC - 198	1	5

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
hf rate	10	3	50	10	mLR			001R8 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
hf rate	150	150		mLR		100	B0 - 110

TestAmerica weGacorã

QC Sample Results

Line: ufrwoperlomyaGS
 wroectRite: l . hmitd wrG

TestAmerica Job ID: 400-154881-C
 hDu : Asd woG

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

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
hf rate	500	504		mL		100	50 - 150

Lab Sample ID: 400-154909-A-1 MS
Matrix: Water
Analysis Batch: 403365

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
hf rate	100		100	100		mL		100	CC- 198

Lab Sample ID: 400-154909-A-1 MSD
Matrix: Water
Analysis Batch: 403365

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
hf rate	100		100	100		mL		100	CC- 198	g	5

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-370670/23-A
Matrix: Water
Analysis Batch: 374837

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 370670

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
. aj if m-99U	00gU5B	3	0098	0098	100	0044	yl iR	0UR5R8 1U:09	0CR1R8 14:94	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					03/12/18 13:09	05/11/18 14:94	1

Lab Sample ID: LCS 160-370670/1-A
Matrix: Water
Analysis Batch: 374837

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 370670

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
. aj if m-99U	150	100B		909	100	00U1	yl iR	100	U8 - 1gC
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	100		40 - 110						

Lab Sample ID: LCSD 160-370670/2-A
Matrix: Water
Analysis Batch: 374837

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 370670

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
. aj if m-99U	150	1509		104	100	0080	yl iR	100	U8 - 1gC	00U	1

TestAmerica weGacora

QC Sample Results

Line: ufrPwoperlomyaGS
 wro/ectRite: l . hmitd wrG

TestAmerica Job ID: 400-154881-C
 hDu : Asd woG

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCSD 160-370670/2-A
 Matrix: Water
 Analysis Batch: 374837

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 370670

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	101		40 - 110

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
. aj if m-99U	06109U	3	0614g	0614g	100	000C	yl iR	0URUR 8 19:1U	0CR1R 8 05:50	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/13/18 19:13	05/11/18 02:20	1

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
. aj if m-99U	110	1008		101	100	0010	yl iR	B1	U8 - 1gC
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	106		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
. aj if m-99U	110	1009		10U	100	0014	yl iR	8B	U8 - 1gC	0010	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	103		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-370673/23-A
 Matrix: Water
 Analysis Batch: 374835

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 370673

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
. aj if m-998	0019g5	3	001U5	001UC	100	0058g	yl iR	0UR5R 8 1C:09	0CR1R 8 0B:4U	1

TestAmerica weGacorã

QC Sample Results

Line: ufrPwoperlomyaGS
 wro/ectRite: l l . hmitd wrG

TestAmerica Job ID: 400-154881-C
 hDu : Asd woG

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

Lab Sample ID: MB 160-370673/23-A
Matrix: Water
Analysis Batch: 374835

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 370673

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110	03/12/18 15:09	05/11/18 0.:43	1
Y Carrier	3.79		40 - 110	03/12/18 15:09	05/11/18 0.:43	1

Lab Sample ID: LCS 160-370673/1-A
Matrix: Water
Analysis Batch: 374836

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 370673

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
. aj if m-998	106	116lg		169	100	06BC	yl iR	109	5U- 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	100		40 - 110
Y Carrier	823		40 - 110

Lab Sample ID: LCSD 160-370673/2-A
Matrix: Water
Analysis Batch: 374836

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 370673

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
. aj if m-998	106	86BB		10U	100	06J5	yl iR	8C	5U- 140	06Jg	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	101		40 - 110
Y Carrier	320		40 - 110

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
. aj if m-998	0611C	3	060C	0608	100	06gU	yl iR	0URUR8 1g:10	0CR0R8 14:44	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110	03/13/18 16:10	05/10/18 14:44	1
Y Carrier	8879		40 - 110	03/13/18 16:10	05/10/18 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
. aj if m-998	86U	8614g		0655	100	064C	yl iR	100	5U- 140

TestAmerica weGacorã

QC Sample Results

Line: ufrwoperlomyaGS
 Project: I.L. hmitd wraG

TestAmerica Job ID: 400-154881-C
 hDu: Asd woG

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

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

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	106		40 - 110
Y Carrier	.672		40 - 110

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
232aj if m-998	861U	8691		06U5	100	0610	yl if2	109	5U-140	06B	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	103		40 - 110
Y Carrier	.173		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
226ombi2aj if m-99U+998	0610	3	0650U		069g	500	060C	yl if2	060	

Chain of Custody Record

Client Information
 Client Contact: Kristi Mitchell
 Company: Gulf Power Company
 Address: BIN 731 One Energy Place
 City: Pensacola
 State, Zip: FL, 32520
 Phone: 850-444-6427(Tel)
 Email: krmitch@southernco.com
 Project Name: CCR Smith Plant
 Site: Ash Pond

Lab P#: Whitmire, Cheyenne R
 E-Mail: cheyenne.whitmire@testamericainc.com
 Carrier Tracking No(s):
 C-OC No: 400-74588-29346.2
 Page: 1 of 2
 Job #: 850-336-012

Due Date Requested:
 TAT Requested (days):
 PO #: Purchase Order not required
 W/O #:
 Project #: 40006609
 SSOW#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (Water, Sewage, Other)	Preservation Code:	Field Filtered Sample (Yes or No)		Perform MSM/SD (Yes or No)		Total Dissolved Solids, 4500 F C - Fluoride		Mercury		3315, Ra226, 9320, Ra228, Ra228Ra228_gfpc		Analysis Requested	Total Number of Containers	Special Instructions/Note:
						X	D	X	D	X	D	X	D	X	D			
MW-02	6-6-18	1410	G	Water		X		X		X		X		X		Barium, Calcium, As, Cu, Beryllium, Sr	3	
MW-03	6-6-18	1907	G	Water		X		X		X		X		X			3	
MW-06	6-8-18	0829	G	Water		X		X		X		X		X			3	
MW-07	6-8-18	1011	G	Water		X		X		X		X		X			3	
MW-08	6-7-18	1314	G			X		X		X		X		X			3	
MW-09	6-7-18	1721	G			X		X		X		X		X			3	
MW-10	6-7-18	1948	G			X		X		X		X		X			3	
MW-12	6-6-18	1606	G			X		X		X		X		X			3	
DUP-01	6-6-18	0600	G			X		X		X		X		X			3	
DUP-02	6-7-18	0700	G			X		X		X		X		X			3	
DUP-03	6-8-18	0605	G			X		X		X		X		X			3	

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: _____ Date/Time: 6-8-18 1130
 Relinquished by: Kristi Mitchell Date/Time: 6/8/18 1:50
 Relinquished by: _____ Date/Time: _____

Company: RDH Company: RDH
 Company: RDH Company: RDH

Cooler Temperature(s) °C and Other Remarks:

Chain of Custody Record

Client Information
 Client Contact: Kristi Mitchell
 Company: Gulf Power Company
 Address: BIN 731 One Energy Place
 City: Pensacola
 State, Zip: FL, 32520
 Phone: 850-444-6427(Tel)
 Email: krmitch@southemco.com
 Project Name: CCR Smith Plant
 Site: Ash Pond

Sample Information
 Sample #: KUC Hg cad Pb Cr
 Phone: 850-336-0192
 Lab P/N: Whitmire, Cheyenne R
 E-Mail: cheyenne.whitmire@testamericainc.com

Due Date Requested:
 TAT Requested (days):
 PO #: Purchase Order not required
 WO #:
 Project #: 40006609
 SSOW#:

Analysis Requested

Field Filtered Sample (Yes or No)	Perform M/M/S/D (Yes or No)	Total Dissolved Solids, 4500 F.C - Fluoride	Mercury	3315_Ra226, 9320_Ra228, Ra226Ra228_GFPc	As, Cd, Chromium, Hg, Pb, Se, Th, U, V, Y	Other
X	X	X	X	X	X	X
X	X	X	X	X	X	X
X	X	X	X	X	X	X
X	X	X	X	X	X	X

Sample Identification

Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Preservation Code:	Matrix (Water, Seawater, Urine, Blood, etc.)
EB-01	6-7-18	1155	G	Water	Water
FB-01	6-7-18	1150	G	Water	Water
EB-02	6-8-18	0917	G	Water	Water
FB-02	6-8-18	0912	G	Water	Water

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/Note:
 Total Number of Containers: 3
 Special Instructions/Note: (Blank)

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

Empty Kit Relinquished by:
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Relinquished by: Kristi Mitchell
 Date/Time: 6-8-18 1:30
 Company: Gulf Power Company

Received by: Kristi Mitchell
 Date/Time: 6-8-18 1:30
 Company: Gulf Power Company

Custody Seal No.:
 Δ Yes Δ No



Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-154881-S

DAG Number: s hd Pon/

Login Number: 154881

List Number: 1

Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
calibration validity deviation or inaccuracy by a hurry meter	NR	
, de vooler vuhto/ y heal° if prehent° ih intavtT	, rue	
Dample vuhto/ y heal° if prehent° are intavtT	NR	
, de vooler or hampleh / o not appear to da' e been vompromihe/ or tampere/ wtdT	, rue	
Dampleh were revei' e/ on iveT	, rue	
Cooler , emperature ih avveptableT	, rue	
Cooler , emperature ih revor/ e/ T	, rue	OTDIC° OTDIC° OTDIC° OTDIC° OTDIC° 7-S
COC ih prehentT	, rue	
COC ih fille/ out in in< an/ le. ibleT	, rue	
COC ih fille/ out wtd all pertinent informationT	, rue	
the Fiel/ Dample name prehent on COC?	, rue	
, dere are no / ihvrepanviah between tde vontainerh revei' e/ an/ tde COCT	, rue	
Dampleh are revei' e/ wtdin Hol/ in. , ime (exvlu/ in. tehth wtd imme/ iate H, h)	, rue	
Dample vontainerh da' e le. ible labelhT	, rue	
Containerh are not broken or leaking. T	, rue	
Dample vollevtion / aterimeh are pro' i/ e/ T	, rue	
sppropriate hample vontainerh are uhe/ T	, rue	
Dample bottleh are completely fille/ T	, rue	
Dample Preher' ation Verifie/ T	, rue	
, dere ih huffvivent ' oITfor all requhe/ analyheh° invITany requhe/ MDRMDAh	, rue	
Containerh requirin. zero dea/ hpave da' e no dea/ hpave or bubble ih =6mm (1/4")T	NR	
Multipdahiv hampleh are not prehentT	, rue	
Dampleh / o not require hplittin. or vompohitin. T	, rue	
chemical Chlorine deviation T	NR	

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-154881-S

DAG Number: s hd Pon/

Login Number: 154881

List Number: 2

Creator: Press, Nicholas B

List Source: TestAmerica St. Louis

List Creation: 06/12/18 05:09 PM

Question	Answer	Comment
calibration vial deviation or inaccuracy by a hurry meter	, rue	
, de vooler vuhto/ y heal° if prehent° ih intavtT	, rue	
Dample vuhto/ y heal° if prehent° are intavtT	, rue	
, de vooler or hampleh / o not appear to da' e been vompromihe/ or tampere/ wtdT	, rue	
Dampleh were revei' e/ on iveT	, rue	
Cooler , emperature ih avveptableT	, rue	
Cooler , emperature ih revor/ e/ T	, rue	18
COC ih prehentT	, rue	
COC ih fille/ out in in< an/ le. ibleT	, rue	
COC ih fille/ out wtd all pertinent informationT	, rue	
the Fiel/ Dample name prehent on COC?	Falhe	
, dere are no / ihvrepavieh between tde vontainerh revei' e/ an/ tde COCT	, rue	
Dample are revei' e/ wtdin Hol/ in. , ime (exvlu/ in. tehth wtd imme/ iate H, h)	, rue	
Dample vontainerh da' e le. ible labelhT	, rue	
Containerh are not broken or leaking. T	, rue	
Dample vollevtion / ateh meh are pro' i/ e/ T	, rue	
s ppropriate hample vontainerh are uhe/ T	, rue	
Dample bottleh are completely fille/ T	, rue	
Dample Preher' ation Verifie/ T	, rue	
, dere ih huffvivent ' oITfor all requehte/ analyheh° invITany requehte/ MDRMDAh	, rue	
Containerh requirin. zero dea/ hpave da' e no dea/ hpave or bubble ih =6mm (1/4")T	, rue	
Multipdahiv hampleh are not prehentT	, rue	
Dampleh / o not require hplittin. or vompohitin. T	, rue	
chemical Chlorine deviation T	NR	

Accreditation/Certification Summary

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

TestAmerica Job ID: 400-154881-2
SDG: Ash Pond

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 12075		L7421	07-77-70
Arizona	State Program	9	AZ0210	01-17-19
Arkansas DEQ	State Program	6	88-0689	09-01-18 F
California	State Program	9	7510	06-30-19
(lorida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010)(L*	06-30-19
Illinois	NELAP	5	700041	10-09-18
Iowa	State Program	2	362	08-01-18 F
Kansas	NELAP	2	E-10753	10-31-18
Kentucky)UST*	State Program	4	53	06-30-19
Kentucky)WW*	State Program	4	98030	17-31-18
Louisiana	NELAP	6	30926	06-30-19
Louisiana)DW*	NELAP	6	LA120005	17-31-18
Maryland	State Program	3	733	09-30-19
Massachusetts	State Program	1	M-(L094	06-30-19
Michigan	State Program	5	9917	06-30-19
New Jersey	NELAP	7	(L006	06-30-19
North Carolina)WW/SW*	State Program	4	314	17-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00462	01-31-19
Rhode Island	State Program	1	LAO00302	17-30-18
South Carolina	State Program	4	96076	06-30-18 F
Tennessee	State Program	4	TN07902	06-30-19
Texas	NELAP	6	T104204786-18-14	09-30-18
US (ish & Wildlife	(ederal		LE058448-0	02-31-19
USDA	(ederal		P330-18-00148	05-12-71
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		L7305	04-06-19
Arizona	State Program	9	AZ0813	17-08-18
California	State Program	9	7886	06-30-19
Connecticut	State Program	1	PH-0741	03-31-19
(lorida	NELAP	4	E82689	06-30-19
Illinois	NELAP	5	700073	11-30-18
Iowa	State Program	2	323	17-01-18
Kansas	NELAP	2	E-10736	10-31-18
Kentucky)DW*	State Program	4	90175	17-31-18
Louisiana	NELAP	6	04080	06-30-19
Louisiana)DW*	NELAP	6	LA180012	17-31-18
Maryland	State Program	3	310	09-30-19
Michigan	State Program	5	9005	06-30-18 F
Missouri	State Program	2	280	06-30-18 F

FAccreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Pensacola

Accreditation/Certification Summary

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

TestAmerica Job ID: 400-154881-2
 SDG: Ash Pond

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	MO000547018-1	02-31-19
New Jersey	NELAP	7	MO007	06-30-19
New York	NELAP	7	11616	03-31-19
North Dakota	State Program	8	R702	06-30-19
NRC	NRC		74-74812-01	17-31-77
Oklahoma	State Program	6	9992	08-31-19
Pennsylvania	NELAP	3	68-00540	07-78-19
South Carolina	State Program	4	85007001	06-30-19
Texas	NELAP	6	T104204193-18-17	02-31-19
US (Fish & Wildlife)	(ederal		058448	02-31-19
USDA	(ederal		P330-12-0078	07-07-70
Utah	NELAP	8	MO000547016-8	02-31-18 F
Virginia	NELAP	3	460730	06-14-19
Washington	State Program	10	C597	08-30-18 F
West Virginia DEP	State Program	3	381	10-31-18 F

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

TestAmerica Pensacola



Memorandum

Date: August 30, 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 440-154881-2, 440-154881-3, 440-154881-5 and 440-154881-7**

SITE: Plant Smith

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of eleven aqueous samples, three field duplicate samples, two field blanks and two equipment blanks collected from June 06 to 08, 2018, as part of the Plant Smith 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 SO₄
- 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
- 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. 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
400-154881-2	MW-14
400-154881-3	MW-13
400-154881-5	MW-11
400-154881-7	MW-02
400-154881-8	MW-03
400-154881-9	MW-06
400-154881-10	MW-07
400-154881-11	MW-08
400-154881-12	MW-09

Laboratory ID	Client ID
400-154881-13	MW-10
400-154881-14	MW-12
400-154881-15	DUP-01
400-154881-16	DUP-02
400-154881-17	DUP-03
400-154881-18	EB-01
400-154881-19	FB-01
400-154881-20	EB-02
400-154881-21	FB-02

The samples were received within 0-6°C, 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.

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
- ✓ Field Blank
- ⊗ Equipment 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 time was 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 402138 and 402140). Metals were not detected in the method blanks above the method detection limits (MDLs).

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-02. 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 no qualifications were applied to the data based on the batch QC.

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 Field Blank

Two field blanks were collected with the sample sets, FB-01 and FB-02. Metals were not detected in the field blanks above the MDLs.

1.7 Equipment Blank

Two equipment blanks were collected with the sample sets, EB-01 and EB-02. Metals were not detected in the equipment blanks above the MDLs, with the following exception.

Selenium was detected at an estimated concentration, greater than the MDL and less the RL in EB-01. Therefore, the concentrations of selenium in the associated samples that were less than five times the equipment blank concentration 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-03	Selenium	0.0003	I	0.0003	U*	BE

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
MW-08	Selenium	0.00032	I	0.00032	U*	BE
MW-13	Selenium	0.00031	I	0.00031	U*	BE
MW-11	Selenium	0.0006	I	0.0006	U*	BE

mg/L- milligram per liter

I-the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit

*-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

1.8 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-03, MW-08 and MW-06, respectively.

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 ANIONS

The samples were analyzed for chloride by SM 4500 Cl, fluoride by SM 4500 F and sulfate by SM 4500 SO₄.

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
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

2.1 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%.

2.2 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.

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). Eight method blanks were reported (chloride batches 403169, 403212 and 403252; fluoride batches 403221 and 403294; sulfate batches 403150, 403304 and 403365). Anions were not detected in the method blanks above the MDLs.

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). One sample set specific MS/MSD pair was reported, using sample MW-02 for the chloride data. The recovery and RPD results were within the laboratory and SOP specified acceptance criteria.

In addition, two batch MS/MSD pairs was reported for the chloride data, two batch MS/MSD pairs were reported for the fluoride data and three 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.

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). Eight LCSs were reported. The recovery results were within the laboratory and SOP specified acceptance criteria.

2.6 Laboratory Duplicate

Two sample set specific laboratory duplicates were reported for the fluoride data, using samples MW-02 and FB-01. The RPD results were within the laboratory and SOP specified acceptance criteria.

2.7 Field Blank

Two field blanks were collected with the sample sets, FB-01 and FB-02. Anions were not detected in the field blanks above the MDLs.

2.8 Equipment Blank

Two equipment blanks were collected with the sample sets, EB-01 and EB-02. Anions were not detected in the equipment blanks above the MDLs, with the following exception.

Sulfate was detected at an estimated concentration, greater than the MDL and less the RL in EB-02. Since sulfate was either not detected or detected at more than five times the equipment blank concentration in the associated samples, no qualifications were applied to the sulfate data based on the equipment blank contamination.

2.9 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-03, MW-08 and MW-06, respectively.

2.10 Sensitivity

The samples were reported to the MDLs. No elevated non-detect results were reported.

2.11 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 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
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

3.1 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%.

3.2 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.

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). Five method blanks were reported (batches 400737, 400948, 400955, 400962 and 401134). TDS was not detected in the method blanks above the MDL.

3.4 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Five LCSs were reported. The recovery results were within the laboratory and SOP specified acceptance criteria.

3.5 Laboratory Duplicate

Five 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.

3.6 Field Blank

Two field blanks were collected with the sample sets, FB-01 and FB-02. TDS was not detected in the field blanks above the MDLs.

3.7 Equipment Blank

Two equipment blanks were collected with the sample sets, EB-01 and EB-02. TDS was not detected in the equipment blanks above the MDLs.

3.8 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-03, MW-08 and MW-06, respectively.

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 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
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

4.1 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%.

4.2 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.

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). Two method blanks were reported for the radium-226 data (batches 370670 and 370790). Two method blanks were reported for the radium-228 data (batches 370673 and 370793). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs).

4.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

4.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCS/LCS duplicate (LCSD) pairs were reported for radium-226 and two 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.

4.6 Laboratory Duplicate

One batch laboratory duplicate was reported for the radium-228 data. Since this was batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

4.7 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.

4.8 Field Blank

Two field blanks were collected with the sample sets, FB-01 and FB-02. Radium was not detected in the field blanks above the MDCs, with the following exception.

Radium-226 was detected above the MDC in FB-02. Since the radium-226 normalized absolute difference (NAD) between the equipment blank and the associated samples radium-226 concentrations were greater than 2.58, no qualifications were applied to the data.

4.9 Equipment Blank

Two equipment blanks were collected with the sample sets, EB-01 and EB-02. Radium was not detected in the equipment blanks above the MDCs.

4.10 Field Duplicate

Three field duplicate samples were collected with the sample sets, DUP-01, DUP-02 and DUP-03. Acceptable precision $[(RER (2\sigma) \geq 3)]$ was demonstrated between the field duplicates and original samples MW-03, MW-08 and MW-06, respectively.

4.11 Sensitivity

The samples were reported to the MDCs. No elevated non-detect results were reported.

4.12 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.

* * * * *

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.

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.

Memorandum

Date: September 21, 2018
To: Carl Eldred
From: Kristoffer Henderson
CC: H. Parthasarathy and J. Caprio
Subject: **Stage 2A Data Validations - Level II Data Deliverables –
TestAmerica Laboratories, Inc. Job Number 440-154881-2**

SITE: Plant Smith

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of one aqueous sample, collected June 07, 2018, as part of the Plant Smith CCR sampling event.

The sample was analyzed at TestAmerica Pensacola (TA Pensacola), Pensacola, Florida, for the following analytical tests:

- Metals by EPA Methods 3005A/6020
- Chloride by Standard Methods (SM) 4500 Cl
- Fluoride by SM 4500 F
- Sulfate by SM 4500 SO₄
- Total Dissolved Solids by SM 2540 C

The sample was 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
- Combine Radium 226 + 228 by Calculation

EXECUTIVE SUMMARY

Based on this 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 report, 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 sample was analyzed and reported in the laboratory report:

Laboratory ID	Client ID
400-154881-2	MW-14

No sample preservation issues were noted by the laboratory. It was noted that there was a discrepancy between the first sample relinquishing time and the first sample receiving time of four minutes (11:30 vs 11:34). This did not have an impact on the data.

1.0 METALS

The sample was analyzed by EPA methods 3005A/6020.

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
- ✓ Field Blank
- ⊗ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

1.1 Overall Assessment

The metals data reported in this package 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 time was met for the sample analysis.

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). One method blank was reported (batch 402138). Metals were not detected in the method blank above the method detection limits (MDLs).

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 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 no qualifications were applied to the data based on the batch QC.

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). One LCS was reported. The recovery results were within the laboratory and SOP specified acceptance criteria.

1.6 Field Blank

Two field blanks were collected with the sample sets, FB-01 and FB-02, reported in laboratory report 400-154881-7. Metals were not detected in the field blanks above the MDLs.

1.7 Equipment Blank

Two equipment blanks were collected with the sample sets, EB-01 and EB-02, reported in laboratory report 400-154881-7. Metals were not detected in the equipment blanks above the MDLs, with the following exception.

Selenium was detected at an estimated concentration, greater than the MDL and less the RL in EB-01. Therefore, the concentration of selenium 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-14	Selenium	0.00041	I	0.00041	U*	BE

mg/L- milligram per liter

I-the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit

*-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

1.8 Field Duplicate

A field duplicate was not reported with the data set.

1.9 Sensitivity

The sample was reported to the MDLs. Elevated non-detect results were reported due to the dilutions analyzed.

1.10 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

2.0 ANIONS

The sample was analyzed for chloride by SM 4500 Cl, fluoride by SM 4500 F and sulfate by SM 4500 SO₄.

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
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

2.1 Overall Assessment

The anion data reported in this package 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 Times

The holding time for anion analyses (chloride, fluoride and sulfate) of a water sample is 28 days from sample collection to analysis. The holding time was met for the sample analysis.

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 (chloride batch 403212; fluoride batch 403221; sulfate batch 403304). Anions were not detected in the method blanks above the MDLs.

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). One batch MS was reported for the chloride data, one batch MS/MSD pair was reported for the fluoride data and one batch MS/MSD pair was 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.

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 Laboratory Duplicate

One batch laboratory duplicate was reported for the fluoride data. Since this was batch QC, the result does not affect the samples in this data set and qualifications were not applied to the data.

2.7 Field Blank

Two field blanks were collected with the sample sets, FB-01 and FB-02, reported in laboratory report 400-154881-7. Anions were not detected in the field blanks above the MDLs.

2.8 Equipment Blank

Two equipment blanks were collected with the sample sets, EB-01 and EB-02, reported in laboratory report 400-154881-7. Anions were not detected in the equipment blanks above the MDLs, with the following exception.

Sulfate was detected at an estimated concentration, greater than the MDL and less the RL in EB-02. Since sulfate was detected at more than five times the equipment blank concentration in the associated sample, no qualification was applied to the sulfate data based on the equipment blank contamination.

2.9 Field Duplicate

A field duplicate was not reported with the data set.

2.10 Sensitivity

The sample data were reported to the MDLs. No elevated non-detect results were reported.

2.11 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

3.0 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
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

3.1 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%.

3.2 Holding Times

The holding time for TDS analyses of a water sample is 7 days from sample collection to analysis. The holding time was met for the sample analysis.

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). One method blank was reported (batch 400948). TDS was not detected in the method blank above the MDL.

3.4 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS was reported. The recovery result was within the laboratory and SOP specified acceptance criteria.

3.5 Laboratory Duplicate

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.

3.6 Field Blank

Two field blanks were collected with the sample sets, FB-01 and FB-02, reported in laboratory report 400-154881-7. TDS was not detected in the field blanks above the MDLs.

3.7 Equipment Blank

Two equipment blanks were collected with the sample sets, EB-01 and EB-02, reported in laboratory report 400-154881-7. TDS was not detected in the equipment blanks above the MDLs.

3.8 Field Duplicate

A field duplicate was not reported with the data set.

3.9 Sensitivity

The sample result was reported to the MDL. No elevated non-detect results were reported.

3.10 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

4.0 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
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

4.1 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%.

4.2 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.

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). One method blank was reported for the radium-226 data (batch 370670). One method blank was reported for the radium-228 data (batch 370673 and

370793). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs).

4.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

4.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCS/LCS duplicate (LCSD) pairs were reported for radium-226 and two 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.

4.6 Laboratory Duplicate

One batch laboratory duplicate was reported for the radium-228 data. Since this was batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

4.7 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.

4.8 Field Blank

Two field blanks were collected with the sample sets, FB-01 and FB-02, reported in laboratory report 400-154881-7. Radium was not detected in the field blanks above the MDCs, with the following exception.

Radium-226 was detected above the MDC in FB-02. Since the radium-226 normalized absolute difference (NAD) between the equipment blank and the associated sample radium-226 concentration was greater than 2.58, no qualifications were applied to the data.

4.9 Equipment Blank

Two equipment blanks were collected with the sample sets, EB-01 and EB-02, reported in laboratory report 400-154881-7. Radium was not detected in the equipment blanks above the MDCs.

4.10 Field Duplicate

A field duplicate was not reported with the data set.

4.11 Sensitivity

The sample was reported to the MDCs. No elevated non-detect results were reported.

4.12 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

* * * * *

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 deficiencies 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 sample and meet quality control criteria. The analyte may or may not be present in the sample.

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: 2018-11-19 11:11:56

Project Information:

Operator Name Philip Evans
 Company Name RDH Environmental
 Project Name Smith CCR
 Site Name Smith Plant
 Latitude 0° 0' 0"
 Longitude 0° 0' 0"
 Sonde SN 417744
 Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
 Tubing Type PE
 Tubing Diameter .17 in
 Tubing Length 42 ft
 Pump placement from TOC 35 ft

Well Information:

Well ID MW-06
 Well diameter 2 in
 Well Total Depth 40 ft
 Screen Length 10 ft
 Depth to Water 13.55 ft

Pumping Information:

Final Pumping Rate 400 mL/min
 Total System Volume 0.2774638 L
 Calculated Sample Rate 300 sec
 Stabilization Drawdown 42.6 in
 Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

Stabilization	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:46:48	1501.02	26.67	5.41	9194.12	0.86	16.60	0.14	-153.60
Last 5	10:51:48	1801.02	27.06	5.35	9271.38	0.94	16.72	0.14	-146.78
Last 5	10:56:48	2101.02	26.84	5.32	9358.43	0.90	16.90	0.13	-140.81
Last 5	11:01:48	2401.02	26.74	5.28	9500.55	0.85	17.04	0.13	-135.61
Last 5	11:06:48	2701.02	26.70	5.26	9613.82	0.82	17.10	0.13	-131.54
Variance 0			-0.22	-0.04	87.06			-0.00	5.97
Variance 1			-0.09	-0.04	142.12			-0.00	5.19
Variance 2			-0.04	-0.03	113.27			-0.00	4.07

Notes

Sample time @1110. PC 70.

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-19 12:26:09

Project Information:

Operator Name Philip Evans
 Company Name RDH Environmental
 Project Name Smith CCR
 Site Name Smith Plant
 Latitude 0° 0' 0"
 Longitude 0° 0' 0"
 Sonde SN 417744
 Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
 Tubing Type PE
 Tubing Diameter .17 in
 Tubing Length 42 ft
 Pump placement from TOC 35 ft

Well Information:

Well ID MW-07
 Well diameter 2 in
 Well Total Depth 40 ft
 Screen Length 10 ft
 Depth to Water 11.75 ft

Pumping Information:

Final Pumping Rate 400 mL/min
 Total System Volume 0.2774638 L
 Calculated Sample Rate 300 sec
 Stabilization Drawdown 6 in
 Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:00:35	26.99	6.13	10725.57	5.01	12.28	0.13	-201.34
Last 5	12:05:35	26.97	6.14	10741.64	4.43	12.28	0.12	-202.42
Last 5	12:10:35	26.74	6.15	10774.92	4.50	12.28	0.11	-202.35
Last 5	12:15:35	26.58	6.15	10795.99	4.28	12.28	0.11	-202.24
Last 5	12:20:35	26.57	6.15	10809.27	4.66	12.28	0.11	-201.76
Variance 0		-0.23	0.01	33.28			-0.00	0.06
Variance 1		-0.17	0.01	21.07			-0.00	0.11
Variance 2		-0.01	0.00	13.28			-0.00	0.49

Notes

Sample time @ 1225. PC 70.

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-19 15:13:14

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Smith CCR
Site Name Smith Plant
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 45 ft
Pump placement from TOC 38 ft

Well Information:

Well ID MW-08
Well diameter 2 in
Well Total Depth 43 ft
Screen Length 10 ft
Depth to Water 17.82 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.290854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 46 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Last 5	14:57:44	300.02	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	15:02:44	600.02	3.19	11466.46	3.08	21.14	0.22	-3.54
Last 5	15:07:45	901.02	3.19	11476.73	3.05	21.48	0.18	-3.07
Last 5			3.26	11397.48	2.91	21.60	0.18	-8.80
Variance 0		nan	nan	nan	nan	nan	nan	nan
Variance 1		-0.09	0.00	10.28			-0.04	0.47
Variance 2		0.01	0.07	-79.25			-0.00	-5.73

Notes

Sample time @ 1515. PC 70.

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-20 08:45:45

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Smith CCR
Site Name Smith Plant CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 35 ft

Pump placement from TOC 28 ft

Well Information:

Well ID MW-09
Well diameter 2 in
Well Total Depth 33 ft
Screen Length 10 ft
Depth to Water 10.43 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 12 in
Total Volume Pumped 16 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	08:23:04	20.03	6.55	8863.92	5.46	11.41	0.21	-185.28
Last 5	08:28:04	20.08	6.54	8900.38	5.07	11.42	0.21	-184.48
Last 5	08:33:04	20.39	6.55	8855.54	4.93	11.42	0.17	-184.28
Last 5	08:38:04	20.48	6.53	8920.38	4.76	11.42	0.19	-183.76
Last 5	08:43:04	20.94	6.52	8950.55	4.51	11.42	0.26	-184.36
Variance 0		0.31	0.01	-44.84			-0.04	0.19
Variance 1		0.09	-0.02	64.84			0.02	0.53
Variance 2		0.46	-0.01	30.17			0.07	-0.60

Notes

Sample@0844, DUP-02@0744, partly cloudy 60

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-20 10:30:40

Project Information:

Operator Name Philip Evans
 Company Name RDH Environmental
 Project Name Smith CCR
 Site Name Smith Plant
 Latitude 0° 0' 0"
 Longitude 0° 0' 0"
 Sonde SN 417744
 Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
 Tubing Type PE
 Tubing Diameter .17 in
 Tubing Length 35 ft
 Pump placement from TOC 28 ft

Well Information:

Well ID MW-10
 Well diameter 2 in
 Well Total Depth 33 ft
 Screen Length 10 ft
 Depth to Water 8.18 ft

Pumping Information:

Final Pumping Rate 400 mL/min
 Total System Volume 0.2462198 L
 Calculated Sample Rate 300 sec
 Stabilization Drawdown 19 in
 Total Volume Pumped 26 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:07:28	2703.02	5.16	9012.37	5.96	9.67	0.15	-103.96
Last 5	10:12:28	3003.02	5.15	9020.14	5.20	9.67	0.14	-103.68
Last 5	10:17:28	3303.02	5.16	9010.36	4.68	9.68	0.14	-102.86
Last 5	10:22:28	3603.02	5.17	9014.01	4.80	9.70	0.14	-102.51
Last 5	10:27:29	3904.02	5.18	9003.92	4.43	9.70	0.14	-101.34
Variance 0		0.19	0.01	-9.79			-0.00	0.82
Variance 1		0.05	0.01	3.66			-0.00	0.36
Variance 2		-0.09	0.01	-10.09			-0.00	1.16

Notes

Sample time @ 1030. PC 70.

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-20 11:47:30

Project Information:

Operator Name Brett Surlles
Company Name RDH
Project Name Smith CCR
Site Name Smith Plant CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 35 ft
Pump placement from TOC 28 ft

Well Information:

Well ID MW-11
Well diameter 2 in
Well Total Depth 33 ft
Screen Length 10 ft
Depth to Water 9.61 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 20 in
Total Volume Pumped 24 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.2	+/- 0.2	+/- 5%	+/- 10	+/- 0.2	+/- 10
Last 5	11:24:10	24.13	6.35	8870.75	11.55	0.15	-235.88
Last 5	11:29:10	24.87	6.36	8817.42	11.55	0.14	-233.85
Last 5	11:34:10	24.12	6.36	8855.32	11.55	0.14	-229.88
Last 5	11:39:10	24.05	6.35	8973.70	11.55	0.15	-231.11
Last 5	11:44:10	24.23	6.35	8964.92	11.55	0.14	-230.12
Variance 0		-0.75	-0.00	37.90		-0.00	3.97
Variance 1		-0.06	-0.00	118.38		0.00	-1.23
Variance 2		0.18	-0.00	-8.78		-0.00	0.98

Notes

Sample@1146, FB-01@1125 Sunny 67

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-19 14:21:42

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Smith CCR
Site Name Smith Plant
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 45 ft
Pump placement from TOC 38 ft

Well Information:

Well ID MW-13
Well diameter 2 in
Well Total Depth 43 ft
Screen Length 10 ft
Depth to Water 15.65 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.290854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 45 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	13:54:49	26.15	6.94	13612.94	0.85	18.89	0.20	-236.70
Last 5	13:59:49	26.04	7.06	13768.92	0.60	19.01	0.17	-274.65
Last 5	14:04:49	26.01	7.04	14020.14	0.57	19.20	0.16	-287.65
Last 5	14:09:49	25.99	7.01	14102.06	0.55	19.28	0.15	-288.89
Last 5	14:14:49	26.01	6.99	14168.26	0.52	19.40	0.15	-288.79
Variance 0		-0.03	-0.02	251.22			-0.01	-13.01
Variance 1		-0.02	-0.03	81.92			-0.02	-1.24
Variance 2		0.02	-0.02	66.20			-0.00	0.10

Notes

Sample time @ 1425. PC 70.

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-19 14:41:08

Project Information:

Operator Name Brett Surlles
Company Name RDH
Project Name Smith CCR
Site Name Smith Plant CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 43 ft

Turbidity placement from TOC 36 ft

Well Information:

Well ID MW-14
Well diameter 2 in
Well Total Depth 41 ft
Screen Length 10 ft
Depth to Water 21.61 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.2819272 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 14 in
Total Volume Pumped 16 L

Low-Flow Sampling Stabilization Summary

Time	Elapsed	Temp C	pH	SpCond μ S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization		+/- 0.2	+/- 0.2	+/- 5%		+/- 0.2	+/- 10
Last 5	14:19:34	22.71	7.02	9336.90	22.62	0.07	-331.59
Last 5	14:24:35	22.52	6.97	9435.65	22.63	0.07	-343.83
Last 5	14:29:35	22.50	6.91	9516.50	22.63	0.08	-351.07
Last 5	14:34:35	22.48	6.88	9559.23	22.63	0.09	-355.95
Last 5	14:39:35	22.59	6.86	9568.48	22.63	0.09	-359.05
Variance 0		-0.02	-0.06	80.85		0.01	-7.24
Variance 1		-0.02	-0.03	42.73		0.00	-4.89
Variance 2		0.11	-0.01	9.25		0.00	-3.09

Notes

Sample@1440, Sunny 66

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-19 08:56:00

Project Information:

Operator Name Brett Surlles
 Company Name RDH
 Project Name Smith CCR
 Site Name Smith Plant CCR
 Latitude 0° 0' 0"
 Longitude 0° 0' 0"
 Sonde SN 597516
 Turbidity Make/Model Hach

Pump Information:

Pump Model/Type PP
 Tubing Type PE
 Tubing Diameter .17 in
 Tubing Length 28 ft

Pump placement from TOC 21 ft

Well Information:

Well ID MW-02
 Well diameter 2 in
 Well Total Depth 26 ft
 Screen Length 10 ft
 Depth to Water 4.02 ft

Pumping Information:

Final Pumping Rate 400 mL/min
 Total System Volume 0.2149758 L
 Calculated Sample Rate 300 sec
 Stabilization Drawdown 14 in
 Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.2	+/- 0.2	+/- 5%		+/- 0.2	+/- 10
Last 5 08:33:37	1500.02	21.49	6.02	178.22	5.26	0.10	-68.22
Last 5 08:38:37	1800.02	21.67	6.04	182.89	5.26	0.09	-72.52
Last 5 08:43:37	2100.02	21.90	6.05	186.84	5.26	0.09	-75.82
Last 5 08:48:37	2400.02	21.89	6.08	186.25	5.26	0.09	-78.45
Last 5 08:53:37	2700.02	21.94	6.09	189.27	5.26	0.08	-81.80
Variance 0		0.23	0.01	3.95		-0.00	-3.29
Variance 1		-0.01	0.02	-0.59		-0.00	-2.64
Variance 2		0.05	0.02	3.02		-0.01	-3.35

Notes

Sample@0855, Sunny 54

Grab Samples

Product Name: Low-Flow System
 Date: 2018-11-19 11:04:51

Project Information:

Operator Name Brett Surlles
 Company Name RDH
 Project Name Smith CCR
 Site Name Smith Plant CCR
 Latitude 0° 0' 0"
 Longitude 0° 0' 0"
 Sonde SN 597516
 Turbidity Make/Model Hach

Pump Information:

Pump Model/Type PP
 Tubing Type PE
 Tubing Diameter .17 in
 Tubing Length 35 ft
 Pump placement from TOC 28 ft

Well Information:

Well ID MW-03
 Well diameter 2 in
 Well Total Depth 33 ft
 Screen Length 10 ft
 Depth to Water 5.72 ft

Pumping Information:

Final Pumping Rate 400 mL/min
 Total System Volume 0.2462198 L
 Calculated Sample Rate 300 sec
 Stabilization Drawdown 0.08 in
 Total Volume Pumped 36 L

Low-Flow Sampling Stabilization Summary

Stabilization Time	Elapsed	Temp C	pH	SpCond μ S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
		+/- 0.2	+/- 0.2	+/- 5%		+/- 0.2	+/- 10
Last 5 10:42:59	4200.02	22.06	4.94	60.29	5.80	0.14	69.51
Last 5 10:47:59	4500.02	22.08	4.95	60.30	5.80	0.17	68.52
Last 5 10:52:59	4800.02	22.21	4.95	60.43	5.80	0.14	67.48
Last 5 10:57:59	5100.02	22.29	4.96	60.43	5.80	0.11	66.99
Last 5 11:02:59	5400.02	22.30	4.95	60.40	5.80	0.17	66.65
Variance 0		0.13	0.00	0.13		-0.02	-1.04
Variance 1		0.08	0.00	0.01		-0.03	-0.49
Variance 2		0.01	-0.01	-0.04		0.06	-0.34

Notes

Sample @1103, Sunny 57

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-19 12:33:57

Project Information:

Operator Name Brett Surlles
 Company Name RDH
 Project Name Smith CCR
 Site Name Smith Plant CCR
 Latitude 0° 0' 0"
 Longitude 0° 0' 0"
 Sonde SN 597516
 Turbidity Make/Model Hach

Pump Information:

Pump Model/Type PP
 Tubing Type PE
 Tubing Diameter .17 in
 Tubing Length 34 ft
 Pump placement from TOC 27 ft

Well Information:

Well ID MW-12
 Well diameter 2 in
 Well Total Depth 32 ft
 Screen Length 10 ft
 Depth to Water 9.88 ft

Pumping Information:

Final Pumping Rate 400 mL/min
 Total System Volume 0.2417564 L
 Calculated Sample Rate 300 sec
 Stabilization Drawdown 52 in
 Total Volume Pumped 16 L

Low-Flow Sampling Stabilization Summary

Stabilization	Time	Elapsed	Temp C	pH	SpCond μ S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Last 5	12:11:47	1200.02	+/- 0.2 24.34	+/- 0.2 6.12	+/- 5% 1205.87	14.11	+/- 0.2 0.12	+/- 10 -93.17
Last 5	12:16:47	1500.02	24.10	6.12	1204.46	14.29	0.12	-92.26
Last 5	12:21:47	1800.02	23.98	6.13	1203.49	14.43	0.11	-91.40
Last 5	12:26:47	2100.02	23.96	6.12	1196.38	14.49	0.11	-90.77
Last 5	12:31:47	2400.02	23.94	6.11	1200.44	14.51	0.10	-90.06
Variance 0			-0.12	0.00	-0.97		-0.00	0.86
Variance 1			-0.02	-0.00	-7.11		-0.00	0.63
Variance 2			-0.03	-0.01	4.06		-0.00	0.71

Notes

Sample@1233, DUP-01@1133, Sunny 64

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: 400-162396-1

TestAmerica Sample Delivery Group: Ashpond
Client Project/Site: CCR Smith Plant

For:

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

Attn: Kristi Mitchell



Authorized for release by:
12/14/2018 4:32:54 PM

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

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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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Case Narrative

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

TestAmerica Job ID: 400-162396-1
SDG: Ashpond

Job ID: 400-162396-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-162396-1

Metals

Method(s) 6020: The continuing calibration verification (CCV) associated with batch 421723 recovered above the upper control limit for Arsenic, Boron, Barium, Beryllium, Chromium, Cobalt, Selenium and Lithium. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: FB-01 (400-162396-11).

Method(s) 6020: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-6 (400-162396-3), MW-7 (400-162396-4), MW-8 (400-162396-5), MW-9 (400-162396-6), MW-10 (400-162396-7) and DUP-02 (400-162396-10). Elevated reporting limits (RLs) are provided.

General Chemistry

Method(s) SM 4500 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-6 (400-162396-3), MW-7 (400-162396-4), MW-8 (400-162396-5), MW-9 (400-162396-6), MW-10 (400-162396-7), MW-12 (400-162396-8), DUP-01 (400-162396-9) and DUP-02 (400-162396-10). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for analytical batch 421795 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

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. (400-162459-A-1 MS) and (400-162459-A-1 MSD)

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 421795 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-6 (400-162396-3), MW-7 (400-162396-4), MW-8 (400-162396-5), MW-9 (400-162396-6), MW-10 (400-162396-7), DUP-02 (400-162396-10), (400-162459-A-1), (400-162459-A-1 MS) and (400-162459-A-1 MSD). Elevated reporting limits (RLs) are provided.

Detection Summary

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

TestAmerica Job ID: 400-162396-1
SDG: Ashpond

Client Sample ID: MW-2

Lab Sample ID: 400-162396-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	20		0.25	0.13	mg/L	5		6020	Total
Barium - RA	0.013		0.0025	0.00049	mg/L	5		6020	Recoverable Total
Boron - RA	0.045	I	0.050	0.021	mg/L	5		6020	Recoverable Total
Chromium - RA	0.0019	I	0.0025	0.0011	mg/L	5		6020	Recoverable Total
Lithium - RA	0.0028	I	0.0050	0.0011	mg/L	5		6020	Recoverable Total
Total Dissolved Solids	88		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	13		2.0	1.4	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
Sulfate	4.4	I	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.09				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-3

Lab Sample ID: 400-162396-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	1.8		0.25	0.13	mg/L	5		6020	Total
Barium - RA	0.019		0.0025	0.00049	mg/L	5		6020	Recoverable Total
Chromium - RA	0.0024	I	0.0025	0.0011	mg/L	5		6020	Recoverable Total
Lithium - RA	0.011		0.0050	0.0011	mg/L	5		6020	Recoverable Total
Total Dissolved Solids	22		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	13		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
Field pH	4.95				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-6

Lab Sample ID: 400-162396-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron - DL	9.5		1.0	0.42	mg/L	100		6020	Total
Calcium - DL	240		5.0	2.5	mg/L	100		6020	Recoverable Total
Arsenic - RA	0.00075	I	0.0013	0.00046	mg/L	5		6020	Recoverable Total
Barium - RA	0.062		0.0025	0.00049	mg/L	5		6020	Recoverable Total
Beryllium - RA	0.0016	I	0.0025	0.00034	mg/L	5		6020	Recoverable Total
Lithium - RA	0.024		0.0050	0.0011	mg/L	5		6020	Recoverable Total
Total Dissolved Solids	5500		130	85	mg/L	1		SM 2540C	Total/NA
Chloride	3200		160	110	mg/L	80		SM 4500 Cl- E	Total/NA
Fluoride	0.040	I	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	520		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	5.26				SU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-162396-1
SDG: Ashpond

Client Sample ID: MW-7

Lab Sample ID: 400-162396-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron - DL	3.5		0.25	0.11	mg/L	25		6020	Total
Calcium - DL	380		1.3	0.63	mg/L	25		6020	Total Recoverable
Arsenic - RA	0.0018		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium - RA	0.14		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Chromium - RA	0.0016	I	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium - RA	0.0047	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	6500		130	85	mg/L	1		SM 2540C	Total/NA
Chloride	3300		160	110	mg/L	80		SM 4500 Cl- E	Total/NA
Sulfate	910		150	42	mg/L	30		SM 4500 SO4 E	Total/NA
Field pH	6.15				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-8

Lab Sample ID: 400-162396-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron - DL	17		1.0	0.42	mg/L	100		6020	Total Recoverable
Calcium - DL	480		5.0	2.5	mg/L	100		6020	Total Recoverable
Arsenic - RA	0.0015		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium - RA	0.058		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium - RA	0.0016	I	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Lithium - RA	0.015		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	7300		130	85	mg/L	1		SM 2540C	Total/NA
Chloride	3600		160	110	mg/L	80		SM 4500 Cl- E	Total/NA
Sulfate	960		150	42	mg/L	30		SM 4500 SO4 E	Total/NA
Field pH	3.26				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-9

Lab Sample ID: 400-162396-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0037		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.077		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.0013	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Boron - DL	11		1.0	0.42	mg/L	100		6020	Total Recoverable
Calcium - DL	220		5.0	2.5	mg/L	100		6020	Total Recoverable
Total Dissolved Solids	4400		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2200		160	110	mg/L	80		SM 4500 Cl- E	Total/NA
Sulfate	580		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	6.52				SU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-162396-1
SDG: Ashpond

Client Sample ID: MW-10

Lab Sample ID: 400-162396-7

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0033		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.095		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00040	I	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Lithium	0.0048	I	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0028	I	0.015	0.0020	mg/L	5		6020	Total Recoverable
Boron - DL	12		2.0	0.84	mg/L	200		6020	Total Recoverable
Calcium - DL	440		10	5.0	mg/L	200		6020	Total Recoverable
Total Dissolved Solids	6000		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2800		160	110	mg/L	80		SM 4500 Cl- E	Total/NA
Sulfate	830		150	42	mg/L	30		SM 4500 SO4 E	Total/NA
Field pH	5.18				SU	1		Field Sampling	Total/NA

Client Sample ID: MW-12

Lab Sample ID: 400-162396-8

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	38		0.25	0.13	mg/L	5		6020	Total Recoverable
Barium - RA	0.014		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron - RA	0.071		0.050	0.021	mg/L	5		6020	Total Recoverable
Lithium - RA	0.011		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	490		10	6.8	mg/L	1		SM 2540C	Total/NA
Chloride	210		20	14	mg/L	10		SM 4500 Cl- E	Total/NA
Fluoride	0.13		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2.2	I	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.11				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-01

Lab Sample ID: 400-162396-9

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
Boron	0.068		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	35		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.013		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0012	I	0.0013	0.00071	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	490		10	6.8	mg/L	1		SM 2540C	Total/NA
Chloride	210		20	14	mg/L	10		SM 4500 Cl- E	Total/NA
Fluoride	0.13		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1.8	I	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-162396-1
SDG: Ashpond

Client Sample ID: DUP-02

Lab Sample ID: 400-162396-10

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0038		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.079		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Selenium	0.00075	I	0.0013	0.00071	mg/L	5		6020	Total Recoverable
Boron - DL	10		1.0	0.42	mg/L	100		6020	Total Recoverable
Calcium - DL	220		5.0	2.5	mg/L	100		6020	Total Recoverable
Lithium - RA	0.0056		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	4000		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2300		160	110	mg/L	80		SM 4500 Cl- E	Total/NA
Fluoride	0.040	I	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	620		100	28	mg/L	20		SM 4500 SO4 E	Total/NA

Client Sample ID: FB-01

Lab Sample ID: 400-162396-11

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

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

TestAmerica Job ID: 400-162396-1
SDG: Ashpond

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

Protocol References:

EPA = US Environmental Protection Agency

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

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

Laboratory References:

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

Sample Summary

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

TestAmerica Job ID: 400-162396-1
SDG: Ashpond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-162396-1	MW-2	Water	11/19/18 08:55	11/20/18 15:40
400-162396-2	MW-3	Water	11/19/18 11:03	11/20/18 15:40
400-162396-3	MW-6	Water	11/19/18 11:10	11/20/18 15:40
400-162396-4	MW-7	Water	11/19/18 12:25	11/20/18 15:40
400-162396-5	MW-8	Water	11/19/18 15:15	11/20/18 15:40
400-162396-6	MW-9	Water	11/20/18 08:44	11/20/18 15:40
400-162396-7	MW-10	Water	11/20/18 10:30	11/20/18 15:40
400-162396-8	MW-12	Water	11/19/18 12:33	11/20/18 15:40
400-162396-9	DUP-01	Water	11/19/18 11:33	11/20/18 15:40
400-162396-10	DUP-02	Water	11/20/18 07:44	11/20/18 15:40
400-162396-11	FB-01	Water	11/20/18 11:25	11/20/18 15:40



Client Sample Results

Line: ufrPwoperl omyaGS
 wro/ectRite: l l . hmitd wraG

TestAmerica Job ID: 400-1526C5-1
 hDu : AsdyoG

Client Sample ID: MW-2
Date Collected: 11/19/18 08:55
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-1
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	20		0.2g	0.16	mLR		11/20/18 10:4g	11/20/18 15:6g	g
9 orSbj eGf m	0.0020	B	0.01g	0.0020	mLR		11/20/18 10:4g	11/20/18 15:6g	g

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0045	B	0.016	0.0045	mLR		11/20/18 10:4g	12/04/18 1MOM	g
Barium	0.013		0.02g	0.004C	mLR		11/20/18 10:4g	12/04/18 1MOM	g
7erSmif m	0.0064	B	0.02g	0.0064	mLR		11/20/18 10:4g	12/04/18 1MOM	g
Boron	0.045	I	0.0g0	0.021	mLR		11/20/18 10:4g	12/04/18 1MOM	g
Chromium	0.0019	I	0.02g	0.011	mLR		11/20/18 10:4g	12/04/18 1MOM	g
l obart	0.0040	B	0.02g	0.0040	mLR		11/20/18 10:4g	12/04/18 1MOM	g
Lithium	0.0028	I	0.0g0	0.011	mLR		11/20/18 10:4g	12/04/18 1MOM	g
hereGf m	0.000M	B	0.016	0.000M	mLR		11/20/18 10:4g	12/04/18 1MOM	g

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	88		g0	64	mLR			11/25/18 10:0C	1
Chloride	13		20	14	mLR			11/28/18 12:65	1
Fluoride	0.12		0.10	0.062	mLR			11/28/18 12:22	1
Sulfate	4.4	I	g0	14	mLR			11/28/18 16:60	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.09				hB			11/20/18 08:gg	1

Client Sample Results

Line: ufrPwoperl omyaGS
 wro/ectRite: l l . hmitd wraG

TestAmerica Job ID: 400-1526C5-1
 hDu : AsdyoG

Client Sample ID: MW-3
Date Collected: 11/19/18 11:03
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-2
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1.8		0.2g	0.16	mLR		11/20/18 10:4g	11/20/18 15:6C	g
9 orSj eGf m	0.0020	B	0.01g	0.0020	mLR		11/20/18 10:4g	11/20/18 15:6C	g

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ArsenGc	0.0045	B	0.016	0.0045	mLR		11/20/18 10:4g	12/04/18 1M10	g
Barium	0.019		0.002g	0.0004C	mLR		11/20/18 10:4g	12/04/18 1M10	g
7erSmf m	0.0064	B	0.002g	0.00064	mLR		11/20/18 10:4g	12/04/18 1M10	g
7oroG	0.021	B	0.0g0	0.021	mLR		11/20/18 10:4g	12/04/18 1M10	g
Chromium	0.0024	I	0.002g	0.0011	mLR		11/20/18 10:4g	12/04/18 1M10	g
l obart	0.0040	B	0.002g	0.00040	mLR		11/20/18 10:4g	12/04/18 1M10	g
Lithium	0.011		0.00g0	0.0011	mLR		11/20/18 10:4g	12/04/18 1M10	g
hereGf m	0.000M	B	0.0016	0.000M	mLR		11/20/18 10:4g	12/04/18 1M10	g

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	22		g0	6.4	mLR			11/25/18 10:15	1
Chloride	13		2.0	1.4	mLR			12/04/18 0C:28	1
Fluoride	0.040	I	0.10	0.062	mLR			11/28/18 12:6M	1
hf rate	1.4	B	g0	1.4	mLR			11/28/18 16:2g	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.95				hB			11/20/18 11:06	1

Client Sample Results

Client: ufrpoperlomyaGS
 Project: I.L. hmidt waG

TestAmerica Job ID: 400-1526C5-1
 hDu: AsdyoG

Client Sample ID: MW-6
Date Collected: 11/19/18 11:10
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-3
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9 orSj eG m	00020	B	001g	00020	mLR		11R0R8 10:4g	11R0R8 15:g4	g

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	9.5		10	042	mLR		11R0R8 10:4g	12R4R8 15:05	100
Calcium	240		g0	24	mLR		11R0R8 10:4g	12R4R8 15:05	100

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00075	I	00016	000045	mLR		11R0R8 10:4g	12R4R8 1Mg0	g
Barium	0.062		0002g	00004C	mLR		11R0R8 10:4g	12R4R8 1Mg0	g
Beryllium	0.0016	I	0002g	000064	mLR		11R0R8 10:4g	12R4R8 1Mg0	g
I dromif m	00011	B	0002g	00011	mLR		11R0R8 10:4g	12R4R8 1Mg0	g
I obart	000040	B	0002g	000040	mLR		11R0R8 10:4g	12R4R8 1Mg0	g
Lithium	0.024		000g0	00011	mLR		11R0R8 10:4g	12R0R8 20:24	g
hereGf m	0000M	B	00016	0000M	mLR		11R0R8 10:4g	12R4R8 1Mg0	g

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5500		160	8g	mLR			11R25R8 10:0C	1
Chloride	3200		150	110	mLR			12R4R8 0C:g4	80
Fluoride	0.040	I	0010	0062	mLR			11R28R8 12:41	1
Sulfate	520		100	28	mLR			12R6R8 0C:g5	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.26				hB			11R0R8 11:10	1

Client Sample Results

Project: ufrpoperlomyaGS
 Write: I.L. hmidt wraG

TestAmerica Job ID: 400-1526C5-1
 hDu: AsdyoG

Client Sample ID: MW-7
Date Collected: 11/19/18 12:25
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-4
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9 orSj eG m	0.0020	B	0.01g	0.0020	mL		11/20/18 10:4g	11/20/18 15:g8	g

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.5		0.2g	0.1	mL		11/20/18 10:4g	12/04/18 15:10	2g
Calcium	380		1.6	0.56	mL		11/20/18 10:4g	12/04/18 15:10	2g

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0018		0.016	0.00045	mL		11/20/18 10:4g	12/04/18 1Mg6	g
Barium	0.14		0.02g	0.0004C	mL		11/20/18 10:4g	12/04/18 1Mg6	g
7erSmif m	0.00064	B	0.002g	0.00064	mL		11/20/18 10:4g	12/04/18 1Mg6	g
Chromium	0.0016	I	0.002g	0.0011	mL		11/20/18 10:4g	12/04/18 1Mg6	g
l obart	0.00040	B	0.002g	0.00040	mL		11/20/18 10:4g	12/04/18 1Mg6	g
Lithium	0.0047	I	0.00g0	0.0011	mL		11/20/18 10:4g	12/04/18 1C:64	g
hereGf m	0.000M	B	0.0016	0.000M	mL		11/20/18 10:4g	12/04/18 1Mg6	g

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6500		160	8g	mL			11/25/18 10:0C	1
Chloride	3300		150	110	mL			12/04/18 0C:4	80
Fri orij e	0.062	B	0.10	0.062	mL			11/28/18 12:44	1
Sulfate	910		1g0	42	mL			12/06/18 10:00	60

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.15				hB			11/19/18 12:2g	1

Client Sample Results

Client: ufrpwoerlomyaGS
 Project: I.L. hmidt waG

TestAmerica Job ID: 400-1526C5-1
 hDu: AsdyoG

Client Sample ID: MW-8
Date Collected: 11/19/18 15:15
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-5
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9 orSj eG m	00020	B	001g	00020	mLR		11R0R8 10:4g	11R0R8 1M20	g

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	17		10	042	mLR		11R0R8 10:4g	12R4R8 15:16	100
Calcium	480		g0	24	mLR		11R0R8 10:4g	12R4R8 15:16	100

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0015		00016	000045	mLR		11R0R8 10:4g	12R4R8 1MgM	g
Barium	0.058		0002g	00004C	mLR		11R0R8 10:4g	12R4R8 1MgM	g
Beryllium	0.0016	I	0002g	000064	mLR		11R0R8 10:4g	12R4R8 1MgM	g
l dromif m	00011	B	0002g	00011	mLR		11R0R8 10:4g	12R4R8 1MgM	g
l obart	000040	B	0002g	000040	mLR		11R0R8 10:4g	12R4R8 1MgM	g
Lithium	0.015		000g0	00011	mLR		11R0R8 10:4g	12R0R8 1C:gC	g
hereGf m	0000M	B	00016	0000M	mLR		11R0R8 10:4g	12R4R8 1MgM	g

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7300		160	8g	mLR			11R25R8 10:0C	1
Chloride	3600		150	110	mLR			12R4R8 0C:g4	80
Fri orij e	0062	B	0010	0062	mLR			11R28R8 12:48	1
Sulfate	960		1g0	42	mLR			12R06R8 10:00	60

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	3.26				hB			11R0R8 1g:1g	1

Client Sample Results

Line: ufrPwoperl omyaGS
 wro/ectRite: l l . hmitd wraG

TestAmerica Job ID: 400-1526C5-1
 hDu : AsdyoG

Client Sample ID: MW-9
Date Collected: 11/20/18 08:44
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-6
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0037		0.0016	0.00045	mLR		11/20/18 10:4g	11/20/18 1M4M	g
Barium	0.077		0.002g	0.0004C	mLR		11/20/18 10:4g	11/20/18 1M4M	g
Beryllium	0.00064	B	0.002g	0.00064	mLR		11/20/18 10:4g	11/20/18 1M4M	g
Bromine	0.0011	B	0.002g	0.0011	mLR		11/20/18 10:4g	11/20/18 1M4M	g
Cadmium	0.00040	B	0.002g	0.00040	mLR		11/20/18 10:4g	11/20/18 1M4M	g
Lithium	0.0013	I	0.00g0	0.0011	mLR		11/20/18 10:4g	11/20/18 1M4M	g
Mercury	0.0020	B	0.01g	0.0020	mLR		11/20/18 10:4g	11/20/18 1M4M	g
Manganese	0.000M	B	0.0016	0.000M	mLR		11/20/18 10:4g	11/20/18 1M4M	g

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	11		10	0.42	mLR		11/20/18 10:4g	12/04/18 15:1M	100
Calcium	220		g0	2g	mLR		11/20/18 10:4g	12/04/18 15:1M	100

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	4400		g0	64	mLR			11/25/18 10:0C	1
Chloride	2200		150	110	mLR			12/04/18 0C:g8	80
Fluoride	0.062	B	0.10	0.062	mLR			11/28/18 12:g1	1
Sulfate	580		100	28	mLR			12/06/18 10:04	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.52				hB			11/20/18 08:44	1

Client Sample Results

Line: ufrpwoerlomyaGS
 wroectRite: l l . hmitd wraG

TestAmerica Job ID: 400-1526C5-1
 hDu : AsdyoG

Client Sample ID: MW-10
Date Collected: 11/20/18 10:30
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-7
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0033		0.0016	0.00045	mLR		11/20/18 10:4g	11/20/18 1Mgg	g
Barium	0.095		0.002g	0.0004C	mLR		11/20/18 10:4g	11/20/18 1Mgg	g
Beryllium	0.00040	I	0.002g	0.00064	mLR		11/20/18 10:4g	11/20/18 1Mgg	g
Indromif m	0.0011	B	0.002g	0.0011	mLR		11/20/18 10:4g	11/20/18 1Mgg	g
lobart	0.00040	B	0.002g	0.00040	mLR		11/20/18 10:4g	11/20/18 1Mgg	g
Lithium	0.0048	I	0.00g0	0.0011	mLR		11/20/18 10:4g	11/20/18 1Mgg	g
Molybdenum	0.0028	I	0.01g	0.0020	mLR		11/20/18 10:4g	11/20/18 1Mgg	g
hereGf m	0.000M	B	0.0016	0.000M	mLR		11/20/18 10:4g	11/20/18 1Mgg	g

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	12		20	0.84	mLR		11/20/18 10:4g	12/04/18 15:21	200
Calcium	440		10	g0	mLR		11/20/18 10:4g	12/04/18 15:21	200

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6000		g0	64	mLR			11/25/18 10:0C	1
Chloride	2800		150	110	mLR			12/04/18 10:0g	80
Fri orij e	0.062	B	0.10	0.062	mLR			11/28/18 12:gg	1
Sulfate	830		1g0	42	mLR			12/06/18 10:04	60

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.18				hB			11/20/18 10:60	1

Client Sample Results

Client: ufrwoperlomyaGS
 Project: I.L. hmitd wraG

TestAmerica Job ID: 400-152605-1
 hDu: AsdyoG

Client Sample ID: MW-12
Date Collected: 11/19/18 12:33
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-8
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	38		0.2g	0.16	mL _R		11/20/18 10:4g	11/20/18 15:46	g
9 or 5j eG m	0.0020	B	0.01g	0.0020	mL _R		11/20/18 10:4g	11/20/18 15:46	g

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0045	B	0.016	0.0045	mL _R		11/20/18 10:4g	12/04/18 1M14	g
Barium	0.014		0.002g	0.004C	mL _R		11/20/18 10:4g	12/04/18 1M14	g
7er 5mif m	0.00064	B	0.002g	0.00064	mL _R		11/20/18 10:4g	12/04/18 1M14	g
Boron	0.071		0.0g0	0.021	mL _R		11/20/18 10:4g	12/04/18 1M14	g
l dromif m	0.0011	B	0.002g	0.0011	mL _R		11/20/18 10:4g	12/04/18 1M14	g
l obart	0.00040	B	0.002g	0.00040	mL _R		11/20/18 10:4g	12/04/18 1M14	g
Lithium	0.011		0.00g0	0.0011	mL _R		11/20/18 10:4g	12/04/18 1M14	g
hereGf m	0.000M	B	0.0016	0.000M	mL _R		11/20/18 10:4g	12/04/18 1M14	g

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	490		10	58	mL _R			11/25/18 10:15	1
Chloride	210		20	14	mL _R			12/04/18 0C:g4	10
Fluoride	0.13		0.10	0.062	mL _R			11/28/18 12:gM	1
Sulfate	2.2	I	g0	1.4	mL _R			12/06/18 0C:22	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.11				hB			11/20/18 12:66	1

Client Sample Results

Client: ufrpwoerlomyaGS
 Project: I.L. hmidt waG

TestAmerica Job ID: 400-152605-1
 hDu: AsdyoG

Client Sample ID: DUP-01
Date Collected: 11/19/18 11:33
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-9
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0045	B	0.016	0.0045	mL		11/20/18 10:4g	11/20/18 15:0M	g
Barium	0.014		0.02g	0.004C	mL		11/20/18 10:4g	11/20/18 15:0M	g
Beryllium	0.0064	B	0.02g	0.0064	mL		11/20/18 10:4g	11/20/18 15:0M	g
Boron	0.068		0.0g0	0.021	mL		11/20/18 10:4g	11/20/18 15:0M	g
Calcium	35		0.2g	0.16	mL		11/20/18 10:4g	11/20/18 15:0M	g
Chromium	0.011	B	0.02g	0.011	mL		11/20/18 10:4g	11/20/18 15:0M	g
Cobalt	0.0040	B	0.02g	0.0040	mL		11/20/18 10:4g	11/20/18 15:0M	g
Lithium	0.013		0.0g0	0.011	mL		11/20/18 10:4g	11/20/18 15:0M	g
Mercury	0.0020	B	0.01g	0.0020	mL		11/20/18 10:4g	11/20/18 15:0M	g
Selenium	0.0012	I	0.016	0.000M	mL		11/20/18 10:4g	11/20/18 15:0M	g

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	490		10	58	mL			11/25/18 10:15	1
Chloride	210		20	14	mL			12/04/18 0C:8	10
Fluoride	0.13		0.10	0.062	mL			11/28/18 14:6g	1
Sulfate	1.8	I	g0	14	mL			12/06/18 0C:22	1

Client Sample Results

LineG: u f r Pwop er l omyaGS
wro/ectRite: l l . hmitd wraG

TestAmerica Job ID: 400-1526C5-1
hDu : AsdyoG

Client Sample ID: DUP-02

Date Collected: 11/20/18 07:44

Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-10

Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0038		0.0016	0.00045	mLR		11/20/18 10:4g	11/20/18 15:10	g
Barium	0.079		0.002g	0.0004C	mLR		11/20/18 10:4g	11/20/18 15:10	g
Indromif m	0.0011	B	0.002g	0.0011	mLR		11/20/18 10:4g	11/20/18 15:10	g
Indobart	0.00040	B	0.002g	0.00040	mLR		11/20/18 10:4g	11/20/18 15:10	g
IndorSbj eG m	0.0020	B	0.01g	0.0020	mLR		11/20/18 10:4g	11/20/18 15:10	g
Selenium	0.00075	I	0.0016	0.000M	mLR		11/20/18 10:4g	11/20/18 15:10	g

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	10		10	0.42	mLR		11/20/18 10:4g	12/04/18 15:24	100
Calcium	220		g0	2g	mLR		11/20/18 10:4g	12/04/18 15:24	100

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
InderSmif m	0.00064	B	0.002g	0.00064	mLR		11/20/18 10:4g	12/04/18 18:01	g
Lithium	0.0056		0.00g0	0.0011	mLR		11/20/18 10:4g	12/06/18 20:06	g

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	4000		g0	64	mLR			11/25/18 10:0C	1
Chloride	2300		150	110	mLR			12/04/18 10:0g	80
Fluoride	0.040	I	0.10	0.062	mLR			11/28/18 14:42	1
Sulfate	620		100	28	mLR			12/06/18 10:08	20

Client Sample Results

Line: ufrPwoperl omyaGS
 wro/ectRite: l l . hmitd wraG

TestAmerica Job ID: 400-1526C5-1
 hDu : AsdyoG

Client Sample ID: FB-01
Date Collected: 11/20/18 11:25
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-11
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ArseGc	0.00045	B	0.0016	0.00045	mLR		11/20/18 10:4g	11/20/18 15:62	g
7arif m	0.0004C	B	0.002g	0.0004C	mLR		11/20/18 10:4g	11/20/18 15:62	g
7erSmif m	0.00064	B	0.002g	0.00064	mLR		11/20/18 10:4g	11/20/18 15:62	g
7oroG	0.021	B	0.0g0	0.021	mLR		11/20/18 10:4g	11/20/18 15:62	g
l arcif m	0.16	B	0.2g	0.16	mLR		11/20/18 10:4g	11/20/18 15:62	g
l dromif m	0.0011	B	0.002g	0.0011	mLR		11/20/18 10:4g	11/20/18 15:62	g
l obart	0.00040	B	0.002g	0.00040	mLR		11/20/18 10:4g	11/20/18 15:62	g
3itdif m	0.0011	B	0.00g0	0.0011	mLR		11/20/18 10:4g	11/20/18 15:62	g
9 orSbj eGf m	0.0020	B	0.01g	0.0020	mLR		11/20/18 10:4g	11/20/18 15:62	g
hereGf m	0.000M	B	0.0016	0.000M	mLR		11/20/18 10:4g	11/20/18 15:62	g

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TotanDissorvej horij s	6.4	B	g0	6.4	mLR			11/25/18 10:15	1
l dnoij e	1.4	B	2.0	1.4	mLR			12/04/18 0C:6g	1
Fri orij e	0.062	B	0.10	0.062	mLR			11/28/18 14:45	1
hf rite	1.4	B	g0	1.4	mLR			12/06/18 0C:2M	1

Definitions/Glossary

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

TestAmerica Job ID: 400-162396-1
SDG: Ashpond

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.
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.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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 Smith Plant

TestAmerica Job ID: 400-162396-1
SDG: Ashpond

Client Sample ID: MW-2
Date Collected: 11/19/18 08:55
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	421723	11/30/18 16:35	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	422045	12/04/18 17:07	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	420775	11/26/18 10:09	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	421176	11/28/18 12:36	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421135	11/28/18 12:22	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	420988	11/27/18 13:30	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	421915	11/19/18 08:55	CDH	TAL PEN

Client Sample ID: MW-3
Date Collected: 11/19/18 11:03
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	421723	11/30/18 16:39	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	422045	12/04/18 17:10	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	420777	11/26/18 10:16	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	421838	12/04/18 09:28	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421135	11/28/18 12:37	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	420988	11/27/18 13:25	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	421915	11/19/18 11:03	CDH	TAL PEN

Client Sample ID: MW-6
Date Collected: 11/19/18 11:10
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	421723	11/30/18 16:54	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100	422045	12/04/18 16:06	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	422045	12/04/18 17:50	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	422591	12/07/18 20:24	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	420775	11/26/18 10:09	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		80	421838	12/04/18 09:54	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421135	11/28/18 12:41	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	421795	12/03/18 09:56	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-162396-1
SDG: Ashpond

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Field Sampling		1	421915	11/19/18 11:10	CDH	TAL PEN

Client Sample ID: MW-7

Lab Sample ID: 400-162396-4

Date Collected: 11/19/18 12:25

Matrix: Water

Date Received: 11/20/18 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	421723	11/30/18 16:58	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	422045	12/04/18 16:10	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	422045	12/04/18 17:53	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	422591	12/07/18 19:34	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	420775	11/26/18 10:09	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		80	421838	12/04/18 09:54	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421135	11/28/18 12:44	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	421795	12/03/18 10:00	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	421915	11/19/18 12:25	CDH	TAL PEN

Client Sample ID: MW-8

Lab Sample ID: 400-162396-5

Date Collected: 11/19/18 15:15

Matrix: Water

Date Received: 11/20/18 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	421723	11/30/18 17:20	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100	422045	12/04/18 16:13	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	422045	12/04/18 17:57	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	422591	12/07/18 19:59	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	420775	11/26/18 10:09	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		80	421838	12/04/18 09:54	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421135	11/28/18 12:48	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	421795	12/03/18 10:00	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	421915	11/19/18 15:15	CDH	TAL PEN

Client Sample ID: MW-9

Lab Sample ID: 400-162396-6

Date Collected: 11/20/18 08:44

Matrix: Water

Date Received: 11/20/18 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			421465	11/30/18 10:45	DRE	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-162396-1
SDG: Ashpond

Client Sample ID: MW-9
Date Collected: 11/20/18 08:44
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020		5	421723	11/30/18 17:47	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100	422045	12/04/18 16:17	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	420775	11/26/18 10:09	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		80	421838	12/04/18 09:58	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421135	11/28/18 12:51	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	421795	12/03/18 10:04	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	421915	11/20/18 08:44	CDH	TAL PEN

Client Sample ID: MW-10
Date Collected: 11/20/18 10:30
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	421723	11/30/18 17:55	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	200	422045	12/04/18 16:21	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	420775	11/26/18 10:09	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		80	421838	12/04/18 10:05	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421135	11/28/18 12:55	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	421795	12/03/18 10:04	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	421915	11/20/18 10:30	CDH	TAL PEN

Client Sample ID: MW-12
Date Collected: 11/19/18 12:33
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	421723	11/30/18 16:43	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	422045	12/04/18 17:14	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	420777	11/26/18 10:16	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		10	421838	12/04/18 09:54	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421135	11/28/18 12:57	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	421795	12/03/18 09:22	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	421915	11/19/18 12:33	CDH	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-162396-1
SDG: Ashpond

Client Sample ID: DUP-01

Lab Sample ID: 400-162396-9

Date Collected: 11/19/18 11:33

Matrix: Water

Date Received: 11/20/18 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	421723	11/30/18 16:07	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	420777	11/26/18 10:16	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		10	421838	12/04/18 09:58	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421180	11/28/18 14:35	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	421795	12/03/18 09:22	RRC	TAL PEN

Client Sample ID: DUP-02

Lab Sample ID: 400-162396-10

Date Collected: 11/20/18 07:44

Matrix: Water

Date Received: 11/20/18 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	421723	11/30/18 16:10	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100	422045	12/04/18 16:24	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	422045	12/04/18 18:01	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	422591	12/07/18 20:03	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	420775	11/26/18 10:09	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		80	421838	12/04/18 10:05	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421180	11/28/18 14:42	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	421795	12/03/18 10:08	RRC	TAL PEN

Client Sample ID: FB-01

Lab Sample ID: 400-162396-11

Date Collected: 11/20/18 11:25

Matrix: Water

Date Received: 11/20/18 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	421723	11/30/18 16:32	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	420777	11/26/18 10:16	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	421838	12/04/18 09:35	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421180	11/28/18 14:46	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	421795	12/03/18 09:27	RRC	TAL PEN

Laboratory References:

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

QC Association Summary

Line: ufrPwoperlomyaGS
 wro/ectRite: l l Whmitd wraG

TestAmerica Job ID: 400-1526C5-1
 hDu : AsdyoG

Metals

Prep Batch: 39237L

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-1	v 3 -2	TotanWecoLerabre	3 ater	600MA	
400-1526C5-1 - WA	v 3 -2	TotanWecoLerabre	3 ater	600MA	
400-1526C5-2	v 3 -6	TotanWecoLerabre	3 ater	600MA	
400-1526C5-2 - WA	v 3 -6	TotanWecoLerabre	3 ater	600MA	
400-1526C5-6	v 3 -5	TotanWecoLerabre	3 ater	600MA	
400-1526C5-6 - DL	v 3 -5	TotanWecoLerabre	3 ater	600MA	
400-1526C5-6 - WA	v 3 -5	TotanWecoLerabre	3 ater	600MA	
400-1526C5-4 - WA	v 3 -7	TotanWecoLerabre	3 ater	600MA	
400-1526C5-4 - DL	v 3 -7	TotanWecoLerabre	3 ater	600MA	
400-1526C5-4	v 3 -7	TotanWecoLerabre	3 ater	600MA	
400-1526C5-M	v 3 -8	TotanWecoLerabre	3 ater	600MA	
400-1526C5-M- WA	v 3 -8	TotanWecoLerabre	3 ater	600MA	
400-1526C5-M- DL	v 3 -8	TotanWecoLerabre	3 ater	600MA	
400-1526C5-5 - DL	v 3 -C	TotanWecoLerabre	3 ater	600MA	
400-1526C5-5	v 3 -C	TotanWecoLerabre	3 ater	600MA	
400-1526C5-7 - DL	v 3 -10	TotanWecoLerabre	3 ater	600MA	
400-1526C5-7	v 3 -10	TotanWecoLerabre	3 ater	600MA	
400-1526C5-8 - WA	v 3 -12	TotanWecoLerabre	3 ater	600MA	
400-1526C5-8	v 3 -12	TotanWecoLerabre	3 ater	600MA	
400-1526C5-C	DFw-01	TotanWecoLerabre	3 ater	600MA	
400-1526C5-10 - WA	DFw-02	TotanWecoLerabre	3 ater	600MA	
400-1526C5-10 - DL	DFw-02	TotanWecoLerabre	3 ater	600MA	
400-1526C5-10	DFw-02	TotanWecoLerabre	3 ater	600MA	
400-1526C5-11	BE-01	TotanWecoLerabre	3 ater	600MA	
v E 400-42145MR-A 9M	v etdoj EraG	TotanWecoLerabre	3 ater	600MA	
LI h 400-42145MR-A	Lab l oGronh amyre	TotanWecoLerabre	3 ater	600MA	
400-152402-I -CE v h 9M	v atrik hyi^e	TotanWecoLerabre	3 ater	600MA	
400-152402-I -C-I v hD 9M	v atrik hyi^e Df yricate	TotanWecoLerabre	3 ater	600MA	

Analysis Batch: 39259(

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-1	v 3 -2	TotanWecoLerabre	3 ater	5020	42145M
400-1526C5-2	v 3 -6	TotanWecoLerabre	3 ater	5020	42145M
400-1526C5-6	v 3 -5	TotanWecoLerabre	3 ater	5020	42145M
400-1526C5-4	v 3 -7	TotanWecoLerabre	3 ater	5020	42145M
400-1526C5-M	v 3 -8	TotanWecoLerabre	3 ater	5020	42145M
400-1526C5-5	v 3 -C	TotanWecoLerabre	3 ater	5020	42145M
400-1526C5-7	v 3 -10	TotanWecoLerabre	3 ater	5020	42145M
400-1526C5-8	v 3 -12	TotanWecoLerabre	3 ater	5020	42145M
400-1526C5-C	DFw-01	TotanWecoLerabre	3 ater	5020	42145M
400-1526C5-10	DFw-02	TotanWecoLerabre	3 ater	5020	42145M
400-1526C5-11	BE-01	TotanWecoLerabre	3 ater	5020	42145M
v E 400-42145MR-A 9M	v etdoj EraG	TotanWecoLerabre	3 ater	5020	42145M
LI h 400-42145MR-A	Lab l oGronh amyre	TotanWecoLerabre	3 ater	5020	42145M
400-152402-I -CE v h 9M	v atrik hyi^e	TotanWecoLerabre	3 ater	5020	42145M
400-152402-I -C-I v hD 9M	v atrik hyi^e Df yricate	TotanWecoLerabre	3 ater	5020	42145M

Analysis Batch: 399) 3L

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-1 - WA	v 3 -2	TotanWecoLerabre	3 ater	5020	42145M
400-1526C5-2 - WA	v 3 -6	TotanWecoLerabre	3 ater	5020	42145M

TestAmerica weGacora

QC Association Summary

Line: ufrPwoperlomyaGS
 wro/ectRite: l l Whmitd wraG

TestAmerica Job ID: 400-1526C5-1
 hDu : AsdyoG

Metals 4Continue80

Analysis Batch: 399) 3L 4Continue80

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-1526C5-6 - DL	v 3 -5	TotanWecoUerabre	3 ater	5020	42145M
400-1526C5-6 - WA	v 3 -5	TotanWecoUerabre	3 ater	5020	42145M
400-1526C5-4 - DL	v 3 -7	TotanWecoUerabre	3 ater	5020	42145M
400-1526C5-4 - WA	v 3 -7	TotanWecoUerabre	3 ater	5020	42145M
400-1526C5-M- DL	v 3 -8	TotanWecoUerabre	3 ater	5020	42145M
400-1526C5-M- WA	v 3 -8	TotanWecoUerabre	3 ater	5020	42145M
400-1526C5-5 - DL	v 3 -C	TotanWecoUerabre	3 ater	5020	42145M
400-1526C5-7 - DL	v 3 -10	TotanWecoUerabre	3 ater	5020	42145M
400-1526C5-8 - WA	v 3 -12	TotanWecoUerabre	3 ater	5020	42145M
400-1526C5-10 - DL	DFw-02	TotanWecoUerabre	3 ater	5020	42145M
400-1526C5-10 - WA	DFw-02	TotanWecoUerabre	3 ater	5020	42145M

Analysis Batch: 399L12

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-1526C5-6 - WA	v 3 -5	TotanWecoUerabre	3 ater	5020	42145M
400-1526C5-4 - WA	v 3 -7	TotanWecoUerabre	3 ater	5020	42145M
400-1526C5-M- WA	v 3 -8	TotanWecoUerabre	3 ater	5020	42145M
400-1526C5-10 - WA	DFw-02	TotanWecoUerabre	3 ater	5020	42145M

General Chemistry

Analysis Batch: 39) 55L

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-1526C5-1	v 3 -2	TotanNA	3 ater	hv 2M40I	
400-1526C5-6	v 3 -5	TotanNA	3 ater	hv 2M40I	
400-1526C5-4	v 3 -7	TotanNA	3 ater	hv 2M40I	
400-1526C5-M	v 3 -8	TotanNA	3 ater	hv 2M40I	
400-1526C5-5	v 3 -C	TotanNA	3 ater	hv 2M40I	
400-1526C5-7	v 3 -10	TotanNA	3 ater	hv 2M40I	
400-1526C5-10	DFw-02	TotanNA	3 ater	hv 2M40I	
v E 400-42077MR	v etdoj EraG	TotanNA	3 ater	hv 2M40I	
LI h 400-42077MR	Lab l oGronhamyre	TotanNA	3 ater	hv 2M40I	
400-1526C5-1 DF	v 3 -2	TotanNA	3 ater	hv 2M40I	

Analysis Batch: 39) 555

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-1526C5-2	v 3 -6	TotanNA	3 ater	hv 2M40I	
400-1526C5-8	v 3 -12	TotanNA	3 ater	hv 2M40I	
400-1526C5-C	DFw-01	TotanNA	3 ater	hv 2M40I	
400-1526C5-11	BE-01	TotanNA	3 ater	hv 2M40I	
v E 400-420777R	v etdoj EraG	TotanNA	3 ater	hv 2M40I	
LI h 400-420777R	Lab l oGronhamyre	TotanNA	3 ater	hv 2M40I	
400-15267MA-4 DF	Df ynicate	TotanNA	3 ater	hv 2M40I	

Analysis Batch: 39) 166

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-1526C5-1	v 3 -2	TotanNA	3 ater	hv 4M00 hx 4 O	
400-1526C5-2	v 3 -6	TotanNA	3 ater	hv 4M00 hx 4 O	
v E 400-420C88R	v etdoj EraG	TotanNA	3 ater	hv 4M00 hx 4 O	
LI h 400-420C88R	Lab l oGronhamyre	TotanNA	3 ater	hv 4M00 hx 4 O	

TestAmerica weGacora

QC Association Summary

LineG: u f r Pwop er l omyaGS
wro/ectRite: l l Whmitd wraG

TestAmerica Job ID: 400-1526C5-1
hDu : AsdyoG

General Chemistry 4Continue80

Analysis Batch: 39) 166 4Continue80

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
v WL 400-420C88R	Lab l oGronh amyre	TotalNA	3 ater	hv 4M00 hx 4 O	
400-1526C5-2 v h	v 3 -6	TotalNA	3 ater	hv 4M00 hx 4 O	
400-1526C5-2 v hD	v 3 -6	TotalNA	3 ater	hv 4M00 hx 4 O	

Analysis Batch: 3922(L

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-1526C5-1	v 3 -2	TotalNA	3 ater	hv 4M00 BI	
400-1526C5-2	v 3 -6	TotalNA	3 ater	hv 4M00 BI	
400-1526C5-6	v 3 -5	TotalNA	3 ater	hv 4M00 BI	
400-1526C5-4	v 3 -7	TotalNA	3 ater	hv 4M00 BI	
400-1526C5-M	v 3 -8	TotalNA	3 ater	hv 4M00 BI	
400-1526C5-5	v 3 -C	TotalNA	3 ater	hv 4M00 BI	
400-1526C5-7	v 3 -10	TotalNA	3 ater	hv 4M00 BI	
400-1526C5-8	v 3 -12	TotalNA	3 ater	hv 4M00 BI	
v E 400-42116MR	v etdoj EraG	TotalNA	3 ater	hv 4M00 BI	
LI h 400-42116MR	Lab l oGronh amyre	TotalNA	3 ater	hv 4M00 BI	
240-104M05-E-2 v hD	v atrik hyi^e Df yricate	TotalNA	3 ater	hv 4M00 BI	
240-104M05-D-2 v h	v atrik hyi^e	TotalNA	3 ater	hv 4M00 BI	
240-104M21-I -Mv h	v atrik hyi^e	TotalNA	3 ater	hv 4M00 BI	
240-104M21-I -Mv hD	v atrik hyi^e Df yricate	TotalNA	3 ater	hv 4M00 BI	

Analysis Batch: 392257

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-1526C5-1	v 3 -2	TotalNA	3 ater	hv 4M00 l n O	
v E 400-421175R	v etdoj EraG	TotalNA	3 ater	hv 4M00 l n O	
LI h 400-421175R	Lab l oGronh amyre	TotalNA	3 ater	hv 4M00 l n O	
v WL 400-421175R	Lab l oGronh amyre	TotalNA	3 ater	hv 4M00 l n O	
400-15267MA-1 v h	v atrik hyi^e	TotalNA	3 ater	hv 4M00 l n O	
400-15267MA-1 v hD	v atrik hyi^e Df yricate	TotalNA	3 ater	hv 4M00 l n O	

Analysis Batch: 39226)

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-1526C5-C	DFw-01	TotalNA	3 ater	hv 4M00 BI	
400-1526C5-10	DFw-02	TotalNA	3 ater	hv 4M00 BI	
400-1526C5-11	BE-01	TotalNA	3 ater	hv 4M00 BI	
v E 400-421180R	v etdoj EraG	TotalNA	3 ater	hv 4M00 BI	
LI h 400-421180R	Lab l oGronh amyre	TotalNA	3 ater	hv 4M00 BI	
400-1526C5-Cv h	DFw-01	TotalNA	3 ater	hv 4M00 BI	
400-1526C5-Cv hD	DFw-01	TotalNA	3 ater	hv 4M00 BI	
400-1526C5-A-17 DF	Df yricate	TotalNA	3 ater	hv 4M00 BI	

Analysis Batch: 39251L

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-1526C5-6	v 3 -5	TotalNA	3 ater	hv 4M00 hx 4 O	
400-1526C5-4	v 3 -7	TotalNA	3 ater	hv 4M00 hx 4 O	
400-1526C5-M	v 3 -8	TotalNA	3 ater	hv 4M00 hx 4 O	
400-1526C5-5	v 3 -C	TotalNA	3 ater	hv 4M00 hx 4 O	
400-1526C5-7	v 3 -10	TotalNA	3 ater	hv 4M00 hx 4 O	
400-1526C5-8	v 3 -12	TotalNA	3 ater	hv 4M00 hx 4 O	
400-1526C5-C	DFw-01	TotalNA	3 ater	hv 4M00 hx 4 O	
400-1526C5-10	DFw-02	TotalNA	3 ater	hv 4M00 hx 4 O	

TestAmerica weGacora

QC Association Summary

Line: ufrPwoperl omyaGS
wro/ectRite: l l Whmitd wræG

TestAmerica Job ID: 400-1526C5-1
hDu : AsdyoG

General Chemistry 4Continue80

Analysis Batch: 39251L 4Continue80

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-1526C5-11	BE-01	TotalRNA	3 ater	hv 4M00 hx 4 O	
v E 400-4217QMR	v etdoj EræG	TotalRNA	3 ater	hv 4M00 hx 4 O	
LI h 400-4217QMR	Lab l oGronh amyre	TotalRNA	3 ater	hv 4M00 hx 4 O	
v WL 400-4217QMR	Lab l oGronh amyre	TotalRNA	3 ater	hv 4M00 hx 4 O	
400-1524MC-A-1 v h	v atrik h yi'e	TotalRNA	3 ater	hv 4M00 hx 4 O	
400-1524MC-A-1 v hD	v atrik h yi'e Df yricate	TotalRNA	3 ater	hv 4M00 hx 4 O	
400-152M58-A-1 v h	v atrik h yi'e	TotalRNA	3 ater	hv 4M00 hx 4 O	
400-152M58-A-1 v hD	v atrik h yi'e Df yricate	TotalRNA	3 ater	hv 4M00 hx 4 O	

Analysis Batch: 3926(6

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-1526C5-2	v 3 -6	TotalRNA	3 ater	hv 4M00 l r O	
400-1526C5-6	v 3 -5	TotalRNA	3 ater	hv 4M00 l r O	
400-1526C5-4	v 3 -7	TotalRNA	3 ater	hv 4M00 l r O	
400-1526C5-M	v 3 -8	TotalRNA	3 ater	hv 4M00 l r O	
400-1526C5-5	v 3 -C	TotalRNA	3 ater	hv 4M00 l r O	
400-1526C5-7	v 3 -10	TotalRNA	3 ater	hv 4M00 l r O	
400-1526C5-8	v 3 -12	TotalRNA	3 ater	hv 4M00 l r O	
400-1526C5-C	DFw-01	TotalRNA	3 ater	hv 4M00 l r O	
400-1526C5-10	DFw-02	TotalRNA	3 ater	hv 4M00 l r O	
400-1526C5-11	BE-01	TotalRNA	3 ater	hv 4M00 l r O	
v E 400-421868R	v etdoj EræG	TotalRNA	3 ater	hv 4M00 l r O	
LI h 400-421868R	Lab l oGronh amyre	TotalRNA	3 ater	hv 4M00 l r O	
v WL 400-421868R	Lab l oGronh amyre	TotalRNA	3 ater	hv 4M00 l r O	
400-1526C5-2 v h	v 3 -6	TotalRNA	3 ater	hv 4M00 l r O	
400-1526C5-2 v hD	v 3 -6	TotalRNA	3 ater	hv 4M00 l r O	

Field Service / Molecular

Analysis Batch: 39212L

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-1526C5-1	v 3 -2	TotalRNA	3 ater	Bierj h amyriGg	
400-1526C5-2	v 3 -6	TotalRNA	3 ater	Bierj h amyriGg	
400-1526C5-6	v 3 -5	TotalRNA	3 ater	Bierj h amyriGg	
400-1526C5-4	v 3 -7	TotalRNA	3 ater	Bierj h amyriGg	
400-1526C5-M	v 3 -8	TotalRNA	3 ater	Bierj h amyriGg	
400-1526C5-5	v 3 -C	TotalRNA	3 ater	Bierj h amyriGg	
400-1526C5-7	v 3 -10	TotalRNA	3 ater	Bierj h amyriGg	
400-1526C5-8	v 3 -12	TotalRNA	3 ater	Bierj h amyriGg	

QC Sample Results

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

TestAmerica Job ID: 400-162396-1
SDG: Ashpond

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-421465/1-A ^5
Matrix: Water
Analysis Batch: 421723

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 421465

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00046	U	0.0013	0.00046	mg/L		11/30/18 10:45	11/30/18 15:42	5
Barium	0.00049	U	0.0025	0.00049	mg/L		11/30/18 10:45	11/30/18 15:42	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		11/30/18 10:45	11/30/18 15:42	5
Boron	0.021	U	0.050	0.021	mg/L		11/30/18 10:45	11/30/18 15:42	5
Calcium	0.13	U	0.25	0.13	mg/L		11/30/18 10:45	11/30/18 15:42	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		11/30/18 10:45	11/30/18 15:42	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		11/30/18 10:45	11/30/18 15:42	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		11/30/18 10:45	11/30/18 15:42	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		11/30/18 10:45	11/30/18 15:42	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		11/30/18 10:45	11/30/18 15:42	5

Lab Sample ID: LCS 400-421465/2-A
Matrix: Water
Analysis Batch: 421723

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 421465

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.0500	0.0495		mg/L		99	80 - 120
Barium	0.0500	0.0483		mg/L		97	80 - 120
Beryllium	0.0500	0.0560		mg/L		112	80 - 120
Boron	0.100	0.106		mg/L		106	80 - 120
Calcium	5.00	4.89		mg/L		98	80 - 120
Chromium	0.0500	0.0498		mg/L		100	80 - 120
Cobalt	0.0500	0.0518		mg/L		104	80 - 120
Lithium	0.0500	0.0548		mg/L		110	80 - 120
Molybdenum	0.0500	0.0477		mg/L		95	80 - 120
Selenium	0.0500	0.0492		mg/L		98	80 - 120

Lab Sample ID: 400-162402-C-9-B MS ^5
Matrix: Water
Analysis Batch: 421723

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 421465

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.023		0.0500	0.0745		mg/L		102	75 - 125
Barium	0.0014	I	0.0500	0.0512		mg/L		100	75 - 125
Beryllium	0.00034	U	0.0500	0.0504		mg/L		101	75 - 125
Boron	0.030	I	0.100	0.135		mg/L		104	75 - 125
Calcium	6.0		5.00	10.9		mg/L		99	75 - 125
Chromium	0.0011	U	0.0500	0.0509		mg/L		102	75 - 125
Cobalt	0.00040	U	0.0500	0.0530		mg/L		106	75 - 125
Lithium	0.0011	U	0.0500	0.0510		mg/L		102	75 - 125
Molybdenum	0.0046	I	0.0500	0.0544		mg/L		99	75 - 125
Selenium	0.0033		0.0500	0.0509		mg/L		95	75 - 125

Lab Sample ID: 400-162402-C-9-C MSD ^5
Matrix: Water
Analysis Batch: 421723

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 421465

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	0.023		0.0500	0.0753		mg/L		104	75 - 125	1	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-162396-1
SDG: Ashpond

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

Lab Sample ID: 400-162402-C-9-C MSD ^5
Matrix: Water
Analysis Batch: 421723

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 421465

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Barium	0.0014	I	0.0500	0.0516		mg/L		100	75 - 125	1	20
Beryllium	0.00034	U	0.0500	0.0506		mg/L		101	75 - 125	0	20
Boron	0.030	I	0.100	0.131		mg/L		101	75 - 125	3	20
Calcium	6.0		5.00	11.0		mg/L		100	75 - 125	1	20
Chromium	0.0011	U	0.0500	0.0521		mg/L		104	75 - 125	2	20
Cobalt	0.00040	U	0.0500	0.0536		mg/L		107	75 - 125	1	20
Lithium	0.0011	U	0.0500	0.0516		mg/L		103	75 - 125	1	20
Molybdenum	0.0046	I	0.0500	0.0542		mg/L		99	75 - 125	0	20
Selenium	0.0033		0.0500	0.0509		mg/L		95	75 - 125	0	20

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

Lab Sample ID: MB 400-420775/1
Matrix: Water
Analysis Batch: 420775

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

Analyte	MB	MB	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			11/26/18 10:09	1

Lab Sample ID: LCS 400-420775/2
Matrix: Water
Analysis Batch: 420775

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	350		mg/L		119	78 - 122

Lab Sample ID: 400-162396-1 DU
Matrix: Water
Analysis Batch: 420775

Client Sample ID: MW-2
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Total Dissolved Solids	88		88.0		mg/L		0	5

Lab Sample ID: MB 400-420777/1
Matrix: Water
Analysis Batch: 420777

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

Analyte	MB	MB	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			11/26/18 10:16	1

Lab Sample ID: LCS 400-420777/2
Matrix: Water
Analysis Batch: 420777

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	256		mg/L		87	78 - 122

QC Sample Results

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

TestAmerica Job ID: 400-162396-1
SDG: Ashpond

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

Lab Sample ID: 400-162375-A-4 DU
Matrix: Water
Analysis Batch: 420777

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	230		226		mg/L	-	0	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-421176/6
Matrix: Water
Analysis Batch: 421176

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	-		11/28/18 12:26	1

Lab Sample ID: LCS 400-421176/7
Matrix: Water
Analysis Batch: 421176

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 400-421176/3
Matrix: Water
Analysis Batch: 421176

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	1.60	I	mg/L	-	80	50 - 150

Lab Sample ID: 400-162375-A-1 MS
Matrix: Water
Analysis Batch: 421176

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	15		10.0	25.1		mg/L	-	97	73 - 120

Lab Sample ID: 400-162375-A-1 MSD
Matrix: Water
Analysis Batch: 421176

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	Limit
Chloride	15		10.0	24.8		mg/L	-	94	73 - 120	1	8

Lab Sample ID: MB 400-421838/6
Matrix: Water
Analysis Batch: 421838

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	-		12/04/18 09:25	1

QC Sample Results

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

TestAmerica Job ID: 400-162396-1
SDG: Ashpond

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

Lab Sample ID: LCS 400-421838/7
Matrix: Water
Analysis Batch: 421838

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 400-421838/3
Matrix: Water
Analysis Batch: 421838

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	1.69	I	mg/L		84	50 - 150

Lab Sample ID: 400-162396-2 MS
Matrix: Water
Analysis Batch: 421838

Client Sample ID: MW-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	13		10.0	23.5		mg/L		107	73 - 120

Lab Sample ID: 400-162396-2 MSD
Matrix: Water
Analysis Batch: 421838

Client Sample ID: MW-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	13		10.0	23.2		mg/L		105	73 - 120	1	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-421135/3
Matrix: Water
Analysis Batch: 421135

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			11/28/18 11:49	1

Lab Sample ID: LCS 400-421135/4
Matrix: Water
Analysis Batch: 421135

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	3.98		mg/L		100	90 - 110

Lab Sample ID: 240-104506-B-2 MSD
Matrix: Water
Analysis Batch: 421135

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	0.96		1.00	1.92		mg/L		96	75 - 125	0	4

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-162396-1
SDG: Ashpond

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 240-104506-D-2 MS
Matrix: Water
Analysis Batch: 421135

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	0.96		1.00	1.92		mg/L		96	75 - 125

Lab Sample ID: 240-104521-C-5 MS
Matrix: Water
Analysis Batch: 421135

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	0.93		1.00	1.89		mg/L		96	75 - 125

Lab Sample ID: 240-104521-C-5 MSD
Matrix: Water
Analysis Batch: 421135

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	0.93		1.00	1.89		mg/L		96	75 - 125	0	4

Lab Sample ID: MB 400-421180/3
Matrix: Water
Analysis Batch: 421180

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			11/28/18 14:20	1

Lab Sample ID: LCS 400-421180/4
Matrix: Water
Analysis Batch: 421180

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	3.90		mg/L		98	90 - 110

Lab Sample ID: 400-162396-9 MS
Matrix: Water
Analysis Batch: 421180

Client Sample ID: DUP-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.13		1.00	1.10		mg/L		97	75 - 125

Lab Sample ID: 400-162396-9 MSD
Matrix: Water
Analysis Batch: 421180

Client Sample ID: DUP-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.13		1.00	1.10		mg/L		97	75 - 125	0	4

Lab Sample ID: 400-162396-A-17 DU
Matrix: Water
Analysis Batch: 421180

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

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-162396-1
SDG: Ashpond

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: 400-162396-2 MS
Matrix: Water
Analysis Batch: 420988

Client Sample ID: MW-3
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	8.50		mg/L		85	77 - 128

Lab Sample ID: 400-162396-2 MSD
Matrix: Water
Analysis Batch: 420988

Client Sample ID: MW-3
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	8.92		mg/L		89	77 - 128	5	5

Lab Sample ID: MB 400-421795/6
Matrix: Water
Analysis Batch: 421795

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			12/03/18 09:16	1

Lab Sample ID: LCS 400-421795/7
Matrix: Water
Analysis Batch: 421795

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	15.3		mg/L		102	90 - 110

QC Sample Results

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

TestAmerica Job ID: 400-162396-1
SDG: Ashpond

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

Lab Sample ID: MRL 400-421795/3
Matrix: Water
Analysis Batch: 421795

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	4.12	I	mg/L		82	50 - 150

Lab Sample ID: 400-162459-A-1 MS
Matrix: Water
Analysis Batch: 421795

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	720		9.90	696	J3	mg/L		-277	77 - 128

Lab Sample ID: 400-162459-A-1 MSD
Matrix: Water
Analysis Batch: 421795

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	720		9.90	688	J3	mg/L		-355	77 - 128	1	5

Lab Sample ID: 400-162568-A-1 MS
Matrix: Water
Analysis Batch: 421795

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	8.07		mg/L		81	77 - 128

Lab Sample ID: 400-162568-A-1 MSD
Matrix: Water
Analysis Batch: 421795

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	8.74	J3	mg/L		87	77 - 128	8	5

Chain of Custody Record

Client Information Client Contact: Kristi Mitchell Company: Gulf Power Company Address: BIN 731 One Energy Place City: Pensacola State, Zip: FL, 32520 Phone: 850-444-6427(Tel) Email: krmitch@southernco.com Project Name: CCR Smith Plant Site:	Lab PM: Whitnire, Cheyenne R E-Mail: cheyenne.whitnire@testamericainc.com	Carrier Tracking No(s): COC No: 400-53432-23565.1 Page: Page 1 of 1 Job #: 10296	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 V - MC-AA W - pH 4-5 L - EDTA Z - other (specify) Other:	Analysis Requested Total Number of Containers Special Instructions/Note:	Sample Identification MW-2 MW-3 MW-6 MW-7 MW-8 MW-9 MW-10 MW-12 Dup-01 Dup-02 FB-01	Sample Date 11/19/18 11/19/18 11/19/18 11/19/18 11/20/18 11/20/18 11/19/18 11/19/18 11/20/18 11/20/18	Sample Time 0855 1103 1110 1225 1512 0844 1030 1233 1135 0744 1125	Sample Type (C-comp, G-grab) G G G G G G G G G G	Matrix (Water, Swill, Overstabil, etc) Water Water Water Water Water Water Water Water Water Water	Field Filtered Sample (Yes or No) X X X X X X X X X X	Perform MS/MSD (Yes or No) X X X X X X X X X X	9315_Ra226, 9320_Ra228, Ra226Ra228_GFP SM4500_Cl_E-Chloride, SM4500_SO4_F-Sulfate, 2540C Total Dissolved Solids, 4500_F_C-Fluoride 6020 - As, Ba, B, Be, Ca, Cr, Co, Li, Mo, Se Field Sampling - Field Sampling Parameters	9315_Ra226, 9320_Ra228, Ra226Ra228_GFP SM4500_Cl_E-Chloride, SM4500_SO4_F-Sulfate, 2540C Total Dissolved Solids, 4500_F_C-Fluoride 6020 - As, Ba, B, Be, Ca, Cr, Co, Li, Mo, Se Field Sampling - Field Sampling Parameters	Preservation Codes: M - Hexane N - None O - AshNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MC-AA W - pH 4-5 K - EDTA L - EDA Z - other (specify) Other:	Special Instructions/Note: Total Number of Containers
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Radiological <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown															
Deliverable Requested: I, II, III, IV, Other (specify)															
Empty Kit Relinquished by: [Signature] Date: 11/20/18 1540 Company: RQH															
Relinquished by: [Signature] Date: 11/20/18 1540 Company: RQH															
Relinquished by: [Signature] Date: 11/20/18 1540 Company: RQH															
Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Cooler Temperature(s) °C and Other Remarks:															



Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-162396-1

SDG Number: Ashpond

Login Number: 162396

List Number: 1

Creator: Whitmire, Cheyenne R

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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, 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 <math><6\text{mm}</math> (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 Smith Plant

TestAmerica Job ID: 400-162396-1
SDG: Ashpond

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

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: 400-162396-2

TestAmerica Sample Delivery Group: Ashpond

Client Project/Site: CCR Smith Plant

For:

Gulf Power Company

BIN 731

One Energy Place

Pensacola, Florida 32520

Attn: Kristi Mitchell



Authorized for release by:

12/28/2018 2:03:28 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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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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Case Narrative

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

TestAmerica Job ID: 400-162396-2
SDG: Ashpond

Job ID: 400-162396-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-162396-2

RAD

Method(s) PrecSep_0: Radium 228 Prep Bach 403456: The following samples were reduced due to potential matrix interference: MW-2 (400-162396-1), MW-3 (400-162396-2), MW-7 (400-162396-4), MW-9 (400-162396-6), MW-10 (400-162396-7) and DUP-02 (400-162396-10). The samples had yellow discoloration, sediment, and a strong sulfur odor. Sample 310-144991-1 was reduced due to limited sample volume.

Method(s) PrecSep-21: Radium 226 Prep Bach 403442: The following samples were reduced due to potential matrix interference: MW-2 (400-162396-1), MW-3 (400-162396-2), MW-7 (400-162396-4), MW-9 (400-162396-6), MW-10 (400-162396-7) and DUP-02 (400-162396-10). The samples had yellow discoloration, sediment, and a strong sulfur odor. Sample 310-144991-1 was reduced due to limited sample volume.

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Method Summary

Project: ufrpwo per l omyaGS
Reference: I I Whmitd wraG

TestAmerica Job ID: 400-152605-2
Subject: AsdyoG

Method	Method Description	Protocol	Laboratory
0613	Waj if m-225 (u Fwl)	h8 945	TAL hL
0620	Waj if m-229 (u Fwl)	h8 945	TAL hL
Wa225_Wa229	I ombiGaj Waj if m-225 aG Waj if m-229	TAL-hTL	TAL hL
wrehey_0	wreyaratioG wreciyitate heyaratioG	NoG	TAL hL
wrehey-21	wreyaratioG wreciyitate heyaratioG(21-DaSIGu rop td)	NoG	TAL hL

Protocol References:

NoG = NoG

h8 945 = "Test Metdoj s For Evarf atiGg horij 8 aste, wdSsicarR demicanMetdoj s", Tdirj Ej itioG November 1095 AG Its Uyj ates.

TAL-hTL = TestAmerica Laboratories, ht. Lof is, FacintShtaG arj OyeratiGg wrocej f re.

Laboratory References:

TAL hL = TestAmerica ht. Lof is, 16713 Wj er TrainNortd, Eartd I itS, MO 56043, TEL (614)209-9355

Sample Summary

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

TestAmerica Job ID: 400-162396-2
SDG: Ashpond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-162396-1	MW-2	Water	11/19/18 08:55	11/20/18 15:40
400-162396-2	MW-3	Water	11/19/18 11:03	11/20/18 15:40
400-162396-3	MW-6	Water	11/19/18 11:10	11/20/18 15:40
400-162396-4	MW-7	Water	11/19/18 12:25	11/20/18 15:40
400-162396-5	MW-8	Water	11/19/18 15:15	11/20/18 15:40
400-162396-6	MW-9	Water	11/20/18 08:44	11/20/18 15:40
400-162396-7	MW-10	Water	11/20/18 10:30	11/20/18 15:40
400-162396-8	MW-12	Water	11/19/18 12:33	11/20/18 15:40
400-162396-9	DUP-01	Water	11/19/18 11:33	11/20/18 15:40
400-162396-10	DUP-02	Water	11/20/18 07:44	11/20/18 15:40
400-162396-11	FB-01	Water	11/20/18 11:25	11/20/18 15:40



Client Sample Results

Client: University of Maryland
 Project: ILLUMINA

TestAmerica Job ID: 400-152605-2
 Analyst: AsdyoG

Client Sample ID: MW-2
Date Collected: 11/19/18 08:55
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-1
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	0.596		0314C	03198	1300	03069	yl iR	11/20/18 19:08	12/11/18 09:96	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	10%		40 - 110					11/30/18 1:08	1/31/18 0:95	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	03157	U	03259	03255	1300	03448	yl iR	11/20/18 15:90	12/11/18 11:9C	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	10%		40 - 110					11/30/18 16:90	1/31/18 11:92	1
Carrier	85%		40 - 110					11/30/18 16:90	1/31/18 11:92	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	0.763		03604	0360C	9300	03448	yl iR		12/17/18 19:10	1

Client Sample Results

Client: ufrpoperlomyaGS
 Project: I.L. hmidt wraG

TestAmerica Job ID: 400-1526C5-2
 Analyst: AsdyoG

Client Sample ID: MW-3
Date Collected: 11/19/18 11:03
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-2
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		0.227	0.295	1300	0.314	yl iR	11/20/18 19:08	12/11/18 09:96	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	25Y		40 - 110					11/30/18 1:08	1/31/18 0:95	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.846		0.306	0.311	1300	0.3C1	yl iR	11/20/18 15:90	12/11/18 11:9C	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	25Y		40 - 110					11/30/18 16:90	1/31/18 11:92	1
. Carrier	7: Y		40 - 110					11/30/18 16:90	1/31/18 11:92	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	2.18		0.356	0.384	9300	0.3C1	yl iR		12/17/18 19:10	1

Client Sample Results

Line: ufrpwerlomyaGS
 wroectRite: l l . hmitd wraG

TestAmerica Job ID: 400-1526C5-2
 hDu : AsdyoG

Client Sample ID: MW-6
Date Collected: 11/19/18 11:10
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-3
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	9.89		0368	1304	1300	03868	yl iR	11/20/18 19:08	12/11/18 09:96	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	25Y		40 - 110					11/30/18 1:08	1/31/18 0:95	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	17.5		0319	1389	1300	0314	yl iR	11/20/18 15:90	12/11/18 11:9C	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	25Y		40 - 110					11/30/18 16:90	1/31/18 11:92	1
. Carrier	80Y		40 - 110					11/30/18 16:90	1/31/18 11:92	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	27.4		1305	2312	9300	0314	yl iR		12/17/18 19:10	1

Client Sample Results

LineG: u f r Pwop er l omyaGS
wro/ectRite: l l . hmitd wraG

TestAmerica Job ID: 400-1526C5-2
hDu : AsdyoG

Client Sample ID: MW-7
Date Collected: 11/19/18 12:25
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-4
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	44.9		132	439	1300	03129	yl iR	11/20/18 19:08	12/11/18 09:97	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	28Y		40 - 110					11/30/18 1:08	1/31/18 0:97	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	8.57		0396	130	1300	03100	yl iR	11/20/18 15:90	12/11/18 11:90	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	28Y		40 - 110					11/30/18 16:90	1/31/18 11:92	1
. Carrier	78Y		40 - 110					11/30/18 16:90	1/31/18 11:92	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	53.5		132	430	9300	03100	yl iR		12/17/18 19:10	1

Client Sample Results

LineG: u fr Pwoper l omyaGS
wro/ectRite: l l . hmitd wrAG

TestAmerica Job ID: 400-1526C5-2
hDu : AsdyoG

Client Sample ID: MW-8
Date Collected: 11/19/18 15:15
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-5
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	12.1		0308	139	130	03072	yl iR	11/20/18 19:08	12/11/18 09:97	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	24%		40 - 110					11/30/18 1:08	1/31/18 0:97	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	21.5		131	232	130	03675	yl iR	11/20/18 15:90	12/11/18 11:9C	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	24%		40 - 110					11/30/18 16:90	1/31/18 11:92	1
. Carrier	77%		40 - 110					11/30/18 16:90	1/31/18 11:92	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	33.6		138	239	930	03675	yl iR		12/17/18 19:10	1

Client Sample Results

Client: ufrpoperlomyaGS
 Project: I.L. hmidt wraG

TestAmerica Job ID: 400-1526C5-2
 Analyst: AsdyoG

Client Sample ID: MW-9
Date Collected: 11/20/18 08:44
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-6
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	7.76		0354	0308	1300	03166	yl iRL	11/20/18 19:08	12/11/18 09:97	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	10%		40 - 110					11/3/18 1:08	1/3/18 0:97	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	5.39		0300	0385	1300	03901	yl iRL	11/20/18 15:90	12/11/18 12:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	10%		40 - 110					11/3/18 16:90	1/3/18 1/90	1
. Carrier	81%		40 - 110					11/3/18 16:90	1/3/18 1/90	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	13.2		0360	1310	9300	03901	yl iRL		12/17/18 19:10	1

Client Sample Results

Client: ufrpwoerlomyaGS
 Project: I.L. hmidt wraG

TestAmerica Job ID: 400-1526C5-2
 hDu: AsdyoG

Client Sample ID: MW-10
Date Collected: 11/20/18 10:30
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-7
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	5.15		0371	0351	1300	03145	yl iRL	11/20/18 19:08	12/11/18 09:97	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	2.0		40 - 110					11/30/18 1:08	1/31/18 0:97	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	14.7		0375	137	1300	0321	yl iRL	11/20/18 15:90	12/11/18 12:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	2.0		40 - 110					11/30/18 16:90	1/31/18 1/90	1
. Carrier	78.2		40 - 110					11/30/18 16:90	1/31/18 1/90	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	19.8		138	130	9300	0321	yl iRL		12/17/18 19:10	1

Client Sample Results

Client: ufrpoperlomyaGS
 Project: I.L. hmidt wraG

TestAmerica Job ID: 400-1526C5-2
 Analyst: AsdyoG

Client Sample ID: MW-12
Date Collected: 11/19/18 12:33
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-8
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	1.98		0.248	0.309	1300	0.0019	yl iRL	11/20/18 19:08	12/11/18 09:97	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	26%		40 - 110					11/23/18 1:08	1/3/18 0:97	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.391		0.265	0.266	1300	0.0097	yl iRL	11/20/18 15:90	12/11/18 12:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	26%		40 - 110					11/23/18 16:90	1/3/18 1/90	1
. Carrier	80%		40 - 110					11/23/18 16:90	1/3/18 1/90	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	2.37		0.342	0.387	9300	0.0097	yl iRL		12/17/18 19:10	1

Client Sample Results

Client: ufrpoperlomyaGS
 Project: I.L. hmidt wraG

TestAmerica Job ID: 400-1526C5-2
 Analyst: AsdyoG

Client Sample ID: DUP-01

Lab Sample ID: 400-162396-9

Date Collected: 11/19/18 11:33

Matrix: Water

Date Received: 11/20/18 15:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.07		0.294	0.319	1300	0.3101	yl iR	11/20/18 19:08	12/11/18 09:97	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	2/ Y		40 - 110					11/30/18 1: 08	1/31/18 0: 97	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.586		0.251	0.255	1300	0.3654	yl iR	11/20/18 15:90	12/11/18 12:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	2/ Y		40 - 110					11/30/18 16:9 0	1/31/18 1/ 00	1
. Carrier	7: Y		40 - 110					11/30/18 16:9 0	1/31/18 1/ 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	2.66		0.3654	0.3412	9300	0.3654	yl iR		12/17/18 19:10	1

Client Sample Results

Line: ufrpwerlomyaGS
 wroectRite: l l . hmitd wraG

TestAmerica Job ID: 400-1526C5-2
 hDu : AsdyoG

Client Sample ID: DUP-02

Date Collected: 11/20/18 07:44

Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-10

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	7.97		0394	0307	1300	0312C	yl iR	11/20/18 19:08	12/21/18 09:98	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					11/30/18 1:08	1/31/18 0:98	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.34		0357	0304	1300	031C7	yl iR	11/20/18 15:90	12/11/18 12:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					11/30/18 16:90	1/31/18 1/90	1
. Carrier	72%		40 - 110					11/30/18 16:90	1/31/18 1/90	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	12.3		0306	1314	9300	031C7	yl iR		12/27/18 19:10	1

Client Sample Results

Client: ufrpwoerlomyaGS
 Project: I.L. hmitd wraG

TestAmerica Job ID: 400-1526C5-2
 Analyst: AsdyoG

Client Sample ID: FB-01
Date Collected: 11/20/18 11:25
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-11
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
. aj if m-225	03219	U	030978	030978	1300	03108	yl iR	11/20/18 19:08	12/21/18 09:98	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	22Y		40 - 110					11/30/18 1:08	1/31/18 0:98	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
. aj if m-228	03222	U	03261	03261	1300	03675	yl iR	11/20/18 15:90	12/21/18 12:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	22Y		40 - 110					11/30/18 16:90	1/31/18 1/90	1
. Carrier	81Y		40 - 110					11/30/18 16:90	1/31/18 1/90	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
l ombiGej . aj if m 225 + 228	03244	U	03268	03268	9300	03675	yl iR		12/27/18 19:10	1

Definitions/Glossary

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

TestAmerica Job ID: 400-162396-2
SDG: Ashpond

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.
α	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: CCh Rmitd Plant

TestAmerica Job ID: 400-1526j 5-2
 RDG: Asdpon3

Client Sample ID: MW-2
Date Collected: 11/19/18 08:55
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total\$ A	Prep	PrecRep-21			406442	11/19/18 17:08	C9P	TA9 R9
Total\$ A	Analysis	j 617		1	405j 6N	12/19/18 07:76	CDh	TA9 R9
Total\$ A	Prep	PrecRepM0			406475	11/19/18 15:70	C9P	TA9 R9
Total\$ A	Analysis	j 620		1	404j 46	12/19/18 11:7j	CDh	TA9 R9
Total\$ A	Analysis	h a225Mh a228		1	40NN6N	12/19/18 17:10	h T_	TA9 R9

Client Sample ID: MW-3
Date Collected: 11/19/18 11:03
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total\$ A	Prep	PrecRep-21			406442	11/19/18 17:08	C9P	TA9 R9
Total\$ A	Analysis	j 617		1	405j 6N	12/19/18 07:76	CDh	TA9 R9
Total\$ A	Prep	PrecRepM0			406475	11/19/18 15:70	C9P	TA9 R9
Total\$ A	Analysis	j 620		1	404j 46	12/19/18 11:7j	CDh	TA9 R9
Total\$ A	Analysis	h a225Mh a228		1	40NN6N	12/19/18 17:10	h T_	TA9 R9

Client Sample ID: MW-6
Date Collected: 11/19/18 11:10
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total\$ A	Prep	PrecRep-21			406442	11/19/18 17:08	C9P	TA9 R9
Total\$ A	Analysis	j 617		1	405j 6N	12/19/18 07:76	CDh	TA9 R9
Total\$ A	Prep	PrecRepM0			406475	11/19/18 15:70	C9P	TA9 R9
Total\$ A	Analysis	j 620		1	404j 46	12/19/18 11:7j	CDh	TA9 R9
Total\$ A	Analysis	h a225Mh a228		1	40NN6N	12/19/18 17:10	h T_	TA9 R9

Client Sample ID: MW-7
Date Collected: 11/19/18 12:25
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total\$ A	Prep	PrecRep-21			406442	11/19/18 17:08	C9P	TA9 R9
Total\$ A	Analysis	j 617		1	405j 65	12/19/18 07:7N	CDh	TA9 R9
Total\$ A	Prep	PrecRepM0			406475	11/19/18 15:70	C9P	TA9 R9
Total\$ A	Analysis	j 620		1	404j 46	12/19/18 11:7j	CDh	TA9 R9
Total\$ A	Analysis	h a225Mh a228		1	40NN6N	12/19/18 17:10	h T_	TA9 R9

Lab Chronicle

Client: Gulf Power Company
 Project Site: CCh Rmitd Plant

TestAmerica Job ID: 400-1526j 5-2
 RDG: Asdpon3

Client Sample ID: MW-8
Date Collected: 11/19/18 15:15
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total\$ A	Prep	PrecRep-21			406442	11/20/18 17:08	C9P	TA9 R9
Total\$ A	Analysis	j 617		1	405j 65	12/21/18 07:7N	CDh	TA9 R9
Total\$ A	Prep	PrecRepM0			406475	11/20/18 15:70	C9P	TA9 R9
Total\$ A	Analysis	j 620		1	404j 46	12/21/18 11:7j	CDh	TA9 R9
Total\$ A	Analysis	h a225Mh a228		1	40NN6N	12/22/18 17:10	h T_	TA9 R9

Client Sample ID: MW-9
Date Collected: 11/20/18 08:44
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total\$ A	Prep	PrecRep-21			406442	11/20/18 17:08	C9P	TA9 R9
Total\$ A	Analysis	j 617		1	405j 65	12/21/18 07:7N	CDh	TA9 R9
Total\$ A	Prep	PrecRepM0			406475	11/20/18 15:70	C9P	TA9 R9
Total\$ A	Analysis	j 620		1	404j 46	12/21/18 12:00	CDh	TA9 R9
Total\$ A	Analysis	h a225Mh a228		1	40NN6N	12/22/18 17:10	h T_	TA9 R9

Client Sample ID: MW-10
Date Collected: 11/20/18 10:30
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total\$ A	Prep	PrecRep-21			406442	11/20/18 17:08	C9P	TA9 R9
Total\$ A	Analysis	j 617		1	405j 65	12/21/18 07:7N	CDh	TA9 R9
Total\$ A	Prep	PrecRepM0			406475	11/20/18 15:70	C9P	TA9 R9
Total\$ A	Analysis	j 620		1	404j 46	12/21/18 12:00	CDh	TA9 R9
Total\$ A	Analysis	h a225Mh a228		1	40NN6N	12/22/18 17:10	h T_	TA9 R9

Client Sample ID: MW-12
Date Collected: 11/19/18 12:33
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total\$ A	Prep	PrecRep-21			406442	11/20/18 17:08	C9P	TA9 R9
Total\$ A	Analysis	j 617		1	405j 65	12/21/18 07:7N	CDh	TA9 R9
Total\$ A	Prep	PrecRepM0			406475	11/20/18 15:70	C9P	TA9 R9
Total\$ A	Analysis	j 620		1	404j 46	12/21/18 12:00	CDh	TA9 R9
Total\$ A	Analysis	h a225Mh a228		1	40NN6N	12/22/18 17:10	h T_	TA9 R9

Lab Chronicle

Client: Gulf Power Company
 Project Site: CCh Rmitd Plant

TestAmerica Job ID: 400-1526j 5-2
 RDG: Asdpon3

Client Sample ID: DUP-01
Date Collected: 11/19/18 11:33
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total\$ A	Prep	PrecRep-21			406442	11/19/18 17:08	C9P	TA9 R9
Total\$ A	Analysis	j 617		1	405j 65	12/21/18 07:7N	CDh	TA9 R9
Total\$ A	Prep	PrecRepM0			406475	11/19/18 15:70	C9P	TA9 R9
Total\$ A	Analysis	j 620		1	404j 46	12/19/18 12:00	CDh	TA9 R9
Total\$ A	Analysis	h a225Mh a228		1	40NN6N	12/21/18 17:10	h T_	TA9 R9

Client Sample ID: DUP-02
Date Collected: 11/20/18 07:44
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total\$ A	Prep	PrecRep-21			406442	11/19/18 17:08	C9P	TA9 R9
Total\$ A	Analysis	j 617		1	405j 65	12/21/18 07:78	CDh	TA9 R9
Total\$ A	Prep	PrecRepM0			406475	11/19/18 15:70	C9P	TA9 R9
Total\$ A	Analysis	j 620		1	404j 46	12/19/18 12:00	CDh	TA9 R9
Total\$ A	Analysis	h a225Mh a228		1	40NN6N	12/21/18 17:10	h T_	TA9 R9

Client Sample ID: FB-01
Date Collected: 11/20/18 11:25
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total\$ A	Prep	PrecRep-21			406442	11/19/18 17:08	C9P	TA9 R9
Total\$ A	Analysis	j 617		1	405j 65	12/21/18 07:78	CDh	TA9 R9
Total\$ A	Prep	PrecRepM0			406475	11/19/18 15:70	C9P	TA9 R9
Total\$ A	Analysis	j 620		1	404j 46	12/19/18 12:00	CDh	TA9 R9
Total\$ A	Analysis	h a225Mh a228		1	40NN6N	12/21/18 17:10	h T_	TA9 R9

Laboratory References:

TA9 R9 = TestAmerica Rt. 9ouis, 16N17 hi3er Trail Lortd, Eartd City, _ O 56047, TE9 (614)2j 8-8755

QC Association Summary

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

TestAmerica Job ID: 400-162396-2
SDG: Ashpond

Rad

Prep Batch: 403442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162396-1	MW-2	Total/NA	Water	PrecSep-21	
400-162396-2	MW-3	Total/NA	Water	PrecSep-21	
400-162396-3	MW-6	Total/NA	Water	PrecSep-21	
400-162396-4	MW-7	Total/NA	Water	PrecSep-21	
400-162396-5	MW-8	Total/NA	Water	PrecSep-21	
400-162396-6	MW-9	Total/NA	Water	PrecSep-21	
400-162396-7	MW-10	Total/NA	Water	PrecSep-21	
400-162396-8	MW-12	Total/NA	Water	PrecSep-21	
400-162396-9	DUP-01	Total/NA	Water	PrecSep-21	
400-162396-10	DUP-02	Total/NA	Water	PrecSep-21	
400-162396-11	FB-01	Total/NA	Water	PrecSep-21	
MB 160-403442/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-403442/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
190-18211-K-1-A DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 403456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162396-1	MW-2	Total/NA	Water	PrecSep_0	
400-162396-2	MW-3	Total/NA	Water	PrecSep_0	
400-162396-3	MW-6	Total/NA	Water	PrecSep_0	
400-162396-4	MW-7	Total/NA	Water	PrecSep_0	
400-162396-5	MW-8	Total/NA	Water	PrecSep_0	
400-162396-6	MW-9	Total/NA	Water	PrecSep_0	
400-162396-7	MW-10	Total/NA	Water	PrecSep_0	
400-162396-8	MW-12	Total/NA	Water	PrecSep_0	
400-162396-9	DUP-01	Total/NA	Water	PrecSep_0	
400-162396-10	DUP-02	Total/NA	Water	PrecSep_0	
400-162396-11	FB-01	Total/NA	Water	PrecSep_0	
MB 160-403456/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-403456/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
190-18211-K-1-B DU	Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

Line: ufrPwoperlomyaGS
 wro/ectRite: l l U hmitd wraG

TestAmerica Job ID: 400-1526C5-2
 hDu : AsdyoG

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-403442/23-A
Matrix: Water
Analysis Batch: 406936

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 403442

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uaj if m-225	0704660	9	070328	07032C	1700	07128	yl iR	11/20/18 11:08	12/21/18 03:46	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					11/23/18 18:09	1/31/19 05:46	1

Lab Sample ID: LCS 160-403442/1-A
Matrix: Water
Analysis Batch: 406937

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 403442

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Uaj if m-225	1L71	167.2		1740	1700	0710L	yl iR	8C	58 - 163
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	107		40 - 110						

Lab Sample ID: 190-18211-K-1-A DU
Matrix: Water
Analysis Batch: 406937

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 403442

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Uaj if m-225	-070210	9	0702C30	9	070452	1700	070801	yl iR	0785	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	257		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-403456/23-A
Matrix: Water
Analysis Batch: 404941

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 403456

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uaj if m-228	076486	9	072C5	072C8	1700	07432	yl iR	11/20/18 15:10	12/11/18 12:02	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					11/23/18 1Y:80	1/31/19 1/:0/	1
. Carrier	907		40 - 110					11/23/18 1Y:80	1/31/19 1/:0/	1

QC Sample Results

Project: UFRP/oper/omyaGS
 Director: I I U hmitd wraG

TestAmerica Job ID: 400-152605-2
 hDu : AsdyoG

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

Lab Sample ID: LCS 160-403456/1-A
 Matrix: Water
 Analysis Batch: 404943

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 403456

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Uaj if m-228	1272	11744		1764	1700	07.04	yl iR	C4	L5 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	10%		40 - 110
. Carrier	90%		40 - 110

Lab Sample ID: 190-18211-K-1-B DU
 Matrix: Water
 Analysis Batch: 404943

Client Sample ID: Duplicate
 Prep Type: Total/NA
 Prep Batch: 403456

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Uaj if m-228	07112	9	070468	9	0720C	1700	07655	yl iR	0714	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	25%		40 - 110
. Carrier	94%		40 - 110

Chain of Custody Record

Client Information		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s):		COC No: 400-53432-23565.1	
Client Contact: Kristi Mitchell		Phone: 380 7458		E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 1 of 1	
Company: Gulf Power Company		Address: BIN 731 One Energy Place		City: Pensacola		State, Zip: FL, 32520	
Phone: 850-444-6427(Tel)		PO #: Purchase Order not required		WO #:		Project #: 40006609	
Email: krmitch@southernco.com		Project Name: CCR Smith Plant		Site:		SSOW#:	
Due Date Requested:		TAT Requested (days):		PO #:		Purchase Order not required	
WO #:		Project #:		SSOW#:			
Sample Identification		Sample Date	Sample Time	Sample Type (C-comp, G-grab)	Matrix (Water, Swab, Groundwater, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)
MW-2	11/19/18	0855	G	Water		X	
MW-3	11/19/18	1103	G	Water		X	
MW-6	11/19/18	1110	G	Water		X	
MW-7	11/19/18	1325	G	Water		X	
MW-8	11/19/18	1512	G	Water		X	
MW-9	11/20/18	0844	G	Water		X	
MW-10	11/20/18	1030	G	Water		X	
MW-12	11/19/18	1233	G	Water		X	
Dup-01	11/19/18	1135	G	Water		X	
Dup-02	11/20/18	0744	G	Water		X	
FB-01	11/20/18	1125	G	Water		X	
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant		<input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Deliverable Requested: I, II, III, IV, Other (specify)	
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: [Signature]		Date/Time: 11/20/18 1540		Company: ROH		Received by: [Signature]	
Relinquished by:		Date/Time:		Company:		Received by:	
Relinquished by:		Date/Time:		Company:		Received by:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:			



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

Special Instructions/QC Requirements:

- 1
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Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-162396-2

SDG Number: Ashpond

Login Number: 162396

List Number: 1

Creator: Whitmire, Cheyenne R

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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, 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 <math><6\text{mm}</math> (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: 400-162396-2

SDG Number: Ashpond

Login Number: 162396

List Number: 2

Creator: Dupart, Lacey S

List Source: TestAmerica St. Louis

List Creation: 11/27/18 02:25 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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	19.0
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 <math><6\text{mm}</math> (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: CCh Rmitd Plant

TestAmerica Job ID: 400-1582j 5-8
 RDG: Asdpon.

Laboratory: TestAmerica Pensacola

All accred. itations/certifications del. by tdis laboratory are liste. Ng of all accred. itations/certifications are applicable to tdis reportN

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	Rtate Pro3ram	4	40160	05-20-1j
Ag A9	IRB SOC 1E086		784E1	08-88-80
AriLona	Rtate Pro3ram	j	Az0E10	01-18-80
ArZansas DOK	Rtate Pro3ram	5	QQ05Q	0j -01-1j
California	Rtate Pro3ram	j	8610	05-20-1j
Flori. a	g O7AP	4	QQ1010	05-20-1j
Geor3ia	Rtate Pro3ram	4	QQ1010 (F7)	05-20-1j
Illinois	g O7AP	6	800041	10-0j -1j
Iowa	Rtate Pro3ram	E	25E	0Q01-80
* ansas	g O7AP	E	O-10862	18-21-1QK
* entucZy (URT)	Rtate Pro3ram	4	62	05-20-1j
* entucZy (WW)	Rtate Pro3ram	4	j Q020	18-21-1j
7ouisiana	g O7AP	5	20j E5	05-20-1j
7ouisiana (DW)	g O7AP	5	7A01E	18-21-1j
Marylan.	Rtate Pro3ram	2	822	0j -20-1j
Massacdusetts	Rtate Pro3ram	1	M-F70j 4	05-20-1j
Micdi3an	Rtate Pro3ram	6	j j 18	05-20-1j
gew Jersey	g O7AP	8	F7005	05-20-1j
g ortd Carolina (WWRW)	Rtate Pro3ram	4	214	18-21-1j
BZadoma	Rtate Pro3ram	5	j Q10	0Q21-1j
Pennsylvania	g O7AP	2	5Q0045E	01-21-1j
h do. e Islan.	Rtate Pro3ram	1	7AB0020E	18-20-1QK
Routd Carolina	Rtate Pro3ram	4	j 5085	05-20-1j
Tennessee	Rtate Pro3ram	4	Tg08j 0E	05-20-1j
Texas	g O7AP	5	T104E048Q5-1Q-16	0j -20-1j
UR Fisd & Wil. life	Fe. eral		7006Q44Q0	0E-21-1j
URDA	Fe. eral		P220-1Q0014Q	06-1E-81
Vir3inia	g O7AP	2	450155	05-14-1j
Wasdin3ton	Rtate Pro3ram	10	Cj 16	06-16-1j
West Vir3inia DOP	Rtate Pro3ram	2	125	05-20-1j

Laboratory: TestAmerica St. Louis

All accred. itations/certifications del. by tdis laboratory are liste. Ng of all accred. itations/certifications are applicable to tdis reportN

Authority	Program	EPA Region	Identification Number	Expiration Date
AlasZa	Rtate Pro3ram	10	MB00064	05-20-1j
Ag A9	DoD O7AP		78206	04-05-1j
AriLona	Rtate Pro3ram	j	Az0Q12	18-0Q1j
California	Rtate Pro3ram	j	8QQ5	05-20-1j
Connecticut	Rtate Pro3ram	1	PH-0841	02-21-1j
Flori. a	g O7AP	4	QQE5Q	05-20-1j
Illinois	g O7AP	6	800082	11-20-1QK
Iowa	Rtate Pro3ram	E	2E2	18-01-1QK
* ansas	g O7AP	E	O-10825	10-21-1j
* entucZy (DW)	Rtate Pro3ram	4	j 0186	18-21-1QK
7ouisiana	g O7AP	5	040Q0	05-20-1j
7ouisiana (DW)	g O7AP	5	7A1Q001E	18-21-1QK
Marylan.	Rtate Pro3ram	2	210	0j -20-1j
Micdi3an	Rtate Pro3ram	6	j 006	05-20-1j
Missouri	Rtate Pro3ram	E	E00	05-20-1j

KAcre. itation/certification renewal pen. in3 - accred. itation/certification consi. ere. vali. N

TestAmerica Pensacola

Accreditation/Certification Summary

Client: Gulf Power Company
 Project Site: CCh Rmitd Plant

TestAmerica Job ID: 400-1582j 5-8
 RDG: Asdpon.

Laboratory: TestAmerica St. Louis (Continued)

All accreditation certifications delivered by this laboratory are listed. None of all accreditation certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Georgia	State Program	4	MB00064801Q-1	0E-21-1j
Georgia Jersey	g O7AP	8	MB008	05-20-1j
Georgia York	g O7AP	8	11515	02-21-1j
Georgia Dakota	State Program	4	h80E	05-20-1j
Georgia	g h C		84-84Q1E-01	18-21-88
Illinois	State Program	5	jjj E	0Q21-1j
Pennsylvania	g O7AP	2	5Q00640	08-8Q1j K
North Carolina	State Program	4	Q6008001	05-20-1j
Texas	g O7AP	5	T104E041j 2-1Q18	0E-21-1j
US Fish & Wildlife	Federal		06Q44Q	0E-21-1j
URDA	Federal		P220-1E-008Q	08-08-80
Utah	g O7AP	4	MB00064801Q-10	0E-21-1j
Virginia	g O7AP	2	450820	05-14-1j
Washington	State Program	10	C6j 8	0Q20-1j
West Virginia DOP	State Program	2	2Q1	0Q21-1j

Accreditation certification renewal pending - accreditation certification considered valid.

TestAmerica Pensacola



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: 400-162396-3

TestAmerica Sample Delivery Group: Ashpond

Client Project/Site: CCR Smith Plant

For:

Gulf Power Company

BIN 731

One Energy Place

Pensacola, Florida 32520

Attn: Kristi Mitchell



Authorized for release by:

12/14/2018 4:39:31 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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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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Case Narrative

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

TestAmerica Job ID: 400-162396-3
SDG: Ashpond

Job ID: 400-162396-3

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-162396-3

Metals

Method(s) 6020: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-11 (400-162396-12). Elevated reporting limits (RLs) are provided.

General Chemistry

Method(s) SM 4500 Cl- E: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-11 (400-162396-12). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for analytical batch 421795 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

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. (400-162459-A-1 MS) and (400-162459-A-1 MSD)

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 421795 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-11 (400-162396-12), (400-162459-A-1), (400-162459-A-1 MS) and (400-162459-A-1 MSD). Elevated reporting limits (RLs) are provided.



Detection Summary

Location: 1100 W. ...
 Address: 1100 W. ...

TestAmerica Job ID: 400-1582C5-2
 Address: AsdyoG

Client Sample ID: MW-11

Lab Sample ID: 400-162396-12

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil	Fac	D	Method	Prep Type
3 or 5	0.05	C	0.1	0.080	m6R			L	5080	Totan
9 or 10	4		0.0	0.01	m6R			L0	5080	. ecoBerabre
1 or 2	180		8	1	m6R			L0	5080	Totan
Arse	0.01		0.012	0.0045	m6R			L	5080	. ecoBerabre
9 or 10	0.1		0.08	0.004	m6R			L	5080	Totan
9 or 10	0.011	I	0.08	0.0024	m6R			L	5080	. ecoBerabre
1 or 2	0.025		0.08	0.011	m6R			L	5080	Totan
vit	0.11		0.0	0.011	m6R			L	5080	. ecoBerabre
Totan	4100		L0	24	m6R			1	h3 8L40I	Totar
1 or 2	8400		150	110	m6R			ND	h3 4L00 I n E	Totar
h f	8		100	8	m6R			80	h3 4L00 hF 4 E	Totar
Qerj yH	5				hU			1	Qerj hamyriG	Totar

Method Summary

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

TestAmerica Job ID: 400-162396-3
SDG: Ashpond

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

Protocol References:

EPA = US Environmental Protection Agency

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

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

Laboratory References:

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

Sample Summary

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

TestAmerica Job ID: 400-162396-3
SDG: Ashpond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-162396-12	MW-11	Water	11/20/18 11:46	11/20/18 15:40

- 1
- 2
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- 13
- 14

Client Sample Results

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

TestAmerica Job ID: 400-162396-3
SDG: Ashpond

Client Sample ID: MW-11
Date Collected: 11/20/18 11:46
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-12
Matrix: Water

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.0069	I	0.015	0.0020	mg/L		11/30/18 10:45	11/30/18 16:46	5

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.1		0.50	0.21	mg/L		11/30/18 10:45	12/04/18 16:28	50
Calcium	120		2.5	1.3	mg/L		11/30/18 10:45	12/04/18 16:28	50

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.015		0.0013	0.00046	mg/L		11/30/18 10:45	12/04/18 18:05	5
Barium	0.11		0.0025	0.00049	mg/L		11/30/18 10:45	12/04/18 18:05	5
Beryllium	0.0011	I	0.0025	0.00034	mg/L		11/30/18 10:45	12/04/18 18:05	5
Chromium	0.0036		0.0025	0.0011	mg/L		11/30/18 10:45	12/04/18 18:05	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		11/30/18 10:45	12/04/18 18:05	5
Lithium	0.011		0.0050	0.0011	mg/L		11/30/18 10:45	12/07/18 19:37	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		11/30/18 10:45	12/04/18 18:05	5

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	4100		50	34	mg/L			11/26/18 10:09	1
Chloride	2400		160	110	mg/L			12/04/18 10:05	80
Fluoride	0.032	U	0.10	0.032	mg/L			11/28/18 14:49	1
Sulfate	250		100	28	mg/L			12/03/18 10:08	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.35				SU			11/20/18 11:46	1

Definitions/Glossary

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

TestAmerica Job ID: 400-162396-3
SDG: Ashpond

Qualifiers

Metals

Qualifier	Qualifier Description
I	The reported Value is between the laboratory method detection limit and the laboratory practical quantitation limit.
v	Indicates that the compound was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
v	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.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Lead
CNF	Contains No Free Lead
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 Smith Plant

TestAmerica Job ID: 400-162396-3
SDG: Ashpond

Client Sample ID: MW-11

Date Collected: 11/20/18 11:46

Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	421723	11/30/18 16:46	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	422045	12/04/18 16:28	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	422045	12/04/18 18:05	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	422591	12/07/18 19:37	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	420775	11/26/18 10:09	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		80	421838	12/04/18 10:05	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421180	11/28/18 14:49	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	421795	12/03/18 10:08	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	421915	11/20/18 11:46	CDH	TAL PEN

Laboratory References:

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

QC Association Summary

LineG: u f rPwop er l omyaGS
wro/ectRite: l l Whmitd wraG

TestAmerica Job ID: 400-1526C5-6
hDu : AsdyoG

Metals

Prep Batch: 39237L

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-12	v 3 -11	TotanWecoUerabre	3 ater	600MA	
400-1526C5-12 - WA	v 3 -11	TotanWecoUerabre	3 ater	600MA	
400-1526C5-12 - DL	v 3 -11	TotanWecoUerabre	3 ater	600MA	
v 7 400-42145MR-A 8M	v etdoj 7raGF	TotanWecoUerabre	3 ater	600MA	
LI h 400-42145MR-A	Lab l oGronhamyre	TotanWecoUerabre	3 ater	600MA	
400-152402-I -C-7 v h 8M	v atriBhyiFe	TotanWecoUerabre	3 ater	600MA	
400-152402-I -C-I v hD 8M	v atriBhyiFe Df yricate	TotanWecoUerabre	3 ater	600MA	

Analysis Batch: 39259(

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-12	v 3 -11	TotanWecoUerabre	3 ater	5020	42145M
v 7 400-42145MR-A 8M	v etdoj 7raGF	TotanWecoUerabre	3 ater	5020	42145M
LI h 400-42145MR-A	Lab l oGronhamyre	TotanWecoUerabre	3 ater	5020	42145M
400-152402-I -C-7 v h 8M	v atriBhyiFe	TotanWecoUerabre	3 ater	5020	42145M
400-152402-I -C-I v hD 8M	v atriBhyiFe Df yricate	TotanWecoUerabre	3 ater	5020	42145M

Analysis Batch: 399) 3L

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-12 - DL	v 3 -11	TotanWecoUerabre	3 ater	5020	42145M
400-1526C5-12 - WA	v 3 -11	TotanWecoUerabre	3 ater	5020	42145M

Analysis Batch: 399L42

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-12 - WA	v 3 -11	TotanWecoUerabre	3 ater	5020	42145M

General Chemistry

Analysis Batch: 39) 55L

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-12	v 3 -11	TotanEA	3 ater	hv 2M40I	
v 7 400-42099MR	v etdoj 7raGF	TotanEA	3 ater	hv 2M40I	
LI h 400-42099MR	Lab l oGronhamyre	TotanEA	3 ater	hv 2M40I	
400-1526C5-A-1 D^	Df yricate	TotanEA	3 ater	hv 2M40I	

Analysis Batch: 39221)

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-12	v 3 -11	TotanEA	3 ater	hv 4M00 k l	
v 7 400-42111NDR	v etdoj 7raGF	TotanEA	3 ater	hv 4M00 k l	
LI h 400-42111NDR	Lab l oGronhamyre	TotanEA	3 ater	hv 4M00 k l	
400-1526C5-A-C v h	v atriBhyiFe	TotanEA	3 ater	hv 4M00 k l	
400-1526C5-A-C v hD	v atriBhyiFe Df yricate	TotanEA	3 ater	hv 4M00 k l	
400-1526C5-A-19 D^	Df yricate	TotanEA	3 ater	hv 4M00 k l	

Analysis Batch: 39254L

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-12	v 3 -11	TotanEA	3 ater	hv 4M00 hx 4 O	
v 7 400-4219CVR	v etdoj 7raGF	TotanEA	3 ater	hv 4M00 hx 4 O	
LI h 400-4219CVR	Lab l oGronhamyre	TotanEA	3 ater	hv 4M00 hx 4 O	
v VL 400-4219CVR	Lab l oGronhamyre	TotanEA	3 ater	hv 4M00 hx 4 O	
400-1526C5-A-1 v h	v atriBhyiFe	TotanEA	3 ater	hv 4M00 hx 4 O	

TestAmerica weGacora

QC Association Summary

LineG: u f rPwop er l omyaGS
wro/ectRite: l l Whmitd wraG

TestAmerica Job ID: 400-1526C5-6
hDu : AsdyoG

General Chemistry Continue86

Analysis Batch: 39254L Continue86

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-1526NA-1 v hD	v atriBhyiFe Df yricate	TotalEA	3 ater	hv 4M00 hx 4 O	

Analysis Batch: 3921(1

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-1526C5-12	v 3 -11	TotalEA	3 ater	hv 4M00 l n O	
v 7 400-421N6N3	v etdoj 7raGF	TotalEA	3 ater	hv 4M00 l n O	
LI h 400-421N6N9	Lab l oGronhamyre	TotalEA	3 ater	hv 4M00 l n O	
v WL 400-421N6N6	Lab l oGronhamyre	TotalEA	3 ater	hv 4M00 l n O	
400-1526C5-A-2 v h	v atriBhyiFe	TotalEA	3 ater	hv 4M00 l n O	
400-1526C5-A-2 v hD	v atriBhyiFe Df yricate	TotalEA	3 ater	hv 4M00 l n O	

Field Service / Mobile bal

Analysis Batch: 39242L

bal Sample ID	Client Sample ID	Prep type	Matrid	Metho8	Prep Batch
400-1526C5-12	v 3 -11	TotalEA	3 ater	kiej hamyriGj	

QC Sample Results

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

TestAmerica Job ID: 400-162396-3
SDG: Ashpond

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-421465/1-A ^5
Matrix: Water
Analysis Batch: 421723

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 421465

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00046	U	0.0013	0.00046	mg/L		11/30/18 10:45	11/30/18 15:42	5
Barium	0.00049	U	0.0025	0.00049	mg/L		11/30/18 10:45	11/30/18 15:42	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		11/30/18 10:45	11/30/18 15:42	5
Boron	0.021	U	0.050	0.021	mg/L		11/30/18 10:45	11/30/18 15:42	5
Calcium	0.13	U	0.25	0.13	mg/L		11/30/18 10:45	11/30/18 15:42	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		11/30/18 10:45	11/30/18 15:42	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		11/30/18 10:45	11/30/18 15:42	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		11/30/18 10:45	11/30/18 15:42	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		11/30/18 10:45	11/30/18 15:42	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		11/30/18 10:45	11/30/18 15:42	5

Lab Sample ID: LCS 400-421465/2-A
Matrix: Water
Analysis Batch: 421723

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 421465

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.0500	0.0495		mg/L		99	80 - 120
Barium	0.0500	0.0483		mg/L		97	80 - 120
Beryllium	0.0500	0.0560		mg/L		112	80 - 120
Boron	0.100	0.106		mg/L		106	80 - 120
Calcium	5.00	4.89		mg/L		98	80 - 120
Chromium	0.0500	0.0498		mg/L		100	80 - 120
Cobalt	0.0500	0.0518		mg/L		104	80 - 120
Lithium	0.0500	0.0548		mg/L		110	80 - 120
Molybdenum	0.0500	0.0477		mg/L		95	80 - 120
Selenium	0.0500	0.0492		mg/L		98	80 - 120

Lab Sample ID: 400-162402-C-9-B MS ^5
Matrix: Water
Analysis Batch: 421723

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 421465

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.023		0.0500	0.0745		mg/L		102	75 - 125
Barium	0.0014	I	0.0500	0.0512		mg/L		100	75 - 125
Beryllium	0.00034	U	0.0500	0.0504		mg/L		101	75 - 125
Boron	0.030	I	0.100	0.135		mg/L		104	75 - 125
Calcium	6.0		5.00	10.9		mg/L		99	75 - 125
Chromium	0.0011	U	0.0500	0.0509		mg/L		102	75 - 125
Cobalt	0.00040	U	0.0500	0.0530		mg/L		106	75 - 125
Lithium	0.0011	U	0.0500	0.0510		mg/L		102	75 - 125
Molybdenum	0.0046	I	0.0500	0.0544		mg/L		99	75 - 125
Selenium	0.0033		0.0500	0.0509		mg/L		95	75 - 125

Lab Sample ID: 400-162402-C-9-C MSD ^5
Matrix: Water
Analysis Batch: 421723

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 421465

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	0.023		0.0500	0.0753		mg/L		104	75 - 125	1	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-162396-3
SDG: Ashpond

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

Lab Sample ID: 400-162402-C-9-C MSD ^5
Matrix: Water
Analysis Batch: 421723

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

Prep Batch: 421465

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Barium	0.0014	I	0.0500	0.0516		mg/L		100	75 - 125	1	20
Beryllium	0.00034	U	0.0500	0.0506		mg/L		101	75 - 125	0	20
Boron	0.030	I	0.100	0.131		mg/L		101	75 - 125	3	20
Calcium	6.0		5.00	11.0		mg/L		100	75 - 125	1	20
Chromium	0.0011	U	0.0500	0.0521		mg/L		104	75 - 125	2	20
Cobalt	0.00040	U	0.0500	0.0536		mg/L		107	75 - 125	1	20
Lithium	0.0011	U	0.0500	0.0516		mg/L		103	75 - 125	1	20
Molybdenum	0.0046	I	0.0500	0.0542		mg/L		99	75 - 125	0	20
Selenium	0.0033		0.0500	0.0509		mg/L		95	75 - 125	0	20

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

Lab Sample ID: MB 400-420775/1
Matrix: Water
Analysis Batch: 420775

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

Analyte	MB	MB	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			11/26/18 10:09	1

Lab Sample ID: LCS 400-420775/2
Matrix: Water
Analysis Batch: 420775

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Total Dissolved Solids	293	350		mg/L		119	78 - 122

Lab Sample ID: 400-162396-A-1 DU
Matrix: Water
Analysis Batch: 420775

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Total Dissolved Solids	88		88.0		mg/L		0	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-421838/6
Matrix: Water
Analysis Batch: 421838

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

Analyte	MB	MB	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	1.4	U	2.0	1.4	mg/L			12/04/18 09:25	1

Lab Sample ID: LCS 400-421838/7
Matrix: Water
Analysis Batch: 421838

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Chloride	30.0	32.4		mg/L		108	90 - 110

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-162396-3
SDG: Ashpond

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

Lab Sample ID: MRL 400-421838/3
Matrix: Water
Analysis Batch: 421838

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	1.69	I	mg/L		84	50 - 150

Lab Sample ID: 400-162396-A-2 MS
Matrix: Water
Analysis Batch: 421838

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	13		10.0	23.5		mg/L		107	73 - 120

Lab Sample ID: 400-162396-A-2 MSD
Matrix: Water
Analysis Batch: 421838

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	13		10.0	23.2		mg/L		105	73 - 120	1	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-421180/3
Matrix: Water
Analysis Batch: 421180

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			11/28/18 14:20	1

Lab Sample ID: LCS 400-421180/4
Matrix: Water
Analysis Batch: 421180

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	3.90		mg/L		98	90 - 110

Lab Sample ID: 400-162396-A-9 MS
Matrix: Water
Analysis Batch: 421180

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	0.13		1.00	1.10		mg/L		97	75 - 125

Lab Sample ID: 400-162396-A-9 MSD
Matrix: Water
Analysis Batch: 421180

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	0.13		1.00	1.10		mg/L		97	75 - 125	0	4

QC Sample Results

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

TestAmerica Job ID: 400-162396-3
SDG: Ashpond

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 400-162396-A-17 DU
Matrix: Water
Analysis Batch: 421180

Client Sample ID: Duplicate
Prep Type: Total/NA

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

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-421795/6
Matrix: Water
Analysis Batch: 421795

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			12/03/18 09:16	1

Lab Sample ID: LCS 400-421795/7
Matrix: Water
Analysis Batch: 421795

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	15.3		mg/L		102	90 - 110

Lab Sample ID: MRL 400-421795/3
Matrix: Water
Analysis Batch: 421795

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	4.12	I	mg/L		82	50 - 150

Lab Sample ID: 400-162568-A-1 MS
Matrix: Water
Analysis Batch: 421795

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	8.07		mg/L		81	77 - 128

Lab Sample ID: 400-162568-A-1 MSD
Matrix: Water
Analysis Batch: 421795

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	Limit
Sulfate	1.4	U	10.0	8.74	J3	mg/L		87	77 - 128	8	5

Chain of Custody Record

Client Information		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(e):	
Client Contact: Kristi Mitchell		E-Mail: cheyenne.whitmire@testamericainc.com		COC No: 400-53432-23565.1	
Company: Gulf Power Company		Phone: 380 3484		Page: 1 of 1	
Address: BIN 731 One Energy Place		Due Date Requested:		Job #: 102394	
City: Pensacola	TAT Requested (days):	Analysis Requested		Preservation Codes:	
State, Zip: FL, 32520	PO #: Purchase Order not required	Field Sampling - Field Sampling Parameters		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 L - EDTA Z - other (specify)	
Phone: 850-444-6427(Tel)	WO #:	6020 - As, Ba, B, Be, Ca, Cr, Co, Li, Mo, Se		Other:	
Email: krmitch@seultest.com	Project #: 40006809	SM4500 Cl ₂ - Chloride, SM4500 SO ₄ - Sulfate, 2540C			
Project Name: CCR Smith Plant	SSOW#: 11/20/18	9315_R4226_9320_R4228_R4226R4228_GFP			
Site:	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, On-site, etc)	Preservation Code
	11/20/18	11:46	G	Water	
				Water	
Sample Identification					
MW-11					
Possible Hazard Identification					
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)					
Empty Kit Requisitioned by:					
Relinquished by: [Signature]		Date: 11/20/18 1540		Company: EDH	
Relinquished by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) To and Other Remarks: 4120/18 1540	
				Received by: [Signature] Date/Time: 11/20/18 1540 Company: Cogsway	
				Received by: [Signature] Date/Time: 11/20/18 1540 Company: Cogsway	
				Received by: [Signature] Date/Time: 11/20/18 1540 Company: Cogsway	
				Cooler Temperature(s) To and Other Remarks: 4120/18 1540	



Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-162396-3

SDG Number: Ashpond

Login Number: 162396

List Number: 1

Creator: Whitmire, Cheyenne R

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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, 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 <math><6\text{mm}</math> (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 Smith Plant

TestAmerica Job ID: 400-162396-3
SDG: Ashpond

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

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: 400-162396-4

TestAmerica Sample Delivery Group: Ashpond

Client Project/Site: CCR Smith Plant

For:

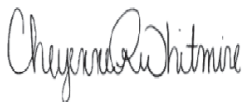
Gulf Power Company

BIN 731

One Energy Place

Pensacola, Florida 32520

Attn: Kristi Mitchell



Authorized for release by:

12/28/2018 2:03:52 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

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results through

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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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Case Narrative

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

TestAmerica Job ID: 400-162396-4
SDG: Ashpond

Job ID: 400-162396-4

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-162396-4

RAD

Method(s) PrecSep_0: Radium 228 Prep Bach 403456: The following samples were reduced due to potential matrix interference: MW-11 (400-162396-12). The samples had yellow discoloration, sediment, and a strong sulfur odor. Sample 310-144991-1 was reduced due to limited sample volume.

Method(s) PrecSep-21: Radium 226 Prep Bach 403442: The following samples were reduced due to potential matrix interference: MW-11 (400-162396-12). The samples had yellow discoloration, sediment, and a strong sulfur odor. Sample 310-144991-1 was reduced due to limited sample volume.

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Method Summary

Project: ufrpwo per l omyaGS
wro/ectRite: l l Whmitd wraG

TestAmerica Job ID: 400-1526C5-4
hDu : AsdyoG

Method	Method Description	Protocol	Laboratory
0613	Waj if m-225 (u Fwl)	h8 945	TAL hL
0620	Waj if m-229 (u Fwl)	h8 945	TAL hL
Wa225_Wa229	I ombiGaj Waj if m-225 aG Waj if m-229	TAL-hTL	TAL hL
wrehey_0	wreyaratioG wreciyitate heyaratioG	NoG	TAL hL
wrehey-21	wreyaratioG wreciyitate heyaratioG(21-DaSIGu rop td)	NoG	TAL hL

Protocol References:

NoG = NoG

h8 945 = "Test Metdoj s For Evarf atiGg horij 8 aste, wdSsicarR demicanMetdoj s", Tdirj Ej itioG November 1C95 AG Its Uyj ates.

TAL-hTL = TestAmerica Laboratories, ht. Lof is, FacintShtaG arj OyeratiGg wrocej f re.

Laboratory References:

TAL hL = TestAmerica ht. Lof is, 16713 Wj er TrainNortd, Eartd l itS, MO 56043, TEL (614)2C9-9355

Sample Summary

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

TestAmerica Job ID: 400-162396-4
SDG: Ashpond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-162396-12	MW-11	Water	11/20/18 11:46	11/20/18 15:40

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Client Sample Results

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

TestAmerica Job ID: 400-162396-4
SDG: Ashpond

Client Sample ID: MW-11
Date Collected: 11/20/18 11:46
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-12
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	21.2		0.926	2.12	1.00	0.129	pCi/L	11/29/18 15:08	12/21/18 07:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	26.8		40 - 110					11/30/19 18:09	1/31/19 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	7.37		0.725	0.993	1.00	0.529	pCi/L	11/29/18 16:50	12/11/18 12:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	26.8		40 - 110					11/30/19 17:80	1/31/19 17:00	1
. Carrier	90.8		40 - 110					11/30/19 17:80	1/31/19 17:00	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	28.6		1.18	2.34	5.00	0.529	pCi/L		12/27/18 15:10	1

Definitions/Glossary

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

TestAmerica Job ID: 400-162396-4
SDG: Ashpond

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.
α	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: CCh Rmitd Plant

TestAmerica Job ID: 400-1526j 5-4
 RDG: Asdpon3

Client Sample ID: MW-11
Date Collected: 11/20/18 11:46
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total\$ A	Prep	PrecRep-21			406442	11/20/18 17:08	C9P	TA9 R9
Total\$ A	Analysis	j 617		1	405j 65	12/18/18 0N46	CDh	TA9 R9
Total\$ A	Prep	PrecRepM0			406475	11/20/18 15:70	C9P	TA9 R9
Total\$ A	Analysis	j 620		1	404j 46	12/18/18 12:00	CDh	TA9 R9
Total\$ A	Analysis	h a225Mh a228		1	40NN6N	12/28/18 17:10	h T_	TA9 R9

Laboratory References:

TA9 R9 = TestAmerica Rt. 9ouis, 16N17 hi3er Trail Lortd, Eartd City, _ O 56047, TE9 (614)2j 8-8755

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QC Association Summary

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

TestAmerica Job ID: 400-162396-4
SDG: Ashpond

Rad

Prep Batch: 403442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162396-12	MW-11	Total/NA	Water	PrecSep-21	
MB 160-403442/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-403442/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
190-18211-K-1-A DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 403456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162396-12	MW-11	Total/NA	Water	PrecSep_0	
MB 160-403456/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-403456/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
190-18211-K-1-B DU	Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

Line: ufrPwop er l omyaGS
 wro/ectRite: l l U hmitd wraG

TestAmerica Job ID: 400-1526C5-4
 hDu : AsdyoG

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-403442/23-A
 Matrix: Water
 Analysis Batch: 406936

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 403442

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uaj if m-225	0704660	9	070328	07032C	1700	07128	yl iR	11/20/18 11:08	12/21/18 03:46	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					11/23/18 18:09	1/31/19 05:46	1

Lab Sample ID: LCS 160-403442/1-A
 Matrix: Water
 Analysis Batch: 406937

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 403442

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Uaj if m-225	1L71	167.2		1740	1700	0710L	yl iR	8C	58 - 163
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	107		40 - 110						

Lab Sample ID: 190-18211-K-1-A DU
 Matrix: Water
 Analysis Batch: 406937

Client Sample ID: Duplicate
 Prep Type: Total/NA
 Prep Batch: 403442

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Uaj if m-225	-070210	9	0702C30	9	070452	1700	070801	yl iR	0785	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	257		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-403456/23-A
 Matrix: Water
 Analysis Batch: 404941

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 403456

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uaj if m-228	076486	9	072C5	072C8	1700	07432	yl iR	11/20/18 15:10	12/18/18 12:02	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					11/23/18 15:00	1/31/19 11:00	1
. Carrier	907		40 - 110					11/23/18 15:00	1/31/19 11:00	1

QC Sample Results

IrieG: u f r Pwop er l omyaGS
 wro/ectRite: l l U hmitd wraG

TestAmerica Job ID: 400-1526C5-4
 hDu : AsdyoG

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

Lab Sample ID: LCS 160-403456/1-A
Matrix: Water
Analysis Batch: 404943

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 403456

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Uaj if m-228	1272	11744		1764	1700	07.04	yl iR	C4	L5 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	107		40 - 110
. Carrier	907		40 - 110

Lab Sample ID: 190-18211-K-1-B DU
Matrix: Water
Analysis Batch: 404943

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 403456

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Uaj if m-228	07112	9	070468	9	0720C	1700	07655	yl iR	0714	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	257		40 - 110
. Carrier	947		40 - 110

Chain of Custody Record

Client Information		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(e):	
Client Contact: Kristi Mitchell		E-Mail: cheyenne.whitmire@testamericainc.com		COC No: 400-53432-23565.1	
Company: Gulf Power Company		Phone: 380 3484		Page: 1 of 1	
Address: BIN 731 One Energy Place		Due Date Requested:		Job #: 102394	
City: Pensacola	State: FL	Zip: 32520	Analysis Requested		
Phone: 850-444-6427 (Tel)	Purchase Order not required		Preservation Codes:		
Email: krmitch@seulthermo.com	WO #:		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 Other:		
Project Name: CCR Smith Plant	Project #: 40006809		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)		
Sites:	SSOW#: 11/20/18		Total Number of Containers		
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Weather, P=soil, O=water, A=air)	Special Instructions/Note:
MW-11	11/20/18	11:46	G	Water	
				Water	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)					
Empty Kit Requisitioned by: [Signature] Relinquished by: [Signature] Date: 11/20/18 1540 Relinquished by: [Signature] Date: 11/20/18 1540 Relinquished by: [Signature] Date: 11/20/18 1540					
Custody Seals Intact: Yes <input type="checkbox"/> No <input type="checkbox"/> Custody Seal No.: 1120181540					
Received by: [Signature] Date/Time: 11/20/18 1540 Received by: [Signature] Date/Time: 11/20/18 1540 Received by: [Signature] Date/Time: 11/20/18 1540 Cooler Temperature(s) and Other Remarks: 11/20/18 1540					



Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-162396-4

SDG Number: Ashpond

Login Number: 162396

List Number: 1

Creator: Whitmire, Cheyenne R

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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, 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 <math><6\text{mm}</math> (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: 400-162396-4

SDG Number: Ashpond

Login Number: 162396

List Number: 2

Creator: Dupart, Lacey S

List Source: TestAmerica St. Louis

List Creation: 11/27/18 02:25 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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	19.0
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 <math><6\text{mm}</math> (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: CCh Rmitd Plant

TestAmerica Job ID: 400-1582j 5-4
 RDG: Asdpon.

Laboratory: TestAmerica Pensacola

All accred. itations/certifications del. by tdis laboratory are liste. Ng of all accred. itations/certifications are applicable to tdis reportN

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	Rtate Pro3ram	4	40160	05-20-1j
Ag A9	IRB SOC 1E086		784E1	08-88-80
AriLona	Rtate Pro3ram	j	Az0E10	01-18-80
ArZansas DOK	Rtate Pro3ram	5	QQ05Q	0j -01-1j
California	Rtate Pro3ram	j	8610	05-20-1j
Flori. a	g O7AP	4	QQ1010	05-20-1j
Geor3ia	Rtate Pro3ram	4	QQ1010 (F7)	05-20-1j
Illinois	g O7AP	6	800041	10-0j -1j
Iowa	Rtate Pro3ram	E	25E	0Q01-80
* ansas	g O7AP	E	O-10862	18-21-1QK
* entucZy (URT)	Rtate Pro3ram	4	62	05-20-1j
* entucZy (WW)	Rtate Pro3ram	4	j Q020	18-21-1j
7ouisiana	g O7AP	5	20j E5	05-20-1j
7ouisiana (DW)	g O7AP	5	7A01E	18-21-1j
Marylan.	Rtate Pro3ram	2	822	0j -20-1j
Massacdusetts	Rtate Pro3ram	1	M-F70j 4	05-20-1j
Micdi3an	Rtate Pro3ram	6	j j 18	05-20-1j
gew Jersey	g O7AP	8	F7005	05-20-1j
g ortd Carolina (WWRW)	Rtate Pro3ram	4	214	18-21-1j
BZadoma	Rtate Pro3ram	5	j Q10	0Q21-1j
Pennsylvania	g O7AP	2	5Q0045E	01-21-1j
h do. e Islan.	Rtate Pro3ram	1	7AB0020E	18-20-1QK
Routd Carolina	Rtate Pro3ram	4	j 5085	05-20-1j
Tennessee	Rtate Pro3ram	4	Tg08j 0E	05-20-1j
Texas	g O7AP	5	T104E048Q5-1Q-16	0j -20-1j
UR Fisd & Wil. life	Fe. eral		7006Q44Q0	0E-21-1j
URDA	Fe. eral		P220-1Q0014Q	06-1E-81
Vir3inia	g O7AP	2	450155	05-14-1j
Wasdin3ton	Rtate Pro3ram	10	Cj 16	06-16-1j
West Vir3inia DOP	Rtate Pro3ram	2	125	05-20-1j

Laboratory: TestAmerica St. Louis

All accred. itations/certifications del. by tdis laboratory are liste. Ng of all accred. itations/certifications are applicable to tdis reportN

Authority	Program	EPA Region	Identification Number	Expiration Date
AlasZa	Rtate Pro3ram	10	MB00064	05-20-1j
Ag A9	DoD O7AP		78206	04-05-1j
AriLona	Rtate Pro3ram	j	Az0Q12	18-0Q1j
California	Rtate Pro3ram	j	8QQ5	05-20-1j
Connecticut	Rtate Pro3ram	1	PH-0841	02-21-1j
Flori. a	g O7AP	4	QQE5Q	05-20-1j
Illinois	g O7AP	6	800082	11-20-1QK
Iowa	Rtate Pro3ram	E	2E2	18-01-1QK
* ansas	g O7AP	E	O-10825	10-21-1j
* entucZy (DW)	Rtate Pro3ram	4	j 0186	18-21-1QK
7ouisiana	g O7AP	5	040Q0	05-20-1j
7ouisiana (DW)	g O7AP	5	7A1Q001E	18-21-1QK
Marylan.	Rtate Pro3ram	2	210	0j -20-1j
Micdi3an	Rtate Pro3ram	6	j 006	05-20-1j
Missouri	Rtate Pro3ram	E	E00	05-20-1j

KAcre. itation/certification renewal pen. in3 - accred. itation/certification consi. ere. vali. N

TestAmerica Pensacola

Accreditation/Certification Summary

Client: Gulf Power Company
 Project Site: CCh Rmitd Plant

TestAmerica Job ID: 400-1582j 5-4
 RDG: Asdpon.

Laboratory: TestAmerica St. Louis (Continued)

All accreditation certifications delivered by this laboratory are listed. Not all accreditation certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Georgia	State Program	4	MB00064801Q-1	0E-21-1j
Georgia Jersey	g O7AP	8	MB008	05-20-1j
Georgia York	g O7AP	8	11515	02-21-1j
Georgia Dade	State Program	4	h80E	05-20-1j
Georgia	g h C		84-84Q1E-01	18-21-88
Georgia	State Program	4	jjj E	0Q21-1j
Pennsylvania	g O7AP	2	5Q00640	08-8Q1j K
North Carolina	State Program	4	Q6008001	05-20-1j
Texas	g O7AP	5	T104E041j 2-1Q18	0E-21-1j
US Fish & Wildlife	Federal		06Q44Q	0E-21-1j
URDA	Federal		P220-1E-008Q	08-08-80
Utah	g O7AP	4	MB00064801Q-10	0E-21-1j
Virginia	g O7AP	2	450820	05-14-1j
Washington	State Program	10	C6j 8	0Q20-1j
West Virginia DOP	State Program	2	2Q1	0Q21-1j

Accreditation certification renewal pending - accreditation certification considered valid.

TestAmerica Pensacola

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: 400-162396-7

TestAmerica Sample Delivery Group: Ashpond

Client Project/Site: CCR Smith Plant

For:

Gulf Power Company

BIN 731

One Energy Place

Pensacola, Florida 32520

Attn: Kristi Mitchell



Authorized for release by:

12/14/2018 4:40:38 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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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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Case Narrative

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

TestAmerica Job ID: 400-162396-7
SDG: Ashpond

Job ID: 400-162396-7

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-162396-7

Metals

Method(s) 6020: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-13 (400-162396-14). Elevated reporting limits (RLs) are provided.

General Chemistry

Method(s) SM 4500 Cl- E: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-13 (400-162396-14). 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. (400-162459-A-1 MS) and (400-162459-A-1 MSD)

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 421795 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-13 (400-162396-14), (400-162459-A-1), (400-162459-A-1 MS) and (400-162459-A-1 MSD). Elevated reporting limits (RLs) are provided.



Detection Summary

Client: f Poy er nom Sauh
 Project: n n3 dmitj p aut

TestAmerica Job ID: 400-1528C5-I
 dDf : Asj Sou/

Client Sample ID: MW-1L

ba4 Sample ID: 066-123L92-10

Analyte	Result	Qualifier	PQb	MDb	Unit	Dil Fac	D	Method	Prep Type
Arseuic	0.015		0.018	0.0045	mL.6		B	5020	Total
9ariPm	0.01 C		0.02B	0.004C	mL.6		B	5020	Total 3 recoverab
Mo@b/ euPm	0.020		0.01B	0.0020	mL.6		B	5020	Total 3 recoverab
9orou - D6	15		2.0	0.74	mL.6	200		5020	Total 3 recoverab
na@iPm - D6	BB0		10	B.0	mL.6	200		5020	Total 3 recoverab
6itj iPm - 3 A	0.25		0.0B0	0.011	mL.6		B0	5020	Total 3 recoverab
Total Dissoe/ do@s	7500		2B0	110	mL.6	1		dM 2B40n	Total GNA
nj @ri/ e	4B00		200	140	mL.6	100		dM 4B00 nGE	Total GNA
F@ori/ e	0.040 I		0.010	0.082	mL.6	1		dM 4B00 F n	Total GNA
dP@te	710		1B0	42	mL.6	80		dM 4B00 dO4 E	Total GNA
Fie@ SH	5.0C				dU	1		Fie@ damS@L	Total GNA

Method Summary

Line: ufrpwoerlomyaGS
 wro/ectRite: l l Whmitd wraG

TestAmerica Job ID: 400-162396-C
 hDu : AsdyoG

Method	Method Description	Protocol	Laboratory
6020	(etas)ll wR hL	h8 M#6	TAE wN5
h(2, 40l	horij svTotanDissorfej)TDhL	h(	TAE wN5
h(4, 00 l n N	l drørij evTotan	h(	TAE wN5
h(4, 00 OI	Ori orij e	h(	TAE wN5
h(4, 00 hg 4 N	hf r#teV Totan	h(	TAE wN5
Qerj hamyrnG=	Qerj hamyrnG=	NwA	TAE wN5
300, A	wreyaratioGvTotanWecoFerabre or Dissorfej (etas	h8 M#6	TAE wN5

Protocol References:

NwA U" h NGFiroGmeGanwroprotectioGA=eGcS
 h(UxhtaG arj (etdoj s Cor Tde N. amiGatioGg P8 ater AG 8 astepaterx
 h8 M#6 UxTest (etdoj s Cor NFarf atiG= horij 8 astevwdSsicarR demican(etdoj svTdirj Nj itioGv5ofember 19M6 AG lts " yj ates7

Laboratory References:

TAE wN5 U TestAmerica weGacorav33, , (cEemore DriFevweGacoravOE 32, 14vTNE JM 0L4C4-1001



Sample Summary

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

TestAmerica Job ID: 400-162396-7
SDG: Ashpond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-162396-14	MW-13	Water	11/19/18 14:25	11/20/18 15:40

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

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

TestAmerica Job ID: 400-162396-7
SDG: Ashpond

Client Sample ID: MW-13
Date Collected: 11/19/18 14:25
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-14
Matrix: Water

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

AnalFte	Result	QualiBer	PQL	MDL	f nit	D	Prepared	AnalFUed	Dil zac
Arsenic	0.0016		0.0013	0.00046	mg/L		11/30/18 10:45	11/30/18 18:02	5
Barium	0.0009		0.0025	0.00049	mg/L		11/30/18 10:45	11/30/18 18:02	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		11/30/18 10:45	11/30/18 18:02	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		11/30/18 10:45	11/30/18 18:02	5
Molybdenum	0.0020		0.015	0.0020	mg/L		11/30/18 10:45	11/30/18 18:02	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		11/30/18 10:45	11/30/18 18:02	5

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

AnalFte	Result	QualiBer	PQL	MDL	f nit	D	Prepared	AnalFUed	Dil zac
Barium	16		2.0	0.84	mg/L		11/30/18 10:45	12/04/18 16:35	200
Calcium	550		10	5.0	mg/L		11/30/18 10:45	12/04/18 16:35	200

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

AnalFte	Result	QualiBer	PQL	MDL	f nit	D	Prepared	AnalFUed	Dil zac
Beryllium	0.00034	U	0.0025	0.00034	mg/L		11/30/18 10:45	12/04/18 18:08	5
Lithium	0.026		0.050	0.011	mg/L		11/30/18 10:45	12/07/18 20:28	50

Method: General Chemistry

AnalFte	Result	QualiBer	PQL	MDL	f nit	D	Prepared	AnalFUed	Dil zac
Total Dissolved Solids	8600		250	170	mg/L			11/26/18 10:09	1
Chloride	4500		200	140	mg/L			12/04/18 10:21	100
Sulfate	0.040	I	0.10	0.032	mg/L			11/28/18 14:55	1
Sulfate	810		150	42	mg/L			12/03/18 10:00	30

Method: Field Sampling - Field Sampling

AnalFte	Result	QualiBer	PQL	MDL	f nit	D	Prepared	AnalFUed	Dil zac
Field pH	6.99				SU			11/19/18 14:25	1

Definitions/Glossary

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

TestAmerica Job ID: 400-162396-7
SDG: Ashpond

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
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.
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.
α	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: CCh Rmitd Plant

TestAmerica Job ID: 400-162396-j
 RDG: Asdpon5

Client Sample ID: MW-14

Date Collected: 11/19/18 10:3R

Date received: 11/36/18 1R06

Lab Sample ID: 066-123492-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total h eco7erable	Prep	3008A			421468	11/30/18 10:48	Dh L	TANPLv
Total h eco7erable	Analysis	6020		8	421j 23	11/30/18 1E:02	Dh L	TANPLv
Total h eco7erable	Prep	3008A	DN		421468	11/30/18 10:48	Dh L	TANPLv
Total h eco7erable	Analysis	6020	DN	200	422048	12/04/18 16:38	Dh L	TANPLv
Total h eco7erable	Prep	3008A	hA		421468	11/30/18 10:48	Dh L	TANPLv
Total h eco7erable	Analysis	6020	hA	8	422048	12/04/18 1E:0E	Dh L	TANPLv
Total h eco7erable	Prep	3008A	hA		421468	11/30/18 10:48	Dh L	TANPLv
Total h eco7erable	Analysis	6020	hA	80	422891	12/0j /18 20:2E	Dh L	TANPLv
Total S A	Analysis	RM 2840C		1	420j j 8	11/26/18 10:09	CNB	TANPLv
Total S A	Analysis	RM 4800 CI- L		100	421E3E	12/04/18 10:21	h h C	TANPLv
Total S A	Analysis	RM 4800 F C		1	4211E0	11/2E/18 14:88	BAB	TANPLv
Total S A	Analysis	RM 4800 RO4 L		30	421j 98	12/03/18 10:00	h h C	TANPLv
Total S A	Analysis	Fiel5 Rampling		1	421918	11/39/18 14:28	CDH	TANPLv

Laboratory references:

TANPLv = TestAmerica Pensacola, 3388 McNemore Drive, Pensacola, FN 32814, TLN(E80)4j 4-1001

QC Association Summary

Customer: Popyronom Sauh
 Project: Write: n3 dmitj pout

TestAmerica Job ID: 400-1526C5-I
 Df : Asj Sou/

Metals

Prep Batch: 39237L

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-14	UM-16	Totalerab	Mater	600vA	
400-1526C5-14 - 3 A	UM-16	Totalerab	Mater	600vA	
400-1526C5-14 - D7	UM-16	Totalerab	Mater	600vA	
U8 400-42145vW-A Fv	Uetj o/ 8@uB	Totalerab	Mater	600vA	
7nd 400-42145vW-A	7ab n outroGlamS@	Totalerab	Mater	600vA	
400-152402-n-C-8 Ud Fv	UatriEd SiBe	Totalerab	Mater	600vA	
400-152402-n-C-n UdD Fv	UatriEd SiBe DPS@ate	Totalerab	Mater	600vA	

Analysis Batch: 39259(

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-14	UM-16	Totalerab	Mater	5020	42145v
U8 400-42145vW-A Fv	Uetj o/ 8@uB	Totalerab	Mater	5020	42145v
7nd 400-42145vW-A	7ab n outroGlamS@	Totalerab	Mater	5020	42145v
400-152402-n-C-8 Ud Fv	UatriEd SiBe	Totalerab	Mater	5020	42145v
400-152402-n-C-n UdD Fv	UatriEd SiBe DPS@ate	Totalerab	Mater	5020	42145v

Analysis Batch: 399) 3L

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-14 - D7	UM-16	Totalerab	Mater	5020	42145v
400-1526C5-14 - 3 A	UM-16	Totalerab	Mater	5020	42145v

Analysis Batch: 399L42

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-14 - 3 A	UM-16	Totalerab	Mater	5020	42145v

General Chemistry

Analysis Batch: 39) 55L

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-14	UM-16	Totalerab	Mater	dU 2v40n	
U8 400-420I l vW	Uetj o/ 8@uB	Totalerab	Mater	dU 2v40n	
7nd 400-420I l vW	7ab n outroGlamS@	Totalerab	Mater	dU 2v40n	
400-1526C5-A-1 D^	DPS@ate	Totalerab	Mater	dU 2v40n	

Analysis Batch: 39221)

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-14	UM-16	Totalerab	Mater	dU 4v00 k n	
U8 400-4211NDW	Uetj o/ 8@uB	Totalerab	Mater	dU 4v00 k n	
7nd 400-4211NDW	7ab n outroGlamS@	Totalerab	Mater	dU 4v00 k n	
400-1526C5-A-C Ud	UatriEd SiBe	Totalerab	Mater	dU 4v00 k n	
400-1526C5-A-C UdD	UatriEd SiBe DPS@ate	Totalerab	Mater	dU 4v00 k n	
400-1526C5-A-1I D^	DPS@ate	Totalerab	Mater	dU 4v00 k n	

Analysis Batch: 39254L

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-14	UM-16	Totalerab	Mater	dU 4v00 dx 4 O	
U8 400-421I OvW	Uetj o/ 8@uB	Totalerab	Mater	dU 4v00 dx 4 O	
7nd 400-421I OvW	7ab n outroGlamS@	Totalerab	Mater	dU 4v00 dx 4 O	
U37 400-421I OvW	7ab n outroGlamS@	Totalerab	Mater	dU 4v00 dx 4 O	
400-1524vCA-1 Ud	UatriEd SiBe	Totalerab	Mater	dU 4v00 dx 4 O	

TestAmerica peusaco@

QC Association Summary

Out: f Poy er nomSauh
 Project: n n3 dmitj p aut

TestAmerica Job ID: 400-1526C5-I
 dDf : Asj Sou/

General Chemistry Continue86

Analysis Batch: 39254L Continue86

Lab Sample ID	Client Sample ID	Prep type	Matrix	Metho8	Prep Batch
400-1524vCA-1 UdD	UatriEd SiBe DPSGate	Total	Mater	dU 4v00 dx 4 O	

Analysis Batch: 3921(1

Lab Sample ID	Client Sample ID	Prep type	Matrix	Metho8	Prep Batch
400-1526C5-14	UM-16	Total	Mater	dU 4v00 nGO	
U8 400-421N6NW	Uetj ol 8 @uB	Total	Mater	dU 4v00 nGO	
7nd 400-421N6NW	7ab n outroGlamSG	Total	Mater	dU 4v00 nGO	
U37 400-421N6NW	7ab n outroGlamSG	Total	Mater	dU 4v00 nGO	
400-1526C5-A-2 Ud	UatriEd SiBe	Total	Mater	dU 4v00 nGO	
400-1526C5-A-2 UdD	UatriEd SiBe DPSGate	Total	Mater	dU 4v00 nGO	

Field Service / Mobile Lab

Analysis Batch: 39242L

Lab Sample ID	Client Sample ID	Prep type	Matrix	Metho8	Prep Batch
400-1526C5-14	UM-16	Total	Mater	kieG damSGig	

QC Sample Results

Line: ufrwoperlomyaGS
 wroectRite: l l . hmitd wrG

TestAmerica Job ID: 400-162396-C
 hDu : AsdyoG

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-421465/1-A ^5
Matrix: Water
Analysis Batch: 421723

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 421465

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ArseGc	000046	g	00013	000046	mLR		11/30/15 10:4B	11/30/15 1B:42	B
Marif m	000049	g	0002B	000049	mLR		11/30/15 10:4B	11/30/15 1B:42	B
MerSnif m	000034	g	0002B	000034	mLR		11/30/15 10:4B	11/30/15 1B:42	B
MbroG	0021	g	00B0	0021	mLR		11/30/15 10:4B	11/30/15 1B:42	B
l arcif m	0013	g	002B	0013	mLR		11/30/15 10:4B	11/30/15 1B:42	B
l dromif m	00011	g	0002B	00011	mLR		11/30/15 10:4B	11/30/15 1B:42	B
l obart	000040	g	0002B	000040	mLR		11/30/15 10:4B	11/30/15 1B:42	B
8itdif m	00011	g	000B0	00011	mLR		11/30/15 10:4B	11/30/15 1B:42	B
7 orSbj eG m	00020	g	001B	00020	mLR		11/30/15 10:4B	11/30/15 1B:42	B
hereGf m	0000C1	g	00013	0000C1	mLR		11/30/15 10:4B	11/30/15 1B:42	B

Lab Sample ID: LCS 400-421465/2-A
Matrix: Water
Analysis Batch: 421723

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 421465

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
ArseGc	00B00	0049B		mLR		99	50 - 120
Marif m	00B00	00453		mLR		9C	50 - 120
MerSnif m	00B00	00B60		mLR		112	50 - 120
MbroG	0000	0006		mLR		106	50 - 120
l arcif m	B00	459		mLR		95	50 - 120
l dromif m	00B00	00495		mLR		100	50 - 120
l obart	00B00	00B15		mLR		104	50 - 120
8itdif m	00B00	00B45		mLR		110	50 - 120
7 orSbj eG m	00B00	004CC		mLR		9B	50 - 120
hereGf m	00B00	00492		mLR		95	50 - 120

Lab Sample ID: 400-162402-C-9-B MS ^5
Matrix: Water
Analysis Batch: 421723

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 421465

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
ArseGc	0023		00B00	00C4B		mLR		102	CB - 12B
Marif m	00014	l	00B00	00B12		mLR		100	CB - 12B
MerSnif m	000034	g	00B00	00B04		mLR		101	CB - 12B
MbroG	0030	l	0000	003B		mLR		104	CB - 12B
l arcif m	60		B00	100		mLR		99	CB - 12B
l dromif m	00011	g	00B00	00B09		mLR		102	CB - 12B
l obart	000040	g	00B00	00B30		mLR		106	CB - 12B
8itdif m	00011	g	00B00	00B10		mLR		102	CB - 12B
7 orSbj eG m	00046	l	00B00	00B44		mLR		99	CB - 12B
hereGf m	00033		00B00	00B09		mLR		9B	CB - 12B

Lab Sample ID: 400-162402-C-9-C MSD ^5
Matrix: Water
Analysis Batch: 421723

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 421465

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
ArseGc	0023		00B00	00CB3		mLR		104	CB - 12B	1	20

TestAmerica weGacora

QC Sample Results

Line: ufrPwoperlomyaGS
wroectRite: l l . hmitd wraG

TestAmerica Job ID: 400-162396-C
hDu: AsdyoG

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

Lab Sample ID: 400-162402-C-9-C MSD ^5
Matrix: Water
Analysis Batch: 421723

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 421465

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Marif m	00014	l	00B00	00B16		mLR		100	CB-12B	1	20
MerSnif m	000034	g	00B00	00B06		mLR		101	CB-12B	0	20
MbroG	0030	l	00100	00131		mLR		101	CB-12B	3	20
l arcif m	60		B00	110		mLR		100	CB-12B	1	20
l dromif m	00011	g	00B00	00B21		mLR		104	CB-12B	2	20
l obart	000040	g	00B00	00B36		mLR		10C	CB-12B	1	20
8itdif m	00011	g	00B00	00B16		mLR		103	CB-12B	1	20
7 orSbj eGf m	00046	l	00B00	00B42		mLR		99	CB-12B	0	20
hereGf m	00033		00B00	00B09		mLR		9B	CB-12B	0	20

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

Lab Sample ID: MB 400-420775/1
Matrix: Water
Analysis Batch: 420775

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TotanDissorvej horij s	34	g	B0	34	mLR			11/26/15 10:09	1

Lab Sample ID: LCS 400-420775/2
Matrix: Water
Analysis Batch: 420775

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
TotanDissorvej horij s	293	380		mLR		119	C5-122

Lab Sample ID: 400-162396-A-1 DU
Matrix: Water
Analysis Batch: 420775

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
TotanDissorvej horij s	55		550		mLR		0	B

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-421838/6
Matrix: Water
Analysis Batch: 421838

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
l dnoij e	14	g	20	14	mLR			12/04/15 09:2B	1

Lab Sample ID: LCS 400-421838/7
Matrix: Water
Analysis Batch: 421838

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
l dnoij e	300	324		mLR		105	90-110

TestAmerica weGacorã

QC Sample Results

Line: ufrPwoperlomyaGS
 wro/ectRite: l l . hmitd wraG

TestAmerica Job ID: 400-162396-C
 hDu : AsdyoG

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

Lab Sample ID: MRL 400-421838/3
Matrix: Water
Analysis Batch: 421838

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
l dnoij e	200	109	I	mLR		54	B0 - 1B0

Lab Sample ID: 400-162396-A-2 MS
Matrix: Water
Analysis Batch: 421838

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
l dnoij e	13		100	23	B	mLR		10C	C3 - 120

Lab Sample ID: 400-162396-A-2 MSD
Matrix: Water
Analysis Batch: 421838

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
l dnoij e	13		100	23	B	mLR		10B	C3 - 120	1	5

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-421180/3
Matrix: Water
Analysis Batch: 421180

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fri orij e	0032	g	000	0032	mLR			11/25/15 14:20	1

Lab Sample ID: LCS 400-421180/4
Matrix: Water
Analysis Batch: 421180

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fri orij e	400	300		mLR		95	90 - 110

Lab Sample ID: 400-162396-A-9 MS
Matrix: Water
Analysis Batch: 421180

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
Fri orij e	003		100	100		mLR		9C	CB - 12B

Lab Sample ID: 400-162396-A-9 MSD
Matrix: Water
Analysis Batch: 421180

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
Fri orij e	003		100	100		mLR		9C	CB - 12B	0	4

TestAmerica weGacor

QC Sample Results

Location: Florida
 Project: Florida

TestAmerica Job ID: 400-162396-C
 Analyst: AsdyoG

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 400-162396-A-17 DU
 Matrix: Water
 Analysis Batch: 421180

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	g	0.032	g	mLR		NI	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-421795/6
 Matrix: Water
 Analysis Batch: 421795

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	g	BL	1.4	mLR			12/03/15 09:16	1

Lab Sample ID: LCS 400-421795/7
 Matrix: Water
 Analysis Batch: 421795

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	1.00	1.03		mLR		102	90 - 110

Lab Sample ID: MRL 400-421795/3
 Matrix: Water
 Analysis Batch: 421795

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	1.00	0.12		mLR		52	80 - 180

Lab Sample ID: 400-162459-A-1 MS
 Matrix: Water
 Analysis Batch: 421795

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	0.20		0.00	0.96	J3	mLR		-200	0.00 - 1.25

Lab Sample ID: 400-162459-A-1 MSD
 Matrix: Water
 Analysis Batch: 421795

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	0.20		0.00	0.55	J3	mLR		-300	0.00 - 1.25	1	0.00

Chain of Custody Record



Client Information Client Contact: Kristi Mitchell Company: Gulf Power Company Address: BIN 731 One Energy Place City: Pensacola State, Zip: FL, 32520 Phone: 850-444-6427 (Tel) Email: krmitch@southernco.com Project Name: CCR Smith Plant Site:		Sampler: <u>Deeth Suesles</u> Phone: <u>380 2458</u> Lab PM: Whitmore, Cheyenne R E-Mail: cheyenne.whitmore@testamericainc.com Carrier Tracking No(s):		COC No: 400-53432-23565.1 Page: Page 1 of 1 Job #: <u>102396</u>																																																																																								
Due Date Requested: TAT Requested (days): PO #: Purchase Order not required WO #: Project #: 40006609 SSOW#:		Analysis Requested <table border="1"> <tr> <td>9315_Ra226, 9320_Ra228, Ra226Ra228_GFPc</td> <td>D</td> <td>N</td> <td>D</td> <td>N</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>SMA500_Cl_E - Chloride, SMA500_SO4_F - Sulfate, 25410C -</td> <td>D</td> <td>N</td> <td>D</td> <td>N</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>6020 - As, Ba, B, Be, Ca, Cr, Co, Li, Mo, Se</td> <td>D</td> <td>N</td> <td>D</td> <td>N</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Field Sampling - Field Sampling Parameters</td> <td>D</td> <td>N</td> <td>D</td> <td>N</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>				9315_Ra226, 9320_Ra228, Ra226Ra228_GFPc	D	N	D	N																	SMA500_Cl_E - Chloride, SMA500_SO4_F - Sulfate, 25410C -	D	N	D	N																		6020 - As, Ba, B, Be, Ca, Cr, Co, Li, Mo, Se	D	N	D	N																		Field Sampling - Field Sampling Parameters	D	N	D	N																	
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Field Sampling - Field Sampling Parameters	D	N	D	N																																																																																								
Sample Identification MW-13		Sample Date: <u>11/19/18</u> Sample Time: <u>1425</u> Sample Type (C=comp, G=grab): <u>G</u> Matrix (W=water, S=solid, O=other): <u>Water</u> Preservation Code: <u>Water</u>		Field Filtered Sample (Yes or No): <input checked="" type="checkbox"/> Yes Perform MS/MSD (Yes or No): <input checked="" type="checkbox"/> Yes		Total Dissolved Solids, 4500 F C - Fluoride 9315_Ra226, 9320_Ra228, Ra226Ra228_GFPc SMA500_Cl_E - Chloride, SMA500_SO4_F - Sulfate, 25410C - 6020 - As, Ba, B, Be, Ca, Cr, Co, Li, Mo, Se Field Sampling - Field Sampling Parameters		Total Number of containers: <u>1</u>		Special Instructions/Note:		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 Other:																																																																																
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Deliverable Requested: <input type="checkbox"/> I, II, III, IV, Other (specify)		Empty Kit Relinquished by: _____ Date: _____ Relinquished by: _____ Date/Time: <u>11/20/18 15:40</u> Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements:		Method of Shipment: _____ Date/Time: <u>11-20-18 05:40</u> Date/Time: _____ Date/Time: _____		Company: _____ Company: _____ Company: _____																																																																																
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____		Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____		Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____		Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____																																																																																

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-162396-S

DAG Number: s hdpon/

Login Number: 162396

List Number: 1

Creator: Whitmire, Cheyenne R

List Source: TestAmerica Pensacola

Question	Answer	Comment
Calibration of the scale used to weigh the sample by a certified scale	NR	
Temperature of the sample when weighed	, rue	
Temperature of the sample when weighed	NR	
Temperature of the sample when weighed	, rue	
Temperature of the sample when weighed	, rue	
Cooler, temperature is acceptable	, rue	
Cooler, temperature is reported	, rue	0 to 5°C (0 to 5°F) ± 0.5°C (± 1°F)
COC is present	, rue	
COC is filled out in accordance with the label	, rue	
COC is filled out with all pertinent information	, rue	
The field label name is present on COC?	, rue	
There are no discrepancies between the container label and the COC	, rue	
Labels are visible within the container, time (exclusive of time with immediate label)	, rue	
Labels are visible on the label	, rue	
Containers are not broken or leaking	, rue	
Labels are attached to the containers	, rue	
Appropriate labels are attached to the containers	, rue	
Labels are completely filled out	, rue	
Labels are properly verified	, rue	
There is sufficient information for all requested analyses	, rue	
MDMA		
Containers require zero dead space or no dead space or bubbles in the container	NR	
Multiple samples are not present	, rue	
Labels do not require splitting or composition	, rue	
Chlorine Deviation	NR	

Accreditation/Certification Summary

Client: Gulf Power Company
 Project Site: CCh Rmitd Plant

TestAmerica Job ID: 400-162396-j
 RDG: Asdpon.

Laboratory: TestAmerica Pensacola

All accreditation certifications delivered by this laboratory are listed. Not all accreditation certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	Rtate ProBram	4	401g0	06-30-19
A5 AO	IRE S7C 1j 02g		L24j 1	02-22-20
Arizona	Rtate ProBram	9	AZ0j 10	01-12-20
Arkansas D7Q	Rtate ProBram	6	88-0689	09-01-19
California	Rtate ProBram	9	2g10	06-30-19
Florida	57LAP	4	781010	06-30-19
Georgia	Rtate ProBram	4	781010 (FL)	06-30-19
Illinois	57LAP	9	200041	10-09-19
Iowa	Rtate ProBram	7	36j	08-01-20
Kansas	57LAP	7	7-102g3	12-31-18
Kentucky (URT)	Rtate ProBram	4	g3	06-30-19
Kentucky (WW)	Rtate ProBram	4	98030	12-31-18
Louisiana	57LAP	6	309j 6	06-30-19
Louisiana (DW)	57LAP	6	LA180023	12-31-18
Maryland	Rtate ProBram	3	233	09-30-19
Massachusetts	Rtate ProBram	1	M-FL094	06-30-19
Michigan	Rtate ProBram	9	9912	06-30-19
New Jersey	57LAP	2	FL006	06-30-19
North Carolina (WW&RW)	Rtate ProBram	4	314	12-31-19
Oklahoma	Rtate ProBram	6	9810	08-31-19
Pennsylvania	57LAP	3	68-0046j	01-31-19
Rhode Island	Rtate ProBram	1	LAE 0030j	12-30-18
South Carolina	Rtate ProBram	4	96026	06-30-19
Tennessee	Rtate ProBram	4	T5 0290j	06-30-19
Texas	57LAP	6	T104j 04286-18-1g	09-30-19
U.S. Fish & Wildlife	Federal		L70g8448-0	0j -31-19
URDA	Federal		P330-18-00148	0g-1j -21
Virginia	57LAP	3	460166	06-14-19
Washington	Rtate ProBram	10	C91g	0g-1g-19
West Virginia D7P	Rtate ProBram	3	136	06-30-19

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: 400-162396-8

TestAmerica Sample Delivery Group: Ashpond

Client Project/Site: CCR Smith Plant

For:

Gulf Power Company

BIN 731

One Energy Place

Pensacola, Florida 32520

Attn: Kristi Mitchell



Authorized for release by:

12/28/2018 2:04:57 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.

1

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Case Narrative

Client: Gulf Power Company
Project Site: CCh Rmitd Plant

TestAmerica Job ID: 400-162396-j
RDG: AsdponM

Job ID: 400-162396-8

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-162396-8

RAD

(etdoMs_PrecRep80: h aMum 22j Prep Bacd 403456: Tde following samples were reMuceMMue to potential matrix interference: (W-13)400-162396-14_ Tde samples daMyellow Mscoloration, seMment, anMa strong sulfur oMbr. Rample 310-144991-1 was reMuceMMue to limiteMsample volume.

(etdoMs_PrecRep-21: h aMum 226 Prep Bacd 403442: Tde following samples were reMuceMMue to potential matrix interference: (W-13)400-162396-14_ Tde samples daMyellow Mscoloration, seMment, anMa strong sulfur oMbr. Rample 310-144991-1 was reMuceMMue to limiteMsample volume.



Method Summary

Out: f Poy er nomSauh
 proctWrite: n n 8 dmitj p aut

TestAmerica Job ID: 400-152605-I
 dDf : Asj Sou/

Method	Method Description	Protocol	Laboratory
0613	8 a/ iPm-225 (f Fpn)	d9 l 45	TAL dL
0620	8 a/ iPm-22l (f Fpn)	d9 l 45	TAL dL
8 a225_8 a22l	n ombiue/ 8 a/ iPm-225 au/ 8 a/ iPm-22l	TAL-dTL	TAL dL
precd eS_0	preSaratiou, preciSitate deSaratiou	Noue	TAL dL
precd eS-21	preSaratiou, preciSitate deSaratiou (21-Dah lu-f roy tj)	Noue	TAL dL

Protocol References:

Noue = Noue
 d9 l 45 = "Test Metj o/ s For EvaCatiug doG 9 aste, pj hsaCw emicaCmetj o/ s", Tj ir/ E/ itiou, November 1Q 5 Au/ Its US/ ates.
 TAL-dTL = TestAmerica Laboratories, dt. LoPis, FaciGh dtau/ ar/ OSeratiug proce/ Pre.

Laboratory References:

TAL dL = TestAmerica dt. LoPis, 16713 8i/ er TraiGnortj , Eartj n ith, MO 56043, TEL (614)2Q -l 355



Sample Summary

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

TestAmerica Job ID: 400-162396-8
SDG: Ashpond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-162396-14	MW-13	Water	11/19/18 14:25	11/20/18 15:40

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Client Sample Results

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

TestAmerica Job ID: 400-162396-8
SDG: Ashpond

Client Sample ID: MW-13
Date Collected: 11/19/18 14:25
Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-14
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	6.12		0.499	0.743	1.00	0.131	pCi/L	11/29/18 15:08	12/21/18 07:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					11/3/18 1:08	1/3/18 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	5.49		0.617	0.797	1.00	0.522	pCi/L	11/29/18 16:50	12/11/18 12:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					11/3/18 1:08	1/3/18 1/01	1
Y Carrier	527		40 - 110					11/3/18 1:08	1/3/18 1/01	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	11.6		0.794	1.09	5.00	0.522	pCi/L		12/27/18 15:10	1

Definitions/Glossary

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

TestAmerica Job ID: 400-162396-8
SDG: Ashpond

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.
α	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: CCd hmit3 Plant

TestAmerica Job ID: 400-1526j 5-/
 hDG: As3pon8

Client Sample ID: MW-14
Date Collected: 11/19/18 10:3R
Date received: 11/36/18 1R06

Lab Sample ID: 066-123492-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Volume	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total R A	Prep	Prechep-21			406442	11/21/18 17:07	C9P	TA9 h9
Total R A	Analysis	j 617		1	405j 65	12/11/18 0N46	CDd	TA9 h9
Total R A	Prep	PrechepM0			406475	11/21/18 15:70	C9P	TA9 h9
Total R A	Analysis	j 620		1	404j 46	12/11/18 12:01	CDd	TA9 h9
Total R A	Analysis	d a225M d a22/		1	40NN6N	12/21/18 17:10	d T_	TA9 h9

Laboratory references:

TA9 h9 = TestAmerica ht. 9ouis, 16N17 di8er Trail Lort3, Eart3 City, _ O 56047, TE9 (614)2j / - / 755



QC Association Summary

Project Name: UFRP Woperl omyaGS
Project Site: I I Whmitd wraG

TestAmerica Job ID: 400-162396-C
Lab ID: AsdyoG

Rad

Prep Batch: 403442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162396-14	NM-13	Total BA	Mater	wrechey-21	
Nk 160-403442R3-A	Netdoj kraGL	Total BA	Mater	wrechey-21	
Bl h 160-403442R-A	8ab l oGronhamyre	Total BA	Mater	wrechey-21	
190-1C211-K-1-A DU	Df yricate	Total BA	Mater	wrechey-21	

Prep Batch: 403456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162396-14	NM-13	Total BA	Mater	wrechey_0	
Nk 160-403456R3-A	Netdoj kraGL	Total BA	Mater	wrechey_0	
Bl h 160-403456R-A	8ab l oGronhamyre	Total BA	Mater	wrechey_0	
190-1C211-K-1-k DU	Df yricate	Total BA	Mater	wrechey_0	

QC Sample Results

Count of Ppoy er nomSauh
 Product: n n9 dmitj pAut

TestAmerica Job ID: 400-1526C5-I
 dDf : Asj Sou/

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-403442/23-A
Matrix: Water
Analysis Batch: 406936

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 403442

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
9a/ iPm-225	0704660	8	070321	07032C	1700	07121	SnIU	1112011 1L:01	1212111 03:46	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					113 2319 18:09	1/ 3 1319 05:46	1

Lab Sample ID: LCS 160-403442/1-A
Matrix: Water
Analysis Batch: 406937

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 403442

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
9a/ iPm-225	1L71	167.2		1740	1700	0710L	SnIU	1C	51 - 163
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	107		40 - 110						

Lab Sample ID: 190-18211-K-1-A DU
Matrix: Water
Analysis Batch: 406937

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 403442

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
9a/ iPm-225	070210	8	0702C30	8	070452	1700	0701 01	SnIU	0785	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	257		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-403456/23-A
Matrix: Water
Analysis Batch: 404941

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 403456

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
9a/ iPm-221	076416	8	072C5	072C1	1700	07432	SnIU	1112011 15:L0	1212111 12:02	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					113 2319 1Y:80	1/ 3 1319 1/:0/	1
. Carrier	907		40 - 110					113 2319 1Y:80	1/ 3 1319 1/:0/	1

QC Sample Results

Customer: Poyron, SAH
 Project: 1909 dmitj p

TestAmerica Job ID: 400-152605-I
 dDf : Asj Sou/

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

Lab Sample ID: LCS 160-403456/1-A
 Matrix: Water
 Analysis Batch: 404943

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 403456

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
9 a/ iPm-228	1272	11744		1764	1700	07.04	SniU	C4	L5 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	107		40 - 110
. Carrier	907		40 - 110

Lab Sample ID: 190-18211-K-1-B DU
 Matrix: Water
 Analysis Batch: 404943

Client Sample ID: Duplicate
 Prep Type: Total/NA
 Prep Batch: 403456

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
9 a/ iPm-228	07112	8	070461	8	0720C	1700	07655	SniU	0714	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	257		40 - 110
. Carrier	947		40 - 110

Chain of Custody Record

<p>Client Information Client Contact: Kristi Mitchell Company: Gulf Power Company Address: BIN 731 One Energy Place City: Pensacola State/Zip: FL, 32520 Phone: 850-444-6427(Tel) Email: kymitch@southernco.com Project Name: CCR Smith Plant Site:</p>	<p>Sampler: Beth Suesles Phone: 380 2458 Lab P/M: Whitmore, Cheyenne R E-Mail: cheyenne.whitmore@testamericainc.com Carrier Tracking No(s): COC No: 400-53432-23565.1 Page: Page 1 of 1 Job #: 102396</p>	<p>Due Date Requested: TAT Requested (days): PO #: Purchase Order not required WO #: Project #: 40006609 SSO#: </p>	<p>Sample Identification Sample Date: 11/19/18 Sample Time: 1425 Sample Type (C=comp, G=grab): G Matrix (Wet, Solid, Other): Water Preservation Code: Water</p>																					
<p>Analysis Requested</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">9315_Raz26_9320_Raz28_Raz26Raz28_GFFC</td> <td style="width: 33%;">D</td> <td style="width: 33%;">N</td> <td style="width: 33%;">N</td> <td rowspan="5" style="vertical-align: top;"> Special Instructions/Note: Total Number of containers </td> </tr> <tr> <td>Perform MS/MSD (Yes or No)</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>Field Filtered Sample (Yes or No)</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>6020 - As,Ba,Bi,Cr,Cd,Cu,Co,Li,Mn,Se</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Field Sampling - Field Sampling Parameters</td> <td></td> <td></td> <td></td> </tr> </table>				9315_Raz26_9320_Raz28_Raz26Raz28_GFFC	D	N	N	Special Instructions/Note: Total Number of containers	Perform MS/MSD (Yes or No)	X			Field Filtered Sample (Yes or No)	X			6020 - As,Ba,Bi,Cr,Cd,Cu,Co,Li,Mn,Se				Field Sampling - Field Sampling Parameters			
9315_Raz26_9320_Raz28_Raz26Raz28_GFFC	D	N	N	Special Instructions/Note: Total Number of containers																				
Perform MS/MSD (Yes or No)	X																							
Field Filtered Sample (Yes or No)	X																							
6020 - As,Ba,Bi,Cr,Cd,Cu,Co,Li,Mn,Se																								
Field Sampling - Field Sampling Parameters																								
<p>Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)</p>																								
<p>Empty Kit Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature]</p>																								
<p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months</p>																								
<p>Special Instructions/QC Requirements:</p>																								
<p>Relinquished by: [Signature] Date/Time: 11/20/18 15:40 Company: RDM Date/Time: [Signature] Company: [Signature] Date/Time: [Signature] Company: [Signature]</p>																								
<p>Custody Seals Intact: Δ Yes Δ No Custody Seal No.:</p>																								



Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-162396-8

SDG Number: Ashpond

Login Number: 162396

List Number: 1

Creator: Whitmire, Cheyenne R

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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, 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 <math><6\text{mm}</math> (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: 400-162396-8

SDG Number: Ashpond

Login Number: 162396

List Number: 2

Creator: Dupart, Lacey S

List Source: TestAmerica St. Louis

List Creation: 11/27/18 02:25 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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	19.0
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 <math><6\text{mm}</math> (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
 Site: CCd hmit. Plant

TestAmerica Job ID: 400-1582j 5-/
 hDG: As. ponN

Laboratory: TestAmerica Pensacola

All accreditations/certifications in by this laboratory are listed in 6 of all accreditations/certifications are applicable to this report

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40130	05-20-1j
A6 AB	h OREC 17083		L8471	08-88-80
Arizona	State Program	j	AZ0710	01-18-80
Arkansas DEQ	State Program	5	// -05/ j	0j -01-1j
California	State Program	j	8310	05-20-1j
Florida	6 ELAP	4	E/ 1010	05-20-1j
Georgia	State Program	4	E/ 1010 (FL)	05-20-1j
Illinois	6 ELAP	3	800041	10-0j -1j
Iowa	State Program	7	257	0/ -01-80
*ansas	6 ELAP	7	E-10832	18-21-1/ K
*entucky (UHT)	State Program	4	32	05-20-1j
*entucky (WW)	State Program	4	j / 020	18-21-1j
Louisiana	6 ELAP	5	20j 75	05-20-1j
Louisiana (DW)	6 ELAP	5	LA017	18-21-1j
Maryland	State Program	2	822	0j -20-1j
Massachusetts	State Program	1	M-FL0j 4	05-20-1j
Michigan	State Program	3	j j 18	05-20-1j
New Jersey	6 ELAP	8	FL005	05-20-1j
North Carolina (WWRW)	State Program	4	214	18-21-1j
Oklahoma	State Program	5	j / 10	0/ -21-1j
Pennsylvania	6 ELAP	2	5/ -00457	01-21-1j
Port of St. Johns	State Program	1	LAO00207	18-20-1/ K
South Carolina	State Program	4	j 5085	05-20-1j
Tennessee	State Program	4	T6 08j 07	05-20-1j
Texas	6 ELAP	5	T1047048/ 5-1/ -13	0j -20-1j
Utah Fish & Wildlife	Federal		LE03/ 44/ -0	07-21-1j
Utah DA	Federal		P220-1/ -0014/	03-17-81
Virginia	6 ELAP	2	450155	05-14-1j
Washington	State Program	10	Cj 13	03-13-1j
West Virginia DEP	State Program	2	125	05-20-1j

Laboratory: TestAmerica St. Louis

All accreditations/certifications in by this laboratory are listed in 6 of all accreditations/certifications are applicable to this report

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00034	05-20-1j
A6 AB	DoD ELAP		L8203	04-05-1j
Arizona	State Program	j	AZ0/ 12	18-0/ -1j
California	State Program	j	8/ / 5	05-20-1j
Connecticut	State Program	1	PH-0841	02-21-1j
Florida	6 ELAP	4	E/ 75/ j	05-20-1j
Illinois	6 ELAP	3	800082	11-20-1/ K
Iowa	State Program	7	272	18-01-1/ K
*ansas	6 ELAP	7	E-10825	10-21-1j
*entucky (DW)	State Program	4	j 0183	18-21-1/ K
Louisiana	6 ELAP	5	040/ 0	05-20-1j
Louisiana (DW)	6 ELAP	5	LA1/ 0017	18-21-1/ K
Maryland	State Program	2	210	0j -20-1j
Michigan	State Program	3	j 003	05-20-1j
Missouri	State Program	7	7/ 0	05-20-1j

KAccreditation/Certification renewal pending - accreditation/certification consideration

TestAmerica Pensacola

Accreditation/Certification Summary

Client: Gulf Power Company
 Project: CCd hmit. Plant

TestAmerica Job ID: 400-1582j 5-/
 hDG: As. ponN

Laboratory: TestAmerica St. Louis (Continued)

All accreditations/certifications performed by this laboratory are listed in 6 of all accreditations/certifications are applicable to this report

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	MO00034801/ -1	07-21-1j
New Jersey	6 ELAP	8	MO008	05-20-1j
New York	6 ELAP	8	11515	02-21-1j
North Dakota	State Program	7	d 807	05-20-1j
North Carolina	6 d C		84-84/ 17-01	18-21-88
Oklahoma	State Program	5	jjj 7	0/ -21-1j
Pennsylvania	6 ELAP	2	5/ -00340	08-8/ -1j K
South Carolina	State Program	4	/ 3008001	05-20-1j
Texas	6 ELAP	5	T1047041j 2-1/ -18	07-21-1j
U.S. Fish & Wildlife	Federal		03/ 44/	07-21-1j
Utah	Federal		P220-17-008/	08-08-80
Utah	6 ELAP	7	MO00034801/ -10	07-21-1j
Virginia	6 ELAP	2	450820	05-14-1j
Washington	State Program	10	C3j 8	0/ -20-1j
West Virginia DEP	State Program	2	2/ 1	0/ -21-1j



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: 400-162396-11

TestAmerica Sample Delivery Group: Ashpond

Client Project/Site: CCR Smith Plant

For:

Gulf Power Company

BIN 731

One Energy Place

Pensacola, Florida 32520

Attn: Kristi Mitchell



Authorized for release by:

12/14/2018 4:38:41 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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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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Case Narrative

Client: Gulf Power Company
Project/ Site: CCS / Unit Plant

TestAmerica Job ID: 400-162396-11
/ DG: Asponh

Job ID: 400-162396-11

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-162396-11

Metals

detRoM (/ d 6020: TRe followin) sample was hiluteh to brin) tRe concentration of tar) et analytes witRn tRe calibration ran) e: d g -14 M00-162396-16(W. leEateh reportin) limits M\$vs(are proEhehW

General Chemistry

detRoM (/ d 4L00 Cl- . : TRe followin) sample was hiluteh to brin) tRe concentration of tar) et analytes witRn tRe calibration ran) e: d g -14 M00-162396-16(W. leEateh reportin) limits M\$vs(are proEhehW

detRoM (/ d 4L00 / 54 . : Due to tRe concentration of sulfates in tRe parent sample tRe d / jd / D were hiluteh after tRe spiCeWTRe spiCe amounts were ah7usteh by tRe hilution factorW M00-1624L9-A-1 d / (anh M00-1624L9-A-1 d / D(

detRoM (/ d 4L00 / 54 . : TRe matrik spiCe j matrik spiCe huplicate M / jd / D(recoEeries for analytical batcR421x9L were outsihe control limitsW ample matrik interference anhjor non-Romo) eneity are suspecteh because tRe associateh laboratory control sample M00-1624L9-A-1 (recoEery was witRn acceptance limitsW

detRoM (/ d 4L00 / 54 . : TRe followin) samples were hiluteh to brin) tRe concentration of tar) et analytes witRn tRe calibration ran) e: d g -14 M00-162396-16(, M00-1624L9-A-1(, M00-1624L9-A-1 d / (anh M00-1624L9-A-1 d / D(W. leEateh reportin) limits M\$vs(are proEhehW

Detection Summary

Location: ufrpwoerlomyaGS
 Project: I.L. hmitd wraG

TestAmerica Job ID: 400-152805-11
 Method: AsdyoG

Client Sample ID: MW-1L

ba4 Sample ID: L00-162396-16

Analyte	Result	Qualifier	PQb	MDb	Unit	Dil Fac	D	Method	Prep Type
ArseGc	030vB		03018	030045	mgRL	v		5020	Totan . eco6erabre
9arif m	030vM		0302v	03004C	mgRL	v		5020	Totan . eco6erabre
7 orSbj eG m	03018 I		0301v	03020	mgRL	v		5020	Totan . eco6erabre
9oroG- DL	1v		230	034	mgRL		200	5020	Totan . eco6erabre
I arcif m - DL	200		10	v30	mgRL		200	5020	Totan . eco6erabre
TotanDisso6ej horij s	400		v0	84	mgRL		1	h7 2v40l	TotanNA
I dorij e	2400		150	110	mgRL		80	h7 4v00 l n E	TotanNA
Fri orij e	030B0 I		030	0382	mgRL		1	h7 4v00 F l	TotanNA
hf rate	M20		1v0	42	mgRL		80	h7 4v00 hO4 E	TotanNA
Fiej yH	535				hU		1	Fiej hamyrG	TotanNA

Method Summary

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

TestAmerica Job ID: 400-162396-11
SDG: Ashpond

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

Protocol References:

EPA = US Environmental Protection Agency

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

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

Laboratory References:

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

Sample Summary

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

TestAmerica Job ID: 400-162396-11
SDG: Ashpond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-162396-16	MW-14	Water	11/19/18 14:40	11/20/18 15:40

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

7 0el t: n 00f oPer 7 omwal p
f roectjy ite: 77/ y mitS f 0l t

TestAmerica Job ID: 400-162396-11
y Dn : AsSwol h

Client Sample ID: MW-14
Date Collected: 11/19/18 14:40
Date Received: 11/20/18 1v:40

Lab Sample ID: 400-162396-16
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Reco5erable

AnalFte	Result	QualiBer	PQL	MDL	f nit	D	Prepared	AnalFUed	Dil zac
Arsenic	0y00v8		0R013	0R0046	m. jg		11j30j1L 10:48	11j30j1L 1L:16	8
. arium	0y0vG		0R028	0R0049	m. jg		11j30j1L 10:48	11j30j1L 1L:16	8
5erp0Gm	0R0034	U	0R028	0R0034	m. jg		11j30j1L 10:48	11j30j1L 1L:16	8
7 SromiGm	0R011	U	0R028	0R011	m. jg		11j30j1L 10:48	11j30j1L 1L:16	8
7 oba0	0R0040	U	0R028	0R0040	m. jg		11j30j1L 10:48	11j30j1L 1L:16	8
gitSiGm	0R011	U	0R080	0R011	m. jg		11j30j1L 10:48	11j30j1L 1L:16	8
MolFbdenum	0y013 I		0R18	0R020	m. jg		11j30j1L 10:48	11j30j1L 1L:16	8
ye0l iGm	0R00B1	U	0R013	0R00B1	m. jg		11j30j1L 10:48	11j30j1L 1L:16	8

Method: 6020 - Metals (ICP/MS) - Total Reco5erable - DL

AnalFte	Result	QualiBer	PQL	MDL	f nit	D	Prepared	AnalFUed	Dil zac
. oron	1v		2R	0R4	m. jg		11j30j1L 10:48	12j04j1L 1B:00	200
Calcium	290		10	8R	m. jg		11j30j1L 10:48	12j04j1L 1B:00	200

g eneral ChemistrF

AnalFte	Result	QualiBer	PQL	MDL	f nit	D	Prepared	AnalFUed	Dil zac
Total Dissol5ed Solids	4900		80	34	m. jg			11j26j1L 10:09	1
Chloride	2400		160	110	m. jg			12j04j1L 09:8L	L0
zluoride	0y080 I		0R0	0R32	m. jg			11j2Lj1L 14:89	1
SulBate	G20		180	42	m. jg			12j03j1L 11:16	30

Method: zield SamplinH - zield SamplinH

AnalFte	Result	QualiBer	PQL	MDL	f nit	D	Prepared	AnalFUed	Dil zac
zield p7	6y86				yU			11j19j1L 14:40	1

Definitions/Glossary

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

TestAmerica Job ID: 400-162396-11
SDG: Ashpond

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.
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.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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 Smith Plant

TestAmerica Job ID: 400-162396-11
SDG: Ashpond

Client Sample ID: MW-14

Date Collected: 11/19/18 14:40

Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	421723	11/30/18 18:16	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		421465	11/30/18 10:45	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	200	422045	12/04/18 17:00	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	420775	11/26/18 10:09	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		80	421838	12/04/18 09:58	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421180	11/28/18 14:59	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	421795	12/03/18 11:16	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	421915	11/19/18 14:40	CDH	TAL PEN

Laboratory References:

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



QC Association Summary

LineG: u f rPwop er l omyaGS
wro/ectRite: l l Whmitd wraG

TestAmerica Job ID: 400-1526C5-11
hDu : AsdyoG

Metals

Prep Batch: 39237L

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-15 - Dv	U3 -14	TotanWecoLerabre	3 ater	600MA	
400-1526C5-15	U3 -14	TotanWecoLerabre	3 ater	600MA	
U7 400-42145MR-A 8M	Uetdoj 7raGF	TotanWecoLerabre	3 ater	600MA	
vl h 400-42145MR-A	vab l oGronhamyre	TotanWecoLerabre	3 ater	600MA	
400-152402-I -C-7 Uh 8M	UatriBhyiFe	TotanWecoLerabre	3 ater	600MA	
400-152402-I -C-I UhD 8M	UatriBhyiFe Df yricate	TotanWecoLerabre	3 ater	600MA	

Analysis Batch: 39259(

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-15	U3 -14	TotanWecoLerabre	3 ater	5020	42145M
U7 400-42145MR-A 8M	Uetdoj 7raGF	TotanWecoLerabre	3 ater	5020	42145M
vl h 400-42145MR-A	vab l oGronhamyre	TotanWecoLerabre	3 ater	5020	42145M
400-152402-I -C-7 Uh 8M	UatriBhyiFe	TotanWecoLerabre	3 ater	5020	42145M
400-152402-I -C-I UhD 8M	UatriBhyiFe Df yricate	TotanWecoLerabre	3 ater	5020	42145M

Analysis Batch: 399) 3L

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-15 - Dv	U3 -14	TotanWecoLerabre	3 ater	5020	42145M

General Chemistry

Analysis Batch: 39) 55L

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-15	U3 -14	TotanEA	3 ater	hU 2M#0I	
U7 400-42099MR	Uetdoj 7raGF	TotanEA	3 ater	hU 2M#0I	
vl h 400-42099MR	vab l oGronhamyre	TotanEA	3 ater	hU 2M#0I	
400-1526C5-A-1 D^	Df yricate	TotanEA	3 ater	hU 2M#0I	

Analysis Batch: 39220)

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-15	U3 -14	TotanEA	3 ater	hU 4M00 k I	
U7 400-4211NOR	Uetdoj 7raGF	TotanEA	3 ater	hU 4M00 k I	
vl h 400-4211NOR	vab l oGronhamyre	TotanEA	3 ater	hU 4M00 k I	
400-1526C5-A-CUh	UatriBhyiFe	TotanEA	3 ater	hU 4M00 k I	
400-1526C5-A-CUhD	UatriBhyiFe Df yricate	TotanEA	3 ater	hU 4M00 k I	
400-1526C5-A-19 D^	Df yricate	TotanEA	3 ater	hU 4M00 k I	

Analysis Batch: 39251L

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-15	U3 -14	TotanEA	3 ater	hU 4M00 hx 4 O	
U7 400-4219CMR	Uetdoj 7raGF	TotanEA	3 ater	hU 4M00 hx 4 O	
vl h 400-4219CMR	vab l oGronhamyre	TotanEA	3 ater	hU 4M00 hx 4 O	
UWw 400-4219CMR	vab l oGronhamyre	TotanEA	3 ater	hU 4M00 hx 4 O	
400-1524MC-A-1 Uh	UatriBhyiFe	TotanEA	3 ater	hU 4M00 hx 4 O	
400-1524MC-A-1 UhD	UatriBhyiFe Df yricate	TotanEA	3 ater	hU 4M00 hx 4 O	

Analysis Batch: 3920(0

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-15	U3 -14	TotanEA	3 ater	hU 4M00 I n O	
U7 400-4211N6NR	Uetdoj 7raGF	TotanEA	3 ater	hU 4M00 I n O	

TestAmerica weGacorã

QC Association Summary

Line: ufrpwo per l omyaGS
 wro/ectRite: l l Whmitd wraG

TestAmerica Job ID: 400-1526C5-11
 hDu : AsdyoG

4 eneral Chemistry Continue86

Analysis Batch: 3920(0 Continue86

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
vl h 400-421N6N9	vab l oGronh amyre	TotalEA	3 ater	hU 4M00 l n O	
UW 400-421N6N6	vab l oGronh amyre	TotalEA	3 ater	hU 4M00 l n O	
400-1526C5-A-2 Uh	UatriBhyiFe	TotalEA	3 ater	hU 4M00 l n O	
400-1526C5-A-2 UhD	UatriBhyiFe Df yricate	TotalEA	3 ater	hU 4M00 l n O	

Field Service / Molecular

Analysis Batch: 39212L

bal Sample ID	Client Sample ID	Prep xype	Matrid	Metho8	Prep Batch
400-1526C5-15	U3 -14	TotalEA	3 ater	kierj h amyriGg	



QC Sample Results

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

TestAmerica Job ID: 400-162396-11
SDG: Ashpond

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-421465/1-A ^5
Matrix: Water
Analysis Batch: 421723

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 421465

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00046	U	0.0013	0.00046	mg/L		11/30/18 10:45	11/30/18 15:42	5
Barium	0.00049	U	0.0025	0.00049	mg/L		11/30/18 10:45	11/30/18 15:42	5
Beryllium	0.00034	U	0.0025	0.00034	mg/L		11/30/18 10:45	11/30/18 15:42	5
Boron	0.021	U	0.050	0.021	mg/L		11/30/18 10:45	11/30/18 15:42	5
Calcium	0.13	U	0.25	0.13	mg/L		11/30/18 10:45	11/30/18 15:42	5
Chromium	0.0011	U	0.0025	0.0011	mg/L		11/30/18 10:45	11/30/18 15:42	5
Cobalt	0.00040	U	0.0025	0.00040	mg/L		11/30/18 10:45	11/30/18 15:42	5
Lithium	0.0011	U	0.0050	0.0011	mg/L		11/30/18 10:45	11/30/18 15:42	5
Molybdenum	0.0020	U	0.015	0.0020	mg/L		11/30/18 10:45	11/30/18 15:42	5
Selenium	0.00071	U	0.0013	0.00071	mg/L		11/30/18 10:45	11/30/18 15:42	5

Lab Sample ID: LCS 400-421465/2-A
Matrix: Water
Analysis Batch: 421723

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 421465

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.0500	0.0495		mg/L		99	80 - 120
Barium	0.0500	0.0483		mg/L		97	80 - 120
Beryllium	0.0500	0.0560		mg/L		112	80 - 120
Boron	0.100	0.106		mg/L		106	80 - 120
Calcium	5.00	4.89		mg/L		98	80 - 120
Chromium	0.0500	0.0498		mg/L		100	80 - 120
Cobalt	0.0500	0.0518		mg/L		104	80 - 120
Lithium	0.0500	0.0548		mg/L		110	80 - 120
Molybdenum	0.0500	0.0477		mg/L		95	80 - 120
Selenium	0.0500	0.0492		mg/L		98	80 - 120

Lab Sample ID: 400-162402-C-9-B MS ^5
Matrix: Water
Analysis Batch: 421723

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 421465

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.023		0.0500	0.0745		mg/L		102	75 - 125
Barium	0.0014	I	0.0500	0.0512		mg/L		100	75 - 125
Beryllium	0.00034	U	0.0500	0.0504		mg/L		101	75 - 125
Boron	0.030	I	0.100	0.135		mg/L		104	75 - 125
Calcium	6.0		5.00	10.9		mg/L		99	75 - 125
Chromium	0.0011	U	0.0500	0.0509		mg/L		102	75 - 125
Cobalt	0.00040	U	0.0500	0.0530		mg/L		106	75 - 125
Lithium	0.0011	U	0.0500	0.0510		mg/L		102	75 - 125
Molybdenum	0.0046	I	0.0500	0.0544		mg/L		99	75 - 125
Selenium	0.0033		0.0500	0.0509		mg/L		95	75 - 125

Lab Sample ID: 400-162402-C-9-C MSD ^5
Matrix: Water
Analysis Batch: 421723

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 421465

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	0.023		0.0500	0.0753		mg/L		104	75 - 125	1	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-162396-11
SDG: Ashpond

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

Lab Sample ID: 400-162402-C-9-C MSD ^5
Matrix: Water
Analysis Batch: 421723

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 421465

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Barium	0.0014	I	0.0500	0.0516		mg/L		100	75 - 125	1	20
Beryllium	0.00034	U	0.0500	0.0506		mg/L		101	75 - 125	0	20
Boron	0.030	I	0.100	0.131		mg/L		101	75 - 125	3	20
Calcium	6.0		5.00	11.0		mg/L		100	75 - 125	1	20
Chromium	0.0011	U	0.0500	0.0521		mg/L		104	75 - 125	2	20
Cobalt	0.00040	U	0.0500	0.0536		mg/L		107	75 - 125	1	20
Lithium	0.0011	U	0.0500	0.0516		mg/L		103	75 - 125	1	20
Molybdenum	0.0046	I	0.0500	0.0542		mg/L		99	75 - 125	0	20
Selenium	0.0033		0.0500	0.0509		mg/L		95	75 - 125	0	20

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

Lab Sample ID: MB 400-420775/1
Matrix: Water
Analysis Batch: 420775

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

Analyte	MB	MB	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	3.4	U	5.0	3.4	mg/L			11/26/18 10:09	1

Lab Sample ID: LCS 400-420775/2
Matrix: Water
Analysis Batch: 420775

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Total Dissolved Solids	293	350		mg/L		119	78 - 122

Lab Sample ID: 400-162396-A-1 DU
Matrix: Water
Analysis Batch: 420775

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Total Dissolved Solids	88		88.0		mg/L		0	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-421838/6
Matrix: Water
Analysis Batch: 421838

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

Analyte	MB	MB	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	1.4	U	2.0	1.4	mg/L			12/04/18 09:25	1

Lab Sample ID: LCS 400-421838/7
Matrix: Water
Analysis Batch: 421838

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Chloride	30.0	32.4		mg/L		108	90 - 110

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-162396-11
SDG: Ashpond

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

Lab Sample ID: MRL 400-421838/3
Matrix: Water
Analysis Batch: 421838

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	1.69	I	mg/L		84	50 - 150

Lab Sample ID: 400-162396-A-2 MS
Matrix: Water
Analysis Batch: 421838

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	13		10.0	23.5		mg/L		107	73 - 120

Lab Sample ID: 400-162396-A-2 MSD
Matrix: Water
Analysis Batch: 421838

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	13		10.0	23.2		mg/L		105	73 - 120	1	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-421180/3
Matrix: Water
Analysis Batch: 421180

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			11/28/18 14:20	1

Lab Sample ID: LCS 400-421180/4
Matrix: Water
Analysis Batch: 421180

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	3.90		mg/L		98	90 - 110

Lab Sample ID: 400-162396-A-9 MS
Matrix: Water
Analysis Batch: 421180

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	0.13		1.00	1.10		mg/L		97	75 - 125

Lab Sample ID: 400-162396-A-9 MSD
Matrix: Water
Analysis Batch: 421180

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	0.13		1.00	1.10		mg/L		97	75 - 125	0	4

QC Sample Results

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

TestAmerica Job ID: 400-162396-11
SDG: Ashpond

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 400-162396-A-17 DU
Matrix: Water
Analysis Batch: 421180

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 400-421795/6
Matrix: Water
Analysis Batch: 421795

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			12/03/18 09:16	1

Lab Sample ID: LCS 400-421795/7
Matrix: Water
Analysis Batch: 421795

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	15.3		mg/L		102	90 - 110

Lab Sample ID: MRL 400-421795/3
Matrix: Water
Analysis Batch: 421795

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	4.12	I	mg/L		82	50 - 150

Lab Sample ID: 400-162459-A-1 MS
Matrix: Water
Analysis Batch: 421795

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	720		9.90	696	J3	mg/L		-277	77 - 128

Lab Sample ID: 400-162459-A-1 MSD
Matrix: Water
Analysis Batch: 421795

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	720		9.90	688	J3	mg/L		-355	77 - 128	1	5

Chain of Custody Record

Client Information Client Contact: Kristi Mitchell Company: Gulf Power Company Address: BIN 731 One Energy Place City: Pensacola State, Zip: FL, 32520 Phone: 850-444-6427(Tel) Email: krmitch@sgulthermco.com Project #: CCR Smith Plant Site:		Lab P/N: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): COC No: 400-53432-23565.1 Page: Page 1 of 2 Job #: 162394	
Due Date Requested: TAT Requested (days): PO #: Purchase Order not required WO #: Project #: 40006609 SSOW#:		Analysis Requested Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 9315_Ra228, 9320_Ra228, Ra226Ra228_GFP SM4500_Cl_F - Chloride, SM4500_SO4_F - Sulfate, 2540C - 6020 - As, Ba, B, Be, Ca, Cr, Co, Li, Mo, Se Field Sampling - Field Sampling Parameters Total Dissolved Solids, 4500 F, C - Fluoride 6020 - As, Ba, B, Be, Ca, Cr, Co, Li, Mo, Se Field Sampling - Field Sampling Parameters Total Number of Containers	
Sample Identification MW-14		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 Other: M - Hexane N - Nontb O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)	
Sample Date: 11/19/18 Sample Time: 1440 Sample Type (C-comp, G-grab): C Matrix (Water, Spool, On-site, AVAL): Water		Special Instructions/Note: Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)	
Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature]		Date: 11/20/18 1540 Date/Time: 11/20/18 1540 Date/Time: [Blank] Date/Time: [Blank]	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	



Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-162396-11

SDG Number: Ashpond

Login Number: 162396

List Number: 1

Creator: Whitmire, Cheyenne R

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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, 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 <math><6\text{mm}</math> (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 Smith Plant

TestAmerica Job ID: 400-162396-11
SDG: Ashpond

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



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: 400-162396-12

TestAmerica Sample Delivery Group: Ashpond

Client Project/Site: CCR Smith Plant

For:

Gulf Power Company

BIN 731

One Energy Place

Pensacola, Florida 32520

Attn: Kristi Mitchell



Authorized for release by:

12/28/2018 2:05:57 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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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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Case Narrative

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

TestAmerica Job ID: 400-162396-12
SDG: Ashpond

Job ID: 400-162396-12

Laboratory: TestAmerica Pensacola

Narrative

**Job Narrative
400-162396-12**

RAD

Method(s) PrecSep_0: Radium 228 Prep Bach 403456: The following samples were reduced due to potential matrix interference: MW-14 (400-162396-16). The samples had yellow discoloration, sediment, and a strong sulfur odor. Sample 310-144991-1 was reduced due to limited sample volume.

Method(s) PrecSep-21: Radium 226 Prep Bach 403442: The following samples were reduced due to potential matrix interference: MW-14 (400-162396-16). The samples had yellow discoloration, sediment, and a strong sulfur odor. Sample 310-144991-1 was reduced due to limited sample volume.

- 1
- 2
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- 11
- 12
- 13

Method Summary

Line: u f rPwop er l omyaGS
wro/ectR ite: l l Whmitd wraG

TestAmerica Job ID: 400-1526C5-12
hDu : AsdyoG

Method	Method Description	Protocol	Laboratory
0613	Waj if m-225 (u Fwl)	h8 945	TAL hL
0620	Waj if m-229 (u Fwl)	h8 945	TAL hL
Wa225_Wa229	I ombiGaj Waj if m-225 aG Waj if m-229	TAL-hTL	TAL hL
wrehey_0	wreyaratioG wreciyitate heyaratioG	NoGæ	TAL hL
wrehey-21	wreyaratioG wreciyitate heyaratioG(21-DaSIGu rop td)	NoGæ	TAL hL

Protocol References:

NoGæ = NoGæ

h8 945 = "Test Metdoj s For Evarf atiGg horij 8 aste, wdSsicarR demicanMetdoj s", Tdirj Ej itioG November 1C95 AG Its Uyj ates.

TAL-hTL = TestAmerica Laboratories, ht. Lof is, FacintShtaG arj OyeratiGg wrocej f re.

Laboratory References:

TAL hL = TestAmerica ht. Lof is, 16713 Wj er TrainNortd, Eartd l itS, MO 56043, TEL (614)2C9-9355

Sample Summary

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

TestAmerica Job ID: 400-162396-12
SDG: Ashpond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-162396-16	MW-14	Water	11/19/18 14:40	11/20/18 15:40

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Client Sample Results

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

TestAmerica Job ID: 400-162396-12
SDG: Ashpond

Client Sample ID: MW-14
Date Collected: 11/19/18 14:40
Date Received: 11/20/18 1v:40

Lab Sample ID: 400-162396-16
Matrix: Water

Method: 931v - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.v1		0.323	0.394	1.00	0.122	pCi/L	11/29/18 15:08	12/21/18 07:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	2. Y		40 - 110					11/3/18 1:08	1/3/18 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	3.08		0.480	0.557	1.00	0.431	pCi/L	11/29/18 16:50	12/11/18 12:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	2. Y		40 - 110					11/3/18 1:08	1/3/18 1/01	1
7 Carrier	8. Y		40 - 110					11/3/18 1:08	1/3/18 1/01	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	v.v9		0.579	0.682	5.00	0.431	pCi/L		12/27/18 15:10	1

Definitions/Glossary

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

TestAmerica Job ID: 400-162396-12
SDG: Ashpond

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.
α	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: CCh Rmitd Plant

TestAmerica Job ID: 400-1526j 5-12
 RDG: Asdpon3

Client Sample ID: MW-14

Date Collected: 11/19/18 14:40

Date Received: 11/20/18 15:40

Lab Sample ID: 400-162396-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total\$ A	Prep	PrecRep-21			406442	11/20/18 17:08	C9P	TA9 R9
Total\$ A	Analysis	j 617		1	405j 65	12/15/18 0N46	CDh	TA9 R9
Total\$ A	Prep	PrecRepM			406475	11/20/18 15:70	C9P	TA9 R9
Total\$ A	Analysis	j 620		1	404j 46	12/15/18 12:01	CDh	TA9 R9
Total\$ A	Analysis	h a225Mh a228		1	40NN6N	12/25/18 17:10	h T_	TA9 R9

Laboratory References:

TA9 R9 = TestAmerica Rt. 9ouis, 16N17 hi3er Trail Lortd, Eartd City, _ O 56047, TE9 (614)2j 8-8755



QC Association Summary

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

TestAmerica Job ID: 400-162396-12
SDG: Ashpond

Rad

Prep Batch: 403442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162396-16	MW-14	Total/NA	Water	PrecSep-21	
MB 160-403442/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-403442/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
190-18211-K-1-A DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 403456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162396-16	MW-14	Total/NA	Water	PrecSep_0	
MB 160-403456/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-403456/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
190-18211-K-1-B DU	Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

Line: ufrPwoperl omyaGS
 wro/ectRite: l l U hmitd wraG

TestAmerica Job ID: 400-1526C5-12
 hDu : AsdyoG

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-403442/23-A
 Matrix: Water
 Analysis Batch: 406936

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 403442

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uaj if m-225	0704660	9	070328	07032C	1700	07128	yl iR	11/20/18 11:08	12/21/18 03:46	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					11/23/18 18:09	1/31/19 05:46	1

Lab Sample ID: LCS 160-403442/1-A
 Matrix: Water
 Analysis Batch: 406937

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 403442

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Uaj if m-225	1L71	167.2		1740	1700	0710L	yl iR	8C	58 - 163
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	107		40 - 110						

Lab Sample ID: 190-18211-K-1-A DU
 Matrix: Water
 Analysis Batch: 406937

Client Sample ID: Duplicate
 Prep Type: Total/NA
 Prep Batch: 403442

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Uaj if m-225	-070210	9	0702C30	9	070452	1700	070801	yl iR	0735	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	257		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-403456/23-A
 Matrix: Water
 Analysis Batch: 404941

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 403456

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uaj if m-228	076486	9	072C5	072C8	1700	07432	yl iR	11/20/18 15:10	12/18/18 12:02	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					11/23/18 15:00	1/31/19 11:00	1
. Carrier	907		40 - 110					11/23/18 15:00	1/31/19 11:00	1

QC Sample Results

IrieG: u f r Pwop er l omyaGS
 wro/ectRite: l l U hmitd wraG

TestAmerica Job ID: 400-1526C5-12
 hDu : AsdyoG

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

Lab Sample ID: LCS 160-403456/1-A
Matrix: Water
Analysis Batch: 404943

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 403456

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Uaj if m-228	1272	11744		1764	1700	07.04	yl iR	C4	L5 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	107		40 - 110
. Carrier	907		40 - 110

Lab Sample ID: 190-18211-K-1-B DU
Matrix: Water
Analysis Batch: 404943

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 403456

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Uaj if m-228	07112	9	070468	9	0720C	1700	07655	yl iR	0714	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	257		40 - 110
. Carrier	947		40 - 110

Chain of Custody Record

Client Information Client Contact: Kristi Mitchell Company: Gulf Power Company Address: BIN 731 One Energy Place City: Pensacola State, Zip: FL, 32520 Phone: 850-444-6427(Tel) Email: krmitch@sgulthermco.com Project #: CCR Smith Plant Site:		Lab P/N: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): COC No: 400-53432-23565.1 Page: Page 1 of 2 Job #: 162394	
Due Date Requested: TAT Requested (days): PO #: Purchase Order not required WO #:		Analysis Requested 6020 - As, Ba, B, Be, Ca, Cr, Co, Li, Mo, Se SM4500_Cl_F - Chloride, SM4500_SO4_F - Sulfate, 2540C - 9315_Ra226, 9320_Ra228, Ra226Ra228_GFC Perform MS/MSD (Yes or No)	
Sample Identification MW-14		Field Filtered Sample (Yes or No)	
Sample Date: 11/19/18 Sample Time: 1440 C Sample Type (C=comp, G=grab): Matrix (W=water, S=solid, O=organic, A=air): Preservation Code: Water		Total Number of Containers:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/Note: Total Number of Containers:	
Empty Kit Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by:		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months	
Date/Time: 11/20/18 1540 Date/Time: Date/Time:		Date/Time: 11/20/18 1540 Date/Time: Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	



Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-162396-12

SDG Number: Ashpond

Login Number: 162396

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, 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: 400-162396-12

SDG Number: Ashpond

Login Number: 162396

List Number: 2

Creator: Dupart, Lacey S

List Source: TestAmerica St. Louis

List Creation: 11/27/18 02:25 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	19.0
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: CCh Rmitd Plant

TestAmerica Job ID: 400-1582j 5-18
 RDG: Asdpon.

Laboratory: TestAmerica Pensacola

All accreditation certifications delivered by this laboratory are listed. Not all accreditation certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	Rtate Pro3ram	4	40160	05-20-1j
Ag A9	IRB SOC 1E086		784E1	08-88-80
AriLona	Rtate Pro3ram	j	Az0E10	01-18-80
ArZansas DOK	Rtate Pro3ram	5	QQ05Q	0j -01-1j
California	Rtate Pro3ram	j	8610	05-20-1j
Flori. a	g O7AP	4	QQ1010	05-20-1j
Geor3ia	Rtate Pro3ram	4	QQ1010 (F7)	05-20-1j
Illinois	g O7AP	6	800041	10-0j -1j
Iowa	Rtate Pro3ram	E	25E	0Q01-80
* ansas	g O7AP	E	O-10862	18-21-1QK
* entucZy (URT)	Rtate Pro3ram	4	62	05-20-1j
* entucZy (WW)	Rtate Pro3ram	4	j Q020	18-21-1j
7ouisiana	g O7AP	5	20j E5	05-20-1j
7ouisiana (DW)	g O7AP	5	7A01E	18-21-1j
Marylan.	Rtate Pro3ram	2	822	0j -20-1j
Massacdusetts	Rtate Pro3ram	1	M-F70j 4	05-20-1j
Micdi3an	Rtate Pro3ram	6	j j 18	05-20-1j
gew Jersey	g O7AP	8	F7005	05-20-1j
g ortd Carolina (WWRW)	Rtate Pro3ram	4	214	18-21-1j
BZadoma	Rtate Pro3ram	5	j Q10	0Q21-1j
Pennsylvania	g O7AP	2	5Q0045E	01-21-1j
h do. e Islan.	Rtate Pro3ram	1	7AB0020E	18-20-1QK
Routd Carolina	Rtate Pro3ram	4	j 5085	05-20-1j
Tennessee	Rtate Pro3ram	4	Tg08j 0E	05-20-1j
Texas	g O7AP	5	T104E048Q5-1Q-16	0j -20-1j
UR Fisd & Wil. life	Fe. eral		7006Q44Q0	0E-21-1j
URDA	Fe. eral		P220-1Q0014Q	06-1E-81
Vir3inia	g O7AP	2	450155	05-14-1j
Wasdin3ton	Rtate Pro3ram	10	Cj 16	06-16-1j
West Vir3inia DOP	Rtate Pro3ram	2	125	05-20-1j

Laboratory: TestAmerica St. Louis

All accreditation certifications delivered by this laboratory are listed. Not all accreditation certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
AlasZa	Rtate Pro3ram	10	MB00064	05-20-1j
Ag A9	DoD O7AP		78206	04-05-1j
AriLona	Rtate Pro3ram	j	Az0Q12	18-0Q1j
California	Rtate Pro3ram	j	8QQ5	05-20-1j
Connecticut	Rtate Pro3ram	1	PH-0841	02-21-1j
Flori. a	g O7AP	4	OQE5Q	05-20-1j
Illinois	g O7AP	6	800082	11-20-1QK
Iowa	Rtate Pro3ram	E	2E2	18-01-1QK
* ansas	g O7AP	E	O-10825	10-21-1j
* entucZy (DW)	Rtate Pro3ram	4	j 0186	18-21-1QK
7ouisiana	g O7AP	5	040Q0	05-20-1j
7ouisiana (DW)	g O7AP	5	7A1Q001E	18-21-1QK
Marylan.	Rtate Pro3ram	2	210	0j -20-1j
Micdi3an	Rtate Pro3ram	6	j 006	05-20-1j
Missouri	Rtate Pro3ram	E	E00	05-20-1j

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TestAmerica Pensacola

Accreditation/Certification Summary

Client: Gulf Power Company
 Project Site: CCh Rmitd Plant

TestAmerica Job ID: 400-1582j 5-18
 RDG: Asdpon.

Laboratory: TestAmerica St. Louis (Continued)

All accreditation certifications delivered by this laboratory are listed. None of all accreditation certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Georgia	State Program	4	MB00064801Q-1	0E-21-1j
Georgia Jersey	g O7AP	8	MB008	05-20-1j
Georgia York	g O7AP	8	11515	02-21-1j
Georgia Dade	State Program	4	h80E	05-20-1j
Georgia	g h C		84-84Q1E-01	18-21-88
Georgia	State Program	4	jjj E	0Q21-1j
Pennsylvania	g O7AP	2	5Q00640	08-8Q1j K
North Carolina	State Program	4	Q6008001	05-20-1j
Texas	g O7AP	5	T104E041j 2-1Q18	0E-21-1j
US Fish & Wildlife	Federal		06Q44Q	0E-21-1j
URDA	Federal		P220-1E-008Q	08-08-80
Utah	g O7AP	4	MB00064801Q-10	0E-21-1j
Virginia	g O7AP	2	450820	05-14-1j
Washington	State Program	10	C6j 8	0Q20-1j
West Virginia DOP	State Program	2	2Q1	0Q21-1j

Accreditation certification renewal pending - accreditation certification considered valid.

TestAmerica Pensacola



APPENDIX B

Statistical Analyses

JUNE 2018 STATISTICAL ANALYSIS –
ASSESSMENT MONITORING
STATISTICS

Confidence Intervals - Significant Results

Plant Smith Client: Southern Company Data: Smith CCR Printed 10/14/2018, 9:08 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	MW-11	0.03023	0.02097	0.01	Yes	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-6	35.51	23.33	5	Yes	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-7	27	21.84	5	Yes	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-8	44.09	35.33	5	Yes	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-9	30.69	17.79	5	Yes	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-10	27.01	20.43	5	Yes	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-11	33.51	23.61	5	Yes	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-13	18.11	11.44	5	Yes	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-14	10.12	6.209	5	Yes	10	0	No	0.01	Param.
Lithium (mg/L)	MW-13	0.2332	0.1725	0.04	Yes	10	0	sqrt(x)	0.01	Param.

Confidence Intervals - All Results

Plant Smith Client: Southern Company Data: Smith CCR Printed 10/14/2018, 9:08 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	MW-2 (bg)	0.0025	0.0025	0.006	No	9	100	No	0.002	NP (NDs)
Antimony (mg/L)	MW-3 (bg)	0.0025	0.0025	0.006	No	9	100	No	0.002	NP (NDs)
Antimony (mg/L)	MW-6	0.0025	0.0025	0.006	No	9	100	No	0.002	NP (NDs)
Antimony (mg/L)	MW-7	0.0025	0.0025	0.006	No	9	100	No	0.002	NP (NDs)
Antimony (mg/L)	MW-8	0.0025	0.0025	0.006	No	9	100	No	0.002	NP (NDs)
Antimony (mg/L)	MW-9	0.0025	0.0025	0.006	No	9	100	No	0.002	NP (NDs)
Antimony (mg/L)	MW-10	0.0025	0.0025	0.006	No	9	100	No	0.002	NP (NDs)
Antimony (mg/L)	MW-11	0.0025	0.0013	0.006	No	9	55.56	No	0.002	NP (normality)
Antimony (mg/L)	MW-12 (bg)	0.0025	0.0025	0.006	No	9	100	No	0.002	NP (NDs)
Antimony (mg/L)	MW-13	0.0025	0.0025	0.006	No	9	100	No	0.002	NP (NDs)
Antimony (mg/L)	MW-14	0.0025	0.0025	0.006	No	9	100	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-2 (bg)	0.0013	0.0013	0.01	No	10	100	No	0.011	NP (NDs)
Arsenic (mg/L)	MW-3 (bg)	0.0013	0.00085	0.01	No	10	90	No	0.011	NP (NDs)
Arsenic (mg/L)	MW-6	0.001357	0.000621	0.01	No	10	30	No	0.01	Param.
Arsenic (mg/L)	MW-7	0.001865	0.001013	0.01	No	10	30	sqrt(x)	0.01	Param.
Arsenic (mg/L)	MW-8	0.0017	0.00097	0.01	No	10	30	No	0.011	NP (normality)
Arsenic (mg/L)	MW-9	0.003059	0.001881	0.01	No	10	10	No	0.01	Param.
Arsenic (mg/L)	MW-10	0.00347	0.00197	0.01	No	10	10	No	0.01	Param.
Arsenic (mg/L)	MW-11	0.03023	0.02097	0.01	Yes	10	0	No	0.01	Param.
Arsenic (mg/L)	MW-12 (bg)	0.0013	0.0013	0.01	No	10	100	No	0.011	NP (NDs)
Arsenic (mg/L)	MW-13	0.001974	0.0004964	0.01	No	10	20	sqrt(x)	0.01	Param.
Arsenic (mg/L)	MW-14	0.004316	0.002384	0.01	No	10	0	No	0.01	Param.
Barium (mg/L)	MW-2 (bg)	0.02902	0.01958	2	No	10	10	No	0.01	Param.
Barium (mg/L)	MW-3 (bg)	0.022	0.016	2	No	10	10	No	0.011	NP (normality)
Barium (mg/L)	MW-6	0.07542	0.05509	2	No	10	10	x^2	0.01	Param.
Barium (mg/L)	MW-7	0.0687	0.05112	2	No	10	10	x^2	0.01	Param.
Barium (mg/L)	MW-8	0.07612	0.05405	2	No	10	10	x^2	0.01	Param.
Barium (mg/L)	MW-9	0.1114	0.06737	2	No	10	10	No	0.01	Param.
Barium (mg/L)	MW-10	0.1226	0.1054	2	No	10	0	No	0.01	Param.
Barium (mg/L)	MW-11	0.1324	0.07262	2	No	10	10	No	0.01	Param.
Barium (mg/L)	MW-12 (bg)	0.017	0.012	2	No	10	10	No	0.011	NP (normality)
Barium (mg/L)	MW-13	0.1484	0.103	2	No	10	0	No	0.01	Param.
Barium (mg/L)	MW-14	0.06067	0.04544	2	No	10	10	x^2	0.01	Param.
Beryllium (mg/L)	MW-2 (bg)	0.0025	0.0025	0.004	No	10	100	No	0.011	NP (NDs)
Beryllium (mg/L)	MW-3 (bg)	0.0025	0.0025	0.004	No	10	100	No	0.011	NP (NDs)
Beryllium (mg/L)	MW-6	0.002008	0.0008904	0.004	No	10	10	No	0.01	Param.
Beryllium (mg/L)	MW-7	0.0025	0.0025	0.004	No	10	100	No	0.011	NP (NDs)
Beryllium (mg/L)	MW-8	0.0015	0.0012	0.004	No	10	10	No	0.011	NP (normality)
Beryllium (mg/L)	MW-9	0.0025	0.00039	0.004	No	10	50	No	0.011	NP (normality)
Beryllium (mg/L)	MW-10	0.00061	0.00033	0.004	No	10	10	No	0.011	NP (normality)
Beryllium (mg/L)	MW-11	0.0025	0.00078	0.004	No	10	60	No	0.011	NP (normality)
Beryllium (mg/L)	MW-12 (bg)	0.0025	0.0025	0.004	No	10	100	No	0.011	NP (NDs)
Beryllium (mg/L)	MW-13	0.0025	0.0025	0.004	No	10	100	No	0.011	NP (NDs)
Beryllium (mg/L)	MW-14	0.0025	0.0025	0.004	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	MW-2 (bg)	0.0025	0.0025	0.005	No	9	100	No	0.002	NP (NDs)
Cadmium (mg/L)	MW-3 (bg)	0.0025	0.0025	0.005	No	9	100	No	0.002	NP (NDs)
Cadmium (mg/L)	MW-6	0.0025	0.0025	0.005	No	9	100	No	0.002	NP (NDs)
Cadmium (mg/L)	MW-7	0.0025	0.0025	0.005	No	9	100	No	0.002	NP (NDs)
Cadmium (mg/L)	MW-8	0.0025	0.0025	0.005	No	9	100	No	0.002	NP (NDs)
Cadmium (mg/L)	MW-9	0.0025	0.0025	0.005	No	9	100	No	0.002	NP (NDs)
Cadmium (mg/L)	MW-10	0.0025	0.0025	0.005	No	9	100	No	0.002	NP (NDs)
Cadmium (mg/L)	MW-11	0.0025	0.0025	0.005	No	9	100	No	0.002	NP (NDs)
Cadmium (mg/L)	MW-12 (bg)	0.0025	0.0025	0.005	No	9	100	No	0.002	NP (NDs)
Cadmium (mg/L)	MW-13	0.0025	0.0025	0.005	No	9	100	No	0.002	NP (NDs)
Cadmium (mg/L)	MW-14	0.0025	0.0025	0.005	No	9	100	No	0.002	NP (NDs)
Chromium (mg/L)	MW-2 (bg)	0.003804	0.001487	0.1	No	10	30	sqrt(x)	0.01	Param.
Chromium (mg/L)	MW-3 (bg)	0.0049	0.0021	0.1	No	10	20	No	0.011	NP (normality)
Chromium (mg/L)	MW-6	0.0025	0.0025	0.1	No	10	100	No	0.011	NP (NDs)
Chromium (mg/L)	MW-7	0.0025	0.0011	0.1	No	10	60	No	0.011	NP (normality)
Chromium (mg/L)	MW-8	0.0025	0.0025	0.1	No	10	100	No	0.011	NP (NDs)
Chromium (mg/L)	MW-9	0.0025	0.0025	0.1	No	10	100	No	0.011	NP (NDs)
Chromium (mg/L)	MW-10	0.0025	0.0015	0.1	No	10	90	No	0.011	NP (NDs)
Chromium (mg/L)	MW-11	0.0087	0.0025	0.1	No	10	20	No	0.011	NP (normality)
Chromium (mg/L)	MW-12 (bg)	0.0025	0.0025	0.1	No	10	90	No	0.011	NP (NDs)
Chromium (mg/L)	MW-13	0.0025	0.0024	0.1	No	10	90	No	0.011	NP (NDs)
Chromium (mg/L)	MW-14	0.0025	0.0012	0.1	No	10	80	No	0.011	NP (NDs)
Cobalt (mg/L)	MW-2 (bg)	0.0025	0.0025	0.006	No	10	100	No	0.011	NP (NDs)
Cobalt (mg/L)	MW-3 (bg)	0.0025	0.0025	0.006	No	10	100	No	0.011	NP (NDs)

Confidence Intervals - All Results

Plant Smith Client: Southern Company Data: Smith CCR Printed 10/14/2018, 9:08 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Cobalt (mg/L)	MW-6	0.0025	0.0025	0.006	No	10	100	No	0.011	NP (NDs)
Cobalt (mg/L)	MW-7	0.0025	0.0025	0.006	No	10	100	No	0.011	NP (NDs)
Cobalt (mg/L)	MW-8	0.0025	0.0025	0.006	No	10	100	No	0.011	NP (NDs)
Cobalt (mg/L)	MW-9	0.0025	0.0025	0.006	No	10	100	No	0.011	NP (NDs)
Cobalt (mg/L)	MW-10	0.0025	0.0025	0.006	No	10	100	No	0.011	NP (NDs)
Cobalt (mg/L)	MW-11	0.0025	0.00046	0.006	No	10	90	No	0.011	NP (NDs)
Cobalt (mg/L)	MW-12 (bg)	0.0025	0.0025	0.006	No	10	100	No	0.011	NP (NDs)
Cobalt (mg/L)	MW-13	0.0025	0.0025	0.006	No	10	100	No	0.011	NP (NDs)
Cobalt (mg/L)	MW-14	0.0025	0.0025	0.006	No	10	100	No	0.011	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	MW-2 (bg)	3.187	1.363	5	No	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-3 (bg)	1.857	1.301	5	No	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-6	35.51	23.33	5	Yes	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-7	27	21.84	5	Yes	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-8	44.09	35.33	5	Yes	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-9	30.69	17.79	5	Yes	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-10	27.01	20.43	5	Yes	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-11	33.51	23.61	5	Yes	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-12 (bg)	3.127	1.956	5	No	10	0	ln(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-13	18.11	11.44	5	Yes	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-14	10.12	6.209	5	Yes	10	0	No	0.01	Param.
Fluoride (mg/L)	MW-2 (bg)	0.2442	0.09765	4	No	11	0	No	0.01	Param.
Fluoride (mg/L)	MW-3 (bg)	0.1	0.04	4	No	11	72.73	No	0.006	NP (normality)
Fluoride (mg/L)	MW-6	0.1	0.04	4	No	11	27.27	No	0.006	NP (normality)
Fluoride (mg/L)	MW-7	0.1	0.04	4	No	11	63.64	No	0.006	NP (normality)
Fluoride (mg/L)	MW-8	0.1	0.1	4	No	11	100	No	0.006	NP (NDs)
Fluoride (mg/L)	MW-9	0.1	0.04	4	No	11	27.27	No	0.006	NP (normality)
Fluoride (mg/L)	MW-10	0.1	0.04	4	No	11	54.55	No	0.006	NP (normality)
Fluoride (mg/L)	MW-11	0.1	0.04	4	No	11	81.82	No	0.006	NP (NDs)
Fluoride (mg/L)	MW-12 (bg)	0.1115	0.08484	4	No	11	0	No	0.01	Param.
Fluoride (mg/L)	MW-13	0.1	0.04	4	No	11	9.091	No	0.006	NP (normality)
Fluoride (mg/L)	MW-14	0.07234	0.04117	4	No	11	9.091	sqrt(x)	0.01	Param.
Lead (mg/L)	MW-2 (bg)	0.0013	0.0013	0.015	No	9	100	No	0.002	NP (NDs)
Lead (mg/L)	MW-3 (bg)	0.0013	0.00039	0.015	No	9	77.78	No	0.002	NP (NDs)
Lead (mg/L)	MW-6	0.0013	0.0013	0.015	No	9	100	No	0.002	NP (NDs)
Lead (mg/L)	MW-7	0.0013	0.0013	0.015	No	9	100	No	0.002	NP (NDs)
Lead (mg/L)	MW-8	0.0013	0.0013	0.015	No	9	100	No	0.002	NP (NDs)
Lead (mg/L)	MW-9	0.0013	0.0013	0.015	No	9	100	No	0.002	NP (NDs)
Lead (mg/L)	MW-10	0.0013	0.0013	0.015	No	9	100	No	0.002	NP (NDs)
Lead (mg/L)	MW-11	0.0013	0.0013	0.015	No	9	100	No	0.002	NP (NDs)
Lead (mg/L)	MW-12 (bg)	0.0013	0.0013	0.015	No	9	100	No	0.002	NP (NDs)
Lead (mg/L)	MW-13	0.0013	0.0013	0.015	No	9	100	No	0.002	NP (NDs)
Lead (mg/L)	MW-14	0.0013	0.0013	0.015	No	9	100	No	0.002	NP (NDs)
Lithium (mg/L)	MW-2 (bg)	0.0087	0.0049	0.04	No	10	40	No	0.011	NP (normality)
Lithium (mg/L)	MW-3 (bg)	0.01418	0.008936	0.04	No	10	10	No	0.01	Param.
Lithium (mg/L)	MW-6	0.02184	0.008698	0.04	No	10	10	No	0.01	Param.
Lithium (mg/L)	MW-7	0.005	0.0018	0.04	No	10	80	No	0.011	NP (NDs)
Lithium (mg/L)	MW-8	0.009255	0.00702	0.04	No	10	20	No	0.01	Param.
Lithium (mg/L)	MW-9	0.009088	0.003848	0.04	No	10	10	x^(1/3)	0.01	Param.
Lithium (mg/L)	MW-10	0.006591	0.005021	0.04	No	10	20	No	0.01	Param.
Lithium (mg/L)	MW-11	0.005	0.0038	0.04	No	10	70	No	0.011	NP (normality)
Lithium (mg/L)	MW-12 (bg)	0.01622	0.007528	0.04	No	10	10	sqrt(x)	0.01	Param.
Lithium (mg/L)	MW-13	0.2332	0.1725	0.04	Yes	10	0	sqrt(x)	0.01	Param.
Lithium (mg/L)	MW-14	0.005	0.0013	0.04	No	10	90	No	0.011	NP (NDs)
Mercury (mg/L)	MW-2 (bg)	0.0002	0.0002	0.002	No	9	100	No	0.002	NP (NDs)
Mercury (mg/L)	MW-3 (bg)	0.0002	0.000071	0.002	No	9	88.89	No	0.002	NP (NDs)
Mercury (mg/L)	MW-6	0.0002	0.0002	0.002	No	9	100	No	0.002	NP (NDs)
Mercury (mg/L)	MW-7	0.0002	0.0002	0.002	No	9	100	No	0.002	NP (NDs)
Mercury (mg/L)	MW-8	0.0002	0.0002	0.002	No	9	100	No	0.002	NP (NDs)
Mercury (mg/L)	MW-9	0.0002	0.0002	0.002	No	9	100	No	0.002	NP (NDs)
Mercury (mg/L)	MW-10	0.0002	0.000089	0.002	No	9	88.89	No	0.002	NP (NDs)
Mercury (mg/L)	MW-11	0.0002	0.0002	0.002	No	9	100	No	0.002	NP (NDs)
Mercury (mg/L)	MW-12 (bg)	0.0002	0.0002	0.002	No	9	100	No	0.002	NP (NDs)
Mercury (mg/L)	MW-13	0.0002	0.0002	0.002	No	9	100	No	0.002	NP (NDs)
Mercury (mg/L)	MW-14	0.0002	0.0002	0.002	No	9	100	No	0.002	NP (NDs)
Molybdenum (mg/L)	MW-2 (bg)	0.015	0.0009	0.1	No	10	80	No	0.011	NP (NDs)
Molybdenum (mg/L)	MW-3 (bg)	0.015	0.015	0.1	No	10	100	No	0.011	NP (NDs)
Molybdenum (mg/L)	MW-6	0.015	0.0011	0.1	No	10	90	No	0.011	NP (NDs)
Molybdenum (mg/L)	MW-7	0.007285	0.004971	0.1	No	10	30	ln(x)	0.01	Param.

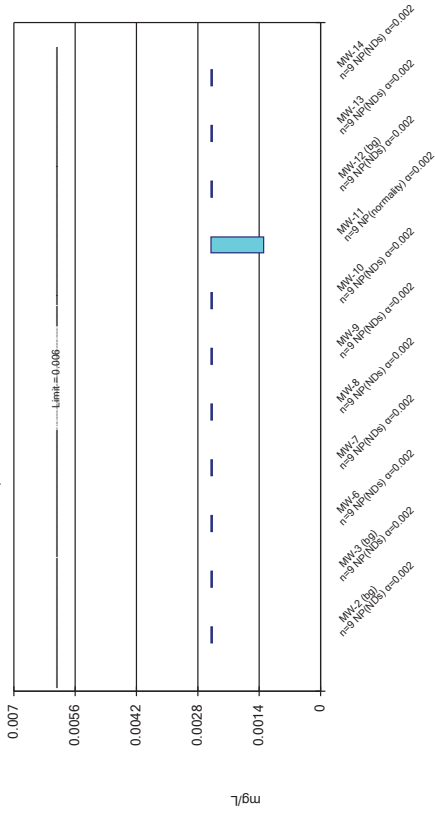
Confidence Intervals - All Results

Plant Smith Client: Southern Company Data: Smith CCR Printed 10/14/2018, 9:08 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Molybdenum (mg/L)	MW-8	0.015	0.015	0.1	No	10	100	No	0.011	NP (NDs)
Molybdenum (mg/L)	MW-9	0.015	0.0014	0.1	No	10	70	No	0.011	NP (normality)
Molybdenum (mg/L)	MW-10	0.003005	0.00113	0.1	No	10	30	ln(x)	0.01	Param.
Molybdenum (mg/L)	MW-11	0.0163	0.0104	0.1	No	10	10	No	0.01	Param.
Molybdenum (mg/L)	MW-12 (bg)	0.015	0.015	0.1	No	10	100	No	0.011	NP (NDs)
Molybdenum (mg/L)	MW-13	0.03384	0.01152	0.1	No	10	10	No	0.01	Param.
Molybdenum (mg/L)	MW-14	0.01816	0.0129	0.1	No	10	0	No	0.01	Param.
Selenium (mg/L)	MW-2 (bg)	0.0013	0.00038	0.05	No	10	90	No	0.011	NP (NDs)
Selenium (mg/L)	MW-3 (bg)	0.0013	0.0003	0.05	No	10	80	No	0.011	NP (NDs)
Selenium (mg/L)	MW-6	0.0013	0.00025	0.05	No	10	60	No	0.011	NP (normality)
Selenium (mg/L)	MW-7	0.0013	0.00028	0.05	No	10	60	No	0.011	NP (normality)
Selenium (mg/L)	MW-8	0.0013	0.0003	0.05	No	10	60	No	0.011	NP (normality)
Selenium (mg/L)	MW-9	0.0013	0.00033	0.05	No	10	80	No	0.011	NP (NDs)
Selenium (mg/L)	MW-10	0.0013	0.00025	0.05	No	10	80	No	0.011	NP (NDs)
Selenium (mg/L)	MW-11	0.0013	0.00046	0.05	No	10	50	No	0.011	NP (normality)
Selenium (mg/L)	MW-12 (bg)	0.0013	0.0013	0.05	No	10	100	No	0.011	NP (NDs)
Selenium (mg/L)	MW-13	0.0013	0.00031	0.05	No	10	70	No	0.011	NP (normality)
Selenium (mg/L)	MW-14	0.0013	0.00024	0.05	No	10	80	No	0.011	NP (NDs)
Thallium (mg/L)	MW-2 (bg)	0.0005	0.0005	0.002	No	9	100	No	0.002	NP (NDs)
Thallium (mg/L)	MW-3 (bg)	0.0005	0.0005	0.002	No	9	100	No	0.002	NP (NDs)
Thallium (mg/L)	MW-6	0.0005	0.0005	0.002	No	9	100	No	0.002	NP (NDs)
Thallium (mg/L)	MW-7	0.0005	0.0005	0.002	No	9	100	No	0.002	NP (NDs)
Thallium (mg/L)	MW-8	0.0005	0.0005	0.002	No	9	100	No	0.002	NP (NDs)
Thallium (mg/L)	MW-9	0.0005	0.0005	0.002	No	9	100	No	0.002	NP (NDs)
Thallium (mg/L)	MW-10	0.0005	0.0005	0.002	No	9	100	No	0.002	NP (NDs)
Thallium (mg/L)	MW-11	0.0005	0.0005	0.002	No	9	100	No	0.002	NP (NDs)
Thallium (mg/L)	MW-12 (bg)	0.0005	0.0005	0.002	No	9	100	No	0.002	NP (NDs)
Thallium (mg/L)	MW-13	0.0005	0.0005	0.002	No	9	100	No	0.002	NP (NDs)
Thallium (mg/L)	MW-14	0.0005	0.0005	0.002	No	9	100	No	0.002	NP (NDs)

Non-Parametric Confidence Interval

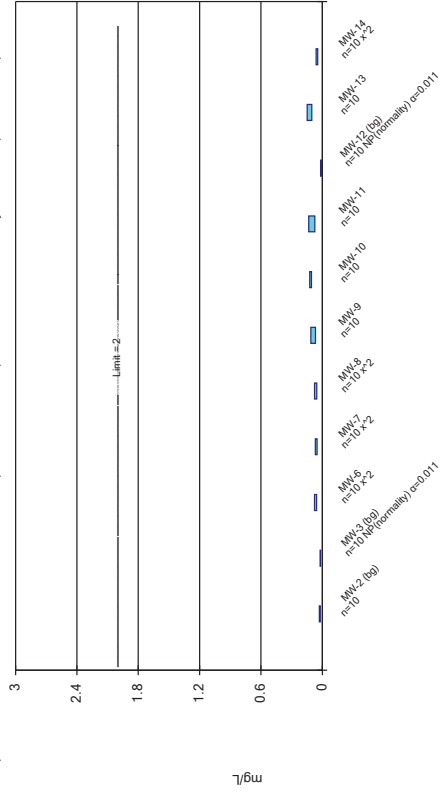
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 10/14/2018 9:06 PM View: Confidence Intervals
 Plant Smith Client: Southern Company Data: Smith CCR

Parametric and Non-Parametric (NP) Confidence Interval

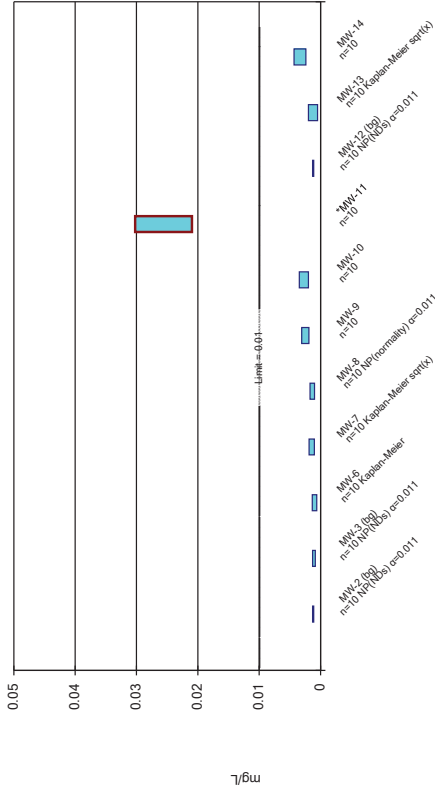
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 10/14/2018 9:06 PM View: Confidence Intervals
 Plant Smith Client: Southern Company Data: Smith CCR

Parametric and Non-Parametric (NP) Confidence Interval

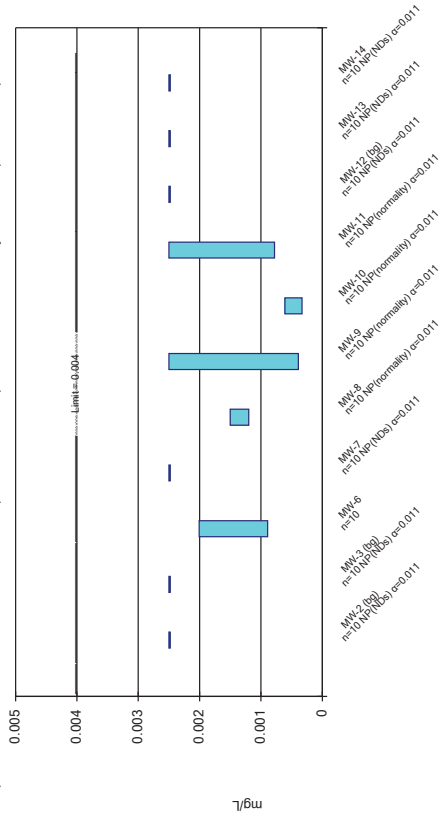
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 10/14/2018 9:06 PM View: Confidence Intervals
 Plant Smith Client: Southern Company Data: Smith CCR

Parametric and Non-Parametric (NP) Confidence Interval

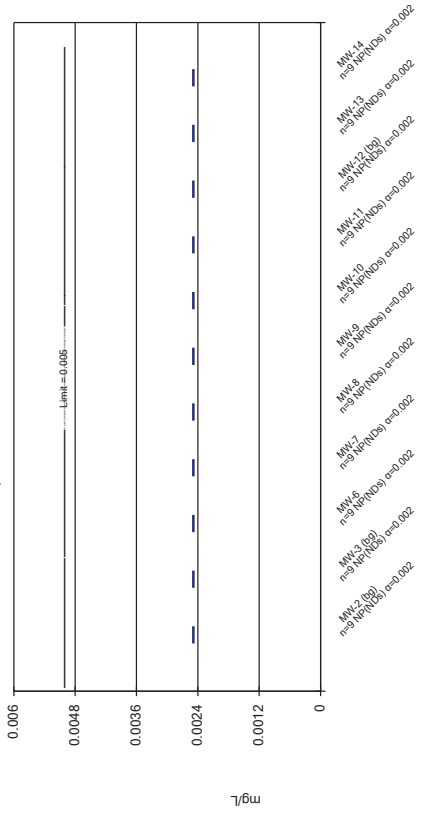
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Beryllium Analysis Run 10/14/2018 9:06 PM View: Confidence Intervals
 Plant Smith Client: Southern Company Data: Smith CCR

Non-Parametric Confidence Interval

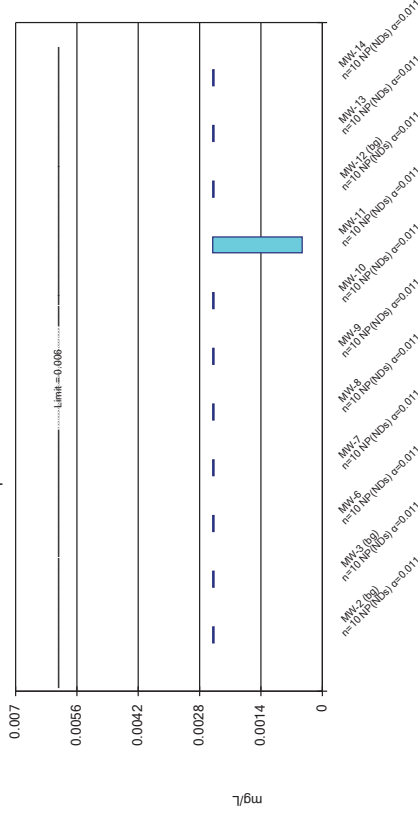
Compliance Limit is not exceeded.



Constituent: Cadmium Analysis Run 10/14/2018 9:06 PM View: Confidence Intervals
Plant Smith Client: Southern Company Data: Smith CCR

Non-Parametric Confidence Interval

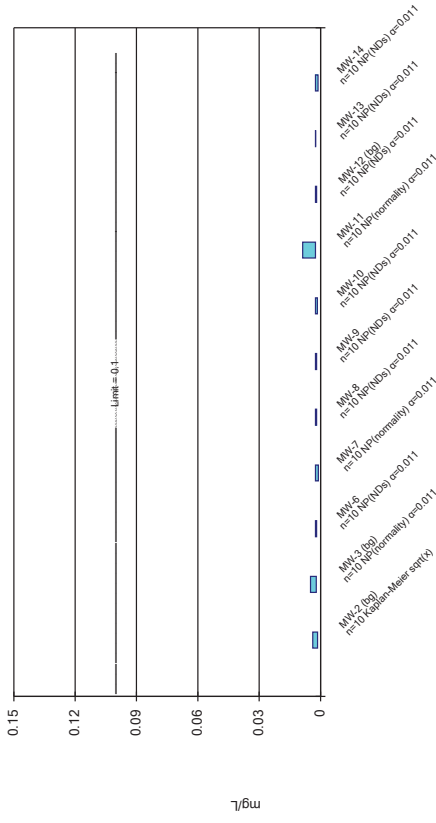
Compliance Limit is not exceeded.



Constituent: Cobalt Analysis Run 10/14/2018 9:06 PM View: Confidence Intervals
Plant Smith Client: Southern Company Data: Smith CCR

Parametric and Non-Parametric (NP) Confidence Interval

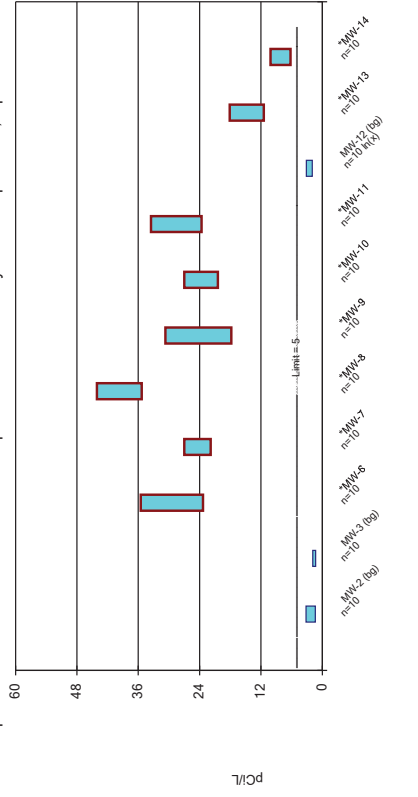
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chromium Analysis Run 10/14/2018 9:06 PM View: Confidence Intervals
Plant Smith Client: Southern Company Data: Smith CCR

Parametric Confidence Interval

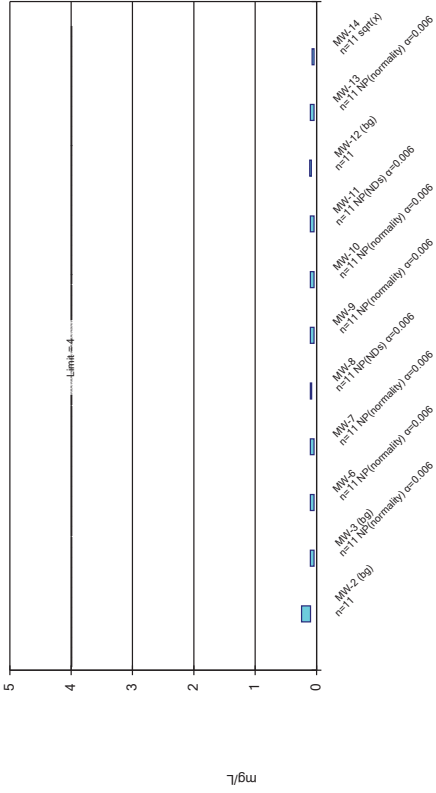
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 10/14/2018 9:06 PM View: Confidence Intervals
Plant Smith Client: Southern Company Data: Smith CCR

Parametric and Non-Parametric (NP) Confidence Interval

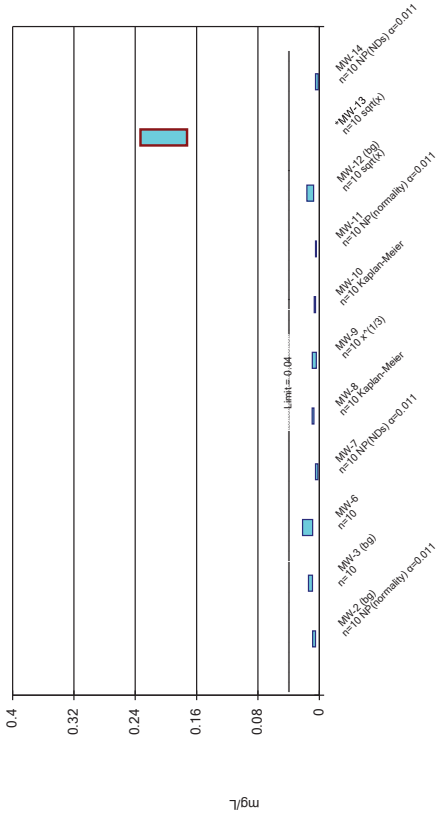
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 10/14/2018 9:07 PM View: Confidence Intervals
Plant Smith Client: Southern Company Data: Smith CCR

Parametric and Non-Parametric (NP) Confidence Interval

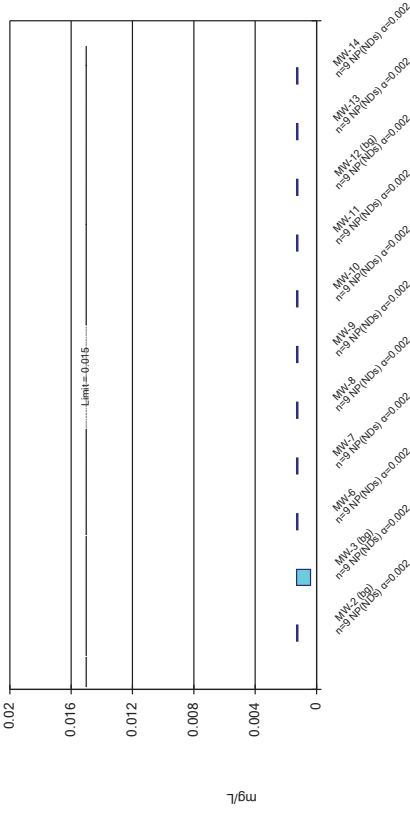
Compliance limit is exceeded. * Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 10/14/2018 9:07 PM View: Confidence Intervals
Plant Smith Client: Southern Company Data: Smith CCR

Non-Parametric Confidence Interval

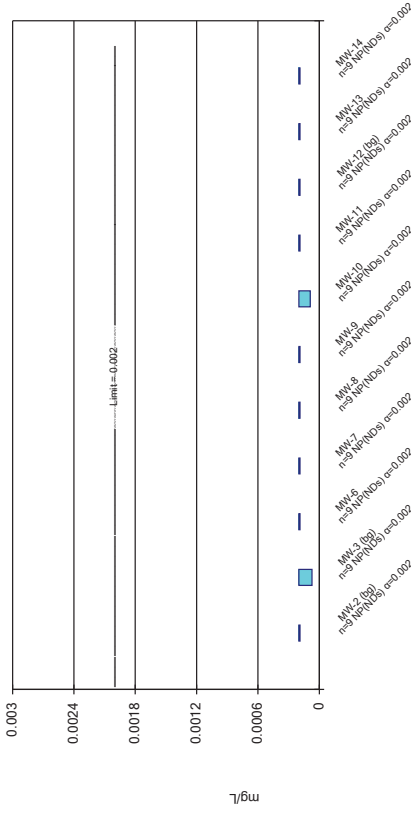
Compliance Limit is not exceeded.



Constituent: Lead Analysis Run 10/14/2018 9:07 PM View: Confidence Intervals
Plant Smith Client: Southern Company Data: Smith CCR

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Mercury Analysis Run 10/14/2018 9:07 PM View: Confidence Intervals
Plant Smith Client: Southern Company Data: Smith CCR

Parametric and Non-Parametric (NP) Confidence Interval

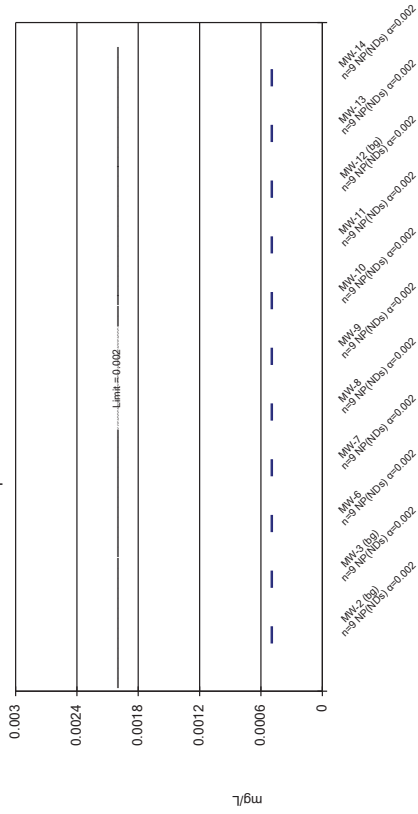
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 10/14/2018 9:07 PM View: Confidence Intervals
Plant Smith Client: Southern Company Data: Smith CCR

Non-Parametric Confidence Interval

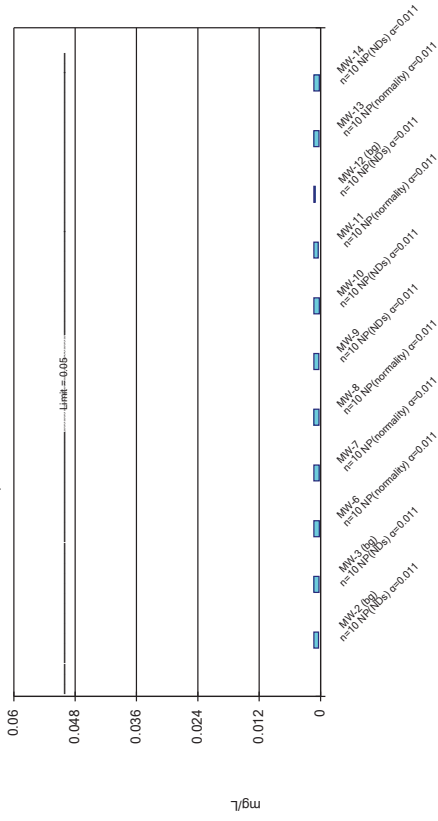
Compliance Limit is not exceeded.



Constituent: Thallium Analysis Run 10/14/2018 9:07 PM View: Confidence Intervals
Plant Smith Client: Southern Company Data: Smith CCR

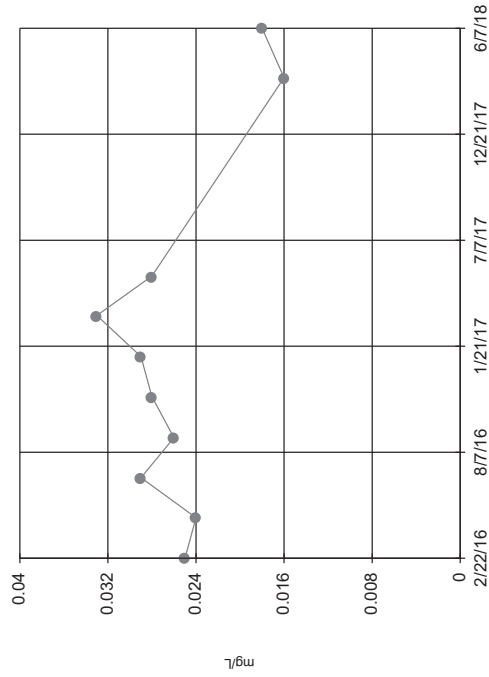
Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



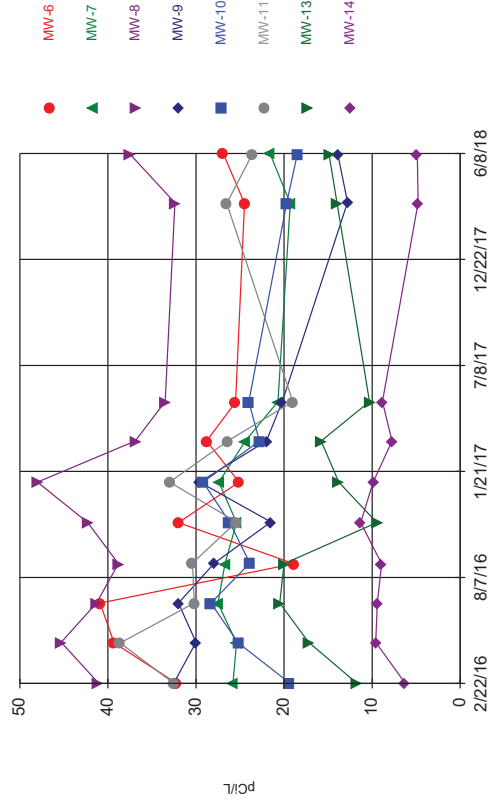
Constituent: Selenium Analysis Run 10/14/2018 9:07 PM View: Confidence Intervals
Plant Smith Client: Southern Company Data: Smith CCR

Time Series



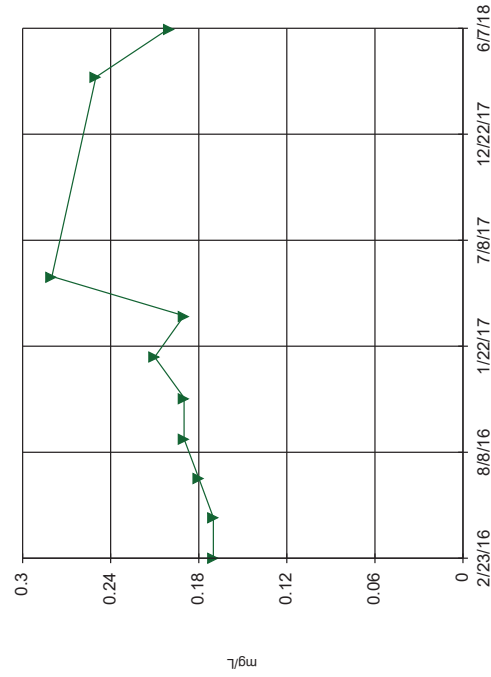
Constituent: Arsenic Analysis Run 9/20/2018 3:21 PM View: Confidence Intervals - Updated Plant Smith Client: Southern Company Data: Smith CCR

Time Series



Constituent: Combined Radium 226 + 228 Analysis Run 9/20/2018 3:21 PM View: Confidence Intervals - Updated Plant Smith Client: Southern Company Data: Smith CCR

Time Series



Constituent: Lithium Analysis Run 9/20/2018 3:21 PM View: Confidence Intervals - Updated Plant Smith Client: Southern Company Data: Smith CCR

Upper Tolerance Limits - App IV

Plant Smith Client: Southern Company Data: Smith CCR Printed 10/14/2018, 9:05 PM

<u>Constituent</u>	<u>Upper Lim.</u>	<u>Bq N</u>	<u>Bq Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	0.0025	27	n/a	n/a	100	n/a	n/a	0.2503	NP Inter(NDs)
Arsenic (mg/L)	0.0013	30	n/a	n/a	96.67	n/a	n/a	0.2146	NP Inter(NDs)
Barium (mg/L)	0.03073	30	0.01763	0.005898	10	None	No	0.05	Inter
Beryllium (mg/L)	0.0025	30	n/a	n/a	100	n/a	n/a	0.2146	NP Inter(NDs)
Cadmium (mg/L)	0.0025	27	n/a	n/a	100	n/a	n/a	0.2503	NP Inter(NDs)
Chromium (mg/L)	0.012	30	n/a	n/a	46.67	n/a	n/a	0.2146	NP Inter(normal...
Cobalt (mg/L)	0.0025	30	n/a	n/a	100	n/a	n/a	0.2146	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	4.2	30	1.437	0.276	0	None	sqrt(x)	0.05	Inter
Fluoride (mg/L)	0.2723	33	0.426	0.1016	24.24	Kapla...	x^(1/3)	0.05	Inter
Lead (mg/L)	0.0013	27	n/a	n/a	92.59	n/a	n/a	0.2503	NP Inter(NDs)
Lithium (mg/L)	0.01834	30	0.09116	0.01993	20	Kapla...	sqrt(x)	0.05	Inter
Mercury (mg/L)	0.0002	27	n/a	n/a	96.3	n/a	n/a	0.2503	NP Inter(NDs)
Molybdenum (mg/L)	0.015	30	n/a	n/a	93.33	n/a	n/a	0.2146	NP Inter(NDs)
Selenium (mg/L)	0.0013	30	n/a	n/a	90	n/a	n/a	0.2146	NP Inter(NDs)
Thallium (mg/L)	0.0005	27	n/a	n/a	100	n/a	n/a	0.2503	NP Inter(NDs)

JUNE 2018 STATISTICAL ANALYSIS -
APPENDIX III CONSTITUENTS

Interwell Prediction Limit Summary Table - Significant Results

Plant Smith Client: Southern Company Data: Smith CCR Printed 10/14/2018, 9:17 PM

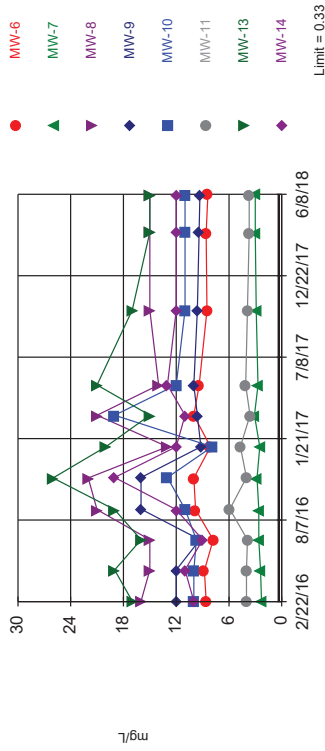
Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDsND Adj.	Transform	Alpha	Method
Boron (mg/L)	MW-6	0.33	n/a	6/8/2018	8.4	Yes	33	n/a	n/a	51.52 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-7	0.33	n/a	6/8/2018	3	Yes	33	n/a	n/a	51.52 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-8	0.33	n/a	6/7/2018	15	Yes	33	n/a	n/a	51.52 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-9	0.33	n/a	6/7/2018	9.3	Yes	33	n/a	n/a	51.52 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-10	0.33	n/a	6/7/2018	11	Yes	33	n/a	n/a	51.52 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-11	0.33	n/a	6/7/2018	3.7	Yes	33	n/a	n/a	51.52 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-13	0.33	n/a	6/7/2018	15	Yes	33	n/a	n/a	51.52 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-14	0.33	n/a	6/7/2018	12	Yes	33	n/a	n/a	51.52 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Calcium (mg/L)	MW-6	59.3	n/a	6/8/2018	290	Yes	33	22.78	17.82	0	None	No	0.0009403 Param Inter 1 of 2
Calcium (mg/L)	MW-7	59.3	n/a	6/8/2018	200	Yes	33	22.78	17.82	0	None	No	0.0009403 Param Inter 1 of 2
Calcium (mg/L)	MW-8	59.3	n/a	6/7/2018	530	Yes	33	22.78	17.82	0	None	No	0.0009403 Param Inter 1 of 2
Calcium (mg/L)	MW-9	59.3	n/a	6/7/2018	280	Yes	33	22.78	17.82	0	None	No	0.0009403 Param Inter 1 of 2
Calcium (mg/L)	MW-10	59.3	n/a	6/7/2018	500	Yes	33	22.78	17.82	0	None	No	0.0009403 Param Inter 1 of 2
Calcium (mg/L)	MW-11	59.3	n/a	6/7/2018	100	Yes	33	22.78	17.82	0	None	No	0.0009403 Param Inter 1 of 2
Calcium (mg/L)	MW-13	59.3	n/a	6/7/2018	670	Yes	33	22.78	17.82	0	None	No	0.0009403 Param Inter 1 of 2
Calcium (mg/L)	MW-14	59.3	n/a	6/7/2018	260	Yes	33	22.78	17.82	0	None	No	0.0009403 Param Inter 1 of 2
Chloride (mg/L)	MW-6	250.5	n/a	6/8/2018	2900	Yes	33	72.1	87.06	0	None	No	0.0009403 Param Inter 1 of 2
Chloride (mg/L)	MW-7	250.5	n/a	6/8/2018	1400	Yes	33	72.1	87.06	0	None	No	0.0009403 Param Inter 1 of 2
Chloride (mg/L)	MW-8	250.5	n/a	6/7/2018	3500	Yes	33	72.1	87.06	0	None	No	0.0009403 Param Inter 1 of 2
Chloride (mg/L)	MW-9	250.5	n/a	6/7/2018	2200	Yes	33	72.1	87.06	0	None	No	0.0009403 Param Inter 1 of 2
Chloride (mg/L)	MW-10	250.5	n/a	6/7/2018	2700	Yes	33	72.1	87.06	0	None	No	0.0009403 Param Inter 1 of 2
Chloride (mg/L)	MW-11	250.5	n/a	6/7/2018	2000	Yes	33	72.1	87.06	0	None	No	0.0009403 Param Inter 1 of 2
Chloride (mg/L)	MW-13	250.5	n/a	6/7/2018	4300	Yes	33	72.1	87.06	0	None	No	0.0009403 Param Inter 1 of 2
Chloride (mg/L)	MW-14	250.5	n/a	6/7/2018	2200	Yes	33	72.1	87.06	0	None	No	0.0009403 Param Inter 1 of 2
Sulfate (mg/L)	MW-6	6.6	n/a	6/8/2018	560	Yes	33	n/a	n/a	69.7 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-7	6.6	n/a	6/8/2018	750	Yes	33	n/a	n/a	69.7 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-8	6.6	n/a	6/7/2018	910	Yes	33	n/a	n/a	69.7 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-9	6.6	n/a	6/7/2018	640	Yes	33	n/a	n/a	69.7 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-10	6.6	n/a	6/7/2018	830	Yes	33	n/a	n/a	69.7 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-11	6.6	n/a	6/7/2018	240	Yes	33	n/a	n/a	69.7 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-13	6.6	n/a	6/7/2018	840	Yes	33	n/a	n/a	69.7 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-14	6.6	n/a	6/7/2018	590	Yes	33	n/a	n/a	69.7 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Total Dissolved Solids (mg/L)	MW-6	608.6	n/a	6/8/2018	6100	Yes	32	215.1	191.4	0	None	No	0.0009403 Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-7	608.6	n/a	6/8/2018	3200	Yes	32	215.1	191.4	0	None	No	0.0009403 Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-8	608.6	n/a	6/7/2018	6000	Yes	32	215.1	191.4	0	None	No	0.0009403 Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-9	608.6	n/a	6/7/2018	4000	Yes	32	215.1	191.4	0	None	No	0.0009403 Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-10	608.6	n/a	6/7/2018	5800	Yes	32	215.1	191.4	0	None	No	0.0009403 Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-11	608.6	n/a	6/7/2018	3400	Yes	32	215.1	191.4	0	None	No	0.0009403 Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-13	608.6	n/a	6/7/2018	8200	Yes	32	215.1	191.4	0	None	No	0.0009403 Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-14	608.6	n/a	6/7/2018	4200	Yes	32	215.1	191.4	0	None	No	0.0009403 Param Inter 1 of 2

Interwell Prediction Limit Summary Table - All Results

Plant Smith Client: Southern Company Data: Smith CCR Printed 10/14/2018, 9:17 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDsND Adj.	Transform	Alpha	Method
Boron (mg/L)	MW-6	0.33	n/a	6/8/2018	8.4	Yes	33	n/a	n/a	51.52 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-7	0.33	n/a	6/8/2018	3	Yes	33	n/a	n/a	51.52 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-8	0.33	n/a	6/7/2018	15	Yes	33	n/a	n/a	51.52 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-9	0.33	n/a	6/7/2018	9.3	Yes	33	n/a	n/a	51.52 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-10	0.33	n/a	6/7/2018	11	Yes	33	n/a	n/a	51.52 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-11	0.33	n/a	6/7/2018	3.7	Yes	33	n/a	n/a	51.52 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-13	0.33	n/a	6/7/2018	15	Yes	33	n/a	n/a	51.52 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Boron (mg/L)	MW-14	0.33	n/a	6/7/2018	12	Yes	33	n/a	n/a	51.52 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Calcium (mg/L)	MW-6	59.3	n/a	6/8/2018	290	Yes	33	22.78	17.82	0 None	No	0.0009403	Param Inter 1 of 2
Calcium (mg/L)	MW-7	59.3	n/a	6/8/2018	200	Yes	33	22.78	17.82	0 None	No	0.0009403	Param Inter 1 of 2
Calcium (mg/L)	MW-8	59.3	n/a	6/7/2018	530	Yes	33	22.78	17.82	0 None	No	0.0009403	Param Inter 1 of 2
Calcium (mg/L)	MW-9	59.3	n/a	6/7/2018	280	Yes	33	22.78	17.82	0 None	No	0.0009403	Param Inter 1 of 2
Calcium (mg/L)	MW-10	59.3	n/a	6/7/2018	500	Yes	33	22.78	17.82	0 None	No	0.0009403	Param Inter 1 of 2
Calcium (mg/L)	MW-11	59.3	n/a	6/7/2018	100	Yes	33	22.78	17.82	0 None	No	0.0009403	Param Inter 1 of 2
Calcium (mg/L)	MW-13	59.3	n/a	6/7/2018	670	Yes	33	22.78	17.82	0 None	No	0.0009403	Param Inter 1 of 2
Calcium (mg/L)	MW-14	59.3	n/a	6/7/2018	260	Yes	33	22.78	17.82	0 None	No	0.0009403	Param Inter 1 of 2
Chloride (mg/L)	MW-6	250.5	n/a	6/8/2018	2900	Yes	33	72.1	87.06	0 None	No	0.0009403	Param Inter 1 of 2
Chloride (mg/L)	MW-7	250.5	n/a	6/8/2018	1400	Yes	33	72.1	87.06	0 None	No	0.0009403	Param Inter 1 of 2
Chloride (mg/L)	MW-8	250.5	n/a	6/7/2018	3500	Yes	33	72.1	87.06	0 None	No	0.0009403	Param Inter 1 of 2
Chloride (mg/L)	MW-9	250.5	n/a	6/7/2018	2200	Yes	33	72.1	87.06	0 None	No	0.0009403	Param Inter 1 of 2
Chloride (mg/L)	MW-10	250.5	n/a	6/7/2018	2700	Yes	33	72.1	87.06	0 None	No	0.0009403	Param Inter 1 of 2
Chloride (mg/L)	MW-11	250.5	n/a	6/7/2018	2000	Yes	33	72.1	87.06	0 None	No	0.0009403	Param Inter 1 of 2
Chloride (mg/L)	MW-13	250.5	n/a	6/7/2018	4300	Yes	33	72.1	87.06	0 None	No	0.0009403	Param Inter 1 of 2
Chloride (mg/L)	MW-14	250.5	n/a	6/7/2018	2200	Yes	33	72.1	87.06	0 None	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	MW-6	0.2377	n/a	6/8/2018	0.05	No	33	0.09148	0.07133	24.24 Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	MW-7	0.2377	n/a	6/8/2018	0.1ND	No	33	0.09148	0.07133	24.24 Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	MW-8	0.2377	n/a	6/7/2018	0.1ND	No	33	0.09148	0.07133	24.24 Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	MW-9	0.2377	n/a	6/7/2018	0.05	No	33	0.09148	0.07133	24.24 Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	MW-10	0.2377	n/a	6/7/2018	0.1ND	No	33	0.09148	0.07133	24.24 Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	MW-11	0.2377	n/a	6/7/2018	0.1ND	No	33	0.09148	0.07133	24.24 Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	MW-13	0.2377	n/a	6/7/2018	0.05	No	33	0.09148	0.07133	24.24 Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	MW-14	0.2377	n/a	6/7/2018	0.08	No	33	0.09148	0.07133	24.24 Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Sulfate (mg/L)	MW-6	6.6	n/a	6/8/2018	560	Yes	33	n/a	n/a	69.7 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-7	6.6	n/a	6/8/2018	750	Yes	33	n/a	n/a	69.7 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-8	6.6	n/a	6/7/2018	910	Yes	33	n/a	n/a	69.7 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-9	6.6	n/a	6/7/2018	640	Yes	33	n/a	n/a	69.7 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-10	6.6	n/a	6/7/2018	830	Yes	33	n/a	n/a	69.7 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-11	6.6	n/a	6/7/2018	240	Yes	33	n/a	n/a	69.7 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-13	6.6	n/a	6/7/2018	840	Yes	33	n/a	n/a	69.7 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	MW-14	6.6	n/a	6/7/2018	590	Yes	33	n/a	n/a	69.7 n/a	n/a	0.001617	NP Inter (NDs) 1 of 2
Total Dissolved Solids (mg/L)	MW-6	608.6	n/a	6/8/2018	6100	Yes	32	215.1	191.4	0 None	No	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-7	608.6	n/a	6/8/2018	3200	Yes	32	215.1	191.4	0 None	No	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-8	608.6	n/a	6/7/2018	6000	Yes	32	215.1	191.4	0 None	No	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-9	608.6	n/a	6/7/2018	4000	Yes	32	215.1	191.4	0 None	No	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-10	608.6	n/a	6/7/2018	5800	Yes	32	215.1	191.4	0 None	No	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-11	608.6	n/a	6/7/2018	3400	Yes	32	215.1	191.4	0 None	No	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-13	608.6	n/a	6/7/2018	8200	Yes	32	215.1	191.4	0 None	No	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-14	608.6	n/a	6/7/2018	4200	Yes	32	215.1	191.4	0 None	No	0.0009403	Param Inter 1 of 2

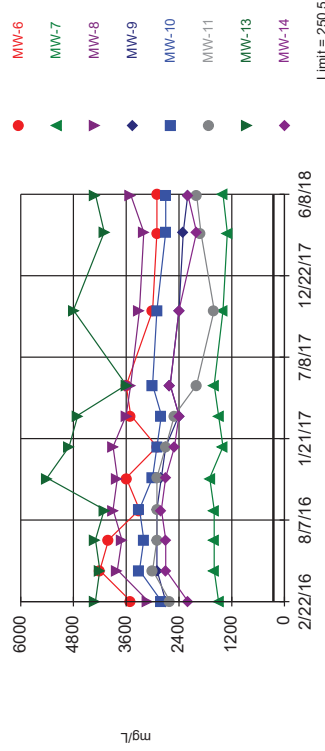
Exceeds Limit: MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-13, MW-14
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 33 background values. 51.52% NDs. Annual per-constituent alpha = 0.02556. Individual comparison alpha = 0.001617 (1 of 2). Comparing 8 points to limit.

Constituent: Boron Analysis Run 10/14/2018 9:14 PM View: Interwell PLs
Plant Smith Client: Southern Company Data: Smith CCR

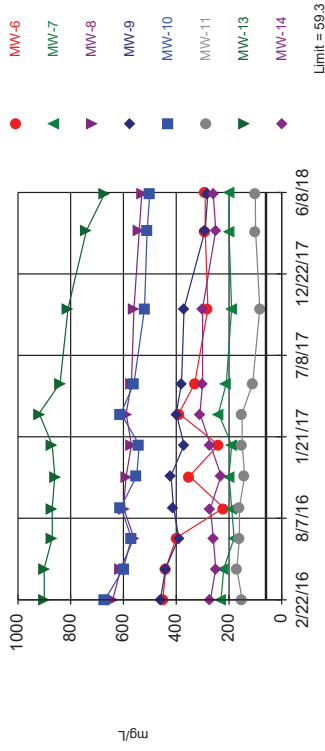
Exceeds Limit: MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-13, MW-14
Interwell Parametric



Background Data Summary: Mean=72.1, Std. Dev.=87.06, n=33. Normality test was disabled. Kappa = 2.05 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403. Comparing 8 points to limit.

Constituent: Chloride Analysis Run 10/14/2018 9:15 PM View: Interwell PLs
Plant Smith Client: Southern Company Data: Smith CCR

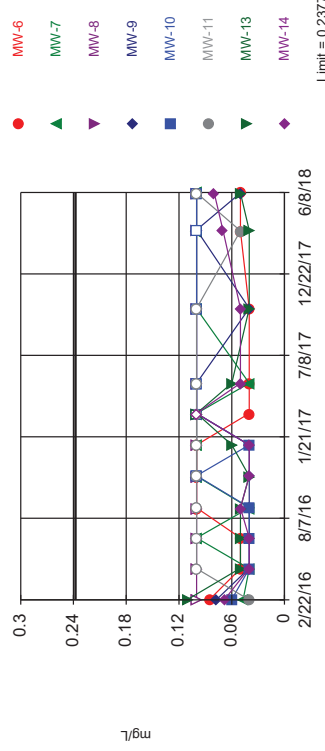
Exceeds Limit: MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-13, MW-14
Interwell Parametric



Background Data Summary: Mean=22.78, Std. Dev.=17.82, n=33. Normality test was disabled. Kappa = 2.05 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0009403. Comparing 8 points to limit.

Constituent: Calcium Analysis Run 10/14/2018 9:15 PM View: Interwell PLs
Plant Smith Client: Southern Company Data: Smith CCR

Exceeds Limit: MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-13, MW-14
Interwell Parametric



Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.09148, Std. Dev.=0.07133, n=33, 24.24% NDs. Normality test was disabled. Kappa = 2.05 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403. Comparing 8 points to limit.

Constituent: Fluoride Analysis Run 10/14/2018 9:15 PM View: Interwell PLs
Plant Smith Client: Southern Company Data: Smith CCR

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/14/2018 9:17 PM View: Interwell PLs

Plant Smith Client: Southern Company Data: Smith CCR

	MW-2 (bg)	MW-11	MW-12 (bg)	MW-3 (bg)	MW-9	MW-8	MW-7	MW-13	MW-6
2/22/2016	<0.05	4	0.14 (J)	<0.05					
2/23/2016					12	16	2.3	17	8.6
4/25/2016	0.022 (J)			<0.05					
4/26/2016		4	0.27				2.4		8.8
4/27/2016					12	15		19	
6/27/2016	0.032 (J)		0.083	<0.05					
6/28/2016		3.9			9.3	15	2.6	16	7.8
8/29/2016	<0.05 (*)		<0.05 (*)	<0.05		21	2.6	19	9.8
8/30/2016		5.9			16				
11/1/2016	<0.05		0.1	<0.05					
11/2/2016						22	2.8	26	10
11/3/2016		4			16				
1/4/2017	<0.05		0.062	<0.05					
1/5/2017		4.7			9.2	13	2.5	20	8.1
3/10/2017	0.032 (J)		0.06	<0.05					
3/11/2017		3.6			9.6	21	3.1	15	10
5/11/2017	0.23		0.33	0.18					9.4
5/12/2017		4.1			10	14	2.7	21	
10/12/2017	<0.05		0.082	<0.05			2.9		8.5
10/13/2017		3.9			9.6	15		17	
3/20/2018			0.072	<0.05					
3/21/2018	<0.05	3.7					3		8.6
3/22/2018						15		15	
3/23/2018					9.4				
6/6/2018	0.027 (J)		0.077	<0.05					
6/7/2018		3.7			9.3	15		15	
6/8/2018							3		8.4

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/14/2018 9:17 PM View: Interwell PLs
Plant Smith Client: Southern Company Data: Smith CCR

	MW-14	MW-10
2/22/2016		
2/23/2016	10	10
4/25/2016		
4/26/2016		10
4/27/2016	11	
6/27/2016		
6/28/2016	9	9.7
8/29/2016	12	
8/30/2016		11
11/1/2016		
11/2/2016		
11/3/2016	19	13
1/4/2017		
1/5/2017	12	7.9
3/10/2017		
3/11/2017	11	19
5/11/2017		
5/12/2017	13	12
10/12/2017		
10/13/2017	12	11
3/20/2018		
3/21/2018		
3/22/2018	12	11
3/23/2018		
6/6/2018		
6/7/2018	12	11
6/8/2018		

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/14/2018 9:17 PM View: Interwell PLs

Plant Smith Client: Southern Company Data: Smith CCR

	MW-2 (bg)	MW-11	MW-12 (bg)	MW-3 (bg)	MW-9	MW-8	MW-7	MW-13	MW-6
2/22/2016	12	150	23	1.9					
2/23/2016					460	640	230	900	450
4/25/2016	11			1.8					
4/26/2016		170	33				220		440
4/27/2016					440	610		900	
6/27/2016	7.7		29	1.7					
6/28/2016		160			390	560	180	870	400
8/29/2016	48		28	1.7		600	190	870	220
8/30/2016		160			410				
11/1/2016	49		36	1.9					
11/2/2016						590	200	860	350
11/3/2016		140			420				
1/4/2017	44		36	1.8					
1/5/2017		150			370	570	190	870	240
3/10/2017	46		37	1.9					
3/11/2017		150			400	590	240	920	390
5/11/2017	43		31	1.7					330
5/12/2017		110			380	570	210	840	
10/12/2017	45		32	1.9			190		280
10/13/2017		83			370	560		810	
3/20/2018			34	1.9					
3/21/2018	45	99					200		290
3/22/2018						540		740	
3/23/2018					290				
6/6/2018	32		30	1.8					
6/7/2018		100			280	530		670	
6/8/2018							200		290

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/14/2018 9:17 PM View: Interwell PLs
Plant Smith Client: Southern Company Data: Smith CCR

	MW-14	MW-10
2/22/2016		
2/23/2016	270	670
4/25/2016		
4/26/2016		600
4/27/2016	250	
6/27/2016		
6/28/2016	260	570
8/29/2016	270	
8/30/2016		610
11/1/2016		
11/2/2016		
11/3/2016	230	550
1/4/2017		
1/5/2017	270	540
3/10/2017		
3/11/2017	310	610
5/11/2017		
5/12/2017	300	560
10/12/2017		
10/13/2017	300	520
3/20/2018		
3/21/2018		
3/22/2018	250	510
3/23/2018		
6/6/2018		
6/7/2018	260	500
6/8/2018		

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/14/2018 9:17 PM View: Interwell PLs

Plant Smith Client: Southern Company Data: Smith CCR

	MW-2 (bg)	MW-11	MW-12 (bg)	MW-3 (bg)	MW-9	MW-8	MW-7	MW-13	MW-6
2/22/2016	15	2600	140	11					
2/23/2016					2700	3100	1500	4300	3500
4/25/2016	18			10					
4/26/2016		3000	190				1600		4200
4/27/2016					2900	3800		4200	
6/27/2016	17		170	11					
6/28/2016		2900			2900	3700	1600	4300	4000
8/29/2016	16		180	11		3900	1600	4100	3300
8/30/2016		2900			2900				
11/1/2016	11		230	11					
11/2/2016						3800	1700	5400	3600
11/3/2016		2900			2800				
1/4/2017	11		220	11					
1/5/2017		2700			2700	3900	1400	4900	2900
3/10/2017	14		210	11					
3/11/2017		2500			2400	3600	1500	4700	3500
5/11/2017	11		200	12					3600
5/12/2017		2000			2600	3500	1600	3600	
10/12/2017	12		190	12			1400		3000
10/13/2017		1600			2400	3300		4800	
3/20/2018			190	11					
3/21/2018	9.3	1900					1300		2900
3/22/2018						3200		4100	
3/23/2018					2300				
6/6/2018	13		190	11					
6/7/2018		2000			2200	3500		4300	
6/8/2018							1400		2900

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/14/2018 9:17 PM View: Interwell PLs
Plant Smith Client: Southern Company Data: Smith CCR

	MW-14	MW-10
2/22/2016		
2/23/2016	2200	2800
4/25/2016		
4/26/2016		3300
4/27/2016	2700	
6/27/2016		
6/28/2016	2700	3200
8/29/2016	2800	
8/30/2016		3300
11/1/2016		
11/2/2016		
11/3/2016	2700	3000
1/4/2017		
1/5/2017	2500	2900
3/10/2017		
3/11/2017	2400	2800
5/11/2017		
5/12/2017	2600	3000
10/12/2017		
10/13/2017	2400	2900
3/20/2018		
3/21/2018		
3/22/2018	2000	2700
3/23/2018		
6/6/2018		
6/7/2018	2200	2700
6/8/2018		

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 10/14/2018 9:17 PM View: Interwell PLs

Plant Smith Client: Southern Company Data: Smith CCR

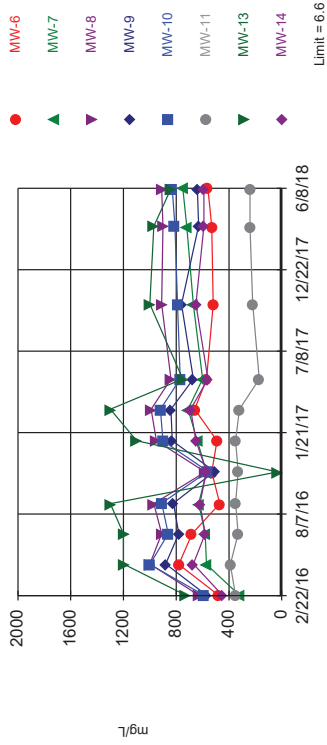
	MW-2 (bg)	MW-11	MW-12 (bg)	MW-3 (bg)	MW-9	MW-8	MW-7	MW-13	MW-6
2/22/2016	0.06 (J)	0.04 (J)	0.09 (J)	0.04 (J)					
2/23/2016					0.077 (J)	<0.1	0.047 (J)	0.11	0.085 (J)
4/25/2016	0.04 (J)			<0.1					
4/26/2016		<0.1	0.08 (J)				0.04 (J)		0.05 (J)
4/27/2016					0.04 (J)	<0.1		0.05 (J)	
6/27/2016	0.04 (J)		0.08 (J)	<0.1					
6/28/2016		<0.1			0.04 (J)	<0.1	<0.1	0.05 (J)	0.05 (J)
8/29/2016	0.16		0.09 (J)	0.04 (J)		<0.1	0.04 (J)	0.05 (J)	<0.1
8/30/2016		<0.1			0.04 (J)				
11/1/2016	0.17		0.08 (J)	<0.1					
11/2/2016						<0.1	<0.1	0.04 (J)	<0.1
11/3/2016		<0.1			0.04 (J)				
1/4/2017	0.23		0.1	<0.1					
1/5/2017		<0.1			0.04 (J)	<0.1	<0.1	0.06 (J)	<0.1
3/10/2017	0.21		0.1	<0.1					
3/11/2017		<0.1			<0.1	<0.1	<0.1	<0.1	0.04 (J)
5/11/2017	0.23		0.1	<0.1					0.04 (J)
5/12/2017		<0.1			<0.1	<0.1	0.04 (J)	0.06 (J)	
10/12/2017	0.27		0.12	<0.1			<0.1		0.04
10/13/2017		<0.1			0.04	<0.1		0.04	
3/20/2018			0.12	<0.1					
3/21/2018	0.28	0.05 (J)					<0.1		0.05 (J)
3/22/2018						<0.1		0.04 (J)	
3/23/2018					<0.1				
6/6/2018	0.19		0.12	0.04 (J)					
6/7/2018		<0.1			0.05 (J)	<0.1		0.05 (J)	
6/8/2018							<0.1		0.05 (J)

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 10/14/2018 9:17 PM View: Interwell PLs
Plant Smith Client: Southern Company Data: Smith CCR

	MW-14	MW-10
2/22/2016		
2/23/2016	0.068 (J)	0.06 (J)
4/25/2016		
4/26/2016		0.04 (J)
4/27/2016	0.04 (J)	
6/27/2016		
6/28/2016	0.04 (J)	0.04 (J)
8/29/2016	0.05 (J)	
8/30/2016		0.04 (J)
11/1/2016		
11/2/2016		
11/3/2016	0.04 (J)	<0.1
1/4/2017		
1/5/2017	0.04 (J)	0.04 (J)
3/10/2017		
3/11/2017	<0.1	<0.1
5/11/2017		
5/12/2017	0.05 (J)	<0.1
10/12/2017		
10/13/2017	0.05	<0.1
3/20/2018		
3/21/2018		
3/22/2018	0.07 (J)	<0.1
3/23/2018		
6/6/2018		
6/7/2018	0.08 (J)	<0.1
6/8/2018		

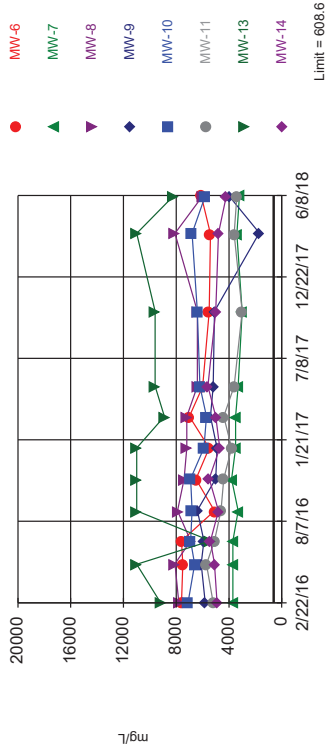
Exceeds Limit: MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-13, MW-14
Prediction Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 33 background values. 69.7% NDs. Annual per-constituent alpha = 0.02556. Individual comparison alpha = 0.001617 (1 of 2). Comparing 8 points to limit.

Constituent: Sulfate Analysis Run 10/14/2018 9:15 PM View: Interwell PLs
Plant Smith Client: Southern Company Data: Smith CCR

Exceeds Limit: MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-13, MW-14
Prediction Limit
Interwell Parametric



Background Data Summary: Mean=215.1, Std. Dev.=191.4, n=32. Normality test was disabled. Kappa = 2.056 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0009403. Comparing 8 points to limit.

Constituent: Total Dissolved Solids Analysis Run 10/14/2018 9:15 PM View: Interwell PLs
Plant Smith Client: Southern Company Data: Smith CCR

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/14/2018 9:17 PM View: Interwell PLs

Plant Smith Client: Southern Company Data: Smith CCR

	MW-2 (bg)	MW-11	MW-12 (bg)	MW-3 (bg)	MW-9	MW-8	MW-7	MW-13	MW-6
2/22/2016	6.3	350	<5	<5					
2/23/2016					570	630	320	730	480
4/25/2016	6.1			1.4 (J)					
4/26/2016		390	<5				570		780
4/27/2016					880	1000		1200	
6/27/2016	6.6		1.6 (J)	<5					
6/28/2016		330			780	910	580	1200	680
8/29/2016	4.5 (J)		<5	<5		970	630	1300	470 (J)
8/30/2016		350			820				
11/1/2016	<5		<5	<5					
11/2/2016						580	570	31	530
11/3/2016		330			510				
1/4/2017	<5 (*)		<5	<5 (*)					
1/5/2017		350			830	950	640	1100	490
3/10/2017	2.3 (J)		<5	<5					
3/11/2017		320			840	990	710	1300	660
5/11/2017	<5		<5	<5					570
5/12/2017		170 (J)			670	840	600	750	
10/12/2017	<5		<5	<5			670		520
10/13/2017		220			760	910		1000	
3/20/2018			1.8 (J)	<5					
3/21/2018	<5	240					720		530
3/22/2018						900		970	
3/23/2018					630				
6/6/2018	4.8 (J)		2.3 (J)	<5					
6/7/2018		240			640	910		840	
6/8/2018							750		560

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/14/2018 9:17 PM View: Interwell PLs
Plant Smith Client: Southern Company Data: Smith CCR

	MW-14	MW-10
2/22/2016		
2/23/2016	450	590
4/25/2016		
4/26/2016		1000
4/27/2016	670	
6/27/2016		
6/28/2016	580	860
8/29/2016	620	
8/30/2016		910
11/1/2016		
11/2/2016		
11/3/2016	570	560
1/4/2017		
1/5/2017	650	900
3/10/2017		
3/11/2017	690	920
5/11/2017		
5/12/2017	560	770
10/12/2017		
10/13/2017	650	790
3/20/2018		
3/21/2018		
3/22/2018	590	810
3/23/2018		
6/6/2018		
6/7/2018	590	830
6/8/2018		

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/14/2018 9:17 PM View: Interwell PLs

Plant Smith Client: Southern Company Data: Smith CCR

	MW-2 (bg)	MW-11	MW-12 (bg)	MW-3 (bg)	MW-8	MW-10	MW-7	MW-6	MW-13
2/22/2016	74	5200	410	46					
2/23/2016					7800	7100	3700	7600	9200
5/11/2016	200	5700	410	42		6600	3700	7500	11000
5/12/2016					8100				
6/27/2016	42		4200 (o)	24					
6/28/2016		5100			6900	6900	3700	7600	5400
8/29/2016	200		490	42	7900		3300	5100	11000
8/30/2016		4600				6800			
11/1/2016	220		540	64					
11/2/2016					7400		3800	6500	11000
11/3/2016		4400				6900			
1/4/2017	140		520	44					
1/5/2017		3800			7200	5900	3500	5500	11000
3/10/2017	160		490	16					
3/11/2017		4400			7200	5700	3500	7000	8900
5/11/2017	190		490	42				6000	
5/12/2017		3600			6400	6200	3300		9600
10/12/2017	150		470	30			3000	5500	
10/13/2017		3000			6400	6400			9600
3/20/2018			510	12					
3/21/2018	150	3600					3400	5400	
3/22/2018					8100	6800			11000
3/23/2018									
6/6/2018	160		460	46					
6/7/2018		3400			6000	5800			8200
6/8/2018							3200	6100	

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/14/2018 9:17 PM View: Interwell PLs
Plant Smith Client: Southern Company Data: Smith CCR

	MW-9	MW-14
2/22/2016		
2/23/2016	5800	4900
5/11/2016		
5/12/2016	6100	5100
6/27/2016		
6/28/2016	5900	5400
8/29/2016		4800
8/30/2016	6400	
11/1/2016		
11/2/2016		
11/3/2016	5000	5500
1/4/2017		
1/5/2017	4900	4700
3/10/2017		
3/11/2017	5400	5000
5/11/2017		
5/12/2017	5200	5600
10/12/2017		
10/13/2017	5100	5000
3/20/2018		
3/21/2018		
3/22/2018		4800
3/23/2018	1700	
6/6/2018		
6/7/2018	4000	4200
6/8/2018		

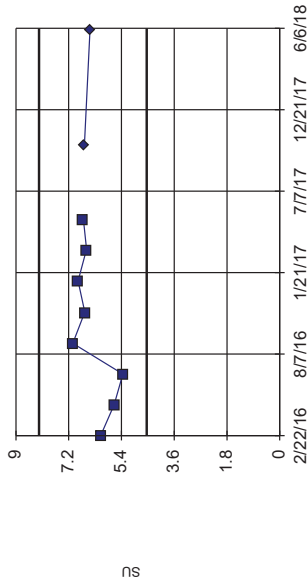
Intrawell Prediction Limit Summary Table - All Results

Plant Smith Client: Southern Company Data: Smith CCR Printed 10/14/2018, 9:14 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bq N	Bq Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
pH (SU)	MW-2	8.21	4.538	6/6/2018	6.47	No	8	6.374	0.6092	0	None	No	0.0004701	Param Intra 1 of 2
pH (SU)	MW-3	5.354	4.616	6/6/2018	4.96	No	8	4.985	0.1225	0	None	No	0.0004701	Param Intra 1 of 2
pH (SU)	MW-6	6.253	3.967	6/8/2018	5.25	No	8	5.11	0.3792	0	None	No	0.0004701	Param Intra 1 of 2
pH (SU)	MW-7	6.575	5.86	6/8/2018	6.31	No	8	6.218	0.1188	0	None	No	0.0004701	Param Intra 1 of 2
pH (SU)	MW-8	5.62	3.568	6/7/2018	4.73	No	8	4.594	0.3404	0	None	No	0.0004701	Param Intra 1 of 2
pH (SU)	MW-9	6.725	4.202	6/7/2018	6.52	No	8	5.464	0.4185	0	None	No	0.0004701	Param Intra 1 of 2
pH (SU)	MW-10	5.468	4.964	6/7/2018	5.35	No	8	5.216	0.08366	0	None	No	0.0004701	Param Intra 1 of 2
pH (SU)	MW-11	7.003	5.977	6/7/2018	6.39	No	8	6.49	0.1702	0	None	No	0.0004701	Param Intra 1 of 2
pH (SU)	MW-12	6.28	5.823	6/6/2018	6.04	No	8	6.051	0.07586	0	None	No	0.0004701	Param Intra 1 of 2
pH (SU)	MW-13	7.628	6.58	6/7/2018	6.86	No	8	7.104	0.1739	0	None	No	0.0004701	Param Intra 1 of 2
pH (SU)	MW-14	6.959	6.416	6/7/2018	6.88	No	8	6.688	0.09004	0	None	No	0.0004701	Param Intra 1 of 2

Within Limits

Prediction Limit
Intrawell Parametric



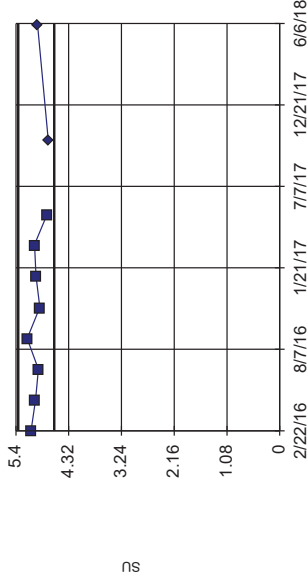
■ MW-2 background
◆ MW-2 compliance
Limit = 6.21
Limit = 4.538

Background Data Summary: Mean=6.374, Std. Dev.=0.6092, n=8. Normality test was disabled. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

Constituent: pH Analysis Run 10/14/2018 9:11 PM View: Intrawell PLs
Plant Smith Client: Southern Company Data: Smith CCR

Within Limits

Prediction Limit
Intrawell Parametric



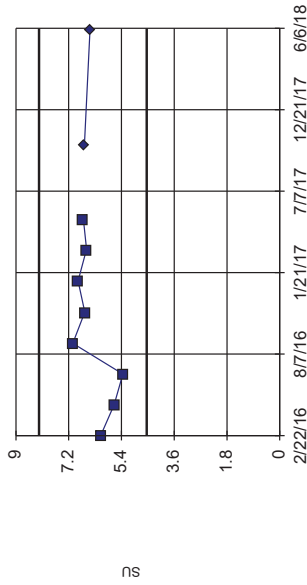
■ MW-3 background
◆ MW-3 compliance
Limit = 5.354
Limit = 4.616

Background Data Summary: Mean=4.985, Std. Dev.=0.1225, n=8. Normality test was disabled. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

Constituent: pH Analysis Run 10/14/2018 9:11 PM View: Intrawell PLs
Plant Smith Client: Southern Company Data: Smith CCR

Within Limits

Prediction Limit
Intrawell Parametric



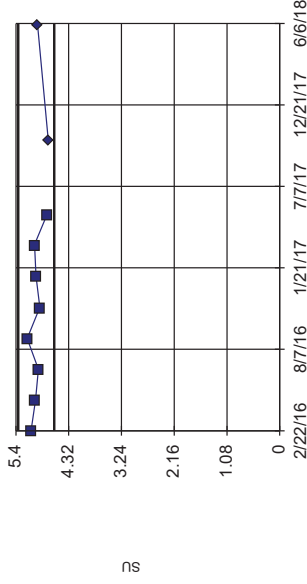
■ MW-6 background
◆ MW-6 compliance
Limit = 6.253
Limit = 3.967

Background Data Summary: Mean=5.11, Std. Dev.=0.3792, n=8. Normality test was disabled. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

Constituent: pH Analysis Run 10/14/2018 9:11 PM View: Intrawell PLs
Plant Smith Client: Southern Company Data: Smith CCR

Within Limits

Prediction Limit
Intrawell Parametric



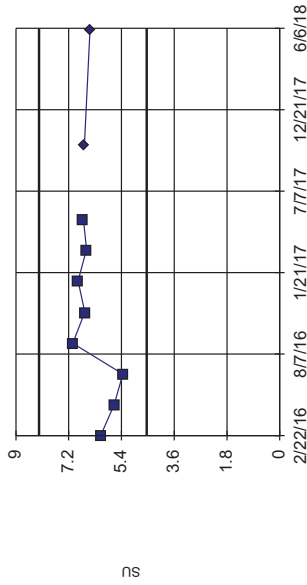
■ MW-7 background
◆ MW-7 compliance
Limit = 6.575
Limit = 5.86

Background Data Summary: Mean=6.218, Std. Dev.=0.1188, n=8. Normality test was disabled. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

Constituent: pH Analysis Run 10/14/2018 9:11 PM View: Intrawell PLs
Plant Smith Client: Southern Company Data: Smith CCR

Within Limits

Prediction Limit
Intrawell Parametric



■ MW-7 background
◆ MW-7 compliance
Limit = 6.575
Limit = 5.86

Background Data Summary: Mean=6.218, Std. Dev.=0.1188, n=8. Normality test was disabled. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

Constituent: pH Analysis Run 10/14/2018 9:11 PM View: Intrawell PLs
Plant Smith Client: Southern Company Data: Smith CCR

Prediction Limit

Constituent: pH (SU) Analysis Run 10/14/2018 9:14 PM View: IntraWell PLs
Plant Smith Client: Southern Company Data: Smith CCR

	MW-2	MW-2
2/22/2016	6.11 (B01)	
4/25/2016	5.65 (B02)	
6/27/2016	5.35 (B03)	
8/29/2016	7.06 (B04)	
11/1/2016	6.65 (B05)	
1/4/2017	6.88 (B06)	
3/10/2017	6.59 (B07)	
5/11/2017	6.7 (B08)	
10/12/2017		6.66
6/6/2018		6.47

Prediction Limit

Constituent: pH (SU) Analysis Run 10/14/2018 9:14 PM View: Intrawell PLs
Plant Smith Client: Southern Company Data: Smith CCR

	MW-3	MW-3
2/22/2016	5.09 (B01)	
4/25/2016	5 (B02)	
6/27/2016	4.94 (B03)	
8/29/2016	5.17 (B04)	
11/1/2016	4.91 (B05)	
1/4/2017	4.99 (B06)	
3/10/2017	5.02 (B07)	
5/11/2017	4.76 (B08)	
10/12/2017		4.74
6/6/2018		4.96

Prediction Limit

Constituent: pH (SU) Analysis Run 10/14/2018 9:14 PM View: Intrawell PLs
Plant Smith Client: Southern Company Data: Smith CCR

	MW-6	MW-6
2/23/2016	5.03 (B01)	
4/26/2016	4.68 (B02)	
6/28/2016	4.82 (B03)	
8/29/2016	5.94 (B04)	
11/2/2016	5.2 (B05)	
1/5/2017	5.2 (B06)	
3/11/2017	5.05 (B07)	
5/11/2017	4.96 (B08)	
10/12/2017		5.37
6/8/2018		5.25

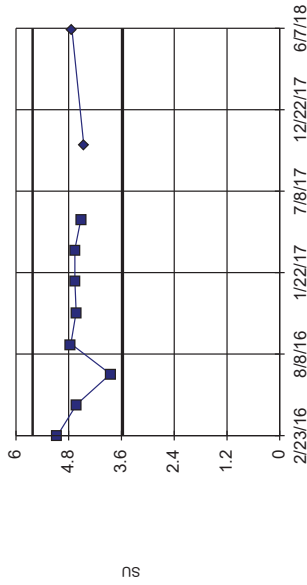
Prediction Limit

Constituent: pH (SU) Analysis Run 10/14/2018 9:14 PM View: Intrawell PLs
Plant Smith Client: Southern Company Data: Smith CCR

	MW-7	MW-7
2/23/2016	6.32 (B01)	
4/26/2016	6.36 (B02)	
6/28/2016	6.09 (B03)	
8/29/2016	6.27 (B04)	
11/2/2016	6.09 (B05)	
1/5/2017	6.18 (B06)	
3/11/2017	6.34 (B07)	
5/12/2017	6.09 (B08)	
10/12/2017		6.13
6/8/2018		6.31

Within Limits

Prediction Limit
Intrawell Parametric



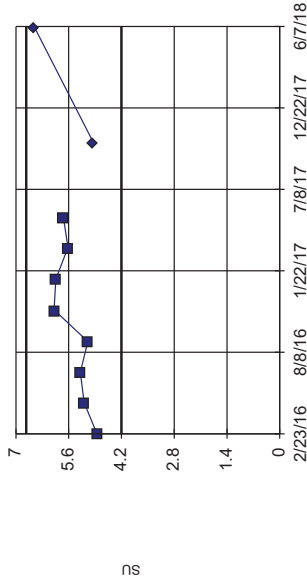
■ MW-8 background
◆ MW-8 compliance
Limit = 5.62
Limit = 3.588

Background Data Summary: Mean=4.594, Std. Dev.=0.3404, n=8. Normality test was disabled. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

Constituent: pH Analysis Run 10/14/2018 9:11 PM View: Intrawell PLS
Plant Smith Client: Southern Company Data: Smith CCR

Within Limits

Prediction Limit
Intrawell Parametric



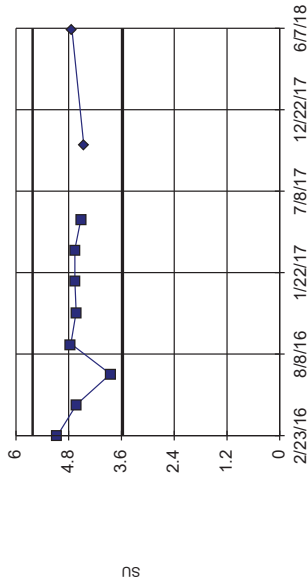
■ MW-9 background
◆ MW-9 compliance
Limit = 6.725
Limit = 4.202

Background Data Summary: Mean=5.464, Std. Dev.=0.4185, n=8. Normality test was disabled. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

Constituent: pH Analysis Run 10/14/2018 9:11 PM View: Intrawell PLS
Plant Smith Client: Southern Company Data: Smith CCR

Within Limits

Prediction Limit
Intrawell Parametric



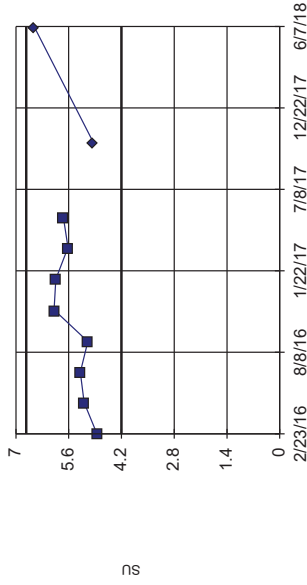
■ MW-10 background
◆ MW-10 compliance
Limit = 5.468
Limit = 4.964

Background Data Summary: Mean=5.216, Std. Dev.=0.08366, n=8. Normality test was disabled. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

Constituent: pH Analysis Run 10/14/2018 9:11 PM View: Intrawell PLS
Plant Smith Client: Southern Company Data: Smith CCR

Within Limits

Prediction Limit
Intrawell Parametric



■ MW-11 background
◆ MW-11 compliance
Limit = 7.003
Limit = 5.977

Background Data Summary: Mean=6.49, Std. Dev.=0.1702, n=8. Normality test was disabled. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

Constituent: pH Analysis Run 10/14/2018 9:11 PM View: Intrawell PLS
Plant Smith Client: Southern Company Data: Smith CCR

Constituent: pH Analysis Run 10/14/2018 9:11 PM View: Intrawell PLS
Plant Smith Client: Southern Company Data: Smith CCR

Constituent: pH Analysis Run 10/14/2018 9:11 PM View: Intrawell PLS
Plant Smith Client: Southern Company Data: Smith CCR

Prediction Limit

Constituent: pH (SU) Analysis Run 10/14/2018 9:14 PM View: Intrawell PLs
Plant Smith Client: Southern Company Data: Smith CCR

	MW-8	MW-8
2/23/2016	5.06 (B01)	
4/27/2016	4.62 (B02)	
6/28/2016	3.85 (B03)	
8/29/2016	4.75 (B04)	
11/2/2016	4.63 (B05)	
1/5/2017	4.66 (B06)	
3/11/2017	4.66 (B07)	
5/12/2017	4.52 (B08)	
10/13/2017		4.46
6/7/2018		4.73

Prediction Limit

Constituent: pH (SU) Analysis Run 10/14/2018 9:14 PM View: Intrawell PLs
Plant Smith Client: Southern Company Data: Smith CCR

	MW-9	MW-9
2/23/2016	4.85 (B01)	
4/27/2016	5.19 (B02)	
6/28/2016	5.29 (B03)	
8/30/2016	5.09 (B04)	
11/3/2016	5.99 (B05)	
1/5/2017	5.94 (B06)	
3/11/2017	5.62 (B07)	
5/12/2017	5.74 (B08)	
10/13/2017		4.95
6/7/2018		6.52

Prediction Limit

Constituent: pH (SU) Analysis Run 10/14/2018 9:14 PM View: Intrawell PLs
Plant Smith Client: Southern Company Data: Smith CCR

	MW-10	MW-10
2/23/2016	5.2 (B01)	
4/26/2016	5.24 (B02)	
6/28/2016	5.25 (B03)	
8/30/2016	5.31 (B04)	
11/3/2016	5.07 (B05)	
1/5/2017	5.3 (B06)	
3/11/2017	5.24 (B07)	
5/12/2017	5.12 (B08)	
10/13/2017		5.33
6/7/2018		5.35

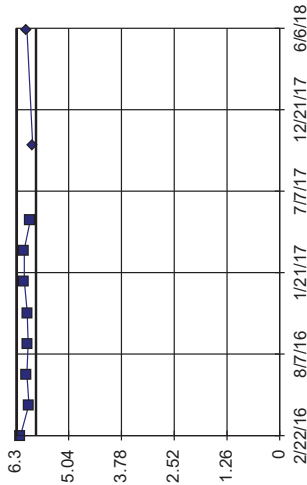
Prediction Limit

Constituent: pH (SU) Analysis Run 10/14/2018 9:14 PM View: Intrawell PLs
Plant Smith Client: Southern Company Data: Smith CCR

	MW-11	MW-11
2/22/2016	6.33 (B01)	
4/26/2016	6.27 (B02)	
6/28/2016	6.76 (B03)	
8/30/2016	6.59 (B04)	
11/3/2016	6.54 (B05)	
1/5/2017	6.5 (B06)	
3/11/2017	6.32 (B07)	
5/12/2017	6.61 (B08)	
10/13/2017		6.73
6/7/2018		6.39

Within Limits

Prediction Limit
Intrawell Parametric



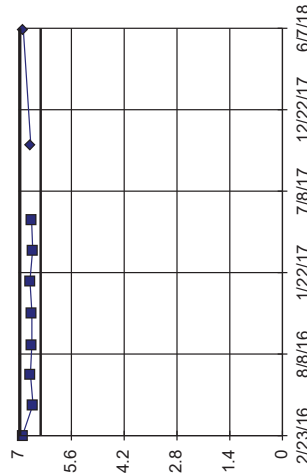
■ MW-12 background
◆ MW-12 compliance
Limit = 6.28
Limit = 5.823

Background Data Summary: Mean=6.051, Std. Dev.=0.07586, n=8, Normality test was disabled. Kappa = 3.014 (c=7, w=8, 1 of 2, event.alpha = 0.05132). Report alpha = 0.0009403.

Constituent: pH Analysis Run 10/14/2018 9:11 PM View: Intrawell PLs
Plant Smith Client: Southern Company Data: Smith CCR

Within Limits

Prediction Limit
Intrawell Parametric



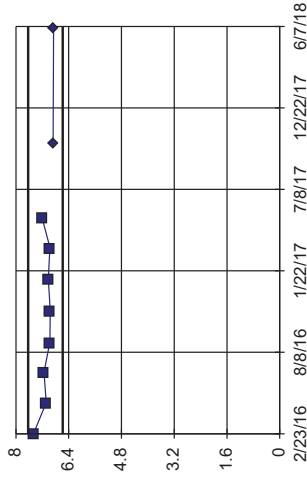
■ MW-14 background
◆ MW-14 compliance
Limit = 6.959
Limit = 6.416

Background Data Summary: Mean=6.688, Std. Dev.=0.09004, n=8, Normality test was disabled. Kappa = 3.014 (c=7, w=8, 1 of 2, event.alpha = 0.05132). Report alpha = 0.0009403.

Constituent: pH Analysis Run 10/14/2018 9:12 PM View: Intrawell PLs
Plant Smith Client: Southern Company Data: Smith CCR

Within Limits

Prediction Limit
Intrawell Parametric



■ MW-13 background
◆ MW-13 compliance
Limit = 7.628
Limit = 6.58

Background Data Summary: Mean=7.104, Std. Dev.=0.1739, n=8, Normality test was disabled. Kappa = 3.014 (c=7, w=8, 1 of 2, event.alpha = 0.05132). Report alpha = 0.0009403.

Constituent: pH Analysis Run 10/14/2018 9:12 PM View: Intrawell PLs
Plant Smith Client: Southern Company Data: Smith CCR

Prediction Limit

Constituent: pH (SU) Analysis Run 10/14/2018 9:14 PM View: Intrawell PLs
Plant Smith Client: Southern Company Data: Smith CCR

	MW-12	MW-12
2/22/2016	6.19 (B01)	
4/26/2016	5.99 (B02)	
6/27/2016	6.04 (B03)	
8/29/2016	6.01 (B04)	
11/1/2016	6.03 (B05)	
1/4/2017	6.1 (B06)	
3/10/2017	6.1 (B07)	
5/11/2017	5.95 (B08)	
10/12/2017		5.9
6/6/2018		6.04

Prediction Limit

Constituent: pH (SU) Analysis Run 10/14/2018 9:14 PM View: Intrawell PLs
Plant Smith Client: Southern Company Data: Smith CCR

	MW-13	MW-13
2/23/2016	7.47 (B01)	
4/27/2016	7.08 (B02)	
6/28/2016	7.15 (B03)	
8/29/2016	6.97 (B04)	
11/2/2016	6.96 (B05)	
1/5/2017	7.02 (B06)	
3/11/2017	6.97 (B07)	
5/12/2017	7.21 (B08)	
10/13/2017		6.87
6/7/2018		6.86

Prediction Limit

Constituent: pH (SU) Analysis Run 10/14/2018 9:14 PM View: Intrawell PLs
Plant Smith Client: Southern Company Data: Smith CCR

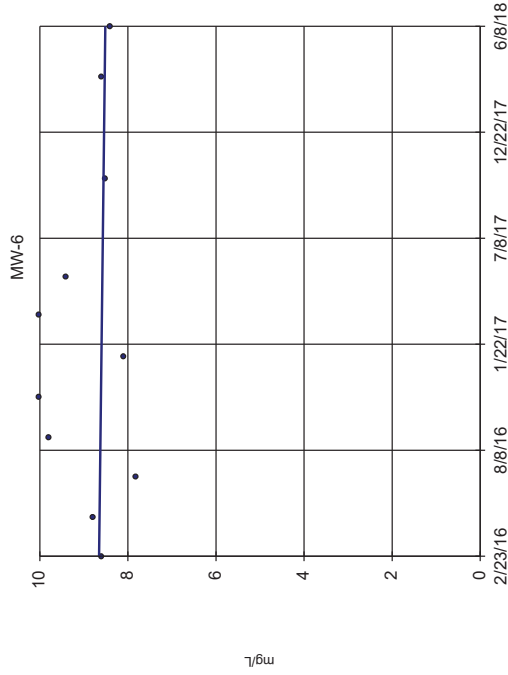
	MW-14	MW-14
2/23/2016	6.9 (B01)	
4/27/2016	6.62 (B02)	
6/28/2016	6.69 (B03)	
8/29/2016	6.65 (B04)	
11/2/2016	6.65 (B05)	
1/5/2017	6.7 (B06)	
3/11/2017	6.63 (B07)	
5/12/2017	6.66 (B08)	
10/13/2017		6.68
6/7/2018		6.88

Trend Test Summary Table - Significant App III Results

Plant Smith Client: Southern Company Data: Smith CCR Printed 10/9/2018, 9:14 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	MW-7	0.2874	37	34	Yes	11	0	n/a	n/a	0.01	NP
Calcium (mg/L)	MW-8	-38.22	-40	-34	Yes	11	0	n/a	n/a	0.01	NP
Calcium (mg/L)	MW-9	-63.42	-42	-34	Yes	11	0	n/a	n/a	0.01	NP
Calcium (mg/L)	MW-10	-57.03	-38	-34	Yes	11	0	n/a	n/a	0.01	NP
Calcium (mg/L)	MW-11	-32.81	-35	-34	Yes	11	0	n/a	n/a	0.01	NP
Calcium (mg/L)	MW-13	-71.1	-37	-34	Yes	11	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-9	-341.8	-40	-34	Yes	11	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-11	-570.3	-35	-34	Yes	11	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	MW-7	106.1	42	34	Yes	11	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	MW-11	-1123	-45	-34	Yes	11	0	n/a	n/a	0.01	NP

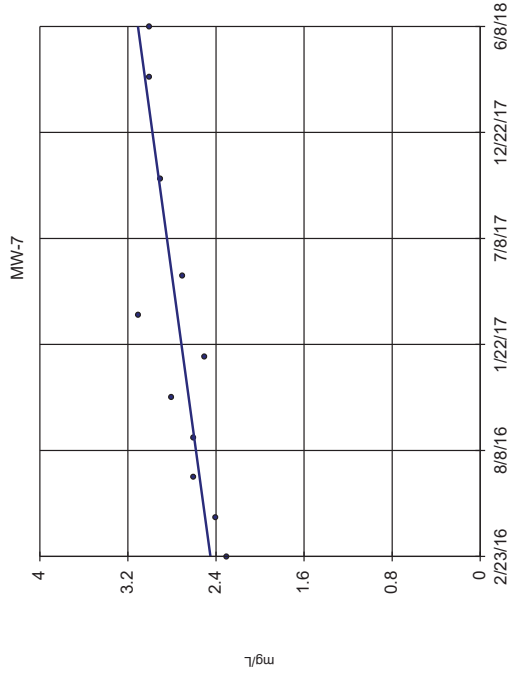
Sen's Slope Estimator



n = 11
 Slope = -0.06114
 units per year.
 Mann-Kendall
 statistic = -3
 critical = -34
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Boron Analysis Run 10/9/2018 9:12 AM View: Trend Testing
 Plant Smith Client: Southern Company Data: Smith CCR

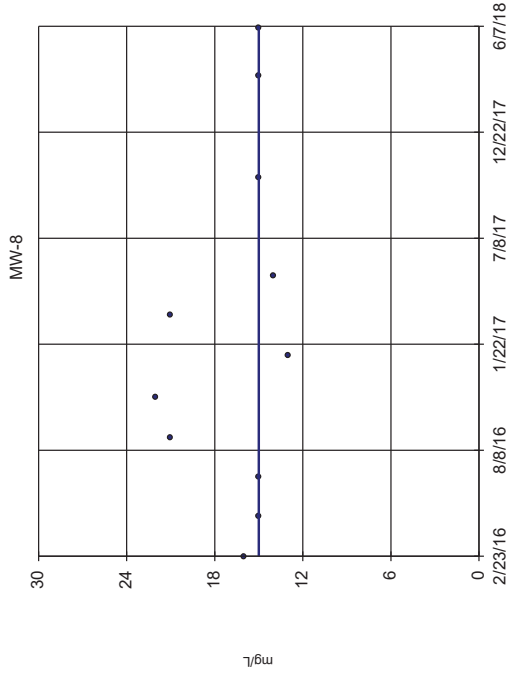
Sen's Slope Estimator



n = 11
 Slope = 0.2874
 units per year.
 Mann-Kendall
 statistic = 37
 critical = 34
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Boron Analysis Run 10/9/2018 9:12 AM View: Trend Testing
 Plant Smith Client: Southern Company Data: Smith CCR

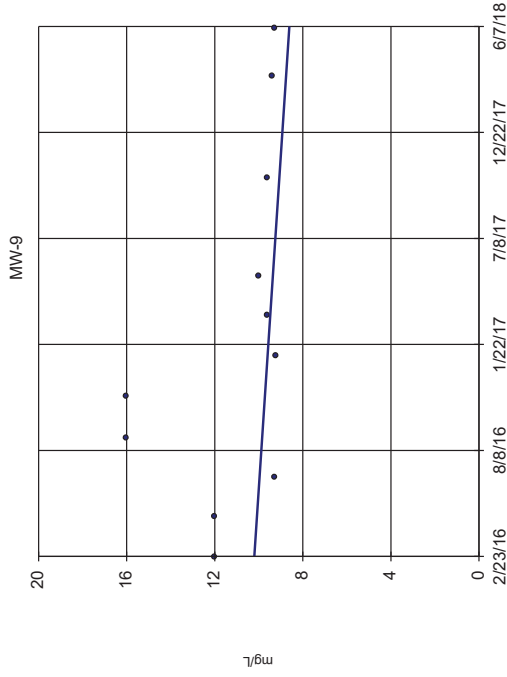
Sen's Slope Estimator



n = 11
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = -8
 critical = -34
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Boron Analysis Run 10/9/2018 9:12 AM View: Trend Testing
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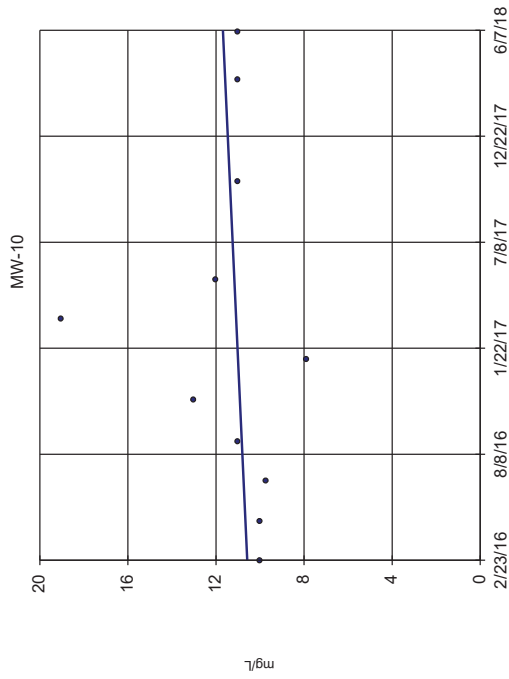
Sen's Slope Estimator



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 Slope = -0.6952
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 Mann-Kendall
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 nificant at 99%
 confidence level
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 tail).

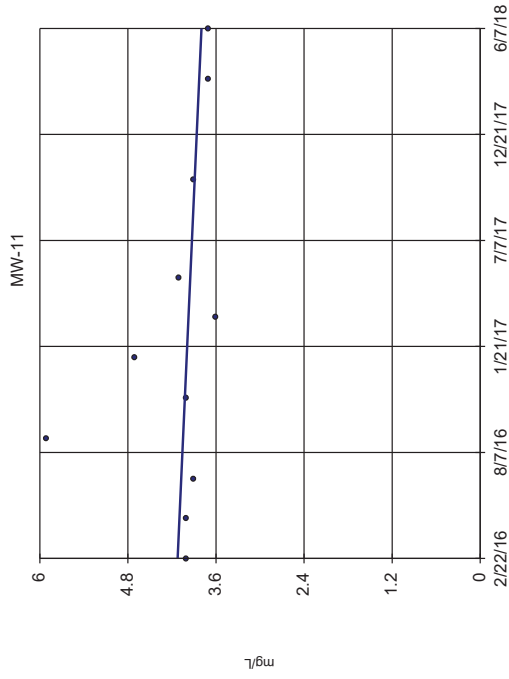
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 Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



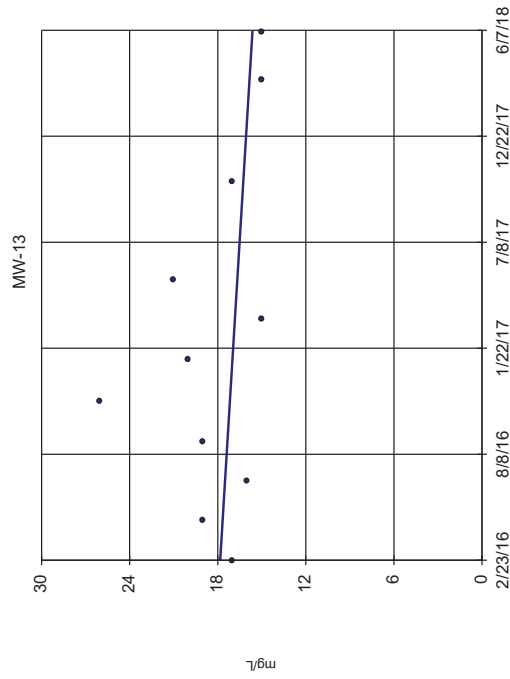
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



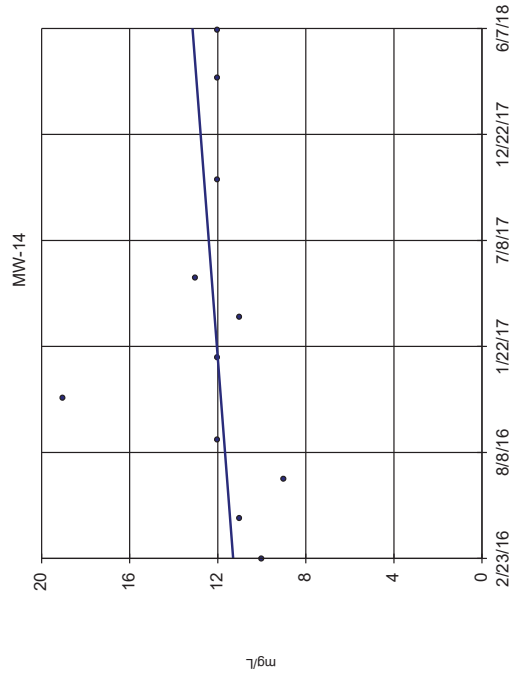
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Sen's Slope Estimator



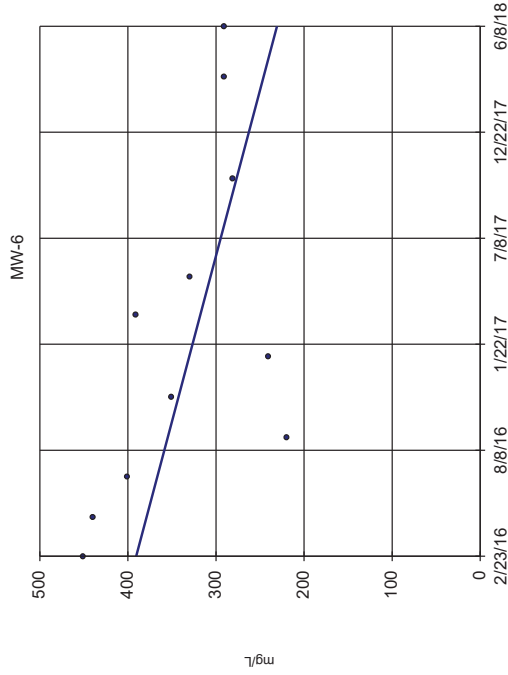
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



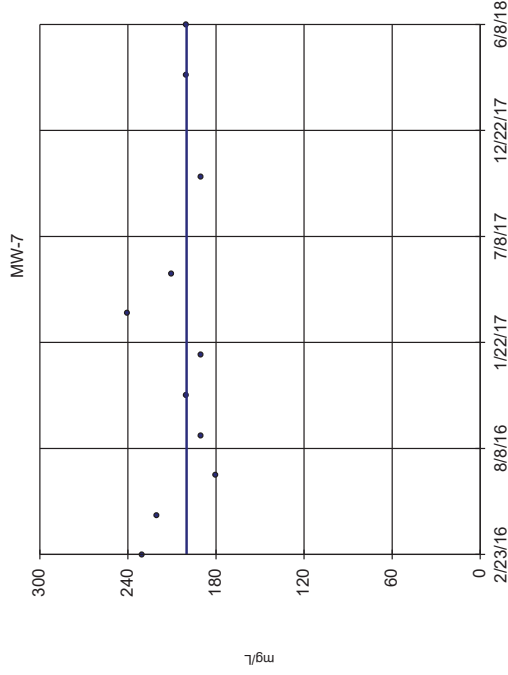
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



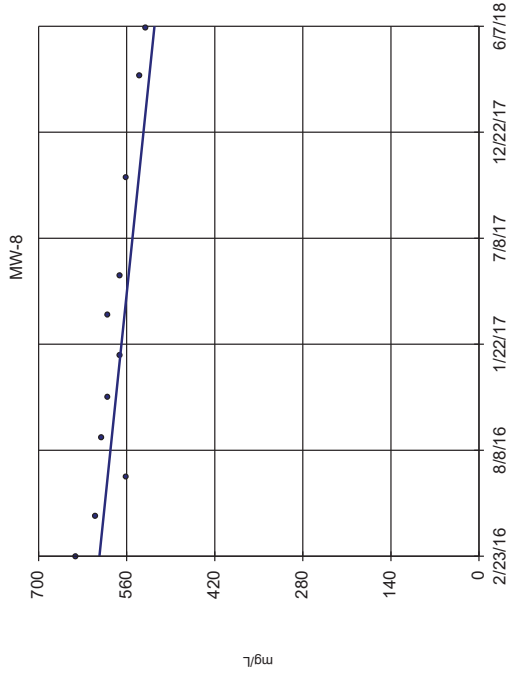
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



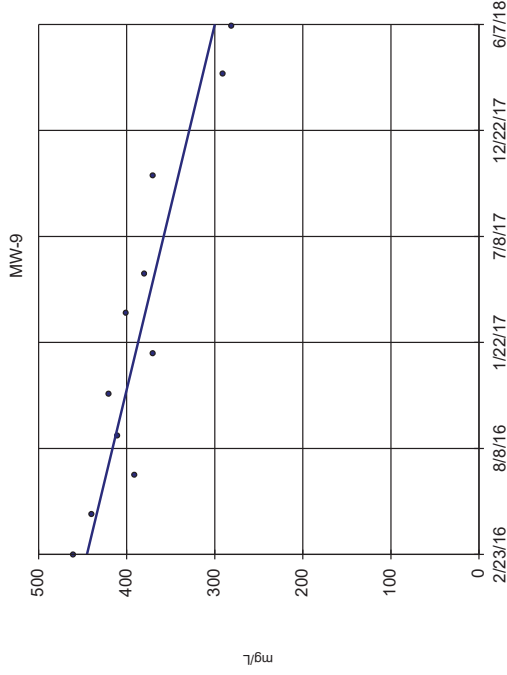
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



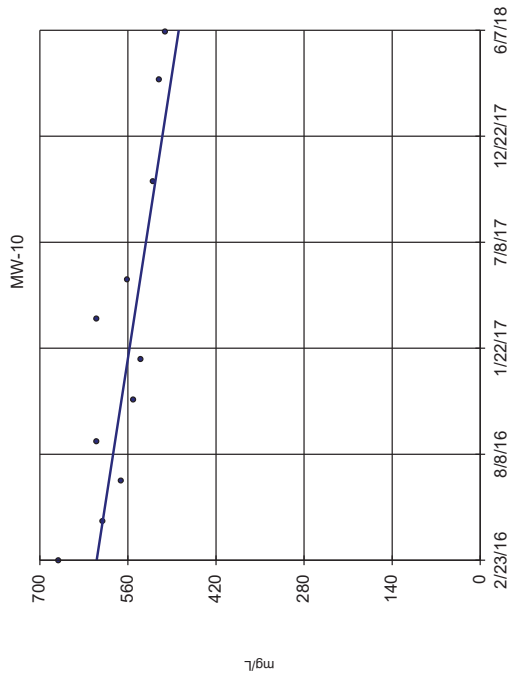
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



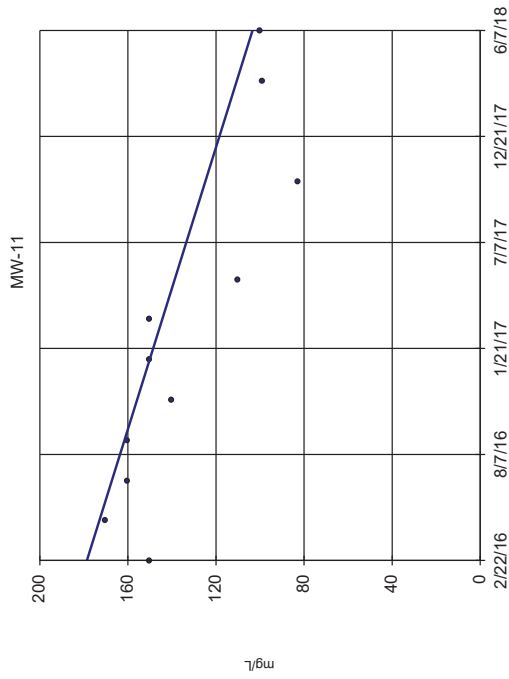
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



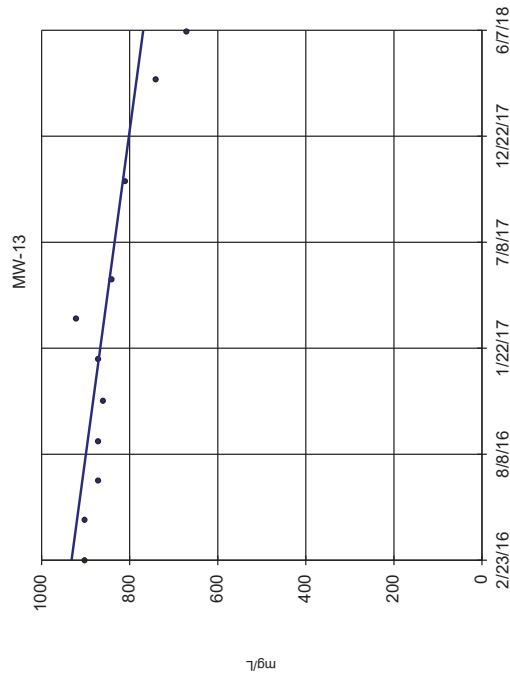
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



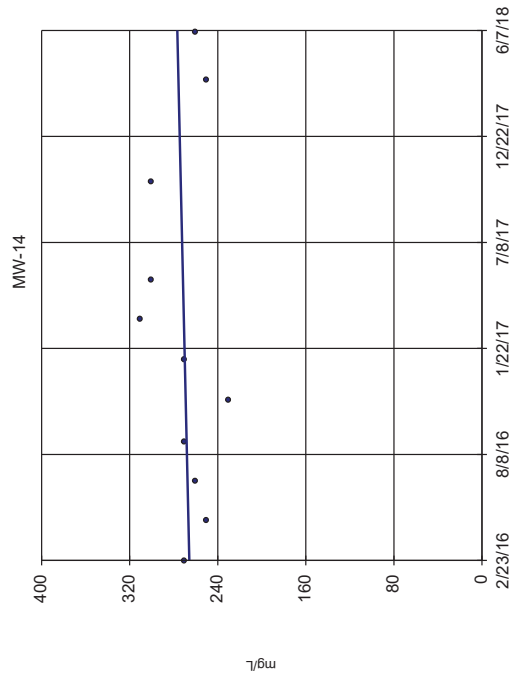
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



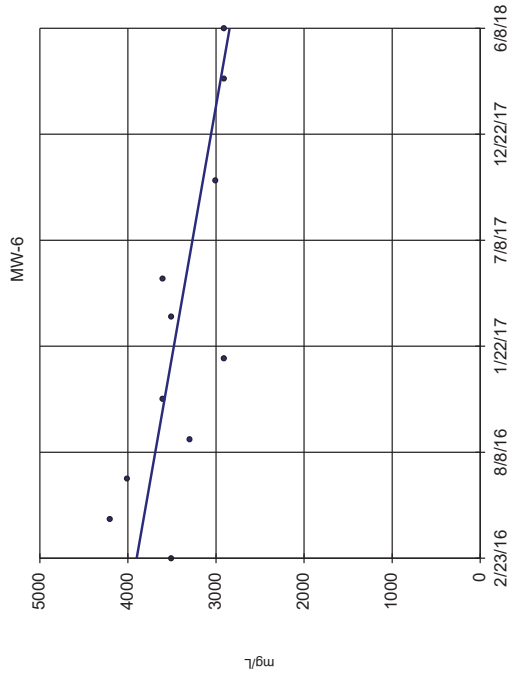
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



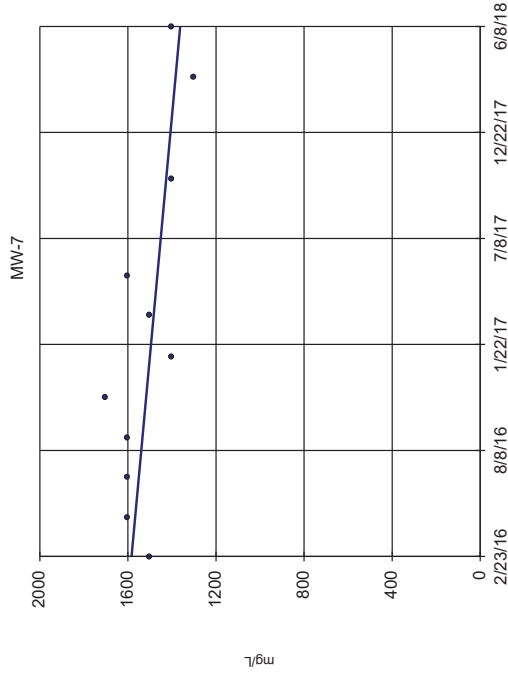
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



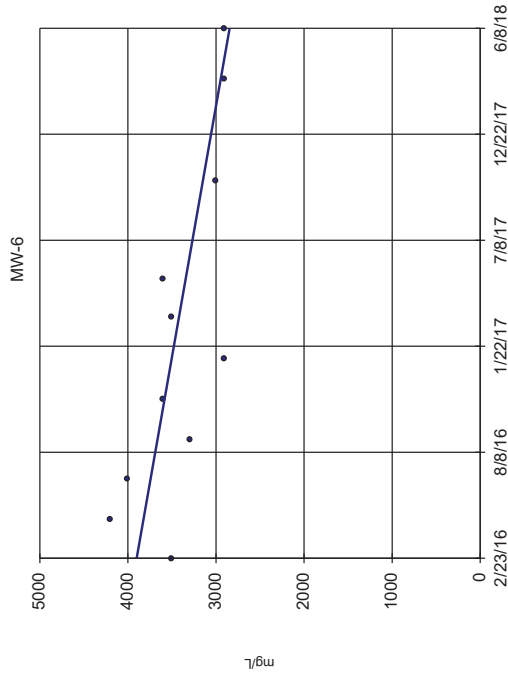
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



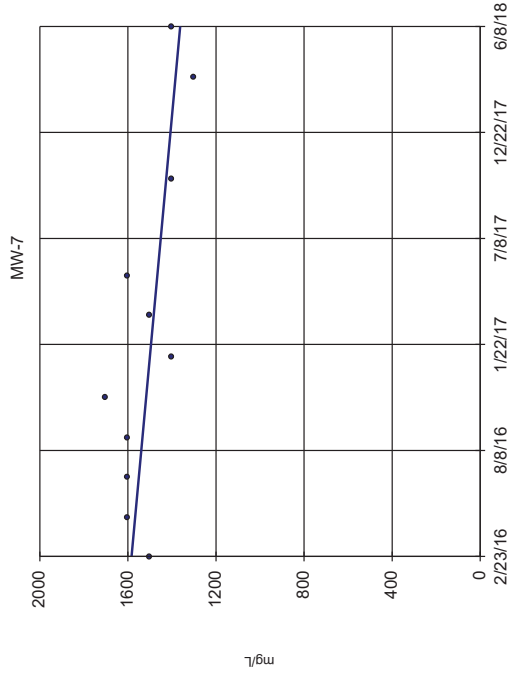
Constituent: Chloride Analysis Run 10/9/2018 9:12 AM View: Trend Testing
Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



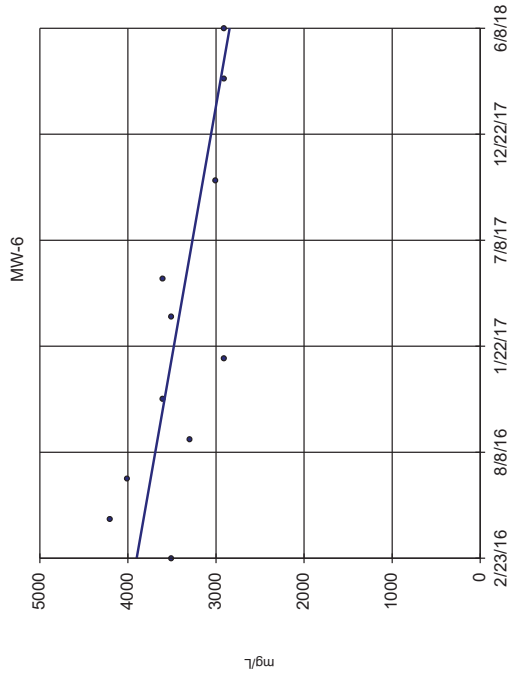
Constituent: Chloride Analysis Run 10/9/2018 9:12 AM View: Trend Testing
Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



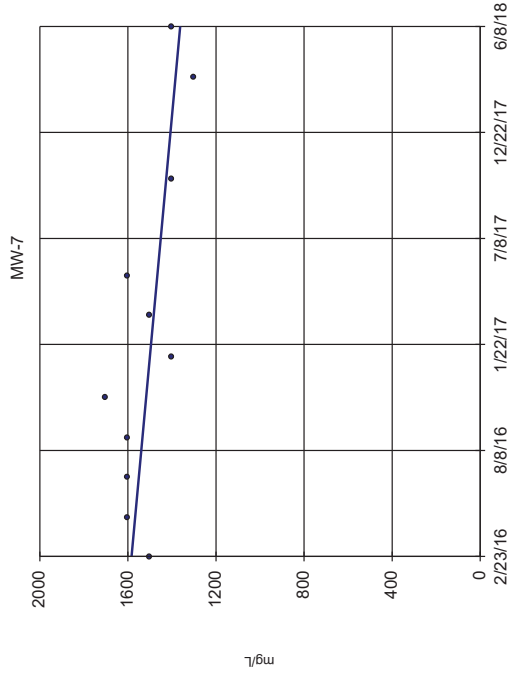
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



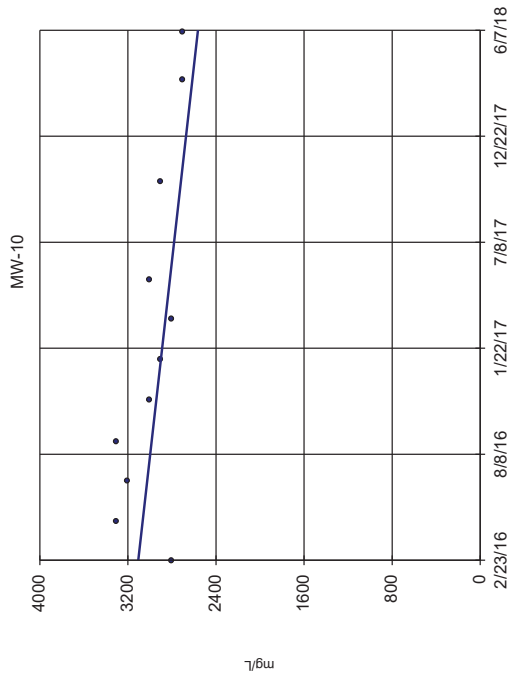
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



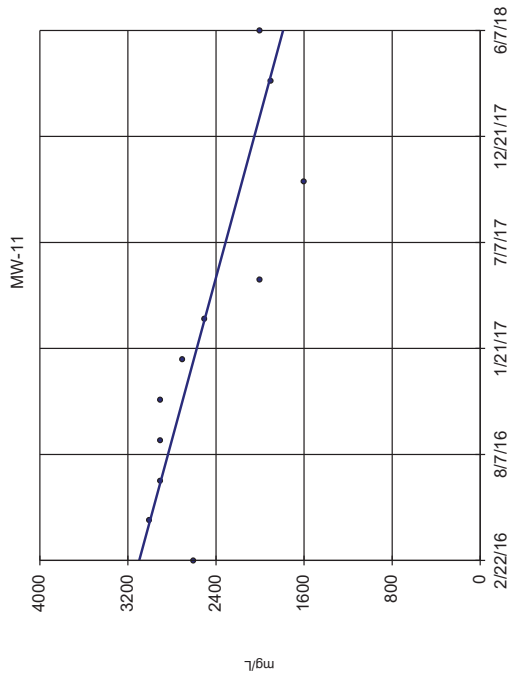
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



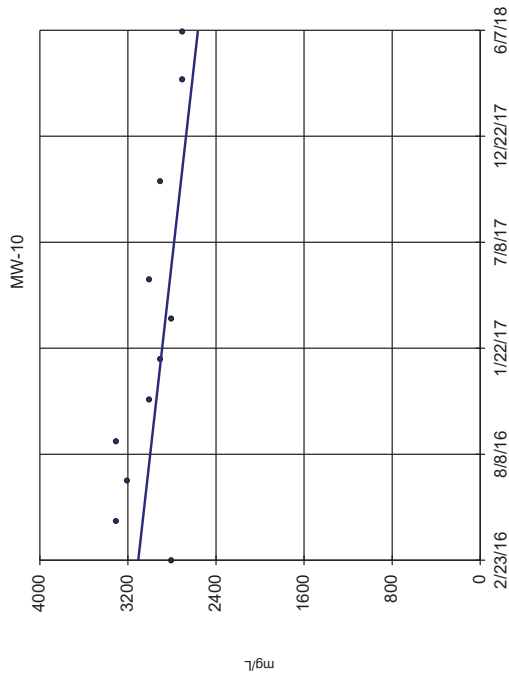
Constituent: Chloride Analysis Run 10/9/2018 9:12 AM View: Trend Testing
Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



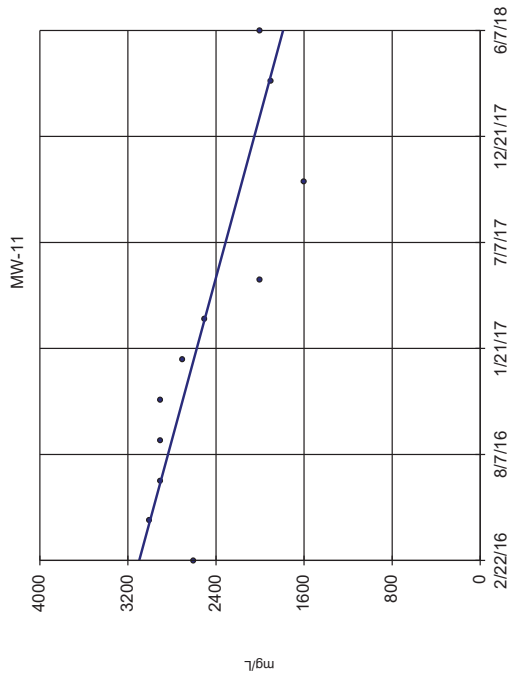
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



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Sen's Slope Estimator

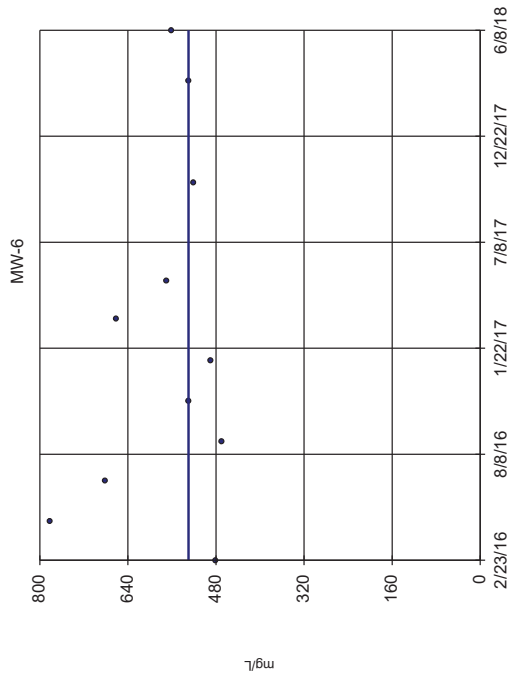


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Plant Smith Client: Southern Company Data: Smith CCR

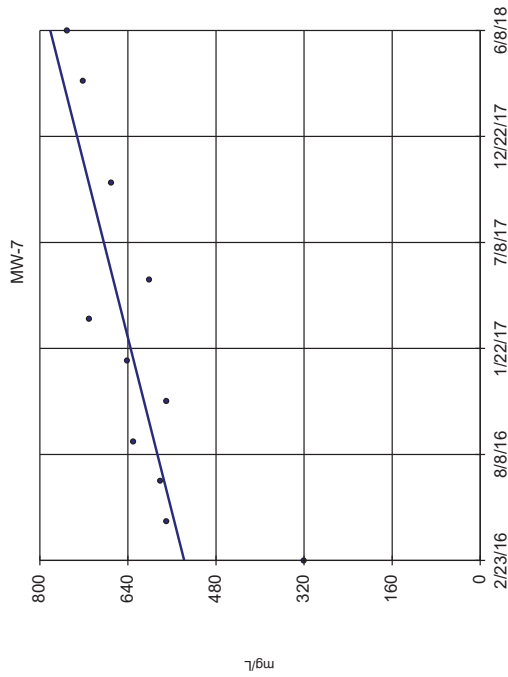
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Sen's Slope Estimator



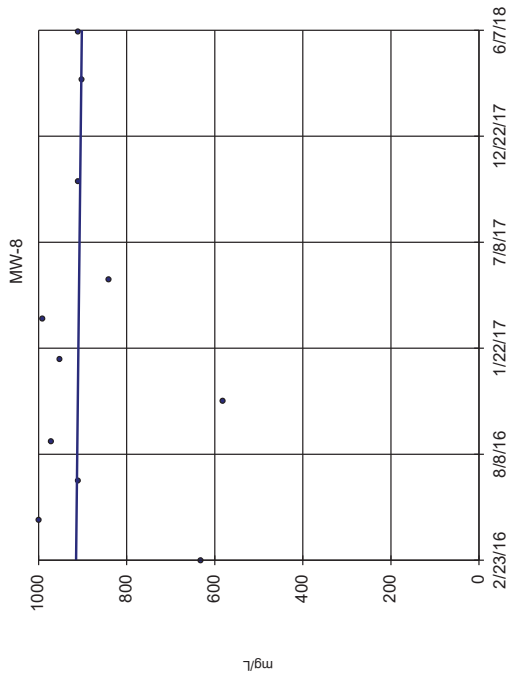
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Sen's Slope Estimator



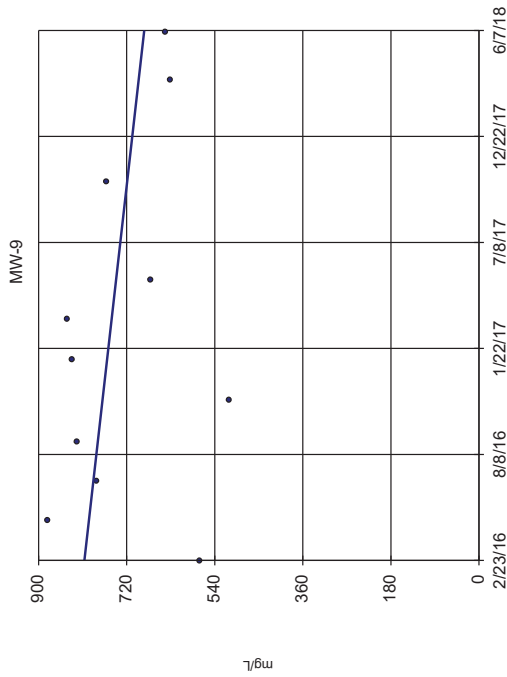
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Sen's Slope Estimator



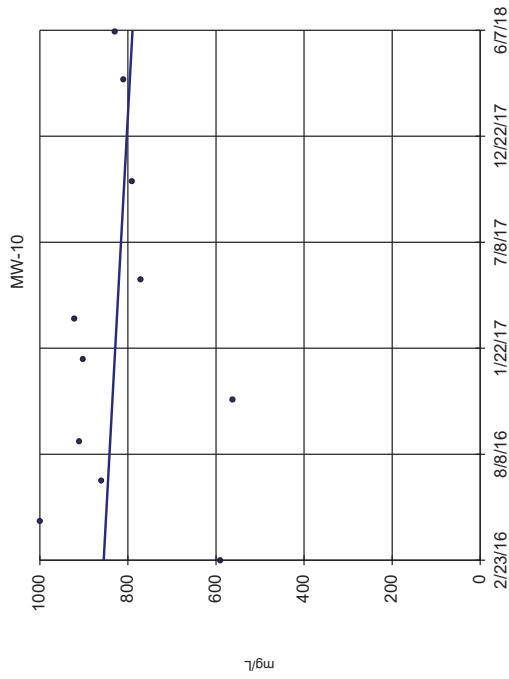
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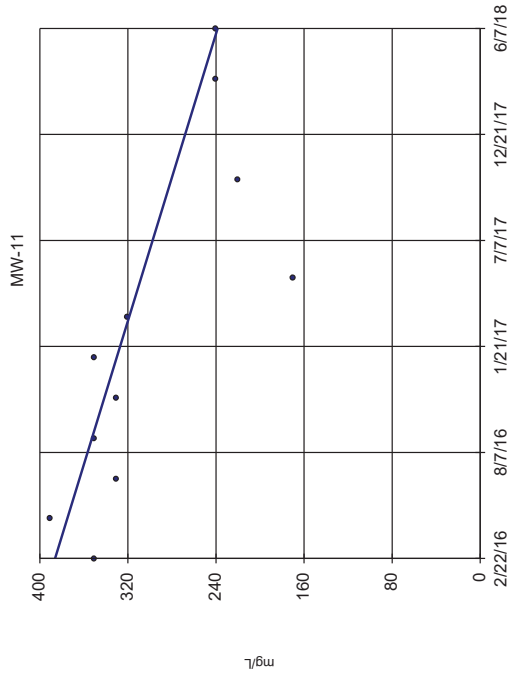
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Sen's Slope Estimator



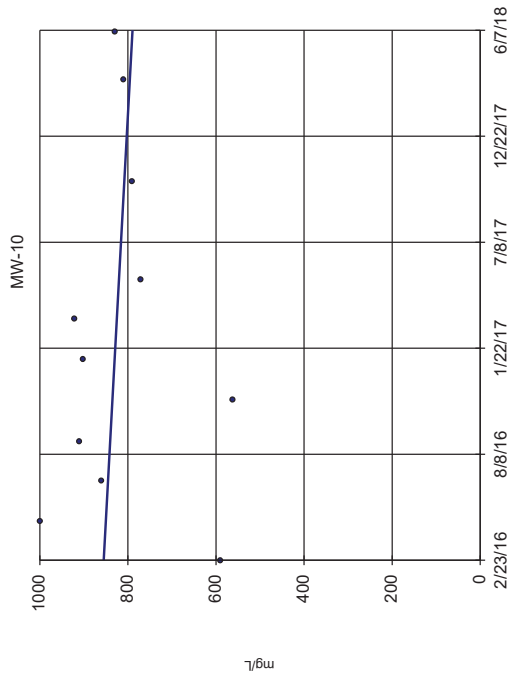
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Sen's Slope Estimator



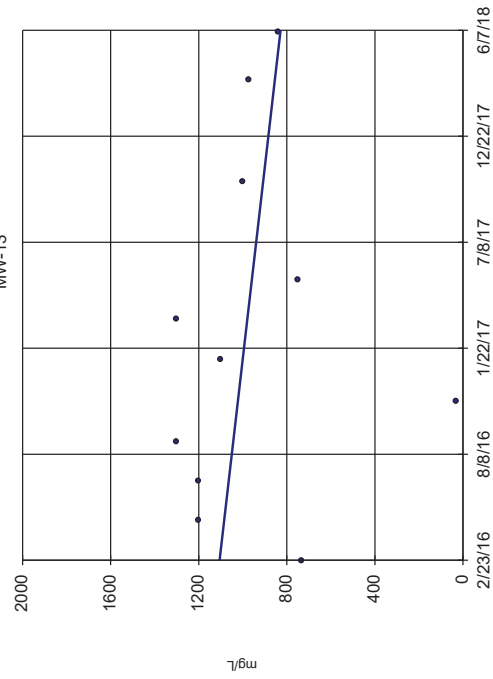
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



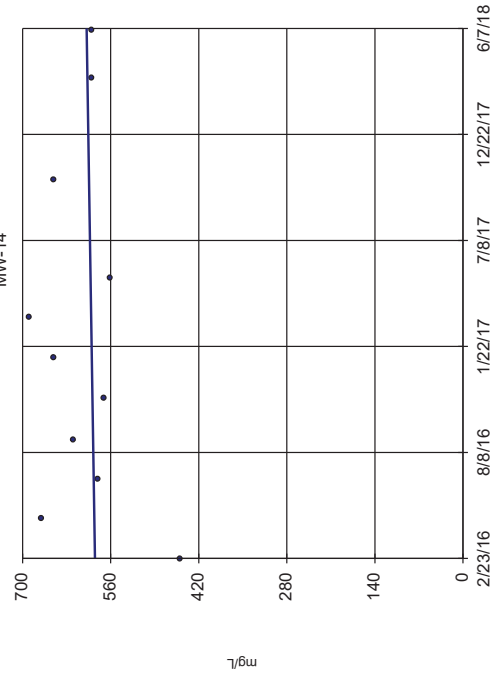
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



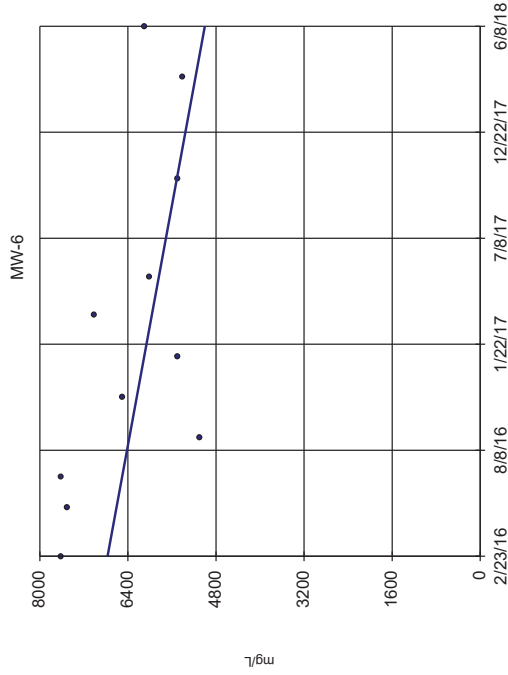
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



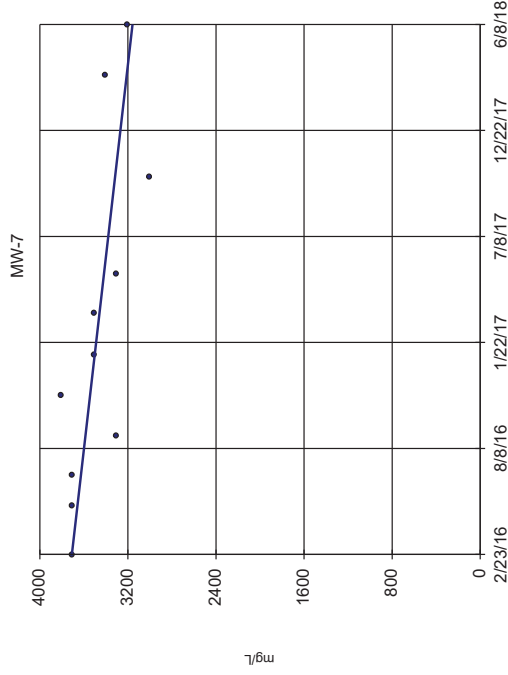
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



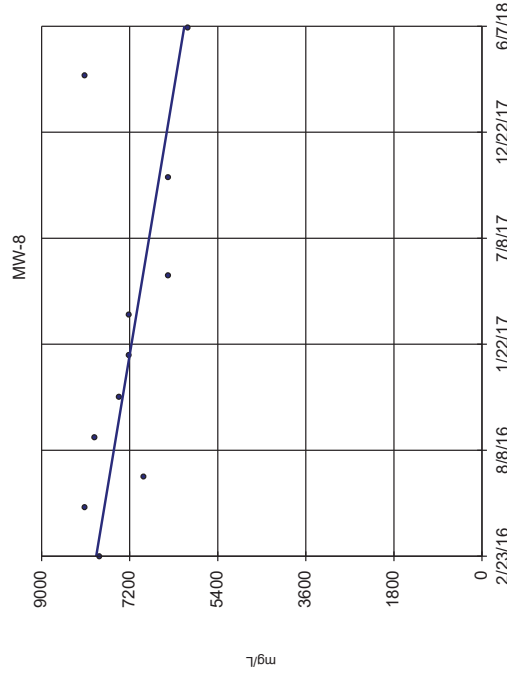
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



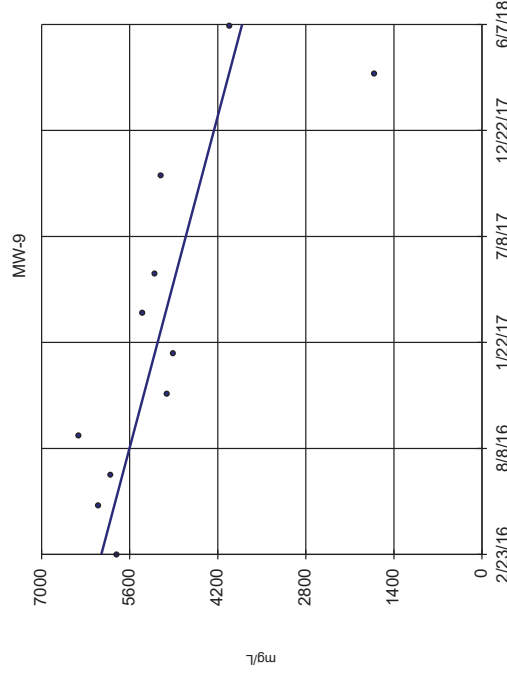
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



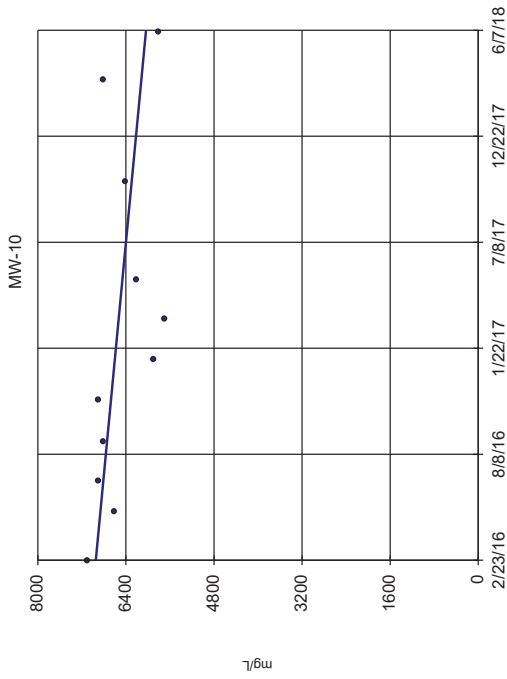
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Sen's Slope Estimator



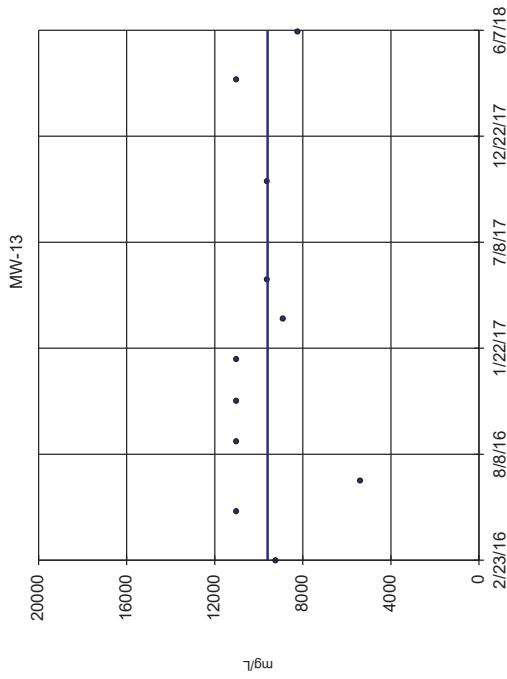
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Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



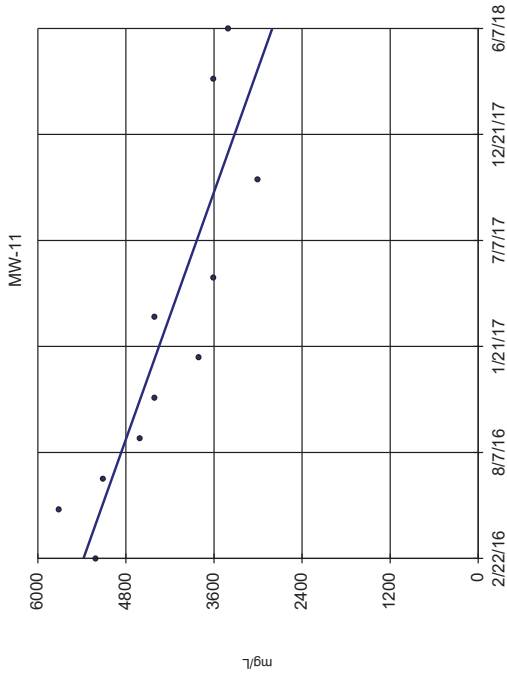
Constituent: Total Dissolved Solids Analysis Run 10/9/2018 9:12 AM View: Trend Testing
Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



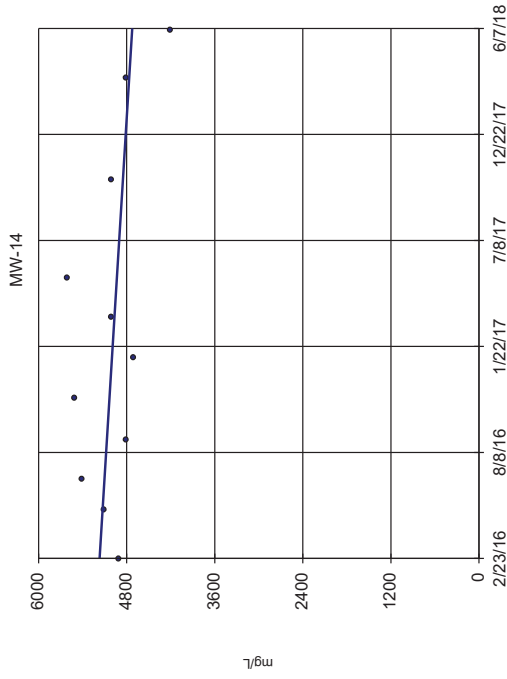
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Sen's Slope Estimator



Constituent: Total Dissolved Solids Analysis Run 10/9/2018 9:13 AM View: Trend Testing
Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



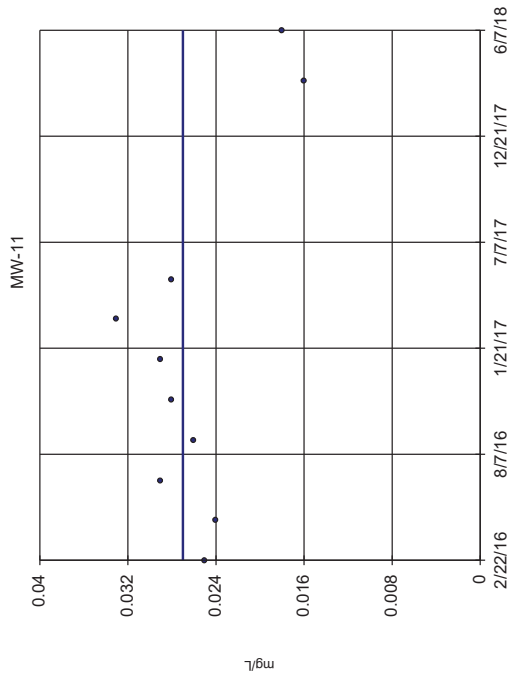
Constituent: Total Dissolved Solids Analysis Run 10/9/2018 9:13 AM View: Trend Testing
Plant Smith Client: Southern Company Data: Smith CCR

Trend Test Summary Table - Significant App IV Results

Plant Smith Client: Southern Company Data: Smith CCR Printed 10/9/2018, 9:16 AM

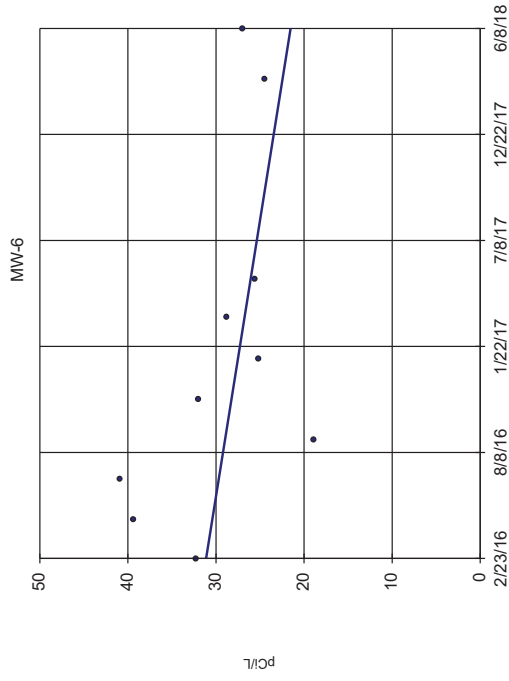
<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Combined Radium 226 + 228 (pCi/L)	MW-9	-9.182	-35	-30	Yes	10	0	n/a	n/a	0.01	NP
Lithium (mg/L)	MW-13	0.03842	31	30	Yes	10	0	n/a	n/a	0.01	NP

Sen's Slope Estimator



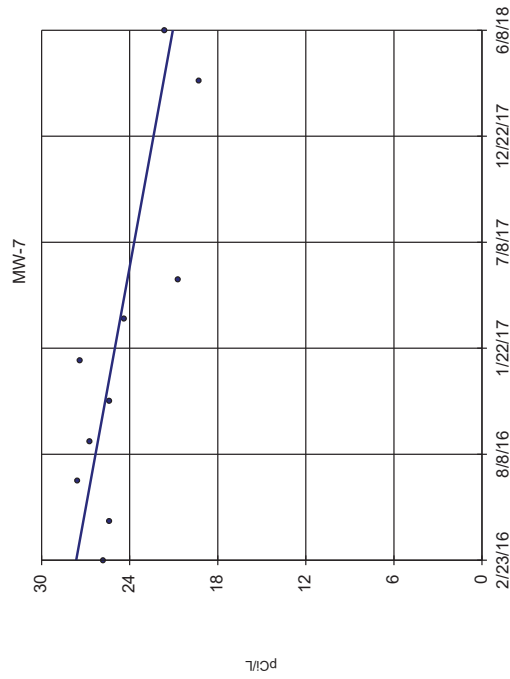
Constituent: Arsenic Analysis Run 10/9/2018 9:15 AM View: Trend Tests - App IV
Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



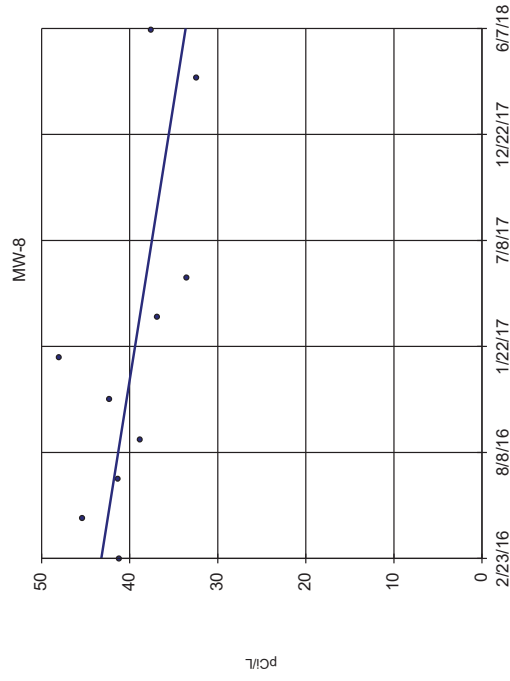
Constituent: Combined Radium 226 + 228 Analysis Run 10/9/2018 9:15 AM View: Trend Tests - App IV
Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



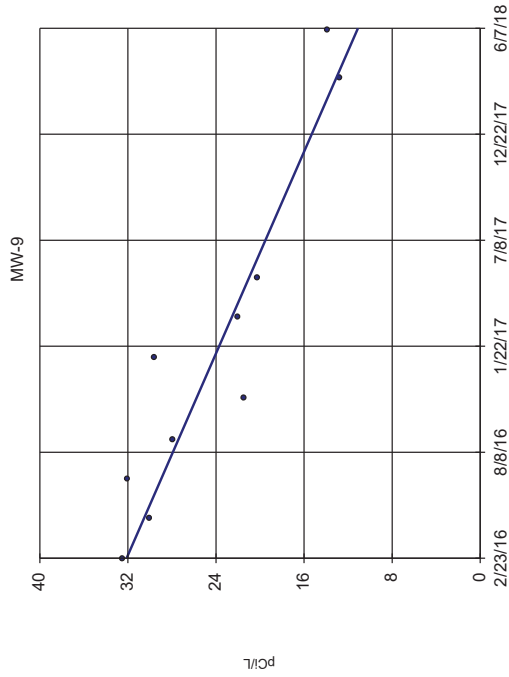
Constituent: Combined Radium 226 + 228 Analysis Run 10/9/2018 9:15 AM View: Trend Tests - App IV
Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator



Constituent: Combined Radium 226 + 228 Analysis Run 10/9/2018 9:15 AM View: Trend Tests - App IV
Plant Smith Client: Southern Company Data: Smith CCR

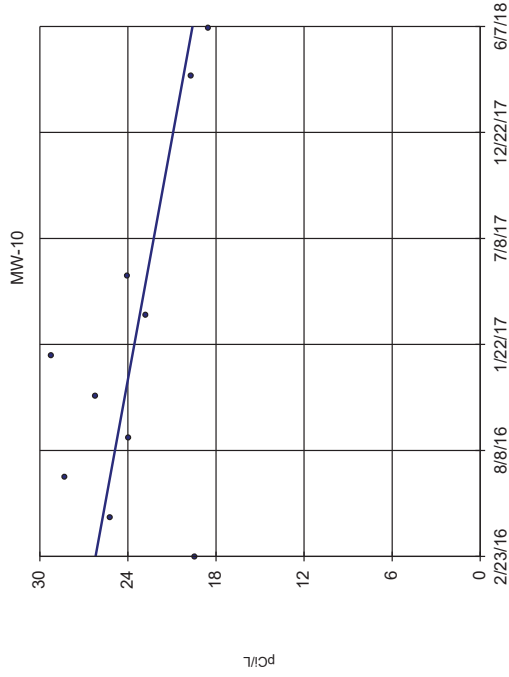
Sen's Slope Estimator



n = 10
 Slope = -9.182
 units per year.
 Mann-Kendall
 statistic = -35
 critical = -30
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Combined Radium 226 + 228 Analysis Run 10/9/2018 9:15 AM View: Trend Tests - App IV
 Plant Smith Client: Southern Company Data: Smith CCR

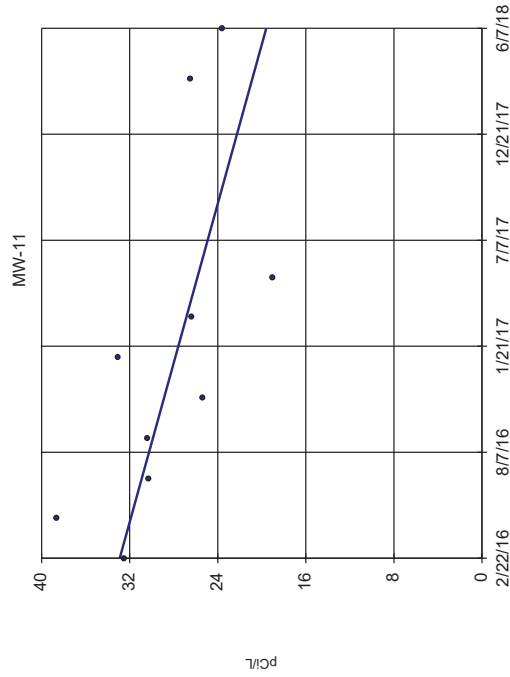
Sen's Slope Estimator



n = 10
 Slope = 2.888
 units per year.
 Mann-Kendall
 statistic = -11
 critical = -30
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Combined Radium 226 + 228 Analysis Run 10/9/2018 9:15 AM View: Trend Tests - App IV
 Plant Smith Client: Southern Company Data: Smith CCR

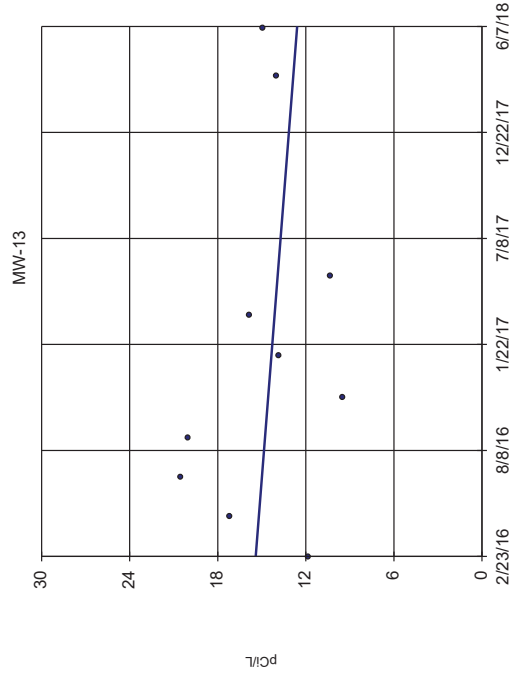
Sen's Slope Estimator



n = 10
 Slope = -5.813
 units per year.
 Mann-Kendall
 statistic = -23
 critical = -30
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Combined Radium 226 + 228 Analysis Run 10/9/2018 9:15 AM View: Trend Tests - App IV
 Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator

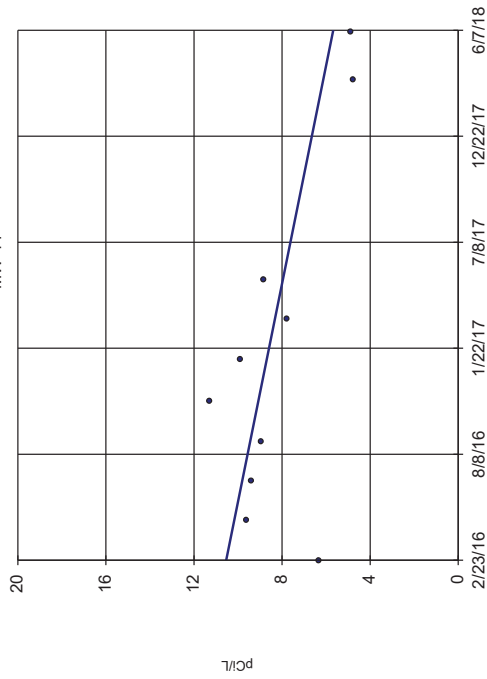


n = 10
 Slope = -1.233
 units per year.
 Mann-Kendall
 statistic = -5
 critical = -30
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Combined Radium 226 + 228 Analysis Run 10/9/2018 9:15 AM View: Trend Tests - App IV
 Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator

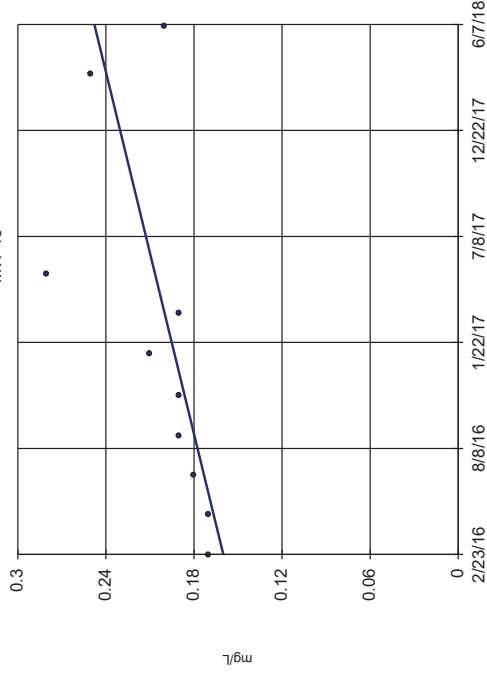
MW-14



Constituent: Combined Radium 226 + 228 Analysis Run 10/9/2018 9:15 AM View: Trend Tests - App IV
Plant Smith Client: Southern Company Data: Smith CCR

Sen's Slope Estimator

MW-13



Constituent: Lithium Analysis Run 10/9/2018 9:15 AM View: Trend Tests - App IV
Plant Smith Client: Southern Company Data: Smith CCR

APPENDIX C

Alternate Source Demonstration, CCR Unit Ash Pond



engineers | scientists | innovators

ALTERNATE SOURCE DEMONSTRATION

ASH POND

**Plant Lansing Smith
Gulf Power Company
Bay County, Florida**

Prepared for

Gulf Power Company
One Energy Place
Pensacola, Florida 32520

Prepared by

Geosyntec Consultants, Inc.
1120 North 12th Avenue
Pensacola, Florida 32501

Project TXR0945

January 2019

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Figure 4	Gross Alpha vs. Chloride Concentrations

CERTIFICATION STATEMENT

**Alternate Source Demonstration
Plant Lansing Smith
Ash Pond
Bay County, Florida
January 11, 2019**

I, Todd Anderson, a qualified professional engineer registered in the State of Florida, certify that the above document was completed consistent with the requirements stipulated in 40 CFR 257.95(g)(3)(ii) and that the information contained herein is, to the best of my knowledge, accurate.



Digitally signed by
Todd D. Anderson, PE
Date: 2019.01.11
13:11:09 -05'00'

Seal and Signature

Date

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1. INTRODUCTION

On behalf of Gulf Power Company (Gulf Power), Geosyntec Consultants Inc. (Geosyntec) has prepared this alternate source demonstration (ASD) report for the Ash Pond at Gulf Power's Plant Lansing Smith (Plant Smith) located in Bay County, Florida (Site) (**Figure 1**). This ASD has been prepared to meet the requirements of the U.S. Environmental Protection Agency's (USEPA's) Coal Combustion Residuals (CCR) Rule 40 CFR Part 257.95(g)(3)(ii) which states that the owner or operator may:

Demonstrate that a source other than the CCR unit caused the contamination, or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Any such demonstration must be supported by a report that includes the factual or evidentiary basis for any conclusions and must be certified to be accurate by a qualified professional engineer. If a successful demonstration is made, the owner or operator must continue monitoring in accordance with the assessment monitoring program pursuant to this section and may return to detection monitoring if the constituents in appendices III and IV to this part are at or below background as specified in paragraph (e) of this section. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by §257.90(e), in addition to the certification by a qualified professional engineer.

1.1 Background

Pursuant to the CCR Rule, Gulf Power installed and certified a groundwater monitoring system for the Ash Pond at Plant Smith (**Figure 1**). Statistical analysis of data collected from the groundwater monitoring system through June 2018 indicated statistically significant levels (SSLs) of radium 226 and 228 combined (total radium) above the applicable groundwater protection standard (GWPS) at the following locations: MW-06, MW-07, MW-08, MW-09, MW-10, MW-11, MW-13 and MW-14).

1.2 Purpose

The purpose of this report is to demonstrate that (i) naturally-occurring sources of total radium are present at the Site, and (ii) that these naturally-occurring sources, not the Ash Pond, caused the SSLs detected.

2. ALTERNATE SOURCE DEMONSTRATION APPROACH

2.1 Overview

The CCR Rule does not establish specific requirements for an ASD. However, appropriate guidance is contained in the *USEPA Solid Waste Disposal Facility Criteria Technical Manual* (USEPA, 1993) for municipal solid waste landfills. The approach to this ASD is modeled on the USEPA guidance document (USEPA, 1993) and relies on three lines of evidence:

- analysis of ash stored in the Ash Pond at the Site;
- analysis of soils at the Site; and
- analysis of groundwater at the Site.

A brief description of the components of this ASD is presented below. An analysis of data and discussion is presented in Section 3. This report demonstrates that there is sufficient evidence to conclude that the Ash Pond at Plant Smith is not the source of total radium SSLs observed in the CCR groundwater monitoring system.

2.2 Analysis of Ash

The results from previous investigations on the leaching of total radium from ash at the Site were compiled and analyzed to determine the potential for ash managed in the Ash Pond to be the source of the detected SSLs of total radium. Leaching tests and groundwater data collected from within and beneath the Ash Pond were also evaluated. If observed, elevated total radium activity in the leaching tests and groundwater collected from within and beneath the Ash Pond could indicate that the Ash Pond was a potential source of total radium. Concentrations of total radium below the GWPS in these tests would confirm the presence of an alternate source of this constituent at the Site.

2.3 Analysis of Soils

Historical soil boring data were evaluated to determine the potential for naturally-occurring radionuclides on-Site. The decay of parent radionuclides, such as uranium (238) and thorium (232), results in the production of daughter radionuclides including radium (226) and radium (228). Therefore, the total radium evaluation focused on identifying the presence of parent radionuclides. The presence of parent radionuclides could indicate an alternate source of total radium at the Site. The absence of parent nuclides could indicate an anthropogenic source of radium in Site soils and groundwater.

2.4 Analysis of Groundwater

Gulf Power previously conducted an investigation in 1990 and 1991 to assess the temporal and spatial variability of total radium activity in groundwater at the Site. The presence of elevated total radium activity throughout the Site, independent of hydraulic connectivity to the Ash Pond, could indicate an alternate source of this constituent. In contrast, a localized source of total radium (such as the Ash Pond) would be indicated by the presence of elevated total radium activity in monitoring wells downgradient of the Ash Pond and the absence of elevated total radium activity in monitoring wells that are hydraulically disconnected from the Ash Pond.

3. ALTERNATE SOURCE DEMONSTRATION

3.1 Previous Site Investigations

Investigations of radiological activity in soil, groundwater, and ash at Plant Smith were previously conducted by Gulf Power between 1990 and 1997. A summary of these investigations, associated results, and conclusions is presented in this section. For detailed data presentation and interpretation, see Ardaman, 1990, 1991, and 1993, LBG-Guyton, 1997 and FDEP, 1997a and 1997b.

3.1.1 Extraction Tests on Ash

In 1990, extraction tests on samples of ash from the Plant Smith Ash Pond were conducted using deionized water and surface water from the Alligator Bayou (Ardaman, 1990) to evaluate the potential for the Ash Pond to be a source of elevated radiological activity in groundwater. The tests were conducted with pre-leach solutions of the deionized water and surface water from Alligator Bayou of different ionic strength and pH.

Results of the extraction testing indicated that the gross-alpha (gross- α) activities (a conservative proxy for total radium) for ash samples extracted with a salt water solution ranged from <1 pCi/L to 5 pCi/L and averaged 2.6 pCi/L (Ardaman, 1990). In addition, the tests demonstrated a limited correlation with ionic strength. These findings demonstrated that the ash did not generate a leachate with a significant gross- α activity (Ardaman, 1990). The report concluded, therefore, that an alternate source of radiological activity (i.e., natural sediments), not the Ash Pond, was likely.

3.1.2 Radiological Activity in Soils

In 1993, soil samples from three borings (TH-1, TH-2, and TH-5) were collected and analyzed for the activities of radium (226), radium (228), gross- α , gross-beta, uranium (238), thorium (232), and potassium (40) (Ardaman, 1990, 1993). Locations of the three borings are presented on **Figure 2**.

Parent radionuclides (uranium (238) and thorium (232)) and daughter radionuclides (radium (226), radium (228), gross- α , gross-beta) were detected in 18 soil samples collected from borings TH-1, TH-2, and TH-5 (Ardaman, 1993). Further, a strong correlation between the uranium, gross- α , and radium (226) activities was observed suggesting that the most likely source of the observed radioactivity in groundwater is the decay of naturally-occurring uranium (Ardaman, 1993). LBG-Guyton (1997) identified a similar correlation and reported coefficient of determination (R^2) values of 0.96 and 0.99 between uranium (238) and radium (226) and gross- α (a conservative proxy for total radium activity) activities, respectively. This strong correlation of uranium (238) and radium (226) indicates that natural radioactive decay processes affecting uranium (238) likely resulted in the observed radium (226) activity. Similarly, the correlation of uranium

(238) and gross- α indicates that natural radioactive decay processes affecting uranium (238) likely resulted in the observed gross- α activity.

Data compiled by Ardaman (1990, 1991, and 1993) and LBG-Guyton (1997) were used to develop a geochemical model. This model documented that the occurrence of radiological activity in groundwater is related to interactions between saline water (i.e., water with a high chloride concentration) and native sediments with naturally-occurring uranium and thorium. The results of the geochemical model suggest that the high ionic-strength saline water of the North Bay drives the release of radionuclides from the native sediments through competitive desorption. At Plant Smith, this desorption process mobilizes naturally-occurring radionuclides from mineral surfaces (LBG-Guyton, 1997).

Results of the investigations outlined above supported the conclusions that:

- the source of radioactivity in soils at Plant Smith is most likely the decay of naturally-occurring uranium and thorium;
- the interaction of saline water with the native soils at Plant Smith that are enriched in uranium and thorium drives reactions (e.g., dissolution and/or ion exchange) that release total radium; and
- elevated radiological activity is naturally-occurring and unrelated to the Ash Pond at Plant Smith (Ardaman, 1990, 1993; LBG-Guyton, 1997).

3.1.3 Radionuclides in Groundwater

In 1990 and 1991, samples of groundwater were collected from monitoring wells upgradient and downgradient of the Ash Pond, and from monitoring wells screened beneath and within the Ash Pond (Ardaman, 1990, 1991, and 1993; and LBG-Guyton, 1997). Data on the activities of radium (226), radium (228), and gross- α (a conservative proxy for total radium activity) from these wells were evaluated relative to the concentration of chloride and groundwater pH. **Figure 2** depicts the Site layout in 1997 and locations of monitoring wells that were sampled as part of the above-cited studies.

The concentration of chloride with respect to the activities of total radium and gross- α from previous investigations is presented in **Figure 3** and **Figure 4**, respectively. In general, the lowest total radium activities were associated with wells upgradient or screened within the Ash Pond (Ardaman, 1990). Specifically, the lowest total radium activities were associated with in-pond well A-5, beneath-pond wells A-8 and A-9, and downgradient well 9-12A (**Figure 3**). Wells with gross- α consistently less than the 15 picocuries per liter (pCi/L) maximum contaminant level (MCL) were upgradient wells M-1 and 9-4, in-pond wells A-4 and A-5, and beneath-pond wells A-8 and A-9 (**Figure 4**). A wide range of activities were reported for wells located downgradient of the Ash Pond (Ardaman, 1990). Several downgradient wells with elevated gross- α activity were

screened in a naturally-occurring saline wedge (based on elevated chloride concentrations) between the Ash Pond and North Bay in an area unaffected by the ash pond, suggesting the potential for a naturally-occurring, alternate source of gross- α activity (Ardaman, 1990).

The high activity of gross- α and total radium observed in wells A-6 and A-6A (which are hydraulically separated areas from Site activities) was significant. Of all wells, the highest observed concentration of total radium of 115 pCi/L was observed in well A-6A. Both wells A-6 and A-6A are located west of Alligator Bayou and not hydraulically connected to the Plant Smith Ash Pond. The elevated radium and gross- α measurements of these wells cannot be accounted for by the flow of groundwater from the Ash Pond due to the presence of the Alligator Bayou, which acts as an effective barrier to groundwater flowing from the Ash Pond (Ardaman, 1990; LBG-Guyton 1997). Therefore, the radiological activity in these wells cannot be attributed the Ash Pond, but to an alternate source of total radium.

The investigations and results described above were documented in a report (LBG-Guyton, 1997) and submitted to the Florida Department of Environmental Protection (FDEP). This report provides descriptions of groundwater flow, radionuclide levels, and statistical data, which indicate that natural sediments are the source of the radionuclides in groundwater, not the Ash Pond. FDEP agreed that gross- α and total radium levels in groundwater and surface water represent natural conditions; specifically, an apatite layer within the native soils and sediments rich in radionuclides is influenced by ion exchange processes resulting from interactions with the bay waters, which contain elevated concentrations of chlorides (FDEP, 1997a and 1997b).

The results of these investigations demonstrate that:

- elevated levels of radium and gross- α observed in monitoring wells can be traced to naturally-occurring sources of radium in the Site's sediments as evidenced by the elevated radioactivity in wells that are hydraulically disconnected from the Ash Pond; and
- the Ash Pond is not the source of elevated radioactivity in CCR groundwater monitoring wells, as evidenced by concentrations of total radium below the GWPS in wells screened within and beneath the Ash Pond.

3.2 CCR Groundwater Data

Groundwater data compiled after 1997 were primarily from monitoring wells installed in conjunction with a FDEP program to assess compliance of the facility with the National Pollutant Discharge Elimination System (NPDES) permit (FL0002267). Total radium activity was observed to be lowest in upgradient CCR wells MW-02 and MW-03. The

concentration of chloride in each of these wells is less than 20 milligrams per liter (mg/L). The relatively low chloride concentrations in groundwater near MW-02 and MW-03 may limit the release of naturally-occurring radionuclides and result in lower observed total radium activity in the groundwater at these monitoring wells.

Total radium activity in the upgradient monitoring well MW-12, located near the west bank of Alligator Bayou, ranged from 1.84 pCi/L to 4.64 pCi/L, and the concentration of chloride ranged from 140 mg/L to 230 mg/L. However, this well is outside the influence of the naturally-occurring saline wedge that dominates the groundwater along the shoreline of North Bay (locations downgradient of the Ash Pond). Therefore, the lower chloride concentrations in MW-12 are also likely a limiting factor in the release of naturally-occurring radionuclides.

Total radium levels in CCR wells surrounding the Ash Pond are greater than 5 pCi/L, and the concentration of chloride in these monitoring wells range from 1,400 mg/L to 5,400 mg/L. The presence of elevated chloride concentrations in these locations is consistent with previous investigations (Ardaman, 1990; LBG-Guyton, 1997) and suggests that the interaction of high chloride groundwater with naturally-occurring radionuclides in native sediments at the Site results in the elevated levels of radiological activity in these wells.

Based on the above, the data indicates that the source of SSLs for total radium in the Site's CCR groundwater monitoring wells is from naturally-occurring radionuclides, as documented by LBG-Guyton (LBG-Guyton, 1997), and concurred with by FDEP (FDEP, 1997a and 1997b).

4. CONCLUSIONS

This ASD was prepared pursuant to 40 CFR 257.95(g)(3)(ii) and demonstrates the following:

- the parent radionuclides that decay into total radium are naturally-occurring constituents in native sediments at Plant Smith;
- the interaction between saline groundwater and native sediments enriched in uranium and thorium (parent radionuclides to total radium) mobilizes total radium into groundwater; and
- the results of the extraction tests conducted on ash from the Plant Smith Ash Pond demonstrate that the Ash Pond was not the source of the SSLs for total radium reported in groundwater monitored by the Site's CCR monitoring wells.

This ASD documents that the SSLs reported for total radium are from a source other than the Ash Pond at Plant Smith. Accordingly, assessment of corrective measures or remedial action will not be performed for total radium at this time. Assessment and/or detection monitoring for total radium, as applicable, will continue for the Ash Pond.

5. REFERENCES

Ardaman & Associates, Inc. (Ardaman), June 1990. *Supplemental PCAR, Ash Pond, Lansing Smith Generating Plant, Gulf Power Company, Bay County, Florida.*

Ardaman & Associates, Inc. (Ardaman), May 1991. *Addendum to Supplemental PCAR, Ash Pond, Lansing Smith Generating Plant, Gulf Power Company, Bay County, Florida.*

Ardaman & Associates, Inc. (Ardaman), March 1993. *Results of Chemical and Radiological Testing of Soil Samples, Lansing Smith Generating Plant, Gulf Power Company, Bay County, Florida.*

Florida Department of Environmental Protection (FDEP), 6 June 1997a. *Radionuclides at Gulf Power Lansing Smith Plant.*

Florida Department of Environmental Protection (FDEP), 9 June 1997b. *Comments concerning "Factors Affecting the Distribution of Radiological Activity in Groundwater in the Vicinity of Plant Lansing Smith, Bay County, Florida.*

LBG-Guyton Associates, May 1997. *Factors Affecting the Distribution of Radiological Activity in Ground Water in the Vicinity of Plant Lansing Smith, Bay County, Florida.*

United States Environmental Protection Agency (EPA), November 1993. *EPA Solid Waste Disposal Facility Criteria Technical Manual.*

FIGURES





Legend

- Property Line
- Ash Pond (CCR Unit)
- ⊕ CCR Monitoring Well
- ▲ Piezometer

Note: CCR = Coal Combustion Residuals

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Site Layout

Plant Smith
Bay County, Florida



Pensacola, Florida January 2019

Figure

1



Legend

- Soil Boring
- NPDES Well
- Presumed Abandoned
- Property Line

Notes:

1. Monitoring wells that are presumed to be abandoned were georeferenced from Figure 1 in the Addendum to Supplemental PCAR dated May 1991 prepared by Ardaman & Associates, Inc. Soil Borings TH-1, TH-2, and TH-5 georeferenced from "Site and Boring Location Map", Ardaman & Associates, Inc., 1993.
2. NPDES indicates National Pollutant Discharge Elimination System.

1997 Site Map
 Plant Smith
 Bay County, Florida

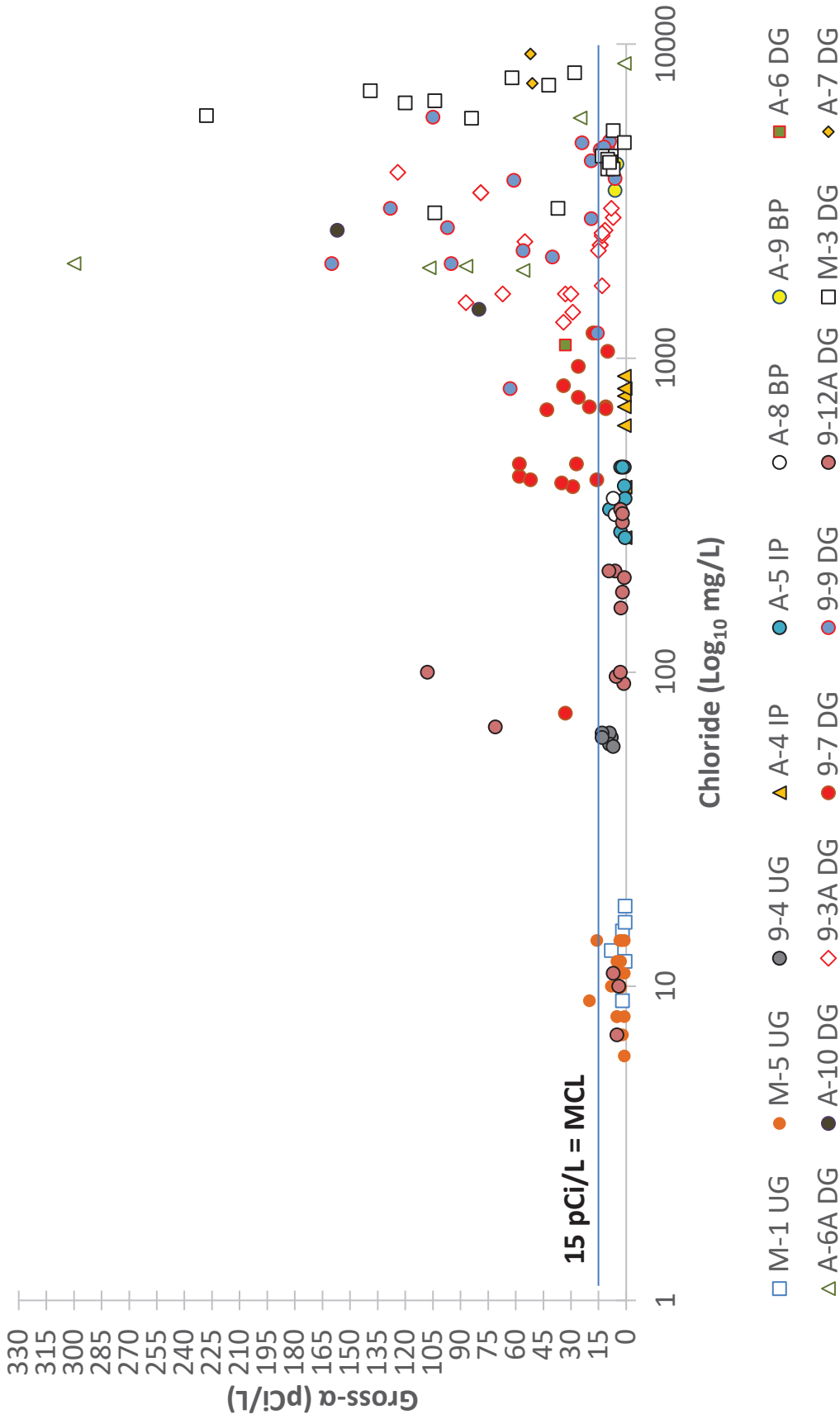
Geosyntec
 consultants

Pensacola, Florida January 2019

Figure 2

Scale: 0 to 1,500 Feet

North Arrow



Notes

- UG = upgradient
- IP = in-pond
- BP = beneath-pond
- DG = downgradient
- pCi/L = picocuries per liter
- mg/L = milligrams per liter
- Gross- α = gross alpha
- MCL = Maximum Contaminant Level

Gross Alpha vs. Chloride Concentrations

Plant Smith
Bay County, Florida



Pensacola, Florida

January 2019

Figure

4